INTRODUCTION
The Mines Safety and Inspection Act, 1994 (MSIA) and Regulations, 1995 (MSIR) introduced a generic health surveillance system for all mining employees who may be exposed to noise and particulates at work. This data, stored in the MineHealth database includes:
• a detailed work history;
• respiratory questionnaire;
• lung function test (spirometry);
• hearing test (audiometry) and
• a chest x-ray (for designated occupations/employees).

Additional tests may also be required for employees exposed to other hazards at levels that may impact health. Biological monitoring for lead, mercury or arsenic may be required, with appropriate clinical assessment based on likely health impacts.

THE MINEHEALTH SYSTEM
• All mining employees have an initial assessment within three months of commencing employment and periodic assessments every five years.
• Resource Safety oversees training, approval and re-accreditation of ‘approved person’ for MineHealth. Approval to test is for two years after which false testing is necessary.
• The MineHealth assessment is organised and carried by the employer and is often done at the same time as the pre-employment fitness medical.
• It is the responsibility of the approved person or medical practitioners to
  • explain the results to the employee and
  • notify the employer of the outcome of the assessment with advice on remedial action (if required).
• Clinical review of assessment is essential for effective intervention, when necessary.
• Amongst all stakeholders, there are a variety of perceptions about the MineHealth system. Some believe:
  • Clinical review at assessment is not required for epidemiological studies or
  • It verifies an employee’s fitness to work on mines, acting as a complete health check.
• Misperceptions have continued as producing regular and meaningful MineHealth reports has had considerable challenges ranging from problems with reporting software to data quality.

METHODS
In the main study, three separate cohorts were compared based on the number of health assessments completed. As each cohort had some differences in gender, age and occupation composition, only those with two assessments are reported in this poster. As no significant differences were observed between assessments, graphs represent the initial assessment.

FINDINGS
Overweight and Obesity
Figure 1 shows a greater proportion of male mining employees in WA who are overweight or obese, compared with females, smoking employees younger than 65 years of age (72% versus 56%) and males in the general Australian population (72% versus 65%). Overweight and obese rates for females in the WA mining industry exceed the general Australian female population (50% versus 50%, respectively).

Cigarette Smoking
Figure 2 shows a greater proportion of male mining employees in WA who are overweight or obese, compared with female mining employees younger than 65 years of age (72% versus 56%) and males in the general Australian population (72% versus 65%). Smoking rates at almost double the Australian population and increased rates of respiratory symptoms in smokers, smoking rates at least double the Australian population and significant hearing losses at the initial health assessment.

CONCLUSIONS
Analysis of MineHealth has shown that the WA mining industry has:
• a high proportion of overweight and obese employees
• increased rates of respiratory symptoms in smokers
• smoking rates at least double the Australian population and
• significant hearing losses at the initial health assessment.

Self-reported Respiratory Symptoms
Figure 3 shows the prevalence of self-reported symptoms from the respiratory questionnaire, and indicates:
• a significantly increased prevalence for all symptoms in smokers compared to non-smokers and those who have never smoked.
• cough, chronic cough and regular phlegm production are reported around five times more frequently in smokers than non-smokers.

Hearing Loss
Figure 5 demonstrates age corrected, percent binaural noise induced hearing loss at the initial health assessment by age. It clearly demonstrates the relationship between age and hearing loss highlighting those people in the industry with significant losses. This implies non-occupational/industrial exposures appear to also play a major role in hearing loss.

REFERENCES


www.wa.gov.au/mines