



What is “Data Analytics” and How does the Fund use it?

The Fund’s Workers’ Compensation Claims Adjusters are using a new tool to help them control the cost of claims from districts. In this age of information mining and millions of data points, the Fund is using an algorithm based analysis to identify certain medical only claims that may evolve into much more costly lost time claims. A medical only claim is usually one where only medical expenses are paid for a minor injury that does not prevent the injured employee from going back to work. A lost time claim involves time off from work due to the seriousness of the injury. On average a lost time claim is 40 times more expensive than a medical only claim.

The algorithm the Fund’s adjusters use includes several factors that may predict a minor medical only claim may develop into a lost time claim. The potential for fraud is one of the factors, but most medical only claims that turn into lost time claims do so for medical reasons or reasons related to the employee’s particular situation in relation to his or her family, the employer and possible other health issues.

The Data Analytics process seeks to:

- ◆ Use claim and managed care data to improve decision making about the treatment and management of a claim
- ◆ Use specific algorithms to predict or anticipate changes in the development of the claim
- ◆ Review data looking for patterns, issues or targets to better manage risk for the employer and the Fund
- ◆ Influence claim progression by alerting to the use of specific actions in order to reduce claim costs and durations
- ◆ Help Fund experts such as nurse case managers work together to change or improve claims direction
- ◆ Gain insights on claim results and patient populations
- ◆ Identify areas for claims handling operational improvement, operational efficiency, effectiveness and results
- ◆ The process targets the specific claim and injured worker but also yields data that may benefit other claimants, employers and the Fund’s overall claim handling operation
- ◆ The process of adjusting even a simple medical only claim generates a tremendous amount of information about the injured worker, his or her job, medical diagnosis and treatments. Some of the “data points” that go into the data analytics process include:

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Loss Control Briefs

School Traffic

Summer is ending and school is about to begin. For many districts the reduction in traffic that results after school lets out is a pleasant and time saving benefit that is about to end. Any road or highway near a school will see school buses, parents transporting kids, bicycles and increased pedestrian traffic. This added congestion will pose serious hazards to district vehicles as they go about their daily movements around the district. When school starts watch out for:

- ◆ School buses stop in streets and roads, usually with some warning that starts with flashing lights and the swinging arm with a stop sign attached. Stop for the safety of the children the bus transports. After the first week you'll know when the buses that affect your travel are also on the road. This may allow you to avoid them. If not, be patient and obey the law. Some buses may be equipped with cameras that record the license numbers of vehicles that illegally pass a stopped bus.
- ◆ Speed limits around schools are significantly lower and usually signaled by flashing yellow lights. In rural areas or small towns speed limits can suddenly drop from highway speeds to 35 mph.
- ◆ New signage after the 2015 Texas legislative session also prohibits cell phone use in any school zone.
- ◆ Additional congestion may be caused by school drop off lines that snake out into local streets as harried parents drop their child off or pick them up in front of the school entrance.
- ◆ Watch out for kids on foot or bicycles crossing streets near the school. Pedestrians in cross walks in school zones have right of way and even if there is not a crossing guard, stop and let them cross safely.
- ◆ Police officers are generally out monitoring school zones in the early weeks of a new school year.

Storm Surge

The heart of hurricane season is approaching and another reminder is in order. The most dangerous aspect of a hurricane is storm surge. This giant tidal dome that is generated by the action of the storm comes ashore rapidly with deadly force as it floods areas far inland from the coast, cuts off evacuation routes and carries the intense wave action with it to add to the destruction. The Fund recommends that members with structures and facilities near the coast plot their location with the storm surge maps provided by NOAA at: <http://noaa.maps.arcgis.com>. The maps cover the coast of the United States from Brownsville to Maine and can zoom in to street level. The maps show estimated surge at typical Category 1 through 5 levels. Other information will be provided by the National Weather Service if

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tropical storms approach the Texas coast with more specific warnings about expected storm surge and local impacts. Storm surge with its increased tides may begin quite some time before other storm effects start. Evacuation routes can be cut off before the heavy winds and rains begin. If you have been instructed to evacuate, do not delay.



