



Australian Government
Department of Health

**National Dust
Disease Taskforce**

A close-up photograph of a worker wearing blue overalls and orange safety gloves. The worker is using a red angle grinder to grind a concrete surface. The background is a plain, light-colored wall.

Final Report to Minister for Health and Aged Care

JUNE 2021

THE NATIONAL DUST DISEASE TASKFORCE'S FINAL REPORT

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Foreword

The Hon Greg Hunt MP
Minister for Health and Aged Care

Dear Minister

On behalf of the National Dust Disease Taskforce (Taskforce), we are pleased to present this Final Report to you.

The key driver for the establishment of the Taskforce was concern about the emerging trend of new cases of accelerated silicosis in Australia. The re-emergence of silicosis not only raised questions about the adequacy of the systems in place for the prevention, early identification, control and management of this disease, but also in relation to broader occupational dust diseases.

Since the release of our Interim Advice in January 2020, we have commissioned further research and undertaken additional consultation with a broad range of stakeholders to explore our early findings, test our early recommendations, and refine strategies and priority areas for action.

We would like to acknowledge and thank all who have contributed to our work, particularly the affected workers and their families and carers who participated in our consultation processes. We understand how confronting and difficult it can be to discuss such personal issues and we are grateful for the insights provided in helping to shape our Final Report.

Since July 2019, more than 120 stakeholder submissions were considered, 146 individuals attended forums across the country, and 11 targeted sessions were held. We heard from researchers, peak bodies, unions, legal firms, occupational hygienists, industry, governments, radiologists and people directly affected by silicosis.

The additional advice and information collected has only strengthened our position on the critical need for immediate action to better protect people from the risks of working with engineered stone and other dust generating jobs, and to better support those who do develop a dust related disease. The final set of recommendations builds on our early recommendations and findings, providing a comprehensive program of reform requiring action by governments, industry and unions.

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Executive Summary

The past decade has seen the re-emergence of an entirely preventable occupational respiratory disease that was prevalent in Australia in the 1940s to 1960s: silicosis.¹ Silicosis is caused by inhalation of respirable crystalline silica generated when manipulating - cutting, grinding and polishing - material containing silica such as engineered stone. The re-emergence of silicosis has been mostly driven by the popularity of engineered stone material which has been available in Australia since the early 2000s. Every case of silicosis affecting a stone benchtop worker is evidence that businesses, industry and governments need to do more to recognise and control the risks of working with engineered stone.

In 2019, the Taskforce was asked to develop a national approach to the prevention, early identification, control and management of occupational dust diseases. In our Interim Advice, we set out five recommendations for immediate attention. Our Final Report builds on these recommendations. Collectively, they provide a comprehensive program of work designed to fundamentally address the risks facing workers in industries that generate hazardous dust such as silica, with an immediate focus on the engineered stone industry.

We recognise that over the past 18 months, state and territory Work Health and Safety (WHS) regulators have taken additional actions to improve education and awareness of the risks and enforce compliance with WHS laws. Many have introduced targeted compliance campaigns and/or have made (or are in the process of introducing) regulatory changes to address the re-emergence of silicosis. While these actions are welcome, their effectiveness is not yet clear and there is not uniformity across jurisdictions.

Reform is urgently required. There is evidence to suggest that nearly one in four engineered stone workers who have been in the industry since before 2018, are suffering from silicosis or other silica dust related diseases.² Existing WHS regulatory frameworks have not effectively protected people working with engineered stone.

We have listened to a wide range of views from stakeholders, and have had lengthy discussions about the merits of different interventions available to drive change: from improving education, communication and awareness raising, to limiting access to the product, to introducing a ban on the product.

In this Final Report, we have identified specific regulatory and non-regulatory actions designed to have an immediate impact on improving worker health and safety. After careful deliberation, we have decided not to recommend a product ban at this stage. However, all parties need to

1 Royal Australian College of General Practitioners (2019) *Explainer: What is Silicosis?*, accessed 20 January 2021

2 Data from Queensland and Victoria indicates that out of 1,509 workers screened, 362 were found to have silicosis: Sources: (i) "WorkCover screening outcomes" as at 31 May 2021 (<https://www.worksafe.qld.gov.au/claims-and-insurance/work-related-injuries/types-of-injury-or-illness/work-related-respiratory-diseases/silicosis> last checked 27/06/2021); (ii) "Silica-associated lung disease health screening research: Phase one final report" as at November 2020 (<https://www.worksafe.vic.gov.au/resources/silica-associated-lung-disease-health-screening-research-phase-one-final-report> last checked 27/06/2021)

Note: this data does not include workers who have been exposed but are yet to be diagnosed or to develop the disease.



consider themselves to be on notice: the majority of Taskforce members agree that if the measures we have recommended do not achieve the expected significant improvements in worker safety within the next three years, then immediate action **must** be taken to ban the product. Industry and governments must urgently demonstrate that engineered stone can, in fact, be used safely.

Additional regulatory controls are required to address gaps in both policy and implementation to ensure safe work environments. A regulatory impact analysis (RIA) must urgently be undertaken to specifically consider effective measures, including the introduction of licensing schemes to ensure that only those persons conducting a business or undertaking, who are able to meet the required standards or competencies developed and introduced as part of such a scheme, have access to the product. Enforcement activities must also be adequately resourced to ensure compliance with WHS laws.

The importance of prevention activities, identified in our Interim Advice, has only been confirmed. The introduction of licensing schemes should effectively achieve many prevention goals. More generally, there needs to be a greater focus on, and investment in, prevention activities, including the immediate finalisation and implementation of a National Silicosis Prevention Strategy, and the associated national education campaign.

There are also significant opportunities to improve health monitoring, surveillance and screening. Improvements in these areas will support better case identification and enable early intervention which is critical to ensuring better health outcomes for workers exposed to respirable crystalline silica, including those who have left the industry. The establishment of the National Occupational Respiratory Disease Registry (National Registry) will support the capture of notifications of silicosis, as well as other dust diseases, from all jurisdictions, allowing for earlier detection of hazards as well as new cases of disease. In addition, the National Registry will help further define the magnitude and importance of the problem.

We were deeply moved by the stories of affected workers and their families about the difficulties they have experienced accessing the full range of supports they need. We understand the terrible impact that a positive diagnosis or being characterised as ‘at high-risk’ of developing a disease, has on all areas of people’s lives. All governments should review and tailor return-to-work programs to better aid affected workers and their families.

Whilst we acknowledge the recent investment by the Commonwealth Government and other governments in silicosis research, much remains to be understood about the disease, both clinically and non-clinically. Additional funding is required to build the evidence base as well as the capability of the research sector.

Throughout our deliberations, the Taskforce has been mindful of the terrible history and legacy of asbestos in Australia. The risk of asbestos dust was first recognised in the 1930s, however, a complete ban on the use of asbestos was only implemented on 31 December 2003, after tens of thousands of individuals had been exposed, and many thousands of Australians dead from mesothelioma, lung cancer and asbestosis.³ We do not want a repeat of this experience in relation to silica dust.

3 Arthur W (Bill) Musk, Alison Reid, Nola Olsen, Michael Hobbs, Bruce Armstrong, Peter Franklin, Jennie Hui, Lenore Layman, Enzo Merler, Fraser Brims, Helman Alfonso, Keith Shilkin, Nita Sodhi-Berry, Nicholas de Klerk (2019) ‘*The Wittenoom Legacy*’, International journal of epidemiology, 49(2):467-476, doi.org/10.1093/ije/dyz204



Immediate action is required to better protect workers from hazardous exposures, reduce the burden of occupational respiratory disease, and ensure Australia has strong, responsive and fit for purpose arrangements that identify occupational respiratory hazards early and ensure safe workplaces. History cannot be allowed to repeat.

All the information gathered by the Taskforce has informed the development of this Final Report. The recommendations set out a comprehensive program designed to drive real, measurable change to make workplaces safer for those working with material containing harmful substances such as silica, minimise risks associated with exposure to these substances, and provide better support to those affected.



Final Recommendations

Over the past decade there has been an unacceptable re-emergence of silicosis in Australia. Several hundred workers have been diagnosed, causing great suffering to them, their families and their co-workers. This is deeply concerning given that silicosis is an entirely preventable disease. This re-emergence has mostly been driven by the introduction and surge in popularity of high silica content engineered stone material since the early 2000s. Nearly one in four workers exposed to respirable crystalline silica dust from engineered stone before 2018, have been diagnosed with silicosis.⁴ Unfortunately, because the health effects of exposure can take many years to develop, considerably more workers are likely to be at risk of future development of disease. There has been a systemic failure to recognise and control the risk associated with producing benchtops from engineered stone, which has led to workers being exposed to hazardous levels of respirable crystalline silica dust.

Based on evidence presented to us, it is clear that existing WHS laws have failed to protect workers from developing silicosis. In the engineered stone benchtop sector, there has been inadequate control of dust exposure by businesses, as well as ineffective health monitoring and insufficient enforcement of existing laws by state and territory WHS regulators. This reflects a lack of sustained vigilance regarding the inherent health risk associated with occupational silica dust exposure. The evidence presented also shows that the risk to workers of developing dust disease is not confined to the engineered stone industry which includes small business and domestic settings, but spans other industrial settings such as mining, sandblasting and construction. Systemic change is required to improve protection for all people who work in dust generating industries.

In December 2019, we presented our Interim Advice to the Minister for Health. This Advice included five early recommendations focusing on awareness raising, data capture and information sharing, research priority areas, national guidance on screening, and a national approach to detection and response. A number of early findings were also identified for further exploration.

Due to the impact of the COVID-19 pandemic, our work was paused for six months in 2020. Shortly after re-convening in August 2020, we undertook further consultations and commissioned research into a number of key issues.

Our final recommendations build on those detailed in our Interim Advice and are a comprehensive set of measures designed to better protect and support workers, and to recognize the incidence and severity of dust diseases. They present a cohesive set of actions designed to be implemented concurrently, and as a package. They will require the commitment of Commonwealth, state and territory governments, recognising the different roles and responsibilities each has for work health and safety and public health within their respective jurisdictions. Active engagement from workplaces and health professionals is also needed to ensure workers stay healthy, safe and protected from dust disease. In the case of silicosis, the point of diagnosis is already too late. Further action is required to save lives and prevent people from being affected by this deadly disease.

4 Data from Queensland and Victoria indicates that out of 1,509 workers screened, 362 were found to have silicosis: Sources: (i) "WorkCover screening outcomes" as at 31 May 2021 (<https://www.worksafe.qld.gov.au/claims-and-insurance/work-related-injuries/types-of-injury-or-illness/work-related-respiratory-diseases/silicosis> last checked 27/06/2021); (ii) "Silica-associated lung disease health screening research: Phase one final report" as at November 2020 (<https://www.worksafe.vic.gov.au/resources/silica-associated-lung-disease-health-screening-research-phase-one-final-report> last checked 27/06/2021)



Recommendations

1. **Strengthen work health and safety measures** to ensure workers are protected from exposure to respirable crystalline silica and its devastating consequences. Maintaining the status quo is not acceptable.
 - a. Take immediate action to ensure that businesses working with engineered stone demonstrate that they:
 - Effectively and continuously manage the risks for workers associated with working with engineered stone;
 - Regularly monitor and record silica dust levels in the workplace, and have these results validated by an appropriately trained occupational hygienist; and
 - Conduct regular health monitoring of all workers exposed to respirable crystalline silica.
 - b. Greater priority be given to **work health and safety monitoring and compliance** activities where workers are at risk of exposure to respirable crystalline silica. Specific consideration should be given to:
 - Development and introduction of an industry funding model to support ongoing regulatory activities; and
 - Increased frequency and robustness of workplace inspections and better promotion of actions taken by WHS regulators.
 - c. Urgently conduct a regulatory impact analysis (RIA) to identify and decide implementation of measures that provide the **highest level of protection to workers from the risks associated with respirable crystalline silica** generating activities in the engineered stone industry. The RIA must consider:
 - A licensing scheme or equivalent to restrict access to the product to those businesses that can demonstrate the ability to effectively manage the risks; and
 - Strengthening the health monitoring requirements include contemporary methodologies such as low dose high resolution computerised tomography (HRCT) scans, and to cover all workers at risk of exposure to respirable crystalline silica.
 - d. Commence the processes required to implement a **full ban on the importation of some or all engineered stone products** if, by July 2024:
 - There is no measurable and acceptable improvement in regulatory compliance rates for the engineered stone sector as reported by jurisdictions; and
 - Evidence indicates preventative measures are not effectively protecting those working with engineered stone from silicosis and silica-associated diseases.
2. Building on the early recommendation from the Interim Advice **to develop national guidance to identify people at risk** from respirable crystalline silica exposure, **improve the quality, frequency and coverage of health screening assessments** for current and former workers.



3. In addition to implementing the early recommendations from the Interim Advice that aim to **prevent the risk of exposure** to respirable crystalline silica and other hazardous dusts, prioritise investment in prevention activities.
 - a. Finalise and implement the **National Silicosis Prevention Strategy** and associated National Action Plan.
 - b. Implement a **national, targeted education and communication campaign**, using lessons learned from jurisdictions and key stakeholders, by end 2021.
 - c. Design and implement an **Early Detection and Rapid Response Protocol** to identify emerging workplace risks using data from the National Occupational Respiratory Disease Registry when it becomes operational, and other relevant sources.
4. **Better support workers** affected by dust diseases and their families through individually tailored programs of psychological, financial and return-to-work support.
 - a. Develop an occupational dust disease management plan for use by health professionals and affected workers, to provide information about the diagnosed disease and what to expect, and the agreed management pathway including referrals for psychological and return-to-work support.
5. **Better support medical, health and other related professionals** to improve the diagnosis and management of workers affected by silicosis.
 - a. Fund multi-disciplinary teams of medical professionals, to improve education of doctors and better manage the care of patients, including people with potential but yet to be accepted diagnoses of silicosis or other occupational respiratory diseases.
 - b. Develop, implement and maintain Australian-based education and upskilling for medical professionals involved in occupational health screening including radiologists, to ensure that they are able to maintain and build expertise to report chest imaging for occupational health screening programs.
 - c. Develop and disseminate information and education materials to health professionals and service providers who assess and support workers affected by dust diseases, as well as those who regulate businesses working with engineered stone.
6. Building on the early recommendations from the Interim Advice for a **strategic national approach to research** and the development of a national dust disease registry, and following initial investments, prioritise:
 - a. Enhancing silica and occupational respiratory disease research expertise in Australia and the evidence base, by identifying additional priority areas for further research funding, supporting collaboration and information sharing, and funding fellowships and scholarships.
 - b. Operationalising the National Occupational Respiratory Disease Registry as soon as possible, with an initial focus on mandatory reporting of silicosis, and voluntary reporting of other occupational respiratory diseases.
7. Establish a **cross-jurisdictional governance mechanism** to improve communication and information sharing, coordinate responses, and report on progress.
 - a. By the end of 2021, the Commonwealth Government, in consultation with jurisdictions, will outline a clear plan for implementation of the Taskforce's recommendations with specific milestones, responsibilities of parties, and outcome measures identified.
 - b. Annual reports should be provided to Health and WHS Ministers in all jurisdictions on the implementation of the recommendations and the effectiveness of measures in improving compliance to prevent dust disease in workers, with the first report due in July 2022.



I. Background

Occupational lung diseases – many are on the rise

Occupational respiratory diseases are conditions of the respiratory system that have occupational exposure as a risk factor for developing the disease,⁵ and can be caused by exposure to dust, fumes, vapours, gasses and microorganisms. These include occupational asthma, work-related chronic obstructive pulmonary disease (including chronic bronchitis) and a group of pneumoconiosis diseases such as coal worker's pneumoconiosis or black lung disease, asbestosis and silicosis. Pneumoconioses are a group of non-malignant interstitial, fibrotic lung diseases caused by inhaling certain kinds of dust particles such as fine silica dust.

Occupational silica dust exposure is one of the oldest known causes of lung disease,⁶ in particular silicosis. Silica, also known as silicon-dioxide, is a naturally occurring and widely abundant mineral. It accounts for 59 per cent of the earth's crust, and is a major constituent of rocks, sand, glass, quartz, natural stones and particularly engineered stone products.

Engineered stone products can contain up to 97 per cent silica. The high amount of silica means that there is a very high risk of workers developing breathing problems and silicosis if they breathe in dust made from these products.⁷

Silicates such as asbestos, talc and kaolinite are formed when silicon-dioxide combines with other elements, and are also risk factors for lung diseases.

Exposure to silica is also linked to an increased risk for a number of other diseases such as lung cancer, kidney disease, renal failure and some autoimmune diseases. There are crystalline and non-crystalline forms of silicon-dioxide. While inhalation of the amorphous form does not often cause clinically significant complications, inhalation of the crystalline form can cause lung disease. For silica particles to be biologically active, they must be small enough to reach minute structures within the lungs. These particles are defined as "respirable" and are usually less than 5µm in diameter.⁸

Occupational exposure to hazardous airborne contaminants contributes substantially to the burden of lung disease in Australia. There are many occupations that expose workers to contaminants that put them at risk.

While some occupational lung diseases such as work-related asthma and asbestosis are showing a downward trend, fibrotic lung diseases including silicosis are increasing in Australia. Evidence

-
- 5 Alif SM, Glass DC, Abramson M, Hoy R, Sim MR (2020) *Occupational Lung Diseases in Australia 2006–2019*, Safe Work Australia
 - 6 Hoy, R and Chambers, D.C (2020) Allergy, 2020 Vol75 Issue 11 *Silica-related diseases in the modern world*, doi: [org/10.1111/all.14202](https://doi.org/10.1111/all.14202), accessed 10 January 2021
 - 7 Safe Work Australia *Crystalline silica and silicosis*
 - 8 Hoy et al (2020) (reproduced from Rees DM et al, Parkes' *Occupational Lung Disorders*, 4th edn. FL: CRC Press, 2017), accessed 10 January 2021



suggests that there are currently at least 477 Australians living with silicosis.⁹ Most of these cases have been diagnosed within the past three years and are linked to inhaling dust while cutting and polishing engineered stone. In addition, lung diseases including black lung, which were previously assumed to be obsolete in Australia, have recently re-emerged among coal industry workers.¹⁰

CASE STUDY: Silicosis and Engineered Stone

The first case of engineered stone-related silicosis was identified in Australia in 2016 with the diagnosis of a 54 year old stonemason in Queensland.¹¹ In retrospect, this case has proven to be typical of subsequent silicosis cases identified within this industry. The stonemason's activities included cutting, grinding, finishing and installing engineered-stone benchtops, primarily using a popular brand of manufactured stone comprising more than 85 per cent crystalline silica.¹² During the first seven years of being a stonemason, the worker did not use any personal protective equipment (PPE) while later he used a simple paper face mask. Despite some dust extraction facilities within the worker's factory, he reported to his physician that the environment was visibly dusty and that water dust suppression during stone processing was hardly ever used.

