

Occupational Health and Injury Surveillance in Louisiana (LOHIS) Fundamental Plus Program
Louisiana Department of Health, Office of Public Health
Annual Report of Major Accomplishments and Outcomes
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MAJOR ACCOMPLISHMENTS AND OUTPUTS

Collect, analyze, and interpret surveillance data: An in-depth analysis of OHI 20: ***work-related severe injury hospitalizations*** was conducted in collaboration with Jeanne Sears/University of Washington. Analysis of 1937 severe injuries over a 9-year time period indicate the rate is statistically flat, while the rate of minor injuries significantly decreased. Hispanic workers had a significantly elevated rate compared with non-Hispanics, which likely reflects the growing Hispanic population in SE Louisiana. The most common injury was fracture, and fall was the most common cause of injury. Intracranial injuries had the highest case fatality rate. These results were summarized and published in the Louisiana Morbidity Report (*Traumatic Injury Hospitalizations among LA Workers from 2006-2014: Results of a Severity Threshold Analysis*) and presented at our advisory meeting, and the LA Workplace Safety Taskforce. *Potential Impact: This research has important implications for worker safety prevention efforts as severe injuries, such as spinal cord and intracranial injuries can result in death, or lifelong disability and pain.*

The first in-depth analysis of Louisiana's ***Behavioral Risk Factor Surveillance System (BRFSS)*** employment data was conducted with an emphasis on service workers' health and well-being. BRFSS 2013 and 2014 data for employed respondents were aggregated into two occupational groups: service workers and all other workers. Service workers represent a broadly defined group that includes: healthcare support, protective service, food service, cleaning and maintenance, as well as personal care and service occupations. Although there is variation among service occupations, many of the jobs are held by women and minorities and involve shift work, low wages and minimum job security. These jobs – especially service jobs that pay below \$20 per hour and require only a high school education or less – are predicted to grow far more quickly than higher-wage jobs over the next decade. Findings indicate that many service workers do not earn enough money to afford basic necessities, such as medical care, food and shelter. Thirty-nine percent did not have health insurance, and 30% could not see a doctor due to medical costs. Furthermore, 17% reported that they were stressed about being able to afford their rent or mortgage, and 34% were stressed about being able to afford nutritious meals. Service workers also had a greater prevalence of chronic health conditions (asthma, COPD, depression, and diabetes); smoking, and poor health status. A final report is available at http://new.dhh.louisiana.gov/assets/oph/Center-EH/envepi/occ_health/Documents/LA_Service_Worker_Wellness_Report_BRFSS_2016_FINAL.pdf.

Potential Impact: This research provides critical information on the health and well-being of service workers in Louisiana that can be used by policymakers, community leaders, and business leaders to better understand the economic hardships, chronic health conditions, and other quality of life issues faced by this growing occupational sector. This information, in turn, can better inform policy and legislation and health intervention and prevention programs.

We continue to take a lead role within the Louisiana Department of Health to develop public health capacity to address and respond to ***climate change***. We hosted a Tulane Public Health Intern to calculate climate change indicators for Louisiana. Indicators include measures from 5 categories: Environmental, Health Outcome, Mitigation, Adaptation, and Policy; many of these indicators (e.g., heat,

mosquito-transmitted diseases) have potential worker impacts. A final report including a summary description of select indicators plus data for the most recent years available, and historical data for the past 25 years, is available at http://new.dhh.louisiana.gov/assets/oph/Center-EH/envepi/occ_health/Documents/Indicators_of_Climate_Change_Louisiana_2016_FINAL.PDF.

Potential Impact: Public health plays an important role in tracking and responding to these population health impacts, and promoting mitigating activities to reduce greenhouse gas emissions (e.g., active transportation, energy conservation).

Heat-related Surveillance: LOHIS was involved in multiple activities to expand its technical and organizational capacity to track heat-related health outcomes. LOHIS co-authored a paper on occupational heat-related illness among 9 southeastern states that was published in October 2015. Data indicate that Louisiana has an elevated hospitalization and ED rate in comparison with 9 other SE states included in the study. Significantly elevated results were observed among men, African-Americans, and Hispanics. LOHIS advocated the addition of an occupational heat-related illness indicator that was formally adopted by state occupational health programs as a new occupational health indicator. LOHIS collaborated with NIOSH to conduct a case cross-over analysis of occupational ED heat-related visits and temperature. Results indicate a positive relationship between temperature and occupational heat-related visits regardless of the measure used: daily mean, wet bulb globe, daily max health index, or daily max temperature. LOHIS co-presented on CSTE webinar on climate change and occupational health with a focus on occupational heat-related illness in the Southeast.

Potential Impact: Workers are one of the most at risk sub-populations for heat-related illness. Increased understanding and tracking of this condition can guide and inform more protective policies about working in hot environments.

