

Capturing the Exposure Source: Improving Lead Surveillance among Adult Pennsylvanians

Pennsylvania (PA) is among the top states for adults with elevated blood lead levels. Understanding how adults are exposed to lead is important for accurately identifying industries and occupations that may contribute to increased blood lead levels in adult Pennsylvanians. To address this issue, the [Pennsylvania Occupational Safety and Health Surveillance \(PennOSHS\)](#) program implemented an updated strategic plan for expanded lead surveillance in 2022, including revised interview questions to capture sources of exposure.

The Challenge

Adult blood lead laboratory reports are often submitted to the PA Department of Health without employer and demographic information. These data are critical to identifying sources of lead exposure, at-risk populations, and appropriate action plans for mitigation. Interviewing individuals with elevated blood lead levels using a comprehensive questionnaire is one of the best methods to enhance surveillance. However, low response rates for public health interviews continues to be a challenge, especially following the COVID-19 pandemic.

The Response

PennOSHS pulled blood lead test reports from the PA - National Electronic Disease Surveillance System (PA-NEDSS) from July 2021-August 2022. Adults aged 16 years and older with a blood lead level of ≥ 25 $\mu\text{g/dL}$ and missing employer information were prioritized for follow-up interviews. One hundred and eighteen individuals were mailed a letter explaining the interview process as well as answers to frequently asked questions about why they were being contacted for interviews and lead exposure in PA in general. Following a completed phone interview, a \$25 token of appreciation and [workplace](#) and [non-workplace](#) lead exposure fact sheets were mailed to participants. Call attempts were made to selected individuals between August - November 2022 and 41 individuals completed the interview. Interviews are planned to continue in the following years as well.



The Impact

The newly updated strategic plan for lead surveillance in PA resulted in a 35% interview participation rate! Working in primary metal manufacturing or specialty trade contracting industries were most highly reported. Interestingly, many individuals with workplace exposure also had at least one non-workplace exposure (such as recreational shooting), suggesting that multiple sources of exposure are likely contributing to elevated blood lead levels in PA adults. Novel information collected from interviews is being used to create industry-specific outreach materials in efforts to better reduce lead exposure in PA.

For more information, visit the PA DOH [Adult Blood Lead Epidemiology and Surveillance Webpage](#).