

**COPING WITH SHIFTWORK:
THE IMPACT ON WOMEN'S HEALTH**

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Traditionally, police work schedules have tended to consider only the operational need for a police presence 24 hours a day and not the needs of the officer other than that of a basic requirement for occasional days off. Society, however, now has different requirements. For example, it expects to be able to shop and socialise at times when previous generations would have been fast asleep. In trying to respond to such demands police organisations around the world continue to experiment, some more successfully than others, with different types of work schedules in an attempt to better match limited police resources to the ever increasing demand for police services.

As research begins to highlight the negative effects of shiftwork on both individual and organisational performance, and legislation imposes health and safety requirements on employers, police managers are coming to realise that the search for operationally more efficient work schedules needs also to encompass consideration of officers health, safety and welfare needs. What many managers still fail to realise, however, is that those needs are not universal, often they are dependant upon individual officers circumstances.

The purpose of this paper is to raise awareness among managers and officers alike of the potentially detrimental effects of shiftwork. Detrimental for the organisation in terms of reduced work capacity, higher absenteeism, increased risks of accidents and staff turnover and poor employee relations. Detrimental for officers in that it can impair performance, particularly one's cognitive ability and alertness. It can reduce one's fertility, and it can damage one's health, relationships and social life. Ultimately it can reduce life expectancy. Police officers will sacrifice a lot for the service; this is one sacrifice they should not have to make.

There is much that can be done to protect oneself against some of the effects of shiftwork but such efforts will be undermined if those responsible for the design, implementation and management of work schedules either don't understand or don't see such matters as important. The second purpose of this paper is, therefore, to put forward the argument that shiftwork needs to be approached in a more holistic way, one that considers the needs of the organisation and the needs of the officer as being of equal importance. Ultimately, it is the needs of the communities we serve that suffers when either one takes too great a precedence over the other. Essentially we need a protocol for the justification, design and management of work schedules in the police service, one that develops good practices and looks beyond the mere provision of a 24/7 police presence.

Lets start with what I consider to be the first law of shiftwork... *'There is no such thing as a good shift system'*. It is generally accepted by those who study them, and those who have to work them, that they are anti-social and detrimental to health, to be avoided if possible - and well managed if not. Work schedules need to be a balance between the needs of the organisation and the needs of the workforce. Unfortunately these are not always compatible. Employees want quality time off for social and domestic commitments. For organisations such as the police this is often the time we most need them at work. So how do we achieve that balance?

There are sound business reasons why it should be important for organisations to get this balance right. Corporate responsibility for breaches of Health & Safety legislation does not preclude individuals, be they directors, middle managers or first line supervisors from being held liable, at least in the United Kingdom and Europe. That includes police managers. Poorly designed or managed work schedules cost money. If they lead to overstaffing, officers can be underemployed, if they lead to understaffing, the quality of service to the public suffers. Often schedules are a combination of understaffing at times of peak demand and overstaffing at times of low demand.

Work schedules can have a huge impact on employee relations and job satisfaction - if people aren't happy one way or another they will show it usually by withdrawing their labour -less effort, absenteeism, eventually they may quit.

Much of what I have to say this afternoon is with reference to patrol officers. This does not mean that other member of police organisations, both police and support staff, are not similarly affected by long and unsociable hours, merely that this group accounts for the lion's share of most police forces resources, both in terms of people and expenditure and, therefore, it offers the greatest potential for making improvements.

A Holistic Approach to Work Scheduling

So how should we go about the process of managing and improving work schedules? Firstly, we should be assessing whether the schedule meets the community's needs and, if not, consider whether we can justify changing it. Secondly, in designing a work schedule there is more to consider than just shift pattern options. Lastly, having designed your work schedule, how is it going to be managed? This isn't rocket science but its surprising how often people fail to consider at least one of these 3 elements. Very often we make the mistake of concentrating on one small part, usually the shift pattern options and usually from the perspective of '*what's in it for me*' depending on which side of the negotiating table we're sitting on. However, if we were to address each of these elements in turn we would stand a much better chance of getting it right for everyone's benefit.

