



To: CAHAN San Diego Participants
Date: July 27, 2023
From: Public Health Services

Health Advisory: Silicosis in Countertop Workers

Key Messages

- Since 2010, over one thousand cases of silicosis have been identified worldwide in workers who fabricate countertops due to inhalation of airborne crystalline silica dust.
- Since 2019, over 70 cases of silicosis have been identified in California by the California Department of Public Health, including at least one in San Diego County. At least ten workers have died, primarily in their 30s and 40s.
- Providers should be alert for silicosis risk in workers in this industry, and report identified cases to Public Health Services.

Background

Quartz is a crystalline mineral composed of silicon dioxide or silica. Engineered stone countertops, sold variously as “quartz” or “quartz surfacing,” are made from quartz aggregate held together with a resin binder. They are popular with builders and homeowners for their resemblance to natural stone and their durability.

When countertops are cut or polished, the grinding action liberates copious quantities of airborne dust. Engineered stone materials, being largely silica-based compared to other materials such as granite, produce a dust that may have very high levels of silica.

Inhalation of silica dust is a serious health hazard to workers due to the risk of silicosis, a progressive, debilitating, incurable and sometimes fatal disease resulting from pulmonary inflammation and scarring. While silicosis typically occurs after a decade or more post-exposure, high levels can lead to more fulminant disease with a faster onset. Inhaled airborne silica particles also increase the risk of lung cancer, chronic obstructive pulmonary disease (COPD), kidney disease, pulmonary infection, autoimmune disorders, and cardiovascular impairment. Silicosis in the countertop industry has been generally identified as a risk since at least 2010; over 1,000 cases worldwide of silicosis have been identified in countertop fabrication workers since that year.

Situation

The California Department of Public Health has identified more than 70 cases of silicosis since 2019, with at least one in San Diego County, of which at least ten workers have died, most of whom were in their 30s and 40s. These workers were characterized by:

- A history of cutting and finishing stone countertops
- Young age (median age at diagnosis was 45)
- Immigrant men, including Mexico and Central America

- Symptoms of cough and shortness of breath
- Delay in diagnosis, particularly with other similar clinical syndromes
- Accelerated course, including severe impairment, need for supplemental oxygen, referral for lung transplantation and/or death.

The signs and symptoms of silicosis can initially be insidious, and the clinical picture may be complicated by its early resemblance to diagnoses such as pulmonary infections (pneumonia, tuberculosis, non-tuberculous mycobacteria such as *M avium-intracellulare*), asthma, and sarcoidosis. The ultimately fulminant and debilitating nature of these cases requires clinicians to have a high index of suspicion.

Actions Requested

1. **Identify** countertop workers by asking patients about their current and previous occupations (“Have you done work cutting or finishing countertops?”). Consider silicosis in both asymptomatic and symptomatic at-risk workers.
2. **Screen** at-risk patients with appropriate imaging (such as chest X-ray or CT) and pulmonary function testing (spirometry, diffusing capacity). Refer early to pulmonary and occupational medicine for diagnosis and coordination of care.
3. **Educate** patients when cutting or grinding to always use a well-fitting respirator, and to use vacuums and water during the cutting or grinding process. Employers are required to provide workers with a safe environment. A worker with concerns about workplace safety can [contact Cal/OSHA](#) for assistance.
4. **Report** local cases of silicosis to the Epidemiology Unit by faxing a [Confidential Morbidity Report](#) to 858-715-6458 or by calling 619-692-8499 during business hours (Monday-Friday 8 AM-5 PM).

Resources

- [CDPH Health Advisory 7/25/2023: Silicosis in Countertop Workers](#)
- [Silica Safety Resources for Stone Fabricators](#)
- [U.S. CDC 10/29/2019: Outbreak of Silicosis among Engineered Stone Countertop Workers in Four States](#)
- NIOSH Crystalline Silica: [General Information](#) and [Medical Monitoring](#)

Thank you for your participation.

CAHAN San Diego

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