

Using ÖMPQ to Reduce Risk of Prolonged Disability in Workers' Compensation Cases

***International Forum on Disability Management
Section: Mental Health
September 21, 2010***

***Dr. Douglas Margison, Chief Medical Officer
douglas.margison@ws-ts.nb.ca
Kay Fitzgerald, Case Management Program Analyst
WorkSafeNB, Canada***

Prolonged disability can be harmful to the worker ...

- *Increased risk of not getting back to any job*
- *Unemployed have higher rates.....*
 - *Morbidity*
 - *Mortality*

Can we predict who is at risk for prolonged disability and provide some type of intervention to prevent bad outcomes?

The challenge ...

Some claimants with little or no impairment are more pain disabled than claimants with definite impairment

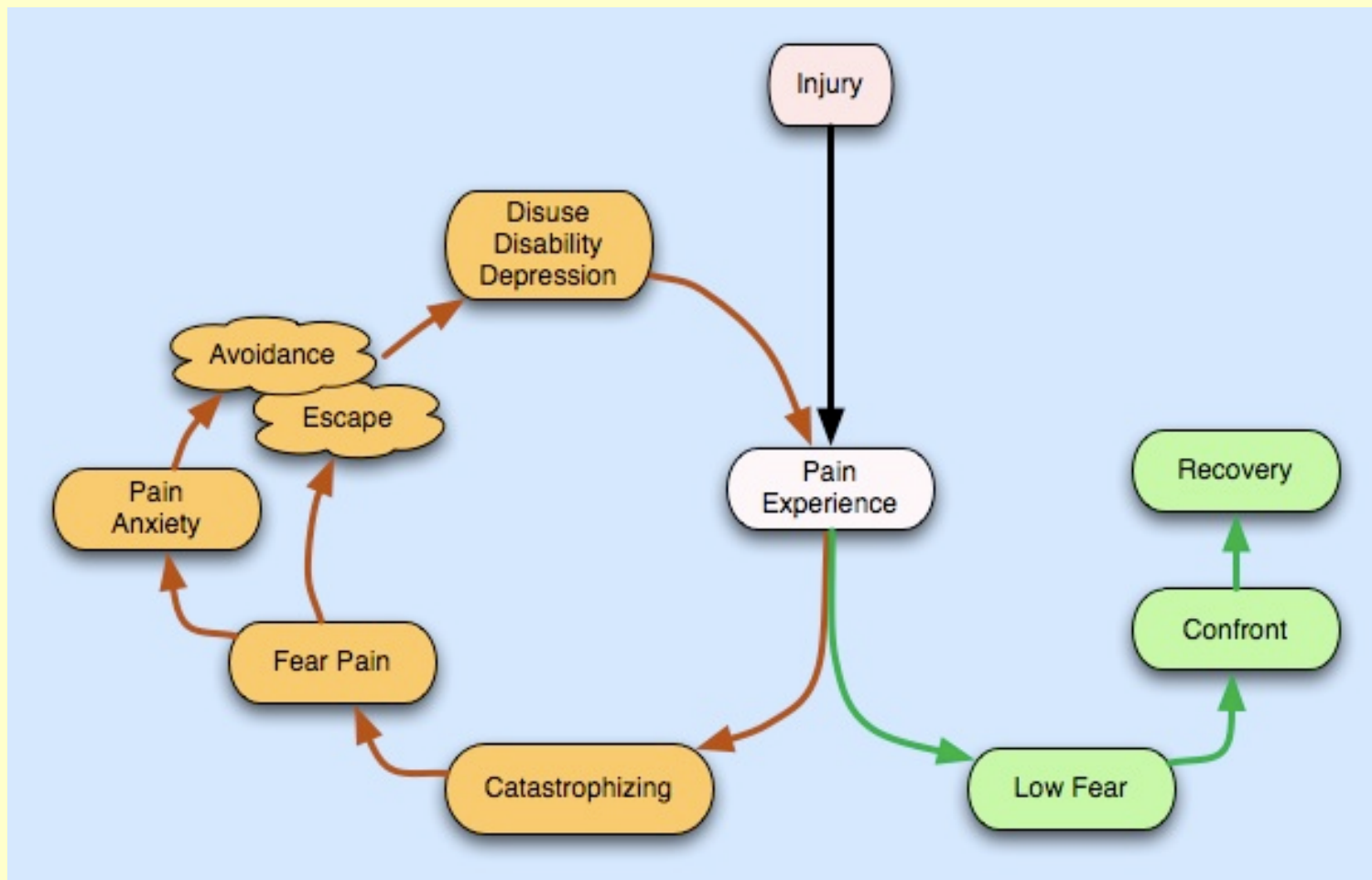
Research suggests ...

