2010 Annual Performance Report

State: Oregon
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Fundamental

This annual performance report summarizes accomplishments for the fundamental state-based surveillance project of the *Oregon Worker Illness & Injury Prevention Program (OWIIPP)* cooperative agreement (U60 OH008472) between July 1, 2009 and June 30, 2010.

Conducting work-related injury, illness, and death surveillance and generating the occupational health indicators (OHIs) have been important components of the fundamental state-based surveillance project. In addition to these activities, the OWIIPP team has carried out a wide range of other analyses, shared findings with partners and stakeholders, performed education/outreach, and worked in collaboration with partners throughout the state on occupational health and safety issues. Areas of emphasis during the period included musculoskeletal disorders, pesticide poisonings, work-related asthma, and young worker injuries.

Surveillance

During the period, OWIIPP generated the OHIs for 2006 and 2007. In addition, staff accessed and analyzed data from several other sources to augment the OHIs and improve occupational health surveillance.

OWIIPP worked with the Oregon Community Health Information Network (OCHIN), an organization of safety-net clinics in the region that provides electronic medical records software and data centralization for the clinics that use its services, and obtained suspected/confirmed diagnoses of pesticide poisoning from 2000 through 2008. Staff intended to match OCHIN cases to those captured in the PEST surveillance system to identify the magnitude of physician under-reporting in the state and estimate occupational pesticide poisonings among vulnerable populations. Despite our efforts to develop a comprehensive list of query criteria, only a handful of cases were identified in the OCHIN database and successfully matched to PEST cases. While the results of the analysis were disappointing, staff recognize that additional efforts are needed to 1) understand the reasons so few cases of pesticide poisoning are captured and/or documented among the OCHIN clinics and 2) identify alternative ways to gauge worker health among vulnerable populations.

Also during the period, OWIIPP conducted special epidemiologic analyses of young worker injuries in the state. Staff specifically analyzed accepted disabling workers' compensation claims among Oregon young workers by age group (10-18, 19-21, and 22-24 year olds) and calculated rates by employment using Quality Workforce Indicators (QWI) data from the U.S. Census Bureau and Local Employment Dynamics. The findings and prevention recommendations were synthesized into a manuscript, "Occupational injuries to Oregon workers 24 years and younger: An analysis of workers' compensation claims, 2000-2007," and published in a July 2010 edition of the *American Journal of Industrial Medicine*. The results of this analysis demonstrate that targeted prevention strategies need to be developed for older teens and young adult workers,

especially because child labor laws do not apply and offer protection after 18 years of age.

To expand on the above mentioned epidemiologic analysis of young worker injuries, staff conducted a spatial analysis using workers' compensation data and then produced maps of injury rates by county, an industry hazard index, a spatial statistic indicating areas of high or low injury clusters, and socioeconomic indicators related to health. The analysis is significant since it provides important information about the distribution of young worker injuries and other factors that may influence their distribution in the state. Staff intend to conduct additional spatial analyses using medical only claims from commercial insurance carriers and share the results with partners and stakeholder groups like local county health departments and legislators.

Education/outreach

During the period, staff presented and published information on many occupational health and safety topics. More specifically, OWIIPP attended the Second Annual NW Environmental Health Conference and gave a presentation to health care providers about occupational epidemiology and using occupational health data for public health prevention. Staff also presented methods and findings from the young worker injury spatial analysis at the May 2010 Western Regional Epidemiology Network Conference and June 2010 Council of State and Territorial Epidemiologists Annual Conference.

Staff developed two new editions of *Putting Data to Work*, "Musculoskeletal disorders" and "Older workers." Both editions provide data, a description of the condition or issue, case studies, prevention recommendations, and resources and have been widely disseminated.

