ACKNOWLEDGEMENTS

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[¶34-221] Safe working hours for doctors – Whose duty of care?

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Conflict of interest

The author of this article declares no conflict of interest.

Abstract

Many doctors work unsafe hours with extended shifts, overtime and on-call rosters. In the pursuit of safer systems of work and improvements to standards of patient care, the issue of excessive working hours has long been the 'elephant in the room'. The risks of onerous rosters are far-reaching, with the potential to affect not only the health of doctors but their patients as well. Tragic and preventable cases of fatigue-related deaths do occur. Despite increasing recognition of the extent of the problem, the healthcare industry has been slow to find solutions.

This article outlines the regulatory framework that governs healthcare organisations, and provides cultural and historical context to working-hour arrangements for doctors. A risk-based perspective of the challenges to implementation of safe working hours, and a number of initiatives are presented. Enforcement of workplace health and safety (WHS) laws in a hospital setting can be an effective change strategy to combat entrenched culture, and the current tolerance of unsafe working hour practices by individuals and organisations.

Keywords: rosters, doctors, patients, fatigue, WHS laws.

Introduction

There is a long-held culture in medicine of working overtime. This has been an accepted practice and a norm for many years, viewed as a rite of passage for doctors, and dating back to the days when doctors would be on-call in hospitals for weeks at a time. However the healthcare environment has changed significantly, with increased work intensity and evolving community expectations around safer clinical practices, leaving this archaic model no longer fit for purpose.

Still, medical rosters that require excessive overtime commitments and extended on-call shifts remain rife, despite mounting evidence that shows individuals are harmed, and healthcare systems suffer under such conditions. Senior clinical and administrative staff may be cognisant of, and complicit in the pervasive and irresponsible rostering present within their organisations. Alternatively, they may be genuinely unaware of the realities of the workforce pressures that are masked by the silence of the doctors who endure, and the cues from their supervisors who view the additional work as a 'normal' part of the job. In many cases, the extent of on-call work is not revealed in pay calculations, and overtime is not claimed by junior doctors. This arises from a general fear by doctors that in doing so, they will be exposing themselves as outliers and potentially putting their prospects of career progression at risk. As a result, there is an unknown amount of overtime and on-call being undertaken in healthcare organisations.

Excessive working hours are not the only rostering challenge faced by doctors. Additional concerns include the need for doctors to commute during, after or between shifts. Equally problematic are roster patterns where the total numbers of hours rostered are within acceptable limits but the shift times vary drastically. The pathological culture of silent tolerance of onerous rostering results in a significant gap between 'work-as-imagined' by hospital rosters and 'work-as-done' by doctors. How big this gap is, remains unclear. What is known, is that the existing demands of medical rosters contribute to high levels of stress, anxiety and burnout amongst doctors. Accidents and adverse events occur. A system that is unable to look after its doctors is unlikely to maximise quality patient care.

The relationships between hours worked, worker fatigue, workplace accidents and driving safety have been well-documented in the workplace health and safety (WHS) literature. Particular attention is given to the hazards of shiftwork and extended working hours in remote sites such as workers in mines or on gas and oil platforms. Employer liability and employee responsibilities with respect to rostering in other major industries such as transport, hospitality and emergency services have been tested in the courts. Cases involving doctors and unsafe working hours, however, appear to receive far less publicity, and are infrequently heard in the Australian court systems.

There needs to be greater scrutiny and accountability within the healthcare industry for rostering practices that fail to promote safe working conditions. Much has been written about unsafe working hours from a health perspective. On the role of WHS laws in this matter though, there is relative silence. This article looks at the relevant legislation governing WHS standards across Australia to examine the issue of unsafe working hours. The risks of onerous rostering practices to doctors and their patients are explored, and the questions asked – how can WHS laws be used to tackle this pathological culture? What is needed to effect change? And finally, whose duty of care is it to guarantee safe working hours for doctors?

Part 1

The Legislative instructions

Work Health and Safety Laws

In addressing the WHS issues around safe working hours for doctors, it is necessary to first consider the objectives of the relevant statutory provisions as a framework for understanding the context in which each of the issues arise. In 2012, the Australian Government introduced the model *Work Health and Safety Act 2011* (Cth). This model Act and its regulations were an amalgamation of existing Australian laws and were subsequently implemented in the Commonwealth, and all states and territories except Western Australia and Victoria. WA retains its own legislation but is set to introduce a single mirror bill in mid-2019 based on the model Act, replacing three WA Acts.[1] In Victoria, the *Occupational Health and Safety Act 2004* (Vic) (OHSA) continues to enshrine the WHS laws and sets out the key principles, duties and rights in relation to occupational health and safety.[2]

The statutes in each jurisdiction have adopted the three-tiered approach recommended by the Robens Report – broad overarching general duties, with more detailed provisions in regulations, and codes of practice.[3] They establish that the primary responsibility for WHS rests with employers. For the purpose of this article, the WHS issues of safe working hours will be examined primarily with reference to the Victorian OHSA, though many similarities can be drawn with other jurisdictions.

Healthcare organisations employ doctors as employees to provide clinical services for patients, clearly falling within the remit of the first tier of broad general duties. Section 2(1)(a) of the OHSA sets out to *"secure the health, safety, welfare of employees and other persons at work".* The principles of health and safety protection are outlined in s 4 OHSA and measured against what is 'reasonably practicable'. Thus, assuming agreement on what would be considered 'reasonably practicable', the right to safe working hours is non-contentious under the law. Even where there are no specific limits stated for work periods, an employer who knowingly allows an employee to work excessive hours is likely to be in breach of legislation. Correspondingly, an employee who works while fatigued, without taking steps to highlight their condition with their manager or reduce the risk to others, may also be in breach.

