

Sleep-Smart Rosters Help Keep Doctors Sharper and Safer

An Australian-first body clock rostering system trial underway at two leading Victorian hospitals aims to improve doctors' performance and wellbeing and enhance patient safety.

The country's best sleep researchers have joined forces to create a staff rostering schedule for shift work that best mitigates fatigue, based on the latest sleep and circadian rhythm research.

Austin Health and Monash Health intensive care unit doctors are taking part in the trial which is being led by the Cooperative Research Centre for Alertness, Productivity and Safety (Alertness CRC) as part of an ongoing effort to further improve workplace alertness, safety and health for staff and patients.

Extensive research has shown sleepiness at work can lead to poor concentration, absenteeism, accidents, errors and even fatalities, says Associate Professor Mark Howard, a sleep and respiratory specialist at Austin Health and Institute for Breathing and Sleep.

"What is more concerning is that shift workers are often employed in the most critical jobs – including the 30,000 plus doctors who work in Australian hospitals," Associate Professor Howard says. "Our new scheduling practices are based on fundamental principles in sleep and circadian medicine and are the result of an extensive review of published literature in the field, undertaken by a reference group of experts.

Research shows reducing the number of consecutive nights worked helps to minimise fatigue and drowsiness, because when you work a night shift you are less likely to get the optimal hours of sleep required. On top of that, there's a circadian rhythm effect that promotes sleepiness at night.

The trial puts these findings to the test, ensuring that the intensive care doctors work no more than three consecutive night shifts, have a minimum of 11 hours' rest between rostered shifts and that they work no longer than 13 hours straight. Shift patterns that run against the 24-hour body clock are also removed

Associate Professor Howard anticipates enrolled staff will feel fresher and more alert on the job. "We're hopeful these changes will result in improved vigilance and alertness, reduced errors and improved safety for both staff and patients," he says. "That would be a great result for all concerned."

He praised the organisations for getting on board. "This type of trial requires great willingness to change and we are proud that Austin Health staff and hospital management have embraced the opportunity to be innovative." Professor Yahya Shehabi, Director Research, Critical Care and Perioperative Medicine, Monash Medical Centre, said the trial will likely deliver long-term benefits too. "In addition to the immediate improvement in workplace effectiveness, the safety of staff and patients, we expect a positive impact on the long-term wellbeing and health of doctors and nursing. It is a rich area for future research".

The initiative was welcomed by the Sleep Health Foundation, which this week launched Sleep Awareness Week calling for a greater focus on the sleep needs of Australia's tens of thousands of shift workers. Prof Dorothy Bruck, Chair, Sleep Health Foundation said, "As we mark Sleep Awareness Week, it's exciting to see a project catering specifically to the needs of this often sleep-troubled population."

Monash Health is using a product developed by Melbourne-based optimisation software company Opturion Pty Ltd, an Alertness CRC industry partner, as part of its trial. The product is thought to be the first of its kind, combining logistics modelling software and workplace sleepiness software into a single tool. It incorporates

scheduling guidelines designed by leading sleep researchers at Monash University, Austin Health and the Institute for Breathing and Sleep.

Alan Dormer, CEO of Opturion stated, "Opturion is unique in its ability to build rosters that ensure complex service levels and compliance requirements are met at minimum cost. Alert safety is a further level of compliance sophistication, so it was a natural extension. We see this as a major opportunity for the health sector to improve performance and control costs, and we now have the software to deliver those outcomes," Mr Dormer says.

Professor Steven Lockley, the Alertness CRC Program Leader for Safety and Productivity Improvements and Professor at Monash University, says until now it has been difficult to incorporate knowledge of factors causing sleepiness into the rostering process. "The great advantage of this new tool is that those factors are automatically included when the schedule is generated, and, we hope, therefore minimising preventable medical errors due to poorly designed work shifts," Professor Lockley says.

The system is not only for medical personnel. "Alertness-safe staff rostering is particularly relevant for overnight workers, shift workers or people starting early in the morning", Professor Lockley said. "Our system could potentially benefit those working in many professions; not just in healthcare, but also mining, police, firefighters, ambulance service, pilots, ships' captains, long-distance trucking and others."

About the CRC for Alertness, Safety and Productivity

The Alertness CRC is an industry focused research program committed to maximising alertness in the workplace. The mission of the Alertness CRC is to 1) Promote the prevention and control of sleep loss and sleep disorders, and 2) Develop new tools and products for individuals and organisations to improve alertness, productivity and safety. <http://www.alertnesscrc.com/>

Further enquiries:

Susan Waterer, Communications Manager
T: 0423 194 593, E: swaterer@alertnesscrc.com

For interviews with Assoc Prof Mark Howard contact:

Julie McNamara, Deputy Director, Communications, Austin Health
T: 0419 595 688