10-Hour Shift Schedules:
A Good Match for Your Group?

By Bruce Oliver • Shiftwork Solutions LLC

A quick glance through recent messages in the APCO Exchange Forum reveals numerous requests for help in finding a 10-hour shift schedule. In most cases, the requester is unaware of the unique properties of 10-hour shifts or the challenges they present. This article will attempt to fill the information void by addressing the major limitations of 10-hour shifts and the best ways to use them in public-safety communications centers.

Many people believe that 10-hour shifts are a good choice because they offer employees more days off and more weekends off. Although 10-hour shifts will help, 12-hour shifts are usually a better choice for this, especially if this is the primary reason for seeking a new schedule. *(See the sidebar on pg. 49 for a comparison of the three different shift lengths.)*

As you can see, 10-hour shift schedules have the potential to provide roughly 50 percent more days and weekends off than do eight-hour shift schedules. The 12-hour shift schedules provide nearly double that amount. Most importantly, 12-hour shifts can do it without any of the four limitations described below.

Limitation 1: 10-Hour Shifts Require More Personnel

When organizations consider changing to 10-hour shifts, they assume they can swap the 10-hour shifts for their existing eight-hour shifts. Unfortunately, when approached in this manner, the 10-hour shift schedules will require 25 percent more personnel.

For example, let's assume there is a minimum coverage requirement of two people on every shift. With an eight-hour shift schedule, this can be done with eight dispatchers, using a 42-hour workweek. As shown below, the weekly hours of coverage divided by the average weekly hours of work indicates the total number of people required. The partial person (0.4 in this case) can be handled with a small amount of overtime built into the schedule.

Two dispatchers times three shifts times eight hours/shift times seven days/week divided by 40 hours/week = 8.4 total employees.

Here is the same calculation with 10-hour shifts:

Two dispatchers times three shifts times 10 hours/shift times seven days/week divided by 40 hours/week = 10.5 total employees.

With the longer shifts, the staffing requirement is larger, because you are scheduling for 30-hour days (three 10-hour shifts).

Family Wellness: Shift Work Affects Everyone

By Nicole E. Kinion

This will come as no surprise to any dispatcher who has been a part of the profession long enough to experience the disruption caused by working in what is anything but a Monday-Friday, nine-to-five job: Engaging in rotational shift work is stressful.

Cues from our environment (i.e., daylight, the dark of night) tell our bodies when we should be awake and when we should be asleep. Depending on the agency and where the individuals fall on the seniority list, dispatchers may have to try to reset their biological clocks every few months. For most people, it takes only a few days for their bodies to adjust to a new routine. For others, the anticipation and accompanying anxiety of trying to fall asleep at an unusual time, then go to work and perform well on less than an ideal amount of sleep, are enough to bring on a bout of insomnia. This type of sleep disruption can cause ongoing fatigue and feelings of general malaise.

What do we say about toddlers who are acting tired and not feeling well? We say they're cranky. It's not such a stretch to say that tired dispatchers get cranky, too, and who else but their family and some lucky co-workers are likely to witness this crankiness and point it out to them?

There's a saying that goes "If momma ain't happy, ain't nobody happy." As most dispatchers do not live solitary lives, it would be safe to extend the saying to "If the shift worker in the family ain't happy, ain't nobody happy."

Although the sleep disruption that accompanies shift work is a major source of stress that dispatchers must cope with, it is certainly not the only source. There also are missed family gatherings, missed social opportunities, the simple fact that you have to work on weekends when "everyone else" has these days off, missed recitals, ball games, meets, plays and everyday activities of the children in your life, the loss of quality time with a significant other, especially when they don't work the same shift that you do… You get the idea.

The disappointments and stress these burdens bring with them aren't limited to the dispatcher. The family is likely to feel these things too. How can we recognize when stress is moving in to our homes? What can we do once it's there? How can we head it off in the future?

Remember, a stressor is any event that causes a change in your normal, everyday routine. This is not to say that the event is good or bad. It's simply different and requires adjustment.

