

ANZSOM SUBMISSION

14 August 2022

Consultation Regulatory Impact Statement

Managing the risk of respirable crystalline silica at work.

Approved by General Council

Name or organisation

The Australian & New Zealand Society of Occupational Medicine Inc (ANZSOM)

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ANZSOM is the professional society, of predominantly doctors and nurses, who practise or have an interest in the fields of occupational medicine, occupational nursing and workplace health more generally. The society seeks to advance the knowledge, practice and standing of occupational health. ANZSOM commits to support and engage with other professionals, governments and relevant organisations to promote good work, safe workplaces and healthy workers.

Respirable crystalline silica (RCS) dust that is generated by cutting, grinding and polishing stones, has a small diameter and can penetrate deep into the airways reaching the lung tissue. Exposure to respirable silica dust can result in pulmonary silicosis, a chronic debilitating lung disease of progressive nature as well as lung cancer, kidney disease and systemic inflammatory conditions.

The higher the silica contents of the rock the higher the levels of respirable silica and the risk of silica related illness. Marble with 2-5% has a much lower risk in comparison to engineered stone with up to 90%.

Silicosis is a preventable disease. A recent epidemic of silicosis, a re-emergence of this chronic lung disease, amongst stonemasons working with engineered stone is a tragedy and indicative of the failure of different stakeholders such as importers, suppliers, employers, regulators and health professionals in the occupational risk assessment and management. A recent study by Curtin University has estimated approximately an extra 10,000 cases of lung cancer and 100,000 cases of silicosis are expected to result from current RCS exposure.

Engineered stones with a very high silica content (70-95%) are of immediate concern for stone bench top industry workers but other industries such as mining, construction and tunnelling also employ a large number of workers with silica risk jobs.

ANZSOM has made joint submissions in 2019 and 2021 to the National Dust Disease Taskforce (NDDT) which was established to assess and make recommendations to curb the incidence of the highly preventable illness, silicosis, caused by working with engineered stone.

ANZSOM, by adopting a hierarchy of control approach, holds the view that a ban on high silica content engineered stone is essential in eliminating the risk of silica related illness and disability.

Until such goal is achieved, ANZSOM proposes a multilayered risk control approach, including the following:

- a. Engineering control, e.g. best evidence based ventilation, water suppression or enclosure of processes
- b. Administrative controls
 - i. Regulations for licencing of suppliers, manufacturers, installers and waste disposal operators
 - ii. Education and training of suppliers, manufacturers, installers and waste disposal operators
 - iii. Dust monitoring and testing,
 - iv. Robust health surveillance
 - Using suitably experienced medical practitioners in the field of occupational health surveillance (e.g. a respiratory or occupational physicians)
 - Working preferably in a multidisciplinary team (with involvement of other relevant disciplines such as radiologists and rheumatologists)
 - Using High-resolution computerised tomography (HRCT) scans instead of plain chest x-rays.
 - Using full Respiratory function test along with gas transfer instead of a desktop spirometry
- c. Personal protective equipment (PPE)
 - i. Acknowledging that PPE are the last line of defence
 - ii. If using a respirator, ANZSOM advocates for use of powered air-purifying respirators (PAPR)
 - iii. If a PAPR is not available, ANZSOM would recommend a negative pressure respirator with P2 filters subject to appropriate education, fit testing, fit checking, maintenance and monitoring of appropriate use

Statement of the problem (Chapter 2)

2.1 Do you agree with the identified problem? Has the entirety of the problem been identified? Please provide evidence to support your position.

Silicosis is a preventable and a recent epidemic of silicosis, a re-emergence of this chronic lung disease, amongst stonemasons working with engineered stone is indicative of the failure of current occupational risk assessment and management.

