Harvard School of Public Health Center for Work, Health, and Wellbeing

SECTION I

To complete this section, please update the information which you provided in your original competing application under Project Summary and Relevance from PHS 398 Form Page 2.

TWH Summary: This is to serve as a succinct and accurate description of the approved work and should include the TWH’s broad, long-term objectives and specific aims. This section should be informative to other persons working in the same or related fields.

The mission of the Harvard School of Public Health Center for Work, Health, and Well-being is to improve the health of workers through designing, testing, implementing and disseminating effective and integrated worksite policies, programs and practices that foster a healthy work environment, reduce potential hazardous job exposures and promote safe and healthy behaviors. NIOSH has funded our Center as part of its Total Worker Health® (TWH) initiative. During the funding cycle completed August 31, 2016, the Center included three main research projects. Be Well, Work Well included social epidemiologic and intervention research aimed at protecting and promoting the health and safety of health care workers. All the Right Moves (ARM) developed and tested an intervention to reduce risk of musculoskeletal disorders and improve worker health-related behaviors for commercial construction workers. In collaboration with a health insurance provider and vendor of services, SafeWell explored the adoption of integrated approaches to safety, health, and well-being by small to medium-sized businesses using The SafeWell Practice Guidelines: An Integrated Approach to Worker Health.

Relevance: Using no more than two or three sentences, describe the relevance of this research to public health. In this section, be succinct and use plain language that can be understood by a general, lay audience.

The Center conducts research to protect and promote the safety and health of workers through effective workplace policies, programs and practices. This research focused on healthcare, construction and manufacturing. The Center also facilitates translation of research findings to practice to ensure broad-based application.

Key Personnel: Please list all key personnel, their role in the TWH, and their current contact information, including email and phone number. You should list a Director (and Deputy if applicable) for each approved program.

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Integrated Approaches to Improving the Health and Safety of Health Care Workers – Be Well, Work Well

Job demands, such as lifting and transferring patients, working long hours (often at night), and limited control over decision-making and scheduling, contribute to elevated risk for musculoskeletal disorders (MSDs) among healthcare workers. These risks intersect with psychological distress and health-related behaviors, including physical activity, inadequate sleep, and dietary patterns associated with being overweight or obese, which are also influenced by the working conditions. In response, the Be Well – Work Well Study is studying the relationships of the conditions of work to worker health outcomes in a multi-hospital network, using data from worker surveys as well as an administrative database. We reported previously that this research has documented the pathways whereby factors at work, such as ergonomic practices, supervisor support, harassment on the job, and working long hours, are associated with worker health-related behaviors (e.g. sleep, physical activity), MSD symptoms, and...
occupational injury. Recent publications have shed new light on the relationships between the work environment and worker health outcomes. For instance, we found that support from supervisors was associated with increased frequency of taking breaks, and that these breaks were associated with lower levels of psychological distress.\textsuperscript{1} Also, recent analyses have demonstrated that when healthcare workers have more control over their schedules, they report lower psychological distress.\textsuperscript{2}

Drawing on these research findings, we developed and implemented the Be Well, Work Well intervention aimed at reducing MSD risk and improving health-related behaviors, including physical activity, sleep, and dietary patterns. In a small-scale proof-of-concept study, we tested the feasibility of changing policies and practices in participating patient care units by providing consultation for nurse managers around organizational practices and educational programming for patient care staff to facilitate improvements in safety and health behaviors.\textsuperscript{3} We also evaluated the effect of a hospital wide safe patient handling and mobilization program on work practices and worker injuries.\textsuperscript{4} Taken together, these evaluations underscore the importance of embedding unit-specific interventions in organization-wide initiatives, the significance of top management support and commitment, and the impact of coordinated efforts across departments and systems. Lessons learned from this study will inform future research within healthcare settings, which are receiving increasing attention given the high risks of injury workers face and the many barriers to risk reduction within this setting.

**Integrated Approaches to Health and Safety in dynamic Construction Work Environment.**

We’ve developed and tested our intervention in construction, called “All the Right Moves,” that emphasizes ergonomics, tobacco use cessation and energy balance (diet and physical activity). The final program that we tested in a clustered randomized controlled trial in 10 constructions sites in the Boston area had two components: (1) a soft tissue injury prevention program, using a continuous improvement framework with core elements of foreman training, pre-task planning, worksite inspections, foreman and worker feedback; and (2) a health week delivering our integrated key messages and opportunities to engage workers site-wide through toolbox talks, health coaching, and nicotine replacement therapy opportunities. Our activities on the worksite were implemented in close collaboration with the general contractor and other site stakeholders.\textsuperscript{5,6}

The evaluations demonstrated significant effects on individual health behaviors such as improved diet, increased minutes of moderate and vigorous physical activity during leisure time, and decreased new incidences of pain; however, little changes in the working conditions were observed. The evaluation indicates that a concerted effort between all contractors is important with a special emphasis on engaging the sub-contractor. The subcontractors need the necessary resources to participate in changing the working conditions.
“Dissemination of Integrated Worker Health Programs among Small/Medium Employers”

