

Mapping Lead Poisoning Prevention Services By Local Health Departments



Overview

Lead exposure in childhood is associated with a variety of detrimental health effects ranging from speech problems to brain damage. While lead exposure has declined substantially over the past several decades, lead exposure in children under six remains a public health concern. Children who live in homes built before 1978, or who live in households at or below the federal poverty line, are at particularly high risk. Sources of lead exposure may include household dust and exterior soil. Less common but possible sources of lead exposure can also include certain children's toys, some types of jewelry, unregulated cosmetics, and drinking water.

While lead abatement can be an expensive intervention, the severe and lifelong health effects associated with childhood lead exposure mean that, by most measures, interventions that are successful at reducing exposure will pay for themselves over time. A study on lead interventions in Michigan⁵ found their program paid for itself in just three years. Lead abatement has been tremendously successful and the Centers for Disease Control and Prevention (CDC) has listed reduction in childhood lead exposure as one of the greatest public health achievements of the first decade of the 21st century.⁶

1 Lead exposure and environmental injustice.

Childhood lead exposure is more likely to occur in children who live in older homes or in low-income households. Due to a history of racial discrimination in housing, Black children bear a disproportionate burden of lead exposure as compared to White and Latino children.

Although any child can be exposed to lead, race and ethnicity have been strongly associated with a child's risk to be exposed to lead. [A figure](#) from the Pew Charitable Trusts⁴ highlights this effect on one- to five-year-old children who have been connected with discriminatory policies such as redlining and housing isolation of minority families.

2 The role of local health departments in lead exposure.

NACCHO conducts the census-style [Profile study](#) every three years to develop a comprehensive description of local health department (LHD) infrastructure and practice. The 2019 Profile study included a total of 2,459 LHDs in the United States and received a response rate of 61%.

Key Findings About Lead Poisoning Prevention Services Offered by Local Health Departments

Blood Lead Screening

- Local health departments are [less likely](#) to provide blood lead screening services in 2019 compared to 2015 (see Figure 1);
- Local health departments in rural areas and those in the Midwest are [most likely](#) to provide blood lead screening services (see Figure 2a, 2b); and
- Three times as many LHDs expanded blood lead screening provisions in 2019 compared to 2015 (see Figure 3).

Lead Inspection Services

- There is [not a lot of change](#) over time in proportion of LHDs directly providing this service (see Figure 4); and
- Local health departments in the Northeast are [most likely](#) to provide this service (see Figure 5).



Figure 1. All Local Health Departments (%) that provided Blood Lead Screening Services in 2016 and 2019.

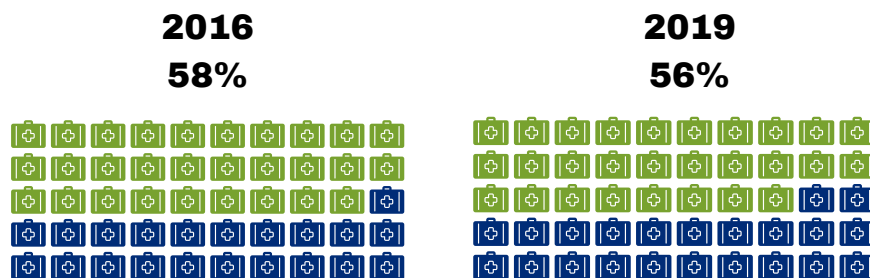


Figure 2 (a). Local Health Departments (%) that provided Blood Lead Screening Services in 2016 and 2019 by Degree of Urbanization

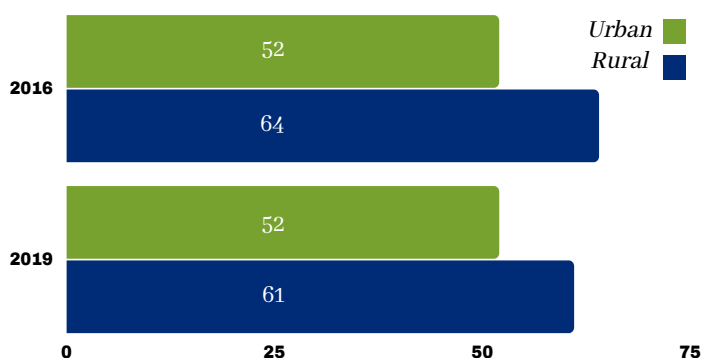


Figure 2 (b). Local Health Departments (%) that provided Blood Lead Screening Services in 2016 and 2019 by Census Region

