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Our Shared Goal

Protect & promote worker safety, health & well-being
Today’s Objectives

• Describe **pathways** from working conditions to health and safety outcomes using a **conceptual framework**
• Examine the **evidence**
• Describe **strategies** for improving worker safety, health, and well-being using a management systems approach
• Review **measures** of core indicators of these best practices
Key Take-Aways

- To improve outcomes, focus upstream.
- Working conditions drive health & safety outcomes.
- Improving working conditions optimizes outcomes.
- Measuring core indicators can guide priority-setting, planning, and evaluation.
Starting with some background...
Standard Model for Worksite Health Protection & Promotion

- Supporting healthier behaviors through workplace environments and services offered at work
  - Health screening & services
  - Promoting healthy behaviors
  - Creating a health-promoting environment

- Preventing work-related illness and injury
  - Workplace safety measures
  - Control of workplace hazards
  - Improved ergonomics
  - Health and safety training

- Reducing work-related stress
  - Decreasing job strain
  - Fostering social support among workers
  - Stress management
  - Supporting work-family balance (e.g., through flexible schedules)

- Expanding work-related resources and opportunities
  - Medical care benefits
  - Paid sick and personal leave
  - Child and elder care services
  - Job training & education
  - Adequate wages and salaries
Usual

- Siloed approach
- Focus: downstream outcomes
- Focus: individuals
- Low participation rates

Optimal

- System approach + collaboration
- Address upstream root causes – working conditions
- Population approach
- Engaged employees
Work matters for health and safety: Identifying root causes in working conditions

Physical
- Exposures to safety and health hazards

Organization
- Hours worked
- Workload and pace of work
- Inadequate benefits (Wages, Leave, Flexibility)
- Inconsistent breaks
- Limited access to resources on the job

Psychosocial
- Job stress
- Low supervisor support
- Co-worker social norms
- Culture of health and safety at work
Workers respond to conditions of work (e.g. deciding how to mobilize a patient)

**Physical:** Is there equipment? Is it in good working condition?

**Organization of Work:** Equipment prescribed in plan of care? Have authority – knowledge – skill to use equipment?

**Job Demands:** Is there time to use equipment? Patient health first.

**Psychosocial:** Supervisors and co-workers support to use equipment?

Dennerlein *Occup Environ Med.* 2017 May;74(5):336-343
Conceptual Framework: Working Conditions as Root Causes

Integrated Policies, Programs, and Practices

Working Conditions
- Physical Environment
- Work Organization
- Psychosocial Factors
- Job Tasks & Demands

Worker health & safety behaviors, knowledge & skills

Worker Outcomes
- Injury
- Illness
- Wellbeing

Enterprise Outcomes
- Productivity & Quality
- Turnover & Absence
- Health Care Costs

Framework summarized

Use organizational strategies to influence working conditions

Policies, programs, practices

Working conditions

Improve working conditions to improve outcomes

Employee & employer outcomes
Example

Policies, Programs, Practices

Working Conditions

Job strain
- High demands
- Low job control

Employee & Employer Outcomes

Work schedule
Available resources

Reduce hypertension & medical costs
An Integrated Solution

is a management system approach to worker safety, health, & well-being shaped by employee input & participation

• Starts with providing a safe work environment
• Builds on traditional health protection & promotion efforts
  – Coordination and linkage of separate policies, practices & programs
• Fosters positive working conditions
• Aims to improve both employee & employer outcomes
• Continuum of approaches exists
NIOSH Total Worker Health®

Total Worker Health® is defined as 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.

(http://www.cdc.gov/niosh/twh/)
What’s the evidence?
WellWorks-2: Study hypothesis

The integration of health protection with health promotion will enhance the intervention impact on behavior change over and above health promotion alone.
WellWorks-2: Manufacturing

- Baseline Assessments in 15 worksites (n=9,019)
  
  Randomization

  Health Promotion

  Health Promotion plus OSH Intervention

  Final Assessments

  - Labor - management participation in program planning
  - Management consultation for changes in the work environment
  - Group and individual education for workers

Adjusted six-month quit rates

At final by intervention and job type
(cohort of smokers at baseline: n=880)

