



THE IMPACT OF FATIGUE ON THE PUBLIC SAFETY WORKFORCE

With the right practices and automated scheduling solution,
leaders can promote safer environments for responders and citizens.



THE FATIGUE PROBLEM

The tendency for those who work in public safety to sacrifice sleep and rest as part of a sense of duty is inherent in the culture and belief system. Answering the call to potentially save a life, catch a criminal, or stand watch musters up extraordinary physiological and psychological efforts. Often seen as a badge of honor, these efforts take a toll on responder health and safety, and place citizens at risk.

To provide the highest quality of service while maintaining safe working conditions for responders, public safety leaders must understand the effects of sleep deprivation and fatigue on the workforce. By doing so, leaders can take steps to better manage it through effective policies and scheduling practices that promote responder health and optimal work schedules — ultimately creating a safe environment for both citizens and workers.

EFFECTS OF FATIGUE

Responders such as police and corrections officers, firefighters, and paramedics very easily experience loss of sleep, which affects almost every system in the body. The circadian rhythm, often referred to as the body's internal clock, regulates many physiological processes, telling our bodies when to sleep, rise, and eat. This internal body clock is affected by environmental cues like sunlight and temperature. Circadian rhythm can be disrupted by chronic stress and alterations in sleeping and eating patterns. Research also shows a disrupted circadian rhythm can increase the chance of cardiovascular events, obesity, depression, and bipolar disorder.

Sleep loss and deprivation also result in more frequent errors, decreases in alertness, and poor decision-making. The effect of 18 hours of no sleep is equivalent to having a blood alcohol level of 0.05. The effect of 24 hours of no sleep is equivalent to having a blood alcohol level of 0.10, which is considered legally drunk in most states (Elliot D. & Kuehl K. 2007).

In addition to sleep loss, responders also face tremendous mental fatigue caused by job stress. Over time, and compounded by other stressors, it can turn into burnout. Burnout can lead to higher turnover rates, increased absenteeism, less satisfaction among staff, behavioral issues, and a greater incidence of injury.

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STUDIES REVEAL THE ALARMING RATE OF FATIGUE IN PUBLIC SAFETY

Police

A recent study involving 277 officers showed that a full 69 percent had committed a fatigue-related error while working (Blake & Cumella 2014). And this is hardly the exception. Another study found that fatigue greatly correlated with decreased or impaired decision-making ability and slower reaction time in deadly force situations.



69% of police officers had **committed a fatigue-related error** while working.

A 2012 study of fatigue (Basińska & Wiciak 2012) in police officers found that the effects of fatigue were far-reaching and included:

- Being more prone to accidents and injuries on duty
- Higher risk of injury or death in the line of duty
- Higher incidence of burnout (e.g., early retirement)
- Greater use of sick time
- Increased time-management issues
- Tendency to sleep on duty
- Issues communicating with superiors/coworkers

Fire Service

According to one International Association of Fire Chiefs (IAFC) study, long work hours correlated with increases in stress and injury. The IAFC found that driving while fatigued may increase the risk of crashes following long work hours and may lead to disproportionately higher fireground injury rates in early-morning and night shifts. Firefighters are also more prone to illnesses that may be caused by the lack of sleep associated with longer work hours.

Also, when comparing the cause of death among firefighters between 1994 and 2004, the CDC found that 61 percent of firefighter fatalities were due to heart attack or motor vehicle crash, both of which are correlated with fatigue. A similar study done by the National Fire Protection Association in 2016 found that heart attack was the cause of 51 percent of firefighter deaths, and 12 percent were due to crashes (Fahy & LeBlanc 2016).

Corrections

Corrections schedules often resemble those of law enforcement. In corrections, overtime and high workload in a stressful, contained environment often lead to the same systematic health and wellness issues experienced in other areas of public safety. The National Jail Exchange found that around 20 percent of corrections officers demonstrated high levels of corrections fatigue. They further found that those scoring highly on the corrections fatigue metric accounted for 36 percent of sick days reported (Spinaris & Denhof 2015).

Much of this correlates to long scheduled shifts and affects all shift workers on longer schedules. Compared with eight-hour shifts, a 10-hour shift has a 10 percent higher accident rate, and a 12-hour shift has a 25 percent higher accident rate. A 15-fold increase in crashes was observed after 13 hours of being awake. (Amenodola 2011).



