# Employer practices and policies to manage and prevent work disability

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# Farmington, Connecticut, USA


I have no potential conflicts to report

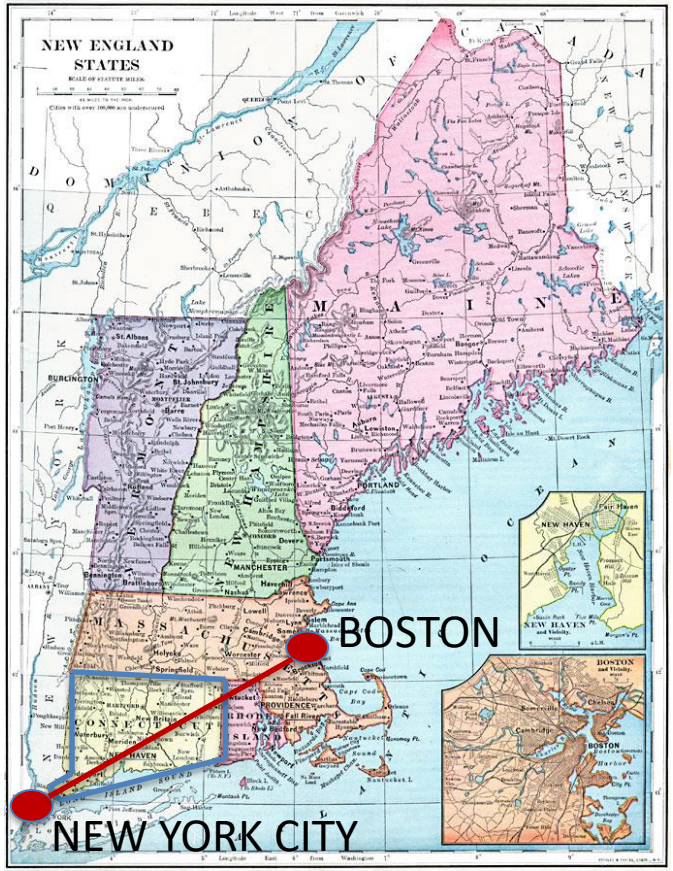



**Figure 2. Breakdown of CT workers by industry type**

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# State of Connecticut, USA

# Presentation agenda

- Findings from the 2015 “Hopkinton Conference”
- Examples of workplace factors and interventions
- State of evidence
- New employer challenges
- Question/Answer

# Invited Conference: Employer Disability Prevention Policies and Practices

## Hopkinton, Massachusetts, USA: October 14-16, 2015

***Hopkinton Conference Working Group on Workplace Disability Prevention***

*Benjamin C. Amick III, Johannes R. Anema, Elyssa Besen, Peter Blanck, Cécile R.L. Boot, Ute Bültmann, Chetwyn C.H. Chan, George L. Delclos, Kerstin Ekberg, Mark G. Ehrhart, Jean-Baptiste Fassier, Michael Feuerstein, David Gimeno, Vicki L. Kristman, Steven J. Linton, Chris J. Main, Fehmidah Munir, Michael K. Nicholas, Glenn Pransky, William S. Shaw, Michael J. Sullivan, Lois E. Tetrick, Torill H. Tveito, Eira Viikari-Juntura, Kelly Williams-Whitt, and Amanda E. Young.*

# Special Issue: *J Occup Rehabil* (Dec 2016)

- Workplace factors
- Workplace interventions
- Workplace outcomes
- Workplace implementation
- Special worker populations
- Changing nature of work


(OPEN ACCESS)

# Employer policies and practices

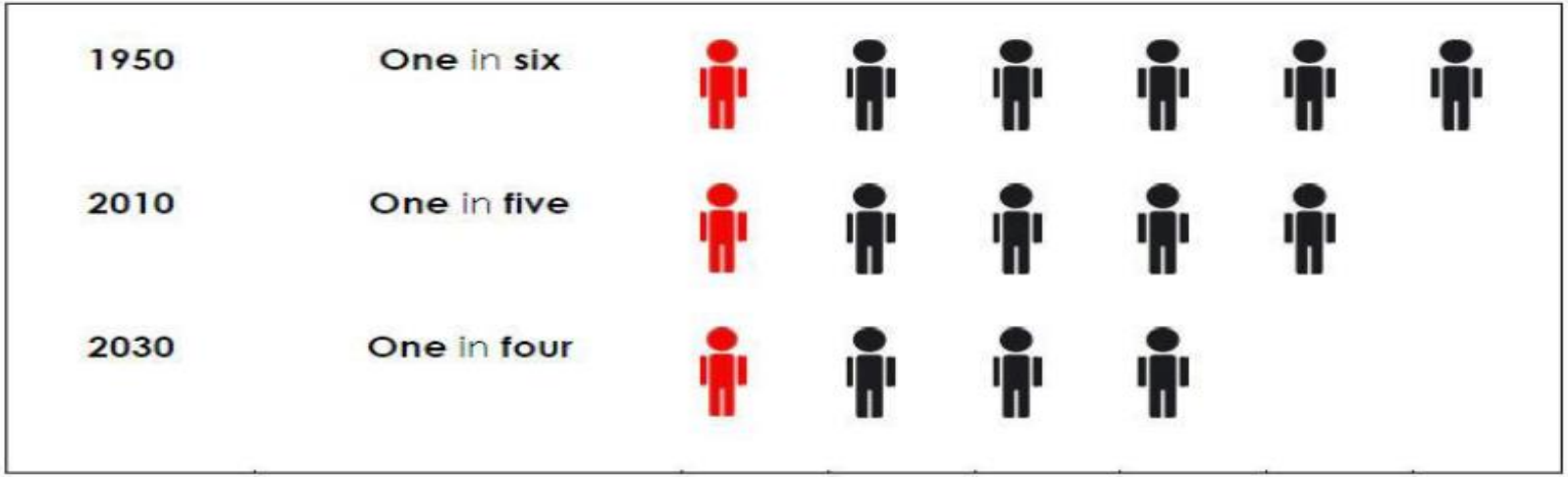
## Changing workplace

Hours worked, service economy, working from home

## Changing workers

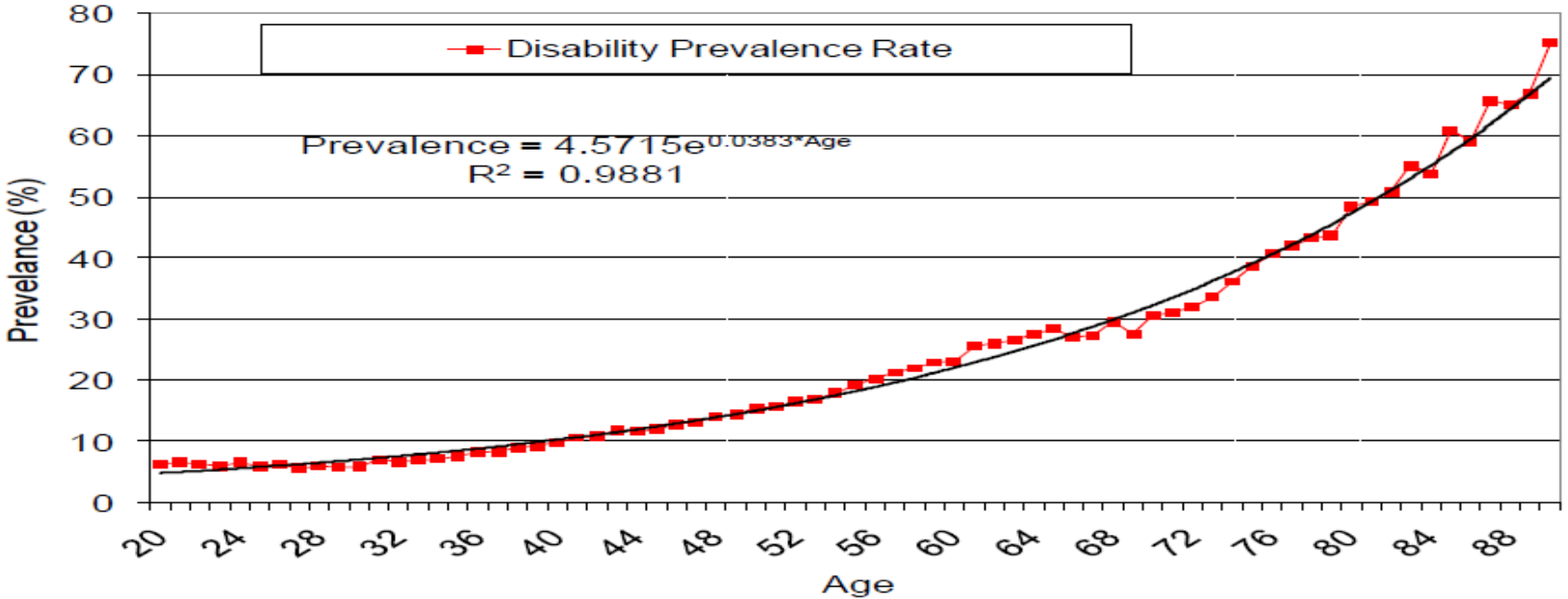
Gender, health, fitness, age, cultural diversity

# Workers over age 55 in the Labor Force as a Proportion of all workers, projected1950 to 2030



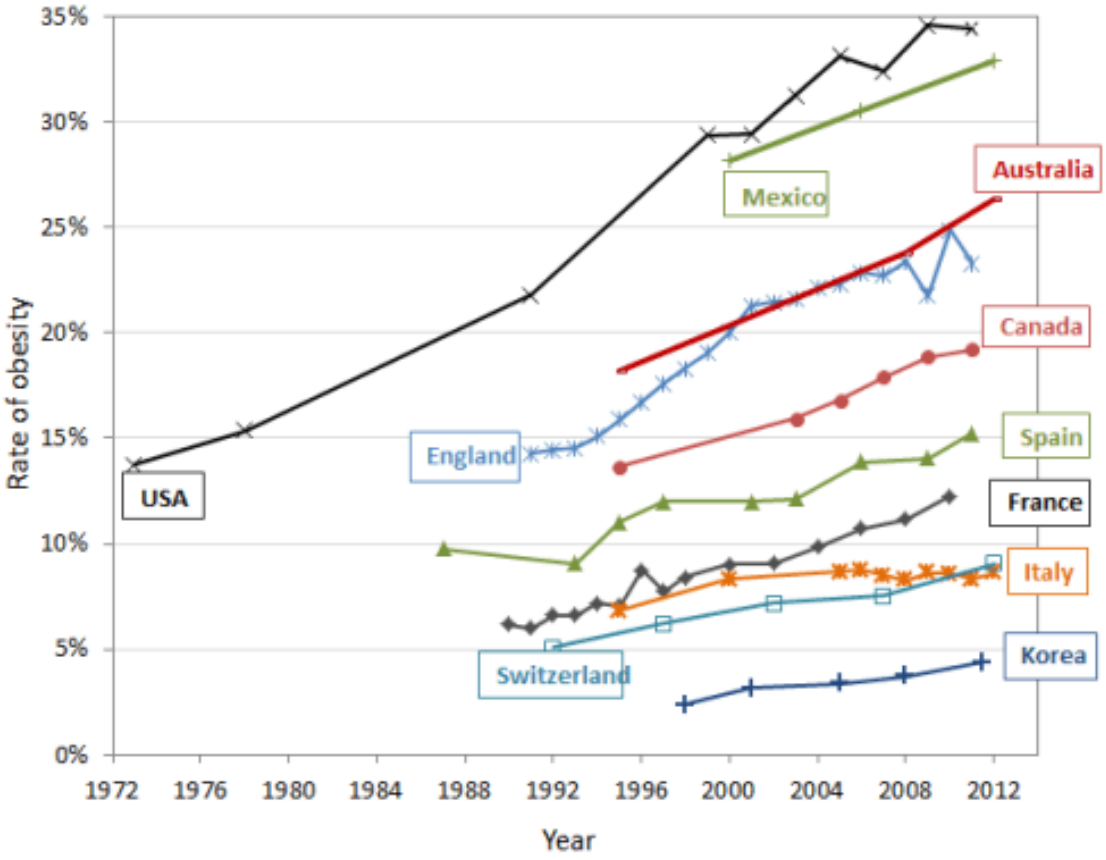

Sources: Bureau of Labor Statistics, "Labor Force Projections to 2018: Older Workers Staying More Active," *Monthly Labor Review*, November 2009; Bureau of Labor Statistics, "New Look at Long-term Labor Force Projections to 2050," *Monthly Labor Review*, November 2006.

Figure 1. Growth in Disability Prevalence by Age




Source: NIDRR Demographics and Statistics RRTC at Cornell University's Employment and Disability Institute, calculations from 2003 ACS PUMS file performed by Robert Weathers, 2005.

# Growing prevalence of obesity (OECD)



# Growing prevalence of chronic conditions

**US working adults, ages 18-64**:

52.9% No chronic conditions
24.6% 1 chronic condition
12.7% 2 chronic conditions
5.5% 3 chronic conditions
2.2% 4 chronic conditions
1.2% 5 chronic conditions
0.8% 6+ chronic conditions

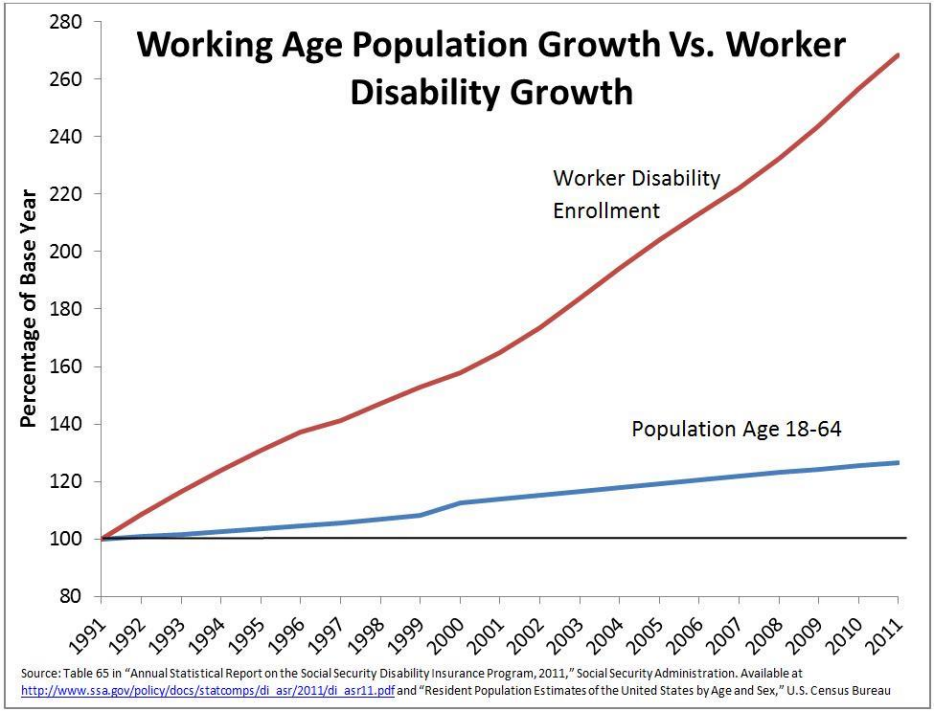
**"About 86% of full-time workers are above normal weight or have at least one chronic condition" (USA)**