Changes in consumer demand, in industry, and the workforce

The popularity of engineered stone for use in benchtops has grown globally over the last two decades. Caesarstone has reported that the total global engineered stone market grew by 17.9 per cent (compound annual growth rate)¹³ between 2010 and 2016.¹⁴ Demand for natural stones including marble and granite have declined and quartz/engineered stone appears to be replacing synthetic products such as laminates.

The global trend in the use of engineered stone is closely matched in the domestic market. Australia's building boom during the 2000s led to an increase in the use of engineered stone in the construction industry, particularly as a cost-effective material for kitchen and bathroom construction. Since its introduction, engineered stone has grown to a market-dominant position.¹⁵

9 Refer to Table 2: Outcomes of jurisdictional health screening programs (data available as at 15 June 2021)

10 Deborah H Yates, Jennifer L Perret, Margaret Davidson, Susan E Miles, AW Musk, 30 May 2021. *Dust diseases in modern Australia: a discussion of the new TSANZ position statement on respiratory surveillance*. <https://doi.org/10.5694/mja2.51097>

11 Yates, D et al (26 Nov 2018) *Artificial stone workers' silicosis: Australia's new epidemic*, InSight+, Tweets by @MJA, accessed 10 January 2021

12 Matar, E., Frankel, A., Blake, L., Silverstone, E., Johnson, A. and Yates, D. (2017). *Complicated silicosis resulting from occupational exposure to engineered stone products*. The Medical Journal of Australia, 206(9), doi: 10.5694/mja16.00257, accessed 10 January 2021

13 Compound Annual Growth Rate is the measure of an investment's annual growth rate over time, with the effect of compounding taken into account

14 [Caesarstone Company Overview September](#), 2018, viewed 30 June 2021

15 [Caesarstone Company Overview September](#), 2018, viewed 30 June 2021



The significant rise in cases of accelerated silicosis has been associated with the increased importation and use of artificial or engineered stone in Australia.¹⁶ While a clear link between exposure to engineered stone and silicosis has been identified, some areas of uncertainty remain. For example, there are questions over whether the resins in engineered stone also contribute to silicosis, or whether it is solely the silica content that is responsible.¹⁷

“There is no good reason why an advanced economy such as Australia should have workers suffering from silicosis and accelerated silicosis. The current situation results from a failure of regulation, in learning from the past and responding to new consumer demands, and a lack of understanding by employers and workers of the risks associated with exposure to respirable silica dust, including in new forms combined with resins and plastics in manufactured stone.”¹⁸

– Health agency¹⁹

The industry is characterised by an abundance of micro and small businesses, including sole traders and tradespeople working on smaller, domestic sites. A market research survey commissioned by the Department of Health on behalf of the Taskforce showed that 75 per cent of businesses operating as stonemasons employ five employees or less, and nearly 60 per cent of adjunct trades employ 20 employees or less.²⁰

The structure of the industry makes it difficult to ensure that all businesses have a good understanding of the risks associated with working with engineered stone, and are aware of their responsibilities under WHS laws.

“The recent outbreak highlights just how little we have learned as a country when it comes to occupational disease, and in particular, dust disease. It underscores the dilemma; a nation obsessed with the latest fashion item at the expense of protecting the workers who make it.”²¹

– Union

The scope of the problem

Accurate assessments of disease prevalence in occupational settings are difficult: silica and silicates are widely used in a large number of industrial applications, including engineered stone. Due to a potentially long lag time between exposure and the appearance of symptoms, and the transitional employment patterns of the workforce, it is difficult to ascertain exactly how many workers develop silica-related conditions and when the causative exposure occurred.

16 PricewaterhouseCoopers (2020) *Options to control unsafe exposure levels associated with the use of high silica content engineered stone*, Report to Department of Health

17 PricewaterhouseCoopers (2020) *Options to control unsafe exposure levels associated with the use of high silica content engineered stone*, Report to Department of Health

18 Hall & Partners (2019) *Synthesis of Online Submissions to National Dust Disease Taskforce Consultation Process*, report to Department of Health

19 Note: Verbatim comments in this report have been de-identified to protect the anonymity of respondents.

20 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health

21 Hall & Partners (2019) *Synthesis of Online Submissions to National Dust Disease Taskforce Consultation Process*, report to Department of Health



The 2006 Senate Inquiry into *Workplace Exposure to Toxic Dust* noted (as reported by the National Occupational Health and Safety Commission), that in 2002, there were nearly 294,000 workers who were potentially exposed to silica.²² Cancer Council Western Australia noted that, “approximately 587,000 Australian workers were exposed to silica dust in the workplace in 2011. It has been estimated that 5,758 of these will develop a lung cancer over the course of their life as a result of that exposure”.²³

Best estimates of the current scale of the problem in relation to engineered stone are drawn from data collected and reported by some jurisdictions.

- As at June 2021, WorkCover Queensland had completed the health screening of 1,053 stonemasons exposed to crystalline silica dust from engineered stone – 238 people were diagnosed with a work-related condition. Of the workers screened, 229 (21.4 per cent) have silicosis, including 32 with a diagnosis of progressive massive fibrosis (a more severe form of silicosis), and 13 have a respiratory condition that is not silicosis²⁴
- In NSW, between 2001 and 2008, 90 chronic silicosis cases were identified. A further 40 cases of silicosis were identified in 2018–19 and 107 in 2019–20²⁵
- In Victoria, Phase 1 of silica associated lung disease health screening research project (report published in November 2020) identified 133 workers who had silicosis²⁶

Workers’ compensation claims for silicosis

The table below provides a breakdown of accepted silicosis claims by jurisdiction and industry from 2000–01 to 2018–19. Due to small numbers of silicosis claims by year, an aggregated number of accepted silicosis claims by jurisdiction and industry can only be provided.

It should be noted that the numbers in the table are not a true indication of the incidence of silicosis in Australia, as only accepted workers’ compensation claims are included. There are many reasons why a worker with silicosis may not make a compensation claim including fear of loss of employment, difficulty with diagnosis, long latency periods between exposure and symptoms, and difficulty in proving a connection between the disease and a specific workplace. While some jurisdictions have established compensation schemes for workers affected by dust diseases (e.g. icare Dust Diseases Care NSW²⁷ and lump sum payments for pneumoconiosis injuries and latent onset injuries in Queensland²⁸), this is not yet uniform.

22 Commonwealth of Australia (2006) Senate Inquiry into *Workplace Exposure to Toxic Dust*, Parliament of Australia, accessed 9 December 2020

23 Cancer Council [Silica Dust](#), accessed 10 January 2021

24 Worksafe Queensland, Silicosis [WorkCover screening outcomes](#), accessed 10 June 2021

25 icare (Insurance and Care NSW) Annual Report 2019–20

26 WorkSafe Victoria: [Final report of phase 1: Silica associated lung disease health screening research project Stonemasons’ screening project & Silica-associated disease registry](#). November 2020, accessed 21 January 2021

27 icare NSW, Dust Diseases Care, icare.nsw.gov.au, accessed 29 June 2021

28 WorkSafe Queensland, [Lump sum payments for pneumoconiosis injuries and latent onset injuries in Queensland, Home | worksafe.qld.gov.au](#), accessed 29 June 2021



Note: not all jurisdictions provide this data to Safe Work Australia (e.g. claims made under icare's dust diseases scheme for NSW are not included).

Table 1: Number of accepted silicosis claims by jurisdiction and industry, 2000–01 to 2018–19 (combined)

Jurisdiction	Manufacturing	Construction	Mining	Electricity, gas, water and waste services	Other Industries	Total
ACT Private	(-)	(-)	n.p.	(-)	(-)	n.p.
NSW	20	60	15	25	15	135
QLD	120	5	15	(-)	5	145
SA	n.p.	(-)	n.p.	(-)	5	5
TAS	5	(-)	(-)	(-)	(-)	5
VIC	60	145	10	(-)	5	220
WA	5	n.p.	n.p.	n.p.	5	15
Total	215	215	40	25	30	520

Table 1 explanatory notes:

1. The number of claims is rounded to the nearest five to maintain confidentiality. Therefore, the sum of claims in the column may not add up to the total claims shown.
2. Data for 2018-19 are preliminary and are subject to upwards revision when new data are available.
3. n.p. Data suppressed for confidentiality reasons.
4. (-) Cell combination has zero claims.
5. All accepted workers' compensation silicosis claims excluding journey and fatality claims.
6. The claim numbers shown here were extracted using the Type of Occurrence Classification System, Nature of Injury/disease: 784 (Silicosis). Previously, silicosis claims were also coded under 640 (Pneumoconiosis due to other silica or silicates) using TOOCS 2.1.
7. The workers' compensation claims are coded using the Australian and New Zealand Standard Industrial Classification (ANZSIC).
8. 'Other industries' includes all other industries excluding the top four industries (i.e. Manufacturing, Construction, Mining and Electricity, Gas, Water and Waste Services) by number of serious claims.
9. The claims data has been sourced from Safe Work Australia's National Data Set (NDS) for Compensation based Statistics, which is compiled based on workers' compensation data provided annually by each of the jurisdictional workers' compensation authorities. The claims data provided by NSW in the NDS does not include most dust disease claims which are managed through a separate scheme by icare. Therefore, the table underreports claims for NSW. Information on these claims can be found in the icare Annual Reports.

The work of the National Dust Disease Taskforce

In October 2018, the Council of Australian Governments' (COAG) Health Council discussed the increase in silicosis diagnoses resulting from the use of fabricated stone benchtops. It was agreed that a National Dust Disease Register should be explored and that the Commonwealth Minister for Health would write to Safe Work Australia to request further examination and the updating of the Workplace Exposure Standard for crystalline silica and the trading of imported stone products. In December 2018, Safe Work Australia Members agreed to prioritise the review of the Workplace Exposure Standard for respirable crystalline silica and commenced a work plan on occupational lung diseases.



On 26 July 2019, the Commonwealth Government announced the establishment of a National Dust Disease Taskforce. The role of the Taskforce was to inform a national approach to the prevention, early identification, control and management of dust diseases in Australia. A copy of the Taskforce's Terms of Reference is at [Attachment 1](#).

At its inception, the Taskforce recognised the lack of available data about the extent of silicosis in Australia. Accordingly, the Taskforce prioritised gathering information, commissioning research, and listening to experts as well as the lived experiences of people affected by silicosis and their families. A first stage of consultation commenced in September 2019 with a range of stakeholders, from individual stonemasons through to industry bodies, unions and governments. This informed the Taskforce's Interim Advice which was provided to the Minister for Health at the end of 2019.

Five immediate national actions were recommended by the Taskforce to address specific issues related to the re-emergence of silicosis:

1. Developing a targeted education and communication campaign to raise awareness of the risks of working with engineered stone
2. Ongoing staged development of a National Dust Disease Registry, with specific data requirements recommended by the Taskforce
3. Targeted investment in key research activities, to improve understanding of prevention, diagnosis and treatment
4. Developing national guidance on screening workers working with engineered stone
5. Development of a national approach to identify occupational silica dust exposure and other future occupational diseases²⁹

The Minister for Health announced in January 2020 that the Commonwealth Government was acting to accept all five recommendations.

Unfortunately, the COVID-19 pandemic stalled the second phase of consultations, and delivery of the Final Report to the Minister was rescheduled for June 2021.

When the Taskforce reconvened in August 2020, it undertook further work to develop an evidence-based understanding of the current silicosis landscape. In particular, it recognised the call from stakeholders in response to its Interim Advice to consider the issue of dust diseases more broadly. Further stakeholder and community engagement through consultations and additional structured market research was conducted.

A further and final consultation process was undertaken by the Taskforce in April 2021 to test its proposed draft vision, strategies and priority areas for action.

Further information on the research commissioned by the Taskforce and the consultation processes conducted can be found at [Attachment 2](#).

²⁹ National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019



Activities of Safe Work Australia and work health and safety agencies

Significant work has been undertaken nationally, including by WHS regulators, in relation to silicosis prevention activities and to manage the risks of exposure to respirable crystalline silica. This increase in activity has been partly in response to increasing cases of accelerated silicosis in the engineered stone workforce. The range of activities underway in jurisdictions include:

- Enhanced controls for working with engineered stone, e.g. a ban on uncontrolled dry-cutting has been introduced in some jurisdictions
- Development of codes of practice
- Implementation of the reduced Workplace Exposure Standard for respirable crystalline silica (reduced to an eight-hour time-weighted average of 0.05mg per m³)
- Compliance campaigns and increased focus on enforcement
- Education and awareness campaigns
- Enhanced support for individuals affected by silicosis

At the national level, more recent activity of Safe Work Australia includes the development of regulations preventing uncontrolled dry cutting, national guidance and a model code of practice on managing the risks of respirable crystalline silica when working with engineered stone in the workplace, and the launch of its *Clean Air. Clear Lungs.* campaign.

See **Attachment 3** for more detailed information on the activities of national, state and territory WHS agencies.



2. A Strategic Approach to the Prevention, Early Identification, Control and Management of Silicosis and Other Occupational Respiratory Diseases

Silicosis, while entirely preventable, is an irreversible and progressive disease. Silicosis is typically, but not always, caused by high exposure to respirable crystalline silica, which is generated in the workplace by mechanical processes such as crushing, cutting, grinding, polishing and demolition of products containing silica. The cumulative exposure (intensity of exposure multiplied by the duration of exposure) to respirable crystalline silica is an important factor associated with the development of silicosis,³⁰ with fresh silica dust causing a higher level of toxicity. Inhalation of respirable crystalline silica is closely associated with the development of accelerated silicosis.³¹

There have been increasing numbers of workers diagnosed with severe, progressive forms of silicosis in Australia and other countries including Israel and Spain, due to the introduction of high silica-containing artificial stone used in fabricating benchtops.

The latency of the disease (the lag between the first exposure to the hazard and when the disease is diagnosed clinically) means there is currently no reliable data on the number of people affected by silicosis.³² This applies even in the case of accelerated silicosis. Difficulty in collecting accurate data from across a wide range of disconnected sources such as businesses, WHS regulators and medical professionals has been identified as a challenge. However, it is estimated up to 600,000 Australian workers are potentially being exposed to silica dust each year across a wide range of industries.

It has become clear to the Taskforce through the consultation process conducted and the research commissioned, that a strategic and coordinated approach needs to be taken to the prevention, early identification, control and management of silicosis and other occupational respiratory diseases.

The Taskforce has identified the following Goal to galvanise stakeholders into action and to drive collaborative effort:

Within three years, relevant industry sectors, all levels of government and workers' representatives will have worked together to ensure all silica dust generating businesses are healthy workplaces, where harm to workers is prevented.

30 Monash University Medicine, Nursing and Health Sciences (Nov 2020) '*Final Report of Phase 1: Silica Associated Lung Disease Health Screening Research Project*' <https://www.worksafe.vic.gov.au/resources/silica-associated-lung-disease-health-screening-research-phase-one-final-report>, WorkSafe Victoria, accessed 17 June 2021

31 Yates DH, Perret JL, Davidson M, Miles SE, Must AW (2021) *Dust diseases in modern Australia: the new TSANZ position statement on respiratory surveillance*, *The Medical Journal of Australia*, doi: 10.5694/mja2.51097

32 Royal Australian College of General Practitioners (2019) *Explainer: What is Silicosis?*, accessed 20 January 2021



Progress towards this Goal will be evidenced by:

- A reduction in the incidence of occupational respiratory diseases in Australia and progress towards elimination of new cases of silicosis
- Development and implementation of a coordinated framework across WHS, the public health system and all at-risk workplaces to protect individuals from silicosis and other occupational respiratory diseases in all industrial settings
- Nationally consistent, and evidence based, health monitoring and health screening for workers at risk of silicosis; and medical support for those diagnosed with silicosis
- Improved support and assistance for workers and their families affected by occupational exposure to silica from engineered stone and other industrial settings
- A fully operational National Occupational Respiratory Disease Registry, with an initial focus on silicosis, to capture and share data on the incidence of occupational respiratory diseases, causative exposures and respiratory health data, to aid the detection of new and emerging threats to workers' respiratory health, inform incidence trends, and assist in targeting and monitoring the effectiveness of interventions and prevention strategies
- Support for world leading research to aid the prevention and treatment of occupational respiratory disease, in particular silicosis



Strengthening Regulatory Arrangements

In its Interim Advice, the Taskforce identified a number of significant concerns with the existing WHS regulatory protections for workers requiring further investigation. The Interim Advice noted that,

Government interventions undertaken in response to the rise in cases of accelerated silicosis appear to have been inconsistently implemented and monitored, creating an unequal and fragmented level of health protection.³³

The Taskforce identified opportunities to improve existing WHS arrangements in Australia to ensure better control of risks associated with engineered stone and that those working with this product are educated to protect themselves from these risks. The Taskforce considered ways in which these risks could be mitigated, noting at the time of the release of the Interim Advice,

growing support for the consideration of the prohibition of some engineered stone products that have very high levels of silica.³⁴

Consultation and research findings

The increase in the number of workers in the engineered stone industry who have been diagnosed with silicosis suggests a regulatory failing. This may have occurred as a consequence of structural issues with existing WHS laws or enforcement issues, or both. There is insufficient data to determine the exact cause, however issues identified by stakeholders include: complexity of regulation and lack of clarity on requirements, a significant degree of non-compliance with existing regulation, and lack of understanding and awareness of the hazardous nature of working with engineered stone amongst both businesses and workers.

Given the lack of available data, the Taskforce deliberately undertook a wide ranging consultative process over two stages in 2019 and 2020 involving representatives from WHS regulators, industry organisations, legal firms, unions, peak bodies, and individual workers including those affected by silicosis and their family members or carers. Activities included inviting written submissions, holding forums around Australia for stakeholders to participate in, conducting workshops of experts to discuss particular issues, and holding follow up targeted discussions with key stakeholders. In April 2021, a final round of consultations was held with key stakeholders to test the Taskforce's proposed strategic approach and identify any practical issues in the implementation of the proposed priority areas for action.

