

Comorbidity and Psychosocial Influences on Workers' Compensation Claims

2025 ICA Workers' Compensation Claims Seminar

August 22, 2025



About WCRI

- Independent, not-for-profit research organization providing high-quality, objective information about public policy issues involving workers' compensation systems
- We serve as a resource for public officials and stakeholders, but we do not make recommendations or take positions
- Studies are peer-reviewed with a focus on benefit delivery
- Diverse membership support, including gov't agencies, employers, insurers, labor unions, service providers, etc.

Objectives

- How common are comorbidities and psychosocial risk factors in workers' compensation claimants?
- How do these factors affect recovery, disability duration, and costs?
- What are the implications of these findings?

Case Study

JB is a 52 year-old male truck driver who twisted his right knee getting out of the truck's cab. He was seen by his primary care doc and was prescribed with meds, PT, and an injection without improvement.

An MRI was performed that revealed a large medial meniscus tear and moderate degenerative joint disease of the knee. Surgery was recommended. He has Hypertension and Type 2 Diabetes, but it is not clear whether they are well-controlled.

Key: PT: Physical therapy. MRI: Magnetic resonance imaging.

Which of the Following Statements Are True?

1. Diabetes is the most commonly occurring comorbidity among injured workers
2. Costs and disability duration are nearly the same when comparing workers with comorbidities and those without
3. Degenerative comorbidities are rare occurrences (<3% of all injuries) in work-related musculoskeletal injuries
4. ??????????