- Gallup-Healthways Well-Being Index 2011



- Burton et al., J Occup Environ Med 2004;46:S38-S45

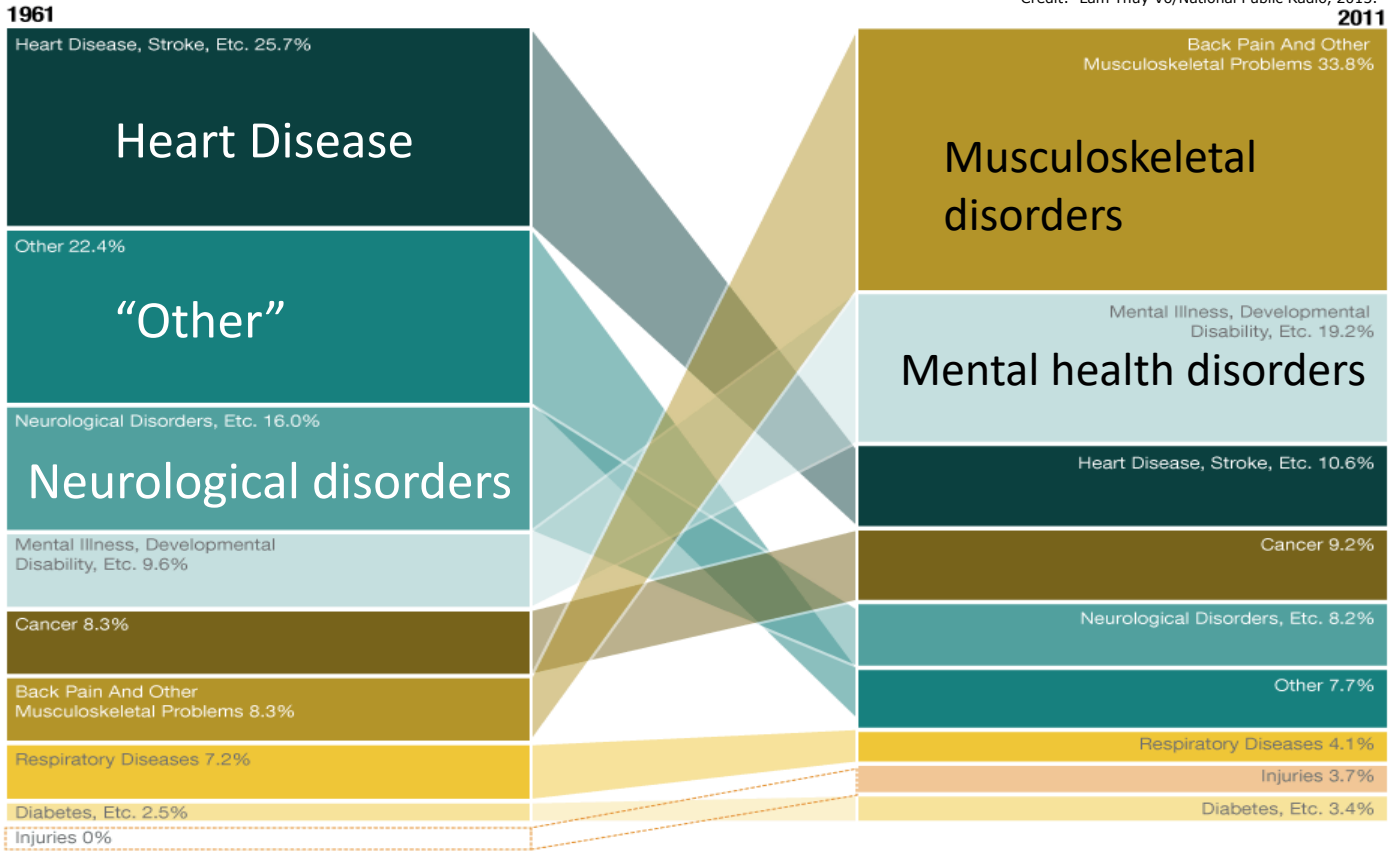
# Permanent work disability rate is increasing (USA)




Source: Table 65 in "Annual Statistical Report on the Social Security Disability Insurance Program, 2011," Social Security Administration. Available at http://www.ssa.gov/policy/docs/statcomps/di_asr/2011/di_asr11.pdf and "Resident Population Estimates of the United States by Age and Sex," U.S. Census Bureau

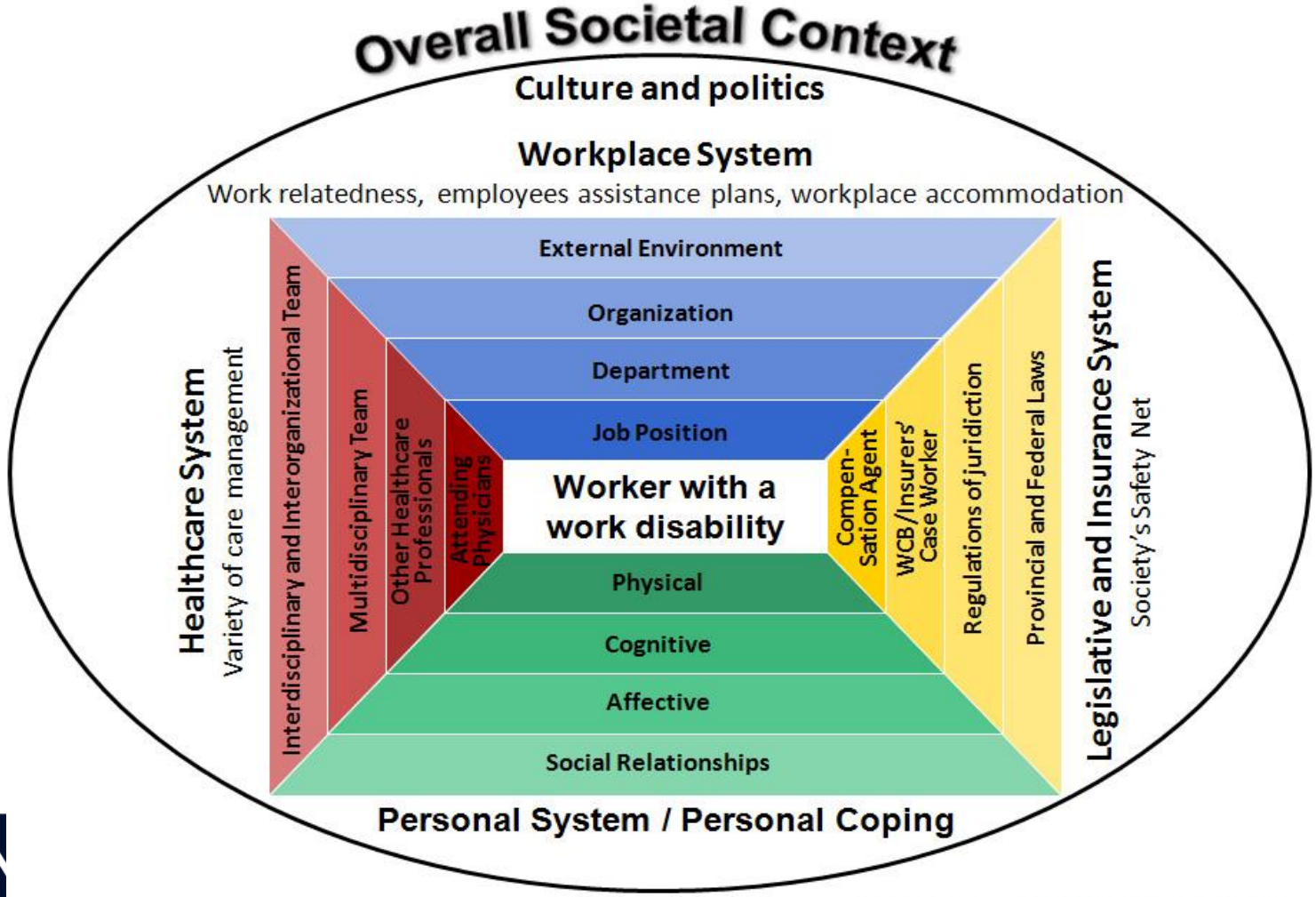
## Share Of Newly Disabled Workers, By Diagnosis

Source: Social Security Administration
Credit: Lam Thuy Vo/National Public Radio, 2013.

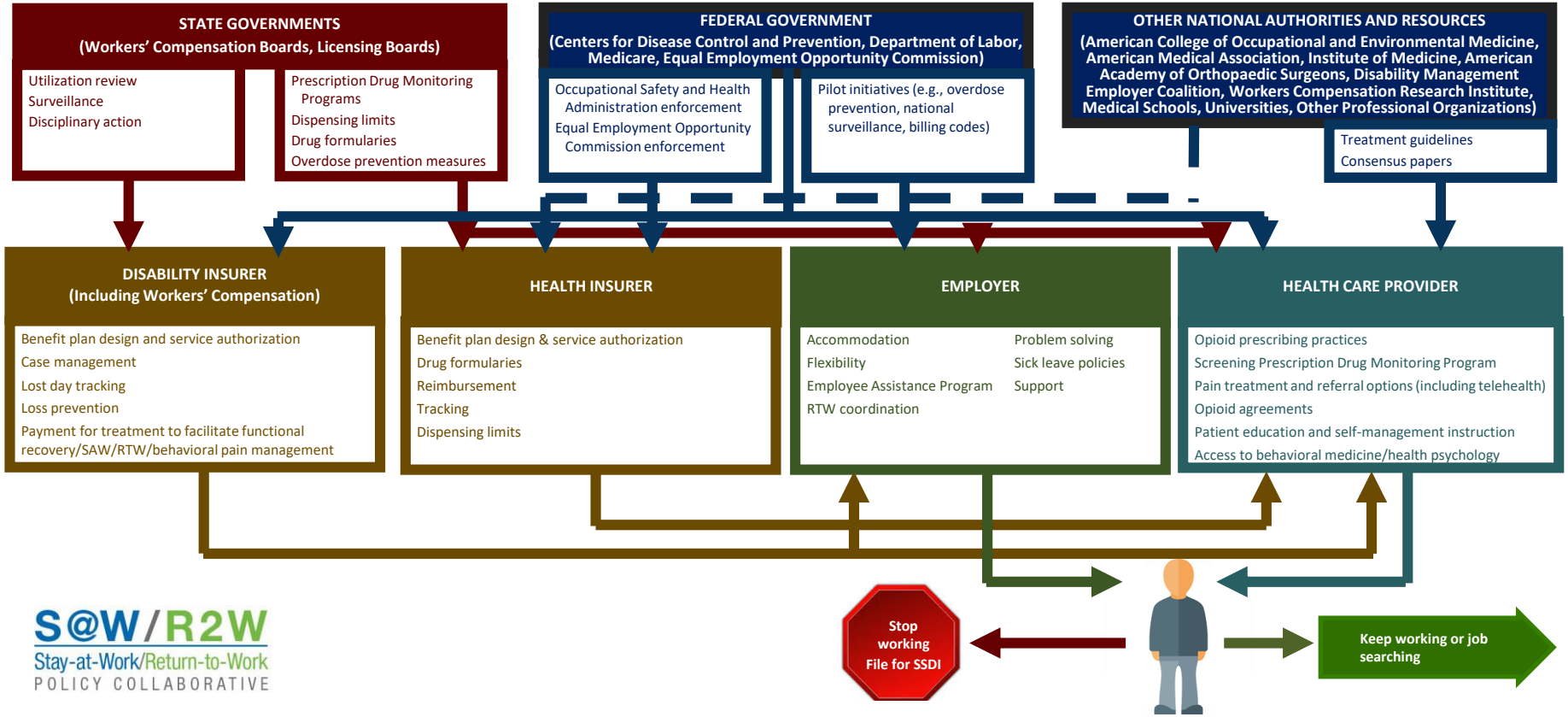


Employer policies and practices

# Workplace factors in disability




(Loisel et al, J Occup Rehabil, 2005)




S@W/R2W
Stay-at-Work/Return-to-Work
POLICY COLLABORATIVE

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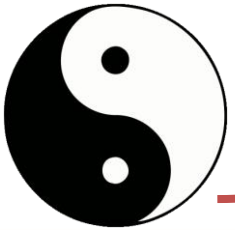
- **Legal compliance**
  ADA, FMLA, WC, HIPAA

- **Cost containment**
  Lost days, HC costs, personnel expenses, insurance premiums

- **Sound business practice**
  Fair treatment, uniform practices, assigned roles, tracking

- **Positive organizational culture**
  Inclusionary workforce, health promotion, employee morale



"Competitive Advantage"



Main, Nicholas et al., J Occup Rehabil. 2016;26:448-464.

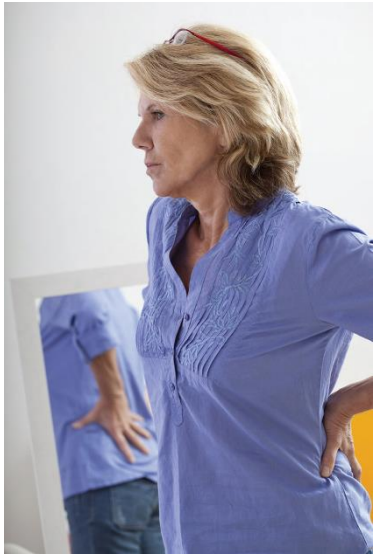
# Disability-related issues in employment

- Return to Work (RTW)
- Stay at Work (SAW)
- Attendance management
- Re-employment/ vocational rehabilitation
- Hiring disabled workers
- Administering disability leave programs
- Safety training and injury prevention
- Health promotion



Shaw, Main et al., J Occup Rehabil. 2016;26:394-398.