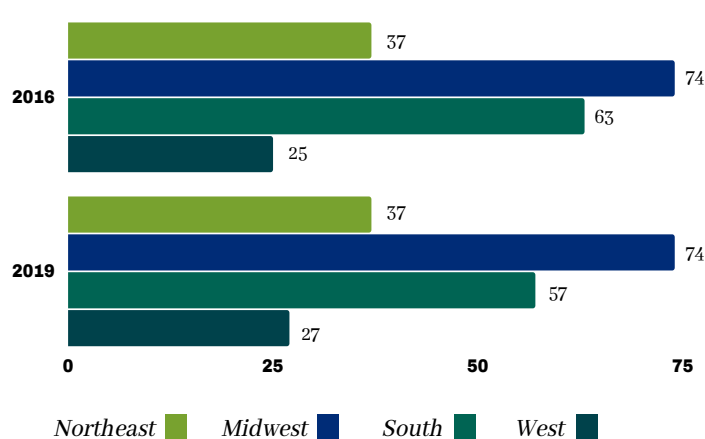
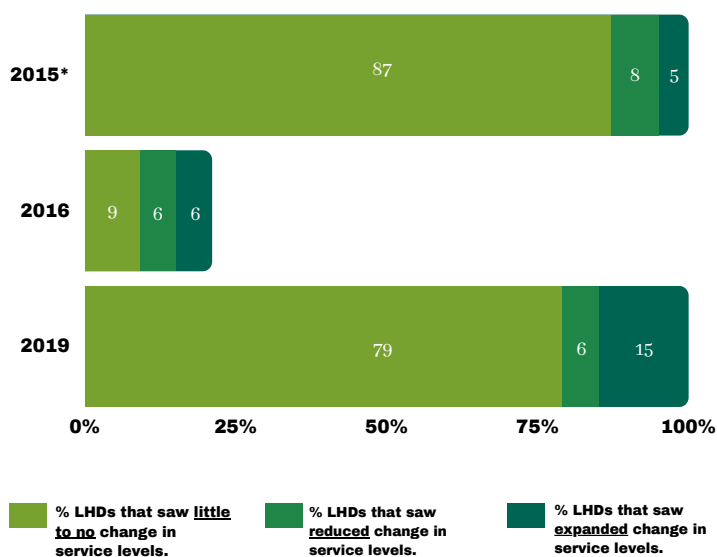


Figure 3. How Budget or Staff Allocations in an Area Changed Blood Lead Screening Delivery Service Levels from 2015 to 2019 Among Local Health Departments (LHDs)



* - NACCHO held the Forces of Change Survey in 2015.

All data from other years have been collected from NACCHO's Profile Studies.

Figure 4. Local Health Departments (%) that Directly Provided Lead Inspection Services from 2008 to 2019.

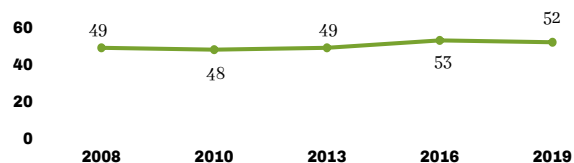
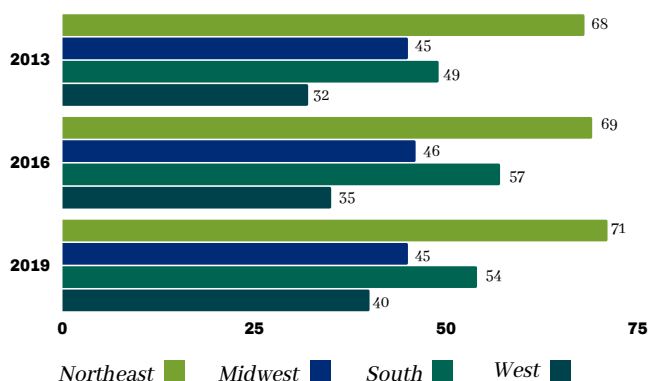


Figure 5. Local Health Departments (%) that provided Lead Inspection Services in 2013, 2016, and 2019 by Census Region.