Sorensen et al, Cancer Causes and Control, 2002
Key Conclusions from WellWorks-2

- Increased tobacco use cessation for blue-collar workers
  - Implications for health behavior change, especially for workers exposed to job hazards.
- Higher participation of both workers and management
  - Implications for engaging multiple stakeholders
- Potential improvements in occupational health programs
  - Promising directions for impact on exposure reduction
Boston Hospital Workers Health Study

- Collaboration with Partners Healthcare
- Datasets
  - 3 surveys of patient care workers at 2 hospitals
    - Response rates = 71-79%
  - Nurse manager surveys
  - Administrative databases
- 40+ peer-reviewed manuscripts published 2011-2017
Integrated research database

Workers, clustered in units

- Hospital policies and practices
- Hospital injury log
- Survey of workers
- Health care use and spending
- Worker’s comp
- Planned and unplanned absence
- Quality of patient care

Center for Work, Health, & Well-being

Harvard T.H. Chan School of Public Health
Attending to the Conditions of Work: Summary Findings for Healthcare Workers

**CONDITIONS OF WORK**

**Physical Environment**
- Job Demands

**Organization of Work**
- Ergonomic Practices
- Job Flexibility
- Inadequate staffing
- Shift schedule/control

**Psychosocial Factors**
- Low decision latitude
- Coworker/supervisor support
- Work-family conflict
- Harassment

**WORKER OUTCOMES**
- Pain
- Work interferences
- Cardiometabolic risk

**WORKER PROXIMAL OUTCOMES**
- Sleep deficiency
- Fatigue
- Physical Activity
- Psychological distress
- BMI

Examples of Shared Pathways

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<thead>
<tr>
<th></th>
<th>Supervisor support</th>
<th>Bullying at work</th>
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<tbody>
<tr>
<td>Risk of injury</td>
<td>↓</td>
<td>↑</td>
</tr>
<tr>
<td>Physical activity</td>
<td>↑</td>
<td>↓</td>
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<tr>
<td>Sleep deficiency</td>
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<tr>
<td>Psychological distress</td>
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*Nelson et al 2014; Reme et al 2014; Sabbath et al 2014; Sorensen et al 2011; Tveito et al 2014; Reme et al (in review).*
Example analysis: Workplace bullying and mental health expenditures

• Research question: Do bullied workers have greater health plan expenditures on mental health diagnoses than non-bullied workers?

• Study captures both health costs to workers and economic cost to the employer
Mental Health Care Costs and Bullying

(N = 841 hospital workers, 2012)

2-year mental health care costs

No Bullying  |  one type  |  2 types  |  3 types

$0  |  $480  |  $796  |  $1,292

$200  |  $800  |  $1,000  |  $1,400

Types: *Being ignored/excluded
       Being humiliated/ridiculed
       Withholding information

Sabbath et al 2018.
Safe patient handling and mobilization program

• Hospital A implemented a hospital-wide safe patient handling program as an integral part of a patient mobilization initiative in 2013; Hospital B did not

• Analysis uses survey data, injury database, and knowledge of policy implementation
Hospital-Wide Integrated Safe Patient Mobilization Program

Key Characteristics

*Leadership commitment*
- Internal marketing campaign
- Commitment communicated

*Comprehensive and collaborative*
- Engaged multiple departments
  - Management committee
  - Coordinating committee
  - Across department infrastructure

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<thead>
<tr>
<th>Conditions of work</th>
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<tr>
<td><strong>Physical</strong></td>
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<tr>
<td>- Lifts in every room</td>
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<td>- Laundry/maintenance program</td>
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<tr>
<th><strong>Work organization</strong></th>
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<tr>
<td>- Integrated patient care plans</td>
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<td>- One-on-one training</td>
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<th><strong>Psychosocial</strong></th>
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<tr>
<td>- Training of nurse directors</td>
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<td>- Mentoring Program</td>
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| Equipment use scale increased | 8% (95\(^{th}\) CI 7 – 11\%) |
| Lifting injuries decreased    | 27% (95\(^{th}\) CI 11-40\%) |

Dennerlein *Occup Environ Med*. 2017;74(5):336-343
Conclusions and knowledge gained from these studies

• Health and safety outcomes share common root causes in working conditions.

• Working conditions matter for worker safety and health and enterprise outcomes.