Comorbidities in Workers' Compensation Claims

Common Physical Comorbidities

- Hypertension
- Diabetes
- Obesity
- Lung diseases

Mental/Behavioral Comorbidities

- Anxiety
- Depression
- Substance use
- Sleep disorders

Degenerative Comorbid Conditions

- Osteoarthritis
- Spondylosis
- Spinal disc diseases
- Spinal stenosis

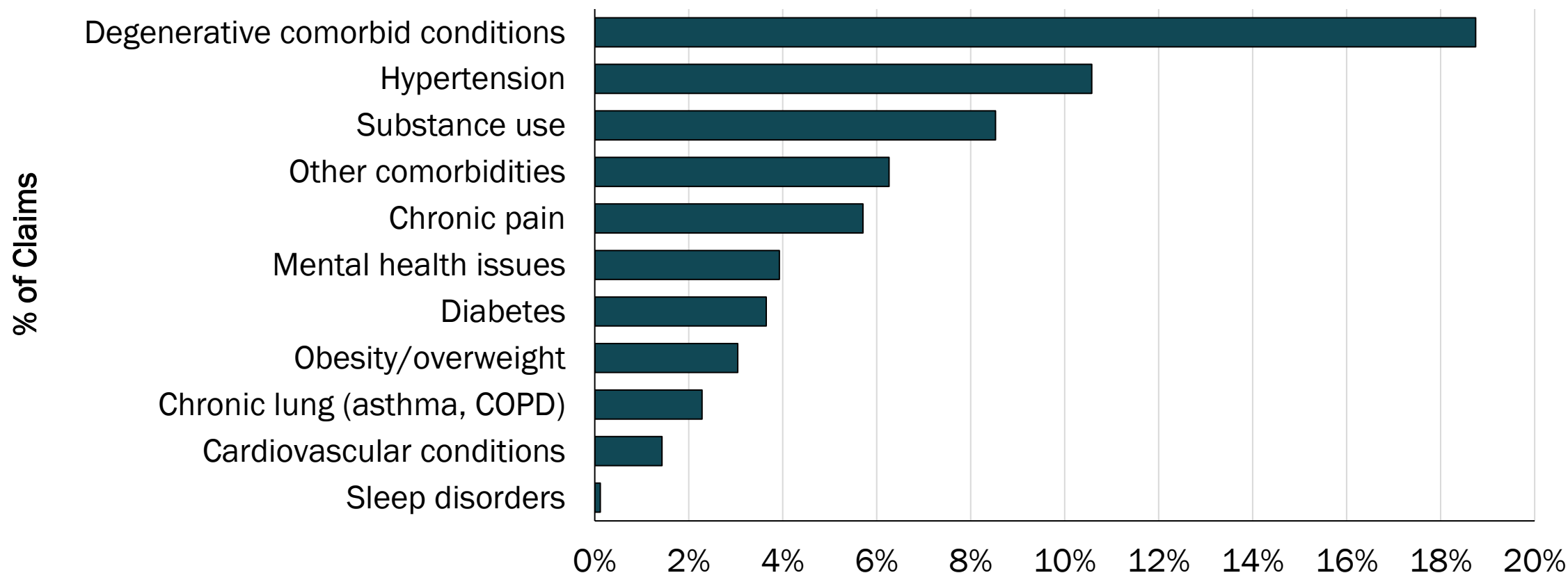
Chronic Pain

- Chronic pain
- Other pain disorders

Comorbidities — Key Findings

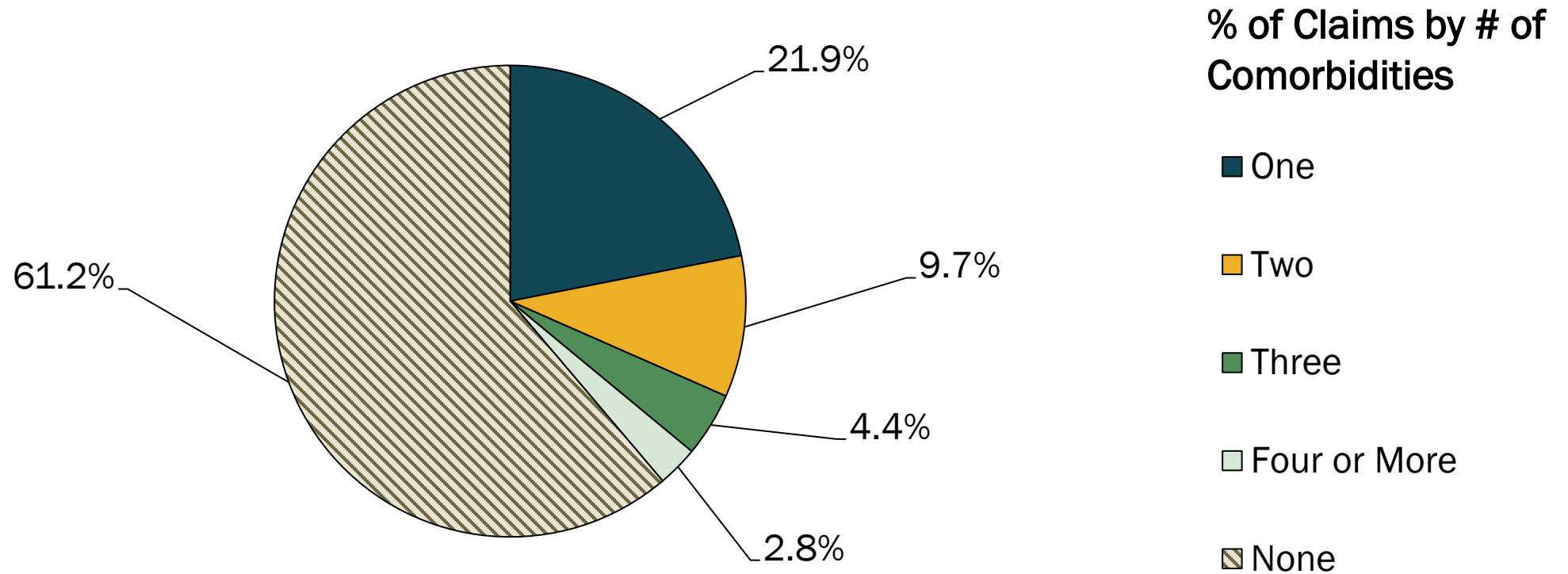
- Nearly 1 in 5 claims had degenerative conditions; other comorbidities also seen in the claims
- 39% of claims had one or more comorbidities
 - Of claims with comorbidities, nearly half had multiple comorbidities
- Claims with comorbidities had substantially higher costs and longer duration of temporary disability, much higher for claims with multiple comorbidities

Nearly 1 in 5 Workers Had Degenerative Comorbid Conditions, Other Comorbidities Also Seen in Claims



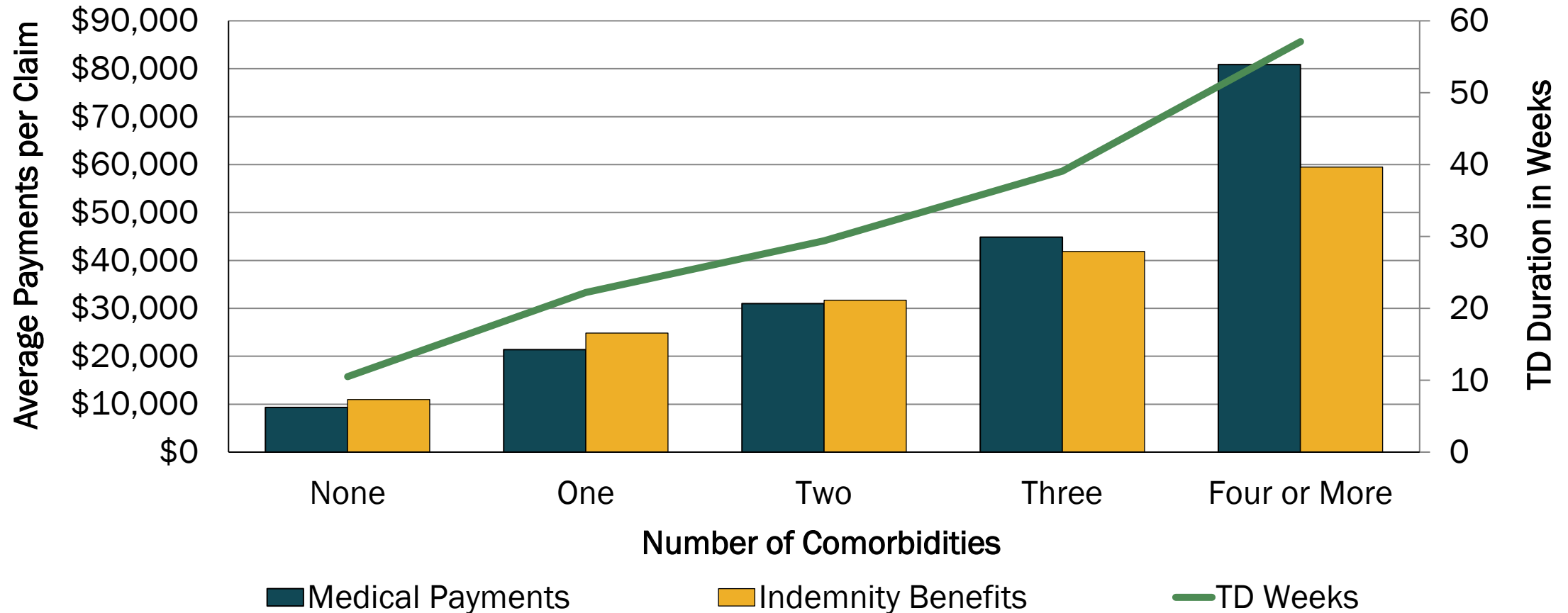
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, payment transactions observed within 36 months of injury, up to March 31, 2022; pooled data of 32 states.

