The Drive Towards Total Worker Health® Workforce Training

Joshua Scott PhD © MS
Who We Are

The Center for Health, Work & Environment is one of six Centers of Excellence for Total Worker Health® and houses the Mountain & Plains Education and Research Center, one of 18 centers of its kind supported by the National Institute for Occupational Safety and Health (NIOSH).
WHY
are we interested in TWH and TWH continuing education (CE) needs and interest

HOW
Did we create the survey, distribute the survey, and collect responses

WHAT
have we learned about TWH CE needs and interest, additional research needed, and next steps
DISCLAIMER
Interruptions Appreciated!
The Drive Toward TOTAL WORKER HEALTH™

Policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.
Small business in the United States

48% of the workforce

Number of establishments

0-4
5-9
10-19
20-99
100-499
500+

US Census 2014
Total Worker Health in Small Business

Challenges
• Higher injury rates amongst smaller businesses
• High levels of poor health
• Fewer resources available in house

Opportunities
• Easier to implement change
• Higher employee engagement
• Relationship focused (family-owned and non-family owned)
## Economic Impact of Workplace Injuries

### 2011 (2007 data)

<table>
<thead>
<tr>
<th></th>
<th>Fatal Injuries</th>
<th>Non Fatal Injuries</th>
<th>Fatal Illnesses</th>
<th>Non Fatal Illnesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fatal Injuries</strong></td>
<td>5,600</td>
<td>8,559,000</td>
<td>53,000</td>
<td>427,000</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>$6 Billion</td>
<td>$186 Billion</td>
<td>$46 Billion</td>
<td>$12 Billion</td>
</tr>
</tbody>
</table>

The economic burden of occupational injury and illness in the United States is estimated to be $250 billion.
Private construction had the highest count of fatal injuries in 2015, but the private agriculture, forestry, fishing and hunting sector had the highest fatal work injury rate.
What's the ROI?

Aggregate Impact Of Lifestyle Management And Disease Management On Per Member Per Month Health Care Costs At PepsiCo, 2004-11

![Graph showing the impact of lifestyle management and disease management on per member per month health care costs at PepsiCo, 2004-11.](image)

**Return on investment**
Together, the lifestyle management and disease management components of Healthy Living returned an average of $1.46 for every dollar invested.
Healthcare Costs in the Workplace

COSTS & QUALITY

By Ron Z. Goetzel, Xiaofei Pei, Maryam J. Tabrizi, Rachel M. Henke, Niranjana Kowlessar, Craig F. Nelson, and R. Douglas Metz

Ten Modifiable Health Risk Factors Are Linked To More Than One-Fifth Of Employer-Employee Health Care Spending
Consensus of ROI Research to date

Return on Investment for wellness programs

• Range = $0.30 - $2.33

Benefits:
• Lower health care costs
• Increased productivity
• Lower number of injuries
• Reduced absenteeism
Engagement is the Buzz

- 2014 Deloit global Human Capital Study
  - 78% of business leaders rate retention and engagement as urgent or important
  - If your company has it, you are 2-4x more successful

But what’s missing from VOI Debate?
“Why You Hate Work”

- Only 30% of employees in the U.S. feel engaged at work
- Demand for time exceeds our capacity – and getting worse
- Increased pressures, competitiveness
- Digital technology

The Energy Project
TWH Training Needs?

- TWH is a relatively young framework, workforce and industry TWH professional development and training needs are unknown.
- In order to move TWH forward in practice, professionals need to have the knowledge and skills critical to TWH interventions.
Did we design the survey?

- 18 ERC Continuing Education Directors
- 2015 National CE Needs and Interest Assessment
- 2011 National Assessment of the Occupational Health and Safety Workforce
Did we distribute the survey?

National convenience sample of all workers – but focus on those in occupational safety and health

**Distributed by:**

- 18 ERCs
- TWH Centers
- TWH Affiliates
- Professional associations
- Chambers of commerce
- Partner organizations
Have we learned?

• 2064 respondents, 1501 completed
• All 50 states
• Industries
  • Healthcare & Social Assistance (430, 29%)
  • Manufacturing (275, 18%)
  • Services (233, 16%)
  • Construction (111, 7%)
  • Government (92, 6%)
• Main Profession
  • OS (432, 29.0%)
  • OHN (299, 20.1%)
  • IH (196, 13.2%)
  • Occ. Med. (123, 8.3%)
  • TWH (36, 2.8%)

<table>
<thead>
<tr>
<th>Age Range</th>
<th>N (1491)</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 29</td>
<td>63</td>
<td>4.2%</td>
</tr>
<tr>
<td>30 - 39</td>
<td>180</td>
<td>12.1%</td>
</tr>
<tr>
<td>40 - 49</td>
<td>305</td>
<td>20.4%</td>
</tr>
<tr>
<td>50 - 59</td>
<td>518</td>
<td>34.7%</td>
</tr>
<tr>
<td>60 - 69</td>
<td>378</td>
<td>25.3%</td>
</tr>
<tr>
<td>70 or older</td>
<td>48</td>
<td>3.2%</td>
</tr>
</tbody>
</table>
Have we learned (cont.)?