A consistent message heard throughout the consultations was a desire for strong, effective and swift action to address the emerging cases of accelerated silicosis in the engineered stone benchmark industry as an immediate priority, and for consideration to be given to extending these actions to other occupational respiratory diseases over time. Participants indicated a systemic approach spanning regulation and its enforcement, data collection, education and health care was essential.

Some stakeholders were of the view that the current laws required tightening, while others felt that they provided adequate protection, but enforcement of regulations was inadequate. Overall, there was strong support for immediate action to change and improve regulatory, compliance and

³³ National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019

³⁴ National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019



enforcement arrangements to ensure better protections for workers from the risks of silicosis and other occupational dust diseases.

Individuals affected by silicosis have a perception that existing WHS laws are focused on the prevention of *physical or acute injury* and not risk factors causing *chronic diseases*. Workers interviewed were of the view that, “without stricter regulations, better monitoring and enforcement, and harsher penalties, Australians will continue to be diagnosed with, and die from silicosis and other dust diseases.” While they held their employers largely responsible, they also believed WHS regulators and governments were at fault for a perceived lack of proper regulation, monitoring and enforcement.³⁵

Written submissions highlighted significant perceptions of non-compliance across stone benchtop fabricators, and suggested that this is caused by a number of factors:

- Lack of clarity amongst businesses about regulatory requirements given the complexity of the WHS regulatory framework
- Difficulty in disseminating information to an industry sector characterised by small and micro businesses
- Implementation of control measures not being seen as mandatory, and requirements often considered impractical to implement; this perspective is particularly prevalent among smaller businesses which may not have the resources to put engineering controls in place
- Lack of sanctions applied, and penalties not being enforced, and a perception amongst businesses that non-compliance can go unpunished
- Inclination among employers and workers not to comply where compliance is at odds with business efficiency and profit, or simply an inconvenience
- Lack of awareness amongst workers about the risks associated with exposure to silica, their rights under the WHS laws and correct use of PPE. Evidence was provided of circumstances where PPE was provided, but it was not fitted for individuals. Anecdotal evidence suggested that workers sometimes choose not to use PPE for short-duration tasks which can generate a higher volume of dust

A number of stakeholders noted that enforcement measures need strengthening, most notably resourcing to conduct spontaneous auditing of all sites where silica dust generating activities are undertaken – and support for WHS regulators in prosecuting non-compliance. Some noted that WHS laws leave too much discretion to employers, and there is also room for interpretation of the requirements.

“Inspectors would call the company beforehand and so employees know WorkSafe is coming, so they clean up or only run certain equipment.”³⁶

– Worker

As the Taskforce’s work progressed, there was increasing support among stakeholders for the introduction of regulatory measures specifically targeting the engineered stone industry. However, stakeholders expressed conflicting views about the effectiveness of the various regulatory options available, including a product ban on engineered stone.³⁷ The option of introducing licensing schemes

35 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health

36 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health

37 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



at a jurisdictional level, supported by a national framework to drive consistency, was frequently raised by stakeholders as being worthy of consideration. Licensing would restrict access to the product to those businesses able to demonstrate that they can eliminate or minimise risks associated with engineered stone, by implementing necessary controls and educating their employees.

Below is a summary of stakeholder views:

- Stakeholders noted robust evidence was needed to support the introduction of a product ban, including evidence of quantifiable risk, ability to clearly identify the product to be banned (i.e. the composition of silica and other hazardous ingredients), and evidence to show that control measures had been implemented but were found ineffective in controlling the risk to workers
- Industry stakeholders were less supportive of a product ban on engineered stone, noting the product itself did not pose risks, but handling it unsafely did. Other stakeholders, including legal firms, unions, peak bodies and advocacy groups, supported a product ban but recognised it could not be enforced immediately and therefore other measures are needed in the interim
- Those who supported a product ban on engineered stone welcomed licensing as one step in a phased approach, on the proviso that data collection started immediately to better inform risks associated with engineered stone and effectiveness of control measures
- Most stakeholders noted licensing would need to span all of the supply chain to be effective; however, fabrication and installation require immediate attention, while licensing importation and distribution are also important. They also noted that over the longer term, licensing should encompass resurfacing, renovation and removal of engineered stone
- Licensing was perceived by stakeholders as a ‘catch-all’ option to address education, training, health surveillance, monitoring and data collection. Stakeholders emphasized the need for licensing to be nationally consistent, and called for schemes to be implemented concurrently across jurisdictions
- Stakeholders supported a licensing scheme enforced by WHS regulators, including through frequent and unannounced site audits and maintenance of compliance records

The current landscape

Existing WHS policy and legislative frameworks, in particular the single set of model WHS laws developed and maintained by Safe Work Australia for implementation across jurisdictions, are designed to provide protection for workers. For the model WHS laws to become legally binding, the Commonwealth, states and territories must separately implement them as their own WHS laws. (See **Attachment 3** for further details of jurisdictional approaches to implementing WHS arrangements).

The model WHS laws are a three-tiered framework comprising:

- The **model Work Health and Safety Act** 2011, which forms the basis of the WHS Acts that have been implemented in most jurisdictions across Australia. It aims to provide a nationally consistent framework for the health and safety of workers and others at workplaces
- The **model Work Health and Safety Regulations** set out detailed requirements, and prescribe procedural or administrative requirements (e.g. requiring licences for specific activities and keeping records) to support the model WHS Act



- The **Model Codes of Practice** are practical guides to achieving the standards of health and safety required under the model WHS Act and regulations. To have legal effect, a model code of practice must be approved as *operational* in each jurisdiction, so that it applies to anyone who has a duty of care in the circumstances described therein. While they are not law, they are admissible in court proceedings, and courts can use them as evidence of what is known about a hazard, risk or control and may rely on the code to determine what is reasonably practicable in the workplace

The model WHS laws are supported by the National Compliance and Enforcement Policy³⁸, which outlines how WHS regulators monitor and enforce compliance.

The 2018 Review of the model WHS laws found that stakeholders desire greater consistency across jurisdictions.³⁹ The Review recommendations were directed towards enhancing consistent application and enforcement of the model WHS laws. Consultations conducted by the Taskforce also identified the lack of national consistency in the interpretation of WHS laws as a key issue; stakeholders considered that this adds to the ambiguity of the regulatory requirements.

“Almost every single site is confused about how to meet their obligations – jurisdictional differences, language in the guidelines being overly technical ... often the audience is small businesses, and the format is not easy to understand and not simple to implement straightaway.”⁴⁰

- Occupational hygienist

Recent efforts to address the emerging trend in silicosis highlight the inconsistency in regulatory arrangements. Some jurisdictions have restricted uncontrolled dry-cutting through amendments to WHS regulations and implemented codes of practice. All jurisdictions except Tasmania have implemented the new Workplace Exposure Standard for respirable crystalline silica under their WHS laws.

While these measures have served as an immediate response to an urgent issue within each jurisdiction, the lack of consistency across jurisdictions and more importantly, lack of consistency with guidance material, means businesses are not receiving consistent messaging, are not clear about their requirements, and may choose to favour requirements that entail lower costs.

“Australian regulators have taken a fragmented messaging approach which results in a dilution of the overall simple message. Given that the majority of the affected population would obtain their information from the internet, a consistency of messaging for Australian workers would be beneficial.”⁴¹

- Occupational hygienist

There is variation across jurisdictions in health monitoring practices, for instance, with some using chest X-rays and some using low dose HRCT scans for radiological screening. Workers' compensation arrangements also vary across jurisdictions, resulting in workers' entitlements being dependent on their place of work. These differences in arrangements can impact health and work outcomes.

38 Safe Work Australia (2011) *National Compliance and Enforcement Policy*, accessed 20 January 2021

39 Safe Work Australia (2019) *Review of the model WHS laws: Final report*, accessed 20 January 2021

40 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

41 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



Given WHS laws are implemented, monitored and enforced independently in each jurisdiction, inconsistencies can also arise in their interpretation, application and enforcement by WHS regulators. One of the strongest messages coming out of this review is the importance of consistent approaches by WHS regulators across jurisdictions to ensure that the harmonised laws are supported by a harmonised approach to their interpretation, application and enforcement.

Proposed reforms

Given the seriousness of the risks associated with the use of engineered stone, the Taskforce recommends that further regulatory measures are urgently implemented, and that these should be supported by non-regulatory measures.

Amongst the range of areas identified for further investigation in its Interim Advice, the Taskforce highlighted the need for “consideration of the prohibition of the importation of some of the engineered stone products that have very high levels of silica,” given that the highest level of protection required under the WHS laws is to “eliminate all risks, including by eliminating hazards” (finding 5 of the Interim Advice).

Consistent with the above, the Taskforce considered a range of regulatory options, including: a product ban on engineered stone including an importation ban; licensing processes within the supply chain (which would encompass accreditation and certification, and labelling requirements); and introduction of codes of practice. The Taskforce recognises that the potential impact of regulatory and non-regulatory options (including licensing) on the industry and the wider economy will need to be assessed through a regulatory impact analysis process.

a) Introduction of a product ban or importation ban on engineered stone products

Silica is a known carcinogen, and can cause a range of significant health issues. Therefore, exposure to respirable crystalline silica is a risk to a person’s health. The purpose of WHS control measures is to reduce exposure to respirable crystalline silica to minimise risk of all injury and illnesses, including occupational lung diseases.

The Workplace Exposure Standard for Respirable Crystalline Silica determines the maximum acceptable level of exposure the controls must achieve, however, in the case of carcinogens, there is no known safe level of exposure. Introducing controls to ensure risk of exposure is below the acceptable level is a challenge, therefore, product bans are the most effective means of control. This would, however, have a significant impact on industry.

Given the number of people being diagnosed with silicosis who work in the stone benchtop industry, the Taskforce gave strong consideration to the elimination of the key source of risk for silicosis, i.e. high silica content engineered stone.

There are concerns that there is a lack of urgent, concerted and effective effort to address the risks associated with exposure to silica. Continued debate on the best mechanism to address this issue means that more workers are at risk of being diagnosed with the disease. Careful consideration has been given to what needs to be done in the immediate, short and long term, and whether a product ban or importation ban on engineered stone is an appropriate response. Before this could occur, a range of legal issues which would need to be addressed.



Generally, the main reason for implementing import prohibitions is to protect the community. This usually complements existing state and territory product safety regulatory arrangements. In practical terms, a domestic ban is enforced by WHS regulators.

Import prohibition of a product in conjunction with consumer safety law

Under Australian Consumer Law, a ban is a legislative instrument, under which the Commonwealth, state and territory ministers can regulate **consumer goods** and product-related services by issuing safety warning notices, banning products on a temporary or permanent basis, imposing mandatory safety standards or issuing compulsory recall notices.

Bans can be placed on products and product-related services if there is a risk that they may cause serious injury, illness or death of consumers.

Prohibiting the importation of engineered stone

When lodging an Import Declaration, importers are required to provide a range of information such as appropriate Tariff classification; an accurate description of the goods; value of the goods; country of origin; and supplier details. Product Import Regulations rely on the information supplied by importers.

Engineered stone is imported under Chapter 68 of the Tariff. The product is determined by the actual mineral content (not on the percentage of the mineral content).

A safe level of silica content would need to be determined as a requirement for lawful importation. A testing Standard, or definitively reliable technology, would be required to determine the level of silica in an engineered stone product, as well as independent technical expertise, to determine that the product complies with the silica level requirement for lawful importation.

Next Steps

The Taskforce notes that further data and information is required on a range of threshold issues before action can be taken to introduce a product or importation ban. Further evidence is required to determine:

- Whether there is a threshold silica level in engineered stone that can be used safely, so that materials containing silica levels above this level could be classified as a banned product;
- Whether there are other compounds present that may also contribute to the development of silicosis, e.g. binding agents and resins, including their content levels, and whether there are safe levels for these ingredients;
- Whether enhanced regulatory and engineering control measures (once appropriate controls are implemented, and their effectiveness measured over time) are effective or not;
- The feasibility of banning as a regulatory intervention. Imported products are usually identified by tariff codes, not by percentages of their constituents. It is also difficult to measure silica content of materials when they cross the border, limiting the likelihood of identifying a product that is prohibited;
- Any potential for circumvention by manufacturers or importers, or the introduction of substitute products that may have harmful levels of silica content or other hazardous chemicals, or even products being recycled; and



- The availability of safer substitutes, and their uptake by the community.

Overall, stakeholders considered a three-year timeframe, during which time further evidence is collected, as reasonable for considering whether or not to progress with any product or importation ban.

The Taskforce considers that a product ban or a ban on the importation of engineered stone should remain a viable option for consideration. The majority of members endorse the three-year timeframe, noting that outcomes of the evidence collection process will need to be available by mid-2024. Data collection will be undertaken to develop evidence to determine whether measures introduced are effective. If they are not, then a ban should be imposed. Data collection will need to commence immediately:

- To demonstrate that control and other regulatory measures have been implemented, evaluated over time and are effectively protecting those working with engineered stone from silicosis and silica-associated diseases; and
- To definitively determine the product characteristics that render engineered stone harmful, e.g. specific compounds, percentages of key ingredients, and threshold levels for safe usage.

The Taskforce was concerned about the complexities involved in the process to introduce a product ban or an importation ban on engineered stone, and, whether this option would provide the timely intervention required. More immediate measures that improve compliance with, and enforcement of, existing WHS laws, as well as consideration of additional regulatory measures are required to provide an immediate and meaningful response.

b) Introduction of nationally consistent licensing schemes for the engineered stone industry

The Taskforce notes that while consultations initially elicited varying views in relation to regulatory options regarding product safety control, there was increasingly wide support for a nationally consistent approach to licensing along the supply chain for engineered stone. The purpose of a licensing scheme is to restrict access to engineered stone to those businesses that can objectively demonstrate that they are able to effectively manage the risk of workers' exposure to hazardous silica dust.

The Taskforce considered that it is important to provide workplaces with the time and opportunity to implement enhanced regulatory and compliance arrangements specifically designed to improve WHS, and that the introduction of licensing could support this. The intention of an effective regulatory framework is to achieve prevention, and the implementation of a national framework to support licensing schemes at a jurisdictional level would assist in this goal.

The introduction of licensing schemes within the existing model WHS laws have the potential to address many of the issues identified in the consultation process. Benefits would include:

- Establishing explicit standards for businesses and consequently, driving improvements in knowledge, practices and behaviours; and
- Improving both compliance by, and the safety of, workers; as well as requiring the business or employer to regularly demonstrate that they continue to meet their regulatory requirements.



Many stakeholders considered that licensing would provide a more comprehensive approach to regulating the industry, and help accomplish multiple objectives in addressing silicosis:

- Provision of consistent information to businesses about safety and regulatory requirements
- Education, training and certification requirements for workers
- Mandated workplace air monitoring, reporting and collection of data
- Mandated health monitoring of workers, reporting and necessary follow-up actions
- Regular, and unscheduled, auditing by WHS regulators
- Collection of data to help analyse the effectiveness of control measures
- Collection of health information to support research into silicosis and dust diseases

CASE STUDY: A licensing scheme in the making

In May 2020, Victoria announced the intention to introduce Australia’s first licensing scheme for engineered stone⁴², and subsequently released a Regulation Impact Statement (RIS) on the proposed *Occupational Health and Safety Amendment (Crystalline Silica) Regulations 2021*. The RIS noted that in Victoria existing OHS Act and OHS Regulations (Victoria) expressed the requirement for employers to eliminate risks associated with engineered stone (or reduce the risks, where elimination was not possible) in general terms, and provided only limited specification in relation to processes involved in working with engineered stone. The RIS further noted that “historical regulation of hazardous substances has provided limited prescription for employers and employees, which appears to be resulting in insufficient controls being put in place to adjust to the changing nature of products that contain crystalline silica”.⁴³ The proposed regulations and the RIS were released for public comment from 22 January to 18 February 2021. WorkSafe Victoria is currently considering the comments for application to the regulations, which are expected to commence shortly.

The Taskforce considers that the following principles should underpin a national framework to support the development of licensing schemes at a jurisdictional level:

- The risks of exposure to silica dust when working with engineered stone may be managed appropriately, so long as laws are strictly adhered to
- Licensing schemes must mandate or otherwise ensure those who supply and/or distribute the product must only sell or distribute it to licensed entities. The immediate focus of licensing schemes should be on the fabrication and installation stages of engineered stone across the supply chain. Over time, the schemes could also expand to target the start and end of the supply chain: from importation and distribution to demolition and disposal
- Only those businesses and workers who have received education and training delivered by a qualified person, and have demonstrated the ability to meet nationally consistent competency standards in relation to working with engineered stone, have access to the product

42 Media Release by the Hon Daniel Andrews, Premier of Victoria (29 May 2020), *Silica Health Assessments Pass Halfway Target*, accessed 29 June 2021

43 WorkSafe Victoria, *Regulation Impact Statement* (November 2020), accessed 29 June 2021



- Licensing requirements should be consistent across jurisdictions to both minimise disruption for businesses and to ensure national consistency in the protection of workers
- WHS regulators would be responsible for the development, introduction and management of licensing schemes
- The licensing framework would complement and build on existing regulation
- Licensing must encompass monitoring of workplaces to ensure compliance. WHS regulators must certify/accredit approved persons to ensure enforcement of licensing requirements, and where possible, independent verification should be explored
- Licensing is supported by a compliance framework that enables evaluation to be undertaken of the extent to which businesses are meeting requirements, and includes appropriate penalties where non-compliance occurs
- Evaluation data on the effectiveness of the licensing scheme, in combination with other data collection activities, is collected and reported annually to ensure that this intervention has the desired impact of improving worker health and safety
- If adherence to WHS laws has not been demonstrated at an industry-wide level within three years from implementation of the first licensing scheme, then the option of introducing a product ban or ban on the importation of engineered stone products must be revisited

The Taskforce considers that the development and implementation of licensing schemes by jurisdictions would be a practical and proportionate approach to protecting workers from exposure to silica dust and other potentially harmful substances from engineered stone products.

The introduction of a licensing scheme could be considered within the model WHS laws. However, any proposed changes to regulation need to be explored through a regulatory impact analysis. This process will systematically assess the costs and benefits of proposed regulatory options to ensure that the most effective and efficient options are put forward for government consideration.

Safe Work Australia Members have agreed to a model code of practice for working with engineered stone, and the Taskforce notes that it is within the remit of Safe Work Australia to develop, if agreed by WHS Ministers, laws and a national framework to support jurisdictional licensing arrangements for businesses working with engineered stone.



c) Greater focus on ensuring enforcement and compliance with WHS laws

There is collaborative compliance and enforcement work being conducted by all jurisdictions in relation to exposure to respirable crystalline silica in the natural and engineered stone industry. This includes compliance and enforcement campaigns and compliance audits and monitoring.

