SECTION I:

TWH Summary: The University of Iowa Healthier Workforce Center (HWC), works to implement, evaluate and compare health protection models and programs, policies and practices to promote safety and health, with the goal of identifying Total Worker Health™ best and promising practices. Through research and outreach activities, the HWC serves as a state and national resource for employee safety and health programs, services, and policies. The Center has a well-qualified leadership team and Internal Advisory Committee, highly qualified investigators, and is advised by its diverse External Advisory Committee. The HWC has demonstrated productive research and electronic translation of its research to practice through implementation and expansion of its outreach efforts and through the efforts of the Small Business Outreach Education and Translation Project. The Small Business Outreach project has developed online resources, including short videos, specifically targeting small- and medium-sized businesses to promote and support employee participation in workplace programs and policies. In addition, a trans-disciplinary research project is currently being conducted in a window manufacturing facility evaluating an integrated safety and health intervention that uses participatory ergonomics in coordination with health coaching to reduce ergonomic stressors, musculoskeletal disease outcomes and their related costs. The Center’s pilot grant program provides guidance and financial resources to engage students, new investigators and community partners in Total Worker Health™ research and initiatives. Through the Healthier Workforce Bulletin, website and social media, the Center shares outcomes and other evidence-based resources and TWH™ best practices to employers, particularly small- and medium-sized employers.

Relevance: The HWC is composed of a well-qualified and productive team of investigators dedicated to further developing the science-base for integrated health protection/health promotion programs through peer reviewed publication of its research, real-time translation of evidence-based employee safety and health educational and training tutorials nationally/globally, and outreach to inform state and national stakeholders through Center educational programs and policy papers and advocacy.

Current Contact Information:

<table>
<thead>
<tr>
<th>Key Personnel</th>
<th>Role in Center</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diane Rohlman, MA, PhD</td>
<td>Center Director &amp; ETP2 Co-Principal Investigator</td>
<td><a href="mailto:diane-rohlman@uiowa.edu">diane-rohlman@uiowa.edu</a></td>
<td>(319) 384-4007</td>
</tr>
<tr>
<td>Nathan Fethke, PhD, CPE</td>
<td>Deputy Director &amp; TRP4 Principal Investigator</td>
<td><a href="mailto:nathan-fethke@uiowa.edu">nathan-fethke@uiowa.edu</a></td>
<td>(319) 467-4563</td>
</tr>
<tr>
<td>Brenda S. Buikema, MD</td>
<td>Medical Director</td>
<td><a href="mailto:brenda-buikema@uiowa.edu">brenda-buikema@uiowa.edu</a></td>
<td>(319) 384-4003</td>
</tr>
<tr>
<td>Shelly Campo, PhD</td>
<td>ETP2 Co-Principal Investigator</td>
<td><a href="mailto:shelly-campo@uiowa.edu">shelly-campo@uiowa.edu</a></td>
<td>(319) 335-9097</td>
</tr>
<tr>
<td>Fredric Gerr, MD</td>
<td>TRP4 Co-Investigator</td>
<td><a href="mailto:fred-gerr@uiowa.edu">fred-gerr@uiowa.edu</a></td>
<td>(319) 335-4212</td>
</tr>
<tr>
<td>Joseph Cavanaugh, PhD</td>
<td>TRP4 Co-Investigator</td>
<td><a href="mailto:joe-cavanaugh@uiowa.edu">joe-cavanaugh@uiowa.edu</a></td>
<td>(319) 384-1602</td>
</tr>
</tbody>
</table>
SECTION II: program highlights of high impact outcomes.

Participatory program for designing workplace health interventions
The workplace presents both challenges and opportunities for promoting worker health. Employee wellness programs are common, but their focus is often on the personal behaviors of workers that occur outside of the workplace and fail to recognize the workplace as a contributing factor in employee health. These programs are usually developed at the corporate level with little input from workers, resulting in poor worker participation and effectiveness. Ann Marie Dale, PhD from Washington University School of Medicine in St. Louis, received a pilot grant from the Healthier Workforce Center at the University of Iowa to test a participatory health promotion program in a retail work setting. The goal of the program was to form an advisory team of retail workers who could identify safety and health issues at their store and to develop feasible workplace interventions to address the issues. Six retail workers participated in a worker Health Team to design an intervention from brainstorming to design process and relied on survey and focus group data form earlier formative evaluation work that identified workplace barriers and facilitators to employee health. Information was presented to the Health Team using an experience map to tell the story of “a day in the life of a retail worker”; the map provided a visual graphic, displaying a variety of information about work activities and thoughts and mood states over the work day and health data of the workforce. Throughout the design process, the Health Team and facilitator met one hour each week for eight weeks. Their interventions focused on improving store communication and educated employees on general health topics including healthy eating. The intervention activities developed by the Health Team are currently being evaluated by store management.