Assessing Need and Justifying Change

How many officers do we need to meet demand within response time targets and to provide an adequate level of service whilst ensuring that there is an equitable distribution of workload? Depending on what style of policing we have adopted, what else might we want patrol officers to do. All of this is essential information when it comes to designing a shift pattern and setting hours of duty.

If you're considering changing your schedule, what are your reasons? Changing a schedule can have a significant impact on people's lives and they need to understand why it's being done. Many people do not like change, particularly when they feel they have no control over the changes that are being made, so its important that people understand the reasons for change and that their interests are being considered.

Designing a Work Schedule – Health Considerations

Some of the physiological and psychological effects of shiftwork are well known, certainly by those people who work shifts and especially if those shifts include night work, even though they may not understand the aetiology. Some of the detrimental effects are only now being recognised and some are still the subject of research that is as yet inconclusive. This is particularly so in the case of women. As more and more women enter fields of work, such as the police, that require shiftworking sufficiently large study populations are becoming available to medical researchers. But in the meantime, perhaps we should be taking steps to avoid becoming a medical statistic.

The human body is not designed to be awake at night – we're diurnal creatures not nocturnal ones. That's because our bodies are controlled by a range of physiological and biochemical processes which have regular cyclical fluctuations over a 24 hour period. These circadian rhythms (circa=about,

dias=day) control body temperature, heart rate, blood pressure, respiration rate, urination, hormone production, etc. On the psychological side mood, alertness and performance all show 24 hour rhythms.

Disruption occurs because shiftwork alters our normal rest and activity requirements and different processes adjust at different rates in response to this. Successive night work will gradually adjust these processes to fit our new rest and activity requirements allowing us to function at night. After about five successive nights the body has begun to make measurable biochemical changes to allow, as far as possible, alertness during the night. Unfortunately for police officers when the tour of night duties finish our bodies have to adjust back again and that takes an awful lot longer - the end result is that our hormonal balances are in a constant state of flux and over time this is detrimental to health.

Physiological effects

The most noticeable and potentially the most dangerous physiological effects of shiftwork include persistent fatigue and reduced alertness. For those who drive or carry firearms such factors are not only a problem but they can also be life threatening ^(1.). Younger officers may say it isn't a problem but as we get older (over 40) we become noticeably less able to cope with shiftwork. Latent medical conditions begin to emerge, gastrointestinal complaints become more common and sleep quality is often reduced. The damage is cumulative over a number of years, much of it will go unnoticed and it's only later that many of the symptoms present themselves, often after peoples working life has ended. You only need to stop working shifts or long, irregular hours for a period of three or four months to notice a significant improvement in your feeling of well-being.

In addition to all these factors, women are faced with some specific hazards. Studies over recent years have identified a number of reproductive problems among women shiftworkers. Perhaps this should not come as a surprise. So many of our reproductive functions are controlled by hormones that the constant disruption of hormonal balances can be expected to have a detrimental effect. The studies published on shiftwork and reproductive health suggest that some forms of non-standard work hours may be associated with elevated reproductive risks ^(2.). Most of the evidence is related to spontaneous abortion, premature birth (among women who continue working after 23 weeks), and lowered birthweight. There is also evidence that it takes shiftworkers longer to become pregnant than their daytime working colleagues. Although the evidence is not ample, none of the studies involved police officers, and the types of shifts being worked varied from study to study, there is general agreement among researchers and reviewers alike that it would be prudent to consider shift work as a potential risk to reproductive health. If you are pregnant or seeking to become pregnant then you need to be considering whether nighttime working is in your or your baby's best interests.

Studies in the United States have linked nighttime working to increased risks of breast cancer ^(3&4). More recently disruption of circadian rhythms has been linked to poor survival rates among patients with breast cancer ^(5.). Expert opinion is still divided but the studies certainly suggest the need for women who work night shifts to be particularly prudent in getting regular mammograms.

