

Annual Report, July 1, 2016 – June 30, 2017
Texas Occupational Health and Safety Surveillance Program
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Program Overview

The Texas Occupational Health Surveillance (OHS) program conducts surveillance of occupational injuries, illnesses and deaths; investigates worker health and safety issues; directs intervention strategies and provides information essential to protect health and safety of Texas workers; and evaluates the effectiveness of intervention strategies.

Major Accomplishments, Outputs, and Outcomes

Generated annual occupational health indicators

Successfully obtained the following data needed to calculate specific indicators for 2014: inpatient and outpatient discharges from Texas hospitals, death records, adult blood lead test results, asthma callback survey, and adult occupational pesticide poisonings. Calculated 22 Council of State and Territorial Epidemiologist (CSTE) occupational health indicators for 2014 and submitted the data report to NIOSH on time.

Meaningful use of existing occupational health surveillance data

Conducted in-depth analysis of 2011-2015 (5-years) Census of Fatal Occupational Injury data, and published a report, *Fatal work-related injuries in Texas, 2011-2015*, summarizing fatal occupational injuries in Texas over time. The report was published on the DSHS website and as a NIOSH eNews story in March 2017.

Intermediate outcome: DSHS and stakeholders used the report to increase awareness on worker fatalities in Texas on Workers' Memorial Day, April 28, 2017. DSHS sent an agency-wide email blast and featured it on DSHS (Facebook and Twitter) accounts.

Enhancing Occupational Health Surveillance in Texas

Completed Phase I of a pilot project that evaluated the use of additional fields in the Texas inpatient hospital discharge data to improve case-finding for work-related hospitalizations. Project findings were presented as a talk at the CSTE Annual Conference in June 2017, Boise, ID.

Intermediate outcome: A cross-walk of potential work-related ICD9-CM and ICD10-CM codes was developed and disseminated to the CSTE Occupational Health Indicator ICD-10 transition

workgroup. The cross-walk will be used to determine necessary revisions in occupational health indicators.

Submitted a proposal to add the optional industry and occupational module to the 2018 Texas Behavioral Risk Factor Surveillance System (BRFSS) survey in June 2017.

Potential outcome: Addition of the module has the potential to improve population-based occupational health surveillance, and provide information on prevalence of health risk behaviors and chronic health conditions among worker population in the state.

Emily Hall received a scholarship to attend the MMWR Intensive Writing Training sponsored by the Council of State and Territorial Epidemiologists (CSTE)

Pesticide poisoning surveillance and in-depth investigations

Submitted 2014 and 2015 data for acute occupational pesticide poisonings in Texas to NIOSH. Staff continues to conduct follow-up for cases reported in 2016 and 2017.

Intermediate outcome: NIOSH SENSOR-pesticides program used the data to update the literature on total release foggers and glyphosate poisonings.

Provided technical assistance to the City of Amarillo Department of Public Health in response to an acute pesticide exposure event that occurred on January 2, 2017. The incident involved the misuse of aluminum phosphide, a restricted-use pesticide. Program staff designed a surveillance tool in EpiInfo to gather information on possible exposures and acute health effects, and collaborated with City of Amarillo Department of Public Health epidemiologists to interview all first responders. Staff is working with NIOSH to analyze and publish the results.

Intermediate outcome: The local health department staff used the EpiInfo hazardous exposure assessment questionnaire to interview first responders.

Potential outcome: Interviews identified the need for all agencies involved in emergency responses to use existing tools (e.g. CDC Emergency Responder Health Monitoring and Surveillance system) to enhance protocols, training, and preliminary site evaluation for incidents involving unknown chemicals. The CDC/NIOSH Emergency Preparedness and Response Office is helping staff develop factsheets for education and outreach, which could prevent exposure of first responders in the future.

Evaluated pesticide-related educational materials and outreach process. The findings are being used to redesign the education materials and outreach strategies.

Adult lead poisoning surveillance and outreach

Obtained delegation of authority for program's nurse to collect blood samples for lead testing.

Potential outcome: Blood lead levels of individuals at risk for blood lead poisoning who might not have access to timely tests can be monitored. This can be used to identify lead poisonings and evaluate the efficacy of remediation and educational efforts.

Staff continues to monitor cases of adult elevated blood lead levels reported in 2016 and 2017, and conduct environmental lead investigations for qualifying cases.

Intermediate outcome: One investigation identified a family-owned business making fishing sinkers from scrap metal as the source of lead exposure. DSHS staff and partnering state agencies evaluated the extent of lead contamination on the site, conducted appropriate remediation, provided education and helped implement processes to prevent further exposure, and continue to monitor blood lead levels of family over time.