Office of Industrial Relations, Queensland⁴⁴

Since December 2020, the Office of Industrial Relations (OIR) in Queensland has progressed the following activities:

- Stage 3 of the respirable crystalline silica dust state-wide compliance campaign is near completion (following Stage 1 and 2 compliance campaigns throughout 2019–2020). All 158 known Queensland stone benchtop fabrication workplaces have been assessed under Stage 3, with follow-up visits due to conclude in May 2021. Stage 3 compliance visits have shown an improvement in compliance and the effectiveness of Queensland's *Managing respirable crystalline silica exposure in the stone benchtop industry Code of Practice 2019* (the Stone Benchtop Code) in setting the minimum standard stone benchtop fabricators must meet to keep workers safe
- Following on from the success of the Stone Benchtop Code, OIR is working with industry, unions and technical experts to develop the *Managing respirable crystalline silica dust exposure in the construction industry Code of Practice* to ensure workers in the broader construction industry are protected from exposure to respirable crystalline silica

However, the Taskforce notes the strong concerns identified by stakeholders in relation to the extent to which current WHS laws and guidelines are followed, and the robustness of existing efforts by WHS regulators to ensure compliance. It is critically important to ensure that the model WHS laws are complied with and this requires consistent independent monitoring of work environments and safety policies in practice.

Greater promotion of regulatory activities as well as the outcomes, including the imposition of sanctions, would assist with driving behavioural change in the industry. There may be scope as part of the introduction of regulatory changes, including potential licensing schemes, to consider options for cost recovery from industry to support additional enforcement efforts by WHS regulators.

44 Submission made by Queensland Office of Industrial Relations to the NDDT Vision, Strategies and Priority Areas for Action Consultation Paper, April 2021



d) Improving awareness and education of the risks related to silica dust exposure when working with engineered stone

A critical element in improving compliance is to ensure that all people working with engineered stone and in other dust generating industries are aware of the risks, regulatory requirements, and the strategies and behaviours needing to be implemented to reduce the risk of exposure. This issue is discussed in detail in *An Enhanced Focus on Prevention, Awareness and Education* section of this Report.

“The South Australian Government recently published a cross-portfolio Strategy for Respirable Crystalline Silica Exposure Awareness and Reduction 2020 (SA Strategy). The SA Strategy commits to raising awareness of, and addressing the risks associated with, respirable crystalline silica exposure in workplaces, promoting safe work practices to prevent occupational diseases, and achieving measurable improvements in the reduction of respirable crystalline silica exposure across business and industry in South Australia. The SA Strategy focuses on awareness and reduction of exposure, as opposed to a specific reduction in disease.”

- SafeWork SA⁴⁵

e) Data collection

The speed with which silicosis has re-emerged means that there is a lack of longitudinal data and a robust evidence base to adequately inform decisions. Immediate attention is required to improve national data collection on the effectiveness of current and future regulatory and non-regulatory measures being implemented across jurisdictions.

The Taskforce recommends collecting data to build an evidence base on whether or how silica-based products can be used safely. A particular issue to explore is whether the application of the combination of control measures is sufficient to eliminate or minimise the risk of silica exposure.

The Taskforce notes that Recommendation 7 will drive improved data collection. It proposes annual reporting to Health and WHS Ministers in all jurisdictions on the effectiveness of regulatory and non-regulatory measures in improving compliance and preventing dust diseases in workers.

The establishment of the National Registry (discussed further under *Strengthening the Evidence Base*) will provide WHS regulators with additional information about the prevalence of silicosis and other occupational respiratory diseases in their respective jurisdictions, support early detection of new cases, and enable them to identify particular workplaces and industries that require greater scrutiny and an enhanced response. In addition, a stronger knowledge base will enable emerging issues to be identified and addressed.

45 Submission made by SafeWork SA to the NDDT Vision, Strategies and Priority Areas for Action Consultation Paper, April 2021



Recommendation

1. **Strengthen work health and safety measures** to ensure workers are protected from exposure to respirable crystalline silica and its devastating consequences. Maintaining the status quo is not acceptable
 - a. Take immediate action to ensure that businesses working with engineered stone demonstrate that they:
 - Effectively and continuously manage the risks for workers associated with working with engineered stone;
 - Regularly monitor and record silica dust levels in the workplace, and have these results validated by an appropriately trained occupational hygienist; and
 - Conduct regular health monitoring of all workers exposed to respirable crystalline silica.
 - b. Greater priority be given to **work health and safety monitoring and compliance** activities where workers are at risk of exposure to respirable crystalline silica. Specific consideration should be given to:
 - Development and introduction of an industry funding model to support ongoing regulatory activities; and
 - Increased frequency and robustness of workplace inspections and better promotion of actions taken by WHS regulators.
 - c. Urgently conduct a regulatory impact analysis (RIA) to identify and decide implementation of measures that provide the **highest level of protection to workers from the risks associated with respirable crystalline silica** generating activities in the engineered stone industry. The RIA must consider:
 - A licensing scheme or equivalent to restrict access to the product to those businesses that can demonstrate the ability to effectively manage the risks; and
 - Strengthening the health monitoring requirements include contemporary methodologies such as low dose high resolution computerised tomography (HRCT) scans, and to cover workers at risk of exposure to respirable crystalline silica.⁴⁶
 - d. Commence the processes required to implement a **full ban on the importation of some or all engineered stone products** if, by July 2024:
 - There is no measurable and acceptable improvement in regulatory compliance rates for the engineered stone sector as reported by jurisdictions; and
 - Evidence indicates preventative measures are not effectively protecting those working with engineered stone from silicosis and silica-associated diseases.

46 Note: issues relating to health monitoring are discussed in detail in the next section



Improving Health Monitoring, Screening and Surveillance

In its Interim Advice, the Taskforce noted that while businesses are required to provide health monitoring for workers under WHS laws where there is a significant risk to health from exposure to prescribed hazardous chemicals, there are gaps in the implementation of these requirements. The Taskforce also noted differing views amongst stakeholders,

on what the most appropriate health screening methods are, with many critical of the minimum health monitoring processes required under the WHS regulations.⁴⁷

The Taskforce further reported in its Interim Advice that,

the use of conventional chest X-rays and spirometry may not detect the early stages of silicosis,

and,

there was agreement that all jurisdictions need to have a consistent and comprehensive program to make screening available to all exposed workers and that there must be consistent national standards in the methodology of screening and case detection.⁴⁸

Early detection of occupational respiratory disease is vital to enable appropriate management of affected workers and to identify deficiencies in workplace controls. Nationally consistent and frequent health screening and surveillance of workers will also provide valuable data to assist with increased understanding of dust disease progression, especially silicosis. It will also assist with the detection of non-compliance by businesses or gaps with workplace controls, enabling implementation of appropriate and timely interventions that will play an important part in identifying emerging health issues and protecting workers who are at risk.

Consultation and research findings

During the Taskforce's consultation, a key theme in feedback was support for greater national consistency in screening. Many stakeholders advocated for the introduction of health screening programs in each jurisdiction. This would serve a number of purposes: enable early identification of disease; inform strategic clinical questions; drive regulatory responses; support data collection through the National Occupational Respiratory Disease Registry; as well as provide valuable information to industry, researchers, clinicians and individuals working in the engineered stone sector.

While health monitoring is required under the model WHS laws, a broad spectrum of stakeholders expressed concerns about the lack of a nationally consistent approach to implementation of health monitoring, and accessibility of health screening assessments for occupational respiratory dust diseases.

Some stakeholders argued that screening should be a mandatory requirement to address existing gaps in data about the incidence and prevalence of accelerated silicosis, and to facilitate monitoring of an individual across their employment life cycle, from commencement of work to follow up

47 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019

48 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019



after leaving the workforce. Additionally, some stakeholders noted that screening events are an opportunity for at-risk individuals to be provided information about respirable crystalline silica exposure and best practice management.

Stakeholders noted that it was important to trace historical cases of workplace exposure, including cases that have resulted in a diagnosis of silicosis, which may have occurred decades earlier.⁴⁹

Many stakeholders advised that the cost of compliance with any health monitoring program could be onerous for small to medium enterprises (SME) and micro business. Larger businesses are often better resourced and knowledgeable about the regulatory system, and better able to access support. Some stakeholders considered that health monitoring should be government funded or that governments should provide financial incentives for SMEs and micro businesses to participate.

“This information could be used to benchmark performance across jurisdictions and enable more comprehensive research and sharing of emerging risks.”

– Industry⁵⁰

The current landscape

a) Existing WHS laws

Health monitoring

Under the model WHS regulations, health monitoring, as it relates to respirable crystalline silica, requires that persons conducting a business or undertaking ‘must provide health monitoring for workers if they carry out ongoing work using, handling, generating or storing crystalline silica, and there is a significant risk to the worker’s health because of exposure.’⁵¹

The minimum health monitoring requirements for crystalline silica include:⁵²

- Collection of demographic, medical and occupational history of each worker
- Records of personal exposure
- Standardised respiratory questionnaire
- Standardised respiratory function tests
- Chest X-ray of full posteroanterior chest view for baseline and high-risk workers.

The model WHS regulations prescribe that health monitoring is to be carried out by, or supervised by, a registered medical practitioner with experience in health monitoring; and each business has the duty to determine if health monitoring is required.

Under the model WHS laws, persons conducting a business or undertaking must determine whether workers are at risk, which workers are at risk, and who warrants health monitoring. This requires knowledge of the product and its risks, and judgement of the person conducting the

49 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

50 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

51 Safe Work Australia *Crystalline Silica Health Monitoring Guide*

52 Safe Work Australia *Crystalline Silica Health Monitoring Guide*



business or undertaking. Given that the high levels of silica content in engineered stone is known to create a significant risk to workers, there is merit in amending the existing health monitoring requirements to provide greater clarity in relation to which workers are at risk and need to undergo monitoring, and the obligations of businesses.

Consultations with stakeholders identified that the costs of monitoring and potential impacts on productivity are a primary concern for businesses. This highlights a need for further education for businesses on the inherent risks associated with working with engineered stone, and their responsibilities in relation to the health of their workers.

Safe Work Australia Members have agreed to a model code of practice for national implementation under the model WHS laws. This will be considered by WHS Ministers later in 2021. This Code will assist businesses to meet their duties under WHS laws. Dissemination of this information, particularly to smaller businesses, will be key to ensuring these practices are embedded and complied with.

As identified above, existing WHS laws prescribe chest X-ray as a minimum health monitoring requirement. However, many experts query the effectiveness of conventional chest X-rays and spirometry in detecting the early stage of silicosis. A HRCT scan has been demonstrated to be more sensitive than X-rays in detecting early dust lung disease. Use of a HRCT scan of the chest (non-contrast) may be considered depending on the worker's history and levels of individual silica exposure. If the worker's role involves a very high level of silica exposure (such as working with engineered stone benchtops) or a high level of silica exposure for over three years, then a HRCT scan should be used as a replacement or adjunct to X-ray.⁵³ Health professionals need to balance the risk of radiation exposure versus the risk associated with exposure to silica dust.

Health screening

Since 2016, free health screening assessments have been implemented in some jurisdictions as a response to the identification of cases of silicosis affecting workers in the engineered stone benchtop industry. There is inconsistency in the approaches taken by jurisdictions due to a lack of overarching national guidance.

The Victorian state system has the most comprehensive database for initial case finding, and ongoing data is collected in the same database when people come back for scans. Other states are doing this more sporadically, and even the Victorian program has been paused this year,⁵⁴ leaving some people having their follow-up scan not happen until two years post diagnosis. In Queensland, there are no mandatory follow-ups, South Australia does not see that they have a problem, and in NSW we are anticipating a lot of cases to be found and a sense that nobody is across what is happening here."⁵⁵

– Medical professional

In 2018, the Queensland OIR sent an alert to people working in the engineered stone industry in Queensland to make them aware of the risks; this resulted in industry-wide safety measures being

53 Safe Work Australia *During exposure to a crystalline silica process*, accessed 24 June 2021

54 Lung function testing could not occur at various stages due to COVID-19 and following the advice of medical peak bodies.

55 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



put in place in Queensland, including free health checks for workers who are reasonably likely to have had high exposure risk, although this did not mandate follow-up screening. The significance of the Queensland approach included its rapid response and the comprehensive nature of actions implemented (see case study below).

CASE STUDY: Queensland Government response to Occupational Dust Exposure.⁵⁶

Queensland has undertaken a range of planned and deliberate actions to address the risk of workers developing illness due to occupational dust exposure.

These actions include:

- development of the *Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019*, which sets enforceable minimum standards stone benchtop fabrication businesses must meet to ensure the risks of exposure to respirable crystalline silica are minimised for workers
- an industry wide audit campaign of all known stone benchtop fabrication businesses to assess compliance with the requirements of the Stone Benchtop Code
- development of a *Guideline for assessing engineered stone workers exposed to silica to support medical practitioners*, which was finalised in November 2019
- support for an immediate reduction in the Workplace Exposure Standard for respirable crystalline silica from 0.1 milligrams per cubic metre (mg/m³) to 0.05mg/m³, with the clear expectation that consideration of a further reduction of the exposure standard should occur within three years of the date of decision of WHS Ministers to reduce the exposure standard
- funding of free initial health screenings by WorkCover Queensland for current or former workers in Queensland who have been exposed to dust from engineered stone in their workplaces
- provision of support to workers affected by exposure to respirable crystalline silica through workers' compensation, which includes high-quality medical treatment and rehabilitation
- support for research into treatment for occupational dust lung disease. Queensland has committed \$5 million over four years to support research into supporting the wellbeing of workers suffering from occupational lung disease
- support for return to work for workers with occupational lung disease including commissioning research to inform return to work and vocational rehabilitation support for workers diagnosed with silicosis
- establishment of the Queensland Notifiable Dust Lung Disease Register (the NDLD Register) on 1 July 2019 and the release of the first annual report of the Register

⁵⁶ Submissions made by Queensland Government to the National Dust Disease Taskforce Consultations, 14 November 2019 and 13 January 2021



Victoria is considered most advanced in collecting and utilising health screening data to identify potential cases of silicosis (see case study below).

CASE STUDY: The Victorian Silicosis Health Assessment Program⁵⁷

In May 2019, WorkSafe Victoria implemented free health assessments for all past and present stonemasons working in Victoria. The health screening program was a best practice approach to accurately identify accelerated silicosis in stonemasons. Baseline screening and secondary investigations utilising experienced and specialised occupational health physicians and respiratory physicians were established. There was a strong emphasis on quality controls in the screening program.

The WorkSafe Victoria Silica Action Plan covered six key areas:

1. Protect workers and members of the public from exposure to silica and hold duty holders to account
2. Strengthen the legislative and regulatory framework
3. Increase awareness and capability in the prevention and response to silica exposure
4. Ensure early intervention, treatment and support for workers
5. Information and education including the development of resources for teachers to use in the classroom and provided to all TAFEs throughout Victoria
6. Research and influence the national agenda, including through sub committees established as part of the National Dust Disease Taskforce set up by the Commonwealth Government

To address key area 4, WorkSafe Victoria launched a dedicated health screening program in May 2019, developed in consultation with medical professionals. Throughout its design, the worker was front of mind and a person-centred approach adopted. For some workers, the screening process is distressing, confronting and may require them to immediately stop work; therefore, it was imperative support be proactively offered throughout every step of the assessment.

57 Source: WorkSafe Victoria



How WorkSafe Victoria implemented the program:

- Established a dedicated WorkSafe silica advisory team to provide a single point of contact and subject matter expertise. These advisors ensure workers and employers are supported throughout the pre-claim process
- Established dedicated case managers within its five insurance agents for continuity of support and to build knowledge, including on-going education sessions with the agents
- Established a dedicated resource in the WorkSafe Claims team for agents to seek advice quickly on new claims and on-going requests for various treatments
- Reduced claim acceptance time from 28 days to two
- Offered wellbeing support (pre-claim) for workers and their families
- Introduced a detailed handover from advisor to case manager to ensure history of the worker is known from the outset and help define support needed for a claim
- Mapped the journey of the worker to inform future customer experience
- Reviewed communications to culturally and linguistically diverse workers to ensure this complex disease is understood by a workforce with a high proportion of Vietnamese and Chinese speakers. Many of the information documents and key guidance were translated, and specific Electronic Direct Mails and campaigns were rolled out to increase awareness and education among this cohort about silicosis and the importance of health screening
- Campaign videos with four ‘stonemason personas’ were created, highlighting the challenges workers face and how WorkSafe Victoria can help address them. These ran on WorkSafe Victoria’s social media channels and advertising spend was allocated to target various language groups
- Developed an online training module for GPs to improve capability in diagnosis and treatment
- Held both a Medical Summit for key medical professionals and a Prevention Summit for key industry sectors to escalate knowledge of the disease

When a claim is accepted, the WorkSafe advisor completes a handover with the agent, informing them of all the supports and services the worker has identified as being necessary to support them in their recovery, re-training and return to work. Workers are provided with a dedicated case manager who specialises in managing silicosis claims and can assist them with accessing treatments and services.

In addition, WorkSafe established an exercise physiology program that allows workers to build their fitness and health with a trained professional. WorkSafe have had great success with this pilot program and is looking to make this a permanent part of the ‘return to life, return to work’ process.

Importantly, WorkSafe continued to offer the health assessment program during COVID-19. WorkSafe also implemented telehealth options for psychological support with occupational healthcare providers and respiratory physicians to reduce face-to-face contact wherever possible. This proved successful particularly with workers who struggle to get to appointments during the day and/or are regionally located.⁵⁸

58 Source: WorkSafe Victoria



Further information about jurisdictional health screening programs can be found at [Attachment 3 Table 2: Outcomes of jurisdictional health screening programs](#).

b) Reluctance of workers to participate in screening

The Taskforce is concerned by feedback from stakeholders about the reluctance of many workers to participate in health screening for fear of a positive diagnosis.

"I'm supposed to be tested, but I haven't gone in. If I test positive, then I can't work. What happens to my business? How do I support my family? Workers comp only lasts for two years."