39% of Claims Had at Least One Comorbidity; 17% Had Multiple Comorbidities



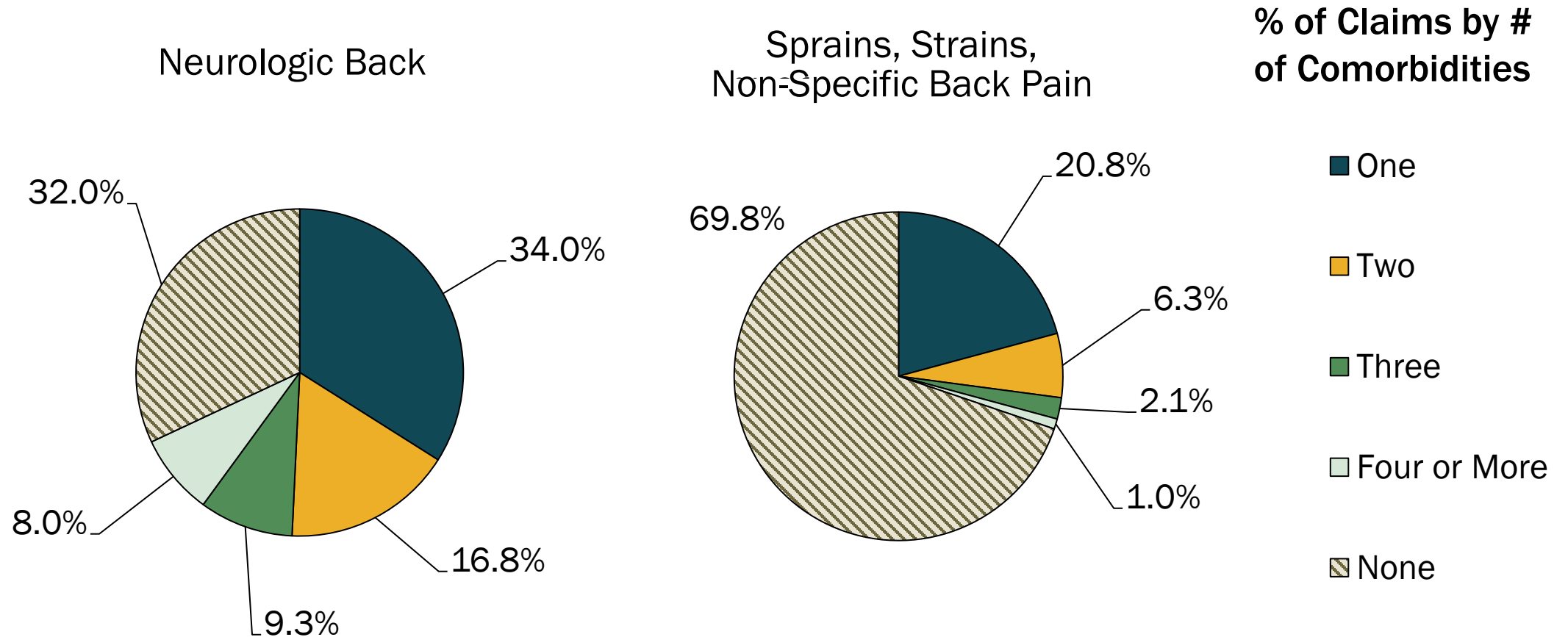
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, observed within 36 months after the date of injury, up to March 31, 2022; pooled data of 32 states.

As Number of Comorbidities Increases, So Do Associated Costs and Duration of Temporary Disability



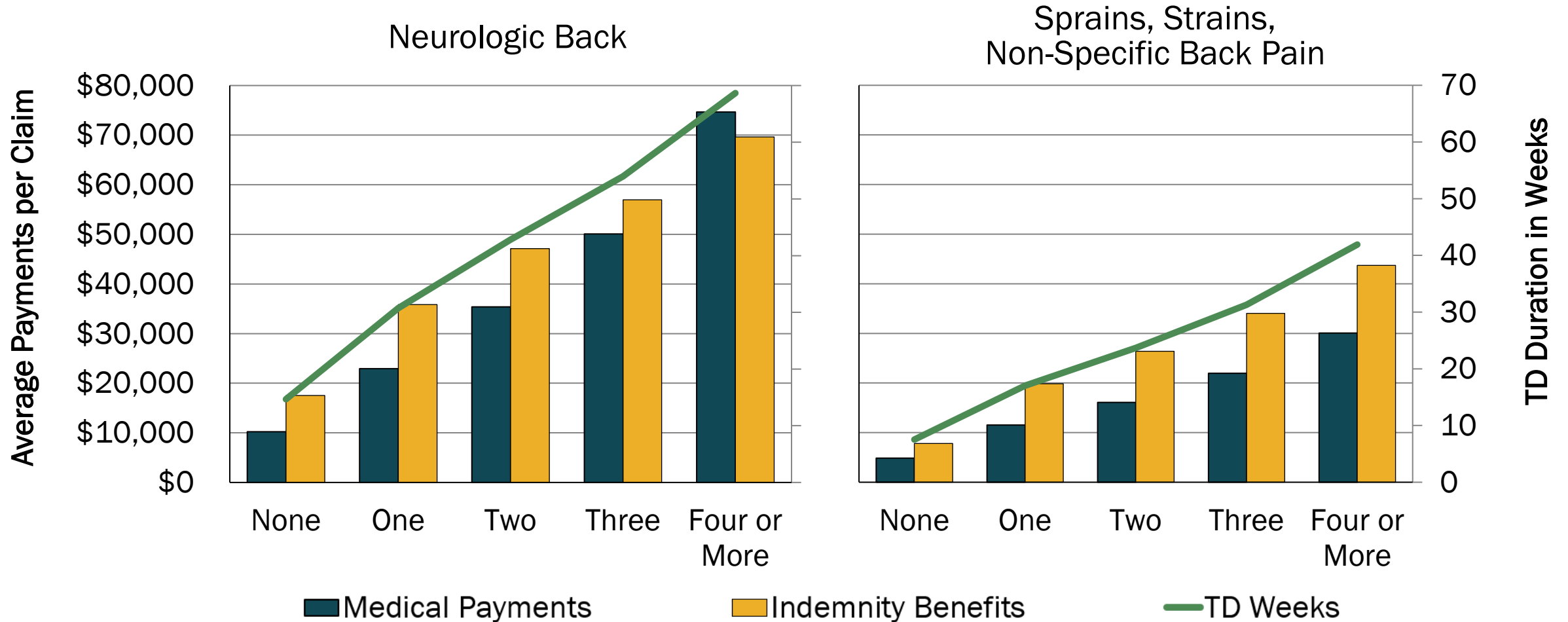
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, observed within 36 months after the date of injury, up to March 31, 2022; pooled data of 32 states. Key: TD: Temporary disability.

