

UK silicosis dashboard

About the Data

Background

Silicosis is an occupational lung disease caused by breathing in respirable crystalline silica (RCS). RCS is created when rocks, stones, engineered or artificial stone (ES or AS, like 'quartz'), bricks, concrete, ceramics, sand and other substances are machined to create inhalable dust. Silicosis is a chronic, incurable, often progressive, and potentially fatal disease. There has been a sharp rise over the last decade in the numbers of cases of silicosis caused by ES internationally.

The Surveillance of Work-Related and Occupational Respiratory Disease (SWORD) is the only national voluntary reporting scheme for UK respiratory physicians to report occupational lung disease (OLD) cases (including silicosis) reviewed in clinical practice. The scheme was established in 1989, is run from the Centre for Occupation and Environmental Health at the University of Manchester and funded by the Health and Safety Executive.

Physicians are asked to report all incident newly diagnosed cases of lung disease monthly ('core' reporters) or from one random month per year ('sample' reporters). Reporters are consultant respiratory physicians with at least one years' experience working within the National Health Service with a specialist interest in OLD, who may or may not work in a dedicated OLD centre. Diagnoses are made through normal clinical pathways.

Cases are collected electronically through REDcap. The detailed methodology is described in published literature (1).

Data are collected in REDcap in real time and cleaned and coded three monthly to allow time for reports to be submitted. Cases are cleaned in February, May, August, and November each year.

The dashboard shows all cases of silicosis reported to SWORD since 1996. This includes cases of silicosis caused by natural stone and ES silicosis cases. Simple unadjusted data is shown. Where there are fewer than 5 cases in a category these are shown as a percentage or '<5'.

Case Definition

Confirmed case:

1. Reported as:
 1. silicosis

2. pneumoconiosis' where the causative agent was either RCS or stone, quarry (etc..) dust; or
 3. other or other pneumoconiosis where silicosis included as free text diagnosis.
2. Exposure to RCS, stone, quarry (etc..) dust, or ES.

Data Limitations

This dashboard presents unadjusted data of cases of silicosis in the UK. Because SWORD is voluntary scheme numbers may be affected by overall reporter numbers, reporter fatigue, delayed and missed reports. Reporter numbers have varied over time and were significantly impacted by COVID. These data likely underestimate the true case numbers of silicosis in the UK.

The risk of underestimation is likely to be exacerbated in silicosis due to many cases being asymptomatic in early stage, misdiagnosis as other conditions (for example sarcoidosis), and a long latent period between exposure and diagnosis. Risk of underreporting is further exacerbated as the numbers of people exposed to RCS in the UK is not known, so accurate denominator data is not available to calculate incidence rates.

SWORD does not collect detailed clinical data, outcome data, or data on ethnicity, migration and work status so this data is not reported here.

Suggested Citation

The Occupation and Health Research network, Centre for Occupation and Environmental Health, University of Manchester: UK Engineered Stone Silicosis Dashboard. Accessed *date*. <https://sites.manchester.ac.uk/thor/silicosis-dashboard/>

Data points

Current raw case numbers: Displays the number of cases in the REDcap database waiting to be cleaned and reported since the last 3 monthly cleaning cycle. These data are broken down into all cases of silicosis and those caused by ES.

Confirmed cases of all silicosis: All cases of silicosis reported to SWORD since 1996, up to the last 3 monthly cleaning cycle. These data are broken down into all cases of silicosis and those caused by AS.

Average age/ES average age: Mean age at time of reporting for all cases of silicosis and ES silicosis.

Confirmed cases of all silicosis cases by gender: Pie chart showing the percentage confirmed cases of silicosis who are male or female.

Confirmed cases of silicosis by year: A bar chart showing the numbers of cases of silicosis reported to SWORD year on year, since 1996. The bar chart shows cases of all silicosis and ES silicosis.

Confirmed cases of all silicosis by industry group: A bar chart showing cases of confirmed cases of all silicosis by industry group, based on standard industrial classification (SIC) codes associated with the reported occupation and industry.

Confirmed cases of all silicosis by region: UK map and bar chart showing location of cases of confirmed silicosis cases, based on the postcode for the case, split by region. When you hover over a county the number of cases in that region will be shown. Clicking on the map or the bar chart highlights the numbers of cases in that region.

- (1) Carder M, Darnton A, Gittins M, et al. Chest physician-reported, work-related, long latency respiratory disease in Great Britain. *Eur Respir J* 2017; 50: 1700961 [<https://doi.org/10.1183/13993003.00961-2017>].