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Keeping America on the Job!

Early Utilization of Physical and Occupational Therapy

Leading to Reduced Workers' Compensation Claim Costs

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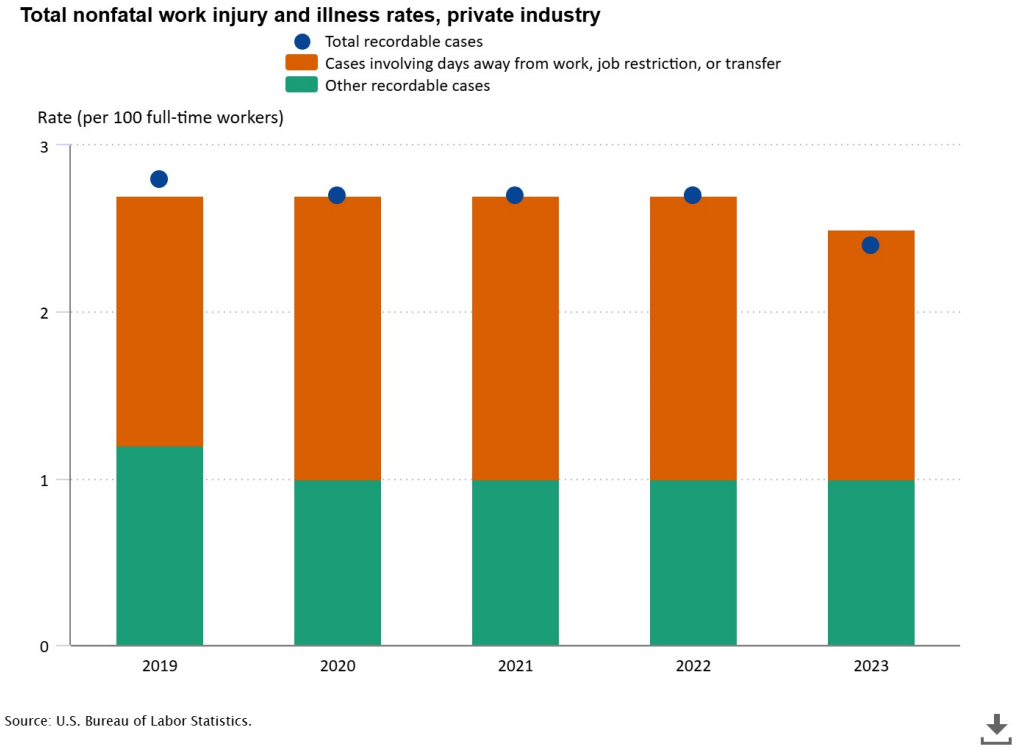
Objectives

- Review latest BLS injury and illness trends
- Explore benefits of early utilization of physical and occupational therapy for return to work
- Review research supporting early PT and OT
- Introduce modern pain movement and biopsychosocial model
- Review research on spinal imaging
- Compare outcomes with surgery and medicine vs PT
- Explore effective utilization management to drive positive outcomes

Bureau of Labor Statistics (BLS)

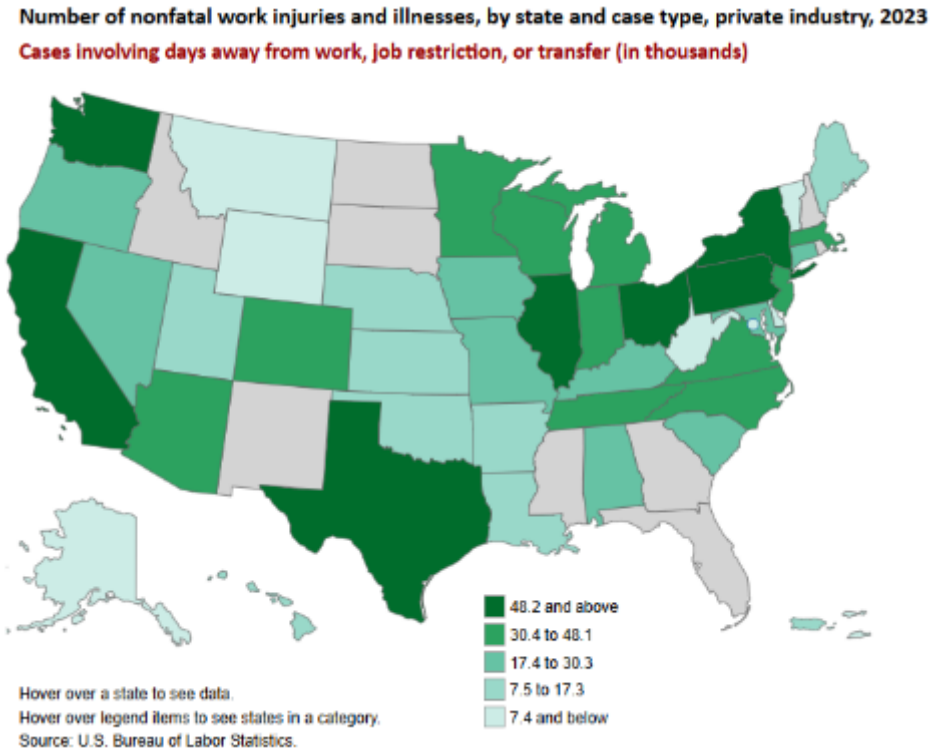
- Private industry employers reported more than 2.6 million recordable workplace illness and injuries in 2023, down 8.4% from 2022
- The private industry injury rate was down in 2023, but the total injury cases (2,368,900) were essentially unchanged from 2022



