Partnering in Practice: Multi-Level Measurement in TWH

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Initial Project Overview

• Focus on
  – Small/medium sized businesses
  – Manufacturing environment
  – Low levels of physical activity
  – Back pain identified as a major risk factor

• 3 companies recruited
• 13 months intervention
• Implementation organized around quarterly themes
  – Health and safety
  – Physical activity
  – Back pain
  – Self-care
Assessments – Conceptual Approach

Health Protection
- Safety Culture
  - Safety Walk-Through

Health Promotion
- Culture of Well-Being
  - Physical Environment

Integration

Organizational
- Individual

HealthPartners Health Assessment
- Health, safety, behaviors, perceptions-
Assessment Process

• Health Assessment
  – Including self-report on safety at the workplace

• “Dimensions” assessments
  – Safety focus and Well-Being focus
  – Integration focus (“Indicators of Integration”)
  – Dialogue with key leaders
  – Consensus ratings on every element assessed

• CDC Worksite Health Scorecard
  – Checklist

• Safety Walkthrough
  – In-depth look at every part of the company by Occ. Med. physician and researcher
# Integrated Feedback Report

## Dashboard

<table>
<thead>
<tr>
<th>Assessment Tool and Key Variables</th>
<th>Company Score</th>
<th>Comparison Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee-rated health and well-being culture</td>
<td>8.0</td>
<td>--</td>
</tr>
<tr>
<td>Employee-rated safety culture</td>
<td>8.6</td>
<td>--</td>
</tr>
<tr>
<td>Engagement rating of manager in health and safety</td>
<td>23% not engaged</td>
<td>5%</td>
</tr>
<tr>
<td>Job gets in the way of safety rules</td>
<td>14.7%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Low physical activity (below guidelines)</td>
<td>32.8%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Not having a personal MD for routine care</td>
<td>32.4%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Use of prescription medications</td>
<td>34.1%</td>
<td>59%</td>
</tr>
<tr>
<td>Don’t know” range for biometrics</td>
<td>50.6% - 79.7%</td>
<td>23.8% - 66.6%</td>
</tr>
<tr>
<td>No dentist visit in past year</td>
<td>13.7%</td>
<td>14%</td>
</tr>
<tr>
<td>Currently affected by diabetes or MD (risk or dx)</td>
<td>20.1%</td>
<td>38.1%</td>
</tr>
<tr>
<td>Healthy weight / Obese</td>
<td>48.4% / 16.6%</td>
<td>34.4% / 29%</td>
</tr>
<tr>
<td>Low fruits &amp; vegetables</td>
<td>79.7%</td>
<td>77.9%</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>9.4%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Suboptimal sleep</td>
<td>29.6%</td>
<td>31.7%</td>
</tr>
<tr>
<td>Drinking and driving</td>
<td>20.0%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Felt depressed and accomplished less</td>
<td>2.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Self-reported verbal or emotional abuse</td>
<td>16.9%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Overall productivity loss</td>
<td>7.7%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions of Corporate Safety Scorecard</th>
<th>66/100 (66%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions of Corporate Well Being</td>
<td>67/100 (67%)</td>
</tr>
<tr>
<td>Dimensions of Corporate Integration</td>
<td>12/46 (26%)</td>
</tr>
<tr>
<td>CDC Worksite Health Scorecard</td>
<td>11/15 (73%)</td>
</tr>
</tbody>
</table>

### Occupational Health and Safety Assessment

- Review Level 1: 23% of hazards (All hazards classed related to job stress and role strain and mental health & work life balance. Company has developed initiatives to promote healthy working conditions.)
- Review Level 2: 57% of hazards
- Review Level 3: 17% of hazards

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### GAP Analysis Detail

**Opportunities for Intervention**

- Employees who are engaged in health and safety at the workplace prevent workplace illness and injury (breast cancer, diabetes, heart attack)
- Support low-use healthcare services
- Mental health concerns and verbal/emotional abuse are factors to consider (clinical considerations)
- Poor physical activity (below average)
- No dentist visit in past year

