

The Thoracic Society of Australia and New Zealand response to the Occupational Health Risks in the Queensland Resources Industry Consultation

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Introduction

The Thoracic Society of Australia and New Zealand (TSANZ) is a health promotion charity whose mission is to lead, support and enable all health workers and researchers who aim to prevent, cure, and relieve disability caused by lung disease. TSANZ is the only Peak Body in Australia that represents all health professionals working in all fields of respiratory health.

The TSANZ has a membership base of over 1800 individual members from a wide range of health and research disciplines. The TSANZ is a leading provider of evidence-based guidelines for the treatment of respiratory disease in Australia and New Zealand and undertakes a large amount of professional education and training. The TSANZ is also responsible for significant research administration and coordinates an accredited respiratory laboratory program.

As the leaders in lung health, we promote the:

- highest quality and standards of patient care
- development and application of knowledge about respiratory health and disease
- highest quality air standards including a tobacco smoke free society and effective regulation of novel nicotine delivery systems
- collaboration between all national organisations whose objects are to improve the wellbeing of individuals with lung disease and to promote better lung health for the community
- professional and collegiate needs of the Membership

The TSANZ are grateful for the invitation to contribute to the evaluation of health risks in the Queensland resources industry. Occupational lung diseases are one of the leading occupational health risks, and the implementation of a clear, risk-based strategy to ensure occupational health risks are effectively managed across the resources industry is of great importance for Australian workers. We will continue to advocate through evidence-based practice and policy to improve respiratory health and prevent respiratory disease for all.

Consultation Topic

The re-identification of mine dust lung disease in the Queensland mining industry demonstrated that in addition to serious safety risks, preventing disease and other health harms must also be a focus. To inform the overall review of occupational health risks relevant to the Queensland resources industry, the Resources Safety and Health Queensland (RSHQ) is seeking stakeholder views on current and emerging occupational health risks, specifically:

- What do you believe are significant current and emerging occupational health risks?
- What associated evidence or data do you have to support this? Please provide.
- How are these occupational health risks currently being controlled and monitored?
- What opportunities are there for improvements in the way occupational health risks are identified, controlled, monitored and regulated in Queensland?

TSANZ Feedback

In terms of the current and emerging occupational health risks, and supporting evidence, and controls, we invite the RSHQ to review the following publications which have originated from the TSANZ Special Interest Group in Occupational & Environmental Lung Disease:

Deborah H Yates, Jennifer L Perret, Margaret Davidson, Susan E Miles and AW Musk. Dust diseases in modern Australia: a discussion of the new TSANZ position statement on respiratory surveillance. *Med J Aust* 2021; 215 (1): . || doi: 10.5694/mja2.51097

<https://www.mja.com.au/journal/2021/215/1/dust-diseases-modern-australia-discussion-new-tsanz-position-statement>

Perret JL, Miles S, Brims F, Newbiggin K, Davidson M, Jersmann H, Edwards A, Zosky G, Frankel A, Johnson AR, Hoy R. Respiratory surveillance for coal mine dust and artificial stone exposed workers in Australia and New Zealand: A position statement from the Thoracic Society of Australia and New Zealand. *Respirology*. 2020 Nov;25(11):1193-202.

<https://onlinelibrary.wiley.com/doi/full/10.1111/resp.13951>

Hoy R, Burdon J, Chen L, Miles S, Perret JL, Prasad S, Radhakrishna N, Rimmer J, Sim MR, Yates D, Zosky G. Work-related asthma: A position paper from the Thoracic Society of Australia and New Zealand and the National Asthma Council Australia. *Respirology*. 2020 Nov;25(11):1183-92.

<https://onlinelibrary.wiley.com/doi/full/10.1111/resp.13951>

There are many opportunities to improve the risk of occupational lung disease in Queensland and we provide the following recommendations.

- 1. The TSANZ strongly recommend the formation of a state-wide, virtual, multidisciplinary team meeting to provide expert advice for workers suffering from (and potentially suffering from) occupational respiratory disease.**

Currently, multidisciplinary teams (MDT) are the accepted standard of care for diagnosis and management of interstitial lung disorders in clinical practice. We recommend establishment of at least one hospital based multidisciplinary team (MDT) meeting, to include respiratory and occupational physicians, radiologists, and other appropriate experts (e.g., occupational hygienists, allied health).

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This team's main purpose would be to come to a consensus regarding diagnosis of an occupational lung disease, enable accurate recording of information compatible with a national registry, and enable appropriate return-to-work strategies. This approach would also encourage education of health care providers, facilitate communication amongst disciplines, and ensure consideration of all aspects of prevention of respiratory disease. We note that this group must be adequately resourced in order to produce effective outcomes and is likely to require ongoing stable funding.