Collaborate and interact with state, regional, and federal partners and stakeholders. During summer of 2015 (June-August) we served as co-mentors along with the National Guestworker Alliance (a worker center organization based in New Orleans) for the **Occupational Health Internship Program (OHIP)**. Two interns (Dawn Surratt/UCSF and Adam Kline/Tulane) conducted in-depth interviews of 25 Latino shipyard workers in SE Louisiana. Results from this analysis were presented at OSHA-Baton Rouge staff meeting, NIOSH OHIP videoconference, APHA, and SouthON. A final report was also prepared. This was the first OHIP program in the South and based on the project's success, New Orleans received ongoing funding to be an OHIP host in summer 2016.

Potential Impact: Assessment of work conditions experienced by immigrant workers can lead to improved prevention and enforcement activities. The expansion of OHIP to the South provides opportunity for ongoing occupational safety and health capacity development.

LOHIS co-planned and hosted the 5th annual **Southeastern States Occupational Network meeting (SouthON)** March 8-9 in New Orleans. The 1.5 day meeting brought together about 70 attendees from state health departments, academia, NIOSH ERCs, AgrCenters, and other key stakeholders to discuss and address occupational safety and health issues impacting workers in the Southeast. A major outcome of the meeting was identification of priority research, dissemination, and intervention activities to be implemented within the following year. The first activity will be to expand the heat case cross-over analysis to include other SE states.

Potential Impact: SouthON continues to build occupational health surveillance and research capacity at the state and regional levels.

LOHIS submitted a competitive grant application for a NIOSH/Fatality Assessment Control Evaluation (FACE) program (July 2016-June 2020) and is awaiting final funding decision.

Publications

Fortenberry GZ, Beckman J, Schwartz A, Prado JB, Graham LS, Higgins S, Lackovic M, Mulay P, Bojes H, Waltz J, Mitchell Y, Leinenkugel K, Oriel MS, Evans E, Calvert GM. Magnitude and characteristics of acute paraquat- and diquat-related illnesses in the US: 1998-2013. Environ Res. 2016 Apr;146:191-9. doi: 10.1016/j.envres.2016.01.003. Epub 2016 Jan 11. PubMed PMID: 26775000.

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Brinker K, Jacobs T, Shire J, Bunn T, Chalmers J, Dang G, Flammia D, Higgins S, Lackovic M, Lavender A, Lewis JS, Li Y, Harduar Morano L, Porter A, Rauscher K, Slavova S, Watkins S, Zhang L, Funk R. Fatal Work-Related Injuries: Southeastern United States, 2008-2011. Workplace Health Saf. 2015 Oct 14. pii: 2165079915607873. [Epub ahead of print] PubMed PMID: 26467194.

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Annual Heavy Metal and Carbon Monoxide Surveillance 2015 Reports. Louisiana Department of Health. Office of Public Health. Section of Environmental Epidemiology and Toxicology. Posted April 29, 2016. <http://ldh.la.gov/index.cfm/page/845>.

Presentations:

Climate Change and Occupational Health: an Environmental Health, Injury, and Occupational Health Issue. Occupational Heat-related Illness Surveillance in the Southeast. CSTE webinar: September 29, 2015.

Provisional Results from a Case-Crossover Analysis in Louisiana, 2010-2012—Implications for Improved Worker Protection. Jeffrey Shire, Ambarish Vaidyanathan, Michelle Lackovic, and Vanessa Paul. Fifth Annual SouthON Meeting. New Orleans, LA. March 8-9, 2016.

Shipwrecked: Working Conditions of Latino Immigrant Shipyard Workers in S.E. Louisiana. LA Governor's Safety and Health Conference (September 28-29, Baton Rouge). A Kline, J Lewis.

Louisiana Occupational Health & Injury Surveillance. Louisiana State University Health Sciences Center/Occupational Health Sciences Class. J Lewis. November 4, 2015.

BRFSS: an Analysis of Industry & Occupation Data in the 2013 & 2014 Surveys. BRFSS Advisory Meeting. J Lewis and V Paul. New Orleans, LA. January 20, 2016.

Occupational Health Program Activities Update. Louisiana Environmental Public Health Tracking Workgroup Meeting. J Lewis. New Orleans, LA. February 3, 2016.

Louisiana's Occupational Health & Injury Surveillance Program. Tulane University School of Public Health & Tropical Medicine/Global Environmental Health Sciences Department Seminar. J Lewis. March 3, 2016.

Louisiana's Occupational Health & Injury Surveillance Program. Louisiana Public Health Association Annual Conference (March 31-April 1, 2016, New Orleans). J Lewis.

Louisiana's Work-related Fatalities (2007-2014). 2nd Annual Workers' Memorial Day Program. Louisiana OSHA Consultation/Louisiana Workforce Commission (April 28, 2016, Baton Rouge). J Lewis.