# Workplace factors and RTW: Research



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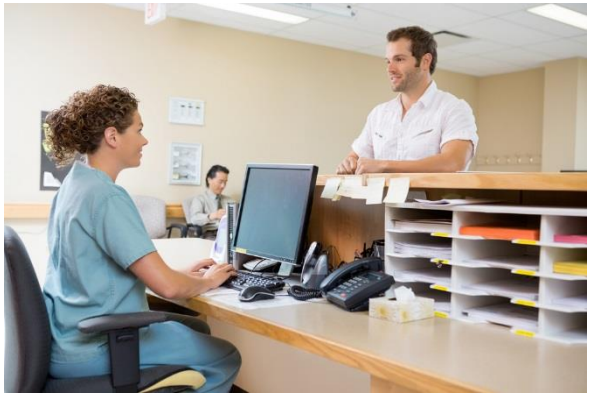

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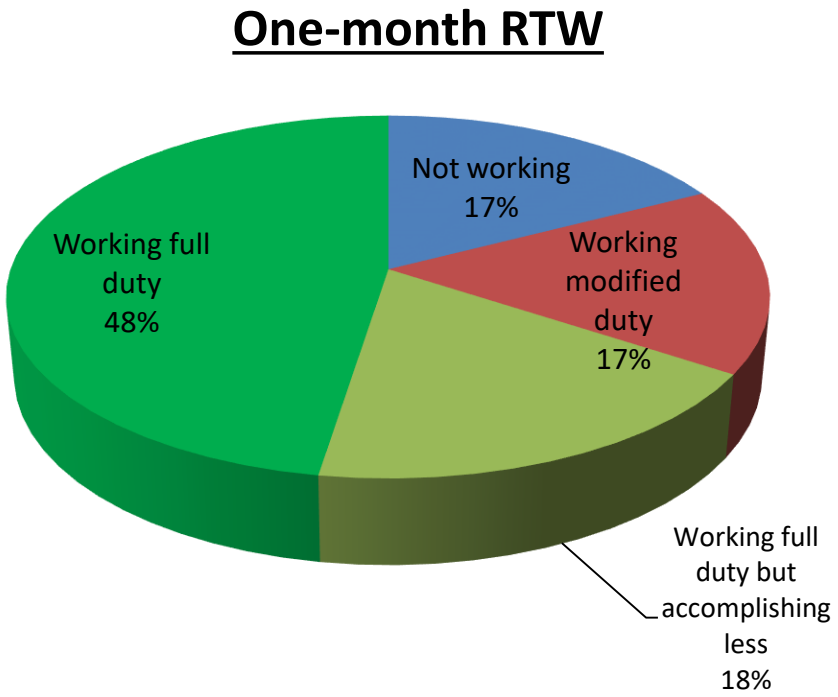
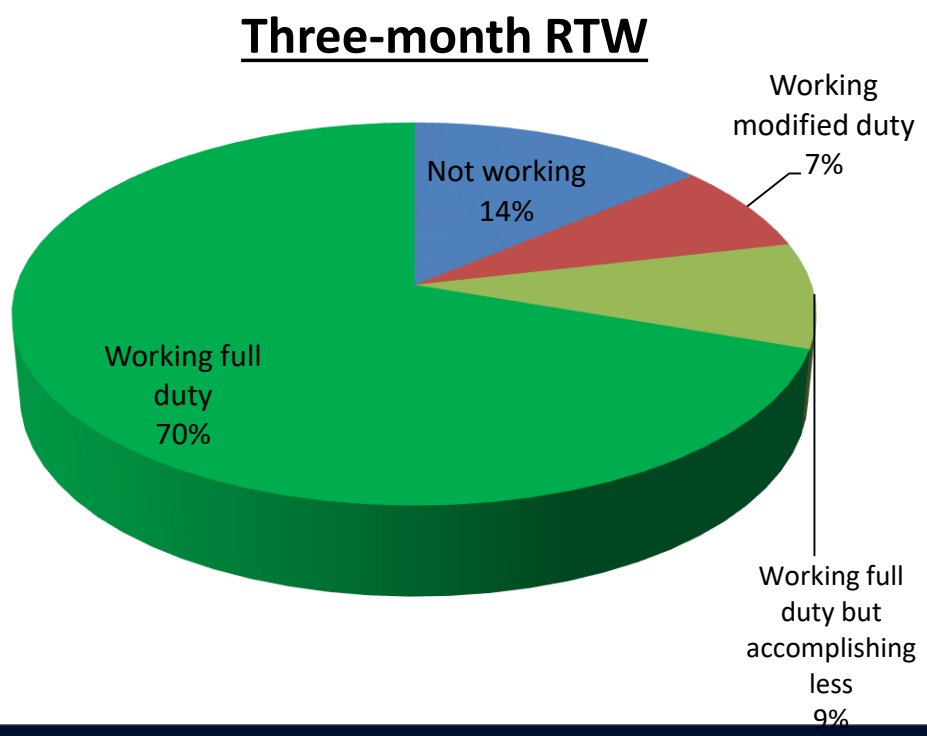
Worker perspective

Clinician perspective

Employer perspective

# Returning to work after low back pain

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Shaw et al., JOEM 2009; N = 519 workers with acute LBP

# Workplace factors and LBP recovery

- Heavy physical demands
- Fear of re-injury on the job
- High job stress
- Job dissatisfaction
- Low social support from peers
- Inability to modify work
- Negative outlook overall



Shaw, van der Windt et al., J Occup Rehabil. 2009;19:64-80.

# Workplace factors influencing disability outcomes: Multiple systematic reviews (individual level)


- Shaw et al., 2001: review of 22 studies
- Crook et al., 2002: review of 68 studies
- Waddell et al., 2003: review of 26 studies
- Hartvigsen et al., 2004: review of 40 studies
- Steenstra et al., 2005: review of 18 studies

General conclusion:

Occupational factors, both physical and psychological, impact return-to-work rates.

# Psychosocial factors and LBP recovery

- Pain catastrophizing
- Distress, worries, mood
- Fear of movement
- Passive coping strategies
- Preoccupation with health
- Extreme symptom report
- Negative expectations for recovery



Shaw, van der Windt et al., J Occup Rehabil. 2009;19:64-80.

# Levels of organizational involvement

- **Managerial level**
  - Proactive RTW policies and practices
  - Managerial commitment to workplace health and safety
- **Supervisory level**
  - Support for job modifications
  - Communication and follow-up
- **Working group level**
  - Coworker support
  - Health and safety practices
- **Worker level**
  - Perceptions of physical demands
  - Perceptions of psychosocial demands



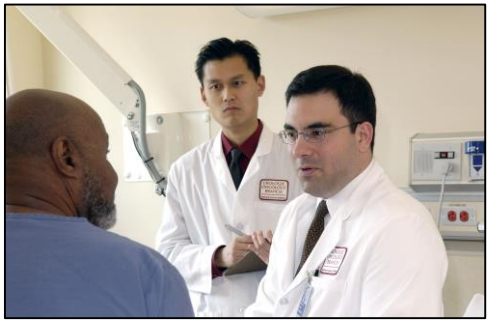
Kristman, Shaw et al., J Occup Rehabil. 2016;26:399-416.

Employer policies and practices

# Workplace interventions

# Return-to-work interventions

Personal coping and problem solving

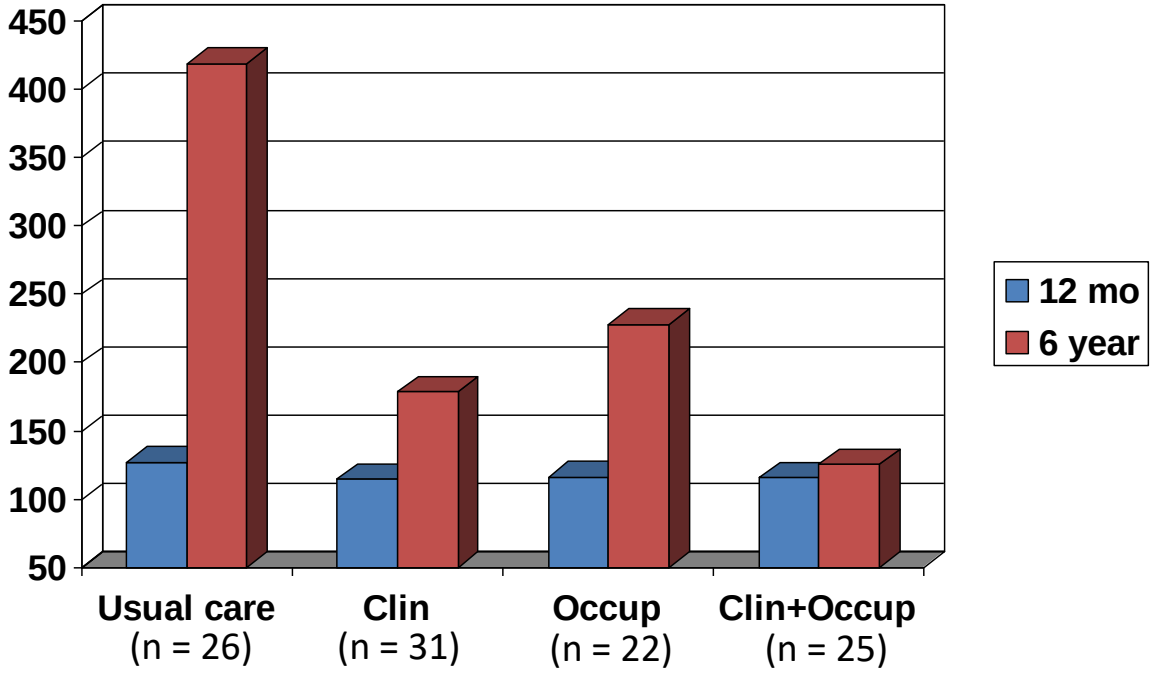


Provider behavior

Workplace support

Case management/RTW coordination

# RCT studies: “Sherbrooke Model” Average days on full benefits



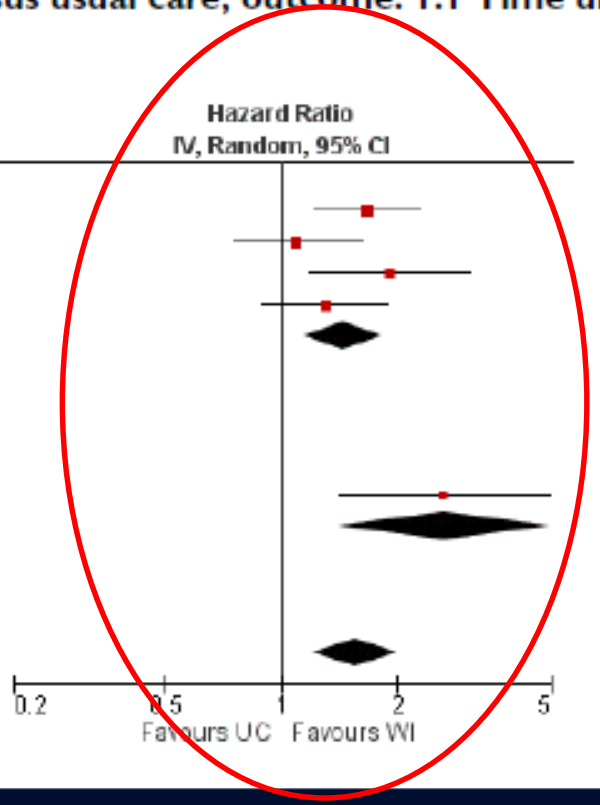



Loisel et al., Occup Environ Med 2002;59:807-815.

# Workplace interventions: Cochrane meta-analysis

**Figure 3. Forest plot of comparison: 1 Workplace intervention versus usual care, outcome: 1.1 Time until first RTW.**

| Study or Subgroup | log[Hazard Ratio] | SE | WI Total | UC Total | Weight | Hazard Ratio IV, Random, 95% CI |
|---|---|---|---|---|---|---|
| **1.1.1 Musculoskeletal disorders** | | | | | | |
| Anema/Steenstra 2007 | 0.5128 | 0.1628 | 96 | 100 | 25.9% | 1.67 [1.21, 2.30] |
| Feuerstein 2003 | 0.093 | 0.194 | 59 | 64 | 22.2% | 1.10 [0.75, 1.61] |
| Loisel 1997a | 0.6471 | 0.2464 | 47 | 57 | 17.1% | 1.91 [1.18, 3.10] |
| Verbeek 2002a | 0.2623 | 0.1906 | 61 | 59 | 22.6% | 1.30 [0.89, 1.89] |
| **Subtotal (95% CI)** | | | **263** | **280** | **87.9%** | **1.44 [1.15, 1.82]** |
| Heterogeneity: Tau² = 0.02; Chi² = 4.39, df = 3 (P = 0.22); I² = 32% | | | | | | |
| Test for overall effect: Z = 3.11 (P = 0.002) | | | | | | |
| **1.1.2 Mental health problems** | | | | | | |
| Blonk 2006 | 0.969642 | 0.321 | 35 | 34 | 12.1% | 2.64 [1.41, 4.95] |
| **Subtotal (95% CI)** | | | **35** | **34** | **12.1%** | **2.64 [1.41, 4.95]** |
| Heterogeneity: Not applicable | | | | | | |
| Test for overall effect: Z = 3.02 (P = 0.003) | | | | | | |
| **Total (95% CI)** | | | **298** | **314** | **100.0%** | **1.55 [1.20, 2.01]** |
| Heterogeneity: Tau² = 0.04; Chi² = 7.63, df = 4 (P = 0.11); I² = 48% | | | | | | |
| Test for overall effect: Z = 3.35 (P = 0.0008) | | | | | | |
| Test for subgroup differences: Chi² = 3.11, df = 1 (P = 0.08), I² = 67.8% | | | | | | |




Van Vilstern, van Oostrom et al. Cochrane Database Syst Rev. 2015.

# Workplace-based RTW interventions

| Return to work Intervention components | Reduces disability duration | Reduces claim costs | Improves quality of life |
|---|---|---|---|
| Early contact with injured worker | + | + | +/- |
| Employer offer of accommodation | ++ | + | +/- |
| Contact with HC provider | ++ | + | +/- |
| Ergonomic worksite visit to plan RTW | + | + | +/- |
| Presence of RTW coordinator | + | + | Insufficient evidence |
| Supernumerary replacement | Insufficient evidence | Insufficient evidence | Insufficient evidence |



Review of 10 studies, Franche et al., J Occup Rehabil. 2005;15(4):607-631.

J Occup Rehabil (2018) 28:1–15
DOI 10.1007/s10926-016-9690-x

REVIEW

# Effectiveness of Workplace Interventions in Return-to-Work for Musculoskeletal, Pain-Related and Mental Health Conditions: An Update of the Evidence and Messages for Practitioners

K. L. Cullen[1] · E. Irvin[1] · A. Collie[2,3] · F. Clay[2] · U. Gensby[4,5] · P. A. Jennings[6] · S. Hogg-Johnson[1] · V. Kristman[1,7] · M. Laberge[8] · D. McKenzie[2] · S. Newnam[9] · A. Palagyi[2] · R. Ruseckaite[2] · D. M. Sheppard[9] · S. Shourie[9] · I. Steenstra[1,10] · D. Van Eerd[1,11] · B. C. Amick III[1,12]

Published online: 21 February 2017


**Abstract** *Purpose* The objective of this systematic review was to synthesize evidence on the effectiveness of workplace-based return-to-work (RTW) interventions and work disability management (DM) interventions that assist workers with musculoskeletal (MSK) and pain-related conditions and mental health (MH) conditions with RTW. *Methods* We followed a systematic review process developed by the Institute for Work & Health and an adapted best evidence synthesis that ranked evidence as strong, moderate, limited, or insufficient. *Results* Seven electronic databases were searched from January 1990 until April 2015, yielding 8898 non-duplicate references. Evidence from 36 medium and high quality studies were synthesized conditions and MH conditions were significantly reduced by multi-domain interventions encompassing at least two of the three domains. There was moderate evidence that these multi-domain interventions had a positive impact on cost outcomes. There was strong evidence that cognitive behavioural therapy interventions that do not also include workplace modifications or service coordination components are not effective in helping workers with MH conditions in RTW. Evidence for the effectiveness of other single-domain interventions was mixed, with some studies reporting positive effects and others reporting no effects on lost time and work functioning. *Conclusions* While there is substantial research literature focused on RTW, there are only

Systematic evidence for:

Multi-component (MSK):

- Health-focused
- Service coordination
- Work modification

Work-focused CBT (MH)

Graded activity (MSK)

Work accommodations (MSK)

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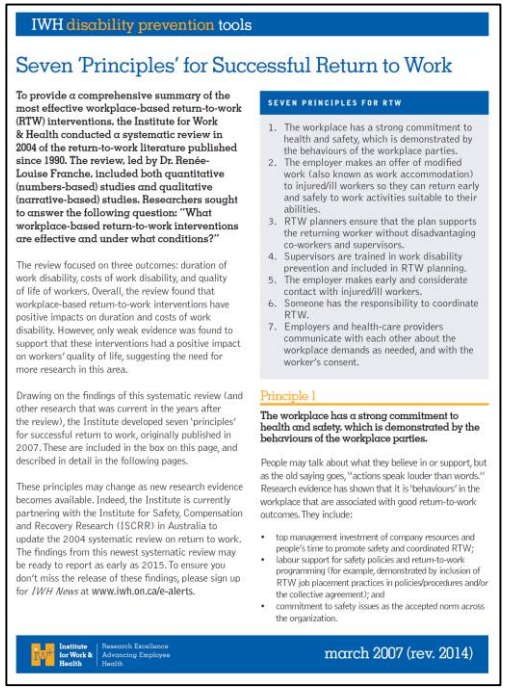
Cullen, Irvin et al., J Occup Rehabil. 2018;28(1):1-15.