Psychosocial factors may be more important than biomedical factors in development of chronic pain disability

Pain catastrophizing and fear avoidance research

- ***Pain catastrophizing scale***
 - *Upper tertile 1.7 x more likely to have chronic pain disability at 26 wks vs. lower tertile (Picavet 2002)*
 - *Upper quartile 1.8 x more likely to have chronic pain disability at 26 wks vs. lower quartile (Buer 2002)*
- ***Fear avoidance scale***
 - *Upper tertile 2.6 x more likely to have chronic pain disability at 26 wks vs. lower tertile (Picavet 2002)*
 - *Upper quartile 2.5 x more likely to have reduction in daily activities vs. lower quartile (Buer 2002)*

Fear Avoidance Model



Ref: Vlaeyen 2000; Buer 2002; Waddell 2004; Leeuw 2007

Related references #1

- Buer N, Linton SJ. Fear-avoidance beliefs and catastrophizing: occurrence and risk factor in back pain and ADL in the general population. *Pain*. 2002;**99**:485-491.
- Picavet HS, Vlaeyen JW, Schouten JS. Pain catastrophizing and kinesiophobia: predictors of chronic low back pain. *Am J Epidemiol*. 2002;**156**:1028-1034
- Crombez G, Vlaeyen JW, Heuts PH, Lysens R. Pain-related fear is more disabling than pain itself: evidence on the role of pain-related fear in chronic back pain disability. *Pain*. 1999;**80**:329-339.

Related references #2

- Denison E, Asenlof P, Lindberg P. Self-efficacy, fear avoidance, and pain intensity as predictors of disability in subacute and chronic musculoskeletal pain patients in primary health care. *Pain*. 2004;**111**:245-252.
- Severeijns R, Vlaeyen JW, van den Hout MA, Weber WE. Pain catastrophizing predicts pain intensity, disability, and psychological distress independent of the level of physical impairment. *Clin J Pain*. 2001;**17**:165-172.

Related references #3

- Swinkels-Meewisse IE, Roelofs J, Oostendorp RA, Verbeek AL, Vlaeyen JW. Acute low back pain: pain-related fear and pain catastrophizing influence physical performance and perceived disability. *Pain*. 2006a;**120**:36-43.
- Vlaeyen, J. W. and S. J. Linton (2000). "Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art." *Pain* **85**(3): 317-32.

Related references #4

- Waddell, G. (2004). The Back Pain Revolution. Edinburgh, Churchill Livingston.
- Additional references at end

Örebro Musculoskeletal Pain Questionnaire

One screening tool for predicting risk of prolonged disability...

- *Applicable for any body part*

ÖMPQ is composite of psychometric tools

- *Number of pain areas*
- *Job dissatisfaction*
- *Anxiety*
- *Depression*
- *Pain catastrophizing*
- *Fear avoidance*

WorkSafeNB Thresholds ...

- **< 99 = *low risk prolonged disability***
 - *predominantly biological pain generator*
- **> 139 = *predominantly psychosocial pain generator***
 - *140-147 = high risk prolonged disability*
 - *> 147 = very high risk prolonged disability*

Related references #1

- Linton SJ, Boersma K. Early identification of patients at risk of developing a persistent back problem: the predictive validity of the Orebro Musculoskeletal Pain Questionnaire. *Clin J Pain*. 2003;**19**:80-86.
- Margison DA, French DJ. Predicting treatment failure in the subacute injury phase using the Örebro Musculoskeletal Pain Questionnaire: an observational prospective study in a workers' compensation system. *J Occup Environ Med*. 2007;**49**:59-67.

Related references #2

- Hockings RL, McAuley JH, Maher CG. A systematic review of the predictive ability of the Orebro Musculoskeletal Pain Questionnaire. *Spine*. 2008;**33**:E494-500.
- Westman A, Linton SJ, Ohrvik J, Wahlén P, Leppert J. Do psychosocial factors predict disability and health at a 3-year follow-up for patients with non-acute musculoskeletal pain? A validation of the Örebro Musculoskeletal Pain Screening Questionnaire. *European journal of pain (London, England)*. 2008;**12**:641-649

Case management experience prior to Mar. 2008

Baseline: New STI Claims 2006 – Claim profiles by ÖMPQ Group

	ÖMPQ Score			
	< 99	99-139	> 139	> 147
Sample size	71 (27%)	146 (57%)	38 (16%)	22 (10%)
% duration > 26 wks	35%	47%	74%	77%
% working at 2 yrs	83%	77%	58%	50%
% work restriction at 2 yrs	8%	18%	24%	27%
Avg. claim duration(wks) ¶	31.9	37	46.6	54.6

