

Taking the Load Off

MANY FIRE DEPARTMENTS THAT have traditionally used 24-hour shifts to staff response units have begun looking to alternative staffing models, recognizing that call volume does not remain constant throughout the day. Long shifts can be especially grueling for providers on ambulances because of an increasing demand for medical services in many communities over the past several decades. The increased demand has also made it difficult to meet response time goals or even respond to some calls. Hoping to find more efficient ways to decrease the wear and tear on providers and ambulances, as well as to avoid mutual-aid assistance, some fire departments have turned to peak load units as the answer.

What Are Peak Load Units?

Overloaded emergency medical services (EMS) systems are a familiar problem for many communities across the country. An excess of calls leads to rising response times and potentially weaker clinical performance. Over time, personnel also frequently experience exhaustion and burnout as they face more work each shift.¹

The obvious solution is to deploy more units in the busiest areas, but many communities cannot afford the cost of adding an additional full-time ambulance to the system. This is where peak load units can help. Peak load ambulances are staffed and deployed during a department's busiest hours, typically from about 7 a.m. or 8 a.m. until the late afternoon or early evening. They can either be stationed at existing quarters or posted on a corner, but either way their purpose is to take as much pressure as possible off the full-time crews and ensure adequate transport unit coverage and response times.

How Do They Work?

By analyzing basic response data, an organization can determine when and where it is struggling to provide reliable service. With this information, decisions can be made: what hours will the peak load unit be in service? Will it be assigned to one

station or moved throughout the day? Dispatch algorithms can also be adjusted to include or even favor the new peak load ambulance—ensuring that it is dispatched first, when possible, to take as much stress as possible away from the 24-hour units.

To staff these units, departments have several options. Some agencies have chosen to offer the peak load shifts as overtime for firefighters on their days off. Others have assigned newer paramedics

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to these trucks so they gain more experience early in their career—sometimes they become full-time field training units. In other cases, departments might find members volunteering for the peak load schedule so they can be home with their families every night.

How St. Petersburg Did It

In St. Petersburg, Florida, peak load units have proven to be a solution for some of the challenges faced by St. Petersburg Fire Rescue, said agency officials. St. Petersburg has seen tremendous population growth in recent years, leading to increased call volumes.

The St. Petersburg team looked at the data and saw that they had five geographical emergency zones that were routinely overstressed and that this happened mostly between the hours of 8 a.m. and 8 p.m., seven days a week. Looking at the data, it simply didn't make sense to add five more 24-hour units, which would be busy all day but not needed at night.

Not only would it have been a logistical mistake to add a 24-hour unit, but it also would have been financially irresponsible, department officials said. Initially,

funding was available for one additional full-time ambulance. But the data showed that the unit was needed only 50 percent of the time. Adding two peak load crews rather than one 24/7 crew meant getting twice the help for the same cost.

Adjusting the dispatch assignments was also critical to taking full advantage of the peak load units and building support among department personnel.

"To get the full benefit, you have to prioritize them in the call assignment process," said department officials. In St. Petersburg, the two 12-hour ambulance crews spend much of their time out in the field, moving between all five overburdened response zones. For example, a medical call comes in at an office building downtown that Rescue 2, a 24-hour unit, would normally be assigned. In the computer-aided dispatch, during peak load hours, Rescue 2 is listed as a "replaceable unit," meaning the computer automatically looks for the location of the nearest peak time unit before dispatching Rescue 2.

This is just one way of integrating peak load ambulances into an established system. So far, St. Petersburg officials report that they have successfully reduced call loads on the 24-hour units. St. Petersburg has reduced its busiest unit workloads back to 2011 levels, when the population was 6.4 percent smaller.² And they're seeing these results after only a partial deployment of the peak load units.

Potential Problems

Although the results have been positive so far, there are challenges associated with any significant change to a fire department's response model. Introducing a peak time schedule means deviating from tradition. Even though the logistics of the shift are not difficult, a break from the norm can often find pushback from personnel.

Some members of the department were apprehensive about the addition of a new schedule, said St. Petersburg leadership, but after its adoption, they were able to see its benefits to both call load reduction and employee welfare. It took time for

everyone to accept this new way of doing business, but the overall reaction has been positive, they added.

Another potential problem that can arise is one that the peak load units are intended to solve: Although the introduction of a peak load truck will reduce stress and fatigue on the busiest paramedics or emergency medical technicians in the system, fatigue and eventual burnout can become problems for the personnel staffing the peak time ambulances. A busy 24-hour unit might run 18 calls in a shift. If a peak load unit takes 12 of those calls in 12 hours, they run the risk of overloading the providers. It is critical that departments continue to monitor the data and closely watch their personnel to ensure peak load units are not taking on too much of the burden. Possible solutions include ensuring the 24-hour units are still taking on their share of calls or rotating providers frequently between the different units or schedules.

A New Reality

Peak load units are a relatively recent answer in the fire service to the question of how best to serve a community while being mindful of the budget. Many nonfire-based EMS systems across the country have used “dynamic deployment” for decades, upstaffing during the busiest hours to maximize efficiency. Their use in the fire service reflects the realities of decreasing budgets, increasing fiscal responsibility, and acceptance of the reality that responding to medical calls requires a different approach than a system originally designed for fires, traffic crashes, and significant rescues. ■

REFERENCES

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