



## Volume 16

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## BETTER THAN A OUIJA BOARD

### TAKING OUR PULSE

This issue will discuss tools that can be used to predict outcomes of a workers compensation claim, and specifically the likely duration of a claim from onset to return-to-work. Since this is one of the key objectives in claim management, it is useful to have a sense of how long this may take in any particular claim, taking into consideration some of the key demographic, occupational and clinical factors that pertain to that claim.

Knowing this projected duration can alert a claim adjuster to the severity of the claim, the potential need for early and proactive interventions such as case management and peer review, and some sense of the amount of reserves that may be required for anticipated medical and indemnity costs.

The process of projecting outcomes based on initial, and ongoing, data elements has come to be known as predictive modeling. This is a science in evolution, as the practice becomes increasingly comprehensive and refined.

Although it is a separate subject for discussion in a later issue of the Medigram, the same methodology of predictive modeling can be used to evaluate past physician performance as a guide to how physicians will behave in their handling of future claims. This is currently in progress at Broadspire, and can be useful in the selection and monitoring of providers.

### JUST WHAT THE DOCTOR ORDERED

To illustrate how a predictive model operates, the ODG calculator will be utilized. ODG has been selected as our single-source provider going forward for duration data, treatment guidelines, and other significant resources it offers. ODG can be accessed from "quick links" on the Broadspire intranet. A new version of the site will be available soon, customized to our specifications.

The predicted durations generated by the model are derived from a historical database of 3.5 million workers compensation claims, and each projection is based on those claims in the database which exactly match the criteria selected by the user for the claim being handled.

The first scenario below deals with a 32 year old worker in Florida, performing a light physical demand job, and diagnosed with carpal tunnel syndrome. No other complicating/confounding/comorbid factors were entered.

(Let's ignore for the moment that his/her carpal tunnel syndrome is not likely causally related to work at all! Please refer to Medigram issue Volume 1, May 2014 for a full discussion of this condition.)

**Work Loss Data Institute  
ODG Comorbidity Calculator**

Show All: This option will show at-a-glance disability duration projections using each dataset and allow the user to select the one that best fits the underlying claim.

Change Dataset: Show All RAS (Risk Assessment Score): 50.62 Savings Calculator Clear Text

**Duration Projections by Dataset (use + to select the best fit)**

Adjusted Duration (in Days)	Best Practice (+)	Claim Profile 95% (+)	Claim Profile 100% (+)
	19	40	52

Add Claim ID and contact info (for printing/documentation)?

State: Florida Employee Age: 32

DOL Job Class: Light

Confounding Factors:

- Depression/PTSD/Psychosocial
- Legal Representation
- Opioids
- Diabetes
- Obesity
- Substance Abuse
- Hypertension
- Smoker
- Surgery or Hospital Stay

Diagnosis ICD Codes: 354.0

Search in:  ICD9 database  ICD10 database

Show ICD1 Guidelines 354.0 - Carpal tunnel syndrome (Mean Duration 70 Days)

User Notes:

Print Summary

By entering this data, the user learns that while the "best practice" clinical recovery duration under optimal circumstances (as determined via the consensus of a physician panel) is 19 days, in "real world" experience this claimant may not RTW for up to 52 days (the 100th percentile), and at least 5% of claims will require 40 or more days. Therefore, while the claim should be managed to attempt to achieve 19 days or fewer, it may well be prolonged to the extent that the actual, historical data indicates.

Please note that the risk assessment score (RAS) for this claim is 50.62 days, which we will address shortly.

Let's now assume that this worker is in fact a smoker who has diabetes. By entering this additional data, the duration projections change, corresponding with this additional information.

ODG Navigator Show URL

Search
Main Menu
ICD Index
CPT Index
Help

Toolbox: [Select...] Procedure Index: [Select...]

## ODG Evidence-Based Decision Support

*ODG: Good to Go!* (complimentary self-training module)

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### Work Loss Data Institute ODG Comorbidity Calculator

**Show All:** This option will show at-a-glance disability duration projections using each dataset and allow the user to select the one that best fits the underlying claim.

RAS (Risk Assessment Score): 75.05

#### Duration Projections by Dataset (use + to select the best fit)

Adjusted Duration (in Days)	Best Practice (+)	Claim Profile 95% (+)	Claim Profile 100% (+)
	19	78	182

Add Claim ID and contact info (for printing/documentation)?

