Section I

Total Worker Health Summary
The Oregon Healthy Workforce Center (OHWC), a National Institute for Occupational Safety and Health (NIOSH) Center of Excellence in Total Worker Health (TWH) is an affiliation of Oregon Health & Science University’s (OHSU) Oregon Institute of Occupational Health Sciences (OHWC home), Portland State University’s (PSU) Occupational Health Psychology program, the University of Oregon’s Labor Education Research Center (LERC) and the Center for Health Research, Kaiser Permanente. The team is pictured at the OHSU tram.

OHWC faculty and staff are developing and evaluating Total Worker Health intervention programs that integrate safety, health, wellness and well-being into integrated or associated programs designed to reduce injuries and improve well-being. They accomplish this by improving the workplace environment, manager/supervisor training, increasing healthy lifestyles and reducing work stress through workplace interventions. The OHWC, located in the Pacific Northwest, serves as a resource for the western states and complements the other three Centers of Excellence in New England (Harvard, Connecticut/Massachusetts) and Iowa. The OHWC is the only Center focusing on intervention effectiveness, successfully conducting randomized trials of innovative interventions and adding value with a cross-study database (Data Repository) of common measures across projects.

Our theme at OHWC is Intervention Effectiveness, specifically through the use of team-based and technology-based approaches to promote and protect health, and designed to be disseminated broadly to the workplace. The OHWC has an overarching conceptual model that predicts that interventions will lead to changes in knowledge and psychosocial factors that mediate or moderate hazard reductions and behavior change, which will in turn produce hazard reductions, safer work practices, improved lifestyle choices, and better psychological and physical health.

The OHWC program consists of four research projects, two initially conceptualized as translational projects; educational programs, and outreach that are inter-related.

Relevance
Through its research and translation projects, the Oregon Healthy Workforce Center implements integrated interventions that provide improved well-being and health protection at the workplace. These projects all employ training and technology enhancements to produce health and safety changes that can be scaled and shared broadly. Some materials and programs have been adopted by organizations (Portland Parks and Recreation Department, Oregon Bureau and Labor and Industries, Oregon Home Care Commission) at their own cost, and tools (e.g., toolbox safety and health talks)
are distributed widely at our outreach events. Tools and evidence-based toolkits from our 2011-2016 funding cycle interventions were made available on the OHWC website on September 30, 2016.
### Key Personnel

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*Oregon Healthy Workforce Center website: [http://www.ohsu.edu/ohwc](http://www.ohsu.edu/ohwc)*
Section II

Research and Translational Projects
The OHWC has two research projects (COMPASS, SHIP) and two translational projects. The translational projects have been evaluated as rigorously as our research projects:

*Creating health and safety “Communities of Practice” for Home Care workers* – Dr. Ryan Olson led the team that developed and evaluated a peer-led and scripted social support group program to improve the Total Worker Health of home care workers. This program, named COMPASS (COMmunity of Practice And Safety Support), was designed to improve social resources, reduce the risk of injuries, and promote health among caregivers.

- In 2015, data collection for the cluster-randomized trial was completed. Sixteen teams of home care workers (n=148) participated in the trial. Measures were collected at baseline, midway through the one-year intervention (6 months), immediately following intervention completion (12 months), and one-year post intervention (24 months).
- Intervention effectiveness results from the COMPASS trial were recently published in the American Journal of Public Health in 2016. Analysis of six and twelve month outcomes indicates that the program effectively improved health and safety behaviors, social resources, physical health indicators, and lost work days due to injury.
- A manuscript reporting qualitative research findings related to participant experiences in the program are under review, and analyses of long-term (24 month) impacts are in progress.
- In 2015, COMPASS was adapted and pilot tested for statewide dissemination through the Oregon Home Care Commission training system. During 2016-2021, this high impact research partnership will be evaluated as part of the Oregon Healthy Workforce Center outreach core.

*Safety & Health Improvement Program (SHIP)* – Drs. Leslie Hammer and Donald Truxillo (Portland State University) developed and evaluated a scaled, revised version of their workplace intervention focused on improving health and safety outcomes for construction workers. SHIP targets work-life stress and safety-related psychosocial factors and is comprised of family-supportive and safety-supportive supervisor training, followed by two weeks of behavior tracking, facilitated team sessions including supervisors and employees, and guided follow-up. The original SHIP intervention was effective at reducing employee blood pressure, and for improving perceptions of work crew effectiveness and work-life balance, particularly for those employees who had lower-quality relationships with their supervisors prior to the intervention.