Anytime a dispatcher's shift changes, due to the shift rotation or overtime, the family's routine is upset and everyone has to adjust. During any period of adjustment, the family needs to draw on its resources to get through. Two of the most important resources the family has are good communication skills and flexibility.

One of the best ways to recognize and acknowledge the stress that family members are feeling is to ask them. It is easy for them to slip into the habit of thinking that everyone else knows how they feel. Remind them, and yourself, that (most likely) no one in the family is a mind reader and you all need to be willing to voice your concerns and needs. And everyone needs the opportunity to have his voice heard if the family is to come together and find ways to create a new routine that works for everyone.

Limitation 2: 10-Hour Shifts Require More Facilities and Equipment

When you squeeze three 10-hour shifts into a 24-hour day, you have six hours of overlap (30 hours - 24 hours = six hours). If you have two dispatchers working every shift, you will have double that number for the six-hour overlap period. If you have three consoles and four dispatchers show up, where will you put the extra person? You might be able to come up with some special projects or send someone to training, but remember, you will have this situation every day of the year. At some point, you will probably have to expand the capacity of your facilities and equipment.

Limitation 3: 10-Hour Shift Schedules for Small Groups Require Built-in Overtime

If you have fewer than 21 employees to provide 24/7 coverage, you won't be able to use 10-hour shifts without some overtime built into the schedule. For example, if you need to have at least one person working on every shift, you will need at least five employees.

One dispatcher times three shifts/day times 10 hours/shift times seven days/week divided by 40 = 5.25 total employees.

The partial person (0.25) is best handled by building overtime into the schedule. You could use six people to have some reserve coverage for absences, but you could get by with only five employees. Please note: a 10-hour fixed shift schedule requires six people and provides double coverage one day of the week.

The typical schedule for five people consists of a five-week cycle. Four of the five weeks would have 40 hours of work (four shifts). The fifth week would be 50 hours long (five shifts). This means that each employee will work 210 hours over a five-week period or an average of two hours of overtime every week (210 hours divided by five weeks = 42 hours/week). Remember, this does not include overtime that may be needed to fill in for absences such as vacations, illness, training, and so on.

Limitation 4: 10-Hour Shifts Require Unusual Shift-Start Times

Because 10-hour shifts overlap for six hours every day, you might as well take advantage of the double coverage during this period. If you align the overlapping shifts with the busiest periods of the day, you will match your coverage with the workload better. This should improve response times, eliminate dropped calls and boost the morale of the people who have to work during these busy periods.

However, when you align the overlapping shifts with the peak workload periods, this may result in some unusual start and end times for the shifts. For example, if your busiest work period is from 1500 to 2100, the resulting three shifts are

Day shift	1100 to 2100
Evening shift	1500 to 0100
Night shift	0100 to 1100

An 11 a.m. start time for the day shift may seem unusual to someone who is used to a more traditional start time of 7 or 8 a.m. But it is the only way to match the overlapping shifts with the peak workload. You certainly would not want to double your coverage when the volume of work is low. Nor would you want to have only minimal coverage when the volume of work is highest. That would be an inefficient use of your personnel.

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Tell your family how your shift work affects you and ask what kind of feelings they have about how your schedule affects the family routine. Many times, in an effort to appear supportive, family members (especially children) will avoid voicing their feelings, especially if they think their emotions are too negative. Therefore, it may be necessary to encourage them to be honest. Tell them you really want to know what effects they anticipate your schedule will have on family life. Remind them you can't work to change a situation if you don't know it exists.

Once everyone has had a chance to talk about and acknowledge any stress caused by shift work, it's important to begin to talk about ways the family can cope with the stress. A key word to remember is flexibility. A key component in the family's strength is the ability to adapt to situations that require changes in the division of labor and the day-to-day tasks of family life. Remaining flexible may take some encouragement, as, for the most part, it is human nature to resist change.

