PCW 13
Silica Exposure and Disease State of the Art

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Duration: Half Day

Background:
Respirable crystalline silica (RCS) dust is an ubiquitous dust that presents pulmonary health hazards in mining, construction, sandblasting, counter top manufacturing, and agriculture. Our expert workshop is designed to provide a comprehensive assessment of silica health hazards and to point to areas needing further global focus.

Methods:
We reviewed the published health literature on RCS and examined the most critical findings. Specifically, we will address the current and historical data
related to silicosis, chronic respiratory conditions, coal workers pneumoconiosis (CWP), TB, auto-immune diseases, lung and other cancers. We examined global RCS policy and regulatory status. Emphasis was on novel concerns such as children exposed to RCS, epidemiologic outbreaks of CWP with silicosis, and uses of scanning to replace chest X-rays.

**Results:**
Our synthesis of findings will include: history of silica epidemiology and medicine; clinical research on respiratory illnesses from RCS; agency guidance and current industrial hygiene; current U.S. and global regulations; RCS and auto-immune diseases; silicoTB in South Africa and other settings; silica countertops and severe silica diseases; coal mining, CWP and silica diseases; risks after diagnosis of silicosis and CWP; RCS and cancer risk, and the media's role in understanding silica disease. We hope our presentations will lead to the adoption of new instruction programs focusing on RCS as well as industry prevention programs.

**Conclusion:** RCS is not a new disease concern, but it has risen in importance because of the severity of silica-related diseases among countertop makers in several countries and the bloom in CWP/silicosis among coal miners. In many parts of the world, silicoTB persists and children exposed to RCS in mining raises prevention challenges. Worker education is needed on the hazards of RCS, and it is needed in Spanish, Chinese, Hindi and other languages.