Can work disability be prevented after musculoskeletal (MSK) injuries?  
Three Successful, Cost-effective Pilot Intervention Programs

Case Study 1: PRIMARY CARE VISITS FOR LOW BACK PAIN
Patients answered 9 screening questions (STarT Back Tool)\(^1\) to determine risk levels.

LOW-RISK PATIENTS  
Received conservative care and reassurance only  
26%  

HIGH-RISK PATIENTS  
Also received psychologically-informed physical therapy services  
28%

MEDIUM-RISK PATIENTS  
Also received psychologically-informed physical therapy services  
46%

Results vs. Usual Care
- 64% fewer lost work days
- 44% net gain in physical functioning
- 12.5% reduction in healthcare costs

CONCLUSION: Targeted services improved work and health outcomes at reduced cost

The STarT Back Trial\(^1,2\)

Concerns about the high cost of a one-size-fits-all strategy for back pain treatment in the UK’s National Health Service led to a 2011 pilot program to stratify patients according to needs. Needs were identified based on pain beliefs and other non-medical factors assessed in a 9-item questionnaire. Physical therapists were specially trained to integrate psychological principles of pain management, coping, and problem solving into their practice. In a randomized, controlled trial, the combined effect of screening patients and applying psychologically-informed physical therapy services resulted in reduced healthcare costs and improved clinical outcomes, including return-to-work.

The pilot study demonstrated that: (1) some, but not all patients require extra help to recover after a routine musculoskeletal (MSK) injury, (2) brief self-report screening questionnaires can identify those at highest risk of poor outcomes, (3) psychological approaches can be integrated successfully with existing MSK care to improve outcomes, (4) return-to-work can be improved by addressing patient beliefs and concerns, and (5) these gains can be achieved at low cost and using allied healthcare providers who are already treating MSK injuries.
Case Study 2: WORKERS’ COMPENSATION LOW BACK INJURIES

Workers answered 21 screening questions (PSQ)\(^3\) to determine risk levels.

**LOW-RISK WORKERS**
- Received usual medical and claims management
- 40%

**MEDIUM-RISK WORKERS**
- Received usual medical and claims management
- 48%

**HIGH-RISK WORKERS**
- Also received brief cognitive-behavioral therapy (CBT) to improve pain coping skills; plus regular team conferences
- 12%

**Results vs. Non-study Comparison Claims**
- Half of all high-risk claimants agreed to CBT
- 30% reduction in healthcare/indemnity costs
- 50% of high-risk claims closed, fewer surgeries

**CONCLUSION:** Early identification and focus on high-risk workers is key.

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The Safeway/Albertsons Trial\(^4\)

Concerns about high workers’ compensation costs being generated by a small percentage of claims, led a large self-insured US employer to introduce a claimant screening and early intervention pilot for employees with back injuries. A service provider was engaged to conduct cognitive-behavioral counseling services to high-risk claimants who agreed to participate. The counseling focused on improving pain self-management skills and timely return-to-work, with an average of six sessions. Also, regular team conferences were held with the treating provider, claims handler, psychologist, and other providers to coordinate care.

Preliminary results of the pilot study showed 50% of high-risk claimants agreed to participate, leading to reduced surgery rates and a 30% reduction in healthcare and lost-time indemnity costs. The preliminary results of this pilot study demonstrate that: (1) half of high-risk workers are agreeable to brief, pain-related counseling, even in the sometimes contentious workers’ compensation environment, (2) counseling can reduce over-utilization of medical care and facilitate return-to-work, and (3) early intervention programs to prevent MSK disability can be feasibly sponsored and coordinated at the employer/insurer level.
Case Study 3: WORK-RELATED MUSCULOSKELETAL INJURIES

Injured workers taking time off work answered 21 screening questions (PSQ) to determine risk levels.

LOW-RISK PATIENTS

Received conservative (usual) care

HIGH-RISK PATIENTS

Also received brief cognitive-behavioral therapy (CBT) to improve adjustment and pain coping skills; plus workplace collaboration.

Results for High-Risk Cases at 2 Years Post-Injury; Intervention Protocol vs. Usual Care

- Half of high-risk claimants agreed to CBT
- Average days lost for intervention group: 30 vs. 68 for control group
- 30% reduction in injury indemnity costs

CONCLUSION: Early identification, counseling, and RTW collaboration were key factors.

The WISE Study

The WISE study was launched in New South Wales, Australia in 2014 in response to rising workers’ compensation premiums for healthcare workers in the State health service. To identify and address those at high risk of delayed recovery early in the claims process, new claimants taking time off work were screened within a week of their injury and offered access to a management protocol agreed to by the employer and insurer. The intervention for high-risk workers involved brief cognitive-behavioral therapy (CBT) to improve coping and problem solving skills and support by a return-to-work coordinator to facilitate job accommodations, plus conservative medical and physical therapy (usual care). The high-risk controls received usual care only. Since its conclusion, the protocol has been implemented system-wide in all public health facilities in the state.

The results at two years post-injury show improved return-to-work rates and improved patient health outcomes. Continuing work involves efforts to disseminate the program effectively and to maintain adherence to the protocol. The results of this study show that: (1) large insurance and employer systems can be modified to allow early screening and intervention, (2) return-to-work facilitation can be combined with counseling to improve work outcomes, and (3) success of pilot studies in this area can lead to larger-scale uptake.
KEY POLICY IMPLICATIONS: These three pilot programs demonstrate the considerable knowledge that exists regarding effective strategies to prevent work disability after MSK injury. Given this evidence, payer policies and service delivery practices in medical care and counseling should take this evidence into account rather than continuing to stand in the way of effective return-to-work interventions:

- About 10–30% of those with MSK injuries are at high risk of chronic pain if payers don’t support work disability counseling and case management services soon after injury.

- Providing short-term counseling to improve coping skills and problem-solving to those identified as high-risk improves RTW rates. Although psychosocial factors (pain beliefs, distress, worries) are consistent predictors of delayed RTW, brief psychosocial screening is not currently supported by guidelines and payer policies.

- When pain-related counseling is limited to high-risk cases, the associated costs are easily offset by improved outcomes. Many low-risk patients receive unnecessary medical care and specialist referrals, since conservative care is sufficient when psychosocial risk factors are low.

- Early intervention for high-risk cases can be successfully administered at the complex interface between healthcare providers, employers, and payers.

Making the appropriate changes in payer policies and service delivery practices, especially those related to early intervention, can thus be both practical and effective in preventing work disability after MSK injury.

REFERENCES:

The Stay-at-Work/Return-to-Work (SAW/RTW) Policy Collaborative was established by the U.S. Department of Labor’s Office of Disability Employment Policy (ODEP) to support the development of policies, programs, and practices that encourage the continued employment of workers likely to leave the workforce due to injury, serious illness, or disability. The Collaborative consists of a Community of Practice to provide input and real-time feedback on specific policy topics related to SAW/RTW, and Policy Working Groups (PWGs), led by Subject Matter Experts (SMEs) and supported by IMPAQ International who explore policies and practices that curtail long-term work disability and job loss due to injury and illness, provide policy recommendations to key stakeholders, and develop resources to support policy action. The 2017 PWGs focused on three topics: (1) Replicating and Adapting the State of Washington’s Centers of Occupational Health and Education (COHE) Model; (2) Musculoskeletal Conditions and Pain Management; and (3) Transition Back to Work. This document is a product of the Musculoskeletal Conditions and Pain Management PWG co-led by Bill Shaw (SME Lead) and Linda Toms Barker (IMPAQ Lead).

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