

Early Work Conditioning Work Hardening (WCWH) to Successfully Return Workers Compensation Patients to Work

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Abstract: *We live in a world where there is a rapid increase in occupational disability and musculoskeletal disorders within the workers' population. These can cause great distress both physically and emotionally to workers with injuries and can be a financial burden to society, especially in industrialized countries. Research by Waters et al. (1993) suggests that occupational musculoskeletal injuries (MSIs) are caused due to the excessive demands placed on workers that exceed their physical capacity. That's why insurers and healthcare workers agree that a worker with a work injury causing back pain, for instance, should be treated with a timely return-to-work goal. The workers' compensation patient population, however, tends to undergo lengthy wait times to see doctors, physical therapists, and other specialists due to the long insurance approval times and poor management of the system. This is why it is of prime importance that this population gets timely care and there is a proper return-to-work (RTW) program that aligns with the goal of getting them back to work as soon as possible. This can not only help manage overall claims costs by speeding safe return-to-work opportunities either in the form of light duties or full duty but can also provide proper education for workers by keeping the workers accountable for their own care. Work conditioning, work hardening (WCWH) is one such underutilized RTW program. This program not only assists in safely and effectively returning workers back to work but also reduces overall claims cost and healthcare costs.*

Keywords: occupational disability, musculoskeletal disorders, returnto work program, work injuries, work conditioning

1. Introduction

For most of the worker population, injury usually begins as a sprain, strain, slip or fall, or a general back ache when lifting, pulling, or pushing something at work. When this population gets delayed care, it can escalate to a prolonged or permanent withdrawal from work. In turn, this can lead to high claims costs for insurers and employers alike. For example, when a worker gets injured loading a 50# weight into the truck, studies have shown that only 1 in 3 workers would get the proper care, diagnosis, and cure for their condition on their first visit to a healthcare provider. This low percentage can directly affect the workers' outcomes to return to work. Incorrect diagnoses can lead to excessive testing, unwanted treatments, and long delays in returning to work, leading to unwanted costs for the employer. Not forgetting the unfortunate effect this can have on employees. A common approach to addressing these challenges is firstly to ensure that this population gets early care from a specialist. When seen early by a specialist, this injured population can have early referral to physical therapy. Physical therapy has proven to be the best outcome for the injured population (APTA, 2020). Early access to physical therapy can substantially improve patient outcomes and can ensure safe return to work. Acute physical therapy followed by the WCWH program can ensure the best holistic approach to return the worker to their pre-injury status. Isenhagen (1991) and Greenberg and Bello (1996) describe the WCWH program as a highly structured, individualized, and interdisciplinary goal-oriented program to maximize the ability of a worker to return to their pre-injured health levels.

Early Intervention in WC Population is the Key
Employees with injury not only go through physical pain but also experience a loss of their self-image as contributing

members of society and for their families, causing them financial difficulties. No worker on workers' comp has ever had financial gains to improve their life as a result. To avoid this grave debacle, it is essential that these individuals receive early intervention. Employers and insurers alike need to understand the gravity of the situation where it is no longer a financial issue only but also a people issue. Ensuring that these injured employees can return to work with a medical clean chit and safe capacity as soon as possible can prevent longer-term effects of unemployment and disability (Besen, Harrell, & Pransky, 2016). If the people issue is appropriately managed, good financial outcomes with cost-saving can follow. The strategy to achieve this is acute physical therapy that can return workers to work with modified duty followed by the WCWH program. A report by APTA (2020) had some key findings:

- WC patients that had early physical therapy intervention had less use of medical services, and higher average payment per claim for all medical services. There was a 23-28% average higher payment per claim for people that started physical therapy after 30 days of injury versus those that started early.
- Amongst patients with back injuries, there was a 47% increased likelihood of having an MRI, 46% of the patient population was prescribed opioids, 29% were likely to have some form of pain management injections, and 89% had an increased chance of having surgical intervention.
- 58% to 69% of patients had a higher number of disability days if they started physical therapy post 30 days after injury versus patients who started physical therapy within seven days of injury.
- The access to initial physician visits, physician practice variances, and access to physical therapy providing facilities can all influence the timing of start of physical therapy intervention.

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These findings from the report suggest that early intervention and access to physical therapy can provide better patient outcomes and provide improved metrics such as decreased medical expenditures, claim costs, and early return to work.

When to Begin WCWH Program

Acute physical therapy is the first step to treating a patient in the acute phase of injury. However, when patients meet their pain management goal, it is advisable to transition them to the WCWH program. The WCWH program is a supervised program specially designed to simulate the work environment and return the injured worker safely back to work. This program focuses on a variety of objective measures such as flexibility, strength, endurance, coordination, and work-simulated activities to safely return to work. The program comprises a personally tailored work simulation approach for 2-4 hours a session for 3 to 5 days a week. Work hardening, on the other hand, is a multidisciplinary approach and involves various facets of healthcare, including psychological services, evaluation of the ergonomic environment, coaching for the job, and transitional work services that work on modifying the worker's environment to improve their performance and safety at work. Acute therapy, on the other hand, is a short duration therapy focusing on acute pain, ROM, and strength goals; however, it does not focus on a tailored return-to-work goal. When the patient meets 80% of the goal criteria for pain, strength, and ROM, it is likely safe to say they can begin the WCWH program. There are many factors that can delay the transition to the WCWH program, such as surgical status, protocols, pain levels, inability to reach a light lifting criteria prior to beginning WCWH, and physician approval. The WCWH program is one of the final steps in ensuring that the patient safely returns to work. For instance, when a patient gets injured and injures his R knee, acute physical therapy only focuses on the R knee. WCWH, on the other hand, comes in after the patient has healed from the R knee injury. The program focuses on increasing the patient's overall endurance and strength. This program is recommended only for injured workers that have a physically demanding job or have reached their maximum rehabilitation potential in physical therapy.

