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Physiatry: Return to Work for Spine Disorders

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Spine Physiatry

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Disclosures

- None

Learning Objectives

- How to evaluate work related spinal disorders.
- How to set reasonable expectations on the initial consult.
- How to create an active functional focus plan of care.
- How to confidently define work capacity when discussing work status with your patients.

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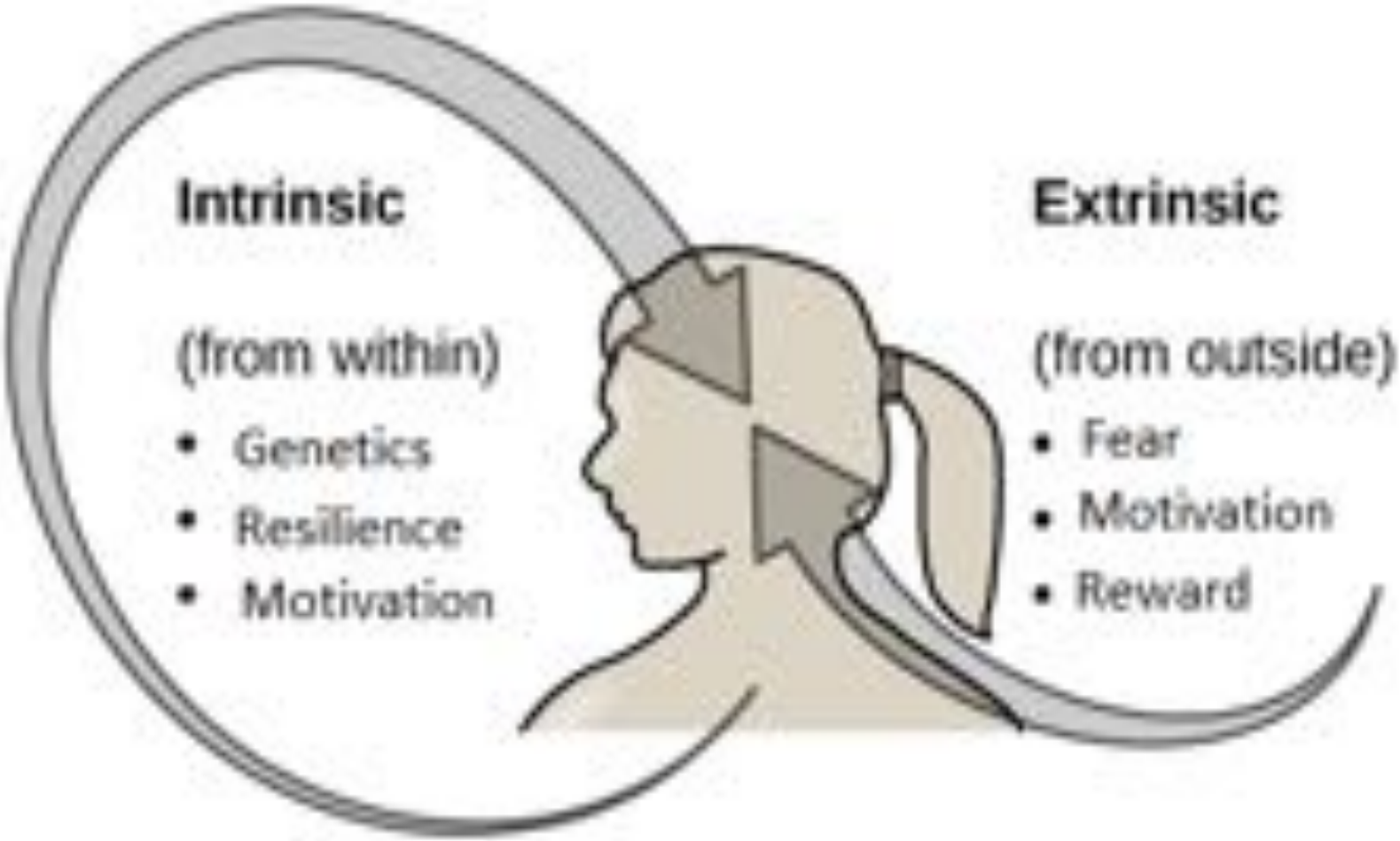
What is Physiatry?

