

COPING WITH SHIFTWORK: THE IMPACT ON WOMEN'S HEALTH

Sue Woolfenden Q.P.M., B.A., Ph.D.
Director and Principal Consultant
Strategic Direction Ltd,
Practitioners in Police Resource Allocation & Management
www.strategic999.com

While police managers experiment with different types of work schedules in an effort to match limited police resources to the ever increasing demand for police services, researchers are highlighting the negative effects of shiftwork on individual and organisational performance and legislation is imposing welfare, health and safety requirements. The day when police work schedules only considered the operational need for a 24 hour police presence is gone. Work schedules need now 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 the police service, this is often the time they are most needed at work.

It is generally accepted by those who study them, and those who work them, that shiftwork is anti-social and detrimental to health; to be avoided if possible – otherwise, well managed! There are sound business reasons for getting this balance right. Corporate responsibility for breaches of Health & Safety legislation does not preclude individuals from being held liable. Poorly designed or managed work schedules result in underemployed or over-stretched staff with an associated impact on the quality of service to the public, employee relations, job satisfaction and organisational costs.

An Holistic Approach to Work Scheduling

So how do we achieve that balance? A structured approach to scheduling will ensure that we get the Organisation's priorities right and that employees are not forgotten about. Firstly, we need to assess whether the schedule meets the community's needs. Secondly, in designing a work schedule we need to consider more than just shift pattern options; we need to think about people's health, welfare and views as well as legal issues. Lastly, having designed a work schedule, we need to consider how it's going to be managed? If we address each of these element in turn we stand a better chance of getting it right for everyone's benefit.

Assessing Need and Justifying Change

Using patrol officers as an example, 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 officers to do? All this is essential information when it comes to designing shift patterns and setting hours of duty.

Designing a Work Schedule – Health Considerations

Some of the physiological and psychological effects of shiftwork are well known, certainly by those who work shifts and especially if those shifts include night work. Other detrimental effects are only now being recognised and some are still the subject of, as yet inconclusive, research. This is particularly so for women.

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 control body temperature, heart rate, blood pressure, respiration rate, urination, hormone production, etc. 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. 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 when the tour of night duties finishes, our bodies have to adjust back again and that takes a 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, they can also be life threatening ^(1.). As we grow older (over 40) we become noticeably less able to cope

with shiftwork. Latent medical conditions can emerge, gastrointestinal complaints become more common and sleep quality is often reduced. The damage is cumulative, occurring over a number of years; much of it will go unnoticed, often until after people have retired. You only need to stop working shifts for three to four months to notice a significant improvement in your feeling of well-being.

Women are faced with some specific hazards. Studies over recent years have identified a number of reproductive problems among women shiftworkers. These studies 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 birth weight. 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 that it would be prudent to consider shiftwork as a potential risk to reproductive health.

Studies in the United States have linked night-time 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 this condition^(5.). Expert opinion is still divided but these studies certainly suggest the need for women who work night shifts to think about the availability of mammographic services.

Psychological effects

Physiological problems can be compounded by psychological problems. Night work in particular affects concentration and performance and lessens higher cognitive functions. Operating technical equipment, performing calculations and making decisions are all more difficult at night. Many of the world's 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 and wastage levels are good indicators that people are being adversely affected by shiftwork^(6.). The wastage rates among women officers have long been of concern. One UK police force lost 15% of its women officers in 2001, and medical retirements among women officers in England and Wales are currently 26% higher than those for men^(7.).

Women officers often face the additional difficulty of balancing childcare and other 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's being able to maintain a balance between her family, her career and her health or having to sacrifice one of the three. Work is currently being undertaken by the BAWP to bring such issues to the fore, and the powers that be seem to be listening.

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. Longer service colleagues are not always the best source of advice. 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. Management of noise and a routine for preparing for sleep will benefit sleep quality. Eating habits need consideration. 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. The fitter you are, the better you will cope. Managing family and other commitments is important; taking care of yourself is an essential element in taking care of your family.

What should your Force do about it?

The way in which organisations design, implement and manage their work schedules will either complement or work against your efforts at maintaining your health and well being. If forces can design work schedules that have regard for people's health and welfare, as far as is possible given the need for a 24 hour presence, they will generally also cover their legal liabilities ^(10.).

The importance of consultation cannot be overstated as it revolves around people's sense of being involved, having or not having control over their 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.

Almost the last part of the process is finding a shift pattern that meets all your criteria. There are any number of shift patterns; adopting one that seems to work elsewhere is an easy option, but what works in one place will not necessarily work in another, because policing environments and priorities are different.

How do you decide what's best for your situation? First, measure your demand and begin to design a schedule that best matches that demand. Then take account of any health or legal consideration that your pattern presents and, as far as possible, people's preferences and welfare needs. If you're considering a rotating shift pattern, three or four consecutive nights are better than seven as the body will adjust back more quickly. Shifts should rotate forward in line with the body's 'clock'. 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. Consider shift length. Compressed working weeks (where officers work longer shifts for fewer days) can facilitate overlapping shifts to match peaks in demand, they also reduce the number of journeys officers have to make to work and give them more days off. Twelve hour shifts may seem attractive given the number of days off but may prove difficult for some given the nature of their domestic commitments. On duty days these commitments will invariably intrude on time that should be spent asleep, thus contributing to officer fatigue.

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. Careful management is needed to ensure all benefits are realised and sustained. This includes the setting of minimum and optimum staffing levels; risk assessments; a crewing policy; monitoring workload equity; managing abstractions; balancing management objectives with staff welfare and training supervisors in resource management skills.

Have you got it right?

Lastly, an essential but often overlooked part of this process is identifying a set of indicators 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 overtime costs changing? What is the impact on employee relations? Any one of these may cause you to revisit and

amend your work schedule. Remember, in the longer term, a better allocation of resources to demand is likely to affect the pattern of demand. This is a continuing process, not a once and for all solution.

Selected References

1. Vila. B. (2000) Tired Cops: The Importance of Managing Police Fatigue, Police Executive Research Forum, Washington D.C. 20036
2. Nurmine. T. Shiftwork and reproductive health. Scandinavian Journal of Work Environ Health 1998; 24 suppl 3:28-34 (a review of epidemiological studies on the reproductive hazards of women's shiftwork)
3. Davis. S. et. al. Night Shift work, Light at Night, and Risk of Breast Cancer. Journal of the National Cancer Institute, Vol 93, No.20, 1557-1562, 2001.
4. Schernhammer. E.S. Rotating Night Shifts and risk of Breast Cancer in Women Participating in the Nurses' Health Study. Journal of the National Cancer Institute, Vol 93, No.20, 1563-1568, 2001.
5. Filipski. E. Host Circadian Clock as a Control Point in Tumor Progression. . Journal of the National Cancer Institute, Vol 94, No.9, 690 -697, 2002.
6. Woolfenden. S. An Exploration of Sickness Absence in the Police Service. Doctoral Thesis, University of Manchester, England 1996.
7. Her Majesty's Inspector of Constabulary, Matrix of Indicators 2001-2002.
8. Working Shifts: A Health and Maintenance Guide for Shiftworking Officers and Support Staff.
Published by Merseyside Police Work Scheduling Unit, Police HQ, Canning Place, Liverpool L69 1JD England
9. Volanti. J.M. et. al. Disease Risk and Mortality Among Police Officers: New Evidence and Contributory Factors. Journal of Police Science and Administration, 1986, Vol. 14. p14-23.
10. European Directive 93/104