Simply talking about the benefits of flexibility and change might help. Remind them that you're much more pleasant when you've had the extra hour of sleep that comes when your partner does the grocery shopping, rather than leaving it for you to worry about. Just make sure you also remind them that you're willing to take on another chore in exchange. Everyone needs to be willing to adapt and compromise.

Remember that the amount of stress family members feel is based on their perceptions of the situation. It's important to lead by example, especially for the children in the family. For example, if you dread going to work and see it as something that is interfering in your life, your family will likely follow your lead in resenting the job and its effect on the family's life. But if you acknowledge that this job lets you pay the mortgage, take vacations and have health insurance, your family is likely to follow your lead and be grateful for what this job affords them. People are less resistant to change when they are aware of the reasons for it and know about the incentives and benefits they can look forward to.

By its nature, dispatching is demanding and, by its nature, shift work creates chaos in family routines. Just as we find ways to cope with the stress of a demanding job, we must learn to cope with the chaos that shift work creates in our lives. The chaos of shift work is a family affair, so the best ways to deal with the stress are to build up and draw on the strengths and resources of the entire family. The strongest families are the ones that talk and work out solutions together.

About the Author

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References

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Making 10-Hour Shifts Work

Despite their limitations, a 10-hour shift schedule can be a great solution for many communication centers because many of them have variable workloads. As indicated above, 10-hour shifts will overlap for six hours every day. If the overlapping shifts are aligned with the busiest work periods, the coverage is increased when it is needed the most.

Few other 24/7 operations have a similar workload pattern. In most manufacturing companies, for example, the same number of workers is needed at all times the plant is operating. Doubling the coverage for six hours every day is unnecessary and would be wasteful. This is why you rarely find 10-hour shifts in these types of businesses.

Many communication and dispatch centers have large increases in their workload one or two days a week. Here is a simple example of a 10-hour schedule with double coverage every Saturday:

	M	T	W	T	F	S	S
Week 1	-	D10	D10	-	-	D10	D10
Week 2	D10	-	-	D10	D10	D10	-

(In all tables, D10 = 10-hour day shift, E10 is evening shift and N10 is night shift.)

Increasing the coverage two days a week (Friday and Saturday) will require some overtime:

	M	T	W	T	F	S	S	
Week 1	-	D10	D10	-	D10	D10	D10	(50 hours)
Week 2	D10	-	-	D10	D10	D10	-	(40 hours)

The most common type of workload variation, however, usually lasts only a few hours each day of the week. If your workload increases for approximately six hours every day, it may be possible to take advantage of the overlapping 10-hour shifts. For example, let's assume your group's workload doubles from 7 p.m. to 1 a.m. every night. If you need at least one dispatcher at all times, but could use two dispatchers during this busy evening period, here is what the schedule might look like:

Employee	Week	M	T	W	T	F	S	S	Hours
A	Week 1	D10	D10	-	-	D10	D10	-	40
B	Week 2	D10	-	-	D10	D10	-	E10	40
C	Week 3	E10	N10		E10	E10	E10	-	50
D	Week 4	E10	E10	-	-	N10	N10	-	40
E	Week 5	N10	-	N10	N10	N10	-	-	40

This schedule consists of five employees working a five-week rotating schedule. When the schedule starts, each employee is assigned a specific week in the cycle. For example, Employee A is assigned to start in week 1 and Employee B is assigned to start in week 2, etc. At the end of each week, the employees rotate down to the next week in the cycle, starting over at week 1 when they end the cycle.

Although only one person is working every shift, the evening with the busiest time period. This means you will have two people at work during your peak workload period and only one person at all other times.

Workload variations are different in each community. The timing or the length of the peak periods may differ. The workload may increase only slightly or it might be substantially larger. Some of the most common patterns and their solutions are discussed below.

Extended Busy Periods

Suppose your busy period lasts longer than six hours every day. One way to address this is to add an overlay shift (sometimes referred to as a power shift) to your existing eight-hour schedule. The length of the overlay shift would match the length of the busy period (e.g., an eight-hour shift for an eight-hour busy period, a 10-hour shift for a 10-hour busy period, and so on). You can allocate part of your staff to work this extra shift exclusively or you can rotate everyone through the shift periodically.