– Stonemason⁵⁹

Workers know that if they are diagnosed with silicosis, they will likely be required to cease work, and not return to their chosen profession. There is also obvious concern about the financial implications associated with this situation. Many of these workers are the primary financial providers for their families.⁶⁰

c) National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis (National Guidance)

*National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis*⁶¹ has been developed by the Taskforce to provide key practice points for medical practitioners, aimed at identifying people at-risk from silica dust exposure, and to carry out health surveillance within their specific training and experience. The National Guidance provides critical information for case-finding efforts which could be used by a business in an initial health screening assessment. In addition to the best practice approach identified above, the National Guidance provides a baseline for state and territory screening programs.

Proposed reforms

Screening workers who currently have, or previously had, exposure to respirable crystalline silica could save lives and play a part in reducing the adverse consequences of a diagnosis. Importantly, the symptoms of silicosis may not appear for many years after exposure, which is why continued health screening is critical.

Screening also provides an opportunity to raise awareness of the risks of silica and to educate workers about the need to correctly apply protective controls to reduce their risk of developing silicosis.

The Taskforce recommends that jurisdictions that do not have free health screening assessments in place, introduce one using Victoria's approach as a baseline, to supplement the requirement

59 Quantum Market Research (2019) *Dust Disease Final Report*, report to Department of Health

60 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health

61 National Dust Disease Taskforce Working Group (2021) *National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis (to be published)*



in the model WHS laws for health monitoring. Where jurisdictions already have assessments in place, they should be reviewed to ensure the outcomes are consistent with this approach.

It is acknowledged that HRCT scans at as low a dose as is practical are superior to chest X-rays for the early detection of silicosis. As such, it is recommended that contemporary methodologies such as low dose HRCT scans be included as the minimum requirement for health monitoring in WHS laws.

Nationally consistent health monitoring is especially important in the engineered stone sector to provide the foundation for understanding the prevalence of silicosis, disease progression, and over time, the efficacy of preventive measures. This information could be captured by the National Occupational Respiratory Disease Registry.

Recommendation

2. Building on the early recommendation from the Interim Advice **to develop national guidance to identify people at risk** from respirable crystalline silica exposure, **improve the quality, frequency and coverage of health screening assessments** for current and former workers.



An Enhanced Focus on Prevention, Awareness and Education Strategies

The national implementation of prevention, awareness and education strategies relating to silica dust, silicosis and other occupational respiratory diseases, targeted at duty holders, workers, health professionals and consumers, is essential. In its Interim Advice, one of the five national actions the Taskforce recommended was that, in the immediate and short-term, all jurisdictions,

*develop and implement a prevention strategy, with an initial immediate targeted education and communication campaign.*⁶²

Further consultation and research undertaken by the Taskforce since this time has emphasised the need for greater priority to be placed on prevention activities. This is considered essential if Australia is to make real headway in eliminating silicosis. There is strong support for further attention on prevention, effective education and communication strategies, with the public sector and industry working together to implement and promote a nationally consistent approach to awareness and prevention under a National Silicosis Prevention Strategy.

Consultation and research findings

During the Taskforce's consultation processes, the lack of awareness of the risks of dust diseases was acknowledged as a problem across all sectors. The Taskforce frequently heard about the lack of attention being paid by some businesses, as well as workers, to prevention activities. Under the WHS laws, persons conducting a business or undertaking have a duty to inform and equip workers with appropriate information and training about the potential risks to health and safety.

SCENARIO: Diagnosis is first time worker hears of silicosis

A worker is employed by a micro business with three employees. The employee has not had any dust specific safety training during induction or a health assessment on commencement of their employment. They are unaware of what silica or silicosis is and also unaware of how to protect themselves. They are provided a basic mask when they are cutting engineered stone and most of the time wet cutting is performed.

The workshop is visibly dusty, and PPE is minimal. After eight years of working at the business, they develop a cough and breathlessness, especially when trying to sleep lying flat. After delaying visiting a doctor for over a year, the worker's symptoms increase, and they visit their GP. After the GP visit and subsequent tests, the worker is diagnosed with silicosis. They are given limited information from the GP and advised they should avoid future exposure to dust, and therefore cease working in the industry immediately.

Affected individuals advised that working conditions and attitudes directly contributed to their diagnosis:

- Lack of suitable PPE; where masks were supplied, they were often paper, or were being re-used (often by multiple people), stored poorly and not fitted correctly

62 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019



- Working in spaces with no ventilation or air conditioning, and in very dusty environments
- No dust suppression: there were many instances of dust routinely being present in the atmosphere, e.g. kicked up by trucks on site, with no water suppression used
- Lack of dust-specific safety training, and no mention of risks associated with dust inhalation during workplace inductions
- Lack of other facilities such as showers and washing machines. While some sites appear to be adding these facilities, they are often patchy or insufficient, e.g. one shower available for a whole site, and workers obliged to be off-site within 15 minutes of a shift ending
- Lack of air monitoring, or monitoring being incorrectly carried out. Many reported air monitoring results being hidden, not submitted, or written off as ‘incorrect’ if showing a high count
- Lack of health screening or routine health monitoring; even the whole workforce being laid off and re-hired to avoid routine testing
- Employer attitudes to worker safety: a feeling that any complaint will result in a loss of job
- Employee attitudes: don’t be ‘seen as weak’, and a feeling that colleagues will put pressure on you if you choose to speak up about safety

While some workers and family members attributed these conditions to a lack of awareness, others were of the view that some employers were aware of the dangers but chose to cut corners, putting efficiency and profitability above safety.

Some stakeholders expressed concern about the lack of higher order controls being implemented in workplaces, such as isolating workers and others from silica dust, engineering controls and administrative controls,⁶³ and an over reliance on the use of PPE to protect workers. Further evidence was provided of many poor practices in the handling of dust, resulting in increased risks to workers. Examples were provided of workshops that did not provide the necessary equipment to ensure the safe handling of engineered stone.

“I always wore my mask but there was no enforcement of it. They put warning signs on the finished products to warn consumers, but there was no understanding, no training, no monitoring.”

- Worker⁶⁴

“I’ll wear a mask if it’s nearby, but there’s no point walking to the office five minutes away to get a mask to do one or two cuts.”

- Stonemason⁶⁵

63 Examples of engineering controls to control silica dust include automation when cutting, grinding or drilling; using wet cutting methods; local exhaust ventilation etc.

Examples of administrative controls to control silica dust include written rules and policies for working with silica or cleaning silica dust e.g. documented clean-up procedures: restricted access policies so that only staff who are carrying out a task that generates silica dust are allowed access to high risk areas etc.

Source is: <https://www.safeworkaustralia.gov.au/choosing-and-implementing-control-measures-silica-dust>

64 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health

65 Quantum Market Research (2019) *Dust Disease Final Report*, report to Department of Health



The current landscape

a) The structure of the workforce

Diversity and workforce mobility pose a challenge to both broadening the scope of engagement with prevention activities and disseminating the materials available. It appears in many forms: in the cultural makeup of the workforce; the age of workers; the occupations of those handling the material; the parties who operate along the supply chain; the worksites where the material is handled; and in business structure and size.

“Information ... must be written in a way that is easily understood, including by workers whose first language is not English. In informal discussions with small, independent and often self-employed tradesmen, it has been impressed upon me that these workers do not actively seek out information from sources such as safety data sheets, WHS regulators or WHS databases.”

– Occupational hygienist⁶⁶

“The workforce is culturally and linguistically diverse, and appropriate support should be given to these individuals to better understand their rights and industry best practice. At a minimum, safety materials should be translated into Arabic, Mandarin, Greek and Vietnamese to support these individuals.”

– Industry⁶⁷

A particular issue with engineered stone is that workers do not require a formal stonemason qualification. This means that many will have missed out on specific training on working with sandstone, limestone, marble and other types of stone and stone products.

Stakeholders have suggested there may be a number of reasons why small and medium businesses may find it difficult to comply with their obligations under the WHS laws. In addition to the compliance costs which may be disproportionate to the size of the business, and limited resources, there may be a genuine lack of awareness of obligations and tools to self-monitor and record compliance. There may also be a perception that they may be under less scrutiny when compared with larger corporations.

b) WHS regulators

Significant work has been undertaken nationally, including by WHS regulators in relation to silicosis prevention activities and to manage the risks of exposure to respirable crystalline silica. This increase in activity has been partly in response to increasing cases of accelerated silicosis in the engineered stone workforce. The range of activities underway in jurisdictions include:

- Enhanced controls for working with engineered stone, e.g. a ban on uncontrolled dry-cutting has been introduced in some jurisdictions
- Development of codes of practice
- Implementation of the reduced Workplace Exposure Standard for respirable crystalline silica (reduced to an eight-hour time-weighted average of 0.05mg per m³)

66 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

67 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



- Compliance campaigns and increased focus on enforcement
- Education and awareness campaigns
- Enhanced support for individuals affected by silicosis

At the national level, more recent activity of Safe Work Australia includes the development of regulations preventing uncontrolled dry cutting, national guidance and a model code of practice on managing the risks of respirable crystalline silica when working with engineered stone in the workplace, and the launch of its *Clean Air. Clear Lungs.* campaign.

See **Attachment 3** for more detailed information on the activities of national, state and territory regulators.

c) The National Silicosis Prevention Strategy

In response to the Taskforce's Interim Advice, the Department of Health is leading the development of a National Silicosis Prevention Strategy and a National Action Plan.

Analysis of stakeholder feedback and current activities implemented over the last two to three years within industry, by Safe Work Australia and jurisdictional regulators has assisted with clarification of the prevention initiatives required to address perceived inadequacies in both the health and WHS frameworks.

The Strategy aims to create a stronger and more effective prevention system through a co-designed and delivered approach by the WHS and health sectors, unions and industry. It seeks to minimise worker exposure to harmful silica dust through a number of strategies and supporting principles. The Strategy aims to create linkages between Commonwealth, state and territory Health departments, WHS regulators, industry and unions, to promote information sharing, consistency in practice and information, and to avoid duplication and reduce gaps in prevention efforts.

d) Early Detection and Response Protocol

In response to the Interim Advice, the Department of Health has commenced work on the development of an Early Detection and Rapid Response Protocol to enable responsible government agencies to detect emerging occupational dust diseases, and drive a coordinated response to the identification of new risks.

The successful implementation of the protocol is dependent on readily available nationally consistent data and information on key workplace risks and triggers, incidence, prevalence and mortality associated with occupational respiratory diseases. This project is inherently linked to the implementation of the National Guidance and the National Occupational Respiratory Disease Registry.

e) Air monitoring

Air monitoring plays an essential role in supporting prevention of dust disease. Accurate measurement of workplace respirable crystalline silica levels is essential to objectively validate the effectiveness of dust control measures, and to support estimation of exposure levels/risk.

Existing legislation is principles and risk based, and may result in some ambiguity. The existence/adoption of the Workplace Exposure Standard for silica dust (or respirable crystalline silica) does not guarantee safety from excursions above the prescribed level for short durations, nor does it protect workers if there are no engineering controls on site.



Businesses are responsible for determining when and where air monitoring is required. Businesses are required to undertake air monitoring to determine the airborne concentration of silica only if a) they are uncertain whether the airborne concentration of silica exceeds the standards, or b) monitoring is necessary to determine whether there is a risk to health. Where air monitoring does occur, the model WHS regulations do not specify the *frequency of monitoring* nor *where in the workplace* it must occur to meet this requirement. This information is typically covered in codes of practice. More importantly, air sampling at fixed locations in the work environment – i.e. 'static samples' – cannot provide personal exposure information for each potentially exposed worker. Given the extremely high silica content in engineered stone and the inherent associated risks, there should be no discretion for businesses in determining whether air monitoring is conducted.

The effectiveness of this measure is also dependent on the accuracy of air monitoring. To enforce the WHS laws, WHS regulators must be confident that a standardised approach is used and that measurements are accurate, consistent and robust enough to withstand challenge and scrutiny in court. In addition, at present, there is no formal centralised system to capture and analyse data about worker exposure and air monitoring, and report this information in a routine way to inform policy making or compliance responses.

Proposed reforms

Prevention is a key priority area requiring further attention and investment. Urgent improvement in the understanding and awareness of employers and employees that translates into improved practices, attitudes and behaviours is required.

a) The National Silicosis Prevention Strategy

The implementation of the National Silicosis Prevention Strategy relies on collaboration between the Commonwealth, state and territory Health departments, WHS agencies, industry and unions. The Department of Health will continue to lead in the development of the Strategy and National Action Plan, working closely with key stakeholders.

The Taskforce strongly supports the implementation of a comprehensive education and awareness campaign, targeting:

- Workers and families about risks, workers' rights and preventative measures
- Businesses about risks, control measures and legislative requirements
- Medical practitioners about occupational risk, symptoms, presentation and evidence-based diagnostic techniques to help early diagnosis of silicosis
- Manufacturers to enlist their cooperation in promoting safe practices through labelling, provision of safety sheets for each stage of the supply chain and taking a lead role in product stewardship
- Designers and renovators of kitchen and bathrooms, as well as the general public, about the risks associated with silica, and to encourage consideration of safer alternatives
- Consumers about the risks associated with engineered stone and encouraging consideration of safer substitutes

For prevention, awareness and education strategies to be effective, and correctly interpreted and implemented, tailored communications need to be designed to account for various levels of literacy as well as culturally and linguistically diverse audiences.



Better visibility and coordination at a national level will help leverage the increased efforts most jurisdictions have made since the re-emergence of the disease. This includes the heightened focus on prevention and awareness around controlling exposure to silica dust and protecting against silicosis, e.g. lowering the Workplace Exposure Standard for respirable crystalline silica; the restrictions on dry cutting (banned outright in some jurisdictions); compliance requirements for air monitoring and health monitoring, and individual exposure levels for workers; and the provision of educational materials for workers and businesses. There is also an important role for the Commonwealth Government in developing national initiatives to complement the work of jurisdictions, raise awareness more broadly, and encourage greater consistency in messaging.

Further efforts need to involve collaboration with all key stakeholders: governments, WHS regulators, industry, employers, employees, medical professionals, unions and peak bodies. Exposure risks vary with each stage of the supply chain and these need to be addressed effectively, and practical guidance and tools will need to be developed for use in workplaces.

b) Early Detection and Response Protocol

In the absence of robust data relating to exposure risks, an interim Protocol is being developed using qualitative data sources. Consultation will be undertaken by the Department of Health with key stakeholders in coming months to test the feasibility and merits of operationalising the Protocol prior to the availability of more comprehensive data.

c) The importance of air monitoring

There are a number of concerns with the current approach to air monitoring including sampling techniques and technologies used; assay technologies available; testing of proficiency and reliability; and quality management regimes. In addition, limitations on the analytical sensitivity of existing technologies may need to be addressed through research.

Safeguarding the validity of air monitoring relies on the capabilities of qualified occupational hygienists. A disparity in the level of experience and qualifications of those conducting air monitoring and inspections has been highlighted as a real issue by medical professionals, support groups and certified occupational hygienists.

“The success of workplace health and safety systems relies on their effective implementation by competent professionals. It is the absence of this which has led to the re-emergence of accelerated silicosis in recent times.”

– Occupational hygienist⁶⁸

68 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



The recommendation from occupational hygienists and medical professionals is that there should be a requirement that businesses engage accredited occupational hygienists to ensure consistency and accuracy in the monitoring of workplaces.

“A further concern is that regulators do not mandate the use of properly qualified and competent hygienists to advise employers on issues such as silica dust control. This opens the field to ‘cowboy’ service providers claiming to be hygienists, to undercut genuine service providers who possess appropriate skills, knowledge and experience, and who are bound by their professional Code of Ethics. It is distinctly possible that by providing poor advice, these ‘cowboys’ may have actually contributed to cases of silicosis.”

– Occupational hygienist⁶⁹

Consultations indicate that adjacent sectors have already taken steps to this effect, with Queensland mining legislation clearly defining the qualifications occupational hygienists are required to have:⁷⁰

1. Full member of Australian Institute of Occupational Hygienists; or
2. Hold an equivalent competency under an international certification scheme; or
3. Hold an Australian Qualifications Framework Level 8 or above qualification (i.e. bachelor or honours degree, graduate certificate, graduate diploma, master’s degree, or doctoral degree) in occupational hygiene with a minimum of five years’ experience in the field of occupational hygiene.

Stakeholders advocated for a similar requirement to be applied to all engineered stone workplaces under WHS legislation in all states and territories.

“Workplace monitoring programs are more than just ‘putting a few monitors on workers’. Rather, they are informed through a health risk assessment, coupled with control verification, undertaken in line with recognised standards, and involve active consultation with the workforce.”

– Occupational hygienist⁷¹

Data from air monitoring is necessary to validate engineering controls, determine daily exposure limits, identify whether there is a safe level of dust for those having received a positive silicosis diagnosis, and inform the best combinations of controls required in various scenarios.

There would be merit in further investigation being undertaken to standardise air and environmental monitoring to promote data integrity, and the establishment of processes to support the provision of this information to WHS regulators and to provide a greater ability to assess and compare exposure data.

69 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

70 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

71 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



Recommendation

3. In addition to implementing the early recommendations from the Interim Advice that aim to **prevent the risk of exposure** to respirable crystalline silica and other hazardous dusts, prioritise investment in prevention activities.
 - a. Finalise and implement the **National Silicosis Prevention Strategy** and associated National Action Plan.
 - b. Implement a **national, targeted education and communication campaign**, using lessons learned from jurisdictions and key stakeholders, by end 2021.
 - c. Design and implement an **Early Detection and Rapid Response Protocol** to identify emerging workplace risks using data from the National Occupational Respiratory Disease Registry when it becomes operational, and other relevant sources.



Better Supports for Affected Workers

In its Interim Advice, the Taskforce identified the need for improved levels of support for workers who have been diagnosed with silicosis across a range of services including legal support, financial support, compensation schemes, and physical and mental health services, including for their families. The Taskforce noted the benefits of bringing together the shared interests of WHS regulators and workers' compensation authorities, industry, unions, health care professionals and medical researchers to pursue a coordinated national effort in the treatment and support of affected workers.

Consultation and research findings

The Taskforce commends the market research, conducted on its behalf, into the health status of affected individuals and the impact of a diagnosis on individuals and their families, and recommends that stakeholders consider the *Dust Disease Research Update Final Report*, March 2021, to better understand the impact of silicosis on individuals and their families, and their views.⁷² The Taskforce wishes to acknowledge the valuable insights provided by those who participated in this research – in particular, the affected individuals and their families or carers.

