



# Streamlining Safety

*Data analytics, AI and other tech tools help speed return to work, improve outcomes and contain costs*

— Written By Bruce Shutan

**N**ew technologies are streamlining self-insured workers' compensation claims as never before. Consider the enormous impact of data analytics, as well as artificial intelligence, the AI subset known as machine learning and its own subset of deep learning, on speeding return to work, improving outcomes, spotting billing errors and containing costs.

Other valuable tools include audio and image analysis, which can help prevent mounting frustration among claimants or elevate surveillance techniques to detect fraudulent activities.

In the Information Age, a typical adjuster desk might be juggling 100 to 200 claims or more, which can be tedious and labor-intensive, explains Charles Richards, director of analytics at CorVel Corporation, who presented on the topic of work comp data and tech applications at SIIA's virtual national conference last fall. Simply adding a single data point means reworking an entire spreadsheet.

"What new technologies allow us to do is not only capture more than what a person might be able to evaluate at any given time, but actually have the power to process it all," he says.

**OUNCE OF PREVENTION**

Included in that assessment is an ability to spot small patterns in large amounts of data and consider more factors, as well as pursue quicker and better actions that improve health outcomes.

Whereas Richards says the trend used to be insight with no action, followed by predictive analytics. Then a realization took hold that prevention is the answer rather than focusing time and energy on the back end of a claim.

But assessing volumes of information will trigger varying reactions. For example, he notes that while a TPA identifies unnecessary treatments, drugs or medical bills when managing the return-to-work process, a self-insured employer might be more concerned about safety by gleaning insight from claims data into why accidents happened.

Richards says some of that info might involve HR data on work shifts, truck loading schedules or company events that aren't fed to a TPA but the employer can leverage for understanding how to prevent claims.

Whatever role it plays, what's clear is that the pandemic advanced the use of AI at a time when virtual visits became the default option for most medical care across both the work comp and group health landscapes.



Greg Famous

“AI involved in the insurance industry will really move things along,” observes Greg Famous, president of AVI Risk Services. “If you can get a claim to close quicker using it, all the better. Claims costs go down.”

While the food processing and trucking groups he manages experienced a hesitancy and slow down with work comp claimants going to doctor appointments, etc., in order to prevent Covid-19 exposure, there were revelations about other technology advances that would save both time and money. For example, he marvels at how blood pressure and heart rate monitoring can be done during telehealth visits.

“I’d rather go to a doctor’s office. That’s just what I’m used to,” Famous muses.

“But a younger generation, they’re not going to want to do that. Who would want to go to a doctor’s office during Covid? The doctors didn’t even want you.”

Doctors who quickly funnel data to claims adjusters not only reduce paper flow, but also free up time for more personal touches with their patients, according to Famous. “That live adjuster now has access to information they otherwise wouldn’t have with that claimant because of artificial intelligence if it’s done properly,” he explains. His larger point is “how you’re extracting that data to operate the best that you can, at the most optimal speed, without the necessity for robots.”

He believes it’s likely that more insurance carriers and brokerages will significantly step up their use of AI to enhance their business, as well as adjusters whose work comp caseloads will become much more manageable with better retention.

**POWER OF PRECISION**

There are numerous real-world examples of how the use of data and technology are shaping, and even revolutionizing, the way work comp claims are managed. Richards recalls how a county school district client had hypothesized that slip, trip and falls were the greatest source of both claim frequency and severity.



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Charles Richards

disproportionate relative to the rest of the district. And there was more to the story.

“These were altercations,” he reports, not accidents, “which, of course, in a school setting is terrible. And so, from a safety perspective, there’s not a lot a TPA could do about it. They’re handling the claims when it, in fact, does become a claim. But from the school district’s perspective, they can redirect staff to these locations. . . It’s an immediate intervention opportunity.”

But after using a highly specific pattern-mining algorithm with embedded logic to crunch the numbers, he says CorVel found that “it actually ended up being other person and bodily motion.” An ability to pinpoint location identified three schools with reduced campus staff where the number of incidents were

Another interesting example Richards cites also involved a disproportionate number of reported work comp incidents – this time at a handful of shoe store locations. An algorithm and business-intelligence tools that mined large amounts of data revealed a disturbing pattern. While severity wasn’t a concern, the issue was frequency of accidents involving a new type of stool that was being piloted. “They quickly got rid of those stools,” he says.

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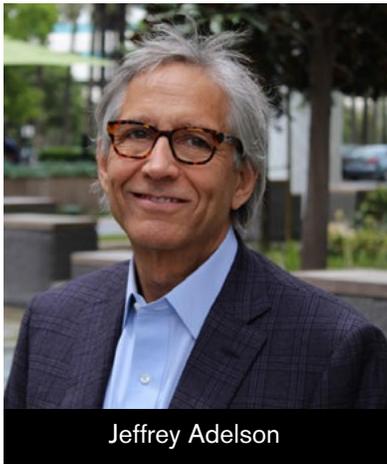
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### BALANCING TECHNOLOGY WITH HUMANITY

If the root causes of workplace mishaps aren't properly addressed or employer responses to injuries are generally lackluster, then litigation may be unavoidable. And while deploying data and tech tools can speed return to work, there also are caveats to consider along the way to achieving better outcomes.