The second tier of WHS laws are the regulations, designed to provide more specific instructions on how the duties of the Act are to be carried out. The *Occupational Health and Safety Regulations 2017* (Vic) covers areas such as manufacturing and installation duties, noise control, handling of hazardous materials and licensing requirements. The regulations do not address rostering, working hours or work-related travel.

Gunningham and Sinclair observed that codes of practice, as the 'third tier' in Roben's approach, have "a critically important role in providing authoritative guidance to duty holders as to ways in which the general duties and regulations should be discharged."[4] Recommendation 22 of the National Review into Model Occupational Health and Safety (OHS) Laws was that the primary duty of care should be supported by codes of practice or guidance material to explain the scope of its operation and what is needed to comply with the duty.[5]

There are no compliance codes with evidentiary status under the OHSA that cover shiftwork. There are, however, voluntary national codes, guidelines and position statements pertaining to safe working hours that have been published by industry regulators, medical bodies and speciality medical colleges.[6] These offer recommendations to employers and employees and contribute to the state of knowledge about working hours but are not enforceable through the law.

Common Law

There are opportunities under common law for employees to take two causes of action against their employers for failing to provide a safe work environment. The first is breach of statutory duty (which gives rise to civil action for damages), and the second is negligence.[7] Hospitals can also be exposed to litigation in malpractice cases due to their vicarious liability for the actions of their employees. Where clinical accidents occur because of doctor fatigue, the issue of negligence can arise. Importantly, fatigue is no defence against a negligence action taken by a patient.[8]

Workers' compensation

Regulation of safe work hours can arise in civil actions and workers' compensation entitlements if a worker can show that they suffered an injury in the course of their employment.[9]

The Fair Work Act

The National Employment Standards set by the *Fair Work Act 2009* (Cth) (FWA) gives national system employees the right to object to working more than 38 hours per week unless the additional hours are reasonable, including consideration of any risk to employee health and safety.[10] Employees may have remedies under the FWA and its regulations if the relevant conduct contravenes the terms of an enterprise agreement.

Health regulation

In addition to WHS laws, there are a detailed suite of laws that regulate what organisations can do, and what the rights and liabilities of their employees are. Health legislation,[11] hospital accreditation schemes, medical boards, mandatory reporting requirements, and service standards set by the Australian Commission on Safety and Quality in Health Care, all focus on improving the quality of care in hospitals. Regulatory councils and colleges consider working hours' issues in the context of disciplinary hearings into the practice of individuals. Labour laws governing contracts and industrial relations are in operation as well, but relate primarily to pay and penalty rate decisions. With such a range of regulatory mechanisms at play for healthcare services and employees, and doctors' hours viewed as a professional standards issue, it is unsurprising that in the current Australian context, WHS laws appear to have lesser prominence within the medical setting.

Part 2

How Working 'overtime' has changed over time

Shiftwork and extended working hours are not a modern-day phenomenon. Many industries rely on 24-hour coverage for production, maintenance and service provision. Yet while the industrial world never sleeps, its workers should not be deprived of theirs. During the 1990s, the world had already recognised the health hazards of long and abnormal work patterns to the extent that the International Labour Organisation announced radical new standards to limit hours worked.[12]

The European Commission Working Time Directive, introduced in 1993, required European Union countries to guarantee the following rights for all workers: no more than 48 hours a week averaged over a 17-week period; a minimum daily rest period of 11 consecutive hours; a minimum weekly rest period of 24 or 48 consecutive hours averaged over 14 days; a minimum of 20 minutes rest in any work period of more than six hours; a maximum of eight hours night-work every 24 hours averaged over a 17-week period; free health assessments for night workers; and paid annual leave of at least four weeks. The Directive also sets out special rules on working hours for workers in a limited number of sectors, including doctors-in-training, offshore workers, sea-fishing workers and people working in urban passenger transport.[13] Work conditions have improved, but protections have not been absolute, and subsequent consultative stages on the Directive remain in progress.

In the Australasian region, the health hazards of onerous rosters have been highlighted, but working hour standards have yet to be written into government policies. A 2007 study involving 1,366 junior doctors in New Zealand found that two-thirds of all respondents had either fallen asleep or felt close to falling asleep while driving home after work in the preceding 12 months, and just under one-half of the doctors recalled a fatigue-related clinical error in the last six months.[14] Night-work was a significant risk factor for both measures.[15]

Ten years later, in July 2017, the Australian Medical Association (AMA) released its 2016 audit of doctors' working hours.[16] The fourth nationwide survey of doctors' working hours conducted by the AMA since 2001, the audit showed that 53% of doctors were still working unsafe hours (a figure that had plateaued from the 2011 audit). Three out of four intensive care specialists and surgeons reportedly work rosters that place them at significant and higher risk of fatigue. The number of junior doctors working rosters that place them at higher risk of fatigue had increased from previous audits. One doctor reported working an unbroken 76-hour shift, alongside others who endured shifts of between 53 and 72 hours. The longest working week reported during the audit was 118 hours (the same as 2006) while the average week came in at 78 hours. Only 11% had two full days free of work, and just under half worked three or more days without a meal break.[17] The AMA declared the figures a significant improvement in the number of doctors working unsafe hours from the start of their audits, which simply underscored just how dire the situation was more than 15 years ago. Progress has been exceedingly slow and the latest audit echoes the call for more to be done.