Claims with Neurologic Back Injuries More Likely to Have Comorbidities Than Sprains, Strains, and Non-Specific Back Pain



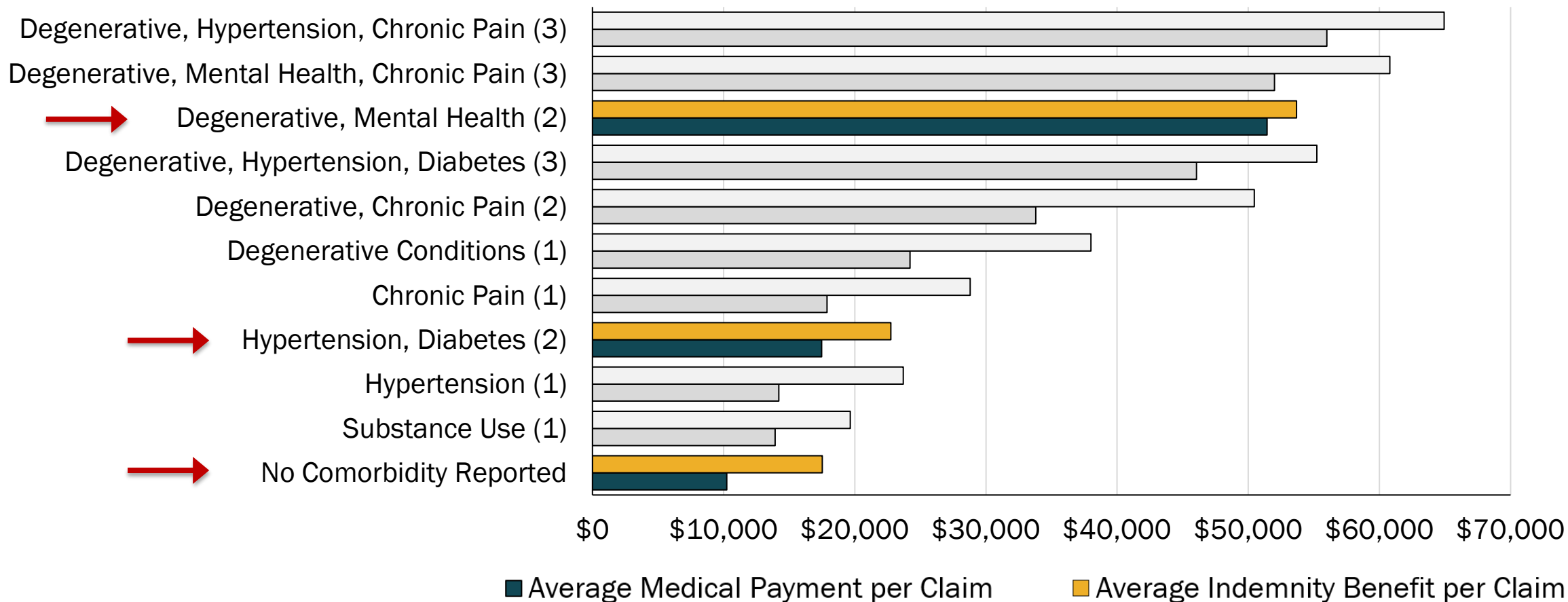
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, observed within 36 months after the date of injury, up to March 31, 2022; pooled data of 32 states.

Costs and TD Duration: Neurologic Back Claims and Claims with Sprains, Strains, and Non-Specific Back Pain as Examples



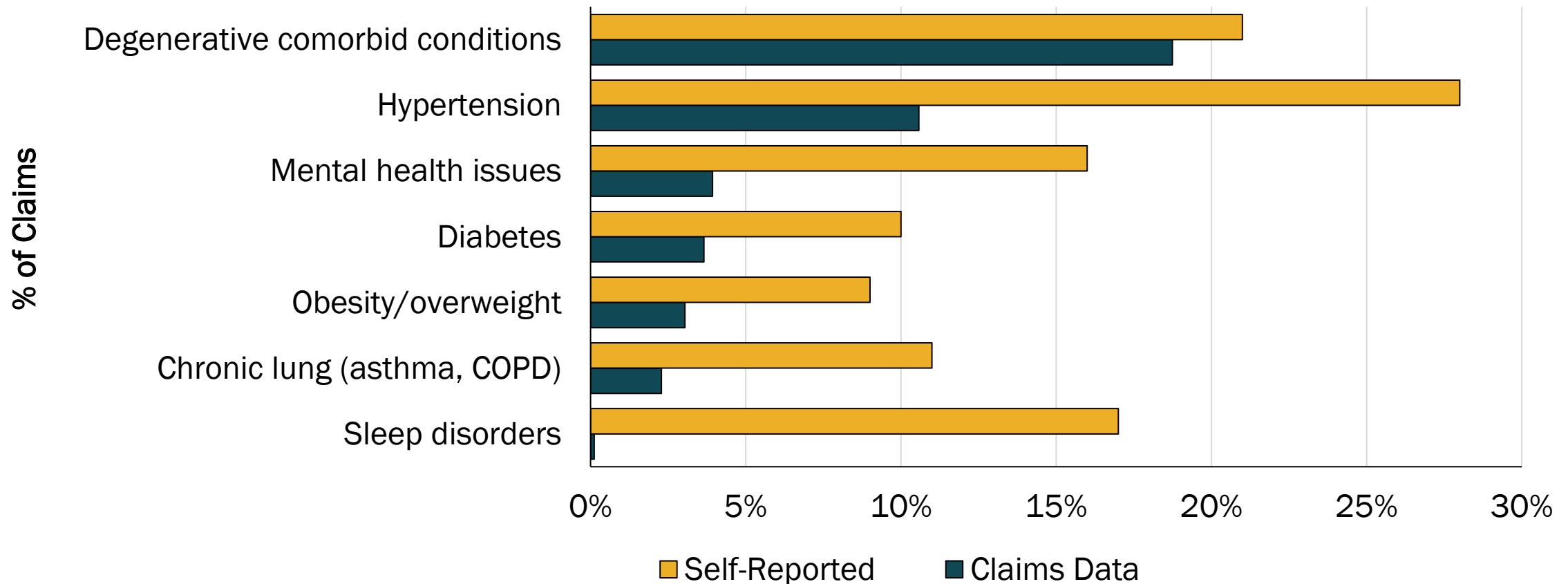
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, observed within 36 months after the date of injury, up to March 31, 2022; pooled data of 32 states. Key: TD: Temporary disability.