Research was conducted in 2019 via interviews with 28 tradespeople, four focus groups with partners of tradespeople and four focus groups with customers of engineered stone benchtops, and through quantitative research (606 online surveys across stonemasons, other tradespeople, partners and customers; and 217 phone surveys across stonemasons and other tradespeople). In 2021, the market research was updated through five focus groups with a total of 24 participants that included affected workers, their families or carers, as well as quantitative research through a survey of 350 stonemasons and other tradespeople.

The insights provided by affected individuals and their families or carers who shared their personal stories directly with the Taskforce during targeted sessions in 2019 and 2021 was also extremely valuable, and provided insights that aided the Taskforce in the development of its Final Report.

The Taskforce heard directly about the terrible impact that a diagnosis of an occupational respiratory dust disease has on all aspects of people's lives. The overwhelming feedback from affected workers is that they lack the financial and psychological support needed. In addition, support is required for the families of affected workers who share the burden. There was general support from stakeholders for improved support services for these workers and their families.

72 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health



CASE STUDY: Silicosis - does it fit the profile?⁷³

Sarah (not her real name) is a 35-year old who had been employed for seven years from 2012 in the administrative area of a quarrying company. Whilst working in the company, Sarah used to walk in areas such as the pub mill and the crushing plant to get paperwork. Lots of quarrying work was performed at the worksite which required digging, drilling and crushing of rocks that contained silica and produced silica dust. Sarah was exposed to a high level of silica dust as she worked in a portable enclosure that was dirty and dusty. The whole quarry was a joined-up structure which meant each room was dusty and all the workers were exposed to dust.

There was an extraction system, but it did not work and was not replaced. The office where Sarah worked had no ventilation or extraction systems, and cleaning took place once a week. The company organised air monitoring a few times, however, this was not a regular event. Only some of the workers onsite at the crushing plant were monitored to determine their exposure levels. Facemasks were available only in the supervisor's office. Workers were neither educated about the risks associated with silica nor were instructed in the use of PPE. Health assessments were prescribed by the company every few years, but they were not conducted on a regular basis.

Sarah returned to work in February 2020 after maternity leave and was required to undergo a 'routine' health assessment. Her X-ray came back with white spots on it and she was referred for a CT scan and lung biopsy where they took silica particles from her lungs. Other than occasional breathing difficulties, Sarah did not have noticeable symptoms. She was diagnosed with silicosis.

Sarah is resigned to the fact that her condition will worsen. She must deal with the uncertainty about how many years she has left to live and look after her children. Sarah is worried that her husband is in denial of her illness and has yet to come to terms with silicosis. Being unemployed means she can no longer afford childcare, which she needs at times. Sarah's day-to-day activities and her work options are restricted due her illness. However, she exercises regularly to maintain her fitness and accesses the services of a psychologist and hypnotherapist for assistance in managing her anxiety and stress.

Sarah advised, "WorkCover is a very overwhelming process and adds additional stress on workers". Her income support will decrease from 85 per cent of her previous income to 65 per cent. Sarah emphasises that return to work programs must consider the circumstances of workers and be flexible to accommodate their needs. Key messages Sarah would like to share are that: "the whole process has been very difficult for the whole family, something that no one should have to go through" and that "it is unethical and prejudicial to class some workers (such as stonemasons) as more important" than other workers.

73 Case study developed from a written submission made by a worker affected by silicosis – credit Quantum Market Research / Australian Workers Union



The consultation processes and market research conducted by the Taskforce identified a range of areas where affected workers and their families or carers suggested reforms could be made. These include:

- Companies being held financially responsible for employees after diagnosis. Many suggested that an industry fund (similar to the asbestos scheme – James Hardie compensation scheme and NSW Asbestos Injuries Compensation Fund) be created to increase financial accountability and give impacted people financial recourse
- No employee losing out financially from a dust disease diagnosis. There is concern that fear of loss of income is a barrier to workers getting tested when they have symptoms
- More awareness, knowledge and empathy by health care professionals, and provision of a clear support pathway for impacted individuals and their families after diagnosis
 - » Many participants raised concerns about their ability to access suitable mental health support. A common criticism was the lack of knowledge and experience of the mental health professional in relation to silicosis or other dust diseases. Participants considered that this lack of knowledge meant that they did not receive appropriately tailored advice and support
- Provision of comprehensive and quality rehabilitation services that take into consideration workers' functionality and include full technical or tertiary retraining where appropriate
- Improved work trial programs to assist workers to obtain suitable duties without dust exposure risk, and associated peer-to-peer support programs
- Improved education and information promoting the benefits of return-to-work programs
- Introduction of vocational support programs and/or workers' compensation obligations that incentivise employers to provide suitable duties for workers with silicosis
- Removal of time limits and step-downs on weekly payments that effectively shift the injured worker onto social security benefits
 - » Quantum Market Research found that financial support for diagnosed workers lasts a relatively short time. Workers can access from 52 to 130 weeks of financial payments under workers' compensation schemes (with 52 weeks being the case for all but one of the people Quantum Market Research spoke to)
- Harmonised workers' compensation legislation across jurisdictions⁷⁴

74 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



In relation to return to work programs, it was the view of many stakeholder groups that there are unique challenges in achieving successful return to work outcomes for workers with a diagnosed lung condition, and whilst leveraging existing frameworks and models is sensible and necessary, more could be understood about the impact of occupational lung disease on return to work. Some jurisdictions report proactive efforts in this area, for example, WorkCover Queensland has commissioned research to, “develop an evidence-based approach to return to work and vocational rehabilitation support for workers suffering from silicosis. The aim is to identify factors, principles or limitations that need to be considered in designing tailored return to work plans for workers to ensure they achieve a safe and early return to work.”⁷⁵

Broadly, there is agreement that there is a role for government (through workers’ compensation schemes) and industry (perhaps through insurance premiums or contribution to a fund, such as in the case for asbestos) in funding return-to-work support.

The current landscape

a) Workers’ Compensation Arrangements

There are 11 workers’ compensation schemes operating in Australia: one for each state and territory, and three Commonwealth schemes. As a consequence, there can be differences in the user experience between states and territories, with some schemes paying significantly more compensation than others, and varying significantly in terms of the duration and level of support services provided. The schemes generally pay time limited financial compensation, unless the worker elects to receive a lump sum.

These discrepancies raise issues in relation to equity, particularly if a worker has had exposure to long latency disease contributors when working in more than one jurisdiction.

Workers that are not eligible for workers’ compensation may be able to access other forms of support such as income support, public health and social security.

WorkSafe Victoria has recently undertaken a review of the workers’ compensation legislative framework to ensure workers with silica-related diseases are not disadvantaged, in particular by the progressive nature of these diseases. Following the review, two new diseases, lung cancer with silicosis and scleroderma with silicosis, have been proclaimed by WorkSafe Victoria. This means that where a worker has been exposed to silica dust at work, these diseases are now automatically deemed to be caused by the nature of that work unless WorkSafe or a self-insurer proves that the disease was not due to employment.⁷⁶

75 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

76 Source: WorkSafe Victoria – [New silica-related diseases now proclaimed](#), viewed 29 June 2021



b) Mental Health Services

Affected individuals advised that they tend to receive four or five mental health support sessions through an Employee Assistance Program in the first year of diagnosis.

In the 2021–22 Budget, the Commonwealth Government committed \$2.3 billion in the National Mental Health and Suicide Prevention Plan (the Plan) to lead landmark reform.

Mental health services and supports provided through the Plan are available to all Australians, including those who have been diagnosed with silicosis and other dust diseases. Through the Better Access to Psychiatrists, Psychologists and General Practitioners through the Medicare Benefits Schedule initiative, all Australians can access mental health support. This initiative allows people with diagnosed mental health conditions to receive Medicare rebates for up to 20 individual and 10 group psychological services per calendar year. Australians can also seek support through the digital mental health gateway, Head to Health. Head to Health is a consumer-friendly website that aims to help people more easily access information, advice and free or low cost phone and online counselling, treatment and crisis support.

c) National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis (National Guidance)

Draft National Guidance has been developed by the National Dust Disease Taskforce’s National Clinical Guidelines Working Group, chaired by Dr Graeme Edwards and with representation from respiratory, occupational, thoracic and radiological specialists and the Safe Work Australia Agency.

The National Guidance provides a general guide to appropriate clinical practice, and seeks to support all medical practitioners to engage in shared decision making with their patients presenting with concerns that might relate to occupational dust exposure, in particular exposure to respirable crystalline silica associated with working with engineered stone. The National Guidance also recognises the important role of general practitioners in the continuing multidisciplinary shared care of their patients and their families.

The National Guidance requires that medical practitioner’s advice for workers to remove themselves from dust-exposed environments must be balanced against the significant impact of ceasing work: psychologically, socially and financially. At the point of diagnosis, it can be difficult for a worker to process that it may be their own livelihood that is causing them harm, and this can compound their sense of hurt and psychological distress.

It is the recommendation of the National Guidance that the diagnosed worker’s workplace be independently assessed before clinicians determine a course of action, particularly if the worker has normal lung function and is clinically asymptomatic.⁷⁷

Based on the current evidence, unless there is a clinical indication to do so, there should be no urgency for workers to leave the workplace until the nature of their disease and circumstances are better understood. During the worker’s phase of adjustment to the diagnosis, the worker will require support to make informed decisions.

77 National Dust Disease Taskforce Working Group (2021) *National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis (to be published)*



As part of the National Guidance, a shared decision-making tool has been developed to facilitate discussions between medical professionals and patients, as the decision to stop work should be one based on the patient's needs and intentions. This tool will provide the opportunity for people to question and understand the advice provided by a trusted clinician, as well as take the time needed to make an informed decision. It is central to facilitating desired behavioural change and nudging affected workers toward positive outcomes.

The National Guidance is intended to be a living document informed by outputs of the National Registry and evolving experience. The National Guidance is expected to be finalised shortly following endorsement from leading clinicians with expertise in radiology, respiratory disease, thoracic medicine and imaging, environmental medicine and occupational hygiene.

Proposed reforms

a) Improving support for individuals

Workers adversely affected by exposure to silica dust in the workplace face life-changing consequences, as do their families. Industry and governments need to ensure that these workers are provided with nationally consistent support that is tailored to their unique and complex needs. Due to the nature of the disease, support is likely to be required from a range of professionals, including specialist physicians, mental health services, financial services including potential compensation claim support, and where appropriate, career re-training.

There is merit in introducing an occupational dust disease management plan to help affected workers. This plan, developed by health professionals in consultation with the worker, would outline the patient's baseline health status at the time of diagnosis, provide information about the diagnosed disease and available supports, advice about how to monitor symptoms and where to get help if symptoms worsen, and ensure a coordinated and holistic approach is taken to the provision of healthcare and other services. The intention would be for the plan to be reviewed annually, or more often as required, by a health professional. Similar action plans are currently available for other lung diseases e.g. the chronic obstructive pulmonary disease (COPD) Action Plan developed by the Lung Foundation Australia.⁷⁸

Improved access to mental health supports is critical for diagnosed workers and their families. It is also critical that health professionals have an understanding of the nature of silicosis and other lung diseases so that they are able to provide sympathetic and informed support. There is merit in developing information and training targeting psychologists and psychiatrists in silicosis and other dust diseases.

78 Lung Foundation Australia, *COPD Action Plan*, accessed 24 June 2021



Based on consultation with, and feedback from, the Heads of Workers' Compensation Authorities (HWCA), there is support for the development of best practice principles to drive improvements in jurisdictional workers' compensation arrangements for people affected by silicosis and related dust diseases.

The Taskforce considers best practice principles could cover: improving consistency and timeliness of medical assessments and claims processes; ensuring a holistic approach is taken to the provision of support and services; ensuring workers and their families are able to access information about the full range of available supports and make informed decisions; and ensuring return to work initiatives are based on the best available evidence.

b) National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis

Following endorsement and dissemination of the National Guidance, the Commonwealth Government should fund the development of training modules by expert medical colleges, to support medical practitioners in the application of the Guidance. This will assist in ensuring that medical practitioners have a thorough understanding of the nature of silicosis and best practice approaches to supporting their patients.

Recommendation

4. **Better support workers** affected by dust diseases and their families through individually tailored programs of psychological, financial and return-to-work support.
 - a. Develop an occupational dust disease management plan for use by health professionals and affected workers, to provide information about the diagnosed disease and what to expect, and the agreed management pathway including referrals for psychological and return-to-work support.



Better Support Medical and Health Professionals

Education and support is required to improve the level of knowledge and expertise amongst medical professionals involved in the diagnosis and management of patients with silicosis and other dust diseases.

In its Interim Advice, the Taskforce identified the need to ensure that the health workforce is well equipped to provide effective support to patients with occupational dust diseases. It identified an opportunity to improve the education of health professionals who work with these patients.

Further action is required to ensure that medical professionals are supported to implement the recommended treatment pathways and best practice approaches across assessment, treatment, and coordination of care for those affected by silicosis.

Consultation and research findings

Submissions from specialist respiratory medical professionals consistently called for greater attention and investment in improving the knowledge and capability of the medical workforce in relation to both diagnosing and management of patients who have silicosis or other dust diseases.⁷⁹ Improved knowledge by medical professionals is required particularly in relation to:

- Understanding of dust generating workplaces to be able to identify whether a patient has been or is at risk of being exposed to materials containing silica
- Awareness that the incidence of silicosis has been increasing
- Understanding the limitation of traditionally used screening investigations such as chest X-ray and spirometry, and understanding of when other imaging techniques such as low dose HRCT should be used
- Effectively and sensitively communicating the diagnosis, and next steps in relation to management of the condition to patients and their families
- Expertise to accurately identify and diagnose occupational respiratory diseases, including silicosis, when patients present to healthcare providers outside of screening programs

“In QLD and VIC there is a need for visual training as general radiologists are not aware or able to pick up the present disease (as shown by an audit of coal scans).”

Medical professional, Radiologist.⁸⁰

“... it is clear that the referrers are not asking the right questions (e.g. age ranges) necessary to prompt general radiologists to look at this properly. We have had very little response from the college of GPs even about raising awareness with their members. This is where the national approach will be helpful – we need a multidisciplinary approach to education.”

– Medical professional, Radiologist.⁸¹

79 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

80 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

81 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



There is considerable concern that a lack of knowledge among medical professionals who conduct initial consults, provide referrals, conduct screening, review imaging, and diagnose is leading to mis-identification of silicosis. As a consequence, the disease sometimes goes undiagnosed which leads to poorer outcomes for patients.

It was suggested by some experts that the establishment of an image library including historical scan results and case histories could assist with developing further capability in this area. The library would be a tool for radiologists to use in conjunction with further training, to better understand and identify the markers for diagnosis.

In addition, some stakeholders argued for the establishment of a register of approved medical providers to assist in ensuring maintenance of knowledge and ongoing upskilling.⁸² An existing example is the Resources Safety and Health Queensland (RSHQ) register of approved medical providers. Under this register, providers are audited and removed if quality requirements are not met, including all involved in diagnostic processes and protocols, such as radiologists, and doctors who subsequently read images.

During consultations with affected individuals and their families or carers, the Taskforce was dismayed to learn of the frequent negative experiences patients had in their interactions with medical professionals across the spectrum of the health system. Many examples were provided that demonstrated a lack of knowledge, sensitivity, and ethical standards. These experiences exacerbated the trauma of diagnosis, and discouraged some patients from actively seeking further medical advice, assistance and support.⁸³ Examples provided included:

- Lack of knowledge – medical professionals not identifying the disease (and instead diagnosing asthma, bronchitis etc.), not understanding the prognosis, and not informing patients of their options in relation to information, advice and support at diagnosis
 - » Some affected individuals discussed their experiences with mental health professionals in particular. They advised that the psychologists or psychiatrists they saw often did not understand their condition and did not provide effective support or treatment. As a consequence, many of the individuals did not seek follow up support. They also advised that despite the significant impact of their condition on their immediate families, no support was offered to their loved ones
- Lack of sensitivity – particularly when a condition is diagnosed by a workplace or workers' compensation doctor. Individuals reported receiving a diagnosis over the phone, or even by email, with no follow up support provided either for themselves to assist with processing the news, or for their families
- Conflict of interest/independence of medical advice – some felt that the medical professionals they were referred to by their employers were not truly independent and had a vested interest in not identifying the disease, or alternatively, identified alternate causes such as smoking, childhood pneumonia, or some other pre-existing condition, in an attempt to absolve the employer of liability

82 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health

83 Quantum Market Research (2021) *Dust Disease Research Update*, report to Department of Health



Many of the workers affected by dust diseases who talked to the Taskforce advised that there was a lack of immediately available and relevant information about their condition, the treatment pathway, and prognosis. Without support and information from healthcare professionals, newly diagnosed people and their families sought out information on the internet.

The current landscape

a) Multi-disciplinary support

The diagnosis of lung disease can be complex. Multidisciplinary team meetings have been operating for many years in hospitals diagnosing respiratory diseases, and have been a feature in primary care settings where general practitioners, nurse practitioners and allied health professionals work together to manage chronic diseases.

Under the Medicare Benefits Schedule,⁸⁴ a multidisciplinary case conference involves at least two medical practitioners and depending on the primary purpose, either diagnosis or management or both, may involve at least one other member such as an allied health professional, home and community service provider or care organiser. A family member of the patient may also be present. The meeting is to:

- Discuss the patient's history
- Identify the patient's multidisciplinary care needs
- Identify outcomes to be achieved by members of the multidisciplinary team giving care and service to the patient, identify tasks that need to be undertaken to achieve these outcomes and allocate those tasks to members of the multidisciplinary team
- Assess whether previously identified outcomes (if any) have been achieved

b) Radiologist services and occupational health screening

Imaging has a central role in the diagnosis and monitoring of occupational lung diseases including disease resulting from exposure to engineered stone. Engineered stone workers present for chest imaging as part of health monitoring and health screening programs, or for other medical reasons. Radiologists use their expert knowledge to detect and characterise abnormalities and provide a definitive diagnosis or differential diagnosis to assist with informing disease management. There is currently no Australian based program available to support radiologists to maintain and enhance their skills and expertise in chest imaging for occupational health assessments.

Similarly, at present there is no formal training or support available to enable medical professionals more generally to improve their knowledge and skills in occupational health screening. It is critical for early detection and improved patient outcomes that occupational health assessments are provided at the highest possible standard.

c) Availability of information for health professionals about silicosis and other dust diseases

General information including position statements, guidelines and available training to support the diagnosis and treatment of silicosis and other dust diseases is available from a number of sources

84 Health Insurance ([General Medical Services Table](#)) Regulations (No.2) 2020



including the Thoracic Society of Australia and New Zealand, Royal Australian and New Zealand College of Radiologists, Royal Australian College of General Practitioners and the Lung Foundation of Australia. However, the onus is on the health professional to seek out this information. The provision of appropriate, relevant and up-to-date information to health professionals is inconsistent. There is a need for information to be more readily available, disseminated appropriately and promoted well to health professionals.

