Omnitracs Analytics Accident Severity Model

Omnitracs Analytics Accident Severity Model provides a proactive and targeted approach to risk avoidance for fleets of all sizes, without the need to touch the truck and install expensive technology.

Aside from the human toll, severe accidents create substantial and often unbudgeted costs stemming from repairs, insurance, third-party damages, litigation and punitive damages, loss of vehicle productivity, damage to customer freight and service levels, and even administrative burdens to manage the lengthy claims process. For example, Omniktracs data indicates that 88% of the cost of claims stems from just 22% of the accidents, and those severe accidents have an average cost nine times higher than the all-client, all-accident average cost of accidents.

The biggest challenge with trying to manage severe accidents is they are typically infrequent and appear to be random. However, contrary to popular belief, many are not random at all, but a natural culmination of a series of subtle indicators that can be detected and addressed well in advance of an accident.

The Science of Identifying Risk

The Omniktracs Analytics Accident Severity Model (ASM) was designed for any fleet using electronic Hours-of-Service (HOS) management applications, so that fleets of all sizes could utilize the benefits of predictive modeling — in this case, to prevent severe accidents. The ASM identifies the highest risk drivers who are most likely to be involved in a serious accident, thereby enabling proactive intervention to prevent accidents, reduce related expenses, improve productivity, and enhance overall safety. The predictive model works to detect subtle changes in driver physiology, and provide key insights into which drivers are most likely to have a severe accident in the near future.

With proven results, based on a ten-year study of nearly 208,000 crashes, the Accident Severity Model accurately predicted 90 percent of severe accidents in the 50 percent of drivers deemed to be at highest risk. This proves that the ASM will help fleets avoid injury, reputation damage, and the long-term impact of higher insurance deductibles and premiums — along with any other financial burdens stemming from severe accidents themselves.

The Accident Severity Model allows fleets to:

- **Reduce** costs associated with severe accidents
- **Improve** driver safety with remediation techniques
- **Increase** driver awareness to unsafe behaviors
- **Provide** a cost-effective accident prevention solution for fleets large and small
- **Improve** fleet efficiency with less downtime due to accidents
- **Play a part in** saving lives through accident prevention

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Anticipated ROI based on average loss of control accidents prevented each month.

Even with the multitude of improvements engineered into fleet safety over the years, severe accidents still occur. To combat this, Omnitracs Analytics designed the Accident Severity Model to support fleets of all sizes. Custom-made models, requiring expertise and extensive data collection, are not necessary — the only requirement is access to electronic driver logs. With only the Hours of Service data feed, from any service provider, we predict those drivers most at-risk of a high-severity, high-cost, loss-of-control accident — allowing for timely intervention and application of avoidance strategies.

Becoming Proactive Instead of Reactive

Current safety technologies utilize audits, perception surveys, and behavior-based scorecard methods that provide fleets with insight into where risk is coming from. However, these tools do not take into account severity or update hourly or even daily, which makes their effectiveness unreliable and inefficient. Also, these methods simply measure symptoms and outcomes, which prevents the fleets that use them from finding the true root cause issues. When fleets fail to realize the root cause of driver issues, they are unable to fix the true physiological problem and only remediate behavioral issues. Furthermore, these methods require large amounts of data — along with the ability to organize and understand the data — which is why Omnitracs created an easier way for fleets to identify the most at-risk drivers.

Omnitracs’ Accident Severity Model relies on objective HOS data to measure true performance, rather than relying on drivers’ perception of their condition and alertness (as drivers, like all humans, overestimated sleep and underestimated fatigue levels). The model features two-way technology that pulls data from the Hours of Service application and returns tailored safety messages to The Driving Center dashboard. The model predicts drivers likely to have an incident based on loss of control of the vehicle at the point of impact, in which the brain completely disconnects from the driving task. The majority of severe accidents come from loss of control accidents when drivers make no attempt to minimize damage at the point of impact. This usually occurs when a driver has been exposed to disrupted or truncated sleep patterns, sleep during the day (when he or she is not used to it), overall sleep deprivation, or cumulative fatigue from weeks of driving heavy vehicles. To help provide drivers with a better safety net, Omnitracs created a way to intervene with the most at-risk drivers to prevent loss of control accidents by improving sleep quality and quantity, introducing creative schedule and driving techniques all underpinned by a world-class sleep science education program.
Understanding and Addressing Driver Fatigue

Timely intervention with at-risk drivers can be the difference between saving lives and losing them, which is why Omnitracs trains management on intervention techniques that will allow managers to speak with drivers when the data shows elevated levels of risks. Some of the interventions could include:

- Strategic timing of naps and/or rest breaks
- Strategic timing of sleep and sleep duration
- Shifting load appointment times to accommodate more sleep
- Driving techniques that promote alertness and vigilance

Drivers’ understanding of the need for these breaks, based on the sleep science education program, makes a huge difference in their productivity and safety. After all, well rested drivers do complete more miles safely. This is why Omnitracs created an intervention program that focuses primarily on sleep quality and quantity, and strategies to remain alert behind the wheel. This includes sleep science education for front-line managers, drivers, and spouses; schedule optimization to identify opportunities to reduce fatigue-risk; and driving techniques based on millions of miles of experience. With the integration of two-hour sleep science education class, drivers learn to be better rested and better prepared to drive more miles safely.

The value of the sleep program is truly amazing when you take a look at the results and their effect on fleets:

Truck drivers who don’t attend a sleep class:

- Incur an average accident cost 7.2 times higher
- Have twice as many loss of control accidents
- Experience five times as many “run-off-road” accidents

While drivers who attend sleep class:

- Are 30% less likely to voluntarily terminate employment
- 6.75 times less likely to have a service failure

These statistics prove that with the proper intervention, fleets can increase safety while lowering operating costs through the reduction of severe accidents — and the significant expenses attached to them. This in turn leads to drivers who experience a more safe and consistent environment, creating less turnover as a result of a better work environment.

With the Accident Severity Model in place, fleets of all sizes will benefit from sophisticated algorithms and technology usually reserved for only the largest of fleets to improve safety outcomes and reduce operating costs. Any fleet generating hours of service electronic data can implement this solution to prevent those infrequent but high-value claims, which can significantly damage the bottom line. If your fleet wants to reduce the cost of infrequent accidents as opposed to just frequency, then this model puts your highest-risk drivers right on your radar. The Accident Severity Model will allow your fleet to gain a demonstrable ROI and, most importantly, save lives.

For more information about Omnitracs Accident Severity Model, please visit:

www.omnitracs.com/products/accident-severity-model
Why Omnitracs

Whether you need a standard, out-of-the-box integration or a customized solution that fits your specific requirements, Omnitracs offers multiple options that help you get the most out of our award winning applications. Contact your account representative, or visit www.omnitracs.com, to learn how Omnitracs Analytics can help your fleet reduce costs, increase profitability, and stay competitive.

About Omnitracs, LLC

Omnitracs, LLC is a global pioneer of fleet management, routing and predictive analytics solutions for private and for-hire fleets. Omnitracs’ nearly 1,000 employees deliver software-as-a-service-based solutions to help more than 50,000 private and for-hire fleet customers manage nearly 1,500,000 mobile assets in more than 70 countries. The company pioneered the use of commercial vehicle telematics over 25 years ago and serves today as a powerhouse of innovative, intuitive technologies. Omnitracs transforms the transportation industry through technology and insight, featuring best-in-class solutions for compliance, safety and security, productivity, telematics and tracking, transportation management (TMS), planning and delivery, data and analytics, and professional services.

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