¶ claims tracked for 2 years

Comparing interventions in 2006 claims when on benefits beyond week 26

	Group 1: Score < 99	Group 2: Score > 139
Physiotherapy	28%	37%
Imaging	19%	29%
Specialist consult	10%	24%
Acupuncture	1%	8%
Injections (blocks)	3%	16%
Surgery	7%	13%
Vocational rehab	6%	11%

**Can we improve
outcomes for claimants with ÖMPQ
scores > 139?**

**WorkSafeNB's High Risk Management
Pilot: Mar 1 2008 to Feb 28 2009**

Case Management Protocols

- *If STI claim on benefits at 4 weeks post-injury or recurrence, refer client to physiotherapy clinic to obtain ÖMPQ score*
- *Case Assigned 4 weeks post-disablement*

If score > 139

- ***Face-to-face client meeting within 3 weeks post-assignment***

Discuss recovery expectations, response to treatment, pending tests/ medical appointments, work accommodation. Set expectations. Identify barriers to RTW. Interview script used to measure motivation.

Case Management Protocols

- **Contact Employer within 2 weeks post-assignment**

Discuss job demands & status, accommodation

- **Contact Service Provider within 2 weeks post-assignment**

Discuss treatment progress & needs; RTW readiness, RTW options & the presence of psychosocial issues

If high risk for prolonged disability is validated:

- **Plan interventions to address barriers such as:**

Concerns about recovery, lack of treatment progress, pending tests/ specialists, complications, employment or personal issues.

Case Management Protocols

- ***Case management Team meeting by week 4-6 post-assignment***

How to address remaining barriers, set timelines for action/follow-up.

- ***Score 140-147***

Active Unidisciplinary functional rehab (primary physio or work conditioning) + basic cognitive-behavioural intervention(s)

- ***If score > 147 & no planned RTW***

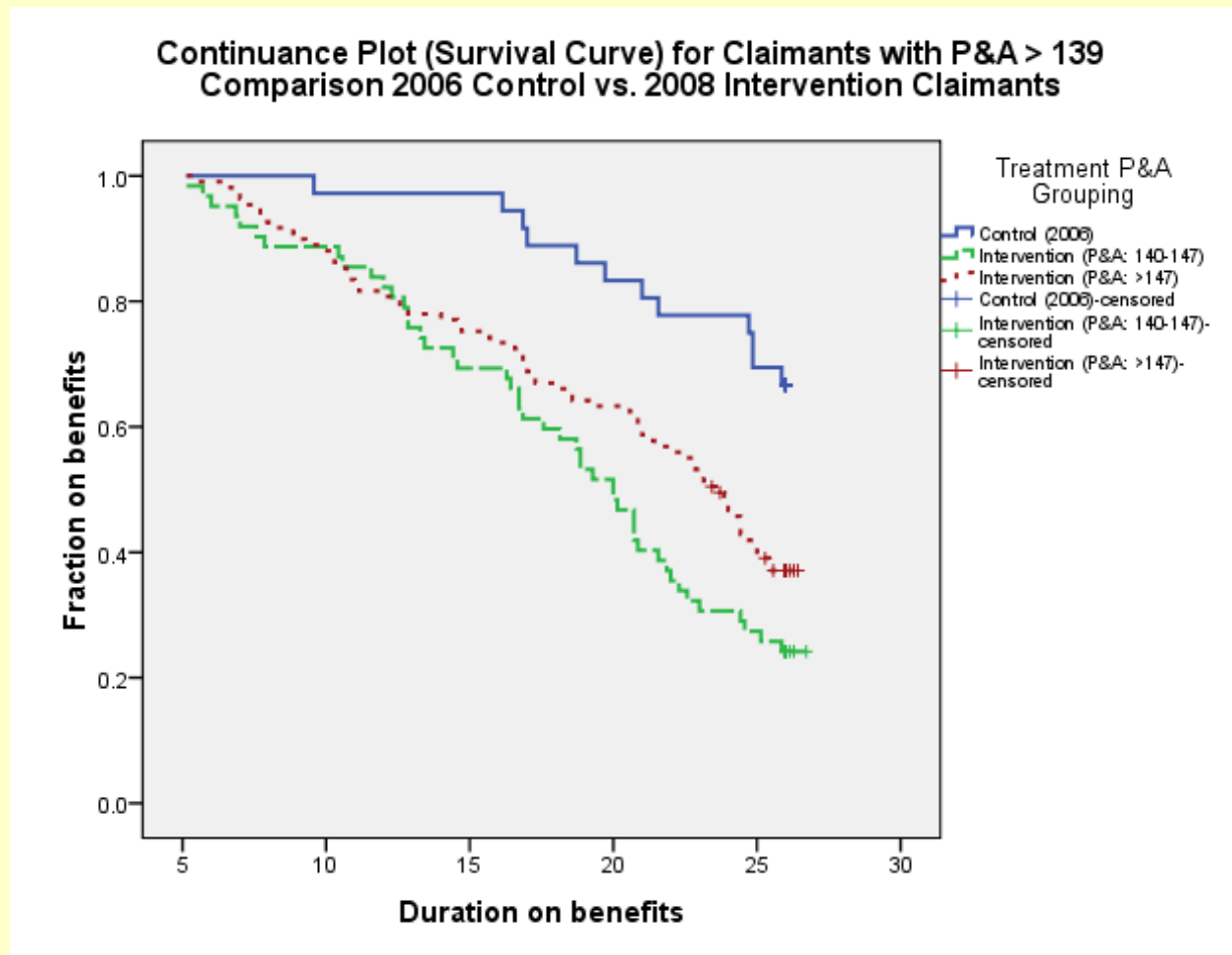
Start Multidisciplinary functional restoration with cognitive-behavioural therapy and work simulation