The Victorian branch of the AMA has been involved in the negotiation and implementation of a new Enterprise Bargaining Agreement, calling for an end to "unsafe, unrecognised and unpaid" shifts for doctors. The log of claims included a call for doctors to work for a maximum of 16 hours, a 10-hour break between work on one day and the next, no more than seven straight nightshifts, and a minimum of 48-hour break after coming off nightshift.[18]

The current statistics are undoubtedly an underestimation of the true magnitude of unsafe working hours and doctor fatigue. Unpaid and un-rostered overtime represents a hidden proportion of the problem. Under-reporting by doctors is common, a by-product of implicit and explicit pressures in the hospital system.[19] There may be a perverse culture of stoicism in the face of unrealistic working hours and a lack of support from supervisors. One study of doctors-in-training found that many doctors normalised their fatigue. Their reported tolerance of excessive working hours was high, while their level of awareness of the resultant impact upon their performance was low.[20]

Another explanation for under-reporting is the common attitude that where an adverse event has occurred, the individual doctor may be viewed by their colleagues as the principal problem, allowing them to deny that they might also be at risk, or even have contributed to the environment leading to the event. These approaches all deflect attention from the underlying concerns about how the organisation of work and the

work environment are unsafe to health.[21] The OHSA addresses these issues in part by requiring effective consultation in the workplace,[22] and protections from discrimination for reporting a concern.[23]

Part 3

Symptoms of an unhealthy industry

Sleep deprivation due to shift work and extended hours has been called the 'Achilles' heel' of the medical profession.[24] The effect of sleep loss and fatigue has been studied extensively, although as Sturm observed, this has been done in a limited manner within the healthcare setting.[25] Kilgore noted that "emerging evidence suggests that some aspects of higher level cognitive capacities remain degraded by sleep deprivation despite restoration of alertness and vigilance with stimulant countermeasures, suggesting that sleep loss may affect specific cognitive systems above and beyond the effects produced by global cognitive declines or impaired attentional processes."[26] Adverse changes in sleep duration are associated with significantly poorer cognitive function.[27] Additionally, it has been shown that mood declines significantly with sleep deprivation, with a purported synergistic effect on impairment of higher level cognitive functions. Thus, the clinician working excessive hours may be at higher risk of both mood deterioration and cognitive impairment when placed in a sleep deprived state.

The longer-term health and medico-legal ramifications of shiftwork for the fatigued doctor are equally troubling. Shiftwork has been linked to anxiety, depression, increased neuroticism, increasing evidence of adverse cardiovascular effects and gastrointestinal disorders, and an increased risk of spontaneous abortion and premature births.[28] A major meta-analysis described a dose–response association with stroke risk in those working long hours (equal to or greater than 55 hours per week) with a weaker association for coronary heart disease.[29]

The burden of illness of doctor fatigue (on doctors and their patients) represents a vast spectrum of health and safety hazards in the workplace. The sources of those hazards are the onerous rosters, affecting doctors at every level and in every speciality. From junior doctors in the public health system working on-call or long shifts, to senior doctors who participate in lengthy operating lists or work excessively long hours in consulting clinics, fatigue and its health and medico-legal implications are a profession-wide concern. Nonetheless, it is difficult to quantify the near misses to doctors and to patients. Issues relating to excessive working hours may be borne out of coronial inquests or internal morbidity and mortality reviews. A few may be heard in court as claims under contract law or negligence actions, but overall, most cases do not attract significant public commentary, and the true physical and fiscal losses to the community are largely unknown.

Human error rapidly increases in clinical environments when tired doctors are under pressure to continue working. Increased surgical complications, needle-stick injuries, and errors not being intercepted have been linked with fatigue and sleep–wake cycle disruption. Cognitive impairment, memory lapses, reduced motor control, and micro-sleeps have all been shown to increase among fatigued doctors, with obvious implications for patient safety.[30] Fatigue decreases the ability to process and react to new information and respond to hazards. It played a role in the Three Mile Island accident, the Chernobyl disaster and the Exxon Valdez oil spill, which all took place in the early morning after a nightshift, when workers' fatigue levels were at their highest.[31] The effect of sleep deprivation on a task that involves tracking is equivalent to the effect of alcohol intoxication.[32]

Fatigue-related deaths of doctors are not an unknown phenomenon. In Victoria, a 24-year-old junior doctor on her first medical placement died when the car she was driving veered into the path of a B-Double at the end of a long shift. The coroner obtained information that showed in the six days prior to her death she was rostered to work 62.5 hours but according to hospital logs was at work for at least 16 more hours cumulatively. Her computer and phone records also revealed she had been awake and updating patient lists overnight at home, then starting work early again the following morning. The coroner concluded from the evidence that it had been a very demanding first week as a doctor, with limited sleep and signs of stress, and fatigue was likely to have played a role in her death.[33]

Nightshifts increase driver drowsiness, degrade driving performance and increase the risk of near-crash events.[34] The risk of occupational accidents is at least 60% higher for non-day shift workers.[35] A recent study of trainee anaesthetists revealed 57% of 2,170 respondents had been involved in an accident, or come close to having one, while driving, motorcycling, cycling or walking home after working all night. Almost all admitted the incidents were their fault, caused by exhaustion. 84% of respondents said that they had felt too tired to drive after a nightshift, and 87% used caffeine-based drinks to mitigate the effects of fatigue. Over half of the trainees said fatigue had impaired their ability to do their job.[36]

A 2013 Australian national mental health survey was conducted of doctors and medical students, which resulted in 12,252 and 1,811 respondents, respectively.[37] Key findings included substantially higher rates of psychological distress and attempted suicide reported by doctors compared to both the overall population and other Australian professionals. The report acknowledged that doctors face long working hours in a stressful work environment, which may contribute to the high general and specific levels of distress and burnout. The report recommended initiatives that address the stressful working environment (eg increasing resources and the size of the workforce, and limiting excessive work hours) to reduce the burden on overworked doctors.[38]

Little attention was paid to the potential patient safety effects of fatigue among junior doctors until 1984, when 18-year-old Libby Zion died at a New York Hospital due to a medication-prescribing error while under the care of residents in the midst of a 36-hour duty period. The subsequent investigation into her death led to the formation of the Bell Commission, which passed regulations mandating that residents at New York hospitals should work no more than 80 hours per week and no more than 24 consecutive hours.[39] This was bolstered in 2003, when the Accreditation Council for Graduate Medical Education set standards upholding the work hour limitations, and adding that residents should not be on-call more than once every third night, should have one day off per week.[40]

More recent evidence suggests that patients fare less well at night when they are cared for by doctors-in-training.[41] In Australia, the judge in *Brotherston v Royal Perth Hospital*[42] awarded substantial damages to a man who suffered permanent brain damage as a result of negligent medical treatment. The judge stated that it was difficult to avoid the conclusion that the long shifts worked by staff contributed to poor clinical management.