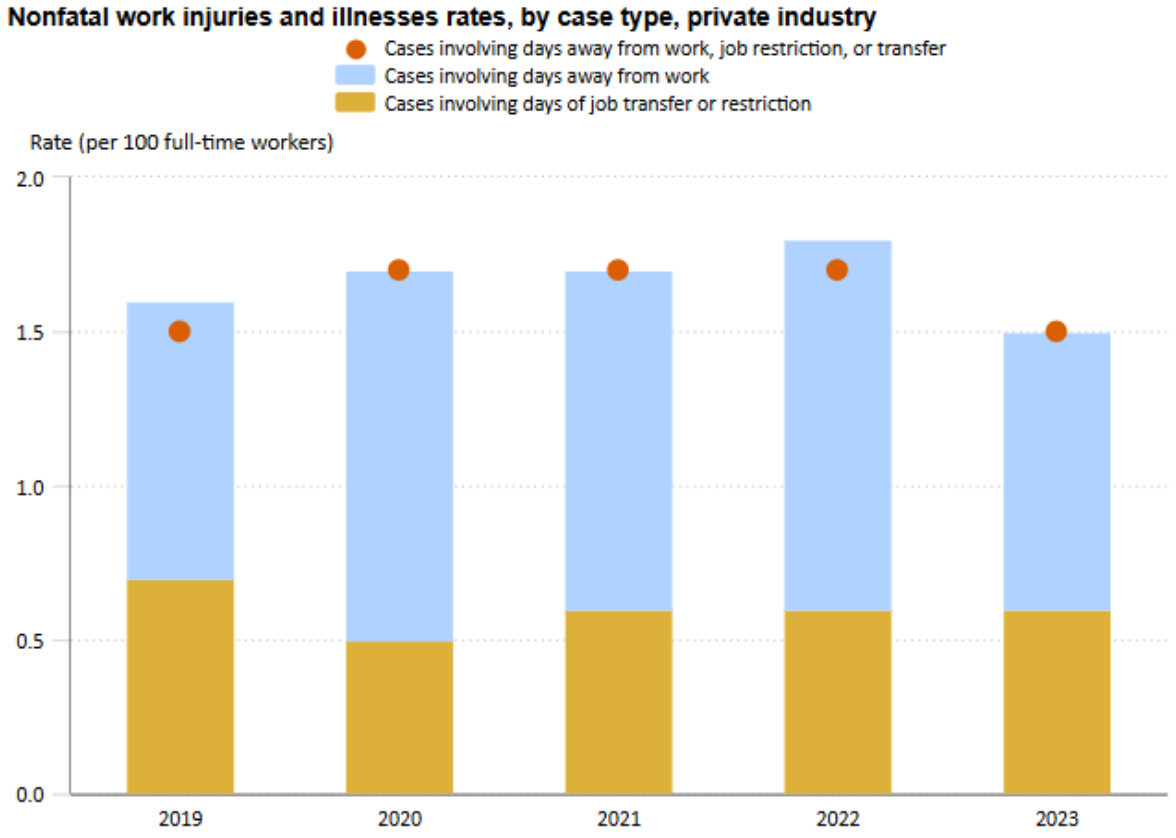
Source: U.S. Bureau of Labor Statistics.

