Stakeholders’ perspectives of factors influencing return-to-work for workers with compensable upper extremity injuries

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My background

- Occupational Therapist
  - Worked in Occupational Rehabilitation & Hand Therapy since 2001
  - Fascinated by the multi-factorial nature of RTW and work disability
  - Wanted to know more!

- Doctorate in Health & Rehabilitation Science, University of Queensland
  - Factors influencing RTW for workers with UE diagnoses

- Current Research Fellow at Harvard Center for Work, Health and Wellbeing, Harvard School of Public Health
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  – Canadian Institute for Health Research (Work Disability Prevention Strategic Training Program)
Objectives

1. Understand the complex nature of RTW and RTW measurement

2. Using the biopsychosocial model, examine which factors different stakeholders think are most important in influencing the return-to-work process for workers with work-related upper extremity conditions

3. Discuss why different stakeholders have different perspectives and how this might impact on RTW process and RTW interventions

4. Identify some of the consistent messages and findings across the studies and consider how these could be applied to understand their impact on clinical, return-to-work and research implications
Overview

1. Background Information
   i. Upper extremity injury in the workplace
   ii. Return-to-work (RTW)
   iii. Systematic review evidence
   iv. Stakeholders in RTW process

2. Other perspectives on factors influencing return-to-work
   i. RTW stakeholders:
      i. Cross-sectional survey
      ii. Case vignette
   ii. Experts: Delphi study

3. Key Findings & Implications
1. Background

- Upper Extremity Injury in the Workplace

- RTW taxonomy
  - Newington et al. Scand J Work Environ Health; In press.

- Biopsychosocial Model

- Systematic Review Evidence
  - Peters et al. JBI Libr Syst Rev 2016; 14(9): 135-216

- Overview of Key Stakeholders
Why focus on Upper Extremity injury?

- Up to 53% of workers suffer from UE pain and symptoms \((Huisstede 2006)\)
- One work absence is more likely to result in a second UE-related absence \((Baldwin 2006)\)
- In Australia over the last decade, claims requiring >1 week off work \((SWA 2015)\)
  - 23% injuries were to the UE
  - Costs increased by 70% to median of >$8000
  - Average work incapacity of nearly 6 weeks
  - Similar results internationally
- 60% of UE injuries are non-traumatic
  - In US, CTS results in 25 days off work & costs >$110 billion annually \((Bhattacharya 2014)\)
  - Surgery is frequently offered to those with more severe symptoms or do not respond to conservative management
- Despite intervention, delays in RTW and work disability continues to persist \((Feuerstein 1998, Bhatia 2010, Peters 2016)\)
Return-to-Work Taxonomy (Peters 2016)

- **Return-to-work**
  
  i. **Process** that encompasses a series of events, transitions and phases related to returning a worker to work
  
  ii. Measurable **final outcome** of work status
      
    a. Working versus not working
    
    b. First RTW
    
    c. Sustained RTW / Multiple work absences
  
  iii. **Capacity** on re-entry to the work force after injury (e.g. alternate or preinjury job or duties, flexible work conditions)

- **Work Disability**
  
  i. Disability associated with the absence from work, reduced productivity or functioning as a result of a health condition. It can be measured as prolonged work absence or a delay in RTW.
Return-to-Work: Why is it hard to define?

- 42 experts could not agree on a definition for delayed RTW \((Peters 2017)\)
  1. Not returning to pre-injury or similar work within the expected timeframe (45%)
  2. Not returning to any type of work (36%)

- 2/3 experts believe that time cut-offs should not be used \((Peters 2017)\)

- Median time to RTW following CTR \((Newington 2018)\)
  - Non-manual work = 21 days (7-41 days)
  - Manual work = 39 days (18-101 days)
  - Modified work = 23 days (12-50 days)
  - Preinjury work = 23 days (17-64 days)

- RTW is multi-factorial
- RTW is complex
- RTW depends on context
- RTW definitions depends on stakeholders’ priorities and perspectives
- Differences in RTW definitions can result in differences in outcomes
Systematic review evidence:
Factors influencing poor RTW outcome of workers with UE injuries

Non-traumatic  (Peters 2016, Desmeules 2017)

- Greater functional limitations**
- Worse mental health state**
- Pre-operative work absence**
- Less supportive workplace polices and practices
- Job accommodation availability
- High job strain
- High job demands with high job control
- Poor co-worker relationships
- Lower household income
- Workers’ compensation status
- Litigation
- Long surgical wait times

• Older age
• Higher pain
• >2 MSK pain sites
• Lower recovery expectations

Main definitions used:
- Time to return to work (continuous)
- Return to work at timepoint (yes/no)
  • Modified duty, pre-injury duty or any type of work
Systematic review evidence:
Factors influencing earlier RTW of workers with UE injuries

Non-traumatic *(Peters 2017)*

- Lower pain anxiety
- Worker desired fewer days off work
- Occupation
Systematic Review Evidence: What’s missing?

