

Protecting Worker Health Through Better Data

What's the connection between work and environmental health?

Environmental health refers to the relationship between the environment (natural or human-made) and the health of people and their communities. This includes the air we breathe, the water we drink, and the land and soils on which we build homes and recreate. Many people spend a large portion of their day at work. This means that we need to think about workplace health the same way we think about home health. However, work is more than just a physical workplace. Our work affects how well we can adapt to other health risks. Specific jobs may mean we do not have access to services and resources that are offered only during business hours. Lack of sick leave or health insurance means delayed health care to treat concerns. Low-income jobs can limit our ability to pay for housing improvements or other environmental health interventions. Work is a social determinant of health.



What does better work data look like?

Public health focuses on population health, looking at data among large numbers of people. In order to understand the potential impacts of work on the health of New Hampshire residents, we need to group together individual jobs in a standardized way. The best practice is to ask for 1-3 words of free text for each job to describe someone's industry and occupation. These are later coded to common group codes following standard classification systems that allow us to compare people within our state over time, across NH programs, and with different cities and states nationally.

Why industry and occupation?

Industry and occupation are both important to give you a full picture of the potential hazards a person may experience. Some health hazards may be associated with an industry, such as lead and metals exposure from electronics recycling plants. A line worker in this industry would have different exposures from a line worker in food manufacturing. Other health hazards tend to be more associated with the occupation. Both line workers may have a higher risk for ergonomic injuries or psychosocial stress. A manager in either of these industries may not have those risks. Combining industry and occupation tells a more precise picture.

Industry is...

...the type of business where a person works. Industry classifications group businesses based on the type of production or services.



Occupation is...

...the kind of work a person does to earn a living.

Occupational classifications group jobs by the type of tasks or activities a worker performs.



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Taking Action

- **Talk about work:** Ask your clients, patients, and the population you serve about the work they do. Talk to them about both the tasks they do on the job and what kind of business they work for. Ask for detail beyond vague titles or what you may assume.
- **Record work data:** Record information about industry and occupation. Do not just ask employer name. Make sure that these fields are complete on forms and records that are sent to public health agencies and that forms and data systems are inclusive of people with more than one job. Best practices are available from the National Institutes for Occupational Safety and Health (NIOSH): <https://www.cdc.gov/niosh/topics/coding>.
- **Think about vulnerable worker groups:** Recognize that temp workers, low income workers, workers with no paid sick leave, and those with limited English proficiency or undocumented status may be more vulnerable at work.

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Collaborating to Improve Work-Related Data and Analysis

The NH Environmental Public Health Tracking (EPHT) program's commitment to data-driven public health action can assist programs, researchers, and health officials to better understand the critical role of work in public health issues and to identify the best targets for intervention. Here are three recent examples of EPHT's collaborations focused on occupational health.

EMPoWER-U study: Work as a source of metals in the body

EPHT assisted the BiomonitoringNH program on their EMPoWER-U (Evaluating Metals in Private Wells and People for Exposure Reduction- Uranium) study. EPHT helped design questions to capture participants' current jobs and work history. This will allow BiomonitoringNH to identify potential occupational sources of metals detected in blood or urine and counsel affected participants on occupational risk reduction. The work information will be coded in a standardized way to allow for comparison across different biomonitoring studies in NH and other states.



Adult Blood Lead Surveillance: Exposure in the workplace and the take-home effect on families

EPHT combined and standardized information from different sources to have more complete work data for adults with elevated blood lead. Historic adult blood lead records were cleaned and formatted for inclusion in a new surveillance system. Better data helps identify which industries and occupations are exposed to lead over time in NH for surveillance and outreach. The new system will allow for better linking with child lead data for a future project to address occupational take-home lead exposures of vulnerable family members.



NH COVID-19 Response: Work as a location of infectious disease spread

EPHT wrote new questions for the investigation of COVID-19 cases to capture whether the individual had worked outside the home during their exposure window, and at what type of job. The quality of this data was assessed after the question introduction, and a follow-up training was provided to case investigators targeting the identified areas in need of improvement. Post-training data quality assessment showed that data completion and quality were improved. The new questions and these findings were shared nationally with other health departments. EPHT also helped write a grant for the Bureau of Infectious Disease Control to improve work information in all infectious diseases and continues to advise on this project.