Illustrative Findings: Impact of Comorbidities on Claim Costs — Neurologic Back as an Example



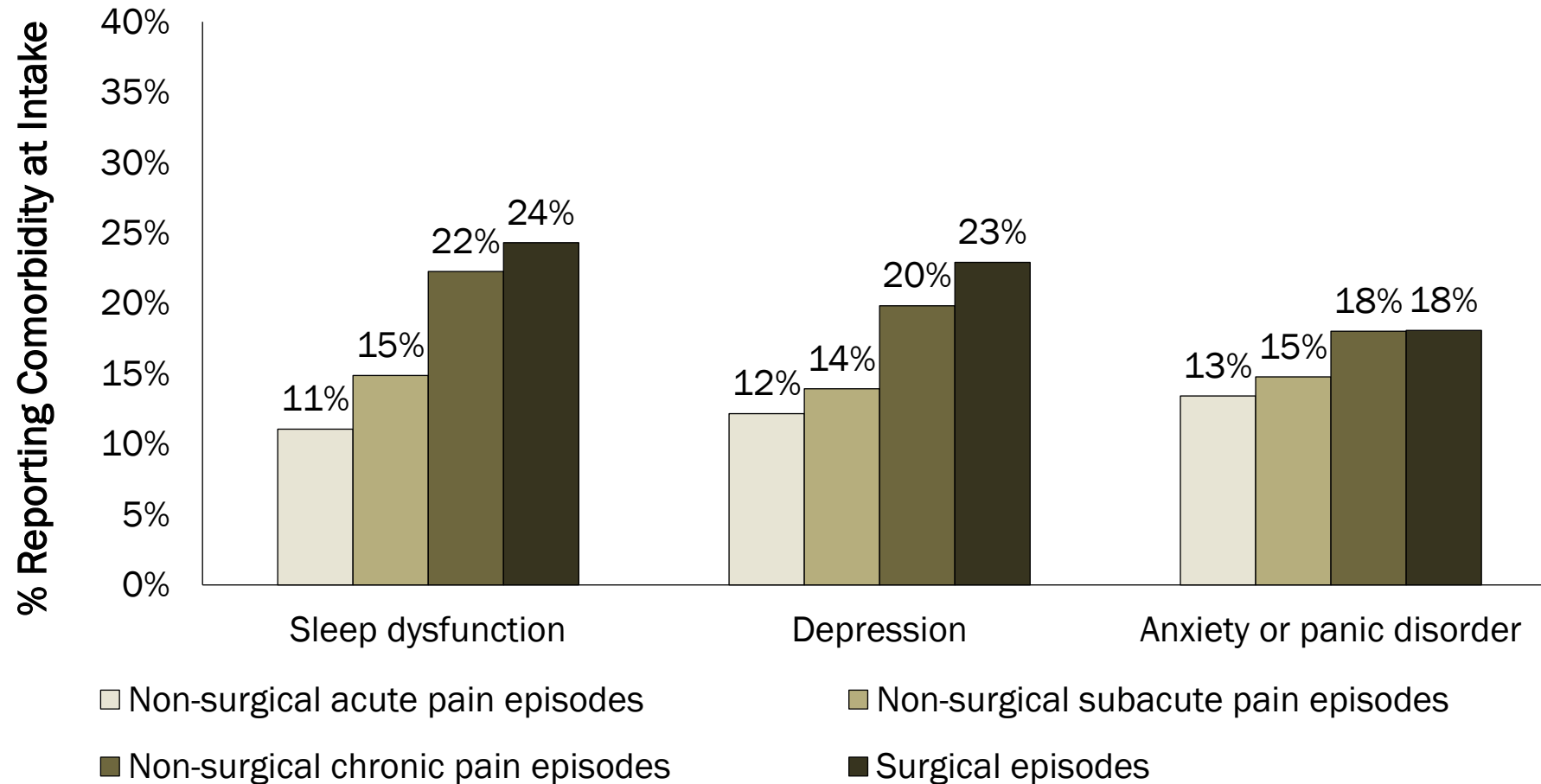
Claims with >7 days of lost time, injuries occurring from October 1, 2015, to March 31, 2019, payment transactions observed within 36 months of injury, up to March 31, 2022; pooled data of 32 states.

Comorbidities Are Underreported in Workers' Compensation Claims Data



Sources: Thumula, Liu, and Lea. 2023. *Comorbidities and Recovery After Physical Therapy for Low Back Pain* (self-reported data). Wang, Lea, and Mueller. 2025. *Degenerative and Comorbid Conditions in Workers' Compensation* (claims data).

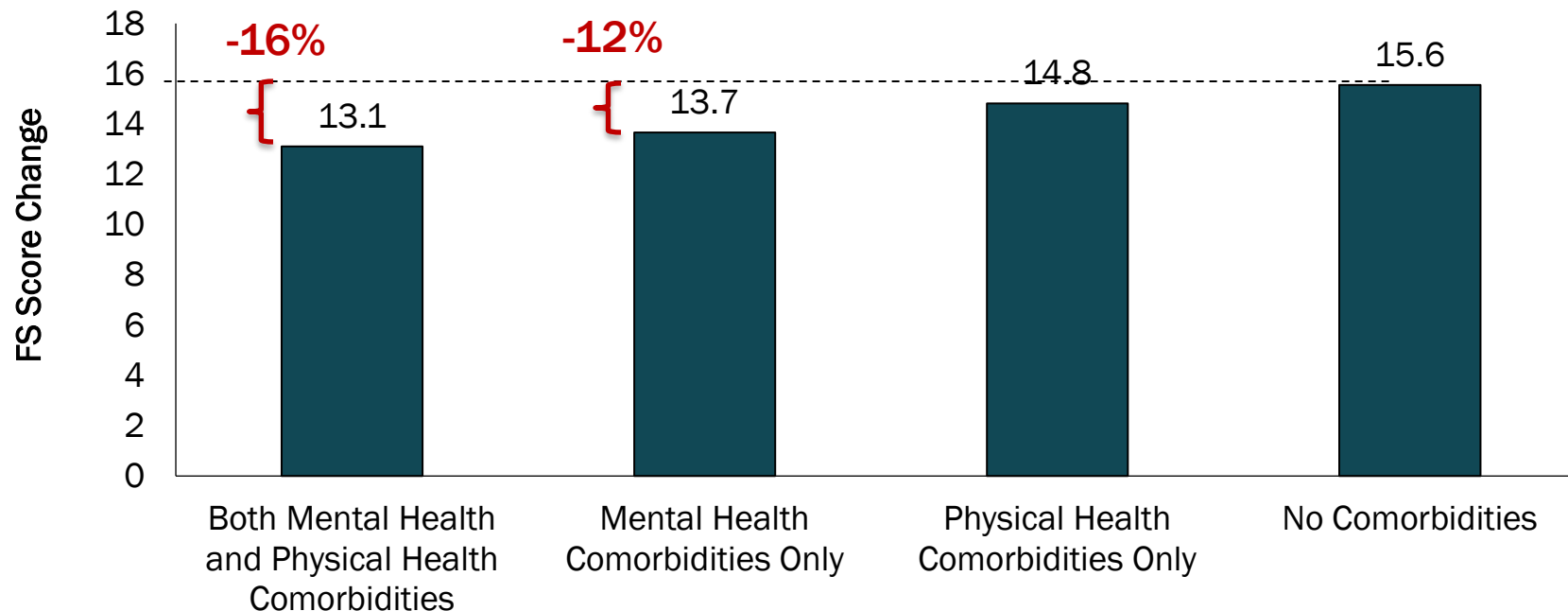
Higher Proportion of Chronic Pain & Surgical Low-Back-Pain Patients Reported Mental Health Comorbidities



