

four IGLO levels. Using the expanded model we were able to explore important SOC strategies at work such as; is your manager providing the necessary equipment to avoid wear and tear, are your coworkers helping you with heavy or difficult work tasks etc. The empirical study, furthermore, brought insights about factors that hinder or facilitates the use of SOC strategies among senior employees, such as time pressure, space issues at the workplace, norms of the group and feelings of guilt and ambiguity towards helping coworkers etc.

**Practical implications.** The list of specific SOC strategies used at the different workplaces at all four IGLO levels may serve as inspiration to other workplaces when aiming to retain senior employees at work. Knowing which factors hinders or facilitates the use of the SOC strategies may prove particularly relevant for practitioners aiming to create a more sustainable workplace.

Furthermore, the results of the interviews provided input to the development of an expanded SOC questionnaire in another part of this project.

**Conclusion.** Based on the empirical findings, exploring the new theoretical outline of the SOC model, we conclude that it is advantageous to expand the original SOC model in order to better fit a workplaces setting. We therefore propose expanding the original SOC model to include the additional levels: group, leadership, and organization.

### Salon 3 & 4

## Building Successful Academic-Employer Partnerships for Research Innovation: Examples from the Construction and Health Care Sectors

### SYMPOSIUM

*Chair: Jessica Williams (University of Kansas Medical Center)*

Strong partnerships between academic researchers and employers are necessary to ensure that research questions are relevant to practice, pinpoint employer needs, design solutions to meet these needs, and bring program solutions to scale for widespread distribution and dissemination. Such partnerships have guided research conducted by the Harvard T.H. Chan School of Public Health Center for Work, Health, and Well-being, a Total Worker Health® Center of Excellence. The Center aims to expand the evidence on integrated approaches through etiologic and intervention effectiveness research studies and to build the practice base through translating and disseminating best practices, developing policy recommendations, and building the capacity of trained professionals and organizations. In this symposium, we present three perspectives on research collaboration from three major research projects conducted by Center investigators. These papers represent collaboration for different research objectives across two different industries, construction and healthcare.

The first paper describes collaborations developed in the context of intervention and observational studies within the construction industry, examining worker safety, health, and well-being within the complexity of the industry. The first project, All the Right Moves (ARM) was a worksite program that aligned with fundamental worksite programs already in place in the industry – safety inspections, pre-task planning, job hazard analysis, and safety week. Based on the lessons learned, we developed a second program based within subcontractors called ARM for Subs. This paper defines and describes the role of partnerships

specifically in the ARM for Subs research project. Intervention development and evaluation consists of several phases of research where our partnership with the industry played out in different roles. The success of many safety and health interventions appreciates when the intervention's goals and objectives match those of the partnering organization so that those receiving the intervention and are engaged in the activities see a value added for their participation.

The second paper describes collaborations among the Center, nursing home associations, and state Worker's Compensation boards to support the Enterprise Outcomes study. The goal of the Enterprise Outcomes study is to promote the health and safety of workers in the nursing home industry through understanding of TWH approaches in the industry. The study aims to determine the extent to which existing programs, policies, and practices in nursing homes align with Total Worker Health®. This paper discusses the methods used to build collaborations with state nursing home associations and state Worker's Compensation boards. Several methods were used to build potential collaborations, however, not all of them resulted in successful partnerships. Data availability and state regulations were the major barriers to collaboration with Worker's Compensation institutions. Major barriers to collaborations with state nursing home associations included: perceived reputational risk, organizational change, and ongoing state level policy processes. Potential training opportunities, future research opportunities, and additional knowledge were key facilitators for collaborations with nursing home associations.

The third paper discusses how an academic-employer partnership, between the Harvard Center for Work, Health, and Well-being (a Total Worker Health Center of Excellence) and Partners HealthCare, a major health system in Massachusetts, has been successful in creating relevant public health research and practice. The Boston Hospital Workers Health Study (BHWHS) consists of approximately 15,000 workers and involves an integrated, longitudinal, administrative database linked with self-report surveys. Several facets of the partnership will be discussed in the presentation starting with how the two groups have gone about negotiating data-sharing, joint agenda-setting, and partnership throughout the research process. Second, we will present the structure and function of BHWHS and discuss the rationale for the setup. We will also provide a brief synopsis of scientific insights that demonstrate how BHWHS advances both the public health enterprise and Partners' concerns about the health of its workforce.

### Partnering with construction companies for health and safety research adds value in a shared mission

*Jack Dennerlein (Northeastern University)*

**Statement of the Problem:** Completing worker safety, health, and well-being research in the construction industry has many challenges while the need to improve working conditions for construction workers is quite evident.<sup>1</sup> Integrated worksite programs that target the conditions of work have become increasingly popular due to their comprehensive nature and their added value to an organization's mission; however, fitting interventions to the context of the construction industry poses many challenges. <sup>2,3</sup> Work organization and the hierarchical structure in construction does not follow the traditional manufacturing model; workers on a given worksite are employed by different companies and move from worksite to worksite (Figure 1).<sup>4,5</sup> On a given worksite, there will be multiple construction companies working side by side employing different trades needed at a given time for the project. These are often overseen by the general contractor and the owner. We