Another investigation found father's work clothes as the source of lead exposure for a child. The father works as a machine operator for a company that produces commercial and industrial valves. The company's safety officer indicated that blood lead testing is done for those who work with lead, but not for workers in the machine shop. He declined our request to initiate a Health Hazard Evaluation, but agreed to offer blood lead testing to all employees in his company. The program provided education to the family on how to prevent take-home exposure and how to obtain blood lead testing.

Designed a surveillance tool in EpiInfo for conducting in-depth adult occupational lead poisoning investigations.

Intermediate outcome: The Texas Adult Blood Lead Surveillance group used the surveillance tool to conduct investigation for potential occupational lead poisoning cases.

Revised and redesigned the education and outreach materials ("Lead safety during home renovation", and "How to protect your family from take home lead exposure") in English and Spanish for adult lead poisoning prevention.

Expanding partnerships and engaging stakeholders

Organized a strategic planning group for the Texas OHS program, which includes representatives from other DSHS programs, academia, government agencies, occupational medicine specialists, non-profit, and worker advocacy groups in Texas. The first annual meeting of the strategic planning group will take place in summer 2017.

Potential outcome: Increased awareness and visibility of Texas OHS program and its activities. Dissemination of reports, and prevention materials using stakeholder resources will increase the impact of program activities. Interaction between members will lead to new collaborative efforts to prevent work-related illness and injury in Texas.

Conducted outreach and education activities for high-risk occupational groups and employers (see presentations), and enhanced participation in external collaborative activities to optimize surveillance and intervention efforts. Collaborative activities include:

- Collaborating with Association of Occupational and Environmental Clinics on an ongoing pilot project to enhance surveillance of occupational exposures occurring in Texas.
- Assisted NIOSH with their Health Hazard Evaluation at two e-cigarettes shops in Austin, Texas. Employee exposures to flavoring compounds and other chemicals associated with vaping were evaluated. NIOSH will produce a report using the data collected.
- Dr. Ketki Patel, epidemiologist with the Occupational Health program, was appointed as the DSHS representative for the Texas Structural Pest Control Advisory Committee.

Publications and Reports

- Prado JB, Mulay P, Kasner EJ, Bojes H, Calvert GM. “Acute pesticide-related illness among farmworkers: barriers to reporting to public health authorities.” *Journal of Agromedicine* - accepted.
- Calvert G, Beckman H, Prado JB, Bojes H, Schwartz A, Mulay P, Leinenkugel K, Higgins S, Lackovic M, Waltz J, Stover D, Moraga-McHaley S. “Acute occupational pesticide-related illness and injury – United States, 2007-2011”. *Morbidity and Mortality Weekly Report (MMWR)*, 2016, 63(55); 11-16.
- Patel K, Hall E, Nogueira L, Bojes H. “Fatal work-related injuries in Texas, 2011-2015” *NIOSH eNews*, Vol. 14 No.11.
- Patel K, Velez J, Hall E, Nogueira L, Bojes H. “Occupational pesticide exposures among a group of seasonal and migrant farmworkers in Texas Panhandle, 2014”. Available at <https://www.dshs.texas.gov/epitox/reports/Occupational-Pesticide-Exposures-Case-Study---Texas-Panhandle,-2014.pdf>.

Presentations

Outreach activities at the Ventanilla de Salud at Mexican Consulate, Austin, TX (July 14, 2016, July 18, 2016, August 4, 2016, August 15, 2016, and September 19, 2016); distribution of educational materials at the 1st Annual Health Fair, Jim Hogg County, TX (October 1, 2016); hosted a booth displaying occupational health surveillance information at the Texas Safety Summit, Austin, TX (August 8-10, 2016, and May 9-11, 2017).

- Velez J. “Texas Occupational Health Surveillance- Pesticides”. Binational Health Fair, Austin, TX, October 8, 2016.
- Velez J. “Farmworker reporting barriers”. Midwest Stream Farmworker Health Forum, San Antonio, TX, October 31, 2016.
- Patel K. “Pesticide poisoning surveillance in migrant and seasonal farmworkers”. SENSOR Pesticides Winter Workshop, Cincinnati, OH, February 1, 2017.
- Patel K and Hall E. “State-based occupational health surveillance: Updates from Texas”. National Institute for Occupational Safety and Health/State Occupational Lung Disease Surveillance Meeting, Austin, TX. April 25, 2017.
- Patel K, Hall E, Nogueira L, Bojes H. “Improving case-identification of work-related hospitalizations in a workers’ compensation ‘opt-out’ state: Pilot-testing of new methods”. 2017 Council of State and Territorial Epidemiologists Annual Conference, Boise, ID. June 6, 2017.