



# Preventing Silicosis: Fabricator & Industry Perspective

**May 16, 2024**

**UCLA**

# Discussion Topics

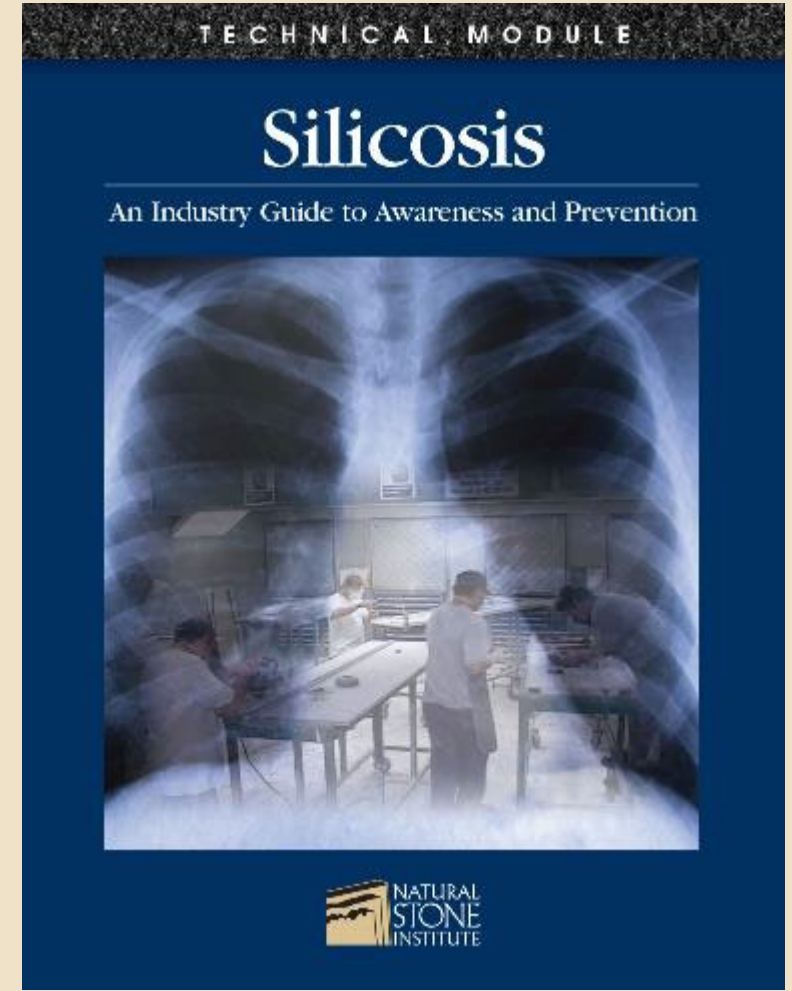
1. About the Industry
2. Industry response to silicosis
3. We need to work together

# Industry has questions too.

- What do existing scientific reports tell us? (or not tell us)?
- Can products be fabricated safely?
- Are some products more dangerous than others or may require additional safety precautions?
- What if all fabricators adhered to the 2016 Silica Standard? Would workers still be contracting silicosis?

# About the Industry

- 90+% of countertop materials are imported.
- Number of Fabricators (est.):
  - CA = 3,000 (all types)
  - U.S. = 12,000 to 20,000
- Fabricators cut, grind, polish multiple building materials.
- Dust prevention.
- California Supply Chain (next slide)



# About the Industry – Supply Chain

How slab material may end up with the fabricator.

- Direct from overseas supplier
- U.S. based distributor
- Consumer
- Kitchen & bath dealer
- General Contractor
- Interior Designer
- Architect
- Another fabricator
- Home builder
- Big Box store
- Manufacturer
- AND MORE...

## In short.....

Uncontrolled access to materials that contain silica. Anyone (consumers too) can purchase materials and allow any “contractor” to fabricate without regulatory control.



