



implementation of an online database that would allow local governmental and nongovernmental organizations to create referrals directly to other participating organizations and facilitate communication between community members and social and health services. This project also sought to establish blood lead level testing in pregnant women. Thirdly, the project established an initiative to educate families of children who have been exposed to lead hazards or who are at high risk for exposure on the role that nutrition can play in protecting children from lead poisoning and assist with countering lead absorption. Lastly, LMPHW's HiAP project proposed to reestablish the local Lead and Healthy Homes Collaborative and to increase cross-sector relationships by engaging stakeholders in the community to advance policies and practices that impact childhood lead poisoning.

### Challenge

A city with a population of over 760,000, Louisville has the highest burden of children with elevated blood lead levels (EBLLs) in Kentucky. LMPHW's data indicates that black children are disproportionately affected by lead, and the city's rising refugee community is also experiencing a growing EBLL problem. These and other affected populations mirror the city's concentration of pre-1950 housing and contain the highest concentrations of people living below the poverty line. The high-risk, target ZIP codes within the municipality are linked to historic inequitable housing. These demographic and economic factors linked to EBLL and the gaps associated with health outcomes are linked to populations' experiences with systems of power. Despite the high burdens of EBLLs in communities of low-income residents, of people of color, and of pre-1950 housing, LMPHW manages fewer than 300 cases of EBLL per year. This project aimed to target these high-risk ZIP codes, and to reduce lead poisoning in the children and pregnant women within them.

### Solution

In partnership with United Way, the City of Louisville, and Jefferson County Public Schools, LMPHW joined an existing initiative, Unite Us. Unite Us is an online database designed to enhance workforce capacity and resource delivery for follow-up care regarding referrals between community members and social and health services. This database endeavors to identify and fill gaps to resource access, service delivery, and follow-up care. As a result of this process, CLPPP identified gaps in their internal data management, which led to the development of new internal data systems for case management, environmental assessment information, and testing results. The data management team also mapped workflow processes to assist with the coding for the new case management database.

In conjunction with this, LMPHW took on educational and outreach campaigns to establish blood lead level testing in pregnant women at provider locations. These provider locations were identified, and outreach efforts were made to physicians to communicate the importance of prenatal testing. Similarly, LMPHW planned four nutrition classes targeted to parents and guardians in Louisville's five target ZIP codes and to families receiving home visits in the

## BY THE NUMBERS

3

Nutrition classes held

959

Children screened

3

Collaborative meetings

18

Collaborative member groups

614

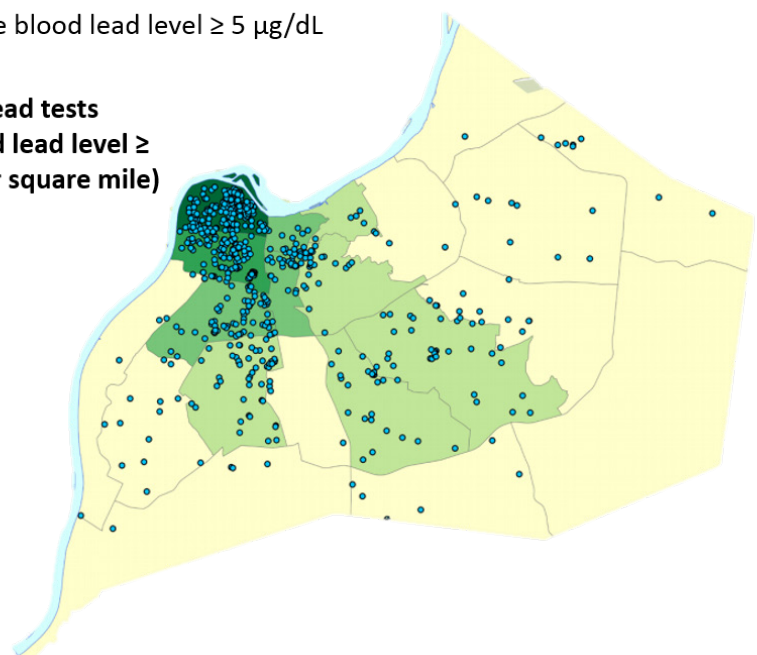
Unite Us referrals received

### Lead Poisoning in Louisville

● Tests were blood lead level  $\geq 5 \mu\text{g}/\text{dL}$

**Density of lead tests where blood lead level  $\geq 5 \mu\text{g}/\text{dL}$  (per square mile)**

- 0-1
- 2-5
- 6-15
- 16-35
- 36-81



*Data Source: 2013-2016 lead testing results from Louisville Metro Department of Public Health and Wellness. This does not include all tests from Jefferson County, but accounts for at least 75% of all tests.*



*Shirley Slemmons assists at a lead poisoning prevention nutrition class being held at Louisville Grows in Louisville, KY.*

preceding months. These nutrition classes were intended to educate families of children who have been exposed to lead hazards or who are at high risk for exposure. The classes also taught how nutrition can play a role in protecting children from lead poisoning and assist with countering lead absorption. These two educational campaigns, targeted both to physicians and to the general public, aimed to increase awareness around prenatal testing and childhood nutrition.