2. The TSANZ strongly recommend the formation of a functioning occupational lung disease Register which is closely linked to the nascent Federal Register.

The resurgence of coal mine lung dust diseases and of coal-workers and silicosis in Queensland should have been avoidable if there had been a robust system for accurately recording incident cases. Such a register supported by adequate resourcing, capturing information on disease in workers through clinical notification and screening pathway is essential. The absence of a system to achieve these aims continues to hamper the provision of timely and accurate advice to individual workers, insurers, employers and regulators. Information collected for the register regarding the natural history and prognosis of the various occupational lung disorders should also improve understanding of the long-term prognosis of affected workers.

3. The TSANZ recommends establishment of expert outpatient occupational lung clinics.

Improved and timely access to clinical care for dust-exposed workers is essential and requires support. Specialised occupational lung clinics are currently not available in the public sector in Qld, despite the need for rapid access to occupational respiratory physicians for those with potential occupational lung issues. The needs of rural areas and transportation realities for workers also need to be taken into account. In addition, such clinical expertise could be utilised for the investigation of outbreaks of occupational lung disease which may present as an index case (such as occurred with the outbreak of artificial stone silicosis).

Several models for such support exist including rural outreach clinics with visiting experts, and/or the establishment of occupational lung clinics in major centres and hybrid models, and/or the use of innovative technological approaches. Provision of psychological and social support would also be greatly beneficial to workers and ideally would also be offered at the same occupational lung clinics. We note that a monopoly based in a large city could give rise to access and travel issues for workers in more remote areas and advise against this approach. A mixed or hybrid model in conjunction with traditional clinical consultation should be explored. Some aspects of care are potentially achievable using telehealth and associated technologies, and this model needs careful planning and evaluation. Data obtained from such outpatient occupational lung assessments could be evaluated at the state MDT as recommended above. Technological challenges and quality control processes for any such model would need careful planning and continued prospective evaluation. Training in occupational lung disease in expert clinics could be supported by dedicated scholarships for a range of medical and allied health professionals.

4. The TSANZ recommends the QLD Government continue to implement respiratory surveillance in workers exposed to occupational lung risks.

In addition to primary prevention of exposure, an important way of monitoring the efficacy of such primary prevention is effective monitoring and surveillance. The TSANZ is aware of the QLD government's commitment to expanding the scope of respiratory surveillance to a wider range of industries where dust exposure exists, and congratulates it on this endeavour. TSANZ recommends

continuation of expansion of respiratory surveillance where a hazard exists, and also more detailed monitoring of dust exposures. Regular review of potential hazards arising from changes in changes in industrial processes or new mining endeavours is also recommended.

5. The TSANZ recommend enhanced respiratory surveillance and expansion and support of innovation in this field using novel technologies.

The QLD government has been leading in the adoption of enhanced respiratory surveillance techniques including complex lung function testing and low dose high resolution CT scanning, and TSANZ congratulates it on these issues. In addition, there are other novel technologies available, for example, automated image interpretation and lung function interpretation, and novel techniques such as exhaled breath analysis and forced oscillation technology (FOT). These potentially could prove useful in identifying occupational lung diseases at their earliest stage and should be considered for future evaluation. Also, emerging ways of estimating risk (e.g. risk score modelling) are under development and may be applicable in the near future.

6. The TSANZ recommends the QLD Government invests in education for affected workers and their families, and also in further education of health professionals regarding prevention and treatment of occupational lung disease.

Education and health literacy are vital and play a significant impact in determining lung health. Health literacy should be made more available to workers and their families, to ensure they are equipped to with the right knowledge about how to work in a safe environment and how to cope with an occupational respiratory disorder. Furthermore, enabling growth in expertise among younger respiratory and occupational physicians should allow establishment of future expertise in preventing, identifying and treating occupational lung diseases. Support of such training in the form of fixed term scholarships (e.g., for physicians, nurses, psychologists and allied health) could enable rapid transition of education into practical improvements in clinical care.

Concluding Remarks

Occupational exposures are highly important determinants of respiratory health. In addition to the many cases of totally preventable cases of pneumoconiosis, approximately 15% of adult-onset asthma and COPD as well as 10-30% of lung cancer cases are estimated to be caused by hazardous occupational exposures. The TSANZ applaud Resources Safety and Health Queensland for its implementation of improvements in this area, hope to continue to such work together to address important respiratory health issues and to improve respiratory health for all Australian workers.