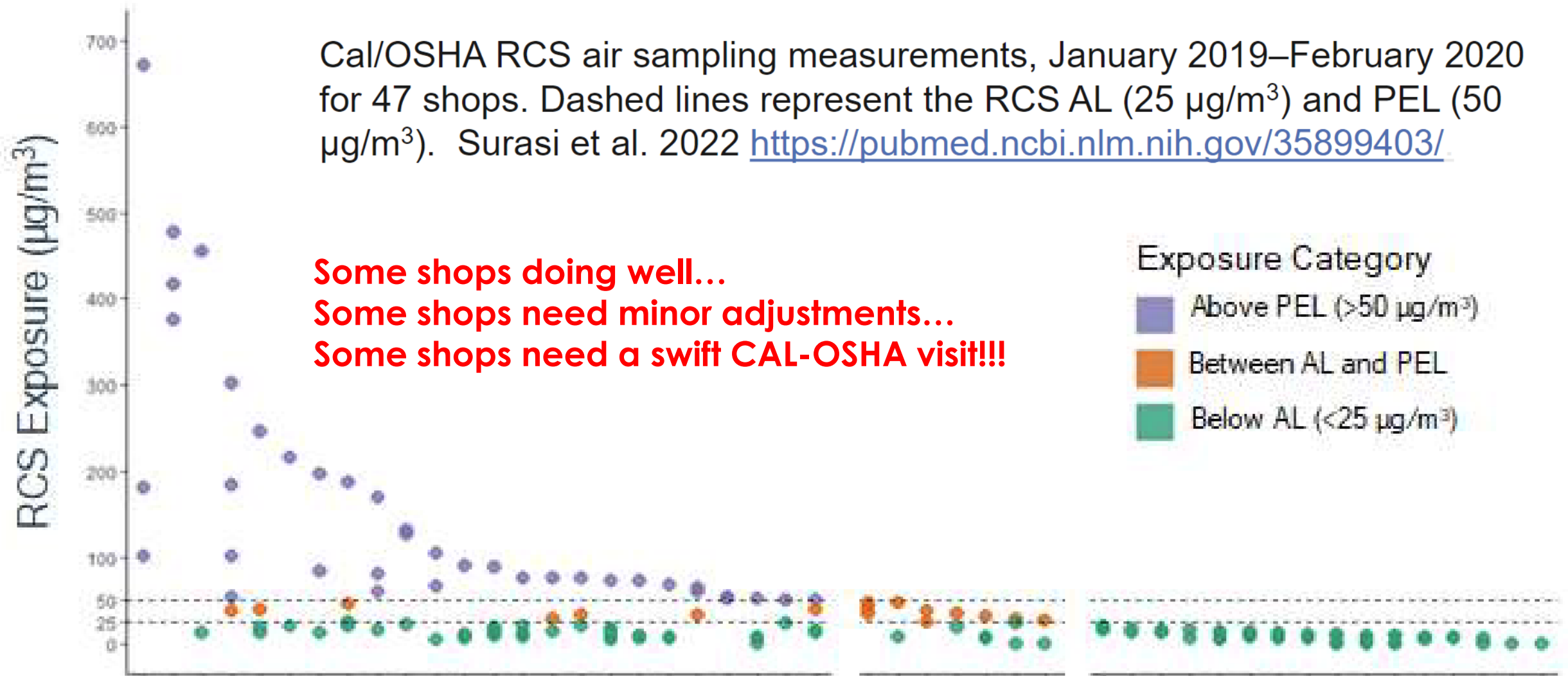
# Compliant vs. Non-Compliant Facilities



# Deficiencies of Existing Silica Regulations

Cal/OSHA RCS air sampling measurements, January 2019–February 2020 for 47 shops. Dashed lines represent the RCS AL ( $25 \mu\text{g}/\text{m}^3$ ) and PEL ( $50 \mu\text{g}/\text{m}^3$ ). Surasi et al. 2022 <https://pubmed.ncbi.nlm.nih.gov/35899403/>

**Some shops doing well...**  
**Some shops need minor adjustments...**  
**Some shops need a swift CAL-OSHA visit!!!**



Inspected Companies (N = 47)

# Industry Response

- Silica Safety Coalition
- Trade associations
- Training Resources Available
- Information Resources Available
- Assembling more science and research
- Resource for public health & Cal-OSHA





# Natural Stone University

Online learning portal

Classes can be downloaded and administered by a company safety manager and attendance tracked in the system.