Source: Thumula, Liu, and Lea. 2023. *Comorbidities and Recovery After Physical Therapy for Low Back Pain*.

Mental Health (MH) Comorbidities Are Associated with Slower Functional Status (FS) Improvements

- MH comorbidities are associated with a smaller FS score change of 12% relative to “no comorbidities”
 - For MH and physical health comorbidities: FS score change is 16% smaller
- Differences are larger in chronic and surgical cases



Source: Thumula, Liu, and Lea. 2023. *Comorbidities and Recovery After Physical Therapy for Low Back Pain*.

Key Insights About Comorbidities in Workers' Compensation

- Degenerative and other comorbid conditions associated with poorer recoveries, higher costs and longer duration of temporary disability
- While degenerative conditions are frequently reported, certain common coexisting conditions likely underreported in the claims data



Psychosocial Risk Factors Are Widespread Among Workers with Injuries

Behavioral Health Conditions in Workers' Compensation (WC)

- Behavioral health issues observed in WC system:
 - **Psychosocial barriers to recovery**
 - Chronic pain
 - Depressive disorders
 - Anxiety disorders
 - Substance use disorders
 - Post-traumatic stress disorder (PTSD) and acute stress disorders
 - Post-COVID condition

Source: Thumula and Negrusa. 2022. *A Primer on Behavioral Health Care in Workers' Compensation*.

Psychosocial Barriers to Recovery

Psychological Factors

- Poor recovery expectations after an injury
- Fear of pain due to activity
- Catastrophizing
- Negative coping
- Negative mood

Workplace Factors

- Job dissatisfaction
- Perceived injustice
- Stressful or monotonous work
- Low supervisor support

Other Factors

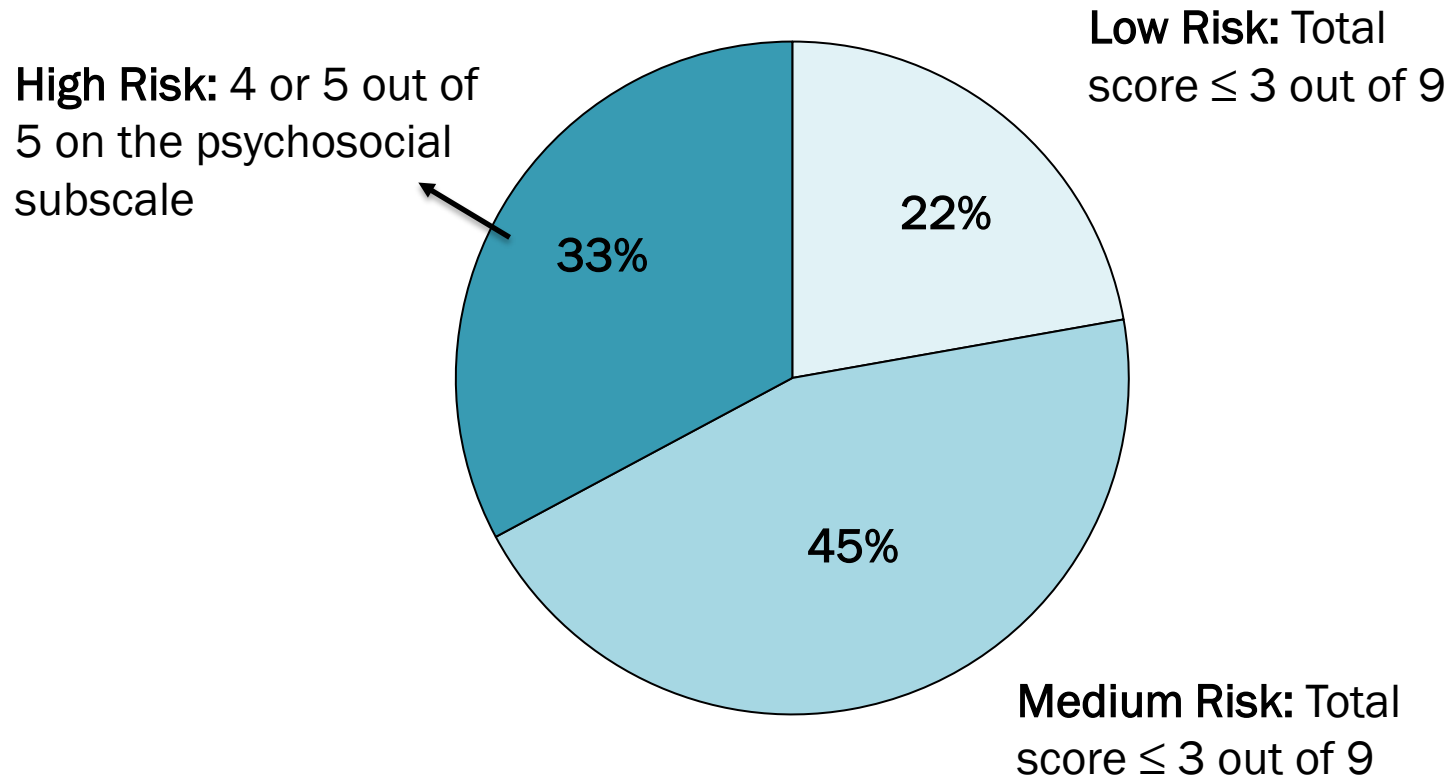
- Family or support system issues
- Preexisting psychological symptoms and conditions
- System or contextual factor