In a joint inquest finding into the deaths of three patients who died from overwhelming infection whilst in the care of a regional health service, the coroner concluded:[43]

> Tired doctors may not attend the hospital when required. It is essential for the proper review of a patient, a proper diagnosis and management plan and proper consideration of the severity of that person's illness that a doctor see the patient in person. The failure to diagnose and the failure to recognize the deterioration of [the patients] and the resulting failure to provide treatment in a timely manner arose directly from the inadequate staffing of doctors…Less direct results include fatigued doctors, doctors resigning from the service, and nurses having to escalate their concerns when on-call doctors do not respond to their requests to attend the hospital.

Strong anecdotal evidence exists that links errors and accidents to doctor fatigue; however, the incidents continue to be viewed as isolated lapses. Medical researchers have argued that in contrast, other hazardous industries have not waited for absolute proof of risk due to operator fatigue, and that if the same investigative analysis used in transportation industry accidents were applied to accidents involving the care of patients, fatigue would almost always be cited as a contributing factor.[44]

Part 4

Provisions of differentials

Duty of care

Section 21(1) of the OHSA provides that employers must, 'so far as is reasonably practicable, provide and maintain for employees of the employer a working environment that is safe and without risks to health.'

This includes specific performance standards to provide and maintain: 'safe systems of work, adequate facilities for the welfare of employees, and information, instruction, training or supervision to employees as is necessary to enable them to perform their work safely.' A common-sense interpretation of 'working environment' would include: the workplace itself; the work processes; the work arrangements, including shift work and overtime arrangements; the intangible environment, including the presence of stress factors such as length of working hours and staffing levels.[45]

Section 20(2) OHSA describes 'reasonably practicable' as: the likelihood of the hazard or risk eventuating; the degree of harm that would result; what the person concerned knows, or ought reasonably to know, about the hazard or risk and ways to eliminate or reduce it; and the availability, suitability, and cost of those ways. The use of the term 'reasonably practicable' provides wide scope for the awareness and action that is expected of employers. Employers are required to undertake a risk assessment with regard to all OHS hazards associated with their operations including hours of work, especially shiftwork and extended working hours.[46] In addition to providing a safe working environment, under s 22(1), employers are also required to monitor the health of their employees (including checking for fatigue). Employers must monitor the conditions at any workplace under their control and keep records of their checks. Section 35 provides that employers must also consult with their employees, so far as is reasonably practicable, on matters such as identifying the risks, and proposing changes that may affect the employee's health and safety.

Under similar provisions in their OHS Act, Western Australia's highest court highlighted the duties of employers to mitigate risks associated with nightshifts and warn workers of them in *Fraser v Burswood Resort (Management) Ltd*. A worker was seriously injured driving home after finishing an eight-hour nightshift at 4 am, when her car drifted onto a verge, struck a median strip and rolled. The employer argued that it did not have a duty to warn of the risks of driving home before sunrise because those risks were obvious, particularly to experienced nightshift employees like the worker. Martin CJ rejected the claim, stating:

> It could not be safely assumed that all [nightshift workers] would be aware of the risk of accumulating a sleep debt as a result of repeatedly failing to obtain sleep of the length and quality which they require; nor could it be safely assumed that all nightshift workers would be aware of the circadian cycle and the increased risk of accidental injury due to inattention or tiredness while driving home in [the pre-dawn] hours; nor could it be safely assumed that all workers would be aware of the masking effect of exposure to stimuli and bright lights while at work, with the result that their true state of fatigue might not be apparent to them at the time they set out to drive home.[47]

Doctors as employees

The doctor–hospital employment relationship reflects the traditional employee–employer contract-of-service approach. Therefore, there are no significant differences between how doctors are covered by the OHSA (s 5) in relation to the definitions of the parties. Employees have a duty to take reasonable care for their own health and safety, and for others who may be affected by what they do, or omit to do at a workplace.

Section 25 of the OHSA defines the duties of employees 'while at work'. There is an ongoing debate in medicine and the law about whether work and travel while 'on-call' constitutes being 'at work'. As the roles of doctors continues to evolve and they are required to be available to provide services in multiple locations and at all hours, the traditional concept of employees 'at work' must be expanded to cover broader circumstances including on-call duties.

Patients as others

A public health focus is prominent in the objects of the OHSA. The concepts of health, safety and welfare are applied to 'other persons at work' as well as employees, and sections 2(1)(c), 23 make explicit reference to not placing 'members of the public' at risk. Thus, patients in healthcare organisations meet the definitions of 'other persons' and 'members of the public' and as such, come under the responsibilities of the employer.

Roster responsibilities

A problem that arises when examining the WHS laws in the context of working hours is determining the provisions that are best applied to rostering issues. Who is responsible for a roster? The employer, designer

or controller? Perhaps the sole duty-holder is the employer maintaining 'systems of work' where safe design of systems includes work schedules and the provisions used to regulate and monitor doctors' rosters.

