

10 November 2020

Professor Paul Kelly
Commonwealth Acting Chief Medical Officer
Chair - National Dust Disease Taskforce
Email: dust.consultation@health.gov.au

Dear Professor Kelly

Thank you for the opportunity to provide comment on the National Dust Disease Taskforce (the Taskforce) Phase 2 Consultation Paper. Resources Safety and Health Queensland (RSHQ) has a strong interest in occupational lung disease as the regulator of health and safety in Queensland's mining, quarrying, petroleum, gas and explosives industries.

Since the Queensland Government's submission to the Taskforce in November 2019, RSHQ has been established as an independent statutory body under the *Resources Safety and Health Queensland Act 2020*. RSHQ's regulatory functions were formerly part of the state's Department of Natural Resources, Mines and Energy (DNRME).

As outlined in DNRME's contribution to the previous submission, many reforms to address mine dust lung disease have been implemented to protect over 53,000 mining and quarry workers in Queensland. RSHQ remains focussed on sustaining and enhancing these reforms that will reduce health harms related to respiratory hazards.

The enclosed submission provides an update on progress made over the last 12 months to protect workers' respiratory health. We are unable to make comment on many of the Consultation Paper questions related to engineered stone. However, I trust the Taskforce will find our submission informative, where RSHQ's contribution can support common learnings and opportunities.

As an independent statutory body, this submission does not represent the views of the Queensland Government.

If you require additional information or would like to discuss this matter further, please contact me directly or alternatively your team can contact Mr Dean Barr, Director – Occupational Health and Hygiene, on (07) 3199 7967.

Yours sincerely



Mark Stone
Chief Executive Officer
Resources Safety and Health Queensland

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RESOURCES SAFETY AND HEALTH QUEENSLAND SUBMISSION TO THE NATIONAL DUST DISEASE TASKFORCE

NOVEMBER 2020

REGULATORY AND GOVERNANCE

Relevant to dust-related diseases, what mechanisms exist or could be further developed to ensure effective enforcement of regulations and codes of practice?

Following the re-identification of mine dust lung disease in Queensland, regulatory amendments and new standards were introduced that prescribed minimum requirements for dust control, dust monitoring and the conduct of respiratory health surveillance. However, complimentary mechanisms to ensure compliance with these changes were also implemented. This has involved a combination of regulatory actions from RSHQ including upfront assessment of experience and competence of industry participants, analysis of dust monitoring data and disease reports, auditing against standards and investigations where required.

Upfront assessment

Amendments to the Coal Mining Safety and Health Regulation 2017 (Qld) that commenced in 2019, provided a statutory basis for RSHQ approving doctors and other medical providers undertaking examinations for the Coal Mine Workers' Health Scheme (the Scheme). [Quality Innovation Performance](#) provides a large part of this assessment on behalf of RSHQ, where applicant qualifications and experience are evaluated to ensure they are suitable to undertake examinations to the appropriate standards and guidelines.

There are currently 819 RSHQ approved providers across Australia on our register, with 297 operating outside of Queensland. The register is available on RSHQ's [website](#) and includes doctors undertaking and reporting on examinations, radiologists and clinics taking and reporting chest X-rays, practices performing spirometry and spirometry training providers. It is expected that the number of providers will reduce as transitional arrangements end on 1 March 2021.

Compliance with dust control and monitoring standards

[Standards for dust control and monitoring](#) at underground and surface coal mines have been developed that require coal mining operations to establish and implement dust control strategies that extend across all sections of the mine site. Effective implementation of these standards should assist operations to minimise dust exposure that will in turn prevent dust related disease. Inspections and audits are conducted by RSHQ to monitor and assess implementation of these standards.

Similarly, a guideline has been published for the management for respirable dust in mineral mines and quarries. The guideline sets out a way for persons with an obligation to manage respirable dust exposures to achieve an acceptable level of risk to persons from operations, by stating what is required at each stage of the risk management process. Importantly, the guideline requires mines and quarries to submit respirable dust sampling results to RSHQ. This has been an important policy step and RSHQ now has a level of visibility of industry risk not previously held. This has generated new regulatory activities, including inspectors following up exposure standard exceedances to ensure that controls are effective and reliable.

Compliance with requirements for doctors and medical providers

In addition to upfront assessment, RSHQ has implemented audits to ensure doctors and medical providers approved by RSHQ are delivering quality respiratory health surveillance against the required standards. This includes providers registered with RSHQ across Australia. Those that do not meet quality requirements can be removed from the register and excluded from conducting examinations under the Scheme. These audits cover both screening examinations and follow-up investigation of abnormal results.

RSHQ has engaged the Thoracic Society of Australia and New Zealand (TSANZ) to design and undertake a spirometry clinical audit program, as part of the on-going compliance and quality improvement processes for the Scheme. TSANZ reviews spirometry conducted by RSHQ approved practices against the [TSANZ Standards for the Delivery of Spirometry for Coal Mine Workers](#) (TSANZ Standards). The program focuses on test quality and spirometry reporting. Spirometry performed by practices is currently being audited as part of the first round of audits undertaken by TSANZ. Initial areas for improvement identified, include ensuring acceptability and repeatability criteria are met, and including key data on the spirometry report, such as all curves and values, comments on test quality and the use of appropriate reference values.