CASE STUDY: LAS VEGAS DETENTION AND ENFORCEMENT

Using Technology to Increase Safety

The Las Vegas Detention and Enforcement Center holds inmates for both the City of Las Vegas and North Las Vegas, booking 60 to 90 inmates each day and managing an inmate population of 700 to 900 inmates daily, most of whom are serving time for misdemeanor offenses. The department employs 182 officers, who are members of the Las Vegas Police Officers Association, and 18 sergeants. The area has a resident population of over 600,000 people, sees more than 41 million visitors a year, and hosts about 22,000 conventions and meetings annually.

Like many public safety agencies across the country, the department, until recently, was still manually scheduling shifts for its officers. Just managing the

paperwork involved required a full eight-hour shift each week. Officers would come to work having already worked the maximum number of hours allowed under the agreed-upon labor rules, creating compliance issues for management and fatigue issues for officers.

To address these issues, the agency switched to Workforce TeleStaff™, an automated scheduling solution by Kronos®. Having the automated solution keep track of hours means less time spent on scheduling, down from a whole day each week to as little as half an hour per week.

More importantly, using the solution means a safer and more compliant work environment. For example, Workforce TeleStaff is able to catch situations where an officer is signed up to work more hours than the rules allow. It also rotates officers automatically, ensuring that they do not work the same post multiple days in a row — helping reduce burnout and officer fatigue.

“If an officer puts in four hours of overtime and then has only four hours off before trying to come back for more overtime, Workforce TeleStaff sees this and won’t hire this person for that time,” says Sergeant Rodolfo Padilla. “This prevents liability issues if the person has an accident. This helps the city and also helps with safety issues.”

SCHEDULING IS A KEY PART OF THE SOLUTION

With the evidence that fatigue and burnout are pervasive problems affecting performance, attendance, health, and safety, leaders must look for ways to alleviate their negative effects when scheduling personnel to work. Proper schedule management, which aims to limit fatigue using best practices and automated scheduling solutions, are key to success.

In terms of practices, setting scheduling standards according to a Move/Limit/Prohibit (MLP) strategy, which not only sets limits, but also offers flexibility on deployment and shift work, is a recommended approach.



MOVE: Move staff from higher- to lower-risk/impact shifts.



LIMIT: Limit the overall number of hours an employee can work without taking the required breaks.



PROHIBIT: Identify fatigued employees and prohibit them from working until rested.

Under MLP, a fatigued or overworked employee who remains on the schedule could be moved to a slower work area or work unit. For example, switch a paramedic from an ambulance to a fire engine or change the patrol district for a police cruiser from self-initiated traffic stops to a slower residential neighborhood. Scheduling efforts should also look to limit workers' time on task. In the case of corrections, rotate posts. Management has the responsibility to limit or prohibit working a fatigued employee. Case law has been established in many states holding employers accountable for collisions or errors committed by overworked or fatigued employees.

However, more often than not, public safety schedules are created manually. Lack of automation makes moving employees into different shifts and assignments time-consuming and error-prone. In fact, simply trying to generate manual schedules, according to the many complex requirements of public safety, is extremely difficult to accomplish.

The implementation of an automated rules-based scheduling solution, such as Workforce TeleStaff, is one way to help mitigate the problem. Workforce TeleStaff creates optimal schedules based on rules by taking into consideration manpower requirements, work preferences, preferred assignments, days off, labor laws, and contractual obligations. When issues arise with staffing, alarms are delivered so staffing managers can take action. Limits can also be automatically set to help minimize employee fatigue and the solution makes it easy to move staff around when necessary — from fast-paced, rigorous rotations and assignments to slower-paced ones. The system will alert managers and/or prohibit employees from taking on too many hours. Employees can also have the opportunity to be more involved in their schedules by signing up for work, requesting time off, and swapping shifts all according to the rules, as well as the ability to indicate their work preferences. Not only does this help with fatigue, but it also promotes better work/life balance and engagement. Workforce TeleStaff also offers command staff detailed time-tracking reports, making it easy to track work hours, the type of work performed, and duration to help keep fatigue at bay.

CONCLUSION

Managing a public safety workforce is a constant balancing act of manpower, minimum staffing requirements, constant staffing, labor agreements, and risk management. 24/7/365 shift work in public safety has always been a challenge and new processes and tools must be utilized to better manage fatigue. As the demands of public safety work increase and evolve, rules-based automated scheduling solutions can help leaders promote responder health and optimal work schedules and create a safe environment for both citizens and workers.



For more information, please visit www.kronos.com/publicsafety.

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