Proposed reforms

a) Multi-disciplinary support

Pathways for the diagnosis and treatment of occupational respiratory disease should be developed through multidisciplinary teams. The establishment of these teams would bring together experts covering a wide range of specialties (for example, primary care, occupational and respiratory medicine, occupational hygiene, radiology, pathology, mental health and allied health). The teams would improve diagnostic standards, build expertise, and assist with disseminating information. New virtual technologies could support the work of these teams, and also enable participation of community and rural physicians.⁸⁵

Government should consider reimbursing the services provided by multidisciplinary teams to assist with the diagnosis of occupational respiratory disease.

b) Improving expertise in occupational health screening and diagnosis

Accuracy in diagnosis of occupational respiratory dust diseases is critical to ensure patients are provided with early intervention and the medical assistance they need. Further attention and investment is required to better support radiologists in the development and maintenance of skills in diagnosing and characterising occupational lung disease.

More broadly, there is also a need to improve the expertise and knowledge of medical professionals in occupational health screening and detection at the time of first presentation to a General Practitioner or specialist. There would be merit in providing education and training opportunities for this broader group to improve understanding, and to ensure better outcomes for affected workers.

c) Further resources are required to support medical professionals

Priority needs to be given to improving education and training resources to better support health professionals diagnose, manage and care for patients. Investment is needed in the development of resources, training, guidance and tools to assist health professionals to make timely diagnosis of occupational lung diseases and deliver best-practice, up-to-date care. Improving the development and dissemination of information to health professionals would also support better patient outcomes.

Additionally, regulatory agencies cannot be fully effective unless the regulatory framework within which they are operating provides the necessary mandate, powers, tools and resources to ensure a capable, competent and trained workforce.

85 Yates D et al (2021) *Dust diseases in modern Australia: the new TSANZ position statement on respiratory surveillance*



Recommendation

- 5. Better support medical, health and other related professionals** to improve the diagnosis and management of workers affected by silicosis.
 - a.** Fund multi-disciplinary teams of medical professionals, to improve education of doctors and better manage the care of patients, including people with potential but yet to be accepted diagnoses of silicosis or other occupational respiratory diseases.
 - b.** Develop, implement and maintain Australian-based education and upskilling for medical professionals involved in occupational health screening including radiologists, to ensure that they are able to maintain and build expertise to report chest imaging for occupational health screening programs.
 - c.** Develop and disseminate information and education materials to health professionals and service providers who assess and support workers affected by dust diseases, as well as those who regulate businesses working with engineered stone.



Strengthening the Evidence Base - A Strategic National Approach

In its Interim Advice, the Taskforce recommended the application of,

a strategic approach to research to better understand accelerated silicosis with the ultimate aim of improving prevention and treatment options.⁸⁶

It noted that although silicosis is not a new disease, there is a lack of research and knowledge about how silicosis results from short-term, moderate to high-level silica exposure in the workplace; and also noted that, apart from lung transplantation, no treatments have been identified. The Taskforce recommended that immediate research be initiated to address this gap, identifying four specific priorities covering:

- The pathogenesis of engineered stone associated silicosis
- Identification of factors associated with disease severity and risk of progression
- Best practise to minimise exposure
- The efficacy and sensitivity of radiological methods to diagnose early silicosis

The Taskforce's Interim Advice also recommended the,

development of a national approach to understand the extent of occupational dust diseases in Australia through identification and capture of data, information collection and sharing.⁸⁷

In particular, it recommended the staged establishment of a National Dust Disease Registry initially focused on accelerated silicosis related to engineered stone.

Consultation and research findings

Stakeholders consulted by the Taskforce identified a number of knowledge gaps around dust diseases in the workplace, which the Taskforce considers priority areas for more research. A deeper understanding of these will not only aid prevention and treatment strategies, but the knowledge acquired will inform better detection of silicosis and other occupational respiratory diseases.

Research priorities identified included:

i) Clinical

- » Medical treatment options, including further research into the efficacy of, and best practice around, lung transplants and whole lung lavage (a procedure for washing out the lungs), as currently there is no treatment for silicosis⁸⁸
- » Study the pathogenesis (or process by which a disease develops) of silicosis from engineered stone, e.g. exposure patterns, effect of particle size, and stone composition. To date there is little understanding of how this contributes to the emergence of silicosis

86 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019

87 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019

88 National Dust Disease Taskforce Working Group (2021) *National Guidance for doctors assessing workers exposed to respirable crystalline silica dust with specific reference to engineered stone related silicosis (to be published)*



- » Identification of biomarkers (molecules or characteristics by which a particular disease can be more easily identified), to help determine susceptibility, disease severity and risk of progression
- » Impact of comorbidities (the simultaneous presence of two or more diseases or medical conditions in a patient) on the progression of silicosis

ii) Non-clinical

- » Incidence and prevalence of lung disease related to silica exposure, and level of impairment, e.g. acute, accelerated or chronic
- » Impact of the concentration of exposure versus intensity, e.g. the effect of ambient exposure, impact of exposure during longer shifts, impact of specific tasks, etc
- » The effectiveness of prevention and control measures for exposure to silica dust when working with engineered stone, e.g. wet cutting, use of PPE, and ventilation or dust extraction
- » An accurate database of death, survival and severity rates
- » Verification of the Workplace Exposure Standards for respirable crystalline silica of less than 0.05mg/m³, and its evidence-based impact on workers' risk exposure
- » Hazard of materials with different levels of silica, resin components, and other composites of engineered stone
- » Efficacy and long-term viability of current measurement tools used in air monitoring
- » Alternative products to engineered stone that are deemed safer for handling and do not generate dangerous levels of dust exposure, including materials currently available and new products under development

Stakeholders noted the critical importance of expanding the capabilities of data collection in relation to occupational dust diseases in Australia. The proposal to establish the Registry was overwhelmingly supported as a key mechanism for building comprehensive knowledge on silicosis and other related occupational respiratory diseases. There was support from stakeholders for the Registry to initially focus on silicosis across all relevant industries, provided there is potential for scope to expand in future to cover other occupational respiratory diseases.

"The Register has to be a priority so we can understand the picture among the bigger group. There don't seem to be any obstacles state-by-state to this, but nobody knows what they need to be doing."

– Medical professional⁸⁹

The current landscape

a) Research Activities

As noted above, at present, there is a lack of available research and knowledge about silicosis. However, there is considerable research activity underway.

On 11 May 2021, the successful applicants of the Medical Research Future Fund's Emerging Priorities and Consumer Driven Research – 2020 Silicosis Research Grant Opportunity were

89 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



announced. Five grants have been provided of between \$600,000 and \$2.2 million for silicosis research projects:

- University of Queensland: Silicosis – Harnessing new ideas to conquer the re-emergence of an ancient lung disease (The SHIELD study)
- University of Sydney: Transforming diagnosis of silicosis – a novel AI approach
- Monash University: The NLRP3 inflammasome as a potential biomarker and therapeutic target for silicosis
- University of Tasmania: The role of particle size in the pathogenesis of engineered stone-associated accelerated silicosis
- Monash University: Emerging techniques for earlier diagnosis and assessment of severity and progression of artificial stone silicosis

A number of other significant research projects are also underway in Australia:

- The University of Adelaide has developed a research project, “Preventing occupational lung disease: integrating real-time sensors and videography to control exposure to toxic dusts to address the importance of monitoring exposure to dust.”⁹⁰ It aims to establish evidence for best practice approaches to reducing dust exposure in the workplace, using real-time sampling of holistic personal exposure assessments; enabling the mapping of high exposure areas and tasks, helping to prioritise dust mitigation measures, evaluating the effectiveness of mitigation, and informing training.⁹¹
- SafeWork NSW, in partnership with the NSW Government’s Centre for Work Health and Safety, is undertaking research into the development of a real-time wearable silica exposure detection device seeking to ‘bridge the gap’ between the onus on businesses to conduct health monitoring, and their capability to measure exposure levels.

“The research has reached a critical milestone with the testing of the prototype at Stage 1 proven to accurately measure the Australian Workplace Exposure Standard of 0.05mg/m³ (8-hour time weighted average) in a laboratory setting as well as at a number of worksites, including quarries, and brick production, tile processing and engineered stone processing facilities. The research is being conducted in partnership with Trolex Nome, whose UK parent company has 60 years’ experience in developing safety technology for the mining, tunnelling, oil and gas industries. The project has built upon initial research conducted by Trolex in conjunction with the University of Hertfordshire.”

– Government⁹²

- Western Australia’s Department of Mines, Industry Regulation and Safety, in collaboration with Professor Fraser Brims of Sir Charles Gairdner Hospital in Perth, is conducting research comparing chest X-ray and low dose HRCT scans for silica health surveillance.

90 Gaskin, S., Gun, R., Jersmann, H and Pisaniello, D (2019) *Respirable Crystalline Silica Exposures in Engineered Stone Benchtop Fabrication*, Adelaide Exposure Science and Health Research Group

91 Gaskin, S (n.d) *Preventing occupational lung disease: integrating real-time sensors and videography to control exposure to toxic dusts*. Adelaide Exposure Science and Health Research Group

92 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



- WorkSafe Victoria has commissioned research to better understand the epidemiology of silica-related disease: the nature of, and early detection methods for, acute and accelerated silicosis and all other illnesses and conditions related to silica dust exposure.⁹³
- The Queensland Government has committed \$5 million over four years to support research into medical treatment as well as prevention initiatives.⁹⁴

b) National Occupational Respiratory Disease Registry

In November 2020, the Taskforce established a Registry Steering Committee (RSC) to advise on the scope, design and operation of the National Occupational Respiratory Disease Registry (the National Registry). The RSC is comprised of representatives from peak medical professional bodies, clinicians, researchers, Safe Work Australia, and one member from each jurisdiction representing either Health or WHS agencies.

Following feedback from stakeholders and advice from the RSC, the Taskforce has expanded the scope of its original recommendation regarding the development of a National Dust Disease Registry. The scope of the National Registry is now to capture information on occupationally caused respiratory diseases in Australia. Initially, the National Registry will require mandatory notification of silicosis by respiratory and occupational physicians, and allow for the voluntary notification of other occupational respiratory disease. The voluntary notification of other occupationally caused respiratory diseases will be critical to the early identification of new and emerging occupational risks. This will assist in ensuring that there is not a repeat of the late identification of the re-emergence of silicosis caused by people working with engineered stone.

Over time the National Registry will develop further. It is possible that a disease notification may change from being voluntary to becoming a mandatory notification. This decision would be taken in consultation with relevant peak medical bodies and the states and territories.

The agreed vision, mission and purpose of the National Registry are:

- **Vision:** A National Registry will support the elimination of preventable occupational respiratory diseases by facilitating earlier detection, intervention and prevention activities
- **Mission of the National Registry:** A National Registry, with an initial focus on silicosis, will capture and share data on the incidence of occupational respiratory diseases, causative exposures and respiratory health data to aid the detection of new and emerging threats to workers' respiratory health, inform incidence trends, and assist in targeting and monitoring the effectiveness of interventions and prevention strategies
- **Purpose of the National Registry:** The primary purpose of the National Registry is to:
 - » understand the nature and extent of occupational respiratory diseases in Australia and their longitudinal trends
 - » support the identification of exposures, and the occupations and workplaces associated with risk of developing occupational respiratory diseases to enable the application of more timely and targeted interventions and prevention activities to reduce further exposures and disease

93 Source: SafeWork Australia

94 WorkSafe Queensland: *\$5m medical research grant for dust lung disease*



- » monitor the effectiveness of policy and regulatory arrangements, particularly those associated with Workplace Exposure Standards, and assist with the development of evidence-based policies on the prevention of occupational respiratory diseases to support government decision making and program execution

Other purposes include:

- to support research into current and emerging occupational respiratory diseases to understand their risk factors, progression and effective control measures
- to enable the identification of patients for inclusion in clinical trials/observations

The build of the National Registry is expected to commence in the second half of 2021 with an expected completion date in late 2022.

Proposed reforms

The Taskforce commends the recent investment by government in research activities designed to address the knowledge gap in relation to understanding of silicosis, as well as the progress being made in the establishment of the National Registry. However, further investment in research is required to continue to build the knowledge base. Active engagement and support from all jurisdictions is required to ensure that the National Registry provides a comprehensive and national picture of occupational respiratory diseases in Australia. The Taskforce urges all governments to work together to implement the National Registry as soon as possible.

A greater focus is now required on building the capability and capacity of the research community within Australia. The research community in this area is small and dispersed. Support is needed to better join up these experts and organisations to improve knowledge sharing, ensure better coordination of research activities, and more strategic identification of future priority areas for research. In addition, consideration needs to be given to further building research expertise in Australia through investment in fellowships and scholarships.

Recommendation

6. Building on the early recommendations from the Interim Advice for a **strategic national approach to research** and the development of a National Dust Disease Registry, and following initial investments, prioritise:
 - a. Enhancing silica and occupational respiratory disease research expertise in Australia and the evidence base, by identifying additional priority areas for further research funding, supporting collaboration and information sharing, and funding fellowships and scholarships.
 - b. Operationalising the National Occupational Respiratory Disease Registry as soon as possible, with an initial focus on mandatory reporting of silicosis, and voluntary reporting of other occupational respiratory diseases.



Driving Reform – Effective Review, Evaluation and Governance

The need for ongoing review and evaluation, as well as the establishment of a mechanism to drive ongoing national governance was not discussed in the Taskforce’s Interim Advice. This reflects that this report was released early in the Taskforce’s term. The need for national coordination to implement required regulatory and non-regulatory changes to improve the safety of workers, as well as the importance of ongoing monitoring and regular reporting has become increasingly clear to the Taskforce over the past 12 months.

Consultation and research findings

There is significant concern amongst stakeholders about the work of the Taskforce beyond 30 June 2021. During the recent consultation process, some stakeholders referred to the May 2006 Senate Inquiry into *Workplace Exposure to Toxic Dust*. The report from this Inquiry included a range of recommendations that remain relevant based on the issues identified by the Taskforce during its term. To date, few of these recommendations have been progressed and implemented. There is concern that the work of the Taskforce may lose momentum once the Final Report is finalised.

Across every aspect – regulatory and governance, workforce organisational culture, resourcing and capability, and research and development – stakeholders called for national governance to help align efforts made by individual jurisdictions in response to the re-emergence of silicosis in Australia. There was support for coordinated action to bring people of differing expertise together to ensure strategies and implementation are informed, and all the evidence is leveraged nationally.

There was unanimous support from stakeholders for a national mechanism to coordinate resourcing and capabilities. Success will be reliant on a joined-up and consistent approach across all stakeholders.

“Despite the fact that several early warning systems are available in Australia, there is a lack of integration and collaboration between the systems and states. It is important to have a wide, national surveillance system, or a combination of existing initiatives, and interdisciplinary and international research and debate. In addition, expert collaboration is important to use limited resources in the most effective way.”

– Occupational hygienist⁹⁵

There has been strong support from stakeholders to the establishment of the National Dust Disease Taskforce by the Minister for Health, and the Taskforce being supported by the Department of Health. Many thought there was merit in continuing a health-driven response to issues of occupational respiratory disease, and expressed support for the Department of Health to continue to provide a leadership role, in collaboration with key stakeholders, following the cessation of the Taskforce.

Some stakeholders identified the establishment of a new governance mechanism as an opportunity to ensure that Commonwealth, state and territory WHS and health agencies work more closely to better identify emerging occupational respiratory diseases and, where required, coordinate a national response.

95 Hall & Partners (2021) *National Dust Disease Taskforce Consultation Synthesis Report*, report to Department of Health



Proposed reforms

Establishment of a national governance mechanism is required to coordinate implementation of the Taskforce's recommendations; ensure regular evaluation and review; promote the utilisation of the latest research; share information and identify activities considered to be best practice; and provide annual reporting.

A key priority will be the development of a reporting and evaluation framework by the Commonwealth Government in collaboration with state and territory governments to measure the progress and impact of individual initiatives, as well as their collective impact on worker safety and related health outcomes.

The governance structure should involve a multilateral approach and include representation from health and WHS agencies from the Commonwealth and states and territories, health experts, and industry.

Recommendation

7. Establish a **cross-jurisdictional governance mechanism** to improve communication and information sharing, coordinate responses, and report on progress.
 - a. By the end of 2021, the Commonwealth Government, in consultation with jurisdictions, will outline a clear plan for implementation of the Taskforce's recommendations with specific milestones, responsibilities of parties, and outcome measures identified.
 - b. Annual reports should be provided to Health and WHS Ministers in all jurisdictions on the implementation of the recommendations and the effectiveness of measures in improving compliance to prevent dust disease in workers, with the first report due in July 2022.



Attachment I: National Dust Disease Taskforce Terms Of Reference

The Commonwealth Government, in response to the emerging trend of new cases of accelerated silicosis, is supporting the development of a national approach to the prevention, early identification, control and management of occupational dust diseases in Australia.

The National Dust Disease Taskforce will inform a national approach by undertaking an independent review of the systems in place to protect Australians who are at risk from occupational dust disease. This will include providing advice on:

1. Actions that have been taken to date to address occupational dust disease across all Australian jurisdictions
2. Existing policy and regulatory arrangements in Australia to protect those at risk from occupational dust disease, more specifically reviewing what controls are in place; and how these are applied and monitored by the system
3. Opportunities for improvement across the system to ensure protection of those at risk populations
4. Options for sustainable approaches for the future prevention, detection and management of occupational dust diseases, including the consideration of the establishment of a National Dust Disease Register, including its scope and outcomes to be achieved
5. Options for potential new research required to support understanding, prevention and treatment of preventable occupational lung disease

The Taskforce will engage with a broad range of stakeholders including key health and medical professionals, relevant state and territory governments and WHS regulators, consumers, industry and workplace health and safety stakeholders, including Safe Work Australia.

The Taskforce will provide interim advice by the end of 2019 to the Hon Greg Hunt, Minister for Health. The Taskforce will provide their final report to COAG Health Council, through the Commonwealth Minister for Health, by no later than December 2020.