Psychological effects

Physiological problems are often compounded by psychological problems. Often it is these problems that come to the fore before the physiological ones. Night work in particular affects concentration, performance and lessens higher cognitive functions. Operating technical equipment, performing calculations, making decisions is all the more difficult at night. It is not surprising that many of the

worlds major disasters which have been put down to human error have occurred at night – Three Mile Island, Chernobyl, Exxon Valdez

Low morale and job satisfaction and higher absenteeism levels are good indicators that people are being adversely affected by shiftwork. Absenteeism in particular is a very good indicator and statistically significant relationships can often be established between absenteeism and certain shift patterns ^(6.). Absenteeism has been a particular problem in UK forces for a number of years, only recently have some begun to consider changes to officers work schedules as a way of managing it.

Shiftwork naturally affects workers domestic and social lifestyles, they are asleep when the rest of the family is up and about; they are often unavailable for family and social events due to clashes with work schedules. As a result, relationships can become strained and children can become distant. It is perhaps not surprising, therefore, that shiftworkers in general and police officers in particular, have a high incidence of relationship breakdowns.

Women officers often face the additional domestic difficulty of balancing childcare responsibilities with their career. The type of work schedules employed or the willingness of police organisations to be flexible can make the difference between an officer being able to maintain a balance between her family, her career and her health or having to sacrifice one of the three. A considerable amount of work is currently being undertaken in the UK by the British Association of Women Police to bring such issues to the fore and the powers that be, at last, seem to be listening.

Organisational effects

The cumulative effect of all this for police organisations is expensive, both in human and financial terms. Whilst police organisations may spend half their budget and devote a significant proportion of their personnel to the resourcing of patrol, few take time to look for deficiencies or improvements in this function.

Absenteeism and staff wastage are a major drain on resources and the patrol function is usually the hardest hit. In particular, the wastage rates among women officers have long been of concern. Last year, one police force in the UK lost 15% of its women officers and medical retirements among women officers in England and Wales are currently 26% higher than those for men ^(7.). Fatigue related accidents jeopardise not only the individual officer but their colleagues, the community and the force's reputation as well.

What can you do about it?

There are a number of sources of help and information on working shifts. Some police organisations publish guidance booklets ^(8.) and run advice sessions for new recruits who may have no experience of shiftwork. Longer service colleagues are not always the best source of advice for new recruits to turn to. Although they will often have developed their own coping strategies, these are not always healthy ones.

Positive benefit will be gained from an active approach to sleep hygiene (your sleeping routine and sleeping environment). Room temperature and the amount of light in the bedroom are important issues. Management of noise and a routine for preparing for sleep will benefit sleep quality. Eating habits are important. 'Fast food' may be convenient especially as such establishments are likely to be the only places open overnight. Perhaps it's not a coincidence that long ago researchers into police officers health identified an increased risk of heart disease and cancer of the digestive organs ^(9.). The

use of drugs or stimulants either to help you stay awake or go to sleep should be avoided. Finding the time for exercise may be difficult but the fitter you are, the better you will cope. Managing family and other commitments, particularly for women officers is essential. Taking care of yourself is an essential element in taking care of your family.

What can the organisation do about it?

Essentially the ways in which organisations design, implements and manage their work schedules will either compliment your efforts at maintaining your health and well-being or work against them. Fortunately, governments are now intervening with the use of legislation to ensure that organisations make some efforts in this regard.

Designing a Work Schedule – Legal Considerations

If you can design a work schedule that has due regard for peoples health consideration, as far as is possible given the need for a 24 hour presence, you will generally also cover your legal liabilities. These will vary from country to country but most now have some form of legislation to protect workers from unreasonable working conditions or hours. The Working Time Directive^(10.), which is law throughout the European Union, is specifically designed to control working hours in order to protect shiftworkers health (and the rest of us from the consequences of not doing so). Of interest to those of supervisory rank in UK police forces is the fact that in addition to any liability on the part of the organisation they also have personally liability. This has done a lot to increase the level of interest among middle managers in ensuring that their work schedules conform to the requirements of the Directive.