(Ike Storm Surge, Reuters/Carlos Barria)

Strain/Sprain Injuries

The most expensive cause of workers' compensation claims for members of the Fund are strain/sprain injuries. The following table illustrates the impact of these injuries over the last ten years.

Strain and sprain injuries are caused by human movement usually under a load. Lifting is a primary cause of strain injuries. When muscles and joints are involved injuries usually take more recovery time and require more expensive medical treatment. Many strains target backs and shoulders from lifting or repetitive motion such as brush clearing, pulling debris from canals or debris screens at head-works, carrying too much weight, poor posture and poor lifting mechanics. Some knee strains occur when employees climb off of heavy machinery and ladders.

TWCARMF Workers' Compensation Cause of Claims 2007-2017			
Cause	Frequency	Severity	Average Cost
Strain/Sprain	557	\$ 4,723,448	\$ 8,480
Slip/Trip/Fall	489	\$ 3,174,449	\$ 6,492
Strike/Struck by	658	\$ 1,338,121	\$ 2,034
Caught In	67	\$ 1,115,625	\$ 16,651
Motor Vehicle	111	\$ 927,829	\$ 8,359
Cut	164	\$ 419,195	\$ 2,556
Exposures	228	\$ 233,204	\$ 1,023
Total	2274	\$ 11,931,872	\$ 5,247

Districts try to reduce strain and sprain injuries through training and providing equipment that has good ergonomic

design. However, many strain injuries are preventable if employees will use proper lifting mechanics (as taught to them in their training). There are also a number of injuries that result from a worker trying to do too much by himself or herself. This error in judgment could involve not asking for help from fellow workers. It could also result when not using equipment that could make the lift without human effort other than attaching a choker or positioning a load so a bucket or blade could move the object. In a very real sense, these are mental mistakes that lead to physical injury. Most districts have sufficient numbers of employees to help with lifting tasks and plenty of equipment such as backhoes that can lift heavy objects. Use it. Prevent a back or shoulder injury that is not only painful but can put an employee out of work for extended periods of time.

TWCARMF Safety Awards

Each year the Fund gives Safety Awards to members whose claims record is better than any other member's in the categories of Workers' Compensation, Liability and overall Risk Management. This last award was named the Leroy Goodson Excellence in Risk Management Award by the Fund's board to honor Leroy's efforts over the years to promote effective risk management by the Fund's members. He was a constant voice of encouragement for members to control their claims, promote safety and advocate for the principles of effective risk management.

The awards for Workers' Compensation recognize the Outstanding Record in Workers' Compensation and the Most Improved Record in Workers' Compensation. These awards are based on a fundamental principle of risk management and the Fund. Members share in the impact of claims. This provides a strong incentive to reduce claims and consequently the contributions they pay. Although the rates members pay have a loss component, eligible members also participate through experience modifiers that calculate a factor that is applied to the member's rates based on past loss history. Experience modifiers above 1.00 impose a penalty on the rates while modifiers less than 1.00 provide a credit. The actual experience modifier for each member is calculated using three years of losses and payroll. The payroll is used to determine what expected losses are for all entities doing similar work in Texas. The member's actual losses are compared with the expected losses to determine the modifier.

The Outstanding Record in Workers' Compensation award is given to the member or members who have the lowest experience modifiers better than a .75. The 2016 awards went to the Brazoria Drainage District #4 with a modifier of .70 and the Gulf Coast Authority with a modifier of .72.