Violence Prevention Policies, Programs, and Practices in a National Sample of Mid-Sized Employers
Understanding how workplace violence prevention policies, programs, and practices compare with industry standards was added in a study by Carri Casteel and her colleagues with pilot project funding from the University of Iowa’s Healthier Workforce Center, one of four centers of excellence in Total Worker Health from the National Institute of Occupational Safety and Health. The team was particularly interested in understanding how policies, practices and programs vary by employer size. A survey was completed by members and key stakeholders of the Association of Threat Assessment Professionals whose members are large corporations and national sample of small and mid-sized businesses from the Dunn and Bradstreet business listing. Findings suggest that nearly all large businesses (97%) and small and mid-sized businesses (91%) have a workplace violence prevention program. Nearly all had policies for
unacceptable behavior, anti-harassment and discrimination and a code of business conduct/ethics. Nearly 95% of large businesses and 83% of small businesses had policies on reporting of circumstances that raise employee safety concerns such as safety, substance use, and weapons on-site. Overall larger employers had more industry standards in place than small and mid-sized companies with the exception of policies allowing employers to inspect employer work spaces and/or devices which is more common in smaller employers. Reports of violence and possession of weapons were more frequent at larger companies and were more likely to include investigations. Findings and reports were shared in 2014 and 2015 at the Association of Threat Assessment Professionals which includes safety directors at Fortune 500 companies.

**Total Worker Health® among College Seniors and Recent Graduates**

Differences in health and safety risks of those working in college versus recent graduates may be different. If so, different types of programs, policies, and practices may be needed to keep those workers safe and healthy. In March of 2015, a survey was conducted with recent alumni and undergraduate seniors at Grinnell College to examine trends in the transition from school to work. The study was funded by a pilot grant to Sophia Chiu, MD, MPH, from the Healthier Workforce Center for Excellence at the University of Iowa, one of four national centers in Total Worker Health™ funded by the National Institute for Occupational Safety and Health (NIOSH). Seventy students and 257 alumni completed the survey, which examined trends in workplace, personal risk factors, and injuries. Chiu and her colleagues compared the results from the 57 students and 212 alumni holding jobs. Current students and recent alumni answered very similarly on a number of factors, including perceptions of wellness, general health, injury rates, water consumption, stress, number of days of moderate or vigorous physical activity and weight, or management support for workplace health and safety. In general, all of these results were in a healthy direction with the exception being feeling stressed sometimes to fairly often. Differences were seen in safety training (students more likely), work life balance (students more supported), and personal health (students felt more supported). In terms of unhealthy personal risks, alumni used more smokeless tobacco than students. However, most personal risks were higher in students including hookah use, sedative use, ecstasy use, binge drinking, eating more sugar, eating more fast food, and eating fewer meals from home. Results suggest Total Worker Health® needs may vary between students and recent college alumni.

**Health Worksite Physical Activity Intervention for Ambulatory Clinic Registered Nursing Staff**

Nursing is recognized as one of the most hazardous occupations, and nurses often work long and irregular work hours limiting their opportunities for engaging in healthy behaviors such as physical activity. Physical activity is not only good for the health of the employee, but can reduce safety risks and the number of sick days and work productivity. Sharon Tucker, a nursing professor at the University of Iowa, and her colleagues conducted a project funded by the Healthier Workforce Center at the University of Iowa to test the effectiveness of a workplace intervention with hospital nurses to increase low intensity physical activity on the job through workstation treadmills, walking meetings, stair climbing, gaming, and 3-minute video clips. Reinforcing text messages were also provided to employees. The intervention was successful in increasing physical activity in the workday by 22 minutes and decreasing absenteeism without reducing self-reported work productivity which is critical to other workplaces adopting these programs.

**Participatory Ergonomics & Wellness Coaching Yield Health Improvements**

Musculoskeletal pain (pain affecting the muscles, bones, or joints) is a very common complaint among workers and results in a large number of missed days from work and
workers’ compensation claims. Nathan Fethke, professor of occupational and environmental health, received funding from the Healthier Workforce Center to develop and evaluate a workplace program to address this critical issue in a large window manufacturing company. His research combined wellness coaching for employee-identified issues (e.g., physical activity, stress reduction, weight loss) with a participatory ergonomic approach. Ergonomics is the science of designing and arranging equipment to fit the operator so that tasks can be completed more efficiently and safely. The ergonomic assessment was based on video footage of employees performing actual manufacturing tasks and was analyzed to reveal ergonomic issues that could be easily addressed by modifying the task, equipment, or physical position of the employee relative to the task. Participatory ergonomics makes full use of worker involvement in the assessment process, recognizing that the worker is the expert of his or her job. Employers then addressed those ergonomic problems by making changes to the equipment, work schedule, table height, etc. Both the wellness coaching and ergonomic changes are being examined for impacts on employee mental and physical well-being.

**Healthier Workforce Center Partners with the Iowa League of Cities the Iowa Municipal Workers’ Compensation Association**

As part of the education and translational research project focused primarily on small employers, the University of Iowa’s Healthier Workforce Center has partnered with the Iowa League of Cities and the Iowa Municipal Workers’ Compensation Association (IMWCA) to learn about the safety and health issues facing municipal workers in Iowa and the policies, programs, and practices being used to address those concerns. Municipal workers can include police, firefighters, city clerks, librarians, road crews, bus drivers, municipal waste workers, park rangers, lifeguards, and a host of other types of full-time, part-time and seasonal workers. Facilitated by IMWCA loss control staff members, the Center has conducted semi-structured interviews with elected officials, managers and employees of Henry County, the cities of Spencer, Atlantic, Waukee, Carrol and Fairfield, as well as the Region XII Council of Governments in Carroll. In addition, Center staff met with municipal clerks from all over the state in Ames on July 28 at the Iowa Municipal Professionals Academy sponsored by Iowa State University Extension and Outreach and presented on mapping workplace hazards, sharing best practices and brainstorming on effective ways to address them. Interviews, video content and photographs will be used in outreach future outreach materials tailored to municipal workers and to more general audiences.