

# CLAIM ANALYTICS

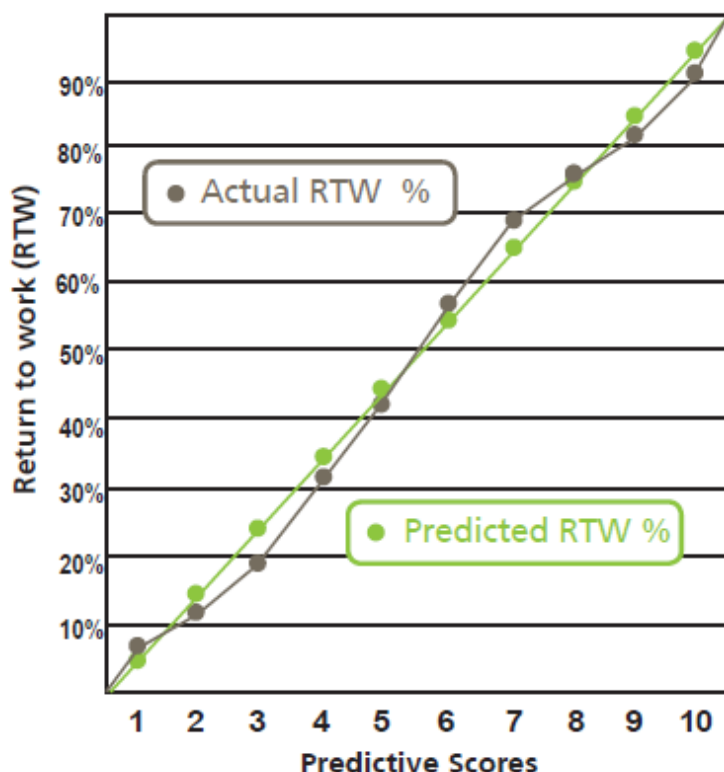
## One-Minute Claims Manager

### Forecasting Return to Work With Predictive Modeling By Barry Senensky and Jonathan Polon, Claim Analytics

Claim Analytics, an innovative firm led by two actuaries, has developed a predictive modeling tool to assist in the complex business of managing long term disability and workers compensation claims that offers a modern approach to prioritizing in claims management.

With the increasing realization of the impact of non-medical factors on the duration of disability claims and the ever increasing number and complexity of diagnoses, early intervention is becoming more and more important to claims management. Early intervention can offer claimants the attention and assistance they need, at the time they need it, to make a successful return to work. It can also prevent the slide into 'disability mindset,' the feeling that a claimant may begin to have that staying away from work is inevitable, and return to work impossible.

SCORES VS. ACTUAL RETURN TO WORK



### The Claim Files

One of the major difficulties in practicing early intervention is the heavy demands it places on the claims management department. In a perfect world, every claims manager would have infinite time and resources and 100% objectivity. The reality of course is different. Claim managers have a great deal of information to consider before deciding which of their one hundred or more claims will receive priority and attention that day.

### Predictive Modeling & Claims Scoring

Claim Analytics uses predictive modeling technology to create a claim scoring tool to help claim managers make the best choices available, and to optimize their use of available time and resources. By drawing empirical observations, based on historical outcomes, predictive modeling tools succeed at accurately predicting results.

The Claim Analytics scoring system scores each claim with a number from one to ten, based on likelihood of return to work within a given timeframe, which for long term disability claims as an example is usually 6, 12, or 24 months. This score gives claim managers a quick, initial assessment of each claim file they manage. It helps them to optimize resource allocation and to decide where to focus their time, energy and available support. By offering a classification for each claim, it also helps the claims supervisor to allocate caseloads effectively.

## Results

The proof is in the pudding – the most interesting discovery the model made was that it could, with great accuracy, predict likelihood of recovery. Upon being declared ready for final testing, the model was fed the input fields for a dataset of historical cases whose outcome was known. The rising line of gray points in the chart on the previous page shows the results of the blind test. A higher score (score shown on x axis, rate of recovery on y) was clearly linked to a higher rate of recovery. The model's predictions aligned very closely with real-life outcomes.

## Different Actions for Different Scores

The score can be used as a factor in creating an overall policy for managing claims. For example, claims scored 4-7 might be afforded the highest level of time, attention and resources. Claims scored 8-10 would require a certain level of monitoring to ensure that nothing stood in the way of the claimant's recovery and return to work. Claims scored 1-3 could receive a similar level of attention to those scored 8-10.

One of the most powerful features of the scoring model is its ability to distinguish between 'gray area' claims, those claims that are neither particularly promising nor particularly unpromising. This is often a very difficult task for a claims manager. Yet it can be seen in the chart above that the model differentiates, clearly and accurately, in the 4-7 range. 'Fives' were more likely to recover than 'fours', 'sixes' than 'fives,' and so on. This differentiation may offer a claims manager assistance in deciding which claims in the 4-7 range would most benefit from extra time and attention.

One route that can be (and is being) taken by claims departments is to focus most attention on claims scored with a 4-7, and, within this group, to start with the claims scored with a 6. These claims have a good potential for return to work, but may not do so without the proper assistance, resources, and encouragement. This is where an intensity of intervention could offer the greatest rewards.

## Conclusion

Claims management is neither a simple nor a routine task. Yet it forms an appreciable portion of insurance activity for most large insurance organizations, and many smaller ones. A means of assisting claim managers to improve return to work would be highly beneficial. The powers of predictive modeling can now offer assistance in this complex, critical area.

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**For more information, contact:**

**Ian Bridgman at [ibridgman@claimanalytics.com](mailto:ibridgman@claimanalytics.com) (774 270 4513) or visit our website**

**[www.claimanalytics.com](http://www.claimanalytics.com)**