NIOSH Respiratory Health Program

National Institute for Occupational Safety and Health

July 2019

At-A-Glance

The Respiratory Health Program mission is to provide national and international leadership to prevent work-related respiratory diseases and optimize workers' respiratory health. This snapshot shows recent accomplishments and upcoming work.

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Respiratory Health Program works with a diverse range of partners in industry, labor, trade associations, professional organizations, academia, and other governmental agencies. The program focuses on:

- Protecting workers from respiratory diseases that are caused or made worse by work exposures
- Optimizing workers' respiratory health

What do we do?

The program works with partners to conduct research, share information (including state-of-the-art recommendations), provide services, and transfer research findings into practice. Examples include:

- Provide national data tracking the burden of work-related respiratory disease and the amounts and types of hazardous workplace respiratory exposures.

- Provide health screening and surveillance services to U.S. coal miners under a program mandated by Federal law called the Coal Workers' Health Surveillance Program (CWHSP). We help individual miners by detecting disease early and provide group data to guide broader prevention activities.

- Conduct multidisciplinary research needed to identify respiratory hazards, characterize their risks, and design, validate, and disseminate effective interventions.

- Contribute to the NIOSH Health Hazard Evaluation (HHE) Program by responding to requests for evaluations of potential respiratory hazards and providing recommendations for solutions.

- Certify courses that train technicians to perform spirometry (a type of lung function testing).

- Provide training and certification testing to physicians who classify chest x-rays for findings of pneumoconiosis using the International Labour Organization's classification system.

What have we accomplished?

- Identified the first known cluster of idiopathic pulmonary fibrosis among dental workers: *Dental Personnel Treated for Idiopathic Pulmonary Fibrosis at a Tertiary Care Center — Virginia, 2000–2015*.

- In 2018, the CWHSP:

  — Provided 8,205 chest x-ray screening examinations (10% more than in 2017).

  — Reviewed 2,665 spirometry test results from NIOSH mobile unit and 32 CWHSP Spirometry Clinics in 11 states: CO, IL, IN, KY, MS, ND, OH, PA, TX, WV, and WY.

- Developed specifications for default content of initial case reports of work-related silicosis for state health departments to use with the Council of State and Territorial Epidemiologists (CSTE) Reportable Condition Knowledge Management System, in collaboration with CSTE.

- Released the *Dampness and Mold Assessment Tool* for both general buildings and schools to help employers identify and assess areas of dampness in buildings (See figure to right). Various stakeholders have disseminated the tool, including the National Safety Council, American Industrial Hygiene Association, and Navy and Marine Corps Public Health Center.

- Published the *Dust Control Handbook for Industrial Minerals Mining and Processing, Second Edition*.

- Published reports on key contemporary work-related respiratory health issues:

  — *Continued increase in prevalence of coal workers' pneumoconiosis in the United States, 1970-2017.*

  — *Changes in respiratory and non-respiratory symptoms in occupants of a large office building over a period of moisture damage remediation attempts.*

  — *Three-dimensional printing with nano-enabled filaments releases polymer particles containing carbon nanotubes into air.*
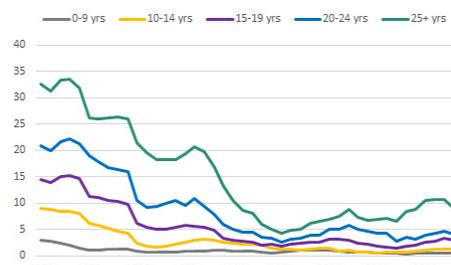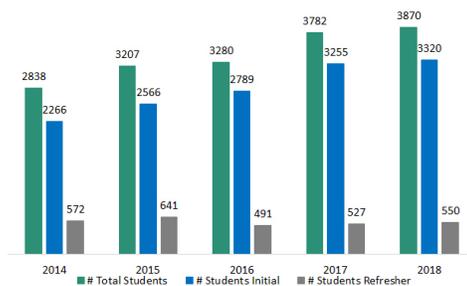
What's next?

- Contribute to publication of three data sharing standards by HL7®, a standard-setting organization, in support of including industry/occupation of patients' jobs in electronic health records (EHRs). Including this information in EHRs will facilitate surveillance for many types of work-related diseases.

- Release new findings for emissions and exposures from desktop 3-dimensional printers and industrial-scale additive manufacturing machines.

- Submit report to Congress regarding the potential barriers to participation in the Coal Workers' Health Surveillance Program.

Percentage of examined underground miners with coal workers' pneumoconiosis (ILO category 1/0+) by tenure in mining, 1970-2017
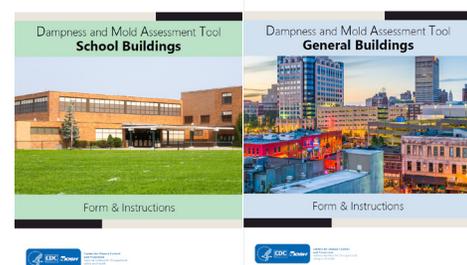

Source: Coal Workers' Health Surveillance Program, NIOSH WoRLD Report

Number of spirometry training course attendees, 2014-2018

Source: NIOSH Spirometry Training Program

Publication Spotlight: Dampness and Mold Assessment Tools

Sources: NIOSH Publications 2019-115 and 2019-114

To learn more, visit
www.cdc.gov/niosh/programs/resp/

Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health