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Organization Name: American Ambulance

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Business Address: 4436 N Van Ness, Fresno, CA

Website: www.americanambulance.com

Number of Annual Service Requests: 150,000

Number of Ambulances: 100

Business Type(s): Privately-Held Corporation

Entry Categories: Innovation in EMS

Situational Analysis: The system began with a mission to improve response time performance, increase employee meal and rest break opportunities, and assure ambulance crews end their shift on time. The diverse service area requires a mixture of home-posted rural, wilderness, and suburban units, along with a dynamically posted, two-tiered system of 12-hour ALS and BLS metro units. With a metro response requirement of 9 minutes for high priority calls, the EMS system operates by geographically deploying available ambulances throughout the city, using backup from rural and wilderness areas, along with backfilling those rural areas when their resources are depleted. A dispatcher can generally move available units according to a posting plan and achieve a fair amount of efficiency and consistency. However, each time we move an ambulance, we are causing fatigue to two people, sometimes interrupting meals or bouncing them around the city for hours. Field personnel already felt inconsistencies from dispatch and were concerned by potential dispatcher favoritism, dislike, or other issues, which created further fatigue and discontent. What were already complex posting rules, we have now overlayed the complexity of seeking consistent downtime for ambulance crews.

Project Goals: To increase geographic coverage, improve consistency, increase personnel downtime, increase the chance an ambulance crew ends their shift on time, reduce concerns of dispatch favoritism or dislike.

Planning & Implementation: American Ambulance's software development team spent over a year developing an automated ambulance deployment management system, called PerfectPosting. This system handles nearly all geographic deployment of more than 100 ambulances serving most of Fresno County and all of Kings County.

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Each day, PerfectPosting makes roughly 2,000 deployment decisions for the 100+ vehicles online. It uses an interface with GoogleMaps API to generate real-time travel estimates in each scenario and delays associated with recent crew downtime, in-motion vs. at post units, and hundreds of other rules in our decision trees. It makes these decisions fairly and consistently, based on a rigorously documented set of rules. When possible, it automatically places units out of service to finish their shift on time, thereby practically eliminating shift holdovers.

Key among the benefits is an accurate account of downtime for each crew during their shift. When the activity data shows that a crew was unable to have a required 30 minute meal period, the system automatically generates a one-hour payment for payroll.
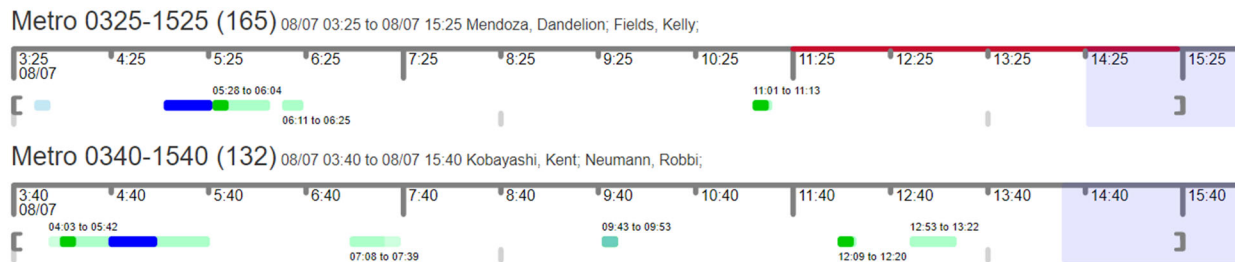
(Graphic representation of shift analysis)

Underneath PerfectPosting are numerous configurations which allow for things like automatically setting an ambulance status to At-post or At-Destination, based on geofenced borders and communicating that information directly to the dispatch CAD.

Post Name   Post 11   Show Detail   Navigate to area edit

Map   Satellite

Enter the number of miles around the location to create a rectanglar region. Click, "Draw Boundary" to preview the change.

North	0.06	Set All
South	0.03	
East	0.02	
West	0.07	

Draw Boundary   Save

PerfectPosting interfaces with American Ambulance's LynxMobile in-vehicle mapping and communications system to notify crews of post changes and manages the deployment activity with almost no radio traffic.

Of course, all American Ambulance dispatchers must spend an hour each week practicing with the system offline to maintain their capability in the case of unexpected downtime. Dispatchers are now able to spend more time checking routes of travel and managing active incidents.

This system has made a significant impact on our ability to protect our employees from excessive fatigue, to apply consistent rules every minute of every day and increase our ability to comply with the ever changing California labor laws.