The University of Illinois at Chicago (UIC) is currently undertaking a review of chest X-ray image quality and reporting against the ILO's [International Classification of Radiographs for Pneumoconioses](#). Performed on behalf of RSHQ, a sample of images and ILO reports have been transferred to the UIC and will be reviewed by early 2021. In addition to the UIC audit, the mandatory provider of chest X-ray ILO dual-reading under the Scheme, Lungscreen Australia, also monitors quality of images taken and ILO reporting by B-reader qualified radiologists. Regular feedback to clinics and radiologists is provided by Lungscreen Australia for continuous improvement and performance management.

RSHQ has also undertaken audits of medical assessment reports it receives to ensure any abnormal screening results are investigated in accordance with the Scheme's [Clinical Pathways Guideline](#) (CPG). This has resulted in an improvement in doctor compliance with the CPG and a number of coal mine workers receiving appropriate follow-up tests that may not have otherwise.

While RSHQ has not regulated the quality of high-resolution computed tomography (HRCT) under the Scheme, it commissioned a [review of HRCT](#) scans and reports to identify any opportunities for improvements. The review used the combined experience of world leading experts in chest radiology to review each scan twice and resolve any disagreements in conference with respiratory physicians. While the review found that the original results for the majority of HRCT scans were confirmed by the expert team, it also identified abnormalities consistent with mine dust lung disease that were not reported. A key recommendation from the review is that the reporting of HRCT scans for mine and quarry workers should be limited to specialist radiologists who have additional training and report cases of occupational lung disease in their routine practice. It was also recommended that a protocol be developed for dual reads of HRCT scans utilising a standardised system, including standardised images similar to the ILO classification process employed with plain chest X-ray.

What learnings from the re-emergence of accelerated silicosis as an occupational health and safety risk can be applied to enhance workplace health and safety systems more generally?

The re-identification of occupational lung disease in the Queensland coal industry, and reforms to the Coal Mine Workers' Health Scheme, has guided RSHQ's work to ensure the respiratory health of other resource sector workers are protected, in particular mineral mine and quarry workers.

Building on RSHQ's guideline for management of respirable dust in Queensland mineral mines and quarries, the Mining and Quarrying Safety and Health Regulation 2017 (Qld) has been amended to ensure that Queensland mineral mine and quarry workers undertake periodic respiratory health surveillance. These [regulatory changes](#) require operators to consider all respiratory hazards, ensuring that workers are protected from respirable dust as well as other hazards including diesel engine exhaust and welding fumes.

RSHQ has also been considering occupational health risk generally across the resources sector. This has included workers in the coal seam gas industry with a [rig health risk assessment](#) completed in May 2020.

These re-emerging risks have highlighted that preventing disease and other health harms must be a focus for workplace safety and health management systems, in addition to serious safety risks.

WORKFORCE ORGANISATIONAL CULTURE

What are examples of good dust exposure workplace monitoring processes? (Where possible please provide evidence to support the effectiveness of these processes).

RSHQ's [Recognised Standard 14](#) for monitoring respirable dust in coal mines details a methodology for developing a risk based monitoring program to ensure collection of a statistically based data set of personal exposures. This includes the requirement of programs to be reviewed and endorsed by competent persons (Certified Occupational Hygienists) and sampling to be conducted by competent technicians, to ensure data is valid.

Personal exposure risk to mine dust must be considered across the entire mine site. RSHQ has developed standardised industry [similar exposure groups](#) (SEGs) to facilitate industry reporting of exposure data and the benchmarking of performance.

All coal mining operations are required to provide exposure data to RSHQ at quarterly intervals and these are stored on a secure centralised database for periodic analysis. This data is displayed on the RSHQ [website](#) for transparent reporting on exposure and compliance performance to industry stakeholders.

RESOURCING AND CAPABILITY

What specific resources (e.g. information, education, other supports etc.) are required, that are not currently available, for small to medium sized businesses, to ensure that owners and staff are fully informed of the availability and correct use of control methods, including by workers from non-English speaking backgrounds?

Accessibility to quality respiratory health surveillance

In April 2020, RSHQ partnered with [Heart of Australia](#) to provide a mobile health service for current and former mine and quarry workers in regional Queensland, to support the early detection and prevention of mine dust lung diseases. The service will have the capacity to conduct full respiratory health surveillance, including chest X-ray and spirometry screening, as well as follow-up investigations like HRCT and complex lung function testing where required. In addition, there will be opportunities for preventative education and respiratory protective equipment fit testing. The service will commence in 2021 and focus on regional and remote areas, where access to RSHQ approved providers is reduced, to improve health outcomes for these workers.

One-stop-shop for advice and support

Current and retired workers can find it difficult to access information and services associated with mine dust lung disease. In March 2020, the Mine Dust Health Support Service was established in Queensland as a joint initiative with the Office of Industrial Relations and WorkCover Queensland. The service provides confidential access to counselling, and guidance regarding respiratory health screening, community support and compensation entitlements. To date, the service has supported almost 200 individuals and can be contacted on 1300 445 715 or at info@minedusthealthsupport.com.