2.2 Do you have further information, analysis or data that will help measure the impact of the problem identified?

Please see

The future burden of lung cancer and silicosis from occupational silica exposure in Australia: A preliminary analysis

https://www.curtin.edu.au/about/wp-content/uploads/sites/5/2022/07/FEFreport_formatted.pdf

Hoy RF et al. Identification of early-stage silicosis through health screening of stone benchtop industry workers in Victoria, Australia, *Occup Environ Med*, 2021, <https://pubmed.ncbi.nlm.nih.gov/33115923/>

Hoy RF. Artificial stone silicosis, 2021 *Curr Opin allergy immun*. <https://pubmed.ncbi.nlm.nih.gov/33332924/>

Why is Government action needed? (Chapter 3)

3.1 *Do you agree with the case for government intervention? Please provide evidence to support your position.*

Re-emergence of this chronic lung disease, silicosis, amongst stonemasons working with engineered stone is a tragedy and indicative of the failure of different stakeholders such, suppliers, employers, regulators and health professionals in the occupational risk assessment and management. This represents a lack of robust regulatory framework supported by appropriate legislation and government coordination.

3.2 *Do you agree with the objectives of government intervention? Please provide evidence to support your position.*

Elimination of the importation, distribution and manufacturing of engineered stones is the best evidence based management of this problem and is supported by a wide range of organizations, academics, relevant medical societies and occupational health and safety experts. Please see references in the answer to question 2.2

What policy options are being considered? (Chapter 4)

4.1 *Do these options address the problem? Please provide evidence to support your position.*

Using a hierarchy of control, the best evidence based management option would be elimination of importation, distribution and manufacturing of engineered stones. This can be undertaken in a gradual fashion over a period of 2-3 years during which a multi-layered risk controls to be put in place. Please see introduction section of this submission.

4.2 *Are there any other non-regulatory or regulatory options you think should be considered to address the problem?*

Education and training of all the stakeholders e.g. employers, employees, regulators, OHS experts and health professionals

A government advertising campaign should raise awareness of the risk associated with exposures to silica, similar to smoking and asbestos.

What is the likely impact of each option? (Chapter 6)

6.1 *Is the cost modelling methodology appropriate to estimate the costs to industry and governments (Appendix D)? Please provide evidence to support your position.*

ANZSOM holds the view that a cost analysis is appropriate however putting a price on human life and suffering is unethical when one considers an extra 10,000 cases of lung cancer and 100,000 cases of silicosis that are expected to result from current RCS exposure, in such cost analysis (please see references provided in the answer to question 2.2).

6.2 *Are the estimates of the number of businesses covered by each of the regulatory and non-regulatory options accurate? Please provide evidence to support your position.*

There are nearly 1000 businesses in Australia with roughly 4000 employees in the stone bench top industry who are exposed to engineered stones. There is a larger group of stonemasons and bricklayers, approximately 32000 in total. If we were to also consider the larger group of workers in the construction, mining and tunnelling sectors, the number of individuals at risk would be hundreds of thousand workers.

6.3 *Are there other factors that should be considered in the assessment of the effectiveness of each option (Section 6.5)? Please provide evidence to support your position.*

See answer to question 2.2

6.4 *Are the cost and other estimates (including worker wage assumptions) listed in Appendix D accurate and appropriate? If not, please provide additional data to support a more accurate estimate of costs.*

No comment

6.5 *Do you have further information regarding the costs to the public health system for silicosis and silica related diseases?*

No

Discussion of options (Chapter 7)

7.1 *Which option or combination of the options presented is most likely to address the identified problem? Please provide evidence to support your position.*

ANZSOM by adopting a hierarchy of control approach holds the view that a ban on high silica content engineered stone is essential in eliminating the risk of silica related illness and disability.

Until such goal is achieved, a multilayered risk control approach should be adopted (please see the introduction).

7.2 *Are there any significant barriers to implementation of the options presented? What are those barriers? Is there a cost associated with them? How could they be overcome?*

A lack of awareness of the severity of the problem amongst all stakeholders has resulted in the current state of affairs, which has led to an epidemic of silicosis.

Other comment

Do you have anything further you would like to add as part of this process?



No