- Treat patients of all ages
- Focus treatment on function
- Have a broad medical expertise that allows them to treat disabling conditions throughout a person's lifetime
- Diagnose and treat pain as a result of an injury, illness, or disabling condition
- Determine and lead a treatment/prevention plan
- Lead a team of medical professionals, which may include physical therapists, occupational therapists, and physician extenders to optimize patient care
- Work with other physicians, which may include primary care physicians, neurologists, orthopedic surgeons, and many others.
- Treat the whole person, not just the problem area

What is Pain?

- Pain is complex neurologic response to perceived dangers to the human body
- The experience of pain can be different in each individuals
- How we respond to that experience is also different in each individual

Factors to Consider



Evaluating Spinal Disorders

- **Take a good history**
- Assess for red and yellow flags during the review of system
- Perform an detailed physical exam
- Communicate effectively expectations and treatment plan
- Avoid early diagnostic testing

Taking a History

- Onset
- Location
- Duration
- Characteristic
- Alleviating and Exacerbating factor
- Referral or Radiation
- Temporal association
- Severity

Additional History Elements

- When the injury was reported
- Initial treatment
- Perceived disability
- Have they returned to work
- History of previous work injuries
- History of previous back pain

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Red Flags

- Fever, night sweats and chills
- Pain at night
- Unexplained weight loss
- History of cancer
- Chronic Steroid use
- History of osteoporosis
- Major Trauma
- Minor trauma in advance age
- Saddle anesthesia
- Progressive neurologic deficits over the first month

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Yellow Flags

Early Identification and Management of Psychological Risk Factors ("Yellow Flags") in Patients With Low Back Pain: A Reappraisal Michael K. Nicholas, Steven J. Linton, Paul J. Watson, Chris J. Main,

- Catastrophising – **thinking the worst**
- Finding painful experiences unbearable, reporting extreme pain disproportionate to the condition
- Having unhelpful beliefs about pain and work – for instance, 'if I go back to work my pain will get worse'
- Becoming preoccupied with health, over-anxious, distressed and low in mood
- Fear of movement and of re-injury
- Uncertainty about what the future holds
- Changes in behaviour or recurring behaviours
- Expecting other people or interventions to solve the problems (being passive in the process) and serial visits to various practitioners for help with no improvement.

Blue flags

Early Identification and Management of Psychological Risk Factors ("Yellow Flags") in Patients With Low Back Pain: A Reappraisal Michael K. Nicholas, Steven J. Linton, Paul J. Watson, Chris J. Main,

- Concerns about whether the person is able to meet the demands of the job
- Low job satisfaction
- Little or poor support at work
- A perception that the job is very stressful
- Poor communication between employer and employee.

Black flags

Early Identification and Management of Psychological Risk Factors ("Yellow Flags") in Patients With Low Back Pain: A Reappraisal Michael K. Nicholas, Steven J. Linton, Paul J. Watson, Chris J. Main,

- Misunderstandings among those involved
- Financial issues and/or claims procedures
- Sensationalist media reports
- Family and friends with strong unhelpful beliefs influencing the employee
- Social isolation and becoming disconnected from the workforce

Accident Rehabilitation and Compensation Insurance Corporation of New Zealand and the National Health Committee; 1997.

- **A**ttitudes/Beliefs – What does the patient think to be the problem and do they have a positive or negative attitude to the pain and potential treatment?
- **B**ehaviour – Has the patient changed their behaviour to the pain? Have they reduced activity or compensating for certain movements. Early signs of catastrophising and fear-avoidance?
- **C**ompensation – Are they awaiting a claim due to a potential accident? Is this placing unnecessary stress on their life? .
- **D**iagnosis/Treatment – Has the language that has been used had an effect on patient thoughts? Have they had previous treatment for the pain before, and was there a conflicting diagnosis? This could cause the patient to over-think the issue, leading to catastrophising and fear-avoidance.
- **E**motions – Does the patient have any underlying emotional issues that could lead to an increased potential for chronic pain? Collect a thorough background on their psychological history.