Alternatively, rosters might be upstream duties of designers in a workplace. The OHSA does not define 'design' but a plain English meaning would include the development of a concept, process or machine. The Act does refer to designers of a 'plant' as 'machinery, equipment, appliance, implement and tool'.[48] This definition has been construed to mean hardware; however, a legal challenge could see the software or templates used to design rosters as another interpretation of 'tool'. Then, under s 27, the designer of the roster template or software could be held liable for the creation of an onerous roster. In *Simpson Design Associates Pty Ltd v Industrial Court (NSW),*[49] Sackville AJA held that it was sufficient if the prosecution proved that the initial inadequate design by the appellant was a 'substantial cause' of the risk viewed in a common-sense and practical way. It did not matter if the original design was not the sole cause of the risk.[50]

Another potential avenue for categorising a duty with regard to rosters is s 26 OHSA that refers to a person who manages or controls a workplace. If a person in control requires an employee to work long shifts, then any resultant fatigue creates performance and environmental risks for the employee entering and leaving the workplace and its surrounds. Legislative definitions limit the scope and application of the law, and further clarity on the duties of roster-bearers needs to be tested in the courts.

Reasonably practicable and reasonable care

Onerous rosters are prevalent and potentially dangerous, and the combined cost of road and workplace accidents caused by fatigue is significant. The question of whether an accident might conceivably occur cannot be ignored by employers in this context. In *Holmes v RE Spence and Co Pty Ltd*,[51] Harper J stated:

> The Act does not require employers to ensure that accidents never happen. It requires them to take such steps as are practicable to provide and maintain a safe working environment…remembering also that, in the main, such a responsibility can only be discharged by taking an active, imaginative and flexible approach to the potential dangers in the knowledge that human frailty is an ever-present reality.

Given that human frailty is more pronounced when faced with work pressures, complex tasks, low mood and sleep deprivation, where is the line to be drawn between an employer's and an employee's duty to mitigate risk? Managing fatigue in the workplace is a shared responsibility. But it is also the distinction between a reasonably practicable test for employers and reasonable care for employees.

Employees have a duty to assist their employer in meeting health and safety obligations and to take reasonable care not to put themselves, or others, at risk.[52] In the setting of a doctor who is on nightshifts and unable to sleep during the day (family commitments, disturbed sleep–wake cycle, etc), what are their responsibilities? Can it be argued that they have not satisfied the 'reasonable care' element? The AMA Code qualifies their duties as: participating in training about the hazards of shiftwork; ensuring allocated rest breaks are used appropriately; reporting incidents arising from hazards related to shiftwork and extended hours; recognising signs of sleep deprivation or fatigue and taking active steps to avoid the impact on themselves and others; reporting to supervisors on circumstances in which fatigue and lack of sleep is impacting on individual well-being and patient care; and considering the health and safety implications of voluntarily seeking additional hours of work.

Safer systems of work

An important notion of the OHSA is that the provisions are risk-based rather than outcome-based. Therefore, an employer may be in contravention of the Act whether or not harm has occurred. The difficulties lie where hospitals and employees are unaware of their duties and rights so there is little incentive to change working hours. Hospitals are potentially either failing to establish a safe system of work or are content to acquiesce in the system of work adopted by the roster managers and doctors who develop work-arounds to cope with the long hours. In *Sungravure Pty Ltd v Meani*,[53] Windeyer J said, "A safe system of work is one that is safe for an average workman taking reasonable care for his own safety…it is not a system which is safe only for a

person of superior skill whose attention never wanders." Accordingly, an employer does not discharge his or her duty when sleep-deprived doctors display inattention or misjudgement in performing their tasks.

Liabilities in a healthcare organisation

Section 144 of the OHSA creates an accessorial liability for officers[54] in an organisation who fail to take reasonable care, with regard to 'what the officer knew', and what they were able to do about a particular matter. The model Act differs significantly in that there is a duty of care placed on officers to be more actively involved and show 'due diligence'[55] with a practicable definition of what they 'ought reasonably to know'.[56]

Healthcare organisations have complex hierarchies that traverse clinical, managerial and administrative levels. Junior doctors work under clinical supervisors, pre-vocational trainee coordinators, unit directors, ward managers, and human resource executives, all of whom have varying degrees of control over the junior doctor's work environment and might have little or substantial input to the roster. Who then, are the officers responsible for the matter of safe working hours? What constitutes 'practicable' in such a convoluted hospital structure? Can senior medical staff be prosecuted as 'officers' if they themselves are employees of the healthcare organisation and bound to work long hours too?[57] Or can a hospital executive who works in a national office and has no direct contact with the operational management of a local hospital be in 'control' of roster matters? The legislation does not prescriptively address these specific scenarios and it remains to be seen how the courts will interpret the provisions in cases about doctors' rosters. In Victoria, the difficulties in examining the liabilities of officers within healthcare organisations will lie not only in identifying who the relevant 'officers' are in relation to working hour issues, but also in showing that they 'knew' about the risks.

Regulation and enforcement of WHS laws should be a proactive and sustained effort within healthcare organisations, rather than a reactive response when a disastrous event occurs. Internal enforcement of safe working hours is to be wholly preferred over external enforcement as oversight of hospitals by modern OHS inspectorates is a potentially problematic concept. Long working hours represent intangible but serious risks that are not readily identifiable by inspectors conducting site visits. The coronial review of a paediatric death and the role of fatigue in the treating doctor's decision-making uncovered recommendations by the Queensland State Ombudsman to both determine safe standards for working hours in junior doctors, and to progressively implement risk management strategies. The lack of response to these recommendations included the view that safe working hours was an issue of professional standards rather than industrial risk management. A coordinated approach to the proactive and reactive aspects of hazard assessment, and implementation of control mechanisms is now being introduced in Queensland as part of an overall strategy led by the Medical Board of Queensland.[58] The risk management rationale being utilised is based on research by the Centre for Sleep Research, University of South Australia, with the "defences in depth" fatigue risk management policy tailored to the healthcare setting.[59] This supports the argument that sustained change will not occur while junior doctors' hours are viewed as a professional standards problem, but only through a fully formed strategic approach, employing OHS laws and industrial risk management.