Bureau of Labor Statistics (BLS) - DART

- There were 946,500 nonfatal injuries and illnesses that caused a private industry worker to miss at least one day of work in 2023.
- MD - 25.8
- NJ - 43.7
- NY - 85.0
- OH - 48.2
- PA - 64.3
- WV - 6.7

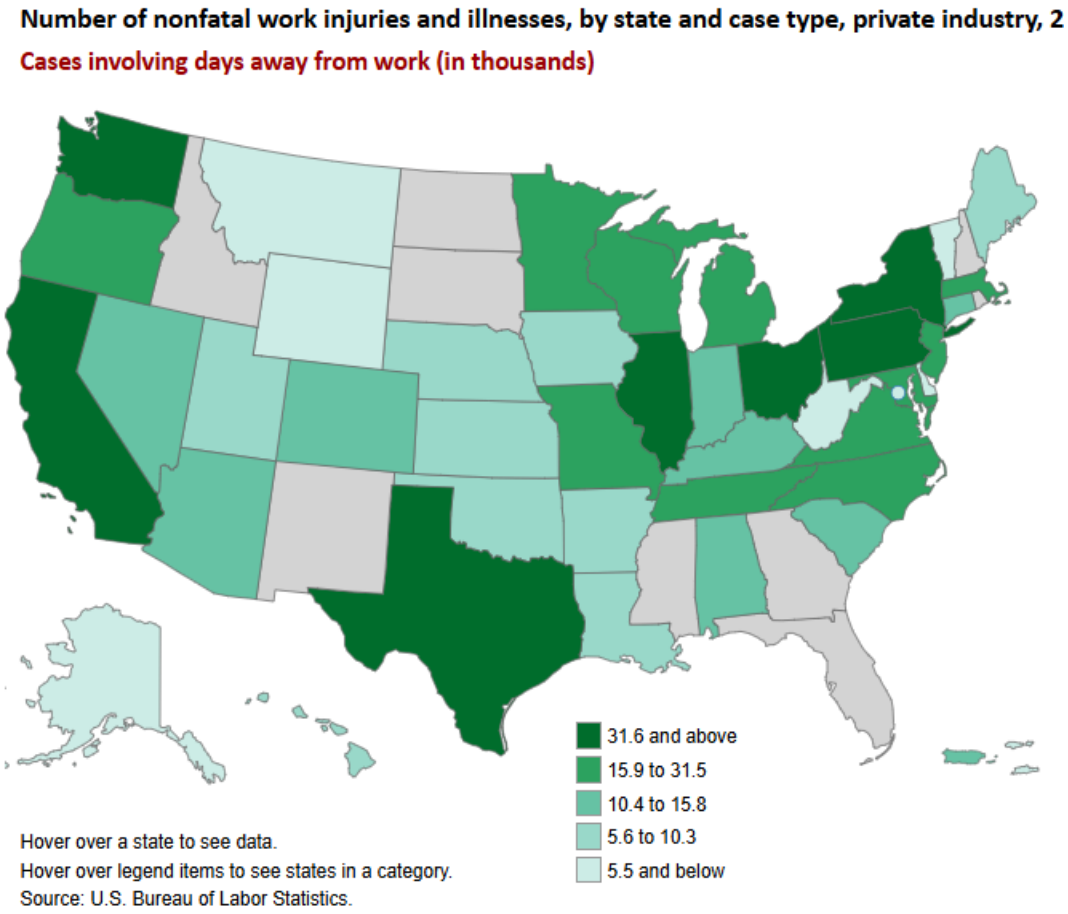


Bureau of Labor Statistics (BLS) - Nonfatal Work Injuries and Illness Rates



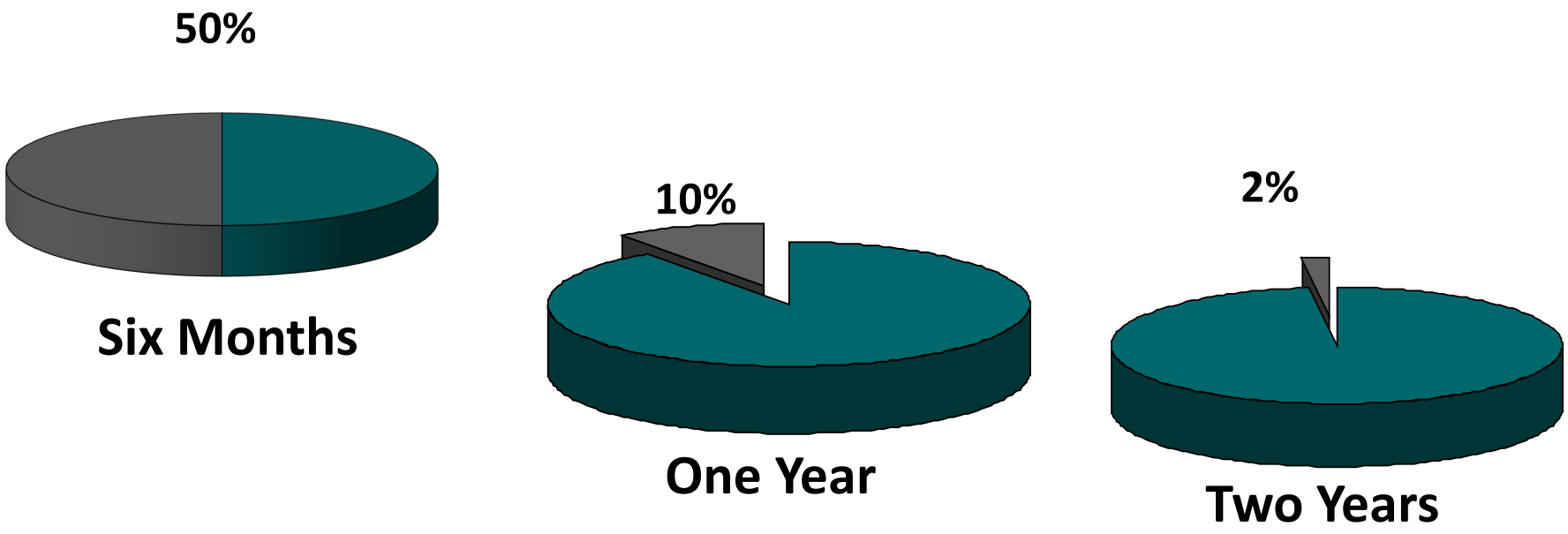
Hover over chart to view data. Click legend items to change data display.
Source: U.S. Bureau of Labor Statistics.