- Few studies exist – many are low quality studies

- Most focus on individual (e.g., biological, sociodemographic) or administrative factors (e.g., workers’ compensation status)

- Few focus on workplace (working conditions) or psychological factors

- Few focus on mechanisms that support or facilitate RTW

- Limited to carpal tunnel and shoulder diagnoses
So, what factors should we consider? Who should we consult?

1. Stakeholders involved in RTW process
2. Research experts
Who are the key stakeholders in RTW process?

**Stakeholder = anyone who stands to gain (or lose)**

- Stakeholders vary depending on the context
  - health, social security and workers’ compensation systems.
- Differing priorities drives decision making, RTW process & stakeholder actions (*MacEachen 2012, Peters 2016*)
**Australian Health Care & Compensation Systems**

- **Health:** Universal health care + private insurance
- **Mandatory state statutory no-fault Workers’ Compensation**
  - Income replacement
  - Medical & rehabilitation
  - RTW assistance
  - Permanent impairment & fatality compensation
- **Potential to claim for common law damages for pain, suffering and loss**
2. Other perspectives on factors influencing RTW

• Cross-sectional survey of key stakeholders

• Stakeholders perspectives of barriers and strategies to overcome barriers using a case vignette
  • *Peters et al. Work 2018; 59(3): 401-412.*

• Delphi study of Experts
Cross-sectional Survey of RTW stakeholders: Methods

- **Purpose:** determine stakeholders’ *perspectives on factors* influencing RTW following surgery for non-traumatic UE conditions, and whether there are any *differences between stakeholder groups*

- **Setting:** Australia-wide (Aug 2013 - Jan 2014)

- **Survey design:** Web-based and hard copy surveys at key stakeholder events

- **Recruitment:** Snow-ball method via gatekeeper organizations

- **Eligibility:** Experience managing workers with UE conditions in the RTW process
  - Health care providers
  - Employer representatives
  - Insurer representatives e.g. claims advisors, case managers
  - Lawyers
Survey Design

• Section 1: Demographic Information
• Section 2: Rating of 50 factors
  – 8 socio-demographic
  – 16 worker-related
  – 19 workplace
  – 7 compensation/procedural

“Please rate the degree influence you think these worker-related factors have on a worker’s ability to return to work with respect to workers who have had surgery for a non-traumatic upper extremity condition?”

• Section 3: Case Vignette
1,011 respondents
- Female (66%)
- 30-49 years (56%)
- > 10 years experience (55%)
- >50% caseload WC (46%)
- Managed >11 workers with UE conditions / month (55%)
- Stakeholder groups were heterogeneous
## Stakeholder survey results: >75% of stakeholders

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker displays difficulty coping with pain/injury **</td>
<td>94.8%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Worker's RTW self-efficacy **</td>
<td>92.2%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Post-operative psychological status **</td>
<td>91.8%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Supportive employer/supervisor **</td>
<td>91.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Employer's willingness to accommodate job modifications **</td>
<td>90.7%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Worker's expectation r.e. their recovery **</td>
<td>88.3%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Job satisfaction **</td>
<td>87.7%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Diagnosed mood disorder **</td>
<td>87.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Availability of alternate/suitable work tasks **</td>
<td>86.8%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Post-operative pain level **</td>
<td>86.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Whether the job can be modified**</td>
<td>86.3%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Worker's perception that the job can be modified **</td>
<td>84.0%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Exposure to hand/wrist repetition at work **</td>
<td>82.3%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Pre-operative psychological status **</td>
<td>82.0%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Exposure to heavy lifting at work **</td>
<td>81.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Supportive work colleagues **</td>
<td>78.2%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Supportive family or spouse **</td>
<td>77.2%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Pre-operative poor overall body function **</td>
<td>75.9%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Whether the worker has sought legal advice **</td>
<td>75.5%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Two or more musculoskeletal pain sites **</td>
<td>75.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Amount of control worker has over job **</td>
<td>75.4%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Whether the worker had a pre-employment medical evaluation in the last 12 months **</td>
<td>15.9%</td>
<td>Very to Extremely Influential</td>
</tr>
<tr>
<td>Gender **</td>
<td>10.5%</td>
<td>Very to Extremely Influential</td>
</tr>
</tbody>
</table>

### Influence Scale
- **Not at all to Somewhat Influential**
- **Very to Extremely Influential**
Results: >75% of stakeholders ‘very to extremely influential’

BPS Model

- Social support (supervisor, coworkers, family)
- Working conditions (job control, high physical work demands)
- Job accommodation (availability, employer willing to modify job, worker perception job modification)
- Legal involvement