Membership:

The Taskforce will be initially chaired by the Chief Medical Officer of Australia, and will comprise of no more than six to eight independent experts that would include expertise in the following areas:

- Thoracic and/or respiratory disease with a focus on dust disease
- Occupational health
- Public Health/health protection
- Policy, administration and governance
- Regulatory practice including standards setting, compliance and enforcement
- Industry practice



Attachment 2: Summary of Consultation Processes and Research Conducted by the Taskforce

The consultation process

The Taskforce undertook a series of consultations from mid-2019 to mid-2021 to seek input from a wide range of stakeholders. There was a high level of similarity and agreement on the issues identified across the various consultation phases. A number of research projects were also conducted into dust diseases in general and silicosis in particular.

Phase 1 consultation

The Taskforce initiated the first stage consultation process in the form of a set of eight questions to be answered by stakeholders. Stakeholders submitted responses through three potential avenues:

- An online survey
- Written submissions
- Feedback via email

69 responses were received, and 146 individuals attended forums in Adelaide, Brisbane, Canberra, Hobart, Melbourne, Perth and Sydney. The findings of these consultations contributed to the Interim Advice.

Key findings of Phase 1

- Broad awareness of silicosis as a disease exists however there is a lack of awareness of risks associated with specific tasks in the workplace, symptoms of silicosis and correct usage of PPE.
- There is no 'silver bullet' or single solution to address this health and workplace issue
- There is no consistency of approach across jurisdictions
- The speed with which silicosis has re-emerged means that there is a lack of longitudinal data and a limited evidence base to inform decisions
- The greatest challenges lie in ensuring worker safety issues and costs faced by micro businesses and small businesses
- There is a high degree of lack of compliance amongst smaller businesses

A key message that emerged was that there was no time to be wasted and a strong and immediate response was required to address the re-emergence of silicosis and to achieve nationally consistent outcomes in its prevention, diagnosis and management.



Research workshop

The Taskforce convened a research-focused workshop in November 2019 to identify research needed to better understand and respond to the emergence of silicosis. It brought together leading Australian researchers in the fields of diagnosis and management of silicosis. Workshop participants identified key research areas as epidemiology, prevention, early diagnosis, underlying pathology and management.

Workshop participants agreed that the establishment of a National Registry and the determination of nationally consistent diagnostic criteria were key priorities. In the view of participants, while there were many interventions being put in place across Australia, research into the effectiveness of control measures and safe levels of exposure was lacking.

The research workshop identified key priorities for the Taskforce to consider; the Taskforce agreed that four of these key priorities should be investigated urgently. The four key priorities were included in the Taskforce's Interim Advice⁹⁶ as an early recommendation.

Phase 2 consultation

Phase 2 consultation collected feedback on the Interim Advice, and further investigated a number of key areas identified by the Taskforce. Due to COVID-19, Phase 2 consultations commenced later in 2020 than initially scheduled. 38 stakeholder submissions received, and 11 stakeholder consultations were conducted.

Findings from the stakeholder consultations and the online submissions received were based on a set of 17 questions under the key areas of:

- Regulatory and governance
- Workforce organisational culture
- Resourcing and capability
- Research and development

Key findings of Phase 2

At an overarching level the consultations identified three key components requiring attention:

1. A phased approach to enable change

Stakeholders were unified in calls for urgent action to address the increasing incidence of silicosis, as a result of working with engineered stone. They were comfortable with a phased approach, so long as there was a balance between immediate actions to address the current crisis, as well as more considered and sustained work to achieve long-term strategic objectives. Stakeholders noted the short-term imperative was prevention, while the longer-term imperative was systemic change in how the industry operates and interacts with WHS regulators, governments and consumers.

96 National Dust Disease Taskforce, *Interim Advice to the Minister for Health*, December 2019



In terms of prevention, strong views were expressed in relation to the option to ban engineered stone. Unsurprisingly, this option was not supported by industry given market demand, impact on businesses and the consumer impact. Other stakeholders – predominantly medical professionals, legal organisations, support groups and unions – strongly supported a ban on engineered stone. Beyond stakeholder views on a ban, enhanced regulation of the industry was recommended by all stakeholders.

2. Need for regulatory change

There was a strong desire from all stakeholders for effective and swift changes to regulation at a national level to create optimal compliance protocols and enforcement practices, and a consistent approach irrespective of location. It was suggested that this regulation should include a clear definition of engineered stone.

The option of introducing a licensing scheme was raised in many submissions. Stakeholders considered that the need for operators to have a licence would improve adherence to safe practices and behaviours to avoid the risk of the business being de-registered. This framework would also provide an opportunity for mandated professional development programs informed by best practices, as data becomes available.

Many stakeholders identified the need for better enforcement of the existing regulatory framework including more consistent monitoring of work environments and safety policies, increasing sanctions, and greater promotion of compliance activities.

Stakeholders also identified the need for better education on the risks associated with engineered stone, safe/unsafe practices, and the strategies and behaviours needed to reduce risk of exposure, across all parts of the workforce.

There was strong support for the creation of a National Dust Disease Registry to monitor and analyse cases.

3. Ongoing communication

There was a strong desire for ongoing and consistent communication on silicosis. It was suggested that communication should:

- » Highlight new information and outline practical steps which can be seamlessly added to work routines to reduce the risk of exposure and improve safety standards
- » Be clear and concise, using language that is easily understandable with clear messaging
- » Be easily available/accessible to a transient workforce, which includes culturally and linguistically diverse workers

Some stakeholders suggested that the early recommendations of the Taskforce had more of a focus on the disease itself and clinical responses to it. Stakeholders noted that the scope of the Taskforce's work should extend beyond the issue of silicosis into other respiratory diseases, and beyond the stone benchtop industry to other industries that are exposed to occupational dust.



Phase 3 Consultation

Consultation on the Taskforce's draft vision, strategies and priority areas for action commenced on 30 April 2021 with the dissemination of a consultation paper to key stakeholders. There were 22 submissions received from WHS regulators, unions, peak bodies, industry, legal firms, researchers and health agencies.

Key findings of Phase 3

- The general feedback through the submissions supported the comments received from stakeholders during Phase 1 and Phase 2
- There was general support for the Taskforce's proposed vision and strategies outlined in the consultation paper
- Some stakeholders noted the need for a greater focus on prevention activities in relation to the proposed strategies
- There was broad support across stakeholders for the development and implementation of a national licensing framework to support the introduction of jurisdictional licensing schemes. Some stakeholders argued for a shorter timeframe than three years in which to determine the efficacy of additional controls, and a subsequent assessment of the feasibility of introducing a product ban or a ban on the importation of engineered stone products

As per previous consultations, most stakeholders considered that the scope of the Taskforce's work should extend beyond the issue of silicosis into other respiratory diseases. However, many recognised the urgent need to take action in relation to preventing accelerated silicosis from engineered stone. Some stakeholders also expressed concerns about the risks for the Taskforce in taking too broad an approach without first achieving real progress in relation to the issues associated with engineered stone.

Research Projects

Supply chain map and the legislative landscape

This project provided a high-level overview of the supply chain for artificial stone, and an analysis of the current legislative environment. The project provided an overview of the structure of the industry including businesses (employees), contracting and sub-contracting arrangements.

The report detailed a supply chain map and the key statistics for this industry. It also discussed the following topics:

- Sample supply chain of an engineered stone
- Contractual arrangements with stonemasons and associated risks
- WHS laws, WHS regulators and key definitions
- Silica awareness in Australia
- Other stakeholders with an interest in accelerated silicosis



Literature scan

To support the Taskforce in meeting its Terms of Reference⁹⁷, a high-level scan was undertaken of actions underway to address accelerated silicosis, both locally and internationally including several Organisation for Economic Co-operation and Development countries. The search included actions to prevent exposure to silica dust, and tools aimed at providing best practice for screening, testing and treatment of silicosis. The Taskforce was provided with a summary of activities, as well as the available evidence supporting these activities. Occupational dust diseases not related to accelerated silicosis and non-occupational silicosis were out of scope for this review.

Key findings of the literature scan

- The incidence of silicosis appears to be increasing in other Western countries, as it has in Australia
- Regulatory bodies in most jurisdictions publish standards and directives for employees and employers to effectively manage risk, though a lack of enforcement and compliance measures show gaps in the regulatory process
- An occupational exposure limit of 0.1 mg/m³ was the most common limit (compared with 0.05mg/m³ time weighted average over an eight-hour period in Australia); however, the effect of these limits must be assessed to gauge whether they have an impact
- The frequency of occupational exposure measurements taken is not clear
- Education is needed for employers and employees on the importance of PPE and the use of water and dust extraction devices
- Biomarkers (molecules by which a particular disease can be easily identified) may assist in diagnosis and early detection, and should be explored

An update of the literature scan conducted in 2021 identified additional clinical information:

- There is an increased risk of developing rheumatoid arthritis as a result of exposure to inhalation of silica dust
- A study in a controlled environment found that silica content of material containing inorganic mineral fillers [95 per cent] and quartz [85 per cent] was significantly higher than products containing compacted materials including aluminosilicates, zircon and inorganic pigments and granite
- Serum Clara Cell Secretory 16 (CC16) is a sensitive biomarker that may improve the ability for early diagnosis of silicosis. However, CC16 was lower in stage I and II and higher in stage III in people affected by silicosis when compared with controls)

97 Department of Health, *National Dust Disease Taskforce Terms of Reference*, accessed 28 June 2021



Market research

To support the Taskforce's consultation process, market research was undertaken to capture the views and experiences of individuals who had previously worked in, or were currently working in, the occupations captured by the chain of supply; workers who may have symptoms of accelerated silicosis; and those currently undergoing diagnosis of, or have been diagnosed with, accelerated silicosis. Additionally, views were sought from end users of manufactured stone products to understand their attitudes towards the product and manufacturing process, and their level of awareness of the issue.

The individuals surveyed were representative of age, gender and location, as well as Aboriginal and Torres Strait Islander and culturally and linguistically diverse backgrounds. Both qualitative and quantitative research was used to gain a comprehensive understanding of the market.

The Taskforce considered the Market Research Report in November 2019. Given the pace of change, and the work done since the benchmarking research was completed, the Taskforce requested that the market research be repeated in March 2021. The research found that:

- Dust disease impacts every part of a diagnosed person's life
- There is no one-size fits-all experience, but common themes emerged
- Many people reported poor working conditions and a lack of enforcement of regulations
- The diagnosis of a dust disease can be traumatic, as is what comes after
- Medical assistance is perceived to be limited
- Many individuals worry their experiences will continue to be repeated
- Individuals want improvements and suggestions were made in relation to prevention activities and post-diagnosis support

Reports on consultations and research projects

A copy of all submissions provided as part of the consultation processes, where authors agreed for these to be publicly released, as well as publicly available reports provided to the Taskforce, can be found on the Department of Health's website (www.health.gov.au/dust).



Attachment 3: Overview of National and State and Territory Work Health and Safety Activities

Key activities, achievements and improvements introduced by WHS regulators

The Commonwealth, states and territories are responsible for implementing and enforcing WHS laws in their jurisdiction. To ensure nationally-consistent WHS laws across all jurisdictions, model WHS laws were developed to provide a consistent legislative framework for implementation by each jurisdiction. The model WHS laws, maintained by Safe Work Australia, have been implemented in all jurisdictions except Victoria and Western Australia, although those jurisdictions have similar laws in place. Western Australia has passed a new WHS Bill based on the model WHS Act, which is expected to commence later in 2022.

Since 2018, Australian WHS regulators have undertaken substantial activities to reduce exposure to respirable crystalline silica and the incidence of silicosis. This has included education and awareness campaigns, compliance and enforcement initiatives, improvements in clinical diagnosis, and the introduction of codes of practice and amended WHS regulation.

Workplace Exposure Standards for respirable crystalline silica

Workplace Exposure Standards are the airborne concentrations of a chemical that are not expected to cause adverse effects on the health of an exposed worker.

In 2019, WHS Ministers agreed to reduce the eight-hour time weighted average for workplace exposure for respirable crystalline silica from 0.1 mg/m³ to 0.05 mg/m³, commensurate with levels set internationally. As of 8 June 2021, all jurisdictions, except Tasmania, have implemented the reduced value.

Ministers also agreed that further work be conducted on solutions to measurement limitations of respirable crystalline silica, with the aim to further reduce the Workplace Exposure Standard to a time weighted average of 0.02 mg/m³.

Ban on dry-cutting, grinding and polishing

While an express ban on uncontrolled dry cutting of engineered stone with power tools has not been implemented in all jurisdictions, it is not permitted under WHS laws as dry cutting would immediately exceed the new Workplace Exposure Standard (and would otherwise breach the general duties of the WHS Act). On-tool water suppression or dust extractors (or local exhaust ventilation if on-tool dust extraction is not reasonably practicable) and respiratory protective equipment must be used. Safe Work Australia Members have agreed to amend the model WHS regulations to expressly prohibit uncontrolled dry cutting of engineered stone.



Summary of national policy initiatives undertaken by Safe Work Australia

Occupational lung diseases, including silicosis, are priority conditions in the *Australian Work Health and Safety Strategy 2012–2022*.

A national **occupational lung diseases workplan** was agreed by Safe Work Australia Members in 2018. Safe Work Australia has completed several initiatives under the workplan including publishing the *Occupational lung diseases in Australia 2006–19* report and publishing the *National guide: working with silica and silica containing products* in multiple languages.

In June 2021, Safe Work Australia commenced a national education and awareness campaign for occupational lung diseases that will target micro, small and medium-sized businesses in the construction, agriculture, manufacturing and engineered stone industries. The *Clean Air. Clear Lungs* campaign will run until the end of 2021.

Safe Work Australia Members have agreed to a model code of practice for managing the risks from respirable crystalline silica in engineered stone workplaces. This will be considered by WHS Ministers later in 2021. This will provide further information for duty holders including persons conducting a business or undertaking about how they can meet their WHS duties including on health monitoring of workers, air monitoring, and controlling the risks from working with engineered stone.

As of June 2021, Safe Work Australia Members have agreed to amend the model WHS regulations to expressly prohibit uncontrolled dry cutting of engineered stone, and develop national guidance materials on managing the risks of all occupational lung diseases.

Jurisdictional health screening programs for workers in the engineered stone industry and/or associated industries

A number of jurisdictions provide free or subsidised health screening for workers exposed to silica dust however, these programs have varying purposes. For example, some assist employers in meeting their obligations under the WHS laws while others have a research focus. There are no health screening programs in other jurisdictions.

Queensland⁹⁸

The *Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019* requires persons conducting a business or undertaking in the stone benchtop industry (fabrication, processing, installation, maintenance or removal of both engineered and natural stone benchtops) to provide health monitoring for workers. Health monitoring is required to be conducted before a worker starts work, to establish a baseline from which changes can be detected (unless the worker has participated in health monitoring within the previous two years and results are available). This is followed by an annual standardised respiratory questionnaire and standardised respiratory function test; and chest X-rays every three years. As at June 2021, WorkCover had completed the health screening of 1,053 stonemasons exposed to crystalline silica dust from engineered stone.

98 WorkSafe Queensland *Silicosis – WorkCover Screening Outcomes*, accessed 10 June 2021



*New South Wales*⁹⁹

In partnership with SafeWork NSW, icare NSW provides a free lung screening service for employers who have received an improvement notice from SafeWork NSW. Small businesses with less than 30 employees are eligible to receive free lung screening for their first round of screening. Businesses with more than 30 employees receive a 50 per cent subsidy reducing the cost of screening for their first round of screening. This helps NSW employers to comply with their WHS obligations. Free medical examinations are also available for workers who were employed in a dusty workplace in the past, or who are retired. In 2019–20, a dedicated lung screening service for workers exposed to hazardous dust in the workplace provided lung screening examinations for 1,459 workers (including 901 examinations for health monitoring purposes and 558 for ‘Dust Diseases Care’ customers). In addition, a mobile lung screening service provided lung screening examinations for 2,726 workers (including for 2,498 for health monitoring purposes and 228 for the Dust Diseases Care customers).¹⁰⁰

Lung screening involves:

- A lung function test by a respiratory scientist
- Respiratory medical examination by a doctor
- If required, an X-ray reported by a radiologist

Results are returned to icare Dust Diseases Care to be analysed by a respiratory physician. A health monitoring report is provided to each worker and the employer is notified of any workplace injury.

*Victoria*¹⁰¹

WorkSafe Victoria funded medical assessments for all workers in the stone benchtop industry. As part of these assessments, workers were invited to contribute their data to the stonemasons’ screening project. Workers identified as being at risk of silica-associated disease were referred to a respiratory physician for further evaluation and invited to participate in the silica-associated disease registry. The screening project commenced in mid-2019. By mid-2020, 456 workers had agreed to take part in the screening project.

99 icare Annual Report 2019–20

100 icare Annual Report 2019–20

101 Monash University Medicine, Nursing and Health Sciences (November 2020) *Final Report of Phase 1: Silica associated lung disease health screening research project*



Western Australia¹⁰²

As part of the WorkSafe CT Recall Project, 100 stone workers who previously had a chest X-ray and had worked five years or more in the engineered stone industry were offered free scans. The project trialled low dose HRCT scans, in place of chest X-rays read by International Labour Office readers, to determine if X-rays have the sensitivity to detect silicosis symptoms. The project commenced in July 2020 and by October 2020, 90 stone workers had completed HRCT scans. The findings from 90 scans identified eight new cases of silicosis, with other abnormalities found from 38 scans. No cases of silicosis had been detected previously. WorkSafe WA may be the first regulatory body in Australia, and likely worldwide, to legislate the use of a low dose chest HRCT as health surveillance for silica workers.

Table 2: Outcomes of jurisdictional health screening programs

Jurisdiction	Number of workers participating in screening programs	Number of people diagnosed with silicosis	Number of workers diagnosed with respiratory conditions other than silicosis
Queensland ¹⁰³	1053	229 (including 32 with a diagnosis of progressive massive fibrosis)	13 (including respiratory conditions other than silicosis)
New South Wales ¹⁰⁴	4185	107	366 (including mesothelioma, asbestosis, lung cancer and other related conditions)
Victoria ¹⁰⁵	456	133	N/A
Western Australia ¹⁰⁶	90	8	38

102 Commission for Occupational Safety and Health (nd), accessed 10 June 2021

103 WorkSafe Queensland *Silicosis – WorkCover Screening Outcomes*, accessed 10 June 2021

104 icare Annual Report 2019–20
Note that NSW data includes broader dust diseases.

105 Monash University Medicine, Nursing and Health Sciences (November 2020) *Final Report of Phase 1: Silica associated lung disease health screening research project*

106 Commission for Occupational Safety and Health