# Seven principles for successful RTW



IWH disability prevention tools

## Seven 'Principles' for Successful Return to Work

**To provide a comprehensive summary of the most effective workplace-based return-to-work (RTW) interventions, the Institute for Work & Health conducted a systematic review in 2004 of the return-to-work literature published since 1990. The review, led by Dr. Renée-Louise Franche, included both quantitative (numbers-based) studies and qualitative (narrative-based) studies. Researchers sought to answer the following question: "What workplace-based return-to-work interventions are effective and under what conditions?"**

The review focused on three outcomes: duration of work disability, costs of work disability, and quality of life of workers. Overall, the review found that workplace-based return-to-work interventions have positive impacts on duration and costs of work disability. However, only weak evidence was found to support that these interventions had a positive impact on workers' quality of life, suggesting the need for more research in this area.

Drawing on the findings of this systematic review (and other research that was current in the years after the review), the Institute developed seven 'principles' for successful return to work, originally published in 2007. These are included in the box on this page, and described in detail in the following pages.

These principles may change as new research evidence becomes available. Indeed, the Institute is currently partnering with the Institute for Safety, Compensation and Recovery Research (ISCRR) in Australia to update the 2004 systematic review on return to work. The findings from this newest systematic review may be ready to report as early as 2015. To ensure you don't miss the release of these findings, please sign up for *IWH News* at www.iwh.on.ca/e-alerts.

**SEVEN PRINCIPLES FOR RTW**

1. The workplace has a strong commitment to health and safety, which is demonstrated by the behaviours of the workplace parties.
2. The employer makes an offer of modified work (also known as work accommodation) to injured/ill workers so they can return early and safely to work activities suitable to their abilities.
3. RTW planners ensure that the plan supports the returning worker without disadvantaging co-workers and supervisors.
4. Supervisors are trained in work disability prevention and included in RTW planning.
5. The employer makes early and considerate contact with injured/ill workers.
6. Someone has the responsibility to coordinate RTW.
7. Employers and health-care providers communicate with each other about the workplace demands as needed, and with the worker's consent.

Principle 1

**The workplace has a strong commitment to health and safety, which is demonstrated by the behaviours of the workplace parties.**

People may talk about what they believe in or support, but as the old saying goes, "actions speak louder than words." Research evidence has shown that it is 'behaviours' in the workplace that are associated with good return-to-work outcomes. They include:

- top management investment of company resources and people's time to promote safety and coordinated RTW;
- labour support for safety policies and return-to-work programming (for example, demonstrated by inclusion of RTW job placement practices in policies/procedures and/or the collective agreement); and
- commitment to safety issues as the accepted norm across the organization.

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march 2007 (rev. 2014)

1) Demonstrated commitment to health and safety.
2) Routine offer of modified work/ job accommodation.
3) RTW without disadvantaging co-workers.
4) Supervisors trained and included in RTW planning.
5) Early and considerate contact with injured worker.
6) Designated person to coordinate RTW.
7) Communicate with providers (with worker consent).

# Workplace interventions – Employer perspective

- Defined roles and responsibilities
  - Senior management buy-in
  - Identifiable RTW coordinator, effective use of HC providers and consultants
  - Training and engagement of frontline supervisors
- Available tools and procedures
  - Clear written policies, guidelines, and procedures
  - Development of practical tools, documents, and materials
  - General workforce education, outreach, surveillance, and health messaging
- Prompt and proactive response
  - Proactive case management and early RTW planning
  - Constant monitoring of sickness and disability outcomes
- Attention to individual needs and circumstances
  - Routine, but individualized, job modification efforts
  - Involvement, communication, and collaboration with workers



Review of the business literature (Kristman et al., J Occup Rehabil, 2016)

# Employer policies and practices

## Biomedical vs. Biopsychosocial: Dealing with individual differences

# Employer acceptance of biopsychosocial model?

- Biomedical
- Biomechanical
- Medical restrictions
- Measurable impairments

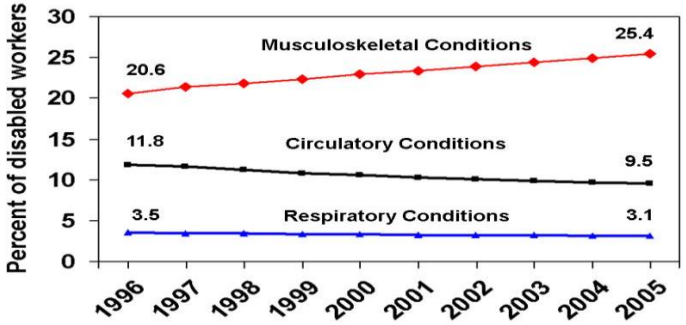

Psychosocial

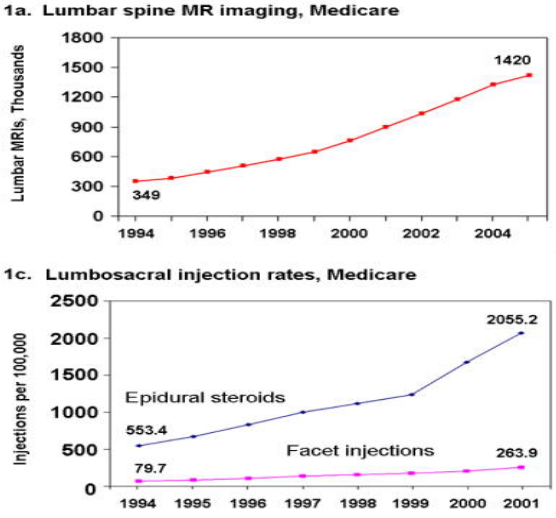
Organizational

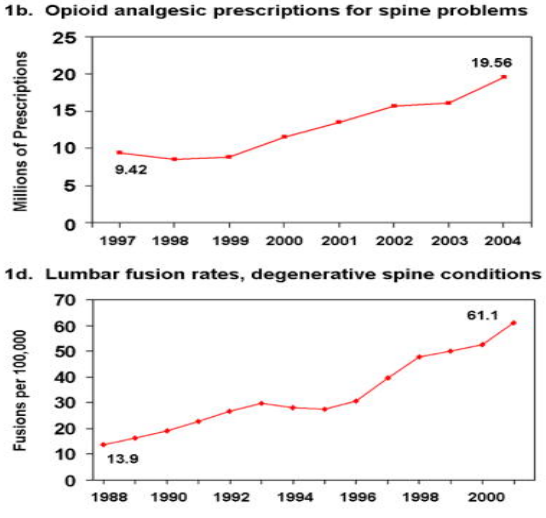
Worker concerns

Perceptions of workability

# Employer reliance on biomedical model: Over-treatment of chronic low back pain



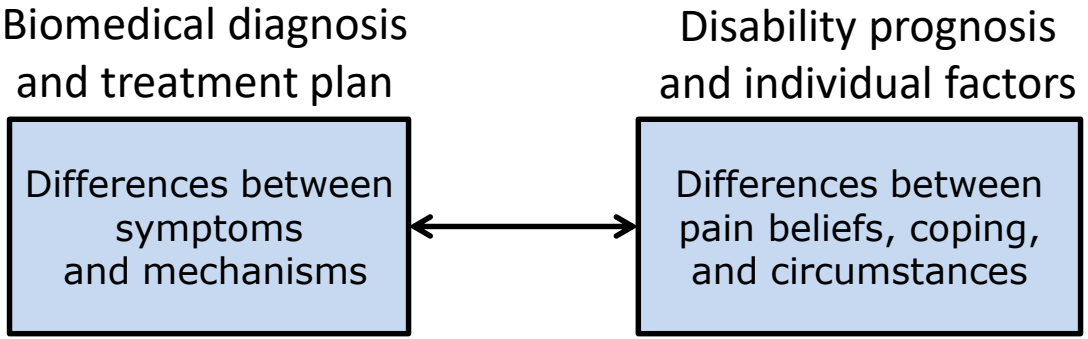




SSD 2011: MSDs 33.8%, MH 19.2%

Deyo et al., J Am Board Fam Med. 2009;22(1):62-68.

# Why hasn't this worker returned to work?




- Symptom patterns
- Medical history
- Comorbidities
- Diagnosis

- Pain beliefs
- Social & org support
- Job demands
- Distress & coping

# “Social Cognitive Theory” of RTW

## Self-efficacy

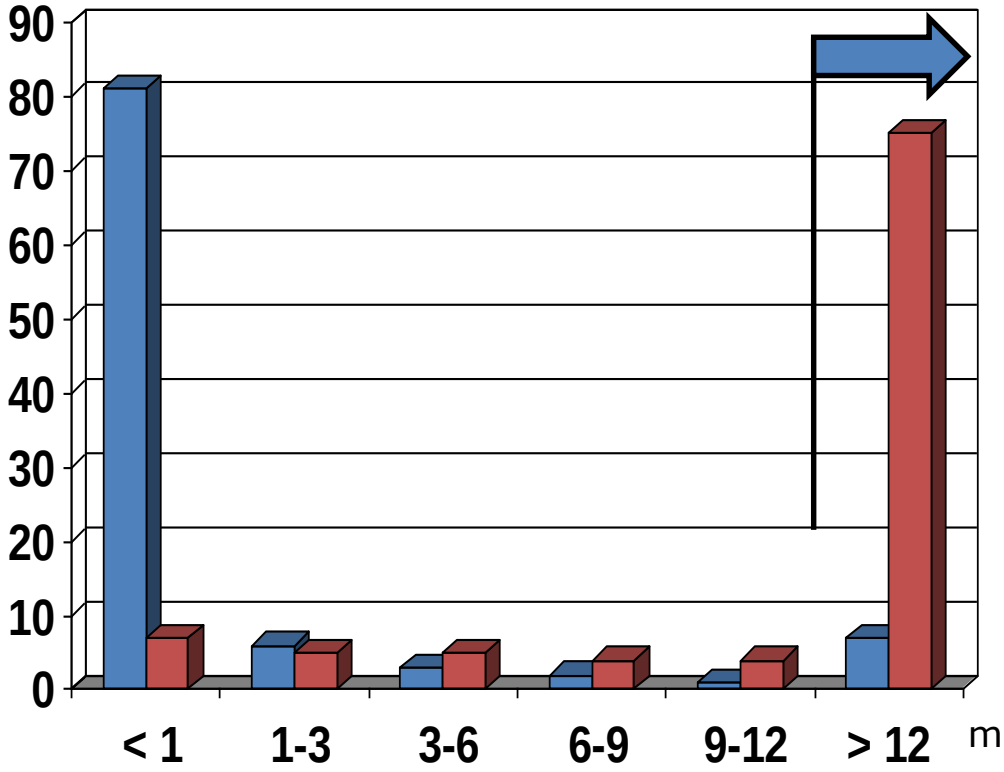
- **Confidence to:**
  - Endure discomfort
  - Manage job stress
  - Avoid re-injury
  - Deal with co-workers
  - Get needed assistance

## Outcome expectancy

**RTW will lead to:**

- Financial benefits
- Job/career success
- Social support
- Needed assistance
- Sustained employ
- Better quality of life

# Distribution of WC claims costs (low back pain)




10% claims = 83% costs



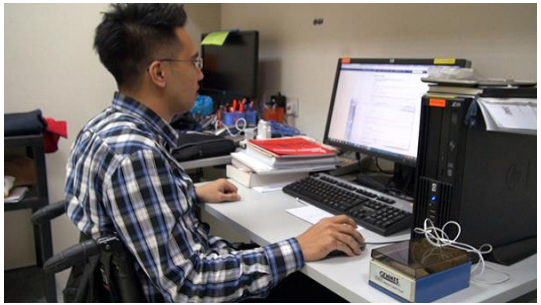
Hashemi et al., 1997, J Occup Environ Med, 39(10), 937-945.

# Improving workplace engagement of clinicians

- **Assess** workplace concerns of clients.
- Find reasons to conduct a **worksite walk-through**.
- Try to make contact with a direct **supervisor**.
- Encourage **participatory** methods for RTW plan.
- **Impose** on employers to do better.

# 5 questions to initiate SAW/RTW discussions:

- “What are your **biggest concerns** about returning to work?”
- “What job tasks will be **most difficult** for you?”
- “How can **vary or adjust your work** to be more comfortable?”
- “How much **help will you get** from supervisors/ co-workers?”
- “How will you deal with any **future problems** at work?”



# Pain Recovery Inventory of Concerns and Expectations (PRICE)

**PRICE (Pain Recovery Issues, Concerns, and Expectations) Questionnaire**

**Instructions:** The following survey will ask you about your current limitations due to back pain, your workplace setting, your beliefs and expectations about recovery, and your current levels of pain and distress. Your responses will help your clinicians provide the most appropriate levels of treatment and support. The survey consists of 46 questions that should take approximately 5-10 minutes, but you may complete the survey at your own speed. Please answer every question unless you find it inappropriate or irrelevant to your situation.