Evaluating Spinal Disorders

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Physical Exam

- Psych: Mood, fear avoidance
- Neurological exam-Sensation, Reflexes, Spurling's Test, SLR
- HEENT-MMM EOM
- Cardiac-Distal pulses, edema, pallor
- Pulmonary-SOB, respiratory distress
- Musculoskeletal Exam- Focal weakness, ROM, TTP

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Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

Shaw, William S. PhD; Zaia, Ann MSN, MHA, NP-C; Pransky, Glenn MD, MOccH; Winters, Thomas MD, MPH; Patterson, William B. MD, MPH

- Patients with a first report of uncomplicated, acute onset LBP
  - 1) The presence of nonspecific sacral, lumbar, or thoracic back pain
  - 2) The pain presumed to be work-related;
  - 3) age 18 or older
  - 4) fluent in English or Spanish.
  - Patients with more significant trauma or neurological involvement were excluded.

Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

- Demographic and Background Variables.
- Provider Communication
- Pain score
- Functional Limitation
- Return to Work
- Patient Satisfaction

Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

- Over 2-year period, 618 patients volunteered to participate in the study.
- 544 patients (181 women, 363 men) completed the telephone follow-up assessment 1 month later (88% retention)
- 513 completed the 3-month assessment (83% retention).

Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

- Those reporting more ***pain*** at 1 month reported poorer satisfaction with care,
- Those with more functional patients reported greater satisfaction with care
- The return to work outcome provided no additional patient satisfaction

Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

- Communication variables associated with a positive outcome at one month included:
  - The doctor took my problem seriously (11.6% of total variance),
  - The doctor advised to prevent re-injury (5.1% of variance),
  - The doctor explained my condition clearly (2.7% of variance), and
  - The doctor tried to understand my job (1.0% of variance) at 1 month.
- Communication variables associated with a positive outcome at three months included:
  - The doctor took my problem seriously (11.0% of total variance)
  - The doctor explained my condition clearly (1.3% of variance)
  - tried to understand my job (0.5% of variance)

Perceptions of Provider Communication and Patient Satisfaction for Treatment of Acute Low *Back Pain*

Conclusions:

- 1) Patients place a high value on providers' efforts to understand their ***pain*** complaints, provide education about LBP, understand their physical job requirements, and recommend ways to prevent re-injury;
- 2) The provider communication is as important to patients as short-term improvements in ***pain*** and function;
- 3) The effect of provider communication on patient satisfaction is attenuated as symptoms persist beyond 1 month.

Evaluating Spinal Disorders

- Take a good history
- Assess for red flags during the review of systems
- Perform an detailed physical exam
- Communicate effectively expectations and treatment plan
- **Avoid early diagnostic testing**

Relationship of Early Magnetic Resonance *Imaging* for Work-Related Acute Low *Back Pain* With Disability and Medical Utilization Outcomes

Webster, Barbara S. BSPT, PA-C; Cifuentes, Manuel MD, MPH, ScD

- Two-year follow-up of 3264 cases of acute lower back pain
- Early MRI was classified as those who received imaging with 30 days of onset

Acute Low Back Pain and Radiculopathy: MR Imaging Findings and Their Prognostic Role and Effect on Outcome

Michael T. Modic, Nancy A. Obuchowski, Jeffrey S. Ross, Michael N. Brant-Zawadzki, Paul N. Grooff, Daniel J. Mazanec, Edward C. Benzel

- 246 patients with acute-onset LBP or radiculopathy
- Early information arm of the study, with MR results provided within 48 hours
- The second arm of the study, where both patients and physicians were blinded to MR results
- Patients underwent 6 weeks of conservative care
- Conclusion: MR imaging does not appear to have measurable value in terms of planning conservative care.
- Patient knowledge of imaging findings does not alter outcome and is associated with a lesser sense of well-being

Magnetic Resonance Imaging of the Lumbar Spine in People without Back Pain

Maureen C. Jensen, Michael N. Brant-Zawadzki, Nancy Obuchowski, Michael T. Modic, Dennis Malkasian, and Jeffrey S. Ross

- MRI examinations on 98 asymptomatic people
- Read independently by 2 neuroradiologists who did not know the clinical status of the subjects
- Abnormal MRI scans from 27 people with back pain were mixed randomly with the scans from the asymptomatic people
- 36% of 98 asymptomatic subjects had normal disks at all levels. 52% of subjects had a bulge at at least one level, 27% had a protrusion, and 1% had an extrusion.