Bureau of Labor Statistics (BLS) - Cases Involving Days Away (in thousands)



- CA – 139.0
- MD – 18.3
- NJ – 29.3
- NY – 76.4
- OH – 32.9
- PA – 38.9
- WV – 5.6

Return to Work Rate



50% Never Return to Work After 6 Months

Info from Bureau of Labor Statistics – 2014

The Case for Early Intervention Rehabilitation

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Early Intervention Model

- The sooner treatment is initiated, the better the chance of a good outcome
- Vast majority of healing occurs in the first six months post injury
- Remaining active increased likelihood of successful return to work
- Days away from regular work results in deconditioning

Physical Therapy

- Systematic performance or execution of planned physical movements, activities and application of modalities intended to enable the patient or client to remediate or prevent impairments of body functions and structures, enhance activities and participation, reduce risk, optimize overall health, and enhance fitness and well-being.
    - Rendered from APTA, Guide to PT Practice

Occupational Therapy

- A form of therapy for those recuperating from physical or mental illness that encourages rehabilitation through the performance of activities required in daily life.
- Occupational therapy practitioners enable people of all ages to live life to its fullest by helping them promote health, and prevent—or live better with—injury, illness, or disability
  - Rendered from the AOTA, Inc.

Benefits of Physical Therapy and Occupational Therapy

- Cost effective
- Less invasive than other options
- Requires patient participation in his/her own rehabilitation
- Promotes active recovery and independence
- Addresses all aspects of injured person’s pain
- Evidence based

Data supports Access to Early Rehabilitation

- Providing medical accessibility and meeting rehabilitation needs were found to be important predictors of return to work after initial treatment for injured workers
- Satisfying medical and rehabilitation needs positively influences returning to work after a work-related injury: an analysis of national panel data from 2018 to 2019
- Annual rate of return to original work (including reemployment) increased from 50.1% in 2011 to 68.5% in 2019

BMC Public Health. 2021; 21: 2017.
Published online 2021 Nov 5. doi: 10.1186/s12889-021-12064-1

Early Access to Physical Therapy and Specialty Care Management for American Workers With Musculoskeletal Injuries. Phillips TD, Shoemaker MJ.; J Occup Environ Med. 2017 Apr;59(4):402-411.

- Expedited access to physical therapy and care management can reduce duration of care, cost of claims, and therapy visits.

Implications of Early and Guideline Adherent Physical Therapy for Low Back Pain (LBP)on Utilization and Costs
JD Childs et al, April 2015

- Results: Early referral to guideline (ODG) adherent physical therapy was associated with significantly lower utilization for all outcomes and 60% lower total LBP-related costs.

Primary Care Referral of Patients With Low Back Pain to Physical Therapy

Fritz et al. *Spine*, Dec 2012

- 1,102 patients received early PT
- 975 received delayed PT
- Patients receiving early PT were less likely to be taking opioids
- Adherent patients had fewer prescription medications
- Cost of patients receiving early PT were an average of $2,700 lower than the delayed PT
- Adherent were an average of $1,300 less than non-adherent

Travelers Early Severity Predictor®

https://www.travelers.com/resources/business-topics/employee-wellness/preventing-chronic-pain-and-opioid-abuse-in-the-workplace

- Developed a model to identify cases early that were at high risk for chronic pain with a goal of minimizing use of opioids
- Takes into account other medical conditions, medicines being taken, overall musculoskeletal health and psychological and behavioral health
- Adjustors and nurses advocate on behalf of the patients for the treatments and medical evaluations they need while still in the acute period
- Model supports getting into Physical Therapy sooner

Travelers Early Severity Predictor®

- Results show patients either not taking opioids or taking lower doses "Avoiding opioid dependency benefits not only the employees and their companies, but their families and society as a whole"
- Helped reverse the sharp rise in chronic pain caused by workplace injuries
- Responding immediately to injuries and providing attentive medical case management can help prevent an injured employee from developing chronic pain for which opioids would be prescribed.