**Today, would you find it difficult to perform the following activities because of your back pain?:**

| | 0 Not difficult at all | 1 Minimally difficult | 2 Somewhat difficult | 3 Fairly difficult | 4 Very difficult | 5 Unable to do |
|---|---|---|---|---|---|---|
| 1. Stand up for 20-30 minutes. | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. Climb one flight of stairs. | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. Walk a few blocks (1000 feet). | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. Walk several miles. | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. Reach up to high shelves. | 0 | 1 | 2 | 3 | 4 | 5 |
| 6. Throw a ball. | 0 | 1 | 2 | 3 | 4 | 5 |
| 7. Run one block (about 300 feet). | 0 | 1 | 2 | 3 | 4 | 5 |
| 8. Take food out of the refrigerator. | 0 | 1 | 2 | 3 | 4 | 5 |
| 9. Make your bed. | 0 | 1 | 2 | 3 | 4 | 5 |
| 10. Put on socks (or pantyhose). | 0 | 1 | 2 | 3 | 4 | 5 |
| 11. Bend over to clean the bathtub. | 0 | 1 | 2 | 3 | 4 | 5 |
| 12. Move a chair. | 0 | 1 | 2 | 3 | 4 | 5 |
| 13. Pull or push heavy doors. | 0 | 1 | 2 | 3 | 4 | 5 |
| 14. Carry two bags of groceries. | 0 | 1 | 2 | 3 | 4 | 5 |
| 15. Lift and carry a heavy suitcase. | 0 | 1 | 2 | 3 | 4 | 5 |

**We would like to know about thoughts and feelings you have when experiencing pain:**

| When I'm in pain... | Not at All | To a slight degree | To a moderate degree | To a great degree | All the time |
|---|---|---|---|---|---|
| 16. I can't seem to keep it out of my mind. | 0 | 1 | 2 | 3 | 4 |
| 17. I keep thinking about how much it hurts. | 0 | 1 | 2 | 3 | 4 |

| When I'm in pain... | Strongly disagree | disagree | agree | Strongly agree |
|---|---|---|---|---|
| 18. My body is telling me I have something dangerously wrong. | 1 | 2 | 3 | 4 |
| 19. People aren't taking my medical condition seriously enough. | 1 | 2 | 3 | 4 |
| 20. My accident has put my body at risk for the rest of my life. | 1 | 2 | 3 | 4 |
| 21. I wouldn't have this much pain if there weren't something potentially dangerous going on in my body. | 1 | 2 | 3 | 4 |
| 22. This episode of pain will jeopardize my job/career. | 1 | 2 | 3 | 4 |
| 23. This episode of pain is a significant event in my life. | 1 | 2 | 3 | 4 |
| 24. This pain episode will affect my future. | 1 | 2 | 3 | 4 |

25. Please indicate your current **level of back pain** by circling a number from 0 to 10 on the scale below:

0 No pain 1 2 3 4 5 6 7 8 9 10 Worst pain imaginable

**We would like to know your opinion of the organization you work for:**

| | Strongly disagree | Moderately disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Moderately Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 26. The organization values my contribution to its well-being. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. The organization fails to appreciate any extra effort from me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. The organization would ignore any complaint from me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. Even if I did the best job possible, the organization would fail to notice. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. The organization cares about my general satisfaction at work. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. The organization shows very little concern for me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. The organization takes pride in my accomplishments at work. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**The following is a list of the ways you might feel or behave. We would like to know how often you felt this way in the past week:**

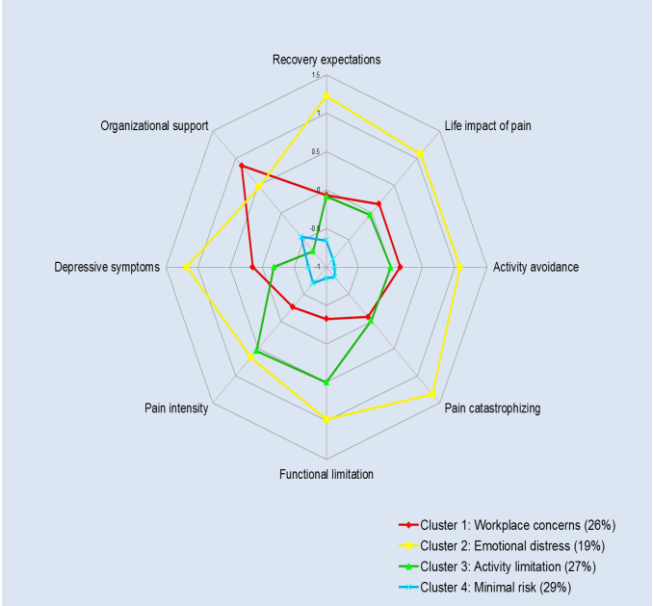
| | Rarely or none of the time (less than 1 day) | Some or a little of the time (1-2 days) | Occasionally or a moderate amount of time (3-4 days) | Most or all of the time (5-7 days) |
|---|---|---|---|---|
| 33. I did not feel like eating; my appetite was poor. | 1 | 2 | 3 | 4 |
| 34. I felt that I could not shake off the blues even with help from my family or friends. | 1 | 2 | 3 | 4 |
| 35. I had trouble keeping my mind on what I was doing. | 1 | 2 | 3 | 4 |
| 36. I felt depressed. | 1 | 2 | 3 | 4 |
| 37. I thought my life had been a failure. | 1 | 2 | 3 | 4 |
| 38. I felt fearful. | 1 | 2 | 3 | 4 |
| 39. I felt lonely. | 1 | 2 | 3 | 4 |
| 40. People were unfriendly. | 1 | 2 | 3 | 4 |
| 41. I had crying spells. | 1 | 2 | 3 | 4 |
| 42. I felt sad. | 1 | 2 | 3 | 4 |
| 43. I felt that people dislike me. | 1 | 2 | 3 | 4 |
| 44. I could not get "going". | 1 | 2 | 3 | 4 |

45. How soon do you expect to be able to resume your normal job without any limitations?

□ 0-2 days □ 3-7 days □ 8-14 days □ 15-30 days □ 31 - 60 days □ > 60 days

46. How long do you expect to limit your physical activities at home due to back pain?

□ 0-2 days □ 3-7 days □ 8-14 days □ 15-30 days □ 31 - 60 days □ > 60 days

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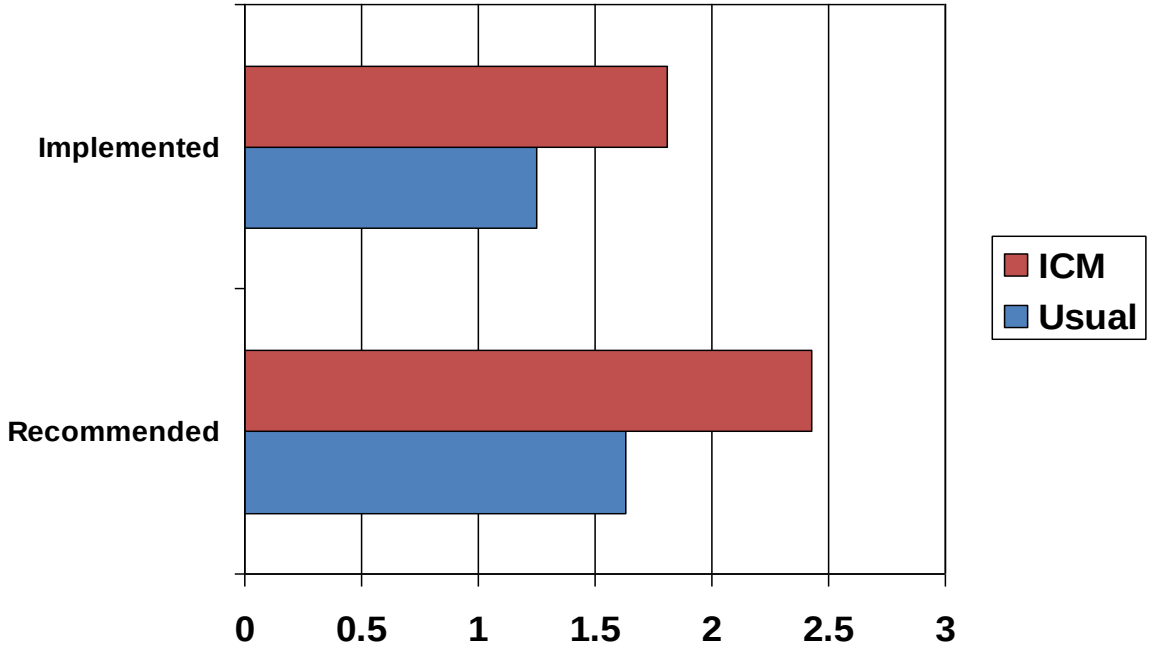
# Employer policies and practices

## Job accommodation

# Temporary job modifications
# Work-related musculoskeletal disorders






Lincoln, Feuerstein et al., JOEM, 2002

# Creating job flexibility to prevent disability

**Job Demand and Control Interventions: A Stakeholder-Centered Best-Evidence Synthesis of Systematic Reviews on Workplace Disability**

K Williams-Whitt[1], MI White[2,3], SL Wagner[4], IZ Schultz[5], C Koehn[6], CE Dionne[7], M Koehoorn[8], H Harder[4], R Pasca[9], O Warje[10], V Hsu[11], L McGuire[12], W Schulz[13], D Kube[14], A Hook[15], MD Wright[16]

- 11 systematic reviews
- **Scope**: Interventions that decrease physical or psychological job demands, increase job control or social support.
- **Conclusion**:
  - "Multimodal job demand reductions for either at-work or off-work workers will reduce disability-related absenteeism"



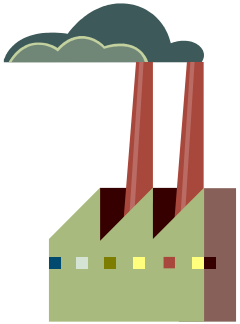
Int J Occup Environ Med 2015;6:61-78

# Why simple job matching doesn't always work

Clinical observations and objective measurements

Systematic return-to-work recommendations

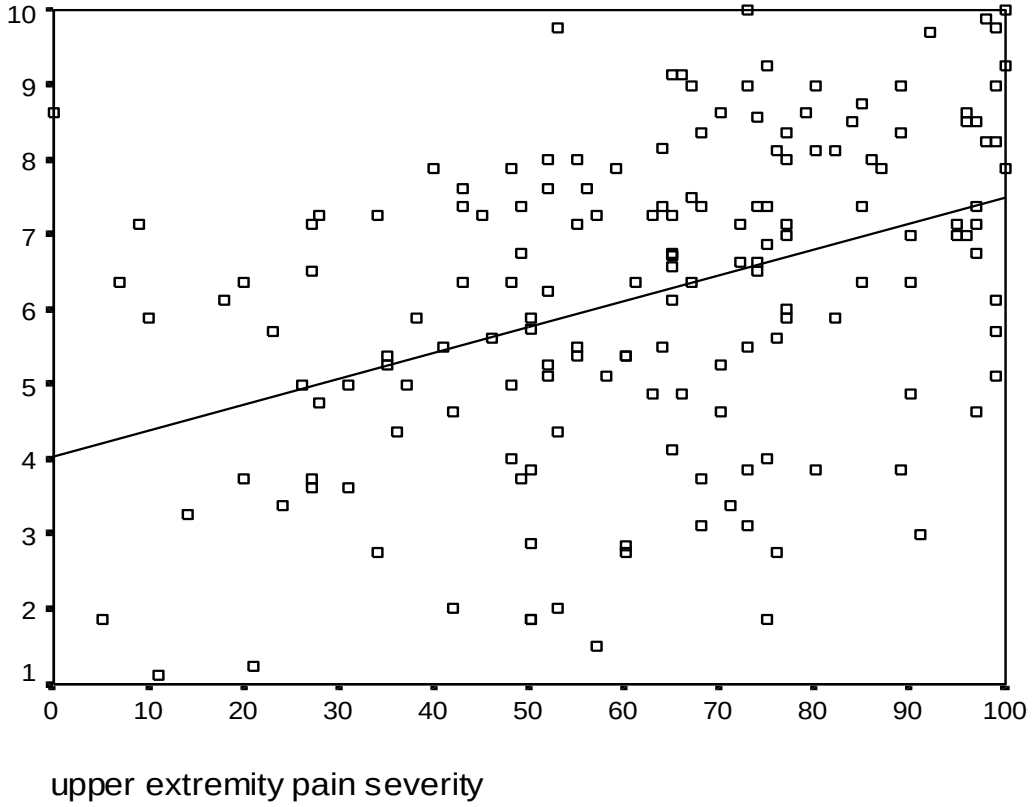
Job description and industry type



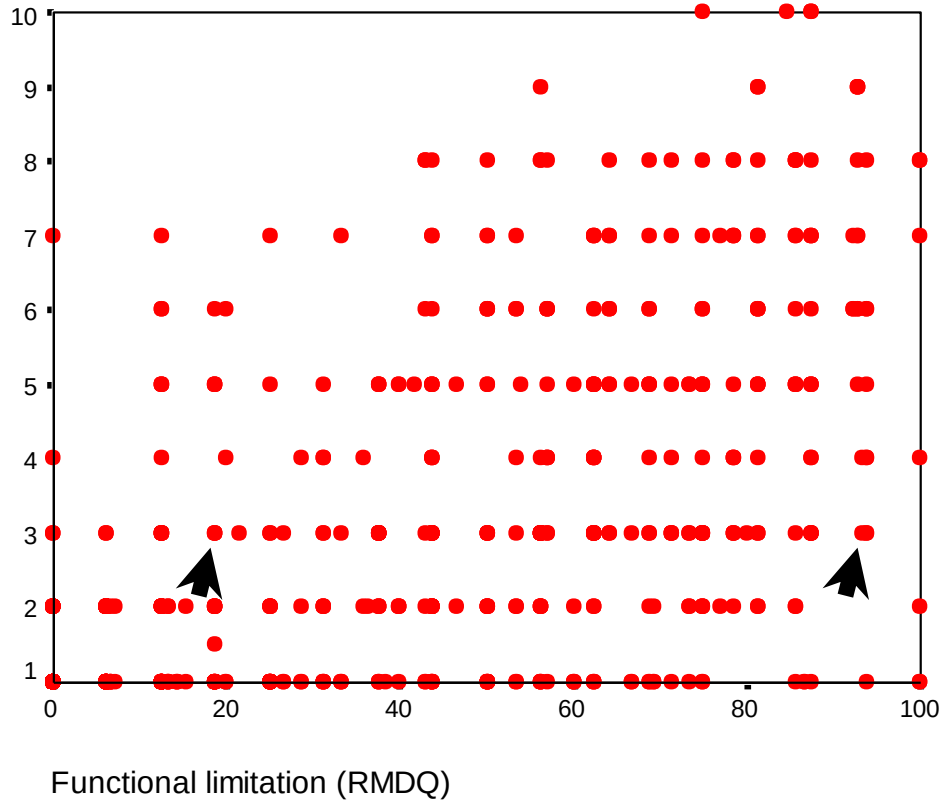
**<u>Underlying assumptions</u>**:

- Providers have sufficient workplace details
- Job modifications can be uniformly applied
- Worker input is unnecessary

# Upper extremity Disorders: Pain vs. function



# Acute LBP: Pain vs. functional limitation (1-mo)




(N = 568)

Weak correlation !