Last year, OWIIPP published *Occupational Health in Oregon*, a report about worker health in the state that includes sections on workforce characteristics, fatal and non-fatal injuries, toxic exposures, occupational diseases, and special populations. Since the report was published, it has been widely disseminated to partners and stakeholder groups. During the period, special efforts were made to share this information with local county health departments and legislators to bring greater attention to occupational health issues in the state.

In addition, OWIIPP prepared and/or published several peer-reviewed journal articles during the period. The findings from the epidemiologic analysis of accepted disabling workers' compensation claims and prevention recommendations were recently published in the July 2010 edition of the *American Journal of Industrial Medicine*. Oregon, Michigan and Minnesota jointly analyzed data from the 2005 Behavioral Risk Factor Surveillance System (BRFSS) asthma call back survey. The findings from this analysis were published in the March 2010 issue of the *Journal of Asthma*. Also, Oregon and nine other states added questions about workers' compensation to the 2007 BRFSS. The participating states collaboratively analyzed the data and prepared the finding for the July 30, 2010 edition of *Morbidity and Mortality Weekly Report*.

Collaborations

Several agencies and organizations with an interest in improving the health and safety of young workers in Oregon assembled and formed the Oregon Young Employee Safety (O[yes]) coalition several years ago. OWIIPP has been a member of the coalition since it was formed and has worked in collaboration with other O[yes] members on various education/outreach efforts since the coalition's inception.

OWIIPP, in collaboration with O[yes], participated in the "Crack the Case of Good Health" event at the Oregon Museum of Science and Industry to encourage kids to think about and take steps to protect their health and safety. In particular, staff used "Desi Bell", an interactive manikin that has a dosimeter, to measure the child's exposure levels to the sound from an Ipod to show when noise can begin to damage hearing. Other activities and demonstrations were also utilized to illustrate hazards and safety while at work. OWIIPP also attended the annual Women in the Trades Career Fair and led 45-minute interactive demonstrations with middle and high school female students about workplace safety.

OWIIPP also helped plan, market, and execute the second annual Public Service Announcement (PSA) video contest for high schools students across Oregon. The entire effort was significant because various marketing techniques, like Facebook advertisements, were used to reach teens, raise their awareness of occupational hazards and safety issues, and promote the contest. The contest was also structured in a way that enabled the students to learn about the most common work-related injuries to youth and methods for prevention while making their 45-second video. This year's contest was considered a huge success with more than four times as many video submissions than the previous year.

Also with the O[yes] coalition, OWIIPP has begun efforts to conduct four focus groups with young workers in construction and health care industries. The results will provide preliminary information about how young workers experience work and their knowledge and attitudes of workplace health and safety. The information gathered from the focus groups will be disseminated to partners and young worker programs and used to develop education and intervention strategies to prevent work-related injuries among young workers.

Burn injuries

This annual performance report summarizes accomplishments for the burn injury state-based surveillance project of the *Oregon Worker Illness & Injury Prevention Program (OWIIPP)* cooperative agreement (U60 OH008472) between July 1, 2009 and June 30, 2010.

Surveillance

OWIIPP staff continued to obtain and analyze accepted disabling and non-disabling claims from Oregon's workers' compensation and commercial insurance carriers for burn injuries. Hospital discharge data and cases from the Oregon Burn Center were also routinely analyzed for trends.

Staff conducted a special analysis of injuries to young workers (< 25 years of age) in Oregon from 2000-2007 using workers' compensation data. One of the findings from this analysis showed that workers 10-18 years old were much more likely to get burned on the job as compared to 19-21 and 22-24 years. This finding and others from this analysis were written up as a manuscript, "Occupational injuries to Oregon workers 24 years and younger: An analysis of workers' compensation claims, 2000-2007" and published in a July 2010 edition of the *American Journal of Industrial Medicine*. This eight-year review of young worker injuries in Oregon is significant because it illustrates that there are differences in the types of work-related injuries sustained between groups of young workers (10-18, 19-21, and 22-24 year olds) and each these groups would benefit from the development and implementation of targeted prevention strategies.