Designing a Work Schedule – Consultation

We all have different views about what consultation actually is. Is it telling people what's going to happen or actively involving them in the decision making process? Is it being told "this is the work schedule now go and organise your life around it", whereas some types of work schedule can actually offer people the choice of organising their work around their life. Which would you rather have? The importance of consultation revolves around people's sense of being involved, having or not having control over ones destiny. You are much more likely to get people to buy into change if they understand the reason for it, know that their well-being has been considered and that they have been involved in the process.

Designing a Work Schedule – Shift pattern options

Almost the last part of the process is finding a shift pattern that meets all your criteria. There is any number of shift patterns but they will all fall within three broad types, rotating, fixed and annual hours. Shift lengths vary but most police schedules tend to be eight, ten or twelve hours long. Your shift pattern should be unique to your patrol unit. Adopting one that seems to work elsewhere is an easy option, but what works in one place will not necessarily work in another because demand is different.

How do you decide on what is best for you? First measure your demand. It's possible to measure demand in a way that will tell you how many officers you need on duty throughout the day, so your first task should be to design a schedule that best matches that demand. You then need to take account of any health or legal consideration that your pattern presents and, as far as possible, people's

preferences and welfare needs. For example, if you're considering a rotating shift pattern, three or four consecutive nights is far better than seven consecutive nights. That way the body will adjust back more quickly. Shifts should rotate forward in line with the bodies 'clock' rather than backwards as this causes less disruption. Those of you who travelled here from the East will have experienced less disruption than those who travelled from the West because you've travelled forward in time, so to speak. Compare that journey with how you feel on the way home; the effects are similar to working a backward rotating shift, if maybe a little more pronounced. Shift start times are important. A 6am start will mean that sleep has had to be interrupted at an important stage and is almost as detrimental as night work. Fixed shifts will give you the most efficient match of officers to demand and because officers are working the same hours of duty all the time they can more readily adjust their lifestyle to those duties. Shift length is also a consideration. Compressed working weeks (where officers work shifts in excess of the normal eight hours) can have considerable benefits in facilitating overlapping shifts to match peaks and troughs in demand, they also reduce the number of journeys officers have to make to work and give them more days off. Twelve hour shifts, however, may prove undesirable or difficult for some officers given the nature of their duties or domestic commitments.

Management of the Schedule

It doesn't matter how well your schedule matches demand if you don't manage it well – it won't work. This would be my second law of shiftwork. An efficient shift pattern and adequate staffing levels are only the first stages in improving the efficiency of the patrol function. Careful management is needed to ensure such benefits are realised and sustained. These will include; setting minimum and optimum staffing levels, risk assessments, establishing a crewing policy (when and where cars should be double crewed), monitoring to ensure workload equity, managing abstractions, establishing an annual leave, rest day in lieu and refreshment policy, balancing management objectives with staff welfare, training supervisors in resource management skills.

Increasingly, police organisations are appointing Resource Managers to oversee this important function. Fewer, however, have recognised the importance of training in this area of management. Merseyside Police in the UK now runs a two week Resource Management Course. It is the first, and as yet only such course in the country, but is now attracting students from abroad as well as other forces in the UK. Other countries are further ahead. In the United States, for example, Northwestern University in Chicago has included resource allocation and work scheduling as part of its Police Command Course for a number of years.

Management of the Schedule – have you got it right?

Lastly, an essential but often overlooked part of this process is identifying a set of performance indicator that will allow you to monitor the effectiveness of the work schedule. Are officers meeting response time targets? Is your accident rate or absenteeism level increasing or decreasing? Are your overtime costs going up or down? What is the impact on employee relations? Any one of these may cause you to revisit and amend your work schedule. Unfortunately, despite all the effort you may put into it, this is not a once and for all time exercise, in the longer term, a better allocation of resources to demand is likely to affect the pattern of demand and you will need to start the process all over again.

If you get your work schedule right everyone benefits, the organisation, officers and the community. My first law of shiftwork still holds true, *'there is no such thing as a good shift system'* but I'd like to add a rider to that *'there are some that are better than others'*.

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THE SHIFTWORKER'S CHECKLIST