The SafeWell project, is built on the Center’s guidelines for implementing TWH approaches, called the SafeWell Practice Guidelines.⁷ To understand factors relevant to small to medium-sized businesses (SMBs) in adopting TWH approaches, we interviewed and conducted a web-based survey of decision-makers in SMBs in the upper Midwest, using tools we developed to assess implementation of TWH approaches.⁸ The Indicators of Integration tool that measures the extent to which integrated efforts are implemented in an organization was validated using project survey data combined with data from Veterans’ Administration Medical Centers’ Surveys.⁸,⁹

We also partnered with a vendor that provides health, safety, and well-being products to examine the feasibility and acceptability of delivering TWH approaches in three pilot site SMBs. Vendors often provide health and safety services to small- to medium-sized employers that lack in-house resources, but vendors rarely provide TWH approaches.

We learned that despite having limited resources to adopt and implement TWH approaches, there are still excellent examples of SMBs successfully adopting and implementing them.¹⁰⁻¹² Company size was not necessarily a barrier, and assessment tools developed were valid and valuable to SMBs.⁸,¹¹,¹³ We found that adoption and implementation of a vendor-delivered approach to TWH were enhanced by: openness to change and innovation; sustained and articulated leadership support; allocation of dedicated staff, budgets, and committees; collaborative organizational cultures that also value and prioritize employee health, safety, and well-being; existing organizational procedures/processes that could be leveraged for new approaches; and realistic implementation timelines to account for organizational changes to occur.¹⁰⁻¹²⁻¹⁴

The SafeWell Practice Guidelines: An Integrated Approach to Worker Health

The SafeWell Guidelines are being used globally to inform organizations about ways they may conduct integrated approaches to worker health, safety, and well-being. They are free and available for download from the Harvard T.H. Chan School of Public Health Center for Work, Health, and Well-being’s website at: [http://centerforworkhealth.sph.harvard.edu/](http://centerforworkhealth.sph.harvard.edu/).

Building on the SafeWell Guidelines, we are developing an Implementation Manual in collaboration with the Veterans Health Administration. The Implementation Manual will include tactical guidance on successful implementation following five steps: (1) obtaining support, by garnering leadership support and employee engagement throughout the process; (2) program planning, including identifying the conditions of work associated with employee safety and health; (3) implementing programs, policies, and practices to address the conditions of work; and (4) evaluating implementation efforts. The Implementation Guidelines will serve as the basis for a capacity building suite of materials.


Executive and Continuing Professional Education course offered annually at the Harvard Chan School of Public Health

In addition, the Center for Work, Health, and Wellbeing’s high impact outcomes include our successful Executive and Continuing Professional Education Courses held annually. The 2016 course attracted 48 professionals to learn about integrated approaches for Total Worker Health®. Participants representing practitioners and researchers came from 14 states and Washington, DC and from 9 countries across 5 continents. In addition, the dissemination impact of this course includes developing new U.S. and global partnerships with governmental, social service, and industrial sectors in Chile, Brazil, and elsewhere to collaborate on advancing and disseminating integrated approaches for TWH.
Total Worker Health Collaboration with Boston Fire Department and Boston Firefighters Union Local 718

Working together, the Boston Fire Department and Boston Firefighters Union Local 718 approached the Center to build a collaboration to reduce cancer risk among Boston firefighters. Over the last year, Dr. Sorensen’s team has conducted preliminary research to explore station-level cancer risk factors, such as diesel emissions from idling trucks and off-gassing from bunker gear, as well as disrupted sleep patterns and high stress levels. The team completed data collection for a pilot study in the spring of 2016 involving air sampling and key informant interviews. The results identified the fire trucks as a probable source of poor air quality in the fire stations, and demonstrated the positive impact of installing bunker gear washing machines in fire stations. The preliminary data will help inform a future intervention aimed at reducing cancer-related risk factors at the fire station.

Publications

2016

Integrating worksite health protection and health promotion: A conceptual model for intervention and research.

Measurement Tools for Integrated Worker Health Protection and Promotion: Lessons Learned From the SafeWell Project.

Validation and Dimensionality of the Integration of Health Protection and Health Promotion Score: Evidence from the PULSE small business and VA Medical Center Surveys.

Supporting employees' work-family needs improves health care quality: Longitudinal evidence from long-term care.
Okechukwu CA, Kelly EL, Bacic J, DePasquale N, Hurtado D, Kossek E, Sembajwe G.

Kottke TE, Stiefel M, Pronk NP.
DOI: http://dx.doi.org/10.5888/pcd13.160155

Implementing an integrated health protection/health promotion intervention in the hospital setting: Lessons learned from the Be Well, Work Well Study.
2015

Validation of biomarkers of CVD risk from Dried Blood Spots: Methodologies and study-specific serum equivalencies.

Schedule Control and Mental Health: The Relevance of Coworkers’ Reports.
References