

## **Queensland Health in partnership with Department of Natural Resources and Mines Submission**

### ***Senate Select Committee on Health***

### ***Inquiry into the re-emergence of the pneumoconiosis disease, also known as 'black lung' or 'coal miner's lung'***

Queensland Health in partnership with the Department of Natural Resources and Mines (DNRM) welcomes the opportunity to make a submission to the Senate Select Committee on Health. This submission contains factual information from each department and does not constitute Queensland Government policy. Queensland Health notes this Inquiry is looking into and reporting on the re-emergence of the pneumoconiosis disease, also known as 'black lung' or 'coal miner's lung' or 'coal worker's pneumoconiosis' (CWP).

The Committee's black lung inquiry will examine:

- issues around detection of the illness
- treatment of cases
- whether reduced federal government hospital and health funding has impacted the ability for the public health system to respond to the re-emergence of this disease
- whether the removal of Health Workforce Australia has reduced capacity for workforce skills planning in relevant areas of the medical profession.

## **BACKGROUND ON THE QUEENSLAND COAL MINE WORKERS' HEALTH SCHEME**

The Coal Mine Workers' Health Scheme (formerly known as the Coal Board Medical) aims to help protect the health of Queensland coal mine workers by ensuring they undergo periodic health assessments. The scheme is regulated under chapter 2, part 6, division 2 of the Coal Mining Safety and Health Regulation 2001.

In December 1982, the Queensland Coal Board authorised the development of a coal miners health scheme which commenced on 1 January 1983 with a program to survey, by chest X-ray and lung function test, all colliery employees in Queensland.

The outcome was the Rathus-Abrahams report which recommended a permanent health scheme for coal miners. The Queensland Coal Board introduced the new Coal Industry Employees Health Scheme in May 1993, which resulted in the formation of the existing Coal Mine Workers' Health Scheme. The Rathus-Abrahams report and its findings are available on the DNRM website <https://www.business.qld.gov.au/industry/mining/safety-health/mining-safety-health/medicals/coal-board-medical>.

## Historical context for screening for respiratory conditions under the scheme

In 1982-83, health surveillance in the Queensland coal mining industry was focused on pre-employment screening for respiratory conditions and lung disease. Chest X-rays were compulsory for all persons entering the industry, however ongoing health surveillance was not compulsory before 1993. At that time, the Coal Board issued directives to mandate the ongoing health surveillance of the workforce at periods not exceeding five years. Chest X-rays were no longer compulsory for all, but for those at increased risk of respiratory disease.

The Queensland coal mining industry and the health monitoring of its workforce was managed by the *Queensland Coal Board* until its abolition in 1997-98. During this period, responsibility for administering the health scheme was assigned to DNRM. The scheme was ultimately transferred to come under the legislative framework of the *Coal Mining Safety and Health Act 1999* and is now contained within the *Coal Mining Safety and Health Regulation 2001*.

## Screening requirements under current health scheme for coal mine workers

The current scheme requires all coal mine workers to undergo a medical assessment prior to the start of their employment and then at least once every five years of their employment. These medical assessments require lung function tests and, where there is a risk of dust exposure, must also include chest X-rays. Medical examinations are performed under the supervision of a Nominated Medical Advisor engaged by the employer. Medical records are sent to DNRM for storage, and must be made available to the worker upon request. Further details about the Coal Mine Workers' Health Scheme are available on the DNRM website, <https://www.business.qld.gov.au/industry/mining/safety-health/mining-safety-health/medical/coal-board-medical>

Nominated Medical Advisors ordering chest X-rays are expected to provide sufficient information to the radiologist, outlining the worker's coal dust exposure and the need to assess the X-ray for pneumoconiosis to the International Labour Organisation (ILO) Standard International Classification of Radiographs of Pneumoconioses.

Specialist radiologists in Queensland, who read the majority of chest X-rays for the Coal Mine Workers' Health Scheme, are qualified to read chest X-rays to the ILO Standard. Specialist radiologists in Queensland are trained to that Standard and this has been confirmed by the Royal Australian and New Zealand College of Radiologists (RANZCR). An independent review team will consider how to ensure that the scheme can maintain sufficient local expertise in detecting pneumoconiosis (the review is discussed in more detail below). RANZCR are preparing a register of clinical radiologists who are available, competent and commit to using the ILO classification.

## ISSUE

As at 22 February 2016, there have been six confirmed cases of CWP reported by the Queensland coal industry since May 2015. In light of these cases, the Minister for State Development and Minister for Natural Resources and Mines, the Honourable Dr Anthony Lynham, has announced the following five-point plan to guide DNRM's overall response and key actions underway:



1. a review to improve the existing screening system, where coal mine workers have chest X-rays when they start work, at least every five years, and when they retire
2. taking action on coal mines exceeding regulated limits on dust levels
3. improving how information is collected and used to ensure cases are not missed
4. investigating options for regulatory change that may be required as part of the mine safety legislation review already underway
5. placing the issue on the agenda for the National Council of Mining Ministers.

The information provided in this submission relates to dot point one, a review to improve the existing screening system, and dot point three, ensuring cases are not missed.

### **Review to improve existing screening system**

The aim of this review is to improve the existing screening system, where coal mine workers have chest X-rays when they start work and at least every five years thereafter.

DNRM has engaged the Monash University Centre for Occupational and Environmental Health to conduct an independent review of the scheme. The review is being conducted by a team of academics and specialists from Monash University in collaboration with the University of Illinois at Chicago.

The review will determine if the current medical assessment regime is an effective method for the early detection of pneumoconiosis in coal mine workers and what changes may be required to achieve accurate detection of the disease. The review is expected to deliver interim findings by the end of March 2016 and more detailed recommendations mid-year.