Do you spend time at work outside your profession - i.e., is your work interdisciplinary?

<table>
<thead>
<tr>
<th></th>
<th>1 - 50 employees (N = 284)</th>
<th>51 - 100 employees (N = 119)</th>
<th>101 - 300 employees (n = 194)</th>
<th>301 - 500 employees (N = 110)</th>
<th>501 or more employees (N = 786)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>194 (68%)</td>
<td>89 (75%)</td>
<td>134 (69%)</td>
<td>55 (60%)</td>
<td>498 (63%)</td>
<td>981 (66%)</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>67 (32%)</td>
<td>30 (25%)</td>
<td>60 (31%)</td>
<td>44 (40%)</td>
<td>290 (37%)</td>
<td>491 (34%)</td>
</tr>
</tbody>
</table>

Of the 981 that indicated Yes - 135 (14%) selected TWH
Primary and secondary profession was coded to identify individuals that indicated an occupational safety related profession and Other (i.e., TWH, occupational health psychology, human resources, benefits and compensation)

### Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>N(%) TWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale and Retail Trade</td>
<td>(12, 50%)</td>
</tr>
<tr>
<td>Public Health</td>
<td>(17, 41.2%)</td>
</tr>
<tr>
<td>Transportation, Warehousing &amp; Utilities</td>
<td>(55, 40%)</td>
</tr>
<tr>
<td>Agriculture, Forestry &amp; Fishing (except wildland firefighting)</td>
<td>(35, 38.2%)</td>
</tr>
</tbody>
</table>

### Primary Profession

<table>
<thead>
<tr>
<th>Primary Profession</th>
<th>N(%) TWH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resources</td>
<td>(31, 45%)</td>
</tr>
<tr>
<td>Occupational Safety</td>
<td>(432, 41.2%)</td>
</tr>
<tr>
<td>Ergonomics / Physical Therapy</td>
<td>(28, 40%)</td>
</tr>
<tr>
<td>Occupational Health Psychology</td>
<td>(20, 38.2%)</td>
</tr>
</tbody>
</table>

587 (29.4%) individuals were classified as practicing TWH

Organizations with 100 or less employees have 38% of folks doing TWH compared to 28% in organizations over 100 employees
Have we learned (cont.)?

Consider the following areas and your need for Continuing Education (top 8 of 35 options), N=587
Have we learned (cont.)?

What are your workplace concerns for which continuing education is needed (top 8 of 34 options)? N=587

Disaster and emergency response
Musculoskeletal health
Back injury prevention
Occupational Stress
Injury prevention
Health promotion in the workplace/worksite wellness
Safety / Health culture
Total Worker Health

- No Interest
- Basic Offering
- Advanced Offering
Online Education in Total Worker Health®
Please do not insert a slide from a different PowerPoint template (PowerPoint will not format it correctly into the CHWE template). Instead, copy and paste content into the CHWE PowerPoint.
Learnpro.org (cont.)
Welcome to ATV Safety Online

Welcome,

I personally want to welcome you to this online ATV safety training course. I am Ken Nelson, Extension Agent, and champion for ATV safety. I served as the technical consultant for this project and want you to get the most from the online training. I also teach the ATV Safety Institute’s RiderCourse™ a 5-hour, hands-on, fully interactive training and hope to see you in that course as well.

The purpose of this training is to increase awareness of the risks, hazards associated with riding ATVs and advocate safer riding strategies to prevent injury and fatality. This online training was modeled after the ASI hands-on RiderCourses™ designed to increase your knowledge, skills and abilities for safer use of ATVs at work and for recreation.

Ken Nelson Clip
Online Course Development

- Occupational Health Nursing Prep.
  - 17 modules, 3 hrs content
- Guidelines & Tools for Improving Pain Management: Opioid Stewardship
  - 3 modules, 3 hrs content
- Employee Engagement Strategies
  - 2 hrs content
- Health Links Benchmark Series
  - 6-8 hrs content
- Family-Friendly
  - 2 hrs content
- Intro to TWH Leadership
  - 2 hrs content
- Ergonomics for the Modern Office
  - 2 hrs content
- Health Links Standard Overview
  - 1 hr content
TWH Certificate

Total Worker Health® EAC Meeting
April 26, 2018
NIOSH Total Worker Health® (TWH) Roundtable on Education and Training: Building capacity for TWH