WCRI Studies Point to Prevalence of Psychosocial Factors and Smaller Recoveries

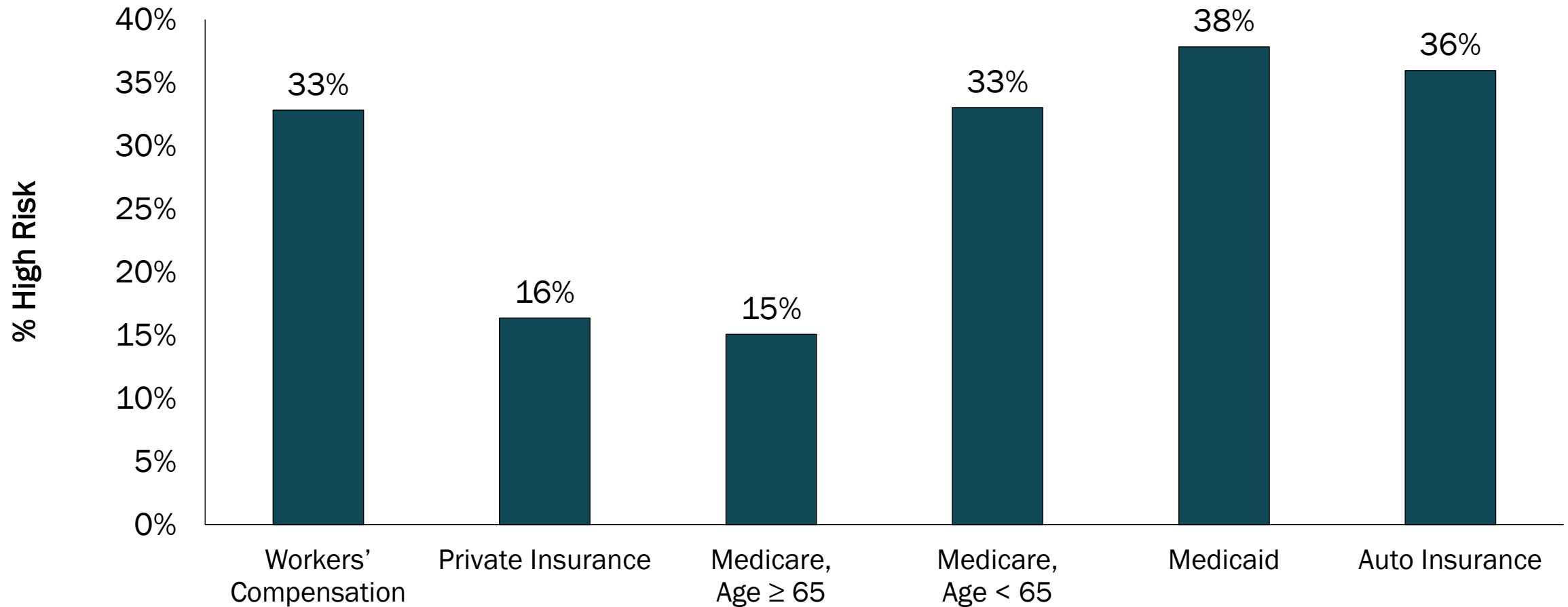
- Yellow flags are prevalent among workers' compensation patients with low back pain (LBP) seeking physical therapy
 - **STarT Back Screening Tool (SBST)**: One-third of ~8k workers reported elevated psychosocial risk factors
 - **Screening for Pain Vulnerability and Resilience (SPARE)**: Half of ~4k workers had high fear avoidance, half had high negative coping, 12 percent had high negative mood

Source: Thumula, Liu, and Lea. 2024. *Importance of Psychosocial Factors for Physical Therapy Outcomes*.

One in Three WC Patients Were Flagged as High Risk Using SBST Scoring System

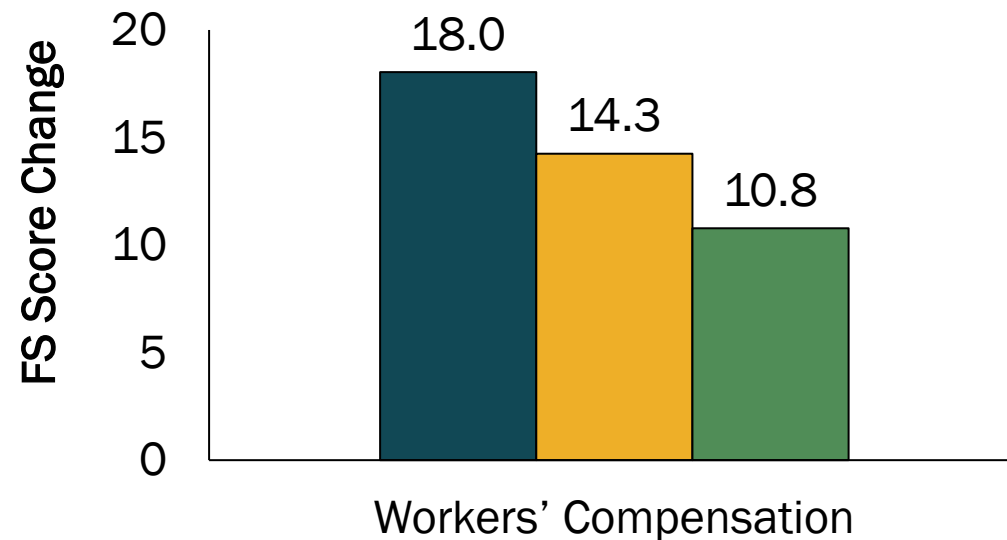


Higher Proportion of WC Patients Classified as High Risk Than Private Insurance, Medicare Cases