Given the myriad work comp injuries, as well as underlying conditions that can shape the healing process or treatment outcome, the use of technology must be tempered with human interaction, emotional intelligence and empathy, cautions an attorney specializing in workers' comp trends.



Jeffrey Adelson

“I’ve read about programs that completely automate the process where the injured worker is not talking to anybody at all,” says Jeff

Adelson, co-managing partner and general counsel for Adelson McLean.

He’s doubtful AI can do much, if anything, to

“create a feeling of security and empathy” in the mind of claimants, noting “the more distant they feel from the process, the more frightened and insecure they become, which is likely going to send them running to an attorney.”

Fear also is naturally associated with bone-breaking injuries, amputation or severe pain that prevent someone from working, which he says will trigger financial anxiety as well. Adelson says enabling injured workers to call a number where they receive a friendly and helpful response will go a long way toward calming nerves and preventing litigation.

While using AI to streamline work comp claims is fine, Adelson suggests that it be geared toward helping injured workers heal and return to work, as well as achieve the best possible results. For example, it could help flag various pre-existing conditions or comorbidities such as diabetes, substance abuse or obesity and uncover any impediments to treating the injured party.

“Sometimes, it might be right on, but it’s not going to necessarily take into account someone failing to make an appointment or wanting to change their doctor,” according

to Adelson.

Technology and data have their place in managing work comp claims, particularly when it comes to offering guideposts and directions, but he notes that some level of expertise and experience dealing within the system also is necessary.

The upshot will be a good collaborative process involving the injured worker, his or her lawyer, doctor, medical manager, adjuster and any others – a head count that number nearly a dozen in some cases.

In short, Adelson suggests AI can keep claims handlers and attorneys on track, help them ask necessary questions and provide guidelines to swiftly move through the system of claims management in a more thorough and timely manner without sacrificing the human element.

### EMOTION IN MOTION

The mind-body connection is undeniable, and it will invariably play out in a work comp setting where pain and frustration go hand in glove with workplace injuries. Audio and image analysis help uncover the psychosocial aspects of claims, according to Richards. He notes that using audio algorithms on the front end



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to examine call-center recordings helps identify how injured workers feel and, as a result, can manage claims more effectively. It may be as simple as small fluctuations, pitches or speech patterns in someone's voice that are subtle and not easily detected, but the pattern is picked up.

“If we identify a poor demeanor or some psychosocial flags, we can have that adjuster contact them more frequently and be very friendly so they know that they're not just a number in the system,” he observes.

There's even call-center software featuring a proprietary algorithm that scores truthfulness, agitation and defensiveness, Richards reports. It may be possible to determine from a transcript of the conversation whether the caller is exaggerating or lying about stubbing a toe. At the heart of any such discovery is uncovering a speech pattern that's consistent with someone who's lying based off of a huge data sample.

Real-time alerts might help a representative on the phone intervene and that conversation could be used for coaching purposes in order to be more effective. “If they know there's something wrong or they're agitated, they can change their tone or use a different prompt,” he adds.

Images also can be taken from social media posts to help detect fraud. For example, AI tools can scrape and analyze images to uncover whether someone with a back injury is up on a ladder hanging Christmas lights or playing basketball. So-called crawlers harvest all the data from image algorithms, Richards explains. “Doing this, you can gather a lot more of that data than you can with just one or two people, or even 50 people,” he says.

In addition, harnessing data analytics and AI can reduce the supply for opioids, as well as the prospect of addiction and recovery times. “I would almost say, to a large degree, it's more about reducing or eliminating the demand” by basing the need for these prescriptions on medical necessity, he notes. A small fracture, for instance typically doesn't require opioids because it's not severe enough, whereas it may be reasonable to prescribe a set of opioids following surgery.

“But they need to be monitored,” Richards hastens to add. “If we're not seeing this stuff in real time and we don't have something that can flag it, one or both might get through. We actually have a combination of the technology, plus a team of experts in the system working with our adjusters.”

Combining data and technology also holds tremendous promise in terms of uncovering medical billing errors. When reviewing 1.5 billion medical bills for one particular payer over the course of a year, CorVel found instances where certain procedures should have been covered under work comp, and the payer should not have paid and is entitled to recover those funds.

What's ideal, Richards explains, is to harness the power of tech tools for prepayment scenarios so that dollars aren't wasted. Having a unified system in place would eliminate any confusion over the origin of claims or eliminate scenarios whereby a TPA may not have health data and a payer may not have comp data. ■

Bruce Shutan is a Portland, Oregon-based freelance writer who has closely covered the employee benefits industry for more than 30 years.