Highlights & Opportunities: Stories from Local Health Departments¹

Louisville Metro Department of Public Health and Wellness was a grantee during years one and two of the Collaborative. During this time, they focused on the HiAP strategies of integrating data systems and synchronizing communications by implementing their United Community platform. This platform is utilized as a referral closure system for families as well as for nutrition referrals to WIC. In addition, they increased access to educational resources through a marketing initiative to both providers and parents. Providers received outreach and a revised provider toolkit with both print and digital versions and a more cohesive parent education packet will be developed.

City of Milwaukee Health Department (MHD) was an Year 2 grantee of the *HiAP + Lead* Collaborative and focused on developing cross-sector relationships and incorporating health into decision-making. By creating a Lead Advisory Committee, MHD engaged diverse stakeholders such as healthcare systems, community-based clinics, government agencies, neighborhood organizations, and academic partners to identify current lead poisoning prevention efforts and evaluate all the educational materials, resources, and communication used in Milwaukee. From this engagement, they developed a lead coalition report to provide recommendations to improve lead efforts.

3 Moving the focus upstream.

In 2018, the CDC's National Center for Environmental Health (NCEH) and Agency for Toxic Substances and Disease Registry (ATSDR) developed the *Health in All Policies (HiAP) + Lead* Collaborative. The *HiAP + Lead* Collaborative is supported by the National Center for Healthy Housing, National Environmental Health Association, the Association of State and Territorial Health Officials, and the National Association of County and City Health Officials. The goal of the Collaborative was to utilize the expertise of the four national partners to support health departments using HiAP strategies to address at least one of several childhood lead-related activities or outcomes (e.g., lead testing awareness, case management coordination, surveillance, implementation of BLRV).

Conclusion

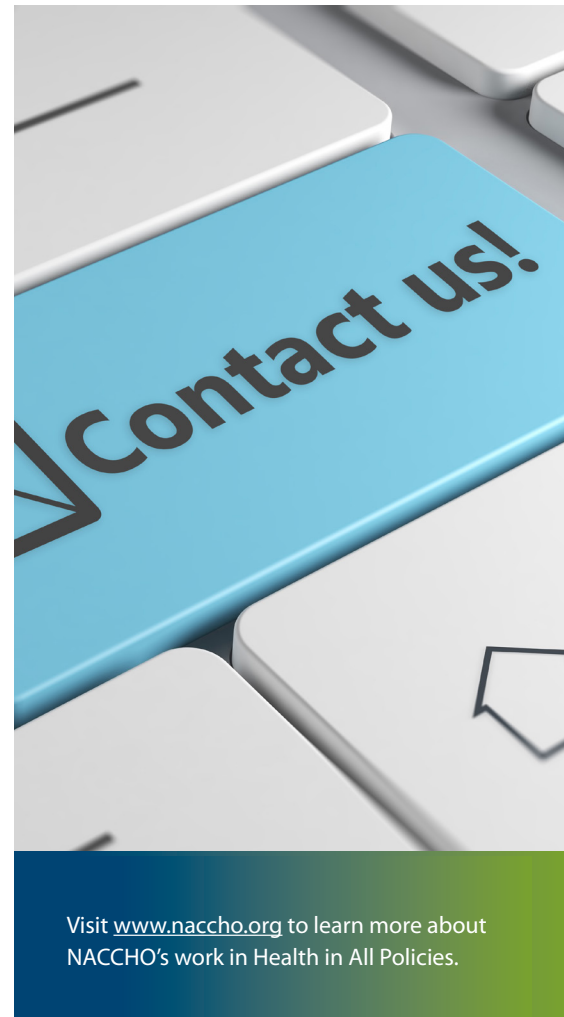
In 2020–2021, the CDC is celebrating 30 years of funding and investment in Childhood Lead Poisoning Prevention.⁷ Although there has been tremendous amount of progress in preventing and mitigating lead poisoning, any level of lead in the blood is still harmful. The average blood lead levels of 1- to 5-year old children in the U.S. have declined from 15 micrograms per deciliter ($\mu\text{g}/\text{dL}$) in the 1970s to less than 1 $\mu\text{g}/\text{dL}$ between 2011 and 2014. To continue to reduce exposure, LHDs should continue providing lead poisoning services such as testing and recommended services. In addition, LHDs should emphasize community-focused approaches and create cross-sectoral partnerships to address lead poisoning.

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[FACT SHEET]

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