

Washington State Childhood Blood Lead Screening, Testing, and Reporting Plan



DOH 334-523 January 2024

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Overview

The Washington State Childhood Lead Poisoning Prevention Program (CLPPP) is increasing efforts to promote childhood blood lead screening and testing, with a focus on areas and populations that are at higher risk for lead exposure. CLPPP is committed to using data to guide efforts, exploring new approaches, increasing outreach and education, and collaborating with partners to reduce the impact of lead exposure on children across the state.

This plan is divided into two parts: Section 1 describes the CLPPP’s plan to increase testing, particularly among vulnerable populations based on Medicaid enrollment, geographic location, and other risk factors. Section 2 serves as a reference and outlines the most current clinical screening, testing, and reporting procedures.

Section 1: Testing Children for Blood Lead in Washington State

Although lead exposure has significantly declined in recent years, it remains a public health issue, especially for children. Exposure to lead can cause serious damage to a child’s development, including loss of IQ points and other cognitive deficits. Given that there is no safe level of lead in the human body and that most children with elevated blood lead levels show no symptoms, it is likely that many who are exposed to lead are not being identified. Performing a blood lead test is the best way to determine if a child has been exposed.

Screening vs Testing

The CLPPP defines screening as a risk assessment conducted via questionnaire to identify risk factors that indicate a child should receive a blood lead test. Testing is conducted either with a capillary finger/heel stick or a venous blood draw. A screening questionnaire does not fulfil the Medicaid testing requirement.

Child blood lead testing rates in Washington state have historically been low. In 2018, 4.2% of Washington children under 6 years of age were tested for blood lead level, while the national average was 17.6% in the same year. While Washington state has not adopted universal testing protocols, Medicaid requires all enrolled children to be tested for lead at 12 and 24 months of age or between 24 to 72 months of age if no record of a previous blood lead test exists. The CLPPP promotes testing using a targeted approach to reach children who are most at risk, including children who are enrolled in Medicaid and children living in identified areas of higher environmental lead.

The CLPPP will use two main information sources to focus efforts on communities with high risk factors for childhood lead exposure and those that are most vulnerable to exposure to other environmental hazards: the lead