Shaw et al., JOEM 2009; N = 519 workers with acute LBP

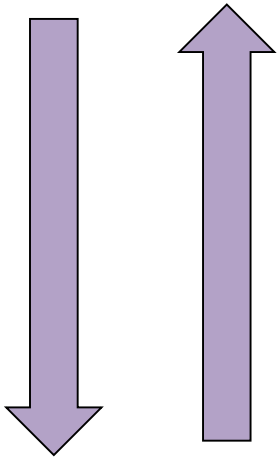
# Job accommodation: what works best

- Worksite visits and meetings
- RTW coordination at lowest level possible
- Direct collaboration and engagement with worker
- Transparent communication
- Healthy amount of arm-twisting (employee AND employer)

# Job modification for delayed RTW: Switch to a bottom-up process

Top-down process:

- Medical diagnosis
- Functional assessment
- Report of task limitations
- Job description
- Offer of modified duty
- Supervisor notification
- Worker acceptance

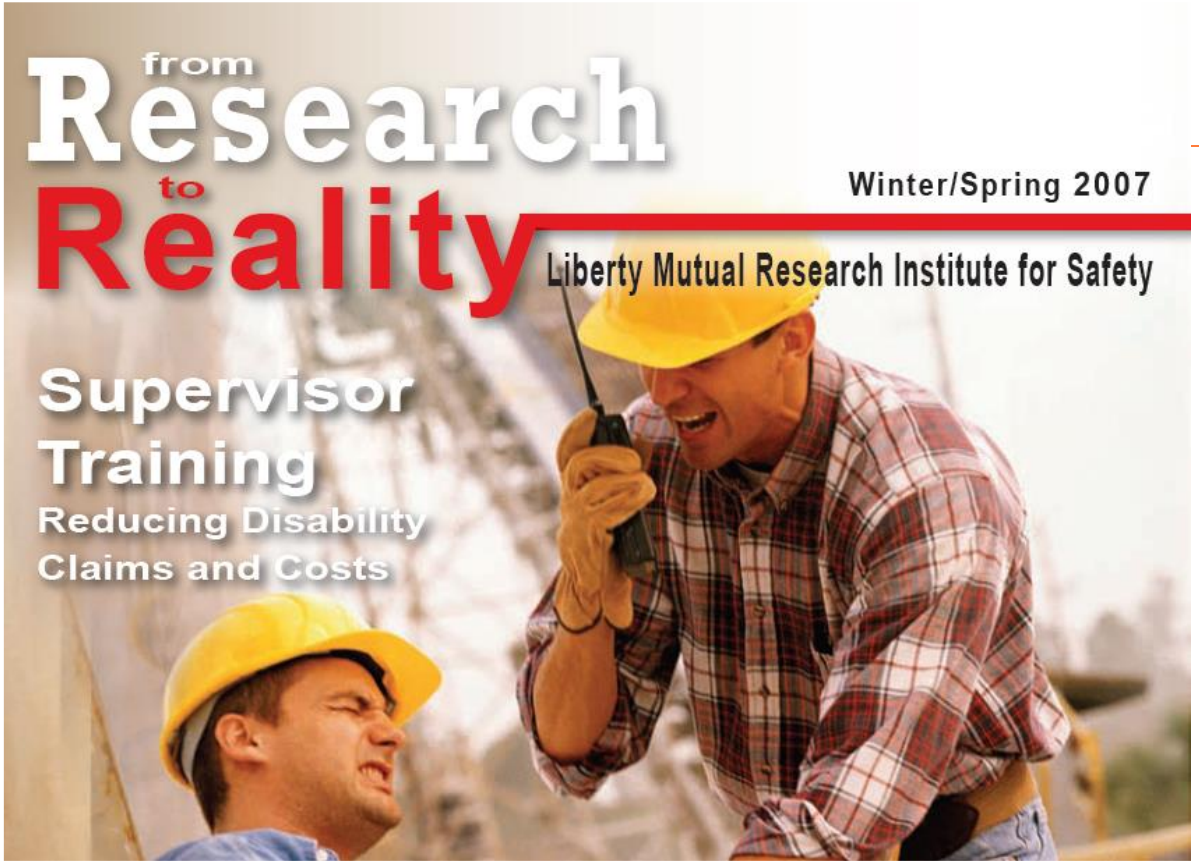


Bottom-up process:

- Monitor and revise as-needed
- MD review for medical clearance
- HR review for policy compliance
- Worker/supervisor draft RTW plan
- Supv. assesses leeway and support
- Worker identifies task limitations
- Worker/supv. list job tasks

# Employer policies and practices

## Organizational support and communication




## Supervisor training

- Invite early complaints
- Listen to worker concerns
  - Private and confidential
- Support and reassurance
  - "These things happen"
  - "We want you back"
- Maintaining contact
- Collaborative problem solving
- Analyzing job tasks
- Suggest modifications
- Coordinate with HR

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Shaw, Robertson et al, J Occup Rehabil. 2003;13(3):129-142.

# Supervisor training: sample videotape vignettes



Shaw, Robertson et al., AAOHN J. 2006;54(5):226-235.

# Results of supervisor training: Workers' compensation lost-time costs

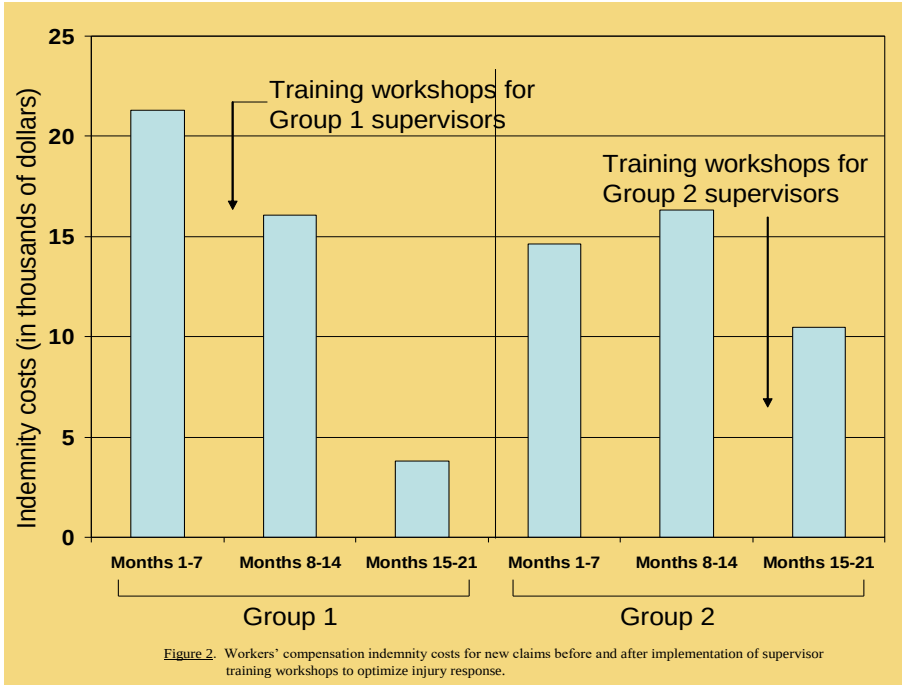


Figure 2. Workers' compensation indemnity costs for new claims before and after implementation of supervisor training workshops to optimize injury response.

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Shaw, Robertson et al., Work. 2006;26(2):107-114.

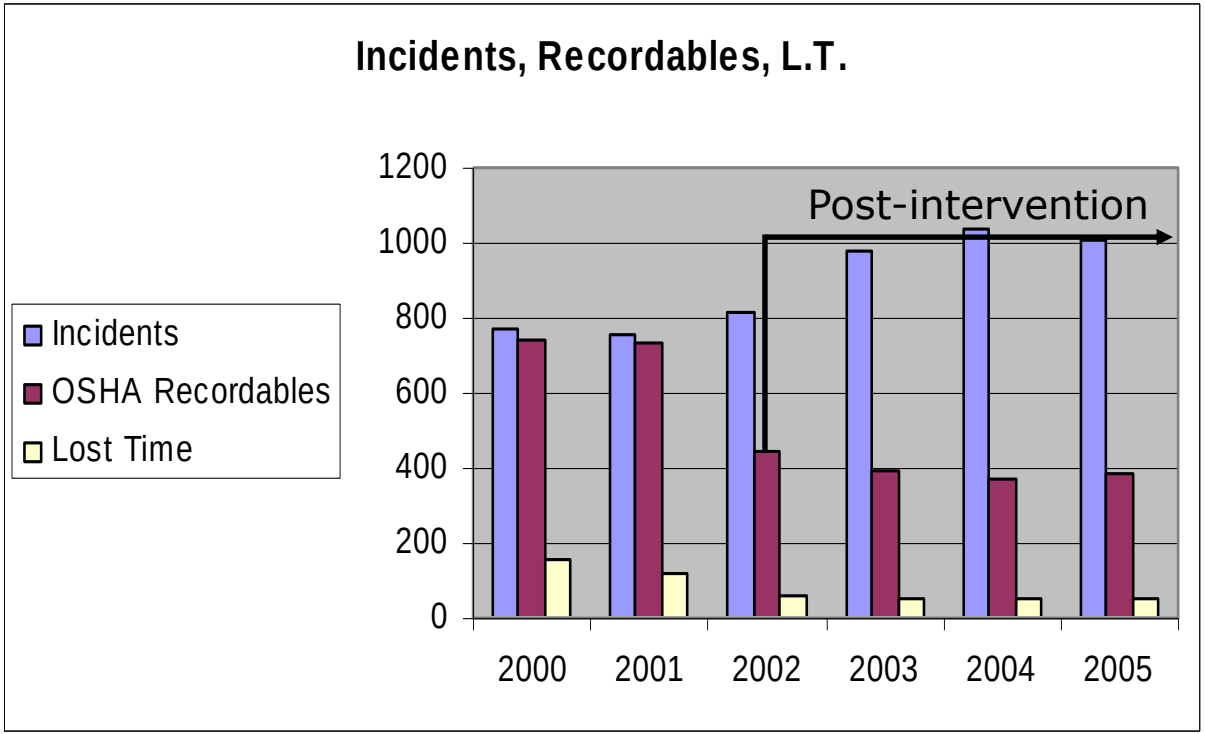
# Supervisor training: Injured worker surveys

| | Pre-training | Post-training |
|---|---|---|
| • Satisfied with supervisor | 68% | 83% |
| • Felt blamed | 17% | 0% |
| • Discouraged from filing | 5% | 0% |
| • Felt penalized | 8% | 4% |
| • Took my pain seriously | 67% | 87% |
| • Talked with me privately | 55% | 92% |
| • Helped to modify my work | 45% | 57% |
| • Helped to decrease discomfort | 44% | 80% |



Shaw, Robertson et al., Work. 2006;26(2):107-114.

# Supervisor training results: Injuries




- More reporting
- Fewer serious injuries
- Fewer lost time claims

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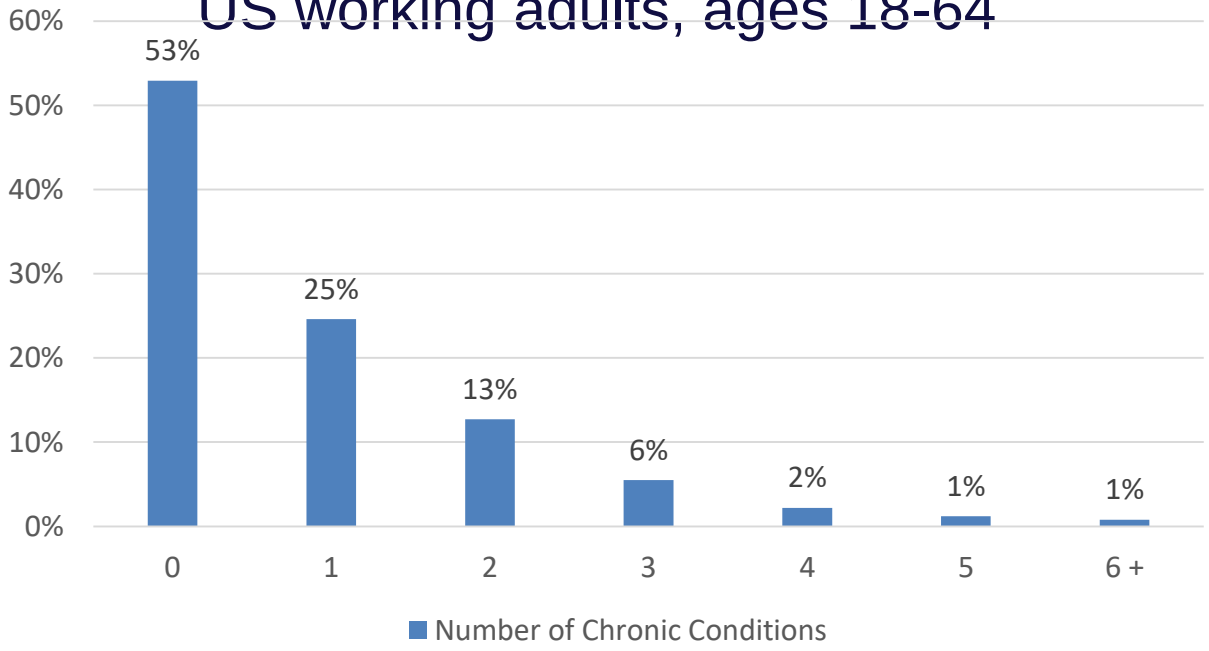
Shaw, Robertson et al., Work. 2006;26(2):107-114.

# Employer policies and practices

## Managing chronic, episodic conditions

# Almost Half of the Workforce Has at Least One Chronic Condition

## US working adults, ages 18-64

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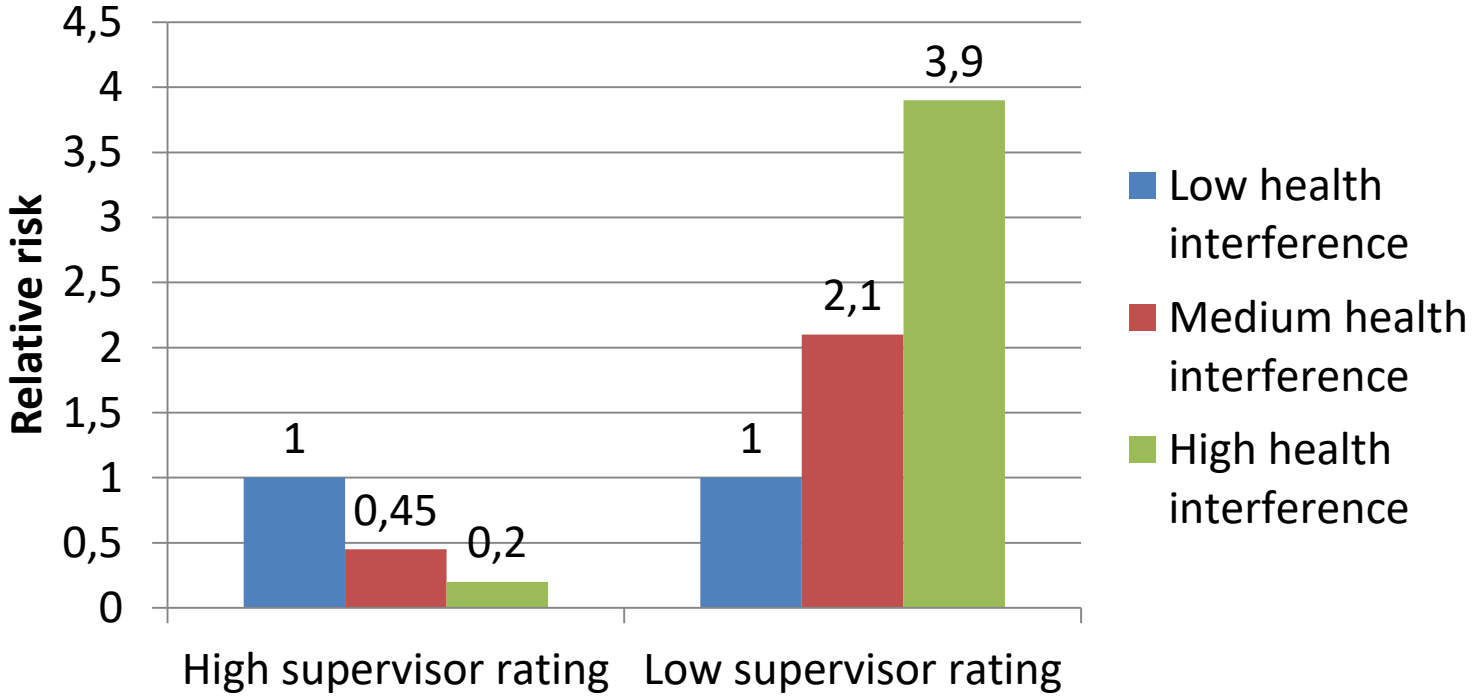
Burton et al., J Occup Environ Med. 2004;46:S38-S45.