Relationship of Early Magnetic Resonance Imaging for Work-Related Acute Low *Back Pain* With Disability and Medical Utilization Outcomes

Webster, Barbara S. BSPT, PA-C; Cifuentes, Manuel MD, MPH, ScD

- This study examined the utilization of early MRI diagnostic testing for a WC population with acute disabling LBP
- Early MRI is with increase disability duration, medical costs, and receipt of surgery post-MRI.
- The utilization of early MRI was quite high overall, was done on average the second week post-onset, and an unexpectedly large percentage had a repeat MRI.
- Low symptom early MRI group had increase disability, medical cost and higher rates of surgery than patient that had more symptomatic patients that had a later MRI

Chose an Active Treatment Plan

- **Set reasonable expectations**
- Keep the focus on function not pain
- Avoid passive modalities preferred
- Progressive non pain contingent functional restoration
- Use injections judiciously
- Refer to surgery as indicated

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Worker recovery expectations and fear-avoidance predict work disability in a population-based workers' compensation back pain sample.

Turner JA[1], Franklin G, Fulton-Kehoe D, Sheppard L, Wickizer TM, Wu R, Gluck JV, Egan K.

METHODS: Workers (N = 1,068) completed telephone interviews assessing demographic, pain, disability, and psychosocial variables 18 days (median) after submitting Workers' Compensation back pain disability claims. Administrative measures of work disability 6 months after claim submission were obtained.

RESULTS: At 6 months, 196 workers (18.4%) were receiving work disability compensation. Age, race, education, and baseline pain and disability were significant predictors of 6-month disability. Adjusting for baseline demographics, pain, disability, and other psychosocial variables, high work fear-avoidance (odds ratio, 4.6; 95% confidence interval, 1.6-13.7) and very low recovery expectations (odds ratio, 3.1, 95% confidence interval, 1.5-6.5) were significant independent predictors.

CONCLUSIONS: Among individuals with acute work-related back pain, high pain and disability, low recovery expectations, and fears that work may increase pain or cause harm are risk factors for chronic work disability.

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Associations Between Physical Therapy Continuity of Care and Health Care Utilization and Costs in Patients With Low Back Pain: A Retrospective Cohort Study.

Magel J[1], Kim J[2], Thackeray A[3], Hawley C[4], Petersen S[5], Fritz JM[6].

BACKGROUND: Patients who consult a physical therapist for low back pain (LBP) may receive initial and subsequent management from different therapists. The impact that physical therapy provider continuity has on health care utilization in patients with LBP is under studied.

OBJECTIVE: The objective of this study was to examine the impact of physical therapy provider continuity on health care utilization and costs in patients with LBP referred from primary care.

Associations Between Physical Therapy Continuity of Care and Health Care Utilization and Costs in Patients With Low Back Pain: A Retrospective Cohort Study.

DESIGN: The study design included a retrospective analysis of claims data.

METHODS: Data from an all-payer claims database was examined. Logistic regression was used to evaluate the association between physical therapy provider continuity and health care utilization during the 1-year period following a visit with a primary care provider for LBP.

RESULTS: Patients who experienced higher provider continuity had lower odds of receiving lumbar surgery.

CONCLUSION: High physical therapy provider continuity appears to be associated with a decreased likelihood of lumbar surgery and lower LBP-related health care costs.

Clinical Trials – Exercise

High load lifting

Low load motor control

Improvements in pain and disability similar in both groups.

Michaelson P, et al. High load lifting exercise and low load motor control exercises as interventions for patients with mechanical low back pain: A randomized controlled trial with 24-month follow-up. J Rehabil Med (2016 Apr 28) 48(5):456-63

Chose an Active Treatment Plan

- Keep the focus on function not pain
- Avoid passive modalities preferred
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- Use injections judiciously
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Work capacity vs Work accommodation

- What is work capacity?
  - What I recommend as reasonable work activity
- Job descriptions are helpful
- What are work accommodations?
  - The ability of the employer to meet those recommendations

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

Shaw, William S., PhD; Nelson, Candace C., ScD; Woiszwillo, Mary Jane, BA; Gaines, Brittany, MS; Peters, Susan E., PhD.