Deborah McLellan, PhD, MHS
Harvard T. H. Chan School of Public Health
Center for Work, Health, & Well-being
Roundtable goal

Develop options for how to design and implement Total Worker Health® (TWH) education & training programs for professional audiences as efficiently and quickly as possible.
Purposes of Subgroups

Audiences and Training Delivery:
- Identify audiences, programs, & methods for TWH training
- Suggest ways to reach each audience with TWH training
- Recommend strategies to create demand for TWH training
- Prioritize the most critical audiences for TWH training

TWH Core Competencies:
- Identify core competencies for TWH for the main audiences who need education and training across a spectrum of existing and developing professionals

Business Case for TWH:
- Develop a strategy for health professionals to make the business case to multiple groups including senior management and provide the appropriate literature and materials to support the business case.
Key Audience Groups

Existing occupational safety & health (OSH) professionals
   Occupational health physicians, nurses, psychologists, industrial hygienists, safety engineers

Existing non-OSH personnel
   Human Resource professionals, EAP, benefits, public health, unions

Key intermediaries
   Insurance brokers, vendors, state/local Health Depts., workers comp

Developing students
   All levels and all types
Suggested TWH Competencies

• Subject matter expertise
• Workers’ Advocacy and Engagement
• Program planning, implementation, & evaluation
• Communication & Marketing
• Leadership & Management
• Partnership building, integrating, coordinating, collaborating, linking
Conclusions

Priority audiences: focus on array of fields representing health, safety, & well-being.

• Human Resources, traditional OSH & Public Health,
• Existing & developing professionals

Major development needs include:

• Partnerships with organizations
• Definitions & measures, including needs assessment
• Core principles, competencies, curricula
• Marketing & communications, including business case
### Required Courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHOH 6628</td>
<td>Health Promotion &amp; Health Protection in the Workplace</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>EHOH 6670</td>
<td>Occupational Health Psychology: Improving Health and Well-Being at Work</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>EHOH 6629</td>
<td>Intro to Occupational Safety &amp; Ergonomics (Intro to Workplace Health Protection)</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>EHOH 6670</td>
<td>Communications for Public Health Impact</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>EHOH 6634</td>
<td>Spectrums of Professions Protecting &amp; Promoting Worker Health</td>
<td>1</td>
<td>Fall (Online)</td>
</tr>
</tbody>
</table>

*H = Hybrid course, permission of instructor/department required.*
## Approved Electives

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHOH 6620</td>
<td>Risk Assessment &amp; Decision Making</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>EHOH 6614</td>
<td>Intro to Environmental and Occupational Health</td>
<td>3</td>
<td>Fall, Spring, Summer (Online)</td>
</tr>
<tr>
<td>CBHS 6613</td>
<td>Program Planning and Implementation</td>
<td>3</td>
<td>Fall, Spring*</td>
</tr>
<tr>
<td>EHOH 6670</td>
<td>Built Environment &amp; Public Health</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>CHBH 6100</td>
<td>Program Planning &amp; Evaluation</td>
<td>3</td>
<td>Fall (UNC)</td>
</tr>
<tr>
<td>EHOH 6630</td>
<td>Occupational and Environmental Health Interdisciplinary Symposium</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>EHOH 6840</td>
<td>Independent Study</td>
<td>1</td>
<td>Fall, Spring, Summer</td>
</tr>
</tbody>
</table>
Challenges

• Curriculum priorities – existing vs. new course development
• Evolving competencies – establishing the field
• MPH vs. adult learner preferences
  - job prospects
  - credentials
  - pre requisites
• Understanding workforce needs
• Marketing strategies
Working the West
Course Structure

• Students will spend one week traveling around Colorado touring five uniquely hazardous work environments

• Students will get exposure to occupational safety and health promotion disciplines aimed at:
  • Acquiring basic knowledge about a variety of TWH disciplines
  • Current research and practice issues in the field
  • An overview of primary research methods and worksite assessment tools used for conducting research.
Overview of Locations (subject to change)

• Larimer County Fair & Rodeo
• Coal Mine
• Oil and Gas Drilling Site
• Vineyard/Peach Farm
• Hot Springs
• Forest Services
• Avid4 Adventure (mountain biking, rock climbing, etc.) or summer recreation
• Indoor Grow Facility
• Deer Trail Missile Silo
• Healthcare site
• Aurora Organic Dairy
• Breweries (Avery, New Belgium, Odell)
• Edgar Mine/Henderson Mine
Deliverables

This course is a combination of individual inputs and group products. Assignments include:

• Readings quiz
• Oral presentation providing overview of the site and the expected occupational hazards
• Daily site reflections
• Communications Blog post from the road
• Formal site visit report and student reflection of trip