## University Assistance



Navigation Tutorial



FAQS



Your Transcript



Your Library



Your Team  
(Edu Admins Only)

## Browse Individual Courses by Category



Safety



Design & Application



Technical & Standards



Business



NSI Programs



Industry Syllabi

Over 80 hours of safety training

## Featured Courses & Bundles



Pre-Membership Trial Courses



CEU Courses for Architects & Designers



Achieving Green Building Goals with Natural Stone



Silica & Slab Safety Certificate



Industry Syllabi for Education, Exhibitors & Restoration



Internship

Silica & Slab Handling training certificate

## NSI Program Overviews



Accreditation for Fabricators & Installers



Women in Stone



Natural Stone Sustainability Standard



Certified CEU Speaker Program



Maximizing Your Membership



## Keep Your Employees Safe

Online training for natural stone including preventing silicosis, safe slab handling and creating a safety program.

# Safety Training



To earn this 4-hour training certificate, one designated safety manager must complete and pass all designated safety courses, download safety materials, etc.

With these resources, safety managers may administer these same training courses to their employees.

The Silica & Safety Certificate includes the following courses:

- General Awareness
- Silica
- Slab Handling
- Associated Materials

# Online Resources

## Silica Resources

### Silicosis: Incurable but Preventable

There is no cure for silicosis. When an aggressive form of silicosis is present in the lungs, scarring progresses rapidly. There is no effective medication to halt the scarring. The only treatment for silicosis is prevention: avoiding exposure to respirable silica dust.

Employers can prevent silicosis and keep employees safe by providing the following:

- Training
- Air monitoring and adherence to air quality requirements
- Engineering controls and housekeeping practices
- Personal protective equipment (PPE)
- Medical surveillance in compliance with OSHA regulations

Protecting employees from respirable crystalline silica and silicosis should be one of the most important objectives of every company in the hard-surface industry.

NOTE: we encourage stone companies to remind customers that silicosis is an occupational hazard and is not a danger to homeowners or other end-users.

### OSHA Silica Rule

#### OSHA Releases Final Silica Ruling

Visit the official OSHA Silica Safety web page



### Natural Stone Institute Training Resources:

#### Silica & Slab Safety Certificate

Includes training and materials for silicosis, silica safety, slab handling, and implementing a silica exposure control plan. **Updated in 2023.** This training certificate must be renewed every two years.



#### Silicosis: An Industry Guide for Awareness and Prevention

Revised in 2020 to reflect current OSHA regulations.

#### Silica Exposure Control Plan for General Industry

Document to help satisfy one of the steps for compliance.

#### OSHA Inspection Planning Checklist

A general overview of policies and items needed to be prepared in advance of an OSHA inspection.