Barriers to WCWH Program

Many barriers exist that limit the injured workers' ability to successfully transition from acute PT to WCWH. As mentioned earlier, delays in getting initial care can make a patient inappropriate to start the program due to continued pain and limitation. Physician approach is one such area that can also hinder the ability of an injured worker to start the WCWH program. It is often seen that physicians and rehabilitation therapists are not all in agreement with when and if it is appropriate for an injured worker to safely start the program. Sometimes delays in communication between the interdisciplinary teams can also act as a barrier. Insurance carriers also have delays with claim processing that can further hinder the worker's ability to successfully start a WCWH program.

Structure of the WCWH Program

Initially, the injured worker goes to a physician who, if

appropriate, will send the patient to acute physical therapy. Post the completion of acute physical therapy, the patient will be referred to a WCWH program if they meet the baseline transition criteria of current PDL of light with the required PDL of medium to heavy. The initial visit is an evaluation of the worker's baseline measurements with relation to the area of injury. With the back pain analogy, the worker is asked to lift from the floor, overhead, waist to shelf, push/pull, etc. These activities are included throughout the program with work simulation to make objective gains. Following the initial evaluation, the worker starts attending the WCWH program for 2 to 4 hours 3/5 days a week as appropriate for the worker. The worker from this point on begins with a warm-up, followed by strengthening exercises that are measurable over time through repeating the exercises after a period of days to evaluate improvement in the ability to lift/push/pull. If the patient continues to make improvements, the program progresses as per individual requirements. If the worker is non-compliant or is unable to make the required gains, then the therapist can stop the program and recommend a functional capacity evaluation for the worker to determine their ability to return to work.

Implementing a Successful WCWH Program

There are several key factors that require adherence to best practice guidelines to successfully implement a WCWH program for optimal outcomes:

- **Comprehensive assessment:** A thorough assessment of the patient's medical history, mechanism of injury, work duties, functional abilities, short-term and long-term work goals to tailor the program intervention (Feuerstein, 1992).
- **Goal-focused treatment:** The goals that are set for this patient population must be measurable and should align with the injured worker's job Physical Demand Level (PDL), should be attainable, and should be time-specific to be able to track them effectively.
- **Multidisciplinary approach:** There needs to be a multidisciplinary team approach of physicians, physical therapists, occupational therapists, and other professionals to ensure the patient's progress and health is effectively tracked.
- **Program exercise specifications:** The program comprises overall conditioning for the worker with an emphasis on endurance, flexibility, and strength with progressively challenging exercises that address the worker's functional capacity with work-specific activities and simulation of work-related strengthening exercises (Genaidy et al., 1994).
- **Simulation of work duties:** For a firefighter, work simulation will involve activities such as pulling/pushing, lifting, running, and crawling. The exercises are job-specific and replicate the job demand, with an emphasis on strength and safety to be able to safely transfer the skills to work and prevent reinjuries.
- **Gradual return to work:** The program implements a slow return-to-work structure with the ability to start with light duties or to start work duties with restrictions part-time/full-time with accommodations for the limitations with lifting/pulling/pushing as required by the nature of the injury.
- **Outcome measures and objective limitations:** The program goals should be measured with standardized

outcome tools, objective functional assessments, and work performance metrics that demonstrate successful completion of return-to-work goals.

- **Psychological support:** These workers may have psychosocial barriers such as fear, anxiety, and depression that need to be addressed through peer support, cognitive-behavioral strategies, motivation, and accommodations for injury as needed when available.
- **Functional Capacity Evaluation:** The program should end with a possible functional capacity evaluation that analyzes the worker's physical job demand, description of job duties including the ability to lift from the floor to waist, waist to shoulder, and shoulder to overhead and tolerance required for sitting, standing, walking, crawling, kneeling, and so on.

2. Conclusion

Studies have revealed that workers with low back pain after completing a comprehensive work rehabilitation program showed significant improvement in strength upon discharge from the program (Greenberg et al., 1996). The underutilization of the WCWH program and the delay in the start of the program can, however, interfere with the injured worker's ability to safely and effectively return to work with a shorter sick period. This can save the worker sick days, financial burdens, and psychosocial distress, and can significantly improve injury outcomes. This is not only beneficial for the worker but also saves healthcare dollars and claims costs. By effectively utilizing this program for injured workers through evidence-based practice and interdisciplinary care, we can help them achieve their functional goals, vocational independence, and help them be productive members of society.

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