Importance of a Biopsychosocial Approach

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What is Pain?

- "An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage." International Association for the Study of Pain - IASP
- Tissue injury is not sufficient nor necessary for one to experience pain
- The degree of injury is not predictive of the degree of pain
  - Not diagnosis specific

Pain Varies for Everyone

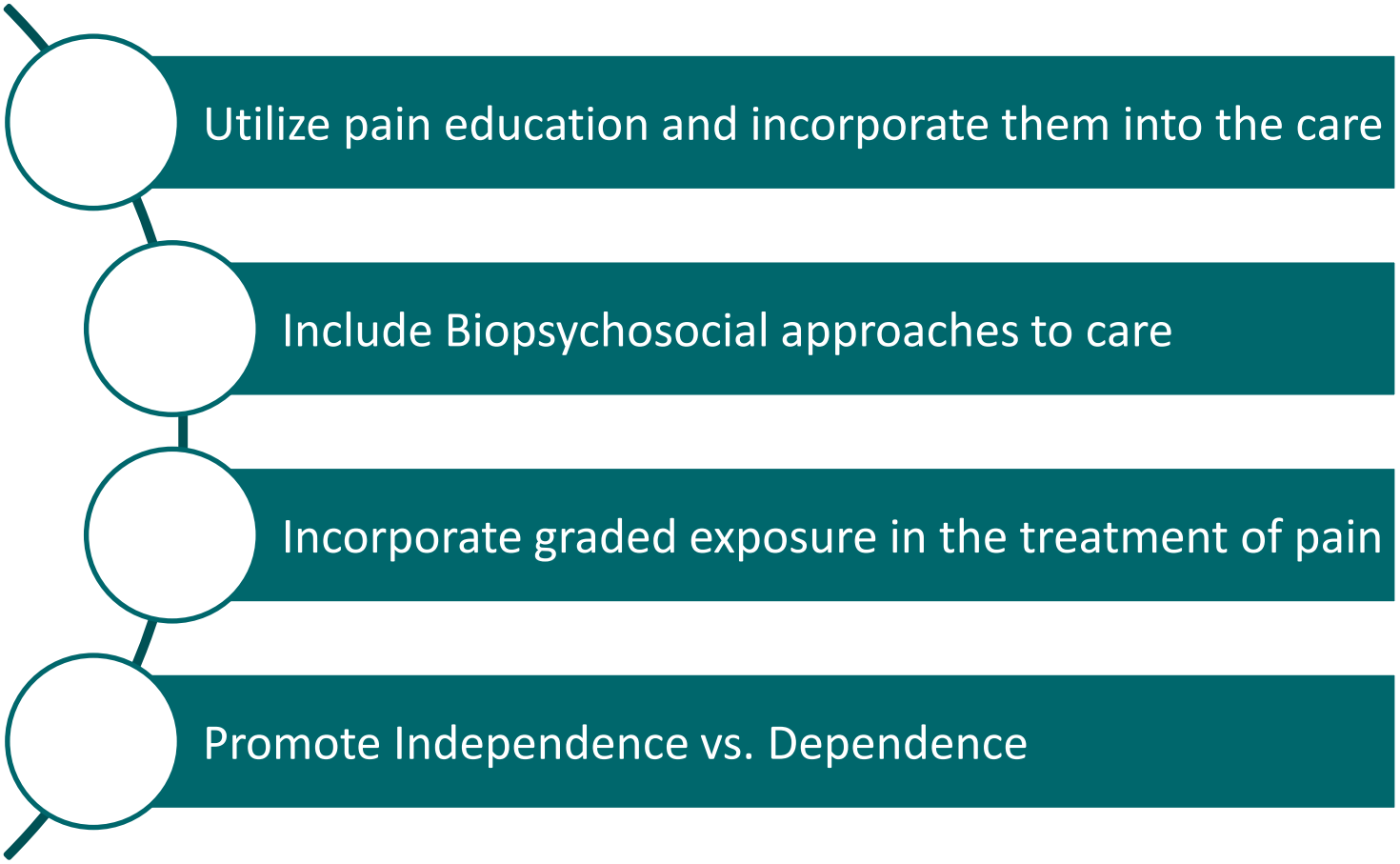
Why Does This Matter?