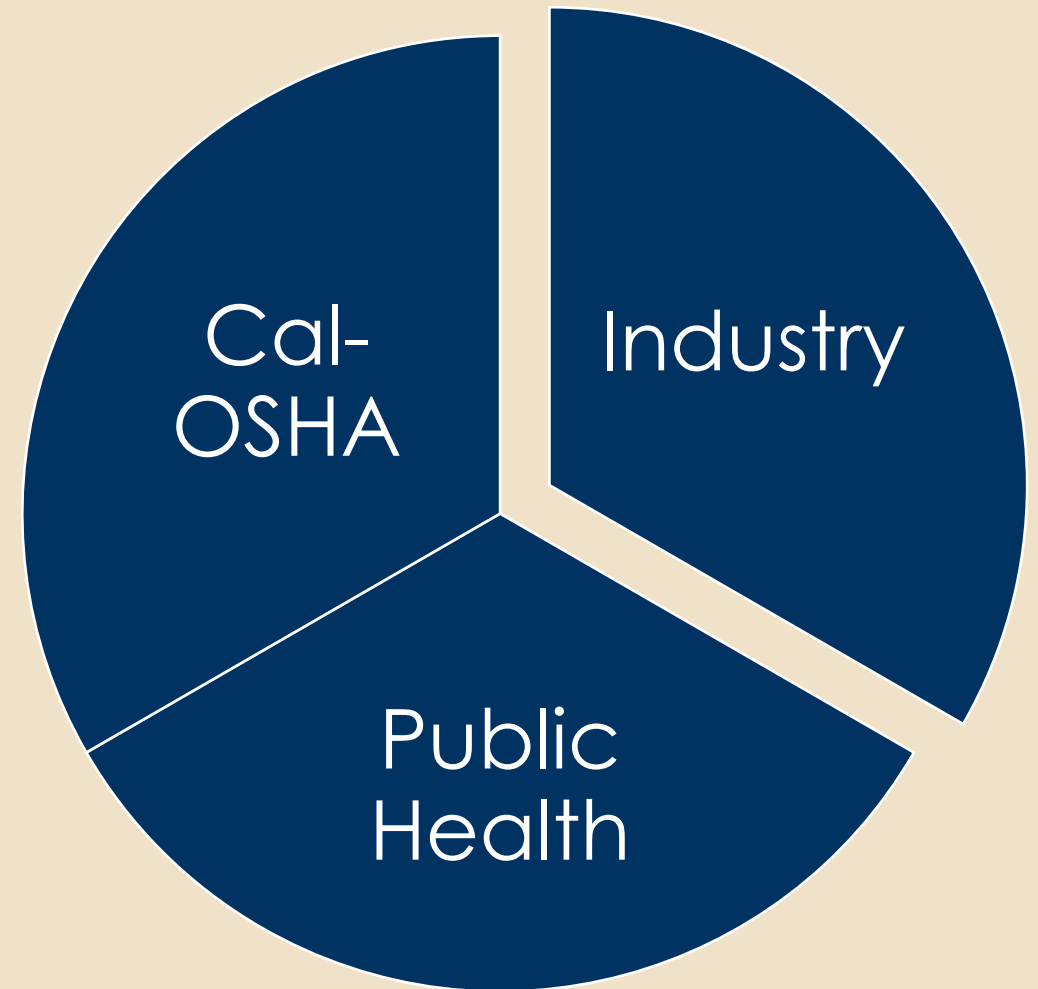
For additional safety training resources, courses, videos, and links – [click here](#).

Silica Webpage: [www.naturalstoneinstitute.org/silica](http://www.naturalstoneinstitute.org/silica)

# Collaboration Assemble Science

Science & Data drive  
future discussion.

Opportunity to work  
together!



# Assemble more science

- Literature Review
- Fabricator Survey (May 15<sup>th</sup> deadline)
- Exposure monitor fact sheet for fabricators
- Additional studies to fill in gaps

Can stone products be fabricated safely?

Are additional ETS requirements necessary if a shop is 2016 OSHA standard compliant?

**OSHA • NIOSH HAZARDALERT**  
**Worker Exposure to Silica during Countertop Manufacturing, Finishing and Installation**  
The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have identified exposure to silica as a health hazard to workers involved in manufacturing, finishing and installing natural and manufactured stone countertop products, both in fabrication shops and during in-home finishing/installation. This hazard can be mitigated with simple and effective dust controls in most countertop operations.

**Introduction**  
Workers involved in manufacturing, finishing, and installing natural and manufactured stone countertops are at risk for significant crystalline silica exposure. Crystalline silica commonly occurs in nature as the mineral quartz and is found in granite, sandstone, quartzite, various other rocks, and sand. Workers who inhale very small crystalline silica particles are at risk for silicosis — an incurable, progressively disabling and sometimes fatal lung disease.

Silicosis results in permanent lung damage. Silica dust particles become trapped in lung tissue, causing inflammation and scarring, and reducing the ability to take in oxygen. Symptoms of silicosis include shortness of breath, cough and fatigue. Workers exposed to airborne crystalline silica are at increased risk for lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease.

OSHA and NIOSH investigated U.S. work industry following reports from other countries that workers developing silicosis while exposed in shops operating without dust controls in the United States.

