

OCCUPATIONAL HEALTH

SPECIAL INTEREST GROUP

President's Message

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The Independent Study Course for worker rehabilitation is now available through the Orthopaedic Section. Experts in occupational health physical therapy have worked hard to create a top notch educational offering. Take advantage of this resource by purchasing it through the Orthopaedic Section website.

Members of the SIG continue to make significant contributions to this specialty area of practice. The following **authors are recognized** for their time and expertise as they submitted the articles published in Orthopaedic Physical Therapy Practice over the past year:

- Margot Miller, "Integrating Safety and Wellness Programming"
- Chris Juneau, "Holistic Emphasis Part 2: Pain Management Epidemic"
- Christopher Studebaker and Brian Murphy, "Common Industrial Ergonomics Assessment Tools for Physical Therapists"
- Nicole Matoushek, "Limitless Opportunities for the Physical Therapy Professional in the Occupational Health & Workers' Compensation Industry"
- John Lowe, "Occupational Health: It's not just workers' compensation" (2014)

Authors are needed for submitting articles for *Orthopaedic Physical Therapy Practice*. If you have ever thought of sharing information related to worker rehabilitation, injury prevention or perhaps a case study, please contact Lorena at Lpette@aol.com.

Sign up for involvement in the Occupational Health SIG at the Orthopaedic Section website under special interest groups. If you do not get email updates from the SIG, please contact Tara Fredrickson at the Orthopaedic Section office (800-444-3982) or any of the OHSIG board of directors.

It's Time to STaRT to Integrate Evidence-based Low Back Pain Clinical Practice Guidelines into Occupational Settings

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Low back pain (LBP) is the most prevalent and costly musculoskeletal problem in today's economically advanced societies, often leading to long-term disability and frequent use of health

care resources.¹ Despite spine-related expenditures substantially increasing, there is a lack of evidence of corresponding improvement in self-assessed health status.² In Canada, Finland, and the United States, more people are disabled from working as a result of musculoskeletal disorders (MSDs)—especially back pain—than from any other group of diseases.¹ A systematic review in 2008 estimated the total economic burden for LBP in the United States to be between \$118.8 and \$624.8 billion depending on the methods used to calculate these estimates.³ A breakdown of costs associated with the treatment of LBP estimated that the largest proportion of direct medical costs for the treatment of LBP was spent on physical therapy (17%) and inpatient services (17%), followed by pharmacy (13%) and primary care (13%).³

Given the profound effect that occupational LBP can have on individual workers, their families, employers, and those responsible for paying for compensation and medical services, including the high utilization and cost of physical therapy, it is vital that as a profession, physical therapists institute processes to minimize costs and maximize outcomes associated with our role in management of this condition. In keeping with the advice of Delitto et al,⁴ a staging and classification approach to the treatment of occupational LBP are recommended. In accordance with the original classification for management of LBP proposed by Delitto et al,⁴ it is suggested that stage 1 involve the evaluation for the presence of red flags by all practitioners. In the absence of red flags and in the interest of efficiently using resources, stage 2 should seek to identify the likelihood of recovery without further treatment or with minimal treatment versus the need for more extensive intervention.⁵ Finally, stage 3 should classify patients based on signs and symptoms into the most evidence supported treatment.⁶⁻¹⁰ Below is a more detailed description of each stage.

Stage 1: Rule Out the Need for Immediate Medical Intervention

The first stage serves to rule out red flags that would indicate the need for an immediate work up. In general, it has been demonstrated that early imaging leads to increased costs due to the cost of imaging itself, as well as an acceleration of costly and invasive treatments without significant benefit.¹¹ In fact, early imaging might be an iatrogenic cause of delayed recovery. However, in the presence red flags, appropriate work up is prudent. Red flags include signs and symptoms such as elevated body temperature, abnormal resting blood pressure, heart rate or respiration rate, and recent unexplained weight loss. Severe symptoms include constant pain unrelenting with positional change or movement, severe night pain unrelated to movement, history of significant trauma, abdominal pain especially if radiating into the groin and associated with hematuria, sexual dysfunction, recent menstrual irregularities, bowel or bladder dysfunction, or anesthesia in the perineum.⁴ To this should also be added progressive distal weakness.