- In 2015-16, SHIP materials and resources were redesigned using an iterative approach incorporating feedback at each phase to make them accessible and applicable for use in a variety of industries and occupations. This process included conducting a post-implementation process evaluation and obtaining feedback on initial revisions from SHIP participants (employees and supervisors), organizational leaders, and intervention facilitators. Additional revisions were informed by focus groups and interviews with potential future adopters from different business backgrounds and occupational roles.
- The completed training package integrating an evidence-based work-family and safety intervention is now publicly available. The SHIP Toolkit can be downloaded [here](#).

Publications to support dissemination of SHIP materials are available or in progress through various practitioner outlets including the Occupational Safety & Health Administration (OSHA), American Society of Safety Engineers (ASSE), and the Society for Human Resource Management (SHRM).
Health Protection and Health Promotion in Young Workers – Dr. Diane Rohlman is using internet-delivered training (PUSH: Promoting U through Safety and Health), supervisor-led Start the Conversation training activities, and social media to promote safety and health in young workers. Results from a randomized controlled trial of the PUSH online training showed durable changes in knowledge [$p<0.001$, effect size (Cohen’s $d$) 0.4] in the population that took the PUSH training at the three month follow-up; participants also rated the training highly. To augment the one-time training, Rohlman and her research team created a series of videos and images intended to serve as follow-up messages to reinforce lessons learned throughout the PUSH online training. Videos like the Safety First Rap are available on YouTube; more social media resources can be found at the PUSH Tumblr page. The Start the Conversation activities were developed and/or adapted from CDC/NIOSH’s curriculum, Talking Safety, Youth @ Work. These activities were made to educate young workers about work and non-work factors (safety in the workplace, professional communication and health) that can impact safety on and off the job. Each activity is about 15-20 minute-long and they have been designed to be led by supervisors at staff meetings or training sessions with the intention of developing two-way conversation about workplace safety between supervisors and young workers. All PUSH resources are available for download here.

Supervisor training to promote health/safety in construction (Latino+non-Latino) - Dr. Kent Anger is enhancing supervisor team building training skills, supported by behavior tracking technology, and providing a 12-week course of scripted healthy lifestyle education delivered once a week on cards in 15-minute meetings in small groups to motivate employees to adopt healthier lifestyle choices and safer work practices, in the construction industry.

- Following piloting of materials in two union apprentice programs, three construction company have completed the pilot study and the fourth company is mid-way through the program. Results of the pilot study (three companies; $N=24$) showed that supervisors substantially increased the level of job and family supports in their communication with employees and safety compliance increased. For lifestyle education, the pre to post results showed substantial knowledge improvements, increased exercise and sleep, reduced fast food meals eaten and caffeinated beverages consumed, and greater team cohesion.
• The toolkit including guides, spreadsheets for data collection, impacts surveys, supervisor training and education cards are completed and will be available for download in English and Spanish in November here when the Pilot is completed.

**OHWC Outreach and Education**

Our reach was expanded to new individuals, employers and partners through events, social media and our monthly newsletter. Outreach was supported through 1) face to face connections with our partners and stakeholders; 2) newly developed toolkits and workplace guides; 3) social media; and, 4) engagement in partnerships and committees.

*Highlights for this past year include:*

• Completed successful Summer Institute on Occupational Health Psychology (7/16) and biannual symposia (Mindfulness and TWH; How to Create and Sustain a Culture of Safety).
• Completed OHWC-specific project chalk talks by faculty and staff, and monthly seminars among researchers and invited practitioners.
• Fifteen summer interns were recruited to the Oregon Institute of Occupational Health Sciences summer intern program, including OHWC projects (summer 2016).
• The OHWC and the Oregon Institute of Occupational Health Sciences sponsored and exhibited at more than a dozen high profile safety, health and wellness conferences including the American Heart Association Worksite Wellness Summit, and all conferences sponsored by ASSE, Oregon OSHA, ACOEM, Oregon Worker Compensation Division, local section of AIHA, among others.
• Presented at regional and national meetings to increase visibility of Total Worker Health (e.g., Oregon OSHA & ASSE-sponsored conferences, Work, Stress and Health).
• Continued to grow our social media followers through our Twitter, Facebook, Linkedin and Blog channels, particularly emphasizing growth of our informative, monthly newsletter now reaching 1,156 subscribers.
• Continued to expand outreach of ten different "Health Impacts Safety" meeting guides in English and Spanish, including a new brochure that are available at events. Dissemination of the impact guides included: 2,700 handed out live; and > 1,500 website hits and >500 direct downloads.

**Representative Publications**