Working hour arrangements

Doctors do not have a strong union presence in the way that many other trades do, which is a major disadvantage when attempting to assess the priorities, challenges and limitations to implementing safer rostering systems. Many doctors would not have knowledge of the health and safety representatives (HSRs) in their hospitals. It is time to look to comparable industries (eg the police and ambulance services) to consider how to promote HSRs and understand how out-of-hours work might be better managed in those workforces (eg two staff working together on shifts, strict shift hours and changeovers, formal systems for filling roster gaps, regular announcements about HSRs and OHS issues). Doctors need to be assertive and supported by well-trained HSRs to exercise their rights and refuse to perform under dangerous working conditions.

The economic and organisational costs of changing doctors' rosters to reflect 'normal working hours' may be deemed by some to be 'grossly disproportionate'[60] or not 'reasonably practicable'[61] to implement, and to have an unfavourable effect on the public's timely access to healthcare. In principle, cost should never trump safety, but in analysing the costs-needs-benefits of the problem, a solution may be to focus on reducing the

risks through better structuring and sequencing of rosters, rather than eliminating on-call and nightshift work altogether.

Employers have an obligation to consult with HSRs and employees about shift changes – this includes any change to the length of a shift or additional overtime requirements. Sections 35 and 36 of the OHSA deal with the requirements for consultation, and s 205(1) of the Fair Work Act stipulates that an employer must consult with its employees about a change to, 'the employees' regular roster or ordinary hours of work'. In practice, therefore, the employer's statutory duty to consult arises with a corresponding duty under an enterprise agreement binding on the employer.[62] Despite these provisions, there is no enforcement through prosecution, while hospitals continue to display a lack of consultation in process changes driven by financial goals, and the push to reach hospital key performance indicators set by government departments.

Fatigue and driving

Fatigued employees who are injured in the course of travelling between work and home can argue that their employer breached its duties of care, which caused them to incur serious injuries. Where there is a reasonably foreseeable risk of injury and a practicable means of obviating the risk, hospitals can be found negligent if it is shown that a motor vehicle accident (or other) occurred because of a doctor's fatigue.[63]

Call for action

WHS breaches by healthcare organisations are noteworthy not only in the extent of the onerous rostering that is taking place, and the period of time over which the conditions have been allowed to continue, but also in the departure of the duty that employers owe to their employees to keep them safe. Ultimately, the risks created by long working hours to a doctor or patient's health can lead to significant morbidity and mortality, and evidence around fatigue shows that such harms are foreseeable.

Part 5

Driving curative changes

The pathological culture around long working hours for doctors has been one of solitariness. Doctors often work and travel alone on their shifts. It can be hard to pinpoint the true owners or designers of onerous rosters, and doctors are seen as the isolated problem when things go wrong. Even the patients who suffer harm are generally identified in a singular fashion. Johnstone et al stated that:[64]

> A powerful influence on public perceptions of work health and safety has been the medical perspective, which has focused primarily on care of individuals than of groups, on health monitoring and treatment rather than prevention, and on acute rather than chronic illness. This perspective has tended to emphasize monocausal explanations of work-related injury and disease and has reinforced management's portrayal of work-related conditions as an individual problem, rather than as a result of the way in which work is organised.

Healthcare is a safety-critical industry and it is time that the culture changes to one of a 'whole-of-workplace' issue. Working hours and the organisation of work should be treated in the same way as other OHS hazards and subjected to the same types of risk assessments. This involves identifying the hazards; assessing the risks posed by the hazards; and eliminating or controlling the hazards. Techniques that can be used to identify the hazards and the risk of injury or illness arising from exposure to the hazard include collating time records; investigating employee complaints; examining sick leave records; conducting employee surveys; health surveillance records; assessing reports from experts in work scheduling, shiftwork and fatigue; reviewing scientific and medical literature on the impact of extended hours on work performance and health; and incident, injury and illness investigation. [65] The risk assessment and hazard identification phase needs the active involvement by doctors engaged with WHS committees or other hospital-based forums or working groups. The main working hour hazards faced by doctors are summarised in the AMA Code (Box 1):[66]

Box 1. Typical Hazards Associated with Shiftwork and Extended Hours

1. excessive consecutive hours worked (usually more than 10 hours)
2. lack of rest within and between work (leading to a significant 'sleep debt')
3. inappropriate speed and direction of shift rotations (a forward rotating pattern from days to evenings to nights is thought to be more compatible to a person's circadian rhythm)
4. irregular and unpredictable work schedules, including the frequency of on-call (compromising family and social life as well as the quality of rest time)
5. nightshift or extended hours that lead into nightshift (human performance is at its lowest level between 2 am and 6 am)
6. type of work and additional workloads (more pronounced performance reductions occur at night with simpler, routine medical or administrative tasks)
7. potential exposure to other hazards (calculation need to take into account extended hours of work and exposures).

There is a conspicuous tension between the current WHS laws and the traditional model of working hours for doctors in the healthcare sector. Compelling evidence shows that doctors and others are at risk of harm as a result of unsafe working hours. Yet there is very little detail, either in the legislation or common law that demonstrates how these issues are successfully addressed.

The starting point to initiate change is with the hospitals themselves. Russell et al stated that, "As major employers and flagship healthcare organisations, hospitals can influence the norms of the communities they serve by adopting model policies and practices that promote the health of patients, visitors, employees, students and trainees."[67]

By adapting the 'Key Principles and Practices for Effective Work Health and Safety Management',[68] hospitals can lead the way in setting a culture of safety and responsiveness. Effective implementation of safe working hours may be achieved through the following WHS principles:

1. Organisational commitment to safe working hours

This must be driven by senior leadership to ensure that there is engagement, cultural change and action. Healthcare organisations should assume responsibility for reforming work practices and changing attitudes towards work. Self-regulation should be designed into the systems so that organisations act responsibly and fulfil their obligations. Areas to be addressed include payment of all overtime worked, allowing staff to take leave in lieu of excess hours worked, encouraging staff to speak up and providing clear documentation of all commitments and processes. Records or risk assessments, working hours and training time are required for any workplace reviews under WHS laws.