**Recommendations**

- Increase employee engagement in health and safety initiatives
- Implement mental health and stress management programs
- Improve smoking cessation programs
- Enhance physical activity and nutrition programs

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**Additional Notes**

- The low level of participation in the health assessment may be indicative of a lack of interest in these programs.
- Addressing these areas could lead to improved overall health and well-being among employees.
### TABLE 2. Data Samples Based on the Six Measurement Tools Used in the SafeWell Project

<table>
<thead>
<tr>
<th>Assessment Tool and Key Variables</th>
<th>Company A</th>
<th>Company A</th>
<th>Company B</th>
<th>Company B</th>
<th>Company C</th>
<th>Company C</th>
<th>Comparison</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Pre (%)</td>
<td>Post (%)</td>
<td>Pre (%)</td>
<td>Post (%)</td>
<td>Pre (%)</td>
<td>Post (%)</td>
<td></td>
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<tr>
<td>Health assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Response rate</td>
<td>74</td>
<td>77</td>
<td>23</td>
<td>36</td>
<td>63</td>
<td>67</td>
<td>–</td>
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<td>Employee-rated health and well-being culture</td>
<td>80</td>
<td>80</td>
<td>77</td>
<td>82</td>
<td>89</td>
<td>92</td>
<td>–</td>
</tr>
<tr>
<td>Employee-rated safety culture</td>
<td>86</td>
<td>88</td>
<td>65</td>
<td>82</td>
<td>90</td>
<td>88</td>
<td>–</td>
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<tr>
<td>Job always gets in the way of safety rules</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>18</td>
<td>17</td>
<td>–</td>
</tr>
<tr>
<td>Back pain</td>
<td>39</td>
<td>39</td>
<td>37</td>
<td>37</td>
<td>36</td>
<td>33</td>
<td>41*</td>
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<tr>
<td>Obese</td>
<td>16</td>
<td>17</td>
<td>27</td>
<td>28</td>
<td>24</td>
<td>25</td>
<td>29*</td>
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<tr>
<td>Tobacco use</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>10*</td>
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<td>66</td>
<td>84</td>
<td>77</td>
<td>74</td>
<td>93</td>
<td>100</td>
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<td>Self-rated safety system</td>
<td>68</td>
<td>85</td>
<td>80</td>
<td>75</td>
<td>88</td>
<td>90</td>
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<tr>
<td>Dimensions of corporate well-being</td>
<td>67</td>
<td>75</td>
<td>74</td>
<td>74</td>
<td>99</td>
<td>98</td>
<td>56*</td>
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<tr>
<td>Dimensions of corporate integration</td>
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<td>83</td>
<td>67</td>
<td>35</td>
<td>96</td>
<td>98</td>
<td>–</td>
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<tr>
<td>CDC worksite health scorecard</td>
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<td></td>
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<td>Organizational support</td>
<td>73</td>
<td>100</td>
<td>47</td>
<td>73</td>
<td>100</td>
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<td>Physical activity</td>
<td>88</td>
<td>100</td>
<td>88</td>
<td>88</td>
<td>88</td>
<td>88</td>
<td>65†</td>
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<tr>
<td>Nutrition</td>
<td>76</td>
<td>95</td>
<td>43</td>
<td>68</td>
<td>73</td>
<td>95</td>
<td>52†</td>
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<td>“Safety Walk-Through”**</td>
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<tr>
<td>Review Level I (low risk)</td>
<td>23</td>
<td>57</td>
<td>None</td>
<td>35</td>
<td>58</td>
<td>100</td>
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<tr>
<td>Review Level II (potential/moderate risk)</td>
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<td>43</td>
<td>None</td>
<td>57</td>
<td>42</td>
<td>None</td>
<td>–</td>
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<tr>
<td>Review Level III (high risk)</td>
<td>17</td>
<td>None</td>
<td>100</td>
<td>8</td>
<td>None</td>
<td>None</td>
<td>–</td>
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<tr>
<td>Review Level IV (very high risk)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>–</td>
</tr>
</tbody>
</table>

