PRISM

PREDICTIVE FATIGUE MANAGEMENT

Case Study

At an iron mine in South Africa, the PRISM fatigue management system helped reduce incidents by 35% while reducing the number of hours miners worked while in a high or severe fatigue status zone.

The Challenge

Using a proprietary algorithm and automated tracking system, PRISM alerts employees and supervisors to upcoming fatigue and then helps them manage it in advance, before it can pose a risk to safety and productivity.

The continuing mission of a prominent mining corporation in South Africa has been to advance its reputation as an industry leader in safety. This philosophy encouraged the management of one of its iron mines to be an early adopter of PRISM fatigue management, as part of their own aim in becoming one of the world's safest mine operations.

Managing fatigue was at the top of management's list, given the mine's 24-hour operations. Day and night shifts were each twelve hours, occurring in blocks of three or four consecutive days. Given the spreading awareness that shift work itself, in any industry, contributes to higher incidence of fatigue and consequent safety risk, the management understood that an effective method for mitigating this risk was needed—especially given that fatigue is not always related to shift work and can come from things like illness, insomnia, or poor nutrition.

The problem led management to seek a solution that could make a measurable impact on the mine's safety performance, sophisticated enough to balance the demands of the industry with the needs of the people comprising its valuable workforce.

The mine's management decided on the PRISM system for its ability to monitor as well as predict fatigue levels for individual employees in real time. PRISM was chosen also for its capability to assign countermeasures that diminish fatigue symptoms and reduce safety risk when an employee is identified as having greater susceptibility to fatigue.

PS Predictive Safety

Once implemented onsite, the PRISM system was able to begin generating fatigue status reports for individual employees, using an advanced analysis of employees' shift schedules as well as their own input about their nightly (or daily) sleep and their performance on a brief alertness test at clock-in. Able to interface easily with the mine's own SQL-based data system, PRISM quickly became a standard part of their everyday operations.

After implementing PRISM, employees and supervisors both overwhelmingly felt that the system allowed them to better manage their fatigue at work while also increasing their awareness of their own safety and performance. Employees also asserted to have a higher sense of comfort in the work environment knowing their crew mates' fatigue levels were being monitored.

Over one year since implementing PRISM, the mine saw their incident rates decrease by a significant 35%, corresponding to a 38% reduction in the number of hours its employees worked while in a high or severe fatigue status. Interestingly, night shift attendance increased by 3% as well, suggesting confirmation of employees' perception that the system improved their ability to self-manage their fatigue. Given these results, PRISM is now a fixture of everyday operations at this mine, having positively influenced both the operation's culture and safety performance in measurable ways.

Although it has roots in the mining industry, PRISM is not an industry-specific system and can be implemented in a wide variety of occupational settings such as manufacturing, health care, construction, transport, and more.

Find out more at:

www.predictivesafety.com/prism

The Solution

84%	Employees and supervisors who agreed that fatigue monitoring improved job safety
35%	Reduction in incidents
38%	Reduction of hours worked with a high or severe fatigue status
3%	Improvement in worker attendance on night shifts

About PRISM: Predictive Safety's PRISM fatigue management system provides protection and tracking to help individuals and their supervisors get in front of fatigue. Using a proprietary predictive algorithm and automated tracking system, it alerts them to upcoming fatigue and then helps them manage it in advance through an automated system. PRISM can help companies overcome the limitations of outdated, reactive safety systems to help ensure their workforces are fit for work every day, perform optimally, and can return safely home to their families. Learn more about preventative safety and performance solutions at **www.predictivesafety.com**.

PS Predictive Safety