InSight
Mobile Data | Real-time visibility into the
mobile work environment

Seamless from Dispatch to Billing:
The Connected EMS Organization

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1. Why Integration Is Essential in EMS

Why is accurate and seamless sharing of information in real-time so essential in EMS and non-emergency medical transportation? Because every moment is critical when the lives of patients or other passengers are hanging in the balance.

Technologies such as automatic vehicle location (AVL) and computer-aided dispatch (CAD) already play an invaluable role in emergency response operations and overall fleet management. However, dispatchers must often toggle between disconnected systems, manually record data, and rely on outdated tools like two-way radio to relay critical navigation information to EMS crews.

This reliance on manual activity to bridge the gaps between disparate systems wastes critical moments during dispatch and often fails to leave a complete and auditable record of events–hindering response times, effective billing, and overall operations.

Integrating AVL and CAD systems with driver behavior monitoring and safety tools, maintenance and back-office functions can dramatically improve the efficiency of the entire EMS organization–creating a seamless process from dispatch to billing.

2. Seamless Emergency Response

Rapid communication is critical during any medical situation–especially an emergency. When a 911 call comes in, information needs to move swiftly and smoothly from dispatch to the closest available crew. The ability to share real-time location and status data between dispatch, crews in the field, supervisors, and back-office functions is a major advantage for an EMS operation.

Incorporate Real-Time Ambulance Location and Status Information into Dispatch Decisions

The dispatcher should be able to check the location and status of all nearby ambulances at a glance. Vehicle tracking alone doesn't provide all of the critical information that a dispatcher needs to determine which unit is best positioned to respond to an emergency.

Incorporating crew location and status data into the CAD system ensures that no time is wasted tracking down the best available unit.

Digitally Share Navigation and Patient Information

Once the dispatcher has identified the closest available ambulance, they should be able to instantly send navigation information directly to the driver. With a Wi-Fi unit in the vehicle, an EMS crew can also automatically transmit critical health data–ensuring total coordination of care from the moment the call is received until the patient is released or checked into a hospital.

Capture Accurate Details of Each EMS or Non-Emergency Trip

EMS companies shouldn't be left scrambling to reconstruct trips after the fact. Relevant data should be automatically captured and recorded in back-end systems for billing and other data associated with each trip. This streamlines the process, saves payroll hours, and minimizes the potential for costly errors.

Accurate documentation of EMS operations also helps protect the crew and company from potential liabilities by enabling them to prove they responded to the emergency as effectively as possible.

3. Accuracy and Efficiency in Billing, Maintenance, and Back-Office Functions

The ability to capture real-time location and navigation data and feed it directly into billing and other back-end systems is valuable to a private ambulance company for several reasons. First of all, having precise information about billable mileage ensures that the organization will be properly reimbursed for each trip–and minimize overhead costs related to preparing invoices.

Integration with the company's maintenance function is another critical benefit. With scheduled maintenance alerts and real-time monitoring of driver behavior and vehicle conditions, an EMS company can substantially reduce its maintenance expenses–and the impact of unplanned downtime on operations.

Achieving this level of efficiency throughout a company's back office ensures that daily operations run as smoothly as possible–helping to save time, money, and potentially lives.

4. Sophisticated Driver Behavior Monitoring and Safety Tools

Driver behavior has a substantial impact on EMS companies' operating costs, potential liabilities, and overall financial performance–as well as the safety of patients, passengers, and crews.

Emergency response vehicles are 13 times more likely to be involved in an accident than other vehicles–and an estimated 40% of accidents involving fleet vehicles are preventable. EMS companies can realize considerable savings by reducing the frequency of accidents, because the average crash costs an employer more than $16,000 in vehicle repairs alone – to say nothing of the substantial costs of injuries, insurance, legal expenses, reputation damage and lost productivity.

With an integrated driver behavior monitoring platform, EMS companies can mitigate these costs and make safety a priority for every driver every day. Three core components contribute to an effective driver safety program.

Granular Driver Behavior Data–With Analytics to Track Trends

Management needs visibility into key performance indicators for their entire organization, and safety is a critical element of performance for ambulance drivers. To understand driver behavior patterns and risks, it is essential to track individual drivers, rather than only vehicles. Enabling drivers to login to their vehicle using a key fob is an easy and efficient way to implement a driver ID system.