have implemented a number of intervention and observational studies within the construction industry examining worker safety, health, and well-being within the complexity of the industry. Two intervention projects were based on a conceptual framework put forth by the Center for Work, Health and Well-being at the Harvard T.H. Chan School of Public Health.<sup>2</sup> The first project called, All the Right Moves (ARM) was a worksite program that aligned with fundamental worksite programs already in place in the industry – safety inspections, pre-task planning job hazard analysis, and safety week.<sup>6</sup> Based on the lessons learned, we developed a second program based within subcontractors called ARM for Subs. For both programs we partnered with industry stakeholders to complete almost all stages of developing, implementing, and evaluating the interventions. Our goal here in this abstract is to define and describe the role of the partnerships in our ARM for Subs research project from intervention development to the program evaluation. Procedures and Analyses. Intervention development and evaluation consists of several phases of research where our partnership with the industry played out in different roles. Before developing the intervention fully, we utilize formative research to understand the organizational structure, current practices, attitudes and beliefs within the organization. We completed key informative interviews with four sub-contracting companies. Once we developed an intervention design, we vet the program with both managers (safety, project execs, and foreman) and workers. For this project we vetted the program with three companies. Then we piloted the program with a single subcontractor to work out the implementation logistics and finalize the design. We are currently evaluating the program with three subcontractors needing a total of 14. For this phase we have teamed up with the Association of Subcontractors of Massachusetts to recruit these 14 subcontractor companies. Data collection during the most of these phases were primarily qualitative, which included research staff process tracking notes collected during intervention activities as well as key informant interviews with company managers and focus groups with workers. We used standard analytic methods for thematic content analysis of qualitative data that are collected in the form of texts.<sup>7</sup> Results. Throughout the formative research phases of the projects our industrial stakeholders described a need for the work we were proposing to do. They shared our need to help create change within their organizations. As a result, they shared how they as an organization currently work, how they create teams and how crews work together. They provided us with organizational structures in order to understand how they work and how they are structured. During the piloting of the intervention with the single subcontracting company our process tracking revealed that the company saw value in what we were doing. “In our collaboration we gained a better understanding of what we do well and what needs improvement.” “[the program achieved measured improvement and increased morale.” Currently in our recruitment of the 14 companies, we are hearing the interest in partnering with us has come from our previous success in helping companies meet their needs. Practical Implications and Conclusions. The success of many safety and health interventions appreciates when the intervention’s goals and objectives match those of the partnering organization so that those receiving the intervention and are engaged in the activities see a value added for their participation. Developing an intervention in partnership with the key stakeholders through collaborative process has benefits for the intervention design in achieving this goal. In addition aligning activities with current work practices also allow for the intervention to adapt to and adopted by the partners.<sup>8,9</sup> Overall, both parties involved in the research, the academic research staff and the industrial partners simply

want to do the right thing to improve the safety, health, and well-being of their workers. This shared value has proven time and again to be key in the success of our research.

### **Confronting challenges in collaboration: Examples from the nursing home industry**

*Jessica Williams (University of Kansas Medical Center)*

Problem. Industry-wide adoption of TWH approaches offers a promising comprehensive strategy to address elevated health risks among nursing home workers. Yet, the degree to which the industry’s existing programs, policies, and practices align with the Total Worker Health® approach is unknown. In order to determine whether scarce resources should be allocated to implementing TWH, it is important to understand if this approach is associated with a reduction in occupational injuries and/or with improvements in patient outcomes. The primary goal of the Enterprise Outcomes study is to promote the health and safety of workers in the nursing home industry through understanding of TWH approaches in the industry. The central hypothesis of the Enterprise Outcomes study is that nursing homes whose programs, policies, and practices align more closely with TWH as measured by the Workplace Integrated Health Assessment<sup>1</sup> will have better outcomes with respect to occupational injury and quality of patient care compared to worksites less aligned with TWH approaches. Procedures. The project combines three types of organizational level data: (1) survey of Directors of Nursing in nursing homes in three states; (2) quality of care from an administrative database housed at Harvard Medical School; and (3) facility level data on occupational injury rates, which will come directly from state workers compensation boards. To obtain the necessary data for the study, extensive partnerships were sought among several states (MA, NY, OH, CA, and OR). Potential partners included nursing home professional associations and State Worker’s Compensation Boards. The goal was to have nursing home associations inform their members of the survey with letters of support or to send out the survey to increase salience for respondents. Facility level data on injuries were needed from the State Worker’s Compensation Boards. Ideally, there would be functioning partnerships of both types in each state. Crucially though, we could not do the research without the Worker’s Compensation data on injuries, making their participation a binding constraint. For the state worker’s compensation boards, state practice regarding data access and our assessment of data quality drove the relationship process. Several methods were used to build partnerships with nursing home associations. These included both email and phone contact, with and without preexisting relationships and referrals from colleagues. Results. The level of identifiers for the nursing homes was the major determinant of whether relationships with state worker’s compensation boards could move forward (all states). However, institutional changes, such as in personnel and management structure were also important. In some states the attempted methods worked to build relationships with nursing homes associations, resulting in successful collaborations, while in others they were insufficient to induce participation. In all states, political and policy concerns were important to partner organizations. The perceived heightened scrutiny surrounding nursing homes and pending legislation were insurmountable barriers in some states. There was also a great degree of concern for the workload of the directors of nursing—our intended respondents. There was also concern about the level of shared value for the individual nursing homes as the survey did not itself address patient care—a primary motivator<sup>2</sup>. Additionally,

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