Sometimes you can modify 10-hour shifts to accommodate an extended busy period. For example, suppose your busy period runs from 3 p.m. to midnight and is busiest from 6 p.m. to 9 p.m. This would require two 10-hour shift schedules with different start times:

Day Shift 1	1100 - 2100	Day Shift 2	0400-1400
Evening Shift 1	1500-0100	Evening Shift 2	1400-2400
Night Shift 1	0100-1100	Night Shift 2	1800-0400

The first schedule has double coverage from 1500 to 2100, when the day and evening shifts overlap. The second schedule has double coverage from 1800 to 0000, when the evening and night shifts overlap.

If each schedule has one person working every shift, the coverage would be as follows:

0000 to 1500 2 people (one from each schedule).
1500 to 1800 3 people (one from schedule 2 and two from schedule 1).
1800 to 2100 4 people (two from each schedule).
2100 to 0000 3 people (one from schedule 1 and two from schedule 2).

Multiple Busy Periods

Some organizations have more than one busy period every day. For example, they may have both a morning peak and an evening peak. If the two peaks do not exceed six hours total, 10-hour shifts might work. An example of start times to address a two-hour morning peak and a four-hour evening peak are:

Day shift 1000 to 2000
Evening shift 1600 to 0200
Night shift 0200 to 1200

With these start times, the day shift and night shift overlap from 10 a.m. to noon. The day shift and the evening shift overlap from 4 p.m. to 8 p.m.

If the peaks are spread too far apart, it may not be possible to use 10-hour shifts to cover both peaks. For instance, if the morning peak runs from 8 to 10 a.m. and the evening peak runs from 6 to 10 p.m., you can't get the 10-hour shifts to overlap both peaks unless you create two separate schedules.

Moderately Busy Periods

In some areas, the workloads may increase for six hours every day, but not enough to justify double coverage during that time period. One solution is to create two schedules: one with 10-hour shifts and the other with eight-hour shifts.

The first schedule has double coverage from 1500 to 2100, when the day and evening shifts overlap. The second schedule has single coverage throughout the day.

If each schedule had one person working every shift, the coverage would be as follows:

10-hour Day Shift	1100 - 2100	Eight-hour Day Shift	0700-1500
10-hour Evening Shift	1500-0100	Eight-hour Evening Shift	1500-2300
10-hour Night Shift	0100-1100	Eight-hour Night Shift	2300-0700

0000 to 1500 two people (one from each schedule)
1500 to 2100 three people (one from the eight-hour schedule and two from the 10-hour schedule)
2100 to 0000 two people (one from each schedule)

If your primary goal is to find a schedule that will provide more days/weekends off for your employees, 10-hour shifts are not always the best solution, as 12-hour shifts provide a lot more days and weekends off and are not subject to the limitations of 10-hour shifts.

On the other, if you are looking for a schedule that will make more efficient use of your staff and match your variable workload better at different times of the day, 10-hour shifts may be a perfect solution. The key determinants of whether 10-hour shifts are appropriate are the workload and its distribution, not the desire to get more days off. A 10-hour shift will provide more days and weekends off than do eight-hour shifts, but this is secondary to its ability to match the number of workers with the workload throughout the day.

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Number of scheduled days off per year with different shift lengths:

Eight-hour shifts	91 days off (four crew schedules)
10-hour shifts	146 days off (five crew schedules)
12-hour shifts	182 days off (four crew schedules)

Maximum possible number of full weekends off per year with different shift lengths:

Eight-hour shifts: 13 (four crews, seven consecutive work days)
10-hour shifts: 21 (five crews, three and four days of work in a row)
12-hour shifts: 26 (multiple possibilities)

Notes:

- *All schedules used in comparisons average 42 hours of work per week.*
- *Figures are based on level coverage (the same number of employees working on every shift).*
- *The number of weekends off depends on more than shift length. Other factors are the number of days worked in a row, the pattern of on-off workdays, and the day the pay week begins.*