2. Embedded processes to create safe rosters

Dedicated personnel are required to manage rosters with the best interests of the workers in mind, or automated systems that are configured to recommended shift patterns and hours. Some roster databases incorporate alerts that trigger when excessive working hours are logged by staff. Safer rostering means efficient and smarter rostering based on research. There should be appropriate access to leave provisions and protected teaching time within working hours. Innovative strategies should be sought by the organisations to find solutions to rostering challenges and continually improve the work conditions.

3. Increased staffing

Funding and resources that provide more doctors on-site for after-hours shifts would reduce the need for on-call or overtime. A commitment to improved staffing at every level would ensure that junior doctors are more available to attend educational sessions, and an increased pool of senior doctors to provide teaching and supervision.

4. Staff awareness and training on safe work hours

Education on sleep management, the health, safety and social effects of fatigue, and knowing how to recognise and communicate concerns regarding a worker's health (of self or others) is crucial. Inductions and information on coping strategies for shiftwork and employee support services should be made available. Exhaustion should be viewed as posing an unacceptable risk rather than as a sign of dedication to the job.

5. Employee consultation

Ensuring a feedback system exists with open channels of communication between management, human resources and doctors at every level of seniority is the key to a safer work environment. HSRs need to be elected and made known to employees. The issues that are flagged to them must be examined contemporaneously. Doctors should be involved in the development of rosters having regard to the design principles recommended by national guidelines. All proposed changes to a roster should be made in consultation with the doctors they impact, then monitored, evaluated and audited by a joint working party of doctors, HSRs and management.

6. Building safer environments

Where it is necessary for staff to be on-call or work longer shifts, the organisation should provide transport arrangements (eg taxi vouchers), or suitable rest, meal and shower facilities at the hospital (with break times built into rosters for these). Ideally, start and finish times should allow access to public transport. Security arrangements are needed to ensure the staff can be safely escorted to and from the premises after-hours, with video surveillance and duress alarms used in appropriate areas.

7. Managing risks and responding to adverse events

Employers need to be proactive and imaginative in constructing fatigue management systems. The short and longer-term WHS effects of shiftwork may not be immediately evident. It can be hard to pinpoint the safety risks when the symptoms are not always overtly physical. Doctors should be encouraged to use tools such as the 'Risk Assessment Checklist'[69] to calculate their level of risk based on a simple scoring system. Appropriate resources are needed to ensure the planning, support, close monitoring and review around safe working hours takes place. Easily accessible incident reporting systems should be implemented, and employee assistance programs made available to staff. Organisations need to show that roster concerns are addressed promptly and fairly, and adverse events are examined through a systems-wide lens. Comprehensive reporting enables corrective action and allows better prevention planning to take place.

Globally, there are a number of health initiatives that are attempting to solve the working hours problem. In the UK, the Department of Health sponsored a "*Hospital @ Night*" project followed by a "*Hospital 24/7*" project that relied on a coordinated approach and significant organisational change to enable safe delivery of medical care within a safe environment for the staff delivering that care.[70] An anaesthetic-led 'Fatigue Group' in the UK arose following their 2017 trainee study. The group's projects include a traffic-light grading system for rest facilities and cultural attitudes towards fatigue in hospitals, levelled at highlighting the best, and empowering those working elsewhere to advocate changes.[71] A year-long trial is currently underway in two Melbourne hospitals, using a novel approach to doctors' rosters to improve patient safety. Researchers are applying up-to-date sleep science to create a 'body-clock' rostering system aimed at improving workplace performance, and minimising fatigue and drowsiness at work and on the way home.[72]

For the most part, however, there is still a remarkable lack of impetus in the medical and legal sectors on the issue of unsafe working hours. It is alarming to consider that no organisation is held to account when a tired young doctor collides with a B-Double, or when one in two doctors surveyed nationally are working unsafe hours. McDonald described this as:[73]

> Aside from collective efforts in respect of employment conditions, professional self- regulation of long working hours has been somewhat limited. It may be that self- regulatory bodies are inactive because of conflict within the profession about the necessity, or desirability, of limiting working hours. Inaction may also be a tacit acknowledgement that other actors are better equipped to address this issue, or other policy actors have, however imperfectly, already addressed it.

Exposing non-compliance with WHS laws may be the catalyst to using the legal framework to gain traction and positively influence hospital rostering practices. An increase in the number of employee complaints and escalating compensation claims will prioritise the issue for regulators. The more doctors that support claims

of excessive work hours and breach of duties, the stronger the claims will stand, creating a group consensus on the matter, which cannot be overlooked.

Coronial referrals to the Director of Public Prosecutions are another avenue for demanding attention be given to onerous rosters, where a link is found between doctor fatigue and a death. Reports that lead to court cases are critical to enforcing OHS in the workplace. Prosecutions, media coverage and high penalties for organisations that breach their duties, all generate momentum to focus on the governance of working hours and instil much-needed accountability.