- 1.5 billion people suffer from chronic pain worldwide
  - Equates to 20% of human population
- World Health Organization states Low Back Pain is the leading cause of disability worldwide
- It is the #1 reason why people seek rehabilitation services
- Pain experiences can vary across cultures

The Modern Pain Movement

- There has been **more** research performed on pain in the past 10 years, than there was in the previous 100 years
- We now believe pain is more complex than originally thought, and treatment should address biological, psychological and social variables
  - **The Biopsychosocial model of care**

Keys to Treating Pain



Utilize Pain Education and Incorporate Them Into the Care

- Literature indicates that there is a significant value in the education of healthcare consumers about “pain”

  JAMA Neurology July 2018 Volume 75, Number 7:
  “Effect of Pain Neuroscience Education Combined
  With Cognition-Targeted Motor Control Training
  on Chronic Spinal Pain - A Randomized Clinical Trial”

- Key Results: Combining pain neuroscience education with cognition-targeted exercises does not affect brain gray matter morphologic features but can reduce pain and disability and improve mental and physical functioning and pain cognitions in people with non-specific chronic spinal pain.

Incorporate Biopsychosocial Approaches to Care

- Motivational interviewing
- Meaningful activities
- Aerobic conditioning to release endorphins
- Stress reduction
- Sleep hygiene
- Gratitude journaling

Incorporate Graded Exposure in the Treatment of Pain

- The exposing of a patient to a specific situation which they are fearful

- This exposure is gradual and hierarchical, in which you introduce an exercise or activity which elicits very little fear and gradually introduce more fearful situations

Promote Independence vs. Dependence

Comparing Therapy to Surgery

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Imaging Costs

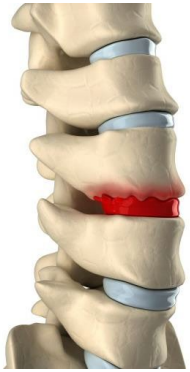
- MRI without contrast approximately $1,000
- MRI with contrast approximately $2,000
- CT scan without contrast approximately $350 - $600
- CT scan with contrast approximately $500 - $1,500

MRIs Can Be Costly and Harmful

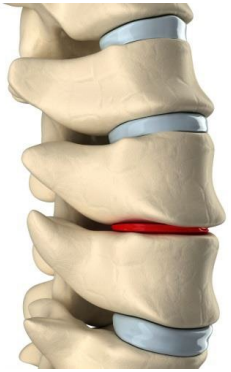
- Performance of MRIs in the management of low back pain have been linked to worse health outcomes, increased likelihood of disability, and longer disability duration.
- Webster and Cifuentes found surgery rates of those who did not get an early MRI when not indicated had a 10% rate of surgery
- Patients who did get an early MRI without indications of serious pathology had a 100% rate of spinal surgery.

Low Back Pain - The Disc

Normal Disc



Degenerative Disc



Thinning Disc

Bulging Disc

Herniated Disc

Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Population

Brijikji et al 2015

Disc Degeneration

- 37% of 20 year olds
- 80% of 50 year olds
- 96% of 80 year olds

Disc Bulging

- 30% of 20 year olds
- 60% of 50 year olds
- 84% of 80 year olds

Physical Therapy vs. Surgery

Physical Therapy

- Uses a variety of techniques to help self manage
- Very affordable
- No major side effects
- Still helps a patient get stronger even if surgery is still indicated

Surgery

- Uses a procedure to attempt to correct the problem
- Costly
- Side effects: infection, blood clots, medicine reactions, healing complications, and pain
- Will likely need therapy after
- Can affect return to work rates

Surgical Costs

- Carpal Tunnel approximately $6,000 - $8,000
- Knee Surgery approximately $30,000 - $50,000
- Rotator Cuff Repair approximately $15,000 - $25,000
- Spinal Cervical Fusion approximately $30,000 - $70,000
- Spinal Lumbar Fusion approximately $50,000 - $150,000

Harris IA et al. Spine Surgery Outcomes In Workers' Compensation Cohort

ANZ J of Surg. 2012; 82: 625-629

Following a spinal fusion, the return to work probability is only 50% !