Stage 2: Determine Risk Factors for Chronicity and Need for Skilled Care

Research has indicated there are many factors that help to predict the likelihood of an acute case of LBP transitioning on to chronic pain or resulting in failure to return to gainful employment in a reasonable time period. These predictive factors include severity of pain, and radiation of pain, as well as psychosocial factors often referred to as yellow, orange, blue, and black flags.¹²⁻¹⁷ Yellow flags generally relate to psychosocial factors such as pain catastrophizing, fear avoidance beliefs and behaviors, depression, and self-efficacy or locus of control.¹⁸ Orange flags indicate a comorbidity of a severe mental illness. Blue flags are factors that are unique to the worker and their work environment and include adversarial relationship with employer management, insufficient abilities to perform the job prior to injury, feelings of lack of control over the work environment or not being valued at the work place, etc.¹⁹ Lastly, black flags include work environment or organizational factors that may affect the speed of recovery or ability to return to work. These can include insurance authorization delays, no light duty, high physical demands, required overtime, and lack of a flexible return to work program as well as others.

With all of these factors that can affect the prognosis in occupational LBP, it is helpful to use screening tools to assist in an efficient assessment. The STarT Back Screening Tool (<http://www.keele.ac.uk/sbst/onlinetool/>) measures a group of psychosocial factors and has been shown to predict recovery in back pain.²⁰ The tool places individuals with back pain into 3 categories (Figure 1): (1) those likely to recover with appropriate advice and reassurance supplemented with medicine, (2) those with medium risk of developing chronicity and who have physical obstacles to recovery and should receive direct care from a physical therapist, and (3) those with psychological barriers to recovery that may require an *enhanced package of care* that targets these psychosocial risk factors.⁵

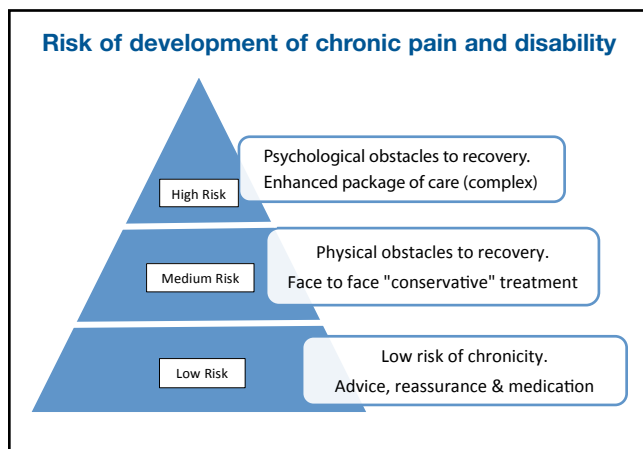


Figure 1. Application of STarT Back Screening Tool/ Subgrouping and targeting treatment for low back pain. Adapted with permission from Keele University website (<http://www.keele.ac.uk/sbst/>). The copyright (© 2007) of the STarT Back Tool and associated material is owned by Keele University, the development of which was partly funded by the Arthritis Research UK.

Stage 3: Determine the Appropriate Dominant Treatment Classification

For patients requiring more intensive care based on their increased likelihood for chronicity, there is a need to match patient's signs and symptoms to the most appropriate intervention. The Clinical Guidelines for Low Back Pain summarizes current available evidence through 2010.⁶

A summary of what the staging and classification approach in the form of a decision making flow chart might look like is in Figure 2. It should be noted that not all presentations of back pain will fit firmly into one classification.^{21,22} Patients may have elements of more than one classification or may change from one classification to another through the course of treatment. Furthermore, patients who score high on the STarT Back Screening Tool are more likely to require therapeutic neuroscience education,^{23,24} cognitive behavioral techniques,²⁵ graded exercise, activity,²⁶ and exposure²⁷ as primary treatment approaches or in combination with more traditional physical therapy approaches.^{12,28}

Physical therapists have the opportunity to decrease the costs associated with occupational LBP including direct medical costs and indirect indemnity costs by providing the most prudent, efficient, appropriate management strategies. More importantly, we have the opportunity to improve the lives of individuals who sustain occupational LBP as well as the lives of their families, and decrease the epidemic of chronic occupational LBP and disability. Physical therapists need to be cognizant of the appropriate use of the resources available to them and use tools that identify prognosis with regards to recovery. Greater resources should be invested where prognosis is poor and fewer resources where prognosis is excellent.⁵