- Eight private occupational health clinics in the United States - outpatients between September 2000 and October 2002.
- Most patients referred after the initial report of a ***work*** injury.
- Inclusion criteria:
  - (1) acute episode (<14 days) of nonspecific or uncomplicated sacral or lumbar ***back pain***;
  - (2) employed adults - age 18 or older;
  - (3) ability to read documents in English or Spanish.
- Participants were recruited at the initial visit. Their diagnosis of lower back pain was based solely on patient interview and physical examination.

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Eligible participants were identified by front desk staff or clinicians before or during the initial evaluation visit for acute LBP.
- After providing informed consent, participants completed a questionnaire containing questions related to demographics, injury circumstances, and potential disability risk factors.
- Participants then proceeded with evaluation and treatment as usual.
- The results of the survey data were not shared with clinicians, and no add-on interventions were provided.
- 1 and 3 months after ***pain*** onset, participants completed a follow-up survey describing ***pain***, function, and ***work*** status.
- All study methods were approved by the Institutional Review Board of the Liberty Mutual Research Institute for Safety

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- 1-month follow-up, participants indicated whether they had been able to resume ***work*** with or without any job modifications.
- Participants also reported the number of days absent from ***work*** and the number of days on modified duty ***work*** status.
- Based on the number of days reported at 1-month follow-up, participants were categorized as “immediate RTW” (0 days lost), “early RTW” (1 to 7 days lost), or “longer absence” (>7 days).

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- The cutoff of 7 days was chosen because this aligned with the 7-day waiting period before insurance indemnity payments were initiated in these jurisdictions as a substitute for lost wages.
- Although it may seem unusual to include those with no lost ***work*** time in a RTW cohort study, all study participants left the workplace for at least a few hours to be evaluated by an off-site physician, and all were eligible to either return to ***work*** or return home after the medical evaluation.
- Our research team was especially interested in the factors that allowed some individuals to resume their ***work*** immediately despite ***pain*** and dysfunction of sufficient severity to trigger a report of ***work*** injury.

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Over a 2-year recruitment period, 618 patients (67.5% male) with a presenting complaint of acute LBP agreed to participate.
- A subset of participants (n = 557) who had complete RMDQ data at 3 months were chosen for all remaining analyses (a 90% retention rate).
- Comparisons of those lost to follow-up with those with complete 3-month data revealed those lost to follow-up were younger (32.1 years vs 36.6 years), more likely to be male (80.7% vs 66.1%), with higher levels of ***pain*** at baseline (6.71 vs 6.14).

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Demographic variables for the remaining analytic subsample (n = 557) are shown in Table 1.
- Overall, the most common demographic characteristics were being young, white, male, with moderate-to-low income, significant physical job demands, and working with a large employer (>500 employees). These demographic characteristics are consistent with that of workers who would be referred by their employers to visit private occupational medicine clinics in the study region after the onset of ***back pain*** at ***work***.
- After the initial visit with a health care provider,
  - 171 patients (30.7%) returned to ***work*** immediately with no lost ***work*** time,
  - 205 (36.8%) returned to ***work*** within 7 days,
  - 181 (32.5%) lost eight or more ***work*** days of ***work***.

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Early RTW contributed to short-term (3-month) improvements in pain and function.
- Female sex and lower income were associated with poorer RTW rates and pain recovery at 3 months.

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Among those who anticipated employer support for job modification, 39% stayed on the job and only 23% had more than 7 days off ***work***.
- Among those with no expected modified ***work***, only 17% stayed on the job, and nearly half (48%) were out for more than 7 days.

Early Return to *Work* Has Benefits for Relief of *Back Pain* and Functional Recovery After Controlling for Multiple Confounds

- Patient had better outcomes that were encouraged to return to work as soon as they are able and with adequate employer support.
- Returning to work within the first 7 days after pain onset was observed to reduce back pain and improve function
- The benefit of early RTW on pain recovery is still small and many other factors, for example, health care treatment, comorbid health conditions, patient education and counseling, and family support, are other obvious factors.
- An early RTW may be therapeutic by increasing physical activity, by providing social and financial reinforcement, and by gaining confidence in the ability to solve pain-related challenges on the job.
- For the majority of patients with work-related cases of LBP, an early RTW seems to have not just financial, but also short-term health benefits.

Conclusions

- Take a good History and Physical exam
- Set expectation for recovery
- Use imaging and injections judiciously
- Keep patient in the workplace as much as possible

THANK YOU

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