†Reflects CDC Worksite Health Scorecard national comparison data.
‡Review level I (probably a low contributor to injury/illness risk), II (may potentially contribute to injury/illness risk), III (high risk hazard—careful consideration of this hazard is needed), or IV (very high risk hazard—urgent review and management needed).
Recent Research

• Collaborative pilot with HealthPartners
  – Demonstrated feasibility
  – Assessed factors for success through in-depth interviews, focus groups, and process tracking data

• Associations between conditions of work and worker health and productivity indicators
Factors Contributing to Successful Implementation

- Leadership support
- Openness to change and innovation
- Dedicated resources (e.g., staff, budgets, and committees)
- Existing organizational processes
  - Collaborative organizational cultures
  - Prioritizing employee health and safety
  - Leverage alignment with existing business priorities
- Realistic timelines
- Targeted communications, training, tactical management guidance
Examine relationships between Organizational Safety and Health Climates and

- **Worker health behaviors.** Behaviors included: physical activity, diet, tobacco use, sleep and alcohol use.
- **Worker outcomes** including physical abuse, emotional abuse, depression, job satisfaction, life satisfaction, back pain (frequency and severity), and self-perceived general health.
- **Worker productivity indicators** (**employer outcomes**):
  - Work Limitations Questionnaire (WLQ)
  - Work Productivity and Activity Impairment Scale (WPAI).
Conceptual Model

**Conditions of Work**
- Psychosocial Factors
- Organization of work
  - Worker health and safety climate, job-related safety interference, manager support for HWB

**Worker Health Behaviors**
- Physical activity, Diet, Tobacco, Sleep, Alcohol

**Worker Outcomes**
- Verbal or emotional abuse, back pain, job satisfaction, life satisfaction, self-perceived health status

**Employer Outcomes**
- Absenteeism, presenteeism, overall productivity loss

**Aim 1**
- Worker Health Behaviors

**Aim 2**
- Worker Outcomes

**Aim 3**
- Employer Outcomes

Figure 1: Conceptual Model
Results Summary – observed associations

**• HWB Climate**
  - Health behaviors
    - Sleep (.058)
  - Worker outcomes
    - Back Pain-frequency
    - Back Pain-impact on life
    - Depression
    - Job Satisfaction
    - Life Satisfaction
    - Self-perceived general health
  - Organizational outcomes
    - Productivity Loss (WPAI)

**• Safety Climate**
  - Health behaviors
    - Physical Activity
    - Sleep
  - Worker outcomes
    - Back Pain-frequency
    - Back Pain-impact on life
    - Depression
    - Job Satisfaction
    - Life Satisfaction
    - Self-perceived general health
  - Organizational outcomes
    - Productivity Loss (WPAI)

- Alcohol, nutrition, tobacco, abuse (emotional/physical), and WLQ were not associated with worker perceptions of a health and well-being or safety climate
Conclusion

• Multi-level assessments allow for the generation of new insights into TWH relationships that appear to be actionable for companies.

• Actions appear to be generate improvements in work conditions as well as worker outcomes.

• This research-practice partnership is an example of creating shared value for the academic partner, the service provider (health plan) and the companies.
Continued development and improvement

WISH Assessment

The Guidelines

- Executive summary
- Leadership & Collaboration
- Planning
- Implementation
- Evaluation & Improvement
- Tools & resources

Includes case examples, tips, checklists

McLellan et al., 2017
http://centerforworkhealth.sph.harvard.edu
Thank you!

Our Shared Goal
Protect and promote worker safety, health, and well-being
http://centerforworkhealth.sph.harvard.edu/

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