State:  Employee Age:

DOL Job Class:

**Confounding Factors:**
 Depression/PTSD/Psychosocial
  Diabetes
  Hypertension

Legal Representation
  Obesity
  Smoker

Opioids
  Substance Abuse
  Surgery or Hospital Stay

**Diagnosis ICD Codes:**

Search in:  ICD9 database  ICD10 database

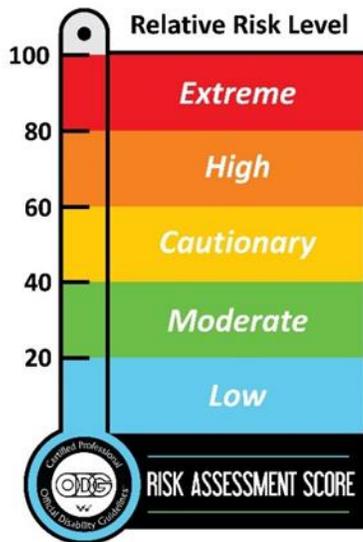
354.0 - Carpal tunnel syndrome (Mean Duration 70 Days)

**User Notes:**

The range of expected durations now extends up to 182 days, reflecting the impact of the added risk factor of smoking, and the comorbidity of diabetes. One can therefore expect that this claim may be prolonged and present more challenges to the claim adjuster and the medical management team, and it suggests that the team needs to be prepared to deal with a more complex case. Furthermore, the intensity of the claim is now at the higher RAS level of 75.05.

So what exactly is the RAS?

The ODG Risk Assessment Scoring mechanism uses medical codes (ICD diagnosis codes, CPT and ICD procedure codes, National Drug Codes, DME/HCPCS, and First Notice of Loss Nature of Injury and Body Part codes) plus claim demographics to quantify relative risk level in a workers' comp population. A score from 0 to 100 is generated, to be used for interventional triage, ensuring claims administration staff can put the right resources on problematic claims early, while not engaging complex and costly vendor referrals for "low touch" claims.



Claims are scored using the inputs above (diagnosis codes, demographics, etc.), with ODG predicting disability duration and total medical, indemnity and administrative costs using a proprietary causal model derived from “like” claims in the ODG database of 3.5 million workers’ comp claims.

Historically, interventions like medical case management, field vs. telephonic, IME, work conditioning, etc. are only introduced after certain dollar and duration thresholds have been hit, but by then the claim is already a problem, and facilitating return-to-work and claim closure is much more difficult, often costing considerably more on claims that are not reserved as such or medically could have been resolved earlier. Using the ODG Risk Assessment Score, clients can target these claims early, putting resources on the highest risk claims first, and working down.

We anticipate that using these tools will be of great value to Broadspire staff, and additional clarification or training is available as needed.

**CIRCULATING IN THE PRESS**

In addition to claims data, predictive correlations may also be generated by well-designed research studies.

For example, this recent study identifies early opioid use (within 4 weeks of injury) as a predictor of prolonged claim duration.

“Our analysis of the Ontario WSIB’s (Workplace Safety and Insurance Board) administrative data revealed that older claimants who were fully disabled at 4 weeks due to uncomplicated, acute LBP and who are reimbursed for opioid prescription in the first 4 weeks of their claim were more likely to experience prolonged claim duration. Higher preinjury income was also associated with prolonged claim duration, but only among persistent claims. Injured workers employed by organisations with an RTW programme and/or missing information on union affiliation were likely to resolve their claim faster. Neither early receipt of reimbursement for physiotherapy nor chiropractic care for uncomplicated LBP was associated with claim duration.”<sup>1</sup>

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A presentation at this year’s annual meeting of the American Academy of Orthopedic Surgeons revealed that several risk factors are associated with the development of low back pain. This again confirms previous research that concludes that in many or most cases, back pain is not of occupational origin.

One can also assume that these same factors will complicate the course of claimants who do have compensable low back pain.

“According to the U.S. Centers for Disease Control and Prevention’s (CDC) 2012 National Health Survey, nearly one-third of U.S. adults reported that they had suffered from low back pain during the previous three months. For many adults, low back pain is debilitating and chronic. Determining modifiable risk factors for low back pain could help avoid or diminish the financial and emotional costs of this condition.

Researchers reviewed electronic records of more than 26 million patients from 13 health care systems across the U.S., including 1.2 million patients diagnosed with low back pain (approximately 4.54 percent of the patient records).

The review found that 19.3 percent of the patients diagnosed with a depressive disorder reported lower back pain, as did 16.75 percent of patients diagnosed as obese (a body mass index, or BMI,  $>30\text{kg/m}^2$ ), 16.53 percent of the patients diagnosed with nicotine dependence, and 14.66 percent with reported alcohol abuse. Patients with nicotine dependence, obesity, depressive disorders, and alcohol abuse had “statistically significant” relative risks of 4.489, 6.007, 5.511 and 3.326 for low back pain, respectively, when compared to other patients. This study used an electronic health care database to identify modifiable risk factors – obesity, depressive disorders, alcohol and tobacco use – in patients with low back pain,” said lead study author and orthopaedic surgeon Scott Shemory, MD. ‘The findings will allow physicians to better counsel and more closely follow their high-risk patients.’ “<sup>2</sup>

#### REFERENCES:

- 1) “Association of worker characteristics and early reimbursement for physical therapy, chiropractic and opioid prescriptions with workers compensation claim duration, for cases of acute low back pain: an observational cohort study”, Jason W. Busse, et al, BMJ Open 2015;5:e007836. doi:10.1136/bmjopen-2015-007836.
- 2) “Obesity, smoking, alcohol abuse, depressive disorders are risk factors for low back pain”, News Medical, published on March 25, 2015.