At 26 weeks, both intervention groups showed clinically significant improvement ...

	Control Group (2006)	Intervention Group (2008-2009)		P Value
	ÖMPQ: > 139	ÖMPQ: 140-147	ÖMPQ: > 147	
Sample size	36	62	109	
% Claims closed at 26 weeks	33%	76%	62%	< 0.001
% Working at 26 weeks	17%	68%	39%	< 0.001
Avg. claim duration to 26 weeks	24.0 wks	18.7 wks	20.2 wks	< 0.001

¶ based on intention to treat

Comparison of continuance (survival) plots at 26 weeks



Case management validation ...

- *Not at risk for prolonged disability – 7%*
 - *Expected 10% false +ve rate*
- *High risk => very high risk – 31%*
- *Very high risk => high risk – 39%*

Conclusions



- *ÖMPQ can be used to triage claimants into high /very high risk for prolonged disability*
- *ÖMPQ is a screening tool for predicting prolonged disability*
 - *Case Manager needs to validate if the case is at risk of prolonged disability*

Conclusions

- *Early Case Manager intervention to address psychosocial issues reduced disability duration in claimants at high/very high risk*
 - *Involves some form of cognitive-behavioural intervention, depending on the nature of the issue(s)*

References #1

- Boersma K, Linton SJ. Expectancy, fear and pain in the prediction of chronic pain and disability: A prospective analysis. *Eur J Pain*. 2005;**10**:551-557.
- Fritz JM, George SZ, Delitto A. The role of fear-avoidance beliefs in acute low back pain: relationships with current and future disability and work status. *Pain*. 2001;**94**:7-15.
- Ghaffari M, Alipour A, Farshad AA, Jensen I, Josephson M, Vingard E. Effect of psychosocial factors on low back pain in industrial workers. *Occupational medicine (Oxford, England)*. 2008;**58**:341-347.

References #2

- Gheldof EL, Vinck J, Van den Bussche E, Vlaeyen JW, Hidding A, Crombez G. Pain and pain-related fear are associated with functional and social disability in an occupational setting: evidence of mediation by pain-related fear. *Eur J Pain*. 2006;**10**:513-525.
- Leeuw M, Goossens ME, Linton SJ, Crombez G, Boersma K, Vlaeyen JW. The fear-avoidance model of musculoskeletal pain: current state of scientific evidence. *J Behav Med*. 2007;**30**:77-94.
- Linton SJ. Early identification and intervention in the prevention of musculoskeletal pain. *Am J Ind Med*. 2002;**41**:433-442

References #3

- Linton SJ. Occupational psychological factors increase the risk for back pain: a systematic review. *J Occup Rehabil.* 2001;**11**:53-66.
- Peters ML, Vlaeyen JW, Weber WE. The joint contribution of physical pathology, pain-related fear and catastrophizing to chronic back pain disability. *Pain.* 2005;**113**:45-50.
- Sieben JM, Portegijs PJ, Vlaeyen JW, Knottnerus JA. Pain-related fear at the start of a new low back pain episode. *Eur J Pain.* 2005;**9**:635-641

References #4

- Sullivan MJ, Lynch ME, Clark AJ. Dimensions of catastrophic thinking associated with pain experience and disability in patients with neuropathic pain conditions. *Pain*. 2005;**113**:310-315.
- Swinkels-Meewisse IE, Roelofs J, Verbeek AL, Oostendorp RA, Vlaeyen JW. Fear-avoidance beliefs, disability, and participation in workers and non-workers with acute low back pain. *Clin J Pain*. 2006b;**22**:45-54.
- Verbunt JA, Sieben J, Vlaeyen JW, Portegijs P, Andre Knottnerus J. A new episode of low back pain: who relies on bed rest? *Eur J Pain*. 2008;**12**:508-516