WC Patients with Elevated Psychosocial Barriers Have Smaller Functional Improvements

- Workers with high SBST scores had FS change that was 7 points (or 40%) smaller than workers with low SBST scores



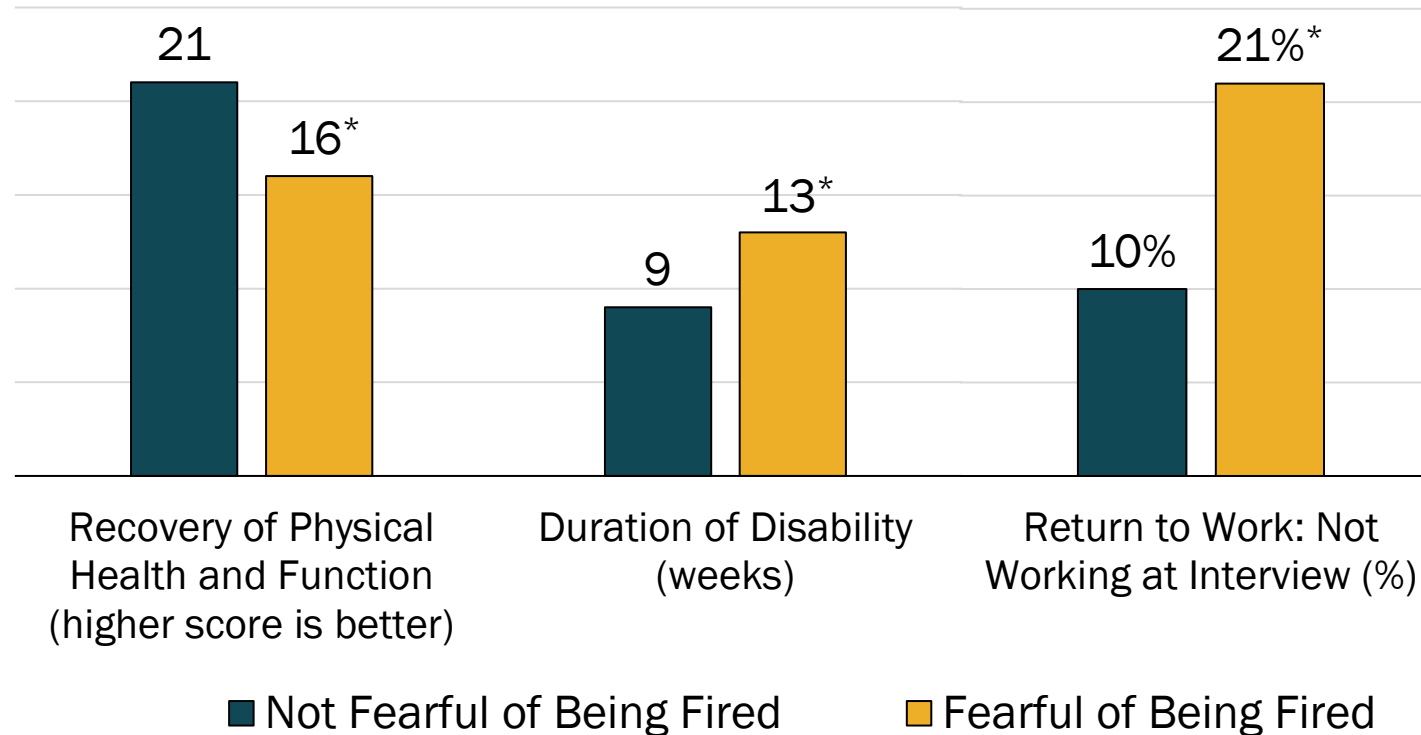
SBST Risk Categories: ■ Low Risk ■ Medium Risk ■ High Risk

WCRI Studies Point to Prevalence of “Blue Flags” and Poorer Outcomes

- WCRI Worker Outcome Surveys: evidence that workplace risk factors could be prevalent
 - Job dissatisfaction (25% were “somewhat” or “not at all” satisfied)
 - Supervisor: worker faking injury (25% “somewhat” or “strongly” agree)
 - Fear of being fired (27% “strongly” agree)

Based on surveys of 11,334 workers from 15 states with more than 7 days of lost time, injured from 2010 through 2016 and interviewed 3 years postinjury. Source: WCRI Worker Outcomes Studies.

Fear of Being Fired Was a Strong Predictor of Worker Outcomes



2010–2011 injuries, 2013–2014 interviews in 12 states; workers with more than 7 days of lost time; case-mix adjusted predictions. * statistically significant.

Directed Interventions to Address Psychosocial Risk Factors

Psychosocial Factor	Examples of Interventions
Poor recovery expectations after an injury, pain catastrophizing, or avoidance behaviors	Physical interventions incorporating behavioral components
High emotional distress	Psycho-education to improve problem solving and coping skills Stress management Cognitive therapy
Workplace risk factors	Workplace contact and evaluation Job modifications Increased supervisor support

Shaw, Linton, and Pransky. 2006. "Reducing Sickness Absence from Work Due to Low Back Pain: How Well Do Intervention Strategies Match Modifiable Risk Factors?" *J Occup Rehabil* 16 (4): 591–605.

Work-Focused Cognitive Behavioral Therapy (W-CBT)

- W-CBT delivered by mental health professionals was effective in preventing delayed recovery due to psychosocial risk factors in workers with work-related physical illness and injury
 - Brief and time-limited
 - Goals are return to work, return to function, and psychological symptom reduction
- Use of CBT techniques is growing beyond the mental health care provider setting

Concluding Remarks

- **Prevalence is high:** Psychosocial risk factors and mental health comorbidities were frequently reported by workers' compensation patients with LBP receiving PT
- **Important impacts on outcomes:** Workers with elevated psychosocial risk factors and mental health comorbidities had smaller functional improvements than those without

Implications

- Early recognition of these relevant comorbidities and psychosocial risk factors for effective interventions
- Efforts to improve data collection to capture relevant comorbidities

Thank You

- Questions about the findings? E-mail us at wcri@wcrinet.org
- The studies discussed may be downloaded from our website.
- Follow us on social media