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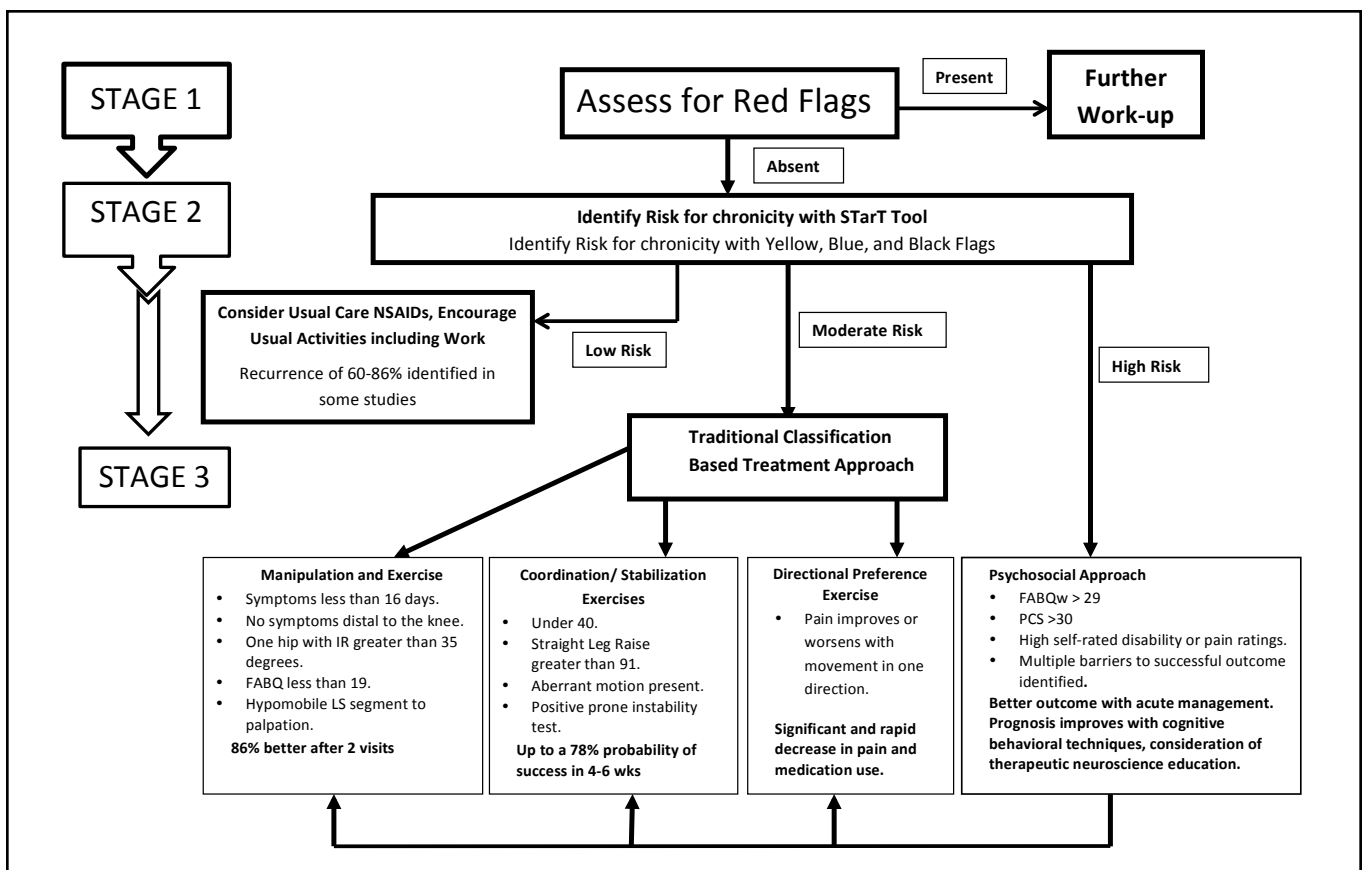


Figure 2. Occupational low back pain decision-making flow chart.

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