Education/outreach

In 2008, OWIIPP published *Putting Data to Work: Burn Injuries*. This newsletter provided information about the scope of burn injuries, data about work-related burn injuries in Oregon, a description of the types of burns, case studies, prevention recommendations, and resources. Although a bit dated, the information in this newsletter is still accurate and relevant and it continues to be widely disseminated throughout the state at conferences and accessed via the internet.

OWIIPP published *Occupational Health in Oregon*, a report about worker health in the state. Several occupational injuries and illnesses were given attention in the report and burn injuries were among the non-fatal injuries that were highlighted. During the period, efforts were made to raise awareness about occupational injuries, illnesses, and deaths in the state by disseminating the report to local county health departments and state legislators.

Collaborations

Burn injuries among young workers are a major occupational health issue. In an effort to prevent burns and other injuries among teens, OWIIPP has played an active role in the Oregon Young Employee Safety (O[yes]) coalition. The coalition is a consortium of representatives from academia, industry, labor, state agencies, and commercial insurance carriers that is dedicated to preventing injuries and promoting safe work

practices among young workers. During the period, staff in collaboration with other O[yes] members worked on various education/outreach efforts that included a focus on burn injuries. OWIIPP activities with the coalition included planning and implementing the second annual PSA video contest for high school students. Burns were one of the work-related injuries that students were encouraged to focus on and develop prevention messages about.

In addition, OWIIPP and O[yes] members have begun to conduct focus groups with Oregon young workers. The qualitative project will help us explore and understand their views about workplace health and safety and discover sector-specific information about injury risk in priority industries, like the leisure and hospitality industry. This information will be shared with other O[yes] members and young worker programs and used to develop intervention strategies to prevent burns and other common young worker injuries.

Fatality Assessment and Control Evaluation (FACE)

Surveillance of traumatic occupational fatalities is conducted by Oregon Fatality Assessment and Control Evaluation (OR-FACE) as part of the fundamental surveillance program of the state Occupational Public Health Program (OPHP), funded by the National Institute for Occupational Safety and Health (NIOSH). In addition to surveillance, OR-FACE assesses priority areas and conducts outreach to promote worker safety. OR-FACE is a project of the Center for Research on Occupational and Environmental Toxicology (CROET) at Oregon Health & Science University (OHSU), and benefits from institutional resources.

The current OR-FACE surveillance system uses (a) an internet search engine that creates daily lists of items from keywords, (b) quarterly reports of death certificates marked “at work” from Oregon Vital Records, (c) Oregon OSHA fatality notification reports, (d) a daily search of numerous websites, (e) an OHSU news clipping service, and (f) incidental fatality reporting from Douglas County Farm Service Agency and Oregon Emergency Response System. Primary data sources include death certificates, medical examiner and police reports, Oregon OSHA investigation reports and news clippings when available, and occasionally other records, such as photo disks, business profiles, hospital or emergency response records, or investigation reports from other sources.

According to preliminary data, OR-FACE recorded 60 occupational fatalities in 56 incidents in 2009, and 11 incidents in 2010 to date. In spring 2010, OR-FACE shared data with the Oregon Census of Fatal Occupational Injuries (CFOI) with a 5-year comparison of codes between the two surveillance programs according to published data. Closer cooperation with CFOI is planned to improve coding congruence, within the parameters of federal rules on data sharing.

Standard demographic characteristics and codes for industry, occupation, and event are charted annually. Investigation priorities in the past year focused on logging, contact events with heavy machinery, and a fall.