• A systems approach can contribute to improved worker safety and health outcomes.
Evidence highlights

Those using an integrated approach find it:

- Financial performance
- Safer workplaces
- Productivity & worker satisfaction
- Participation
- Behavior change

- Absenteeism
- Turnover
- Workers Comp
- OSHA penalties

http://www.cdc.gov/niosh/twh/business.html
Measuring an Integrated Approach
Six key characteristics of an integrated approach

- Leadership commitment
- Participation (Employees and Organized Labor)
- Policies, programs, and practices that foster supportive working conditions
- Comprehensive and collaborative strategies
- Adherence
- Data-driven change

http://centerforworkhealth.sph.harvard.edu/guidelines
Sorensen et al. JOEM May 2018
Rationale for Assessing Integrated Approaches

• Inform employer priority-setting and decision-making
• Track improvements in working conditions over time
• Determine impact of workplace changes
  – For worker health and safety
  – On enterprise outcomes (e.g., productivity, absence)
• Inform policy decisions
• Guide research
Workplace Integrated Safety and Health (WISH) Assessment

• Questionnaire measuring 6 key characteristics identified as central to best practices for protecting and promoting worker safety, health, and well-being

Sorensen, et al. JOEM, May 2018
Workplace Integrated Safety and Health (WISH) Assessment

Sorensen, et al. JOEM, May 2018

Available at: http://centerforworkhealth.sph.harvard.edu/
Measure Development Process

- Literature review to identify core constructs
- Iterative modified Delphi process
- Literature review to identify extant measures
- Systematic cognitive testing
Leadership Commitment (6 items)

- Definition: Organization’s leadership makes worker safety and health an organizational priority, drives accountability, allocates resources, and creates environment for positive working conditions.
- Sample item:
  - “Our company’s leadership, such as senior leaders and managers, take responsibility for ensuring a safe and healthy work environment.”
Participation (5 items)

• Definition: Stakeholders at every level of the organization help plan and carry out efforts to protect and promote worker safety and health.

• Sample item:
  – “In this organization, managers across all levels consistently seek employee involvement and feedback in decision-making.”
Policies, Programs and Practices focused on Positive Working Conditions (14 items)

• Definition: The organization enhances worker safety, health, and wellbeing with policies and practices that improve working conditions.

• Sample items:
  – “This organization ensures that policies to prevent harm to employees from abuse, harassment, discrimination and violence are followed.”
  – “This organization takes proactive measure to make sure that the employee’s workload is reasonable...”
Comprehensive and Collaborative Strategies (6 items)

• Definition: Employees from across the organization work together to develop comprehensive health and safety initiatives.

• Sample item:
  – “This company coordinates policies, programs, and practices for worker health, safety, and wellbeing across departments.”
Adherence (5 items)

• Definition: The organization adheres to federal and state regulations, as well as ethical norms, that advance worker safety, health and wellbeing.

• Sample item:
  – “This workplace complies with regulations aimed at eliminating or minimizing potential exposures to recognized hazards.”
Data-driven Change (4 items)

• Definition: Regular evaluation guides an organization’s priority-setting, decision-making and continuous improvement.

• Sample item:
  – “Data from multiple sources on health, safety and wellbeing are integrated and presented to leadership on a regular basis.”
Our Next Steps

• Use of the WISH tool in multiple settings
• Validation of the instrument against comparison measures
• Further development of scoring methods
Resources for Practice
The Guidelines

- Executive Summary
- Leadership & Collaboration
- Planning
- Implementation
- Evaluation & Improvement
- Tools & Resources

*Includes case examples, tips, checklists*

http://centerforworkhealth.sph.harvard.edu/
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http://centerforworkhealth.sph.harvard.edu

@HSPHCenterWork
For information on how to implement

Consider attending the WWDPI webinar:

**Weaving Health, Safety, and Well-being into the Fabric of Your Organization**

_Deborah McLellan, PhD, MHS_

Tuesday, April 9, 2019
2-3 pm Eastern
Conclusions: Considerations for Organizations

• Improving working conditions adds value for employees and the bottom line.
• Consider a systems approach to build a sustainable culture of health.
• Align with your business priorities and ways of getting things done.
• Start with your own root causes – build success in small steps.
• Measure along the way for planning, priority-setting, and determining progress.
Thank you!...And Questions?

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