1/10 who were able to return, returned to their normal "duty"

Surgery Versus Physical Therapy for a Meniscal Tear and Osteoarthritis

Katz et al. NEJM, 2013

- Primary outcome used was the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)
- Did not find significant differences between the groups in functional improvement at six and 12 months
- 30% of the PT group underwent surgery within six months

Effectiveness of Physical Therapy in Treating Atraumatic full-thickness Rotator Cuff Tears: A Multicenter Prospective Cohort Study

Kuhn et al, *J Shoulder Elbow Surg*, 2014

- Patient reported outcomes improved significantly at 6 and 12 weeks
- Less than 25% of the patients elected for surgery after follow up for two years

Manual Physical Therapy Versus Surgery for Carpal Tunnel Syndrome: A Randomized Parallel-Group Trial

Fernandez-de-Las et al. *J PAIN*, 2015

- Effectiveness of surgery compared with physical therapy consisting of manual therapies including desensitization maneuvers
- Analysis showed advantage for physical therapy at one and three months for pain and function
- Pain and function results were similar for both groups at six and 12 months

Results/Discussion

- Degenerative changes may be incidental and not causally related to presenting symptoms
- Normal age-related changes rather than pathologic process
- No consistent association between low back pain and MR imaging findings
- Relationship between imaging findings and surgical outcomes has not been well established

Comparing Therapy to Medication

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Physical Therapy Versus Opioids

Safe and Promotes Activity

Dangerous and Addictive

Why Were Opioids Developed?

Opioids were developed for end of life cancer pain, not workers' compensation musculoskeletal pain!

Get Physical Therapy
Stay Active

Understand that Physical Therapy is different than general exercise

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Predictors of Disability and Quality of Life After Nerve Injury

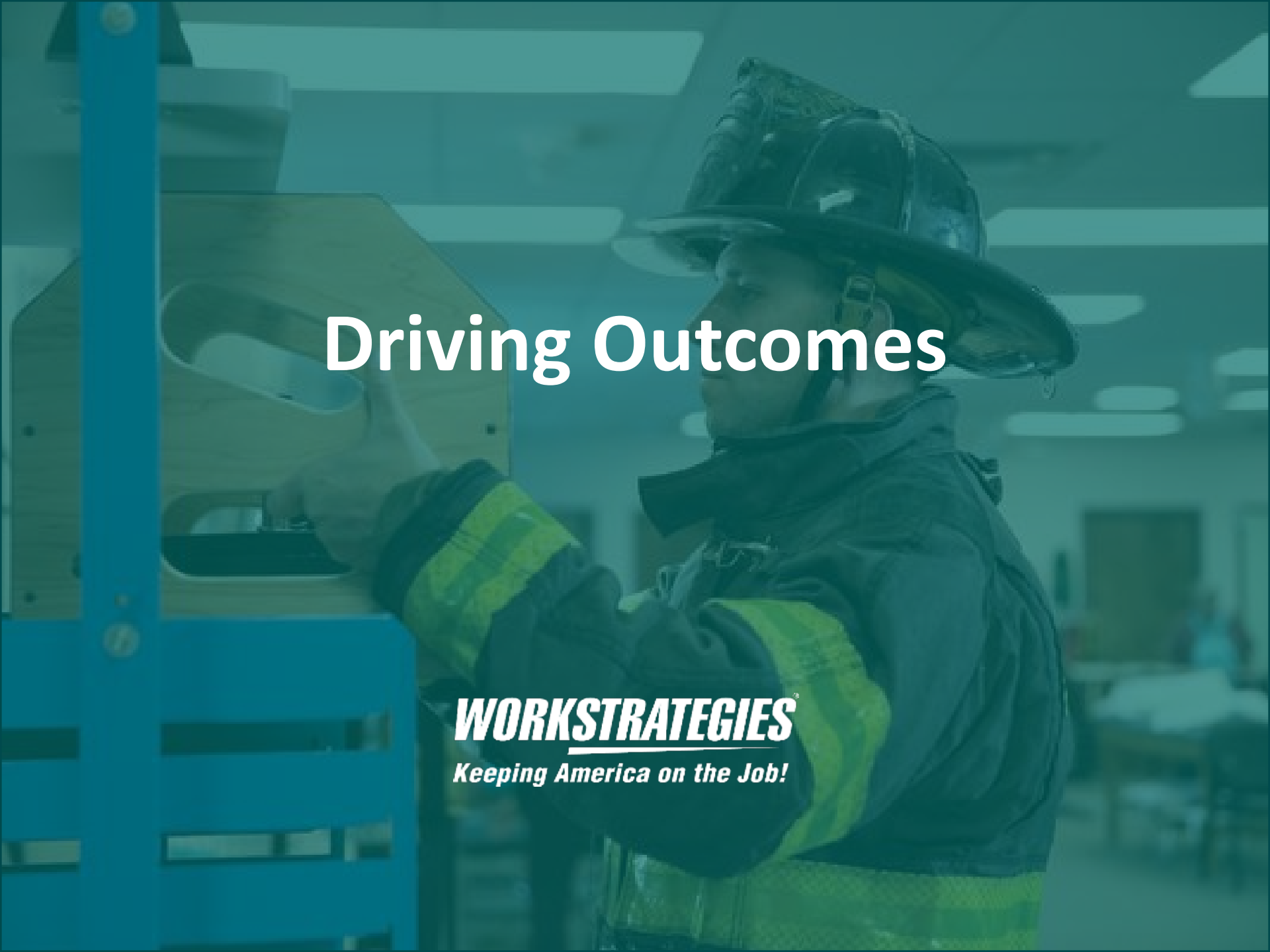
Vicki Kaskutas, OTD, OTR/L, FAOTA; Macyn Miller, AJOT July 2017