The review will determine:

- the adequacy and effectiveness of the existing medical assessment regime
- the expertise required to effectively monitor for pneumoconiosis
- the availability of necessary expertise in Queensland
- a strategy to ensure current mine workers are effectively screened
- recommendations about the current scheme to ensure it is fit for purpose for the detection of occupational lung disease through X-ray, spirometry, respiratory symptoms and other relevant medical information.

Regular updates are being provided to mine workers, key stakeholders and staff involved as this work progresses and new information becomes available about outcomes of the review.

Supporting the review team is a reference group comprising representation from mine workers, mine operators, medical professionals and regulators. While the role of the reference group is confined to assisting the review team to set and meet the scope of its review task, other subject matter experts may be invited to participate on an as-needed basis with the approval of the Chief Mine Safety and Health Officer.

Membership of the group is based on Queensland's tripartite consultation model for mining, to ensure key stakeholders are engaged in all aspects of the coal mining safety and health legislative framework. While participation is expertise based, the reference group will also help promote understanding of the review process and its findings, and in seeking broader input on aspects of the study if required by the review team.

The reference group is not expected to provide advice on the control of respirable dust, or on regulated dust exposure limits and related issues. These important issues will continue to be addressed as a dedicated program of work for this initiative through the Coal Mining Safety and Health Advisory Committee which will be considering the findings of the review as part of the overall CWP response.

### **Ensuring Cases are not Missed**

A confirmed case of CWP is one where a positive identification has been reported to the Health Surveillance Unit of DNRM by the coal mine worker's Nominated Medical Advisor or other medical expert and validated by the DNRM Occupational Physician. A confirmed diagnosis can be made in some circumstances by chest X-ray only, while other cases may require further investigation by CT scan. In some cases a lung biopsy is necessary.

The results of medical assessments taken under the scheme are provided by the medical professionals involved directly to the mine worker concerned. DNRM receives copies of the medical assessments and X-rays for storage that have already been completed and reviewed by doctors then returned to the patient.

In cases where the mine worker concerned is no longer working in a Queensland coal mine, a confirmed diagnosis is usually notified to DNRM by their doctor or appropriately qualified medical professional for ratification by the Occupational Physician. Support is available under the current scheme to assist coal mine workers in obtaining copies of historical medical records. This information is published on the DNRM website.

### **DETECTION OF COAL WORKERS' PNEUMOCONIOSIS**

The current health screening program is regulated under chapter 2, part 6, division 2 of the Coal Mining and Safety Regulation and overseen by DNRM. Health assessments are required before a person starts work as a mine worker and periodically, as decided by the employer's Nominated Medical Adviser, but at least once every 5 years. There is no requirement for a health assessment prior to someone leaving employment as an underground coal miner.

Diagnosis of simple coal worker's pneumoconiosis requires identification of relevant, and usually lengthy occupational history of coal mining, associated with characteristic changes on medical imaging, as well as assessment of lung function. Health assessment of coal mine workers should be carried out by practitioners who have an understanding of industrial dust diseases. Where previous health assessments have been carried out, the results of these should be available to the assessing practitioner to enable comparison with past results and identification of any changes in imaging results or reduction in lung function.

Queensland Health has been working with DNRM to assess whether there is evidence that the scheme, which began in 1993, has missed cases of CWP in Queensland. Data from the



Queensland Hospitals Admitted Patient Data Collection (hospital data) has been matched against data on coal miners held by DNRM. A review of accessible records for these patients will be undertaken.

Whilst screening is a requirement of the current scheme, prevention is the most important issue in coal worker's pneumoconiosis, as once established there is no cure for the disease. This requires active management and intervention at the work site to ensure exposure to coal dust is minimised or eliminated.

## **TREATMENT OF INDIVIDUALS WITH COAL WORKER'S PNEUMOCONIOSIS**

Early detection is critical as no treatment will reverse the effects of exposure to coal dust on the lungs. If CWP is diagnosed, reduction or cessation of exposure to coal dust and other inorganic dusts is the mainstay of management of the disease. Continuing to smoke will accelerate any lung function deterioration related to CWP. As smoking also causes chronic airway obstruction (which is the major cause of lung impairment and disability in CWP) all coal miners who smoke and particularly those with recognised lung disease should receive advice on smoking cessation.

Clinical management of advanced disease is similar to the management of any advanced interstitial lung disease.

## **IMPACT OF REDUCED FEDERAL GOVERNMENT FUNDING ON THE ABILITY OF THE PUBLIC HEALTH SYSTEM TO RESPOND TO THE RE-EMERGENCE OF COAL WORKER'S PNEUMOCONIOSIS**

The primary and most effective means of reducing the prevalence of coal worker's pneumoconiosis is prevention and early detection. Preventive efforts revolve around managing dust levels in coal mines which is overseen by DNRM.

Through the screening program, early detection is largely undertaken by occupational physicians and general practitioners.

Outside of the screening program, the general health care of a miner or ex-miner is provided by general practitioners, not Queensland Health.

The management of advanced cases of coal worker's pneumoconiosis may be provided by Queensland Health or the private sector.

The reduction of Federal Government funding for the Queensland Public Health system is unlikely to have contributed to the re-emergence of coal worker's pneumoconiosis.

## **IMPACT OF THE REMOVAL OF HEALTH WORKFORCE AUSTRALIA ON THE CAPACITY FOR WORKFORCE SKILLS PLANNING IN RELEVANT AREAS OF THE MEDICAL PROFESSION**

The Office of the Chief Medical Officer has advised it has no evidence a relationship can be drawn between changes in Health Workforce Australia and medical workforce oversight, skills and training.