- Pain (coping*, pain intensity, >2 sites)
- Poor overall function

- RTW self-efficacy
- Recovery expectations
- Pre- & Post- operative psych status
- Mood disorder diagnosis

* Interaction between BPS domains
## Results: Differences between Stakeholder Groups

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Biological (Clinical) Factors</th>
<th>Social (Workplace) Factors</th>
<th>Social (Compensation / Procedure-related)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age**</td>
<td>Comorbidities</td>
<td>Heavy lifting duties</td>
<td>Claiming WC</td>
</tr>
<tr>
<td>Gender**</td>
<td>Obesity**</td>
<td>Repetitive duties</td>
<td>Legal involvement</td>
</tr>
<tr>
<td>Income</td>
<td>Cardiovascular fitness</td>
<td>Job control</td>
<td>Doctor’s recommendation for time off work**</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>Job modification available</td>
<td></td>
</tr>
<tr>
<td>Hand Dominance</td>
<td></td>
<td>Supportiveness of colleagues</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suitable duties plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In-house RTW coordinator involved**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-employment medical evaluation</td>
<td></td>
</tr>
</tbody>
</table>

**Sig:**

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p<0.05 \\
p<0.001
\]
Stakeholder survey: Key takeaway messages

- >75% agreed on 23 (of 50) factors
  - Most were related to the workplace or were psychological in nature
  - Most are modifiable and amenable to intervention

- Differences between stakeholder groups for 19 factors
  - Demographic, biological (clinical), social (workplace & compensation system) factors, but for NO psychological factors
  - Differences between groups may reflect stakeholders motivations and priorities in the RTW process, or factors being front of mind due to their occupation or role in RTW process
  - Discordant views are probably inevitable
Case Vignette: Methods

**Purpose:** to explore perspectives of Australian stakeholders regarding the barriers and strategies recommended to facilitate return back to work.

- **Two open ended questions** using a case scenario (Sally)
  1) Identify barriers influencing RTW
  2) Identify strategies that could be implemented to address any of the barriers that you nominated

- **Content analysis** of free text responses

- Responses grouped according to **biopsychosocial model**
- Between group comparisons
“Sally is a 50 year-old woman who has carpal tunnel syndrome of her right dominant hand for the last 12 months. She works fulltime as a factory worker packing food items into boxes. She has a number of absences from work due to carpal tunnel syndrome over the last few months but attributes her most recent exacerbation to increased work leading up to Christmas. All absences have been documented as work-related and she has an active worker’s compensation claim. She has been prescribed a number of treatments including anti-inflammatories, hand therapy (including splinting and ultrasound) and acupuncture with little relief. Sally has found that her symptoms have been progressively getting worse over the last month. Her General Practitioner has sent Sally for a number of diagnostic tests, which were all negative. However, she continued to report symptoms of pain and tingling in her hand. Three months ago she had surgery for her carpal tunnel, and has seen the hand therapist regularly for treatment. Her therapist has reported that Sally is continuing to report higher than usual pain in her arm and appears quite anxious when work is discussed. Sally has told her therapists that she does not believe she will ever be able to return to her pre-surgery job as a factory worker, due to the repetitive nature of the work and the frequent heavy lifting. After speaking with her union representative, she has consulted a lawyer. Her doctor has requested that a suitable duties program be organized for Sally. However, Sally has indicated that she feels she has a strained relationship with her coworkers and supervisor. Her personal life is also in turmoil following the recent separation from her partner of 10 years.”
“E.g. High Pain Levels, Multiple inconclusive Diagnostic Criteria, Natural Trajectory of non-specific MSDs, Multiple treatment providers”

“E.g. Low Recovery and RTW Expectations, Personal Life Stressors, Workplace Stressors, Hx of Depression, Low Job Satisfaction”

“E.g. Workers’ Compensation Status, Seeking Legal Advice, Duration of work absence prior to surgery, Lack of RTW planning at any stage, Lack of co-worker or supervisor support, Litigation”

n=621
RTW BARRIERS

% within Stakeholder Group

- High Pain Levels
- Negative Recovery Expectations
- Personal Relationship Stress
- Work Relationship Stress
- Lack of RTW Planning
- Seeking Legal Advice
- Physical Demands of Work

HCPs (n=488)  Employers (n=62)  Insurers (n=55)  Lawyers (n=16)

*p < 0.05
“Clinical Reassessment, Functional Capacity revaluation, Pain Management, Patient Education”

“Stakeholder Communication, Workplace education, RTW planning / SDP”

“Psychological Intervention, Workplace Relationship counseling, Adjustment to Injury counseling”
RTW STRATEGIES
RTW STRATEGIES

- [*] Pain Management
- [*] Adjustment to Injury Counselling
- [*] Psychological Intervention
- [*] Workplace Relationship Counselling
- Improving Stakeholder Communication
- RTW Planning

% within Stakeholder Group

*20% respondents did not nominate a strategy

*p<0.05

HCPs (n=488)  Employers (n=62)  Insurers (n=55)
Case vignette: Key takeaway messages

• Different stakeholder groups perceive similar barriers for RTW but recommend different strategies.