The second award for Workers' compensation is for the

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- ◆ Date of injury
- ◆ Nature of injury
- ◆ Lag between date of injury and date reported
- ◆ Diagnostic codes
- ◆ Drug codes
- ◆ Co-morbidity diagnoses
- ◆ Dates of service
- ◆ Costs
- ◆ Duration of treatment
- ◆ Number of pills or prescriptions
- ◆ Use of opioids
- ◆ Use of compound medications
- ◆ Attorney involvement
- ◆ Treating physician information
- ◆ The employee's job
- ◆ Employee demographic information
- ◆ Wage information

How do these pieces of information fit together to predict a negative trend in the progress of a supposedly medical only claim? A good example is a back claim that may seem minor at first and result in some physical therapy and pain medication. The apparent “minor” nature and a lack of specialization in occupational injuries by the provider may misdiagnose the injury and lead to ineffective initial treatment. This delays recovery and leads to ineffective treatment or tests that cost a lot but leave the injured worker no closer to a return to work. In this case, the algorithm may detect a continuing pattern of treatments with no corresponding improvement in condition. There may also be a pattern of increasing use of medications when the usual recovery progress for a particular diagnosis may indicate that medication use should be decreasing. The lack of improvement during a course of treatment supposedly appropriate for a diagnosis becomes a “trigger” for review of the claim by a clinical team. The findings of the team are immediately sent to the claims adjuster for use in management of the claim. A problem with the diagnosis or treatment may lead the adjuster to assign a nurse case manager to the claim to help steer the treatment to more effective modalities.

Other claim related factors such as co-morbidities like obesity or diabetes can also be recognized and factored into the treatment. The availability of a district's return to work program can also be used to speed recovery and get the injured worker back to work.

Although the data analytics approach starts with an algorithm applied to the data generated by a particular claim, the results come from the involvement of medical and claims experts using their experience and judgment to help a district employee recover from their injury and get back to work. These efforts supplement the work of the claims ad-

juster whose goal is to get the injured worker back to work as soon as possible with a full medical recovery.

The initial research and trials of the data analytics approach indicated that a triggered intervention resulted in a reduction of 71% in total cost, a reduction of 59% in medical costs and a reduction of 73% in lost time days. The use of these procedures will help the Fund achieve significant savings and more effective results for water district employees.



A Checklist for the Risk Transfer Elements of Contracts

The Fund's coverage documents transfer risk from the member to the self-insured risk management fund. In return for paying contributions the Fund provides coverage up to certain limits of liability for risks the member faces from employee injury, its premises and operations, its governance and administration and to its owned property and vehicles. Members also transfer risk when they enter a contract with a contractor, vendor or provider of professional services such as engineers and architects. The following are principles of effective risk transfer in district contracts:

- ◆ If you are paying for a service or project, the entity you contract with should sign your contract form, not theirs. Many contractors will try to make it easy for the district to sign their form, but what is easy at first could degenerate into disaster if what you have agreed to is against the district's interest.
- ◆ Sometimes you may “have to” sign their contract if they have sufficient leverage. One of our members refused to sign an elevator company's contract so that company refused to provide repairs to the inoperable elevator. The member signed their contract to get the elevator fixed because there was no one else. Even in this situation you may be able to negotiate changes to make the contract more favorable.

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Most Improved Record in Workers' Compensation. It is also based on the member's experience modifier and at least a 10% improvement in the current modifier over last year's modifier with a resulting modifier less than 1.00. Winners in this category for 2016 were:

- ◆ Hidalgo County Irrigation District #2 with a 51% improvement and a modifier of .76
- ◆ Roman Forest Consolidated Municipal Utility District with a 27% improvement and a modifier of .93
- ◆ Nueces River Authority, 12% improvement and a modifier of .98, and
- ◆ Cameron County Water Improvement District #10 with an 11% improvement and a modifier of .99

Workers' Compensation experience modifiers for all members ranged from .69 to 1.48. Percentage of improvement ranged from 62% (better) to -53% (worse). Some members improved their experience substantially but still had modifiers greater than 1.00 so did not qualify for an award.