# Health and job performance

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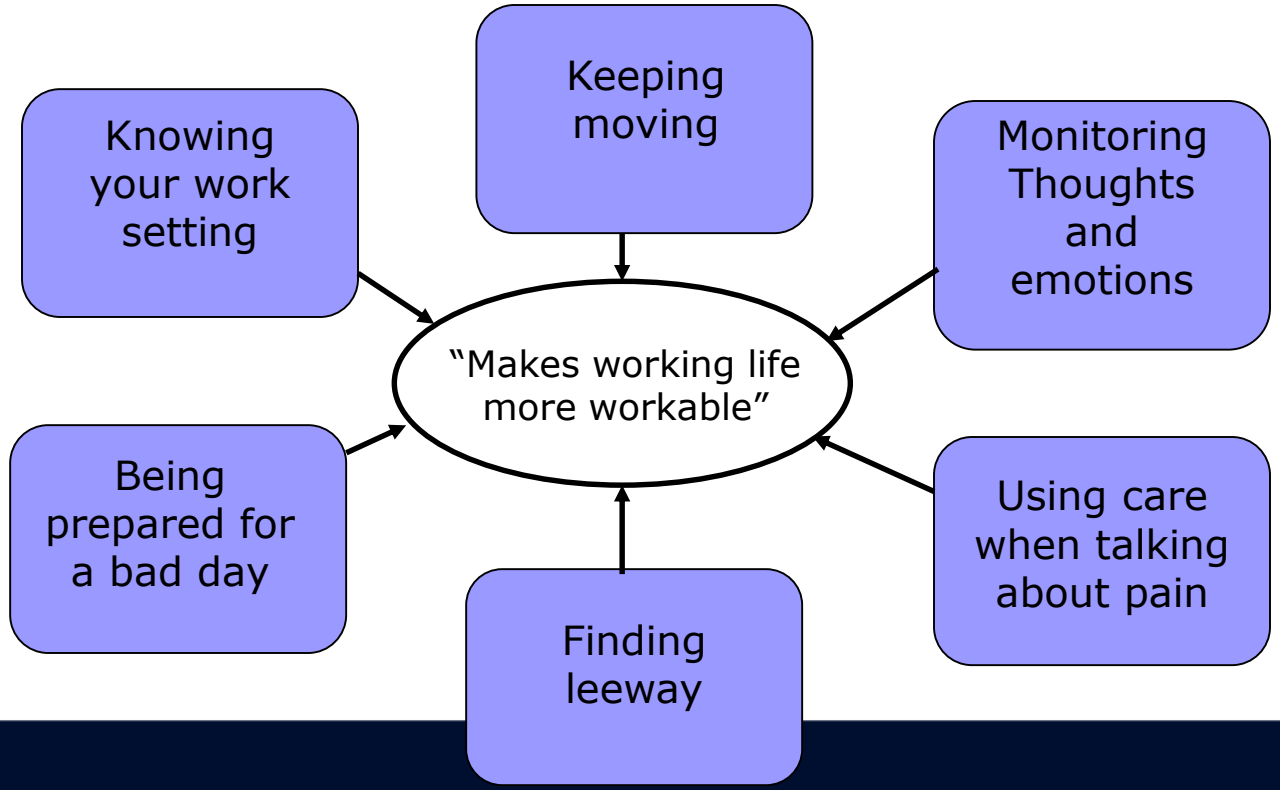
- Kessler et al., J Occup Environ Med. 2004;46:S23-S37.

# Coping with chronic or episodic symptoms Focus group results






- Tveito et al., Disabil Rehabil. 2010;32:2035-2045.

# Leveraging existing job flexibility and leeway

- Change the ordering of job tasks
- Vary the speed or pacing of work
- Switch or rotate among activities
- Use equipment to reduce discomfort
- Avoid uncomfortable or awkward postures
- Alter tasks to fit personal preferences
- Alternate physical and sedentary tasks
- Working from a different location
- Ask for occasional help
- Take micro-breaks to stretch
- Customize work stations
- Alter job hours
- Use available lift-assist devices
- Reduce long reaches
- Use mechanical transport devices




- Tveito et al., Disabil Rehabil. 2010;32:2035-2045.

# The MANAGE AT WORK study:
## Randomized trial of a group self-management program

- 5-session self-management program for workers
  1) *Intro to health self-management principles*
  2) *Job modification, pacing, and problem solving*
  3) *Communicating about health problems at work*
  4) *Keeping a positive outlook, adopting realistic goals*
  5) *Putting it all together: Taking care of yourself*

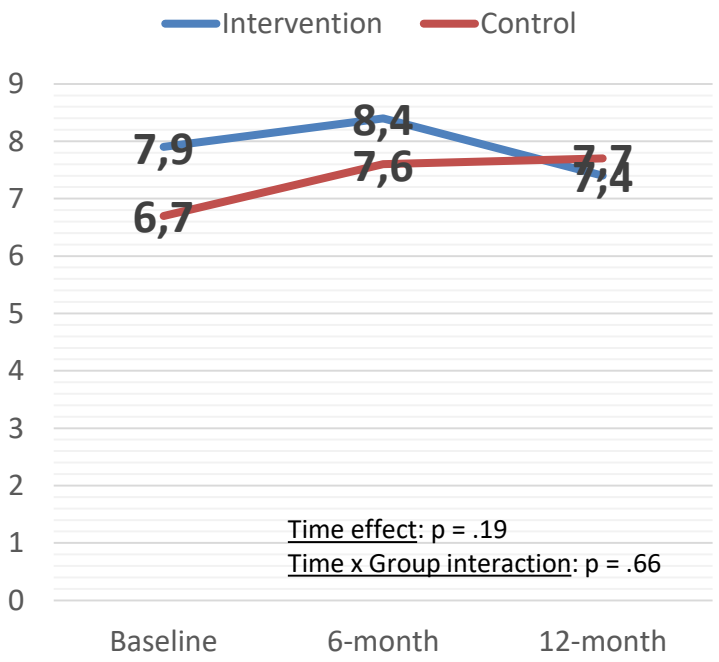
- Randomized controlled trial
- Primary outcome measures:
  - Work engagement
  - Work limitation



Shaw, Besen, et al. BMC Public Health. 2014;14:515.

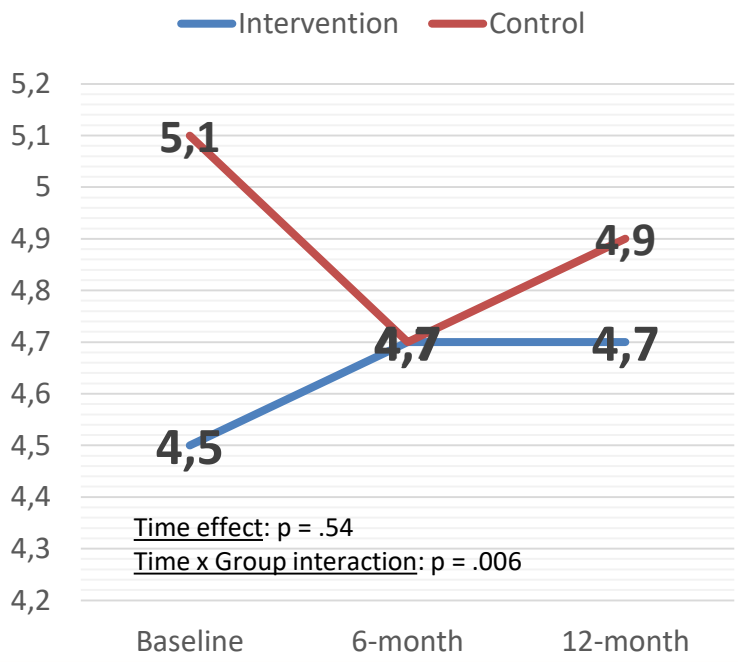
# Preliminary results

## Work limitations*




Note: Scores reflect percentage lost productivity

## Work engagement**




Note: Higher scores reflect more work engagement

* $p > 0.05$, ** $p < 0.05$

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Employer policies and practices

# The opioid crisis


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# US Trends in opioid prescribing and overdose

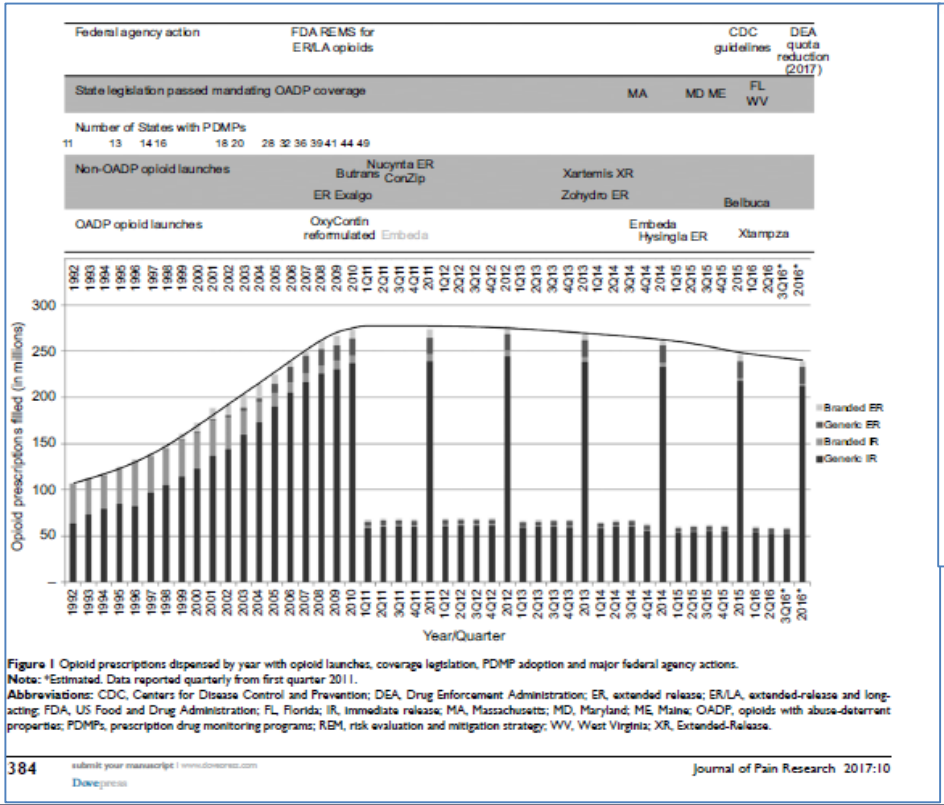
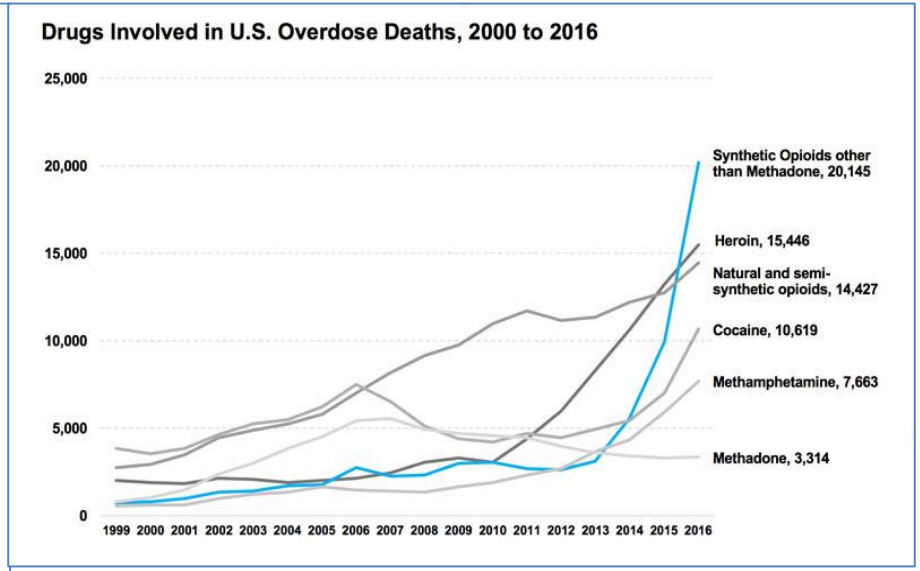



**Figure 1** Opioid prescriptions dispensed by year with opioid launches, coverage legislation, PDMP adoption and major federal agency actions.
**Note:** *Estimated. Data reported quarterly from first quarter 2011.
**Abbreviations:** CDC, Centers for Disease Control and Prevention; DEA, Drug Enforcement Administration; ER, extended release; ER/LA, extended-release and long-acting; FDA, US Food and Drug Administration; FL, Florida; IR, immediate release; MA, Massachusetts; MD, Maryland; ME, Maine; OADP, opioids with abuse-deterrent properties; PDMPs, prescription drug monitoring programs; REM, risk evaluation and mitigation strategy; WV, West Virginia; XR, Extended-Release.






Drugs Involved in U.S. Overdose Deaths* - Among the more than 64,000 drug overdose deaths estimated in 2016, the sharpest increase occurred among deaths related to fentanyl and fentanyl analogs (synthetic opioids) with over 20,000 overdose deaths. Source: CDC WONDER

Pezalla EJ, Rosen D, Erensen JG, Haddox JD, Mayne TJ. Secular trends in opioid prescribing in the USA. Journal of Pain Research. 2017:10;383-387.

