

Answers to questions on notice

Dr Graeme Edwards, Senior Consulting Physician, Occupational and Environmental Medicine
2021 Review of the Dust Diseases scheme, Hearing 16 February 2022

1. Page 37: The Hon. ANTHONY D'ADAM: Could there be some advantages in terms of having a comprehensive screening process, worker education, that a licensing scheme that extends down to the work level would have some benefits though?

DR GRAEME EDWARDS: Yes, however a comprehensive screening process and worker education should be seen as separate, overlapping, and complementary strategies to an effective licensing scheme.

Screening former and current workers aims to identify the magnitude of the problem from those workers who have already been exposed; and to create baseline data for those current and future workers who might be adversely exposed in the future. The requirement to create baseline data, already in your existing legislation, can be enhanced as an audit requirement of a licensing scheme.

Worker education is to enhance the insight, understanding and behaviours of current and future workers. Auditing training records, the content of educational material, and the frequency of educational encounters as a condition of maintaining a license will optimize compliance.

However, the evidence presented to the National Dust Diseases Taskforce, referenced in the supporting documents to the Taskforce's final recommendations: indicated across all surveyed jurisdictions, screening and education were not enough to achieve the sustainable behavioural changes required.

The Taskforce noted in Queensland, the first jurisdiction to adopt an industry sector code of practice, from submissions provided by Queensland's Office of Industrial Relations, while compliance had substantially improved with their second and third rounds of audit activity, non-compliance was still evident. Complementary research conducted for the Taskforce also revealed that the impact on behaviour change associated with the intense media interest and educational activities by all stakeholders across all the jurisdictions, including New South Wales, was waning. For these reasons, the Taskforce recommended SafeWork Australia progress developing a model licensing scheme for all jurisdictions, including New South Wales, with demonstrable compliance with safe work practices by July 2024, otherwise a ban on product importation should be enacted.

Recognizing the fundamental elements necessary for a cost-effective licensing scheme within the NSW context, there is a lot that can be done by various stakeholders now. For example, the Government of the day could give industry formal in principle notice, which would minimize any period of grace deemed necessary to implement a licensing scheme in NSW.

2. Page 40: Mr DAVID SHOEBRIDGE: I did have another question about the artificial intelligence being used on X-rays and whether that is a good or a bad thing, given, as I understand it, your firm position is CT scans should be used.

The CHAIR: Mr David Shoebridge, are you putting that question on notice?

Mr DAVID SHOEBRIDGE: Yes, I will put that on notice and we might get a clearer answer on notice.

DR GRAEME EDWARDS: “Reading” a radiological image requires considerable training and practical experience, particular when looking at subtle changes that may be at the limits of resolution of the imaging technique. Multiple technical features, confounded by intrinsic individual morphological variation can influence the interpretation of an image – both CXRs and CT’s.

Artificial intelligence can be used for standardizing the analysis and subsequent interpretation of radiological imaging and is showing promising research results. More recent advances appear to have reduced the rate of false positive reports. While some commercial agencies are already marketing software to radiology service providers, cost (purchase, process time, and professional time) with the continued potential for false positive results, have restrained market penetration. I refer the Committee to the Royal Australian and New Zealand College of Radiologists (RANZCR) if further information is required.

AI software has a ‘very good’ potential to reduce intra- and inter-individual radiologist variation; and reduce the number of false negative reports. This capability will be particularly important when the envisaged preventative strategies become more effective, leading to a reduction in the case load of experienced radiologists over time. AI assisted radiological interpretation will then become an invaluable aid in support of the health of those who need accurate early recognition of pathology, at a stage when interventions have the best chance to be effective.