**Severe Silicosis in Engineered Stone Fabrication Workers - California, Colorado, Texas, and Washington, 2017-2019**  
Cecile Rose, Amy Henzlerling, Kerki Patel, Coralynn Sack, Jenna Wolff, Lauren Zell-Baran, David Weissman, Emily Hall, Robbie Scornash, Ronca B. McCarthy, Heidi Bojes, Brian Krotzger, Christine Lew, Wenbin G. Joshua Potocka, Kirk D. Jones, Carolyn K. Reeb-Whitaker, R. LaSae, Barbara L. Materni, Ganesh Raghu, Robert Harrison  
doi:10.15585/mmwr.mm6835a1

**Notes from the Field: Surveillance of Silicosis Using Electronic Case Reporting — California, December 2022–July 2023**  
Weekly / November 17, 2023 / 72(46):1275–1276  
Jennifer Flattery, MPH<sup>1</sup>, Chelsea Woolsey<sup>2</sup>, Melanie Epstein-Corbin, MPH<sup>3</sup>, David J. Blackley, DrPH<sup>4</sup>, Robert J. Harrison, MD<sup>5</sup>, Kristin J. Cummings, MD<sup>6</sup> [VIEW AUTHORS AFFILIATIONS](#)  
[View suggested citation](#)

Electronic case reporting (eCR) (1) is a promising rapid reporting mechanism, whereby electronic health records (EHRs) automatically generate and transmit a disease report to jurisdictional public health agencies in real time using previously established criteria. All 50 U.S. states and other jurisdictions are connected to the eCR infrastructure. The Reportable Conditions Knowledge Management System (RCMS) — a component of the eCR infrastructure, is a real-time decision support service that processes reports according to jurisdictional reporting requirements with criteria defined by Council of State and Territorial Epidemiologists' position statements (1). Health care organizations automatically generate and send an initial case report to the eCR infrastructure when trigger criteria, such as diagnosis codes or laboratory results, are met within their EHRs. Therefore, for all participating California health care organizations, if a health care encounter involves COVID-19 or mpox, an initial case report is generated and sent to the eCR infrastructure for processing. When there is a match between the initial case report triggered by an EHR, and a reportable condition rule is entered into RCMS by a jurisdictional public health agency, the initial case report is routed by the eCR infrastructure to the public health agency. Other conditions can be added to public health agency reporting rules.

Silicosis is a progressive, incurable, fibrotic lung disease caused by inhalation of respirable crystalline silica dust produced in industries such as construction, quarrying, and coal mining (2). A resurgence of silicosis among young workers fabricating engineered stone (quartz) countertops in California and in

onal lung disease caused by inhaling particles of respirable crystalline silica dust. Silica exposure is also associated with increased risk for lung cancer, emphysema, autoimmune diseases, and kidney disease. Silica dust is commonly found in stone, workers who cut, exposed to silica dust. Recently, silicosis outbreaks have been reported among workers who cut and finish stone slabs for countertops, a process called engineered stone. This report describes 18 cases of silicosis in each state and latent tuberculosis infection, and Washington. Several patients had severe silicosis in each state and confirmed based on enhanced biopsy findings. Silica dust exposure reduction strategies in the workplace and public health interventions to address the emerging public health threat of silicosis in the stone

**Article Metrics**  
Altmetric: 19  
News (1)  
Policy documents (1)  
Blog (1)  
Facebook (1)  
Mendeley (1)  
Citations: 1  
Views: 1,925  
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[Metrics Details](#)

# General Observations

- Industry is involved in working alongside government officials
- Easier for Cal-OSHA to take action
- Minimal enforcement – address non-compliant shops
- Limited consultation assistance for fabricators
- Plans to make the ETS regulations permanent – will (or what) opportunities exist to document compliance and modify the respirator requirements?
- Legislation (licensure) may be a positive step



**Q&A**  
**Discussion**

[safety@naturalstoneinstitute.org](mailto:safety@naturalstoneinstitute.org)  
[www.naturalstoneinstitute.org/silica](http://www.naturalstoneinstitute.org/silica)  
[www.ifsanow.org](http://www.ifsanow.org)

Thank you!