<u>Recent Investigation Reports</u>
2006-19: *Young logger killed when yarder topples during setup* (Sep-09)
2007-11: *Salesman killed when forklift falls off truck loading ramp* (Oct-09)
2007-57: *Temporary mill worker killed in fall down manlift shaft* (Jul-10 final draft)
2006-24: *Logger under rigging killed when carriage drops* (Jul-10 draft in review)
2008-07: *Rigging slinger killed by swinging log in yarding turn* (Jul-10 draft in review)

OR-FACE investigation reports are published online, and are viewed and used by safety professionals with specific areas of concern. Notably in the past year, The OR-FACE report *Shipyard Welder Ignites Hydraulic Fluid and Is Fatally Burned* (2003-22), was featured in the February 2010 edition of *Safety + Health* (circ. 86,000). Subsequently,

the Hydraulic Safety Authority of Canada notified OR-FACE that it reproduced the investigation report on a hydraulics safety training CD.

The *OR-FACE Annual Report 2007* (Mar-10) included hazard alerts related to falls, violence, and contact events. OR-FACE published 2,000 copies and mailed about 1,200 to safety professionals, state officials, unions, industry associations, and individual companies in target industries. This year's annual report attracted favorable attention, including high praise from two NIOSH/CDC sources, the United Farm Workers, and the Nebraska Department of Labor, stated briefly by one: "Thoroughly enjoyed reading your Annual Report. Great – and interesting – information." The annual report also drew media attention; OR-FACE data was featured in a well-done front-page story in the daily *Oregonian* newspaper (http://www.oregonlive.com/news/index.ssf/2010/06/fatality_survey_details_how_we.html).

All OR-FACE publications are available online (www.ohsu.edu/croet/face). Electronic publication is a critical venue for OR-FACE safety materials. The OR-FACE website was modified in the past year to suit a new institutional strategy at OHSU, which produced problems with links, mailing lists, and disappearing files for several months. The system is mostly restored, but current user statistics are down to just over 100 visitors per month from a previous average of about 850.

OR-FACE safety materials were circulated directly by mail and electronically, and through collaboration with target organizations. A number of links to OR-FACE materials were established at other organization websites. OR-FACE materials were also distributed at conference and event booths attended by OR-FACE or the CROET outreach team, representing occupational safety issues.

A promotional blurb for the young workers safety booklet was delivered to the Oregon School-based Health Centers listserve (Mar-2010), which resulted in additional book orders. A postage-paid order card included with all booklet orders continues to be effective, generating additional response and an opportunity to track how the safety booklets are being used. Considerable results were achieved through a second mailing of the *Fallers Logging Safety* booklet to 250 saw shops and equipment dealers in Oregon and Washington state (Apr-2010), with an introductory letter and postage-paid order card.

Circulation of OR-FACE Safety Materials	Year 2008-09	Year 2009-10
Fallers Safety booklet	859	2,278
Young Workers safety booklet	205	3,277
Agriculture hazard alert (and Spanish version)	5,158 (1,378)	112 (32)

A postage-paid evaluation card in the back of each fallers booklet provided an additional opportunity for user feedback: "… useful information" (Charles Gann, National Wildfire Suppression Association); "Excellent asset to industry" (County Stihl, Inc.); "Written very

well, user friendly" (Anonymous); "Very good booklet" (EHSS Tree Farms); "As an amateur wood cutter, this was a super read" (Anonymous).

The OR-FACE agriculture hazard alert brochure, *Can you identify fatal hazards on your farm or ranch?* – in Spanish and English – was published earlier online, and printed and circulated on demand. Enthusiasm for the brochure encouraged cooperative arrangements with six or so rural organizations and associations in fall 2009 to distribute the ag alert in print by direct mail, as newspaper inserts, and hand delivered at local events; plus, electronically as web links and to subscriber lists. Circulation amounted to over 40,000 – certainly the most successful OR-FACE publication to date. One collaborator wrote: "Thanks again for the information … farmers and ranchers were really glad I had that to share with them" (Shelby J. Filley, Oregon State University Extension Service).

A safety trainer from SAIF, the state's chief Workers' Compensation insurer, used the ag alert with audiences around the state, and especially appreciated the coverage of farm incidents involving trucks and mobile machinery. He asked for a brochure that specifically addressed driving safety, similar to the previous OR-FACE booklet on cell phones and driver distraction. A new brochure, *Know the Hazards of Driver Distraction*, is in final review (Jul-2010), nearly ready for publication.