Information

RSHQ recognises that employers, operators, current and former workers (including their family members and representatives) require information and support. Our approach has been to develop guidance and support

for each audience.

In particular, our [Miners' Health Matters](#) website was developed to provide accessible advice to current and former workers and their families in a variety of media, including video. The site has recently been updated to provide advice on mine dust lung diseases more generally.

In addition, RSHQ has updated its series of [pocketbooks](#) that explain respirable dust, mine dust lung disease and the examinations required to detect disease early. The pocketbooks are available in print and online versions. The Queensland Government also provides a translation service that allows individuals from a non-English speaking background to request a translated version of the documents.

With a specific focus on dust related diseases, what mechanisms exist that could be used as a basis for providing a coordinated national system with representation across stakeholder disciplines for identifying and communicating emerging issues?

RSHQ is establishing a Resources Medical Advisory Committee (RMAC) to consider and provide advice on medical matters relating to the occupational health of Queensland resource sector workers. RMAC will include up to seven experts from the fields of occupational medicine, respiratory medicine, radiology, epidemiology and an international expert in one of these fields. It will engage with stakeholders to inform its agenda and provide advice to guide the development of policy and protective measures that evolve with advances in medical knowledge, technology, best practice and changes to occupational health risks.

RESEARCH AND DEVELOPMENT

What are the specific challenges related to linking workplace exposure with disease development (at a later date) and how should these be addressed?

Regulatory limits for dust exposure have been reduced in Queensland and mechanisms enhanced for reporting monitoring data and diagnosed cases of disease. Regulatory amendments commencing on 1 September 2020 reduced the occupational exposure limits (OEL) in line with those published by Safe Work Australia. The OEL for respirable coal dust is now 1.5 mg/m³ and 0.05 mg/m³ for respirable crystalline silica across all mines and quarries.

However, RSHQ recognises the importance of electronic data collection and storage to support reporting and analysis of workplace exposure monitoring and health surveillance data. Work to enhance our IT platforms for these purposes continues. However, the more consistent these methods are across jurisdictions, the greater potential there will be to better understand relationships between workplace exposure, other factors and disease development. Sufficient detail and consistency in describing work history such as industry sectors, job titles and similar exposure groups are critical to this.

The establishment of RSHQ's exposure database will assist in the analysis of future diseases after sufficient data maturity (>10-15 years). The ability to assign each resource sector worker with a unique identification number that links personal exposure data and health surveillance records is a measure being considered.

RSHQ is also delivering an electronic health records management system (ResHealth) that enables employers, workers and doctors to complete medicals for coal mine workers online and securely store digital health records. This data will then be available for analysis and research that will better inform the effectiveness of workplace health and safety management systems and allow targeted responses to identified risks.

What are three key pieces of information about dust disease that you would like to see collected at a national level? What are the three key uses of the information collected at a national level?

Three key pieces of information about dust disease RSHQ would like to see collected at a national level:

1. disease type
2. work history and job roles including any exposure data
3. other relevant factors e.g. smoking history.

It should be stressed that this would require a highly consistent approach with sufficient detail to allow the information to be used by relevant entities. There is also the risk of duplicating results if reports are being received from more than one source without a way of identifying individual cases.

The three key uses of this information could include:

1. assist in diagnosis to allow doctor consideration of mixed or unknown exposures (e.g. coal mine worker with limited mining history in Queensland but extensive tunnelling experience in another jurisdiction)
2. workers diagnosed with disease outside of the jurisdiction from where exposure occurred can be identified to inform management of the hazard (e.g. RSHQ has detected respiratory disease in workers coming to Queensland from other jurisdictions)
3. benchmark performance across jurisdictions and enable more comprehensive research and sharing of emerging risks.

The interim advice identified immediate research priorities, which has led to a research funding grant opportunity announced by the Medical Research Future Fund and National Health and Medical Research Council. Are there other research priority areas that have not been identified in the interim advice that should be considered, and why? What research areas should be a priority following this first round of research funding?

RSHQ is a strong supporter of research into occupational lung disease and methods to reduce risks for workers and ensure any disease is detected early. Our current research priorities include a prevalence study of coal mine dust lung disease in Queensland being delivered by the Cancer Council, and a cancer and mortality study being completed by Monash University.

Other potential areas for research that have been conveyed to RSHQ include:

- recommendations by the Thoracic Society's October 2020 [Position Statement](#) on respiratory surveillance for coal mine dust and artificial stone exposed workers in Australia and New Zealand, including:
 - comparison of diagnostic utility of ultra low-dose computed tomography (uLDCT) with that of ILO classification of plain chest X-rays
 - utility of requiring workers to undertake lung diffusing capacity tests (DLCO) every three years or less in comparison to spirometry
- development of a protocol for dual reading of HRCT scans utilising a standardised system, including a set of standardised images similar to the ILO classification process employed with plain chest X-ray, as recommended by RSHQ's commissioned [review of HRCT scans](#).