- Study by a group of Occupational Therapists
- Identified work status played a major factor in predicting disability
- Study revealed strong support for the use of OT to help keep individuals working which yields better outcomes following nerve injury

Timing of physical therapy consultation on 1-year healthcare utilization and costs in patients seeking care for neck pain: a retrospective cohort

Maggie E. Horn and Julie M. Fritz BMC Health Nov. 2018

- Purpose:
  - Compare the 1 year healthcare utilization and costs between groups that received PT early (within 14 days), delayed (15-90 days) or late (91-364 days)
- Results:
  - Compared to early PT consultation, the odds of receiving an opioid prescription, spinal injection, undergoing an MRI, or CT scan were increased in patient with late PT consultation
  - Mean costs were $2172 higher in the late PT consultation group compared to the early PT consultation group and $1063 higher than the delayed PT consultation group


Driving Outcomes
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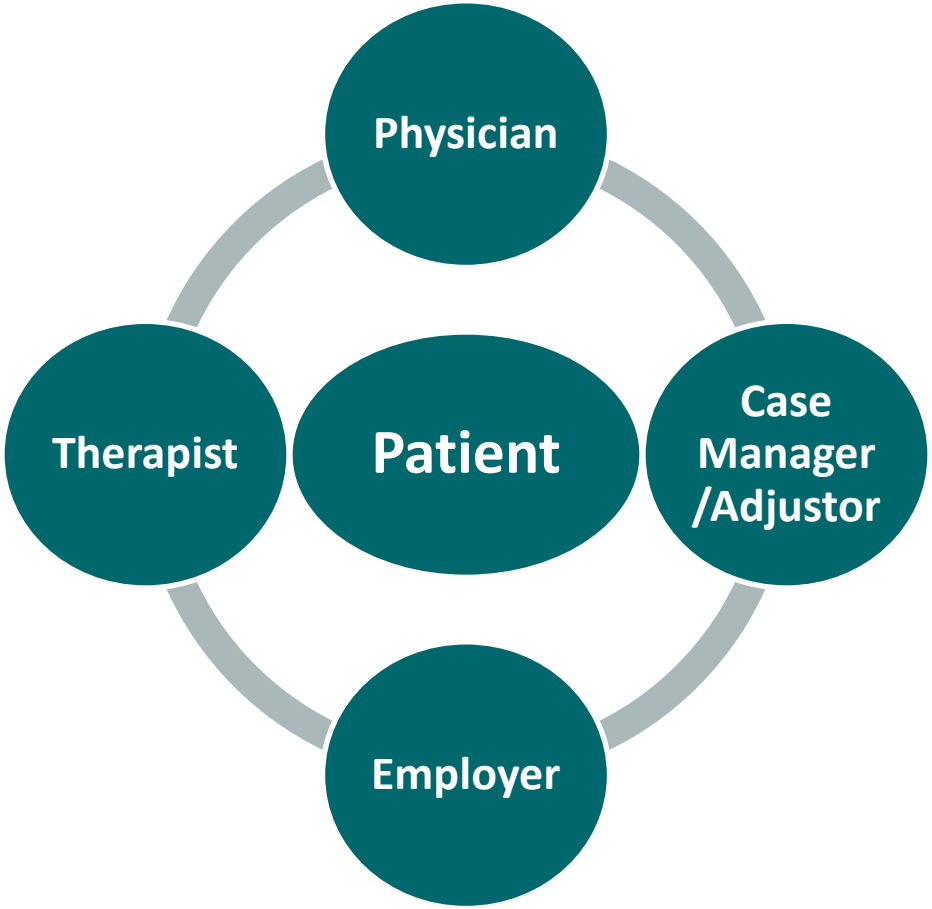
Risk Factors with PT/OT

- Outcome often dependent on patient motivation
- Psycho-social barriers can be predictor of poor outcomes
- Traditional PT doesn't always incorporate the biopsychosocial model
- Patient Non-Compliance

Monitoring Utilization

- Physical therapy costs can be controlled with utilization management
- Ideally should be led by a physical therapist
- Focus should be on active treatment that strengthens the patient rather than passive modalities
- Home exercise programs should be incorporated into the plan of care
- Tracking for functional gains and patient perceived outcomes
- Return to work goals

Key to Successful Outcomes - Communication



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Questions?

Thank you!