OR-FACE developed a closer relationship with the CROET outreach team during 2010, including more attention to local conferences and events related to occupational safety. Activities related to priority areas of concern included the following.

Logging. OR-FACE completed three grant projects related to logging safety: (a) the Fallers Video Observation Study, funded by the Pacific Northwest Agricultural Safety and Health Center (PNASH), and (b) two publications on yarding safety, funded by Oregon OSHA. A news story on the Fallers Video Observation Study appeared in the PNASH *Northwest Forest Worker Safety Review* newsletter (http://depts.washington.edu/pnash/files/forest_news/2010_NWFWSR.pdf). The new Oregon OSHA *Yarding and Loading Handbook* (Jun-2010), after considerable review, was published online (www.orosha.org/pdf/pubs/1935.pdf). The *Yarding Logging Safety* booklet, a companion volume to the OR-FACE *Fallers Logging Safety* booklet, is complete and awaiting publication. OR-FACE Logging Safety Consultant Jeff Wimer gave a presentation on logging safety to the Clatsop County Safety Council, where he distributed the fallers safety booklet.

Young workers. OR-FACE actively participated in the Oregon Young Worker Health and Safety Coalition (now the Oregon Young Employee Safety Coalition): presented worker safety sessions for about 150 high school students at a health science career program (Feb-2010); represented the coalition at the Youth Careers Expo (May-2010); participated in the young worker safety video contest (Apr-2010; view top 7 videos http://oregonyoungworkers.org/home/2010videowinners.html); facilitated six occupational safety workshops for young women at the Oregon Tradeswomen Career Fair (Apr-2010), and participated in the planning committee for the fair.

Crab fishing safety. Continuing a new focus on crab fishing safety, OR-FACE attended an Oregon Dungeness Crab Summit in Newport, Oregon (Jul-2009), sponsored by the Oregon Department of Fish and Wildlife. OR-FACE sponsored a booth at the Pacific Commercial Fisherman's Festival (Sep-09) in Astoria, and partnered with the U.S. Coast Guard Commercial Fishing Vessel Safety coordinator to demonstrate personal flotation devices, including Type I, II, III, and V categories. OR-FACE produced a poster for the event, *Commercial Crab Fishing in Oregon*, with an index of fatality rates and a map of incident locations along the Oregon coast. OR-FACE shared ocean fishing fatality data with Devin Lucas from the NIOSH Alaska field station, and expanded collaboration to begin adapting crab fleet safety research in Alaska to Oregon. OR-FACE developed a questionnaire for a crab fishing safety survey, with review comments from the Oregon Dungeness Crab Commission, the NIOSH Alaska field station, and USCG safety coordinators. A pilot project sponsored by CROET is planned, once OHSU institutional review board approval is obtained. The crab commission has offered to coordinate local contacts. OR-FACE submitted a grant proposal to PNASH to administer the survey to the entire Oregon crab fleet (Jun-2010).

Ladder Safety. Steps were taken to develop a future focus on ladder safety in construction. OR-FACE attended two Construction Advisory Committee meetings (Sep-Oct 2009) – which bring together Oregon OSHA officials and industry leaders – and met with safety directors for Associated General Contractors, a large construction firm, and a roofing company to develop partnerships and an intervention strategy. A source was obtained for a specific ladder safety tool – an inclination indicator – through correspondence with NIOSH researcher Peter Simeonov.

Older workers and heavy vehicles. In accordance with the new OR-FACE 5-year plan, a project was initiated to conduct research on older workers in rural settings who work with heavy trucks or mobile machinery. A grant proposal for a pilot survey was submitted to CROET (Jun-2010), involving collaboration with Dr. Margaret Neal, director of the Institute on Aging at Portland State University.