The next award category is for Outstanding Safety Record in Liability. The awards are based on the experience modifiers for the three lines of liability coverage carried by the members. General Liability covers members for bodily injury or property damage done to members of the public by a member's premises or operations. Automobile Liability responds to bodily injury or property damage caused by member operation of their vehicle fleet. Errors and Omissions Liability covers the actions of the board of trustees and employees that may cause harm to others from employment actions, board decisions or enforcement actions. In each category the Fund's underwriter develops a modifier based on the member's loss history in each line. Modifiers range from a credit of .675 to a debit factor of

1.25. The three modifiers are added to find the best record overall. Total scores ranged from 2.025 to 3.75.

Winners in this category for 2016 were:

- ◆ Tarrant Regional Water District with a score of 2.10
- ◆ Guadalupe-Blanco River Authority, 2.025
- ◆ Colorado River Municipal Water District, 2.10
- ◆ North Harris Regional Water Authority, 2.10

The final award category is the Leroy Goodson Excellence in Risk Management Award to recognize the member who most embodies the Leroy Goodson approach to risk for members of the Texas Water Conservation Association Risk Management Fund. Leroy's approach was a constant effort of advocacy for the Fund and the basic effort of preventing claims of any kind through good risk management, effective safety programs and common sense. Determination of this award is based on performance in both Workers' Compensation and Liability lines. Based on overall performance in all lines of coverage the winner for the 2016 – 2017 Fund year was Jefferson County Drainage District #7. Their Workers' Compensation modifier of .69 and their combined Liability modifier of 2.175 placed them ahead of all other members of the Fund.

These awards are determined each year and are based on the experience modifiers as determined by the Fund's underwriters. They are based on the member's losses in each line of coverage and audited payrolls. The key to winning is few or no claims. Efforts to prevent claims, reduce their impact when they do occur and get injured workers back to work quickly are the factors that will help your district earn an award as well as improve the district's effectiveness and costs.



Reminder about Online Resources of the Fund

The Fund has been upgrading the resources included on its website, www.twcarmf.org. Some of the recent additions include a searchable archive of all quarterly newsletters back through 2007, ability to register online for workshops and seminars, 26 online safety courses and the old standbys of online claim filing and online confidential access to a member's workers' compensation claim history. In addition, recent annual reports and audited financial statements are also available on the site. Updated loss prevention resources include recent risk management bulletins, checklists and guidelines.



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- ◆ The hold harmless (indemnification) agreement is the key to risk transfer. In this provision the contractor agrees to hold the district harmless from actions due to their negligence that cause property damage or bodily injury. The district may agree to be responsible for incidents that are due to the district's sole negligence, but any shared negligence should be the responsibility of the contractor.
 - ◆ The contractor's general liability insurance typically extends coverage for their assumption of liability under a "written" contract and provides the money to pay for the damages or injuries the contractor causes.
 - ◆ This is why insurance requirements in your contracts are so important. The contractor's assumption of liability through their contract with the district is funded by their insurance coverage. Suggested coverages, limits of liability and other important provisions are provided on the Fund's website at twcarmf.org.
 - ◆ Who is responsible for safety during construction or remodeling is also important. The contractor should assume this responsibility as well with a qualified safety officer enforcing their program. The district should be willing to comply with the contractor's safety program.
 - ◆ Venue for settlement of contractual disputes is a trap in contractor prepared documents, particularly if the contractor operates nationally. The district wants the venue to be in Texas, not New York or California.
 - ◆ Your vendors, contractors, service providers and consultants should carry general liability insurance, automobile liability including hired and non-owned vehicles, workers' compensation and professional liability for those providing professional services. Contractors doing construction work for public entities are required by law to carry workers' compensation. Sole proprietors are not. Other entities should, but if they do not the Fund will charge for their coverage based on the cost of their contract.
 - ◆ Certificates of insurance that a contractor or vendor may provide are not binding and are merely for information purposes. If the district requires provisions like being named as additional insured or waivers of subrogation, proof in the form of copies of the endorsements to the contractor's policies should be required. Your contract form should require the contractor to provide a complete copy of their insurance policies if requested.
- The Fund's underwriter, risk management consultant and attorneys will be happy to review contracts, insurance requirements and safety provisions in your contracts. Please send them before they are signed. The Fund wants to help protect the district by helping you avoid assuming risk that belongs to the vendors, contractors or service providers that work for you.