

Who is behind the project?

As Allegheny County Health Department representatives tackle lead and lead exposure in Pittsburgh, Youth Enrichment Services (YES) tasks youth with on-setting investigative efforts in Lincoln-Lemington. Such youth-participatory research, engagement, and community outreach is not new to YES, a non-profit 501 (c)(3) corporation (Federal ID # 25-1737929) formed in 1994 to design and implement educational programs for children living in public housing and economically disadvantaged communities. In fact, for over 23 years, YES has engaged students in academic enrichment and career exploration opportunities, in which students balance both work placement responsibilities and research projects. YES students learn community-based participatory research approaches, with particular emphasis on 1) research methodology, 2) research question development, 3) hypotheses generation, and 4) data collection methods and survey protocols-- and then apply it to challenges unique to disenfranchised populations and communities. Students gain experience examining and extrapolating their findings, synthesizing their results into poster displays, and presenting their work before distinguished personnel.

YES aims to empower youth through education and is committed to expanding its youth-involved community outreach and academic enrichment and career exploration opportunities. Hence, such a project extends student learning opportunities and presents learning in a different capacity. Furthermore, this work allows students to take ownership over and pride in helping Lincoln-Lemington reduce preventable lead exposure.

As such, YES provides the appropriate platform to help Allegheny County Health Department representatives understand how marginalized communities make sense of the high lead exposure challenges facing Pittsburgh.

Supporting Partners:

- Allegheny County Health Department
- West Virginia University
- University of Pittsburgh
- Partner4work

What is the problem?

Lead and lead exposure have recently become popular issues due to the high-profile case of Flint, Michigan, in which vulnerable residents have been disproportionately exposed to toxic lead levels in their drinking water. This tragedy prompted national inquiry into the quality of America's drinking water and into citizens' exposure to lead in other capacities. Unfortunately, this investigation revealed unsafe lead levels well beyond Flint boundaries. In 2015 alone, scholars from the National Resources Defense Council found that over 18 million people from various US communities tested positive for lead poisoning at higher rates than those in Flint, were served by toxic community water systems, and lived in homes in which lead and copper levels violated safety regulations (cite). Because of this, many individuals—including vulnerable children—remain susceptible to the harmful effects of lead (cite). The national lead findings have spurred lawsuits across the country and have elicited action from industry officials, academics, health professionals, and community advocates.

Living in one of eighteen Pennsylvania cities with higher rates of lead exposure than Flint, Pittsburgh stakeholders have answered the call to action and have begun devising plans to attenuate the citizenry's lead exposure. However, this has been no small feat. Despite a concerted effort among industry officials and health stakeholders and decades of changes in the use of lead, studies suggest that lead poisoning remains one of the nation's most devastating health threats, affecting more than 535,000 children each year, particularly those in low-income minority communities. More specifically, children between the ages of 0 to 6 residing in Lincoln-Lemington may be exposed to lead that places them at greater risk of experiencing mental and physical developmental delays.

To augment the current initiatives and to further uncover the nuances of this problem in Pittsburgh, Youth Enrichment Services—an educational non-profit providing low-income students with academic and cultural enrichment—in collaboration with the Allegheny County Health Department, West Virginia University, and the University of Pittsburgh are tasking youth with examining lead and lead exposure in Lincoln-Lemington. Through this investigation, youth will develop and disseminate health and safety awareness materials and intervene on preventable factors contributing to Lincoln-Lemington residents' lead exposure. As such, youth will offer a nuanced perspective that closely reflects Lincoln-Lemington residents and will inform the current and future efforts of key influencers in the city of Pittsburgh.

Why Lincoln-Lemington?

Lincoln-Lemington is an attractive area to investigate lead and lead exposure. First, most of the city's efforts to confront lead exposure have not involved Lincoln-Lemington (Sharkey, 2013). While this is troubling, it is unsurprising as this neighborhood has been overshadowed by other efforts in neighboring east-end communities, in which stakeholders have alternatively invested quality time, energy, and resources (cite). Because minimal work has occurred in this area, little is known about lead as it relates to Lincoln-Lemington's built and social environment or about the conversations around lead exposure between family members and children.

As such, youth recruited for this initiative are uniquely positioned and are important vehicles in commencing the lead initiatives in Lincoln-Lemington. Not only do many of our youth emerge from Lincoln-Lemington, but most either live in surrounding neighborhoods or are closely tied to the community. Because of this, our students are familiar with the territory, relatable to and known by the community, and have a vested interest in improving Lincoln-Lemington residents' quality of life. Establishing such efforts by students who have an established relationship with the community make them valuable assets.

Lincoln-Lemington also has a sizeable family household population, which provides youth the opportunity to explore conversations between families and children about lead and lead exposure. Because lead exposure is riskier for smaller children, using youth to address this challenge may be meaningful to both the youth interventionists and to the community. Furthermore, through such examination, youth will gather quality intervention data, make meaning of the preventable factors contributing to lead exposure in this neighborhood, and offer their insight to guide future work in Lincoln-Lemington and writ large.

How is the project conceptualized?

Leading the Discussion on Lead is a project designed to engage low-income youth in the city of Pittsburgh in investigating lead and lead exposure in Lincoln-Lemington and understanding more about it from families who are most impacted and influenced by lead. As lead investigators, youth will identify the fundamental, intermediate, and proximate factors that place residents at risk of exposure to toxic lead levels to improve the community's awareness using the social determinants of health framework. Then, they will utilize these findings to design, implement, and disseminate a culturally relevant health intervention to attenuate the community's exposure to lead with the support of health professionals, scholars, and community organizations.

What are the project objectives?

The primary goals and objectives of this project are for youth:

- 1) To understand what, if any, measures parents are taking to limit children's exposure to lead
- 2) To understand how the built and social environments influence lead exposure in children residing in Lincoln-Lemington
- 3) To understand how educating residents on lead exposure impacts health behaviors and outcomes
- 4) To engage, instruct, and disseminate information and health interventions to the community about lead and lead exposure
- 5) To assist in limiting the exposure of vulnerable individuals, particularly children less than 24 months and in the developmental phase
- 6) To create partnerships with the Lincoln-Lemington community and to cultivate ongoing conversation and connection with community members
- 7) To expand their knowledge about lead and lead exposure

How is the project set-up?

Students will engage in three phases of programming as lead investigators. These three program components include: 1) Training, 2) Fieldwork and Data Collection, and 3) Synthesizing/ Reporting.

How are students utilized?

Approximately 35 youth will engender roles to engage, investigate, analyze, and disseminate information to improve the community's awareness of lead exposure and be divided into 7 groups of 5.

Each group will have:

One: Community Engager- who plans the health education program, engages with community members, builds and sustains relationships with residents

Two: Community Investigators- who gather data from families, engage in interviews with residents, etc.

One: Community Disseminator- who documents students' experience using social media platforms, newspaper outlets, shares information with community members and synthesizes information for community residents

One: Spatial Analyzer- who uses GIS mapping tools to map community variables and to specifically assess the community to determine the number of vacant homes, analyze quality of housing, describe the community's assets and deficits, etc.

Figure 2. Student Groups