• Stakeholders’ disciplines and priorities and what they do or see every day are likely to drive which strategies they perceive will be most successful.

• Stakeholders perceive their own communication and RTW planning as being important. However, in reality this does not always happen. This supports the importance of having clearly defined supportive organizational policies and procedures and workers’ compensation processes.

• Reinforces a multidisciplinary collaborative approach to managing RTW.
Experts’ perspectives: Delphi Study Methods

**Purpose:** To reach consensus on important facilitators and barriers for RTW following surgery for non-traumatic UE condition

**Round 1**
- Open-ended questions on facilitators and barriers to RTW

**Round 2**
- Rate factors on Likert scale

**Round 3**
- Indicated agreement yes/no

- Added items from literature
- Dichotomized into 2 categories
- Consensus: Strong >85%
# Experts’ perspectives: Results

## 6 barriers
1. Mood disorder diagnosis
2. >1 MSK pain sites
3. Heavy physical job demands
4. Lack of flexible RTW arrangements
5. Lack of supervisor support
6. High pain catastrophizing

## 13 facilitators
1. High motivation to RTW
2. High self-efficacy for recovery and RTW
3. Availability of modified or alternate duty
4. Flexible RTW arrangements (e.g. working hours, locations or duties)
5. Positive coping skills
6. Less physical job demands
7. Supportive RTW policies and procedures
8. Supportive supervisor
9. Lack of catastrophic thinking
10. No fear avoidance to RTW
11. No fear avoidance to pain / activity
12. Meaningful duties
13. High job satisfaction
Experts’ perspectives: Key takeaway message

• Lack of consensus (rounds 2 and 3) on many of the barriers identified in round 1

• Experts focused on facilitating factors that promote successful, earlier RTW

• Factors may have bi-directional effects e.g. supervisor support, flexibility in RTW duties. These were often also amenable to intervention. However, we should not assume this for all factors.
3. Key findings and implications

• Consistent findings across studies

• Implications: Where to from here?
Were there any factors that were consistent between studies for poor RTW outcomes?

1. >2 MSK pain sites***
2. Lack of job accommodation or alternate duty availability***
3. Workers’ recovery expectations
4. Poor mental health state
5. Heavier work duties
6. Lack of supportive organizational policies and procedures
7. Low job control
8. Lack of supportive co-worker relationships
9. Litigation

***Systematic review, stakeholders, Delphi
Were there any factors that were consistent between studies for better RTW outcomes?

1. High RTW and/or recovery expectations
2. High pain coping, lack of fear avoidance to pain
3. High job satisfaction
4. Able to modify job, or options of alternate duties
5. Returning to meaningful duties
6. Less physical work duties
7. Supportive org. policies and procedures

***Systematic review, stakeholders, Delphi
Implications: Where to from here?  
Evaluation of RTW barriers and facilitators

RTW is VERY complex, multifactorial and needs to be considered within its’ context

- Consider barriers and facilitators to RTW as interlinked (bio-psycho-social) systems

- Communication between stakeholders about potential barriers to return to work identified
  - Disagreements may exist due to stakeholder’s profession, priorities, goals, and own experiences

- Role for early identification for workers at high risk of long periods of work incapacity and/or long-term work disability
  - Direct targeted interventions to those who need it most
  - Potential cost benefits

- Worker-centric paradigm shift
  - Involvement in goal setting & decision making = Buy-in
  - Culture of support, respect & trust

- Sets the stage for future research
  - Examining prognostic factors for RTW outcomes
Implications: Where to from here?
RTW intervention planning

- Management of barriers and development of RTW strategies within a bio-psycho-social framework i.e. interlinked systems – integrated solutions
- Developing targeted approaches based on early evaluation of bio-psycho-social barriers to RTW; and build on facilitators to RTW to support RTW process
  - Multidisciplinary collaborative approach
  - Joint goal setting – including worker
  - Communication is key
- Workers’ compensation policies and procedures
  - Programs and interventions funded
  - RTW procedures and processes
  - Case management
- RTW policies for organizations
  - Supportive RTW policies
  - Supportive working conditions & job modifications/transitional duty
- Sets the stage for future research
  - Testing of RTW interventions
Questions?
Thank you!

Our Shared Goal
Protect and promote worker safety, health, and well-being
http://centerforworkhealth.sph.harvard.edu/

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References: Other studies referenced in this webinar

9. Van eerd et al.