Lastly, LMPHW reestablished the Lead and Healthy Homes Collaborative in the Louisville metro area to increase cross-sector relationships by engaging community stakeholders, to advance policies and practices that impact childhood lead poisoning, to increase testing and identification of lead hazards, and to increase enforcement of local housing codes. During this grant period, LMPHW took on four approaches to combating lead poisoning in Louisville. Through database development, provider engagement, a nutrition educational campaign, and the reinvigoration of the collaborative, LMPHW joined existing structures and organizations, as well as developed new initiatives to address lead poisoning in targeted high-risk areas and populations.

## Results

Overall, LMPHW's HiAP project was a success. The Unite Us database has a total of 92 community organizations registered to use the platform, with 242 unique network users. Across all users, there have been a total of 614 referrals received (as of August 12, 2019). Regarding prenatal testing, three clinics within the target ZIP code that provide OB/GYN services were identified and contacted. Educational materials were developed for staff to meet with in these facilities to educate providers on the potential

harm of lead exposure to pregnant women and their unborn children. This provider engagement encouraged physicians to perform a verbal risk assessment and to perform testing when necessary based on the responses to these assessments. LMPHW also worked with its laboratory to establish blood lead level testing in pregnant women. LMPHW was only able to schedule one nutrition class due to a lack of registration; however, by partnering with another agency, it was able to extend the program beyond the project period. Lastly, LMPHW was able to reestablish the Lead and Healthy Homes Collaborative in the Louisville metro area that held two group development sessions and hosted one-on-one meetings to build rapport with stakeholders. With the contribution of community partners, LMPHW developed a mission, vision, and values, as well as subcommittees for the collaborative.

## Lessons Learned

Despite these efforts and successes, LMPHW encountered operational barriers and learned many lessons during this project period. Regarding database development, time and staff capacity constraints prohibited the development of an environmental database. LMPHW also experienced challenges in navigating and establishing relationships with community organizations and governmental departments hesitant to use the tool. To counter these challenges, additional promotional efforts and additional trainings have been scheduled to ensure users are competent using the tool. Concerning provider outreach surrounding prenatal testing, two of the three provider locations lacked correspondence. Because this campaign was managed by another department within the health department, outreach efforts to physicians were difficult to maintain. Moving forward, the CLPPP plans to coordinate with practitioners to better understand their needs and to identify specific goals, outcomes, and roles for each department to ensure proper outreach.

Lack of registration for nutrition classes indicated that LMPHW was unsuccessful in providing a variety in promotion and advertising, and that the department needs to offer more culturally diverse options. This program has been extended to include four more classes in collaboration with LMPHW's Lead Hazard Control Program, Lead-Safe Louisville, and are scheduled to take place one in each of the city's target ZIP codes.

Lastly, LMPHW experienced challenges in engaging the appropriate stakeholders in the Lead and Healthy Homes Collaborative from the community, government, and private sectors. Overall time constraints and operational barriers posed the greatest challenges to the four different initiatives of this project, but LMPHW has already put into place strategies to counteract these obstacles.

## Value of HiAP

Utilizing HiAP approaches has allowed LMPHW's Childhood Lead Poisoning Prevention Program to be innovative in ways that other funding opportunities have not traditionally allowed. Employing the HiAP approach and strategies has allowed LMPHW to incorporate stakeholders from

the community, including both residents and nonprofit organizations. This integration resulted in a model of sustainability and created a system by which the people most affected by lead poisoning could be heard outside of the traditional structures of public health and health services sectors. LMPHW has utilized the HiAP approach to facilitate common goals, complimentary roles, and ongoing constructive relationships between public health, healthcare, and other sectors in the community. This comprehensive and inclusive approach has allowed LMPHW to have a larger impact on reducing health inequities.

## Value of Technical Assistance

The biggest value to having technical assistance was the ability to consult with experts who have worked in the field and have varied experience working with other programs across the country. Having technical assistance was vital to the achievement of our goals. The program was provided specific guidance regarding the development of the Lead and Healthy Homes Collaborative that was crucial to getting the right initial partners in the room. Additionally, throughout the project period, we were connected to other programs and program resources that were specific to questions we had regarding policy analysis, grant writing, and interagency partnerships.

While the experience with technical assistance via this project were exemplary, the opportunity to receive direct guidance from the other grantors would have been welcomed to garner the breadth of expertise across the different organizations.

## Sustainability

LMPHW's Childhood Lead Poisoning Prevention Program plans to continue all activities initiated in alignment with this grant. Regarding the database implementation, LMPHW plans to transition to the new database, including an environmental database that was originally proposed at the start of this project, as it contains information crucial both to the program and to stakeholders. Processes are also being developed to increase the utilization of the Unite Us platform that is part of the Metro United Way United Community. In this project's effort to establish blood lead level testing in pregnant women, until the prevalence of pregnant women with elevated blood lead levels is identified, LMPHW cannot accurately address any issues (including funding) associated with increased testing of prenatal blood lead testing. In order to sustain this project's educational initiative regarding nutrition, LMPHW has scheduled four more classes, one in each of Louisville's target ZIP codes. One of these upcoming classes will be specifically targeted at the Hispanic population with translation services. Costs associated with the continuation of these subsequent nutrition classes have been considered, and potential local resources to assist with balancing these costs have been identified. Lastly, LMPHW is attending neighborhood association meetings and sharing information learned through a network of partnerships with leaders in target communities to continue efforts of the Louisville Lead and Healthy Homes Collaborative. The process to leverage resources and sustain these future initiatives has already begun.

### Stories from the Field

Louisville Metro  
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