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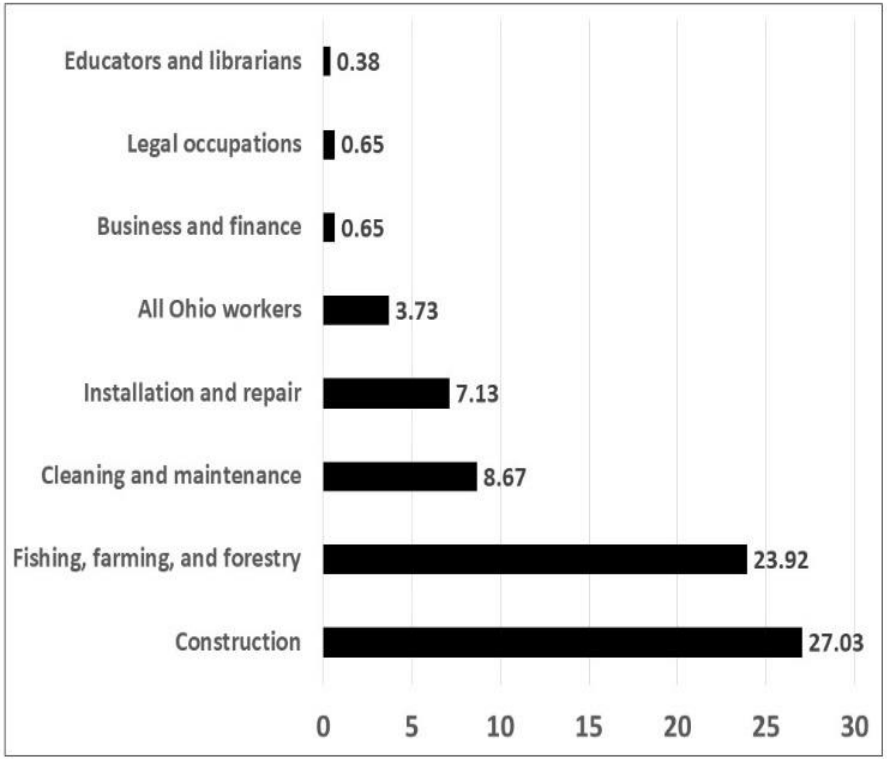



Figure 1. Opioid overdose deaths per 10,000 Ohio workers by industry[14]

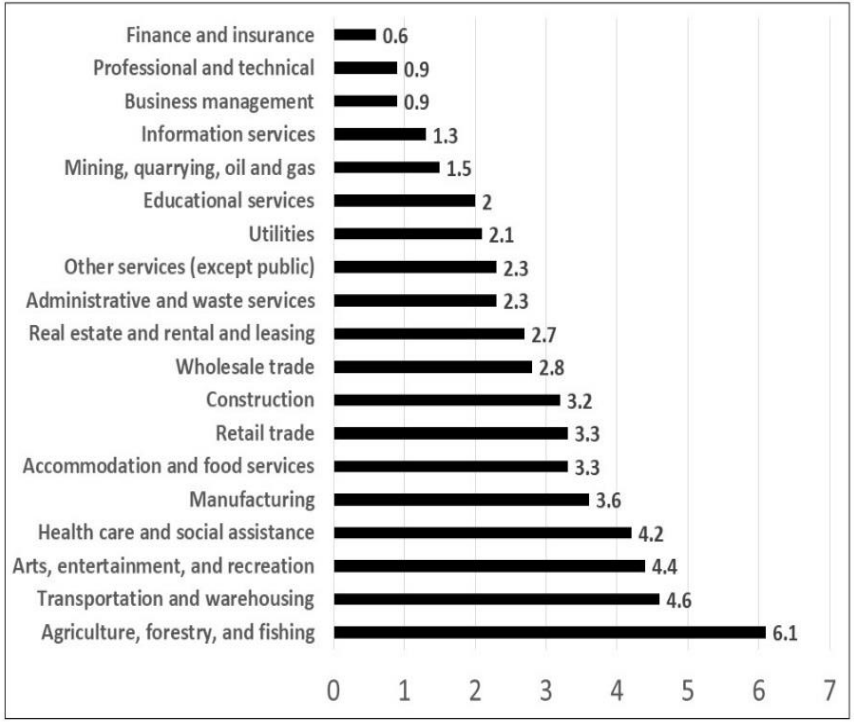
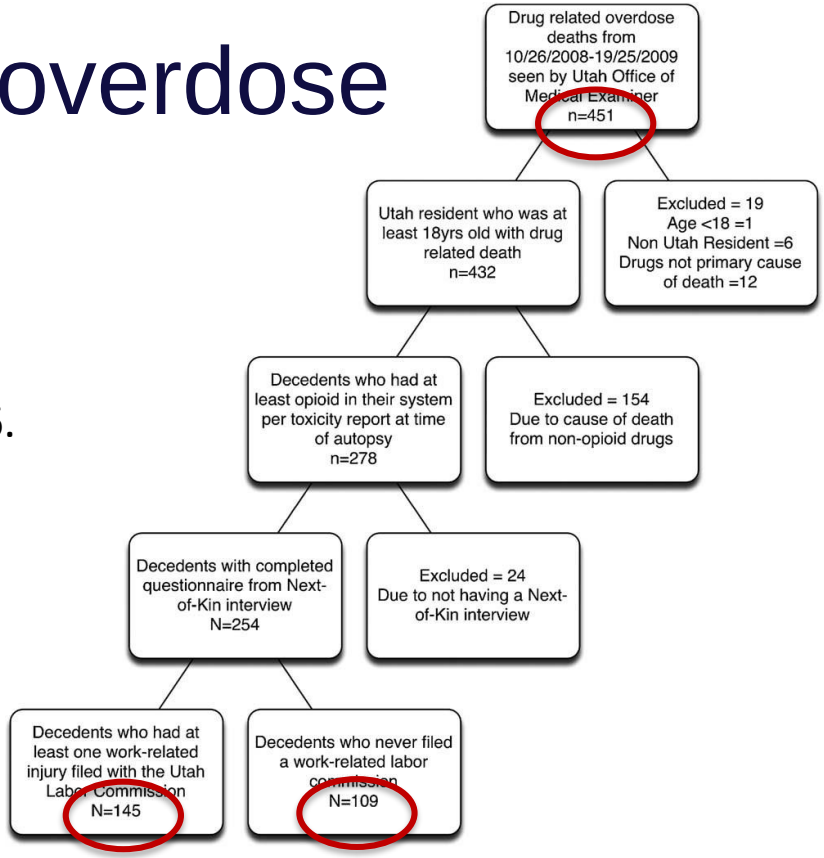



Figure 2. 2016 U.S. nonfatal occupational injury and illness incidence rate per 100 workers by occupation (Source: US Bureau of Labor Statistics, November 2017).

# WC claims and overdose

Cheng, Sauer, Johnson, Porucznik, & Hegmann.
Am J Ind Med. 2013;56:308-316.



## Table 2. Multivariate Linear Regression Model Examining Association Between Morphine Equivalent Amount (MEA) and Disability Duration (days) After Controlling for Severity, Age, Gender, and Job Tenure

| Variable | Change in Mean Disability Duration | 95% Confidence Intervals | *P* |
|---|---|---|---|
| MEA (mg) | | | |
| 450+ | 69.1 | 49.3 to 89.0 | <0.001 |
| 226–450 | 43.8 | 23.7 to 63.9 | <0.001 |
| 141–225 | 21.9 | 3.2 to 40.6 | 0.022 |
| 1–140 | 5.2 | −14.6 to 25.0 | 0.609 |
| 0 | 0.0 | — | — |
| High severity | 88.5 | 78.5 to 98.5 | <0.001 |
| Age (yr) | 1.6 | 1.1 to 2.0 | <0.001 |
| Female gender | −0.1 | −9.9 to 9.7 | 0.985 |
| Tenure (yr) | −1.7 | −2.3 to −1.1 | <0.001 |

Table 2 Multivariate Linear Regression Model Examining Association Between Morphine Equivalent Amount (MEA) and Disability Duration (days) After Controlling for Severity, Age, Gender, and Job Tenure

**Relationship Between Early Opioid Prescribing for Acute Occupational Low Back Pain and Disability Duration, Medical Costs, Subsequent Surgery and Late Opioid Use.**
Webster, Barbara; BSPT, PA-C; Verma, Santosh; MBBS, MPH; Gatchel, Robert; PhD, ABPP

Spine. 32(19):2127-2132, September 1, 2007.
DOI: 10.1097/BRS.0b013e318145a731

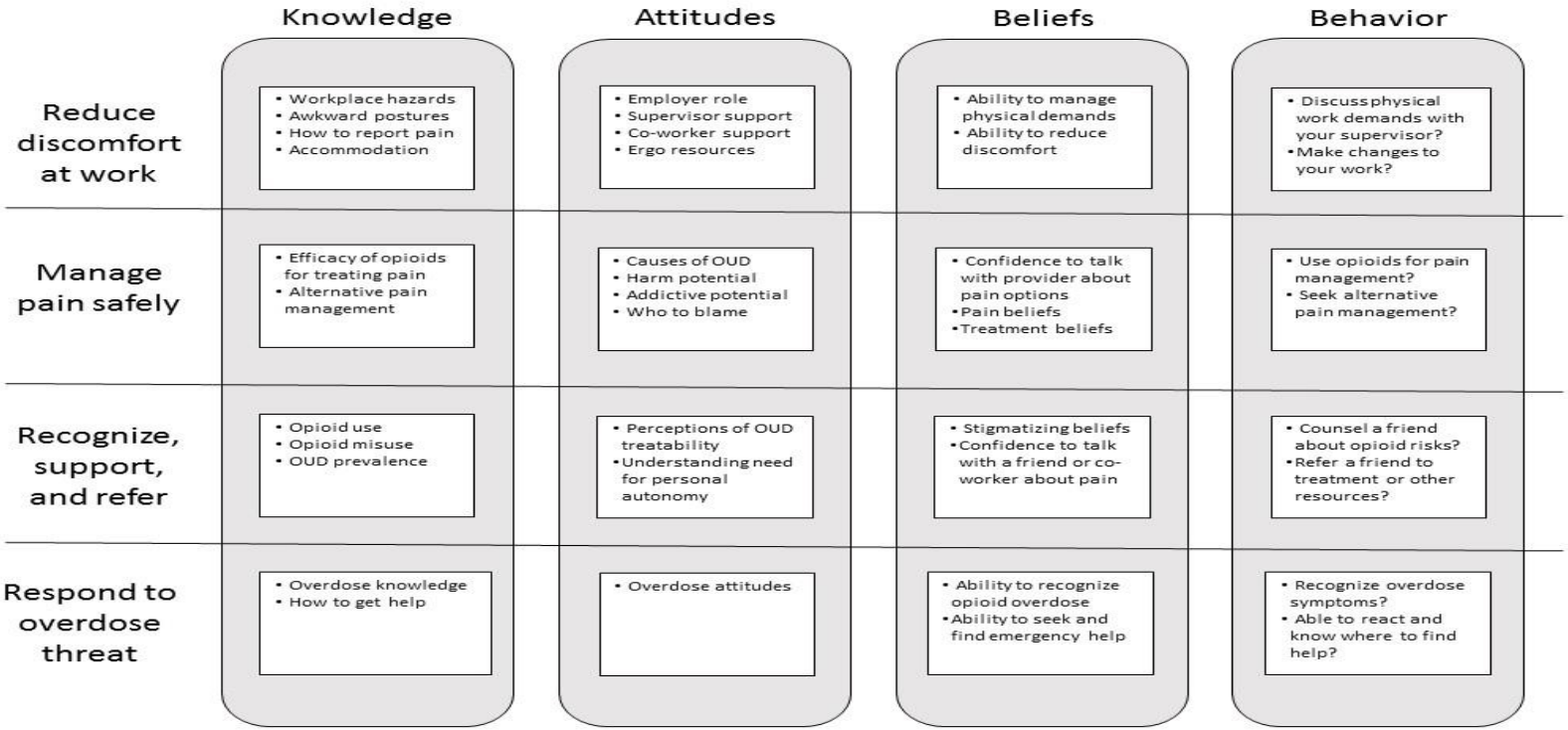



Figure D. Matrix of program evaluation survey domains using the KABB (Knowledge, Attitudes, Beliefs, Behavior) CDC framework

# Summary conclusions

1) Current disability trends and research suggest a greater need for **employer participation** in rehabilitation efforts.

2) Biomedical information needs to be interpreted within an organizational, psychosocial, and individual **context**.

3) Collaborative and **participatory** approaches to RTW that engage employer, patient, and provider are superior.

4) Engaging employers to provide more proactive RTW practices can be **challenging**, but can have real impact.

# RETAIN-CT

("Retaining Employment and Talent After Injury/illness Network")

S@W/R2W
Stay-at-Work/Return-to-Work
POLICY COLLABORATIVE

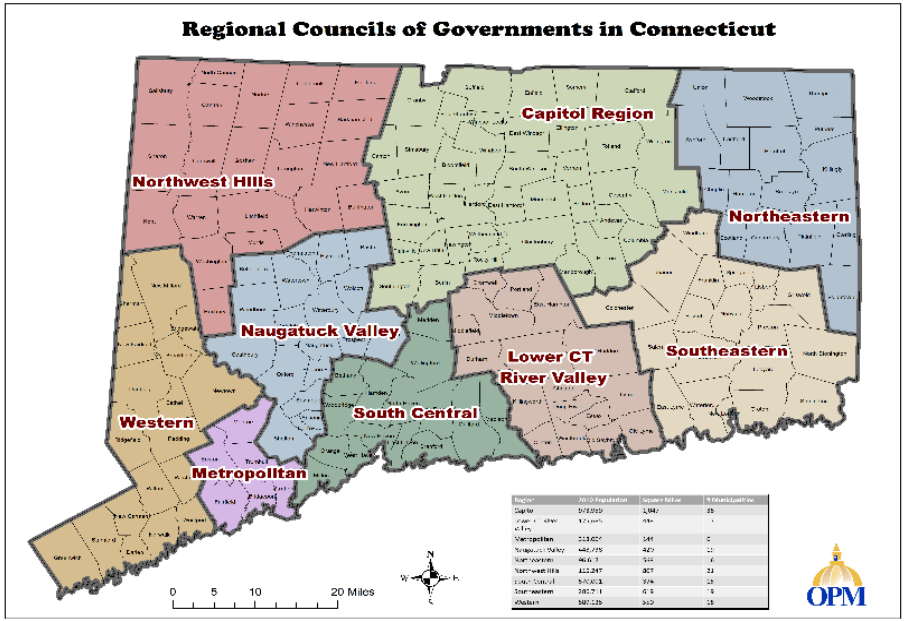



*Figure 4: Map of CT regions*

**System-level intervention for MSKs:**

- **Providers:**
  - Payments for RTW plans
  - 2-way employer communication
- **Insurers:**
  - Earlier tracking of lost days
  - IT solutions: provider portal
- **RTW coordinator:**
  - High disability risk factors
  - after 30 days out of work

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# Thank you!
# Merci!

## Questions/Comments?



wshaw@uchc.edu