Integrated driver behavior monitoring tools enable EMS supervisors to set up a customized dashboard and monitor KPIs for driver behavior in real time. Managers can also easily review historical activity and analyze individual and fleet-wide trends so they can drill down into the data and identify at-risk drivers.

In addition to capturing granular data, it is important to set relevant thresholds for safety–for example, monitoring a vehicle's

speed compared to the posted limit on the road. The tools need to be configurable to accommodate driving in a private ambulance environment–as opposed to standard vehicles used for other purposes. For example, it should be clear whether the vehicle is currently responding to an emergency, which could explain rapid acceleration or hard turns.

Combined with tools for providing real-time feedback and coaching to drivers, this level of visibility helps EMS companies truly understand and manage their risks.

Real-Time Alerts and Driver Feedback

With an integrated platform, supervisors can receive real-time alerts via text or email when drivers engage in unsafe actions such as speeding, rapid acceleration, hard braking, or fast cornering. At the same time, drivers are notified that they've violated company policies by an in-cab buzzer. This immediate feedback is a critical tool for improving driver behavior and eliminating unsafe habits.

The system is based on the principles of Applied Behavioral Analysis. When the driver hears the buzzer, it not only alerts the driver that a violation has been noted, but also serves as an aversive stimulus. Applied systematically, this stimulus makes drivers less likely to repeat their unsafe behavior.

Coaching and Gamification

Providing immediate feedback to drivers is important, but so is following up with coaching and reinforcement to promote safe driving habits. Supervisors should be able to configure benchmarks based on fleet-wide performance metrics and develop individual driver scorecards that can be used in performance reviews or to address any immediate concerns.

With granular driver behavior data, companies can implement incentive programs or set up a driver safety scoreboard to stoke friendly competition. Drivers will be that much more likely to think about safety if they're trying to get to the top of the leaderboard and win a free lunch, gift cards, or coffee for the week. Some companies even give more substantive incentives in the form of quarterly bonuses or other incentives for safe driving.

5. Case Study: OnTime Ambulance

OnTime Ambulance, Inc. offers non-emergency and 911 medical transportation throughout the NY/NJ/CT tri-state area. The company's operations include:

- 250 employees, including 180 field staff
- 135 vehicles, including ambulances, wheelchair vans, and more

OnTime partnered with InSight Mobile Data to implement an integrated solution connecting AVL and a powerful set of driver behavior monitoring tools with back-office applications, including CAD, billing, HR, and maintenance.

OnTime Director of Finance and High-Performance Initiatives Brian Rowe cited four critical advantages of partnering with InSight:

- API data exchange partnerships between InSight's StreetEagle platform and high-performance back office applications (CAD, MDT, billing, maintenance)

- The powerful set of driver behavior monitoring tools built into the StreetEagle platform

- InSight's willingness to solicit input from OnTime and use that feedback to make StreetEagle more effective for EMS operations

- InSight's program to replace (without charge) any GPS hardware that becomes obsolete due to changes in the wireless communications infrastructure

Armed with the StreetEagle platform, OnTime was able to:

- Decrease workers' comp and overall insurance costs

- Reduce accident-related vehicle repairs and lost work hours

- Improve the fleet's overall driving record and operational efficiency

"Nothing hurts our operation more, financially and otherwise, than accidents. InSight has helped us make driver safety improvement not just possible, but part of our company culture."

OnTime Director of Finance and High-Performance Initiatives Brian Rowe

StreetEagle: A Flexible All-in-One Solution for the EMS Industry

All forms of healthcare-related transportation operations require unique capabilities. That's why InSight is committed to working with partners like OnTime to develop flexible solutions for the EMS industry. The StreetEagle platform integrates with all of the major CAD systems used by private ambulance companies, as well as common applications for HR, billing, maintenance, and other back-office functions.

On top of industry-leading driver behavior monitoring tools and comprehensive back-end integration, StreetEagle offers a wide range of additional capabilities that help private ambulance companies maximize performance and accountability in the field. Contact InSight Mobile Data to learn more about how EMS organizations are gaining an edge with the StreetEagle platform.