Future directions should include the consolidation of the AMA code with its subsequent approval as a compliance code under s 149 of the OHSA. The code does not currently cover all situations relevant to safe working hours. The differing needs of doctors who are on-call or who provide services outside of hospital grounds (eg police stations) must be explicitly addressed. Standards for maximum hours and on-call periods need to be developed. Encouragement should be given to recognition of the healthcare industry as one that needs an industry-specific federal regulation.[74]

There have been few external reviews or audits of OHS in hospitals. In 2011, there was a Parliamentary Inquiry into violence and security arrangements in Victorian hospitals,[75] which was followed in 2015 by a Victorian Auditor-General's Office (VAGO) report on Occupational Violence Against Healthcare Workers.[76] A 2013 VAGO report on OHS Risk in Public Hospitals report found that: "More needs to be done by the boards of public hospitals in their role as employers, WorkSafe in its role as regulator, and the Department of Health in its role as health system manager, to reduce the unacceptably high risks to staff." The Auditor-General commented that neither WorkSafe nor the Department of Health had a "good understanding of sector-wide OHS risk." This was further epitomised (albeit unintentionally) in the list of categories of risk-and-hazard identification undertaken by safety inspectors. The list covered: physical work environment; manual handling; fall/trip hazard; occupational violence; infection/sharps; fire and evacuation; equipment/electrical hazard; hazardous substances; and radiation. 'Fatigue' as an OHS issue was a glaring omission. There now needs to be a call for an inquiry or audit into working hour arrangements in hospitals. Perhaps that is what is needed to put the issue of unsafe working hours for doctors directly into the legal spotlight.

It has been argued that proposals aimed at reducing working hours for doctors are counter-productive and result in: an increase in staff changeovers each shift with the need for more patient handovers that might be detrimental to continuity of care; the loss of adequate training time; increased costs to the healthcare system for resources and staffing to cover the shortfall. Effective implementation of safe working hours by healthcare organisations must incorporate robust and practical solutions with appropriate consideration of these issues. The challenge is to balance WHS goals with the demands of economic costs, medical training and service delivery.

The Royal Australian College of Surgeons position statement on safe working hours states that:

> Workable levels of fatigue need to be accepted as there are no economies or health work forces that have the capacity in funding or personnel to support complete cover shift work and restricted hour rostering for the senior consultant surgical staff. Strategies to protect junior staff from long hours do not protect them from the eventual need to deal with decision-making whilst fatigued in their careers as surgical consultants.[77]

Could the introduction of shorter working hours limit the availability of medical staff and services to the public resulting in greater risk? What are the economics involved? And, what are "workable levels of fatigue"? The Commonwealth Department of Health estimates a current oversupply of doctors, exaggerated by the high levels of international medical graduates, with this over-supply predicted to peak in 2020.[78] The per capita production of local medical graduates, and growth in the stock of foreign-trained doctors are among the highest in the world.[79] Rather than a smaller number of doctors working excessive hours, an increase in specialist medical training places would signify a move towards the provision of services by individuals working less dangerously fatiguing hours. The calculations required to cost the changes to service provision from the current state to best-practice fatigue-limiting rostering are complex. There are multiple variables that need to be considered, including restructuring of clinical work, and transfer of some aspects of work to daytime, or to non-clinician staff.[80] As excessive working hours generate significant levels of overtime, the

conversion of this economic model towards an increased number of junior doctor positions, and shiftwork rather than on-call systems, may offset costs by reducing overtime payments. There is a high proportion of pay-for-service to senior staff, and a geographical concentration of senior staff in metropolitan centres with a relative deficit in regional areas. An increase in specialist numbers would introduce market forces, and promote geographical re-distribution from metropolitan to regional services.[81] There may be a case for increasing training time in certain specialities to compensate for the reduced clinical exposure when moving from excessive to "safe" hours.

"Workable levels of fatigue" is a hard concept to define but must encompass the short- and longer-term risk to individuals of cognitive impairment, as well as the increased risk of errors and adverse events to patients. As the current working week for a junior doctor averages 78 hours, and a National Mental Health Survey of Doctors and Medical Students noted an association between high psychological distress and an average working week greater than 50 hours, it would seem sensible to aim for less than 50 hours to optimise the balance between patient and staff safety, training exposure, and service provision.[82]

When developing principles for fatigue management within medical settings, it is important to understand certain aspects of medical culture that continue to fundamentally misunderstand the effect of fatigue on performance and error risk. Some clinicians maintain that their performance remains unimpaired by fatigue.[83] These fallacies result in persistent beliefs that excessive hours and decision-making under states of fatigue are an unchangeable part of the job, possibly even a 'badge of honour'. As Coroner Lock noted, cultural aspects that may include tolerance of excessive hours by junior doctors, due to a fear of professional progression being limited by supervisors, colleges, and hospital administrators, may be an "impediment to reform".[84]

Conclusion

Employers have an obligation to provide a safe work environment for their staff and for others in the workplace. This obligation is recognised in many industries, and healthcare organisations should not be an exception to the rule. Robens considered that, "The preservation of health and safety at work is a continuous legal and social responsibility of all those who have control over the conditions and circumstances in which work is performed", and that a "positive declaration of over-riding duties…would encourage employers and workpeople to take a less narrow and more rounded view of their roles and responsibilities in the field."[85] Surely, he intended those duties to extend to the special characteristics of the healthcare sector and the need to manage the risks associated with shiftwork and extended hours for doctors.

Those words were elucidated more than 30 years ago and still little has changed for the working conditions of many doctors, with "little pressure from market forces to address the issue of fatigue among clinicians".[86] It is now widely accepted that there is a nexus between fatigue and accidents, and there is incontrovertible evidence that doctors in Australia are working hours that put them at a high risk of fatigue. It is not until a collective, concerted effort is made to address the substantial risks of unsafe working hours for doctors, will real change occur. Promulgating work health and safety laws in the healthcare industry may be the key to raising awareness amongst employees and creating incentives for employers to promote safer systems of work through better rostering practices.

Doctors have a duty of care to their patients, and employers have a duty of care to their employees and others in the workplace. Put simply, it is time for WHS laws to be properly applied to working hours in the healthcare sector so that communities can look after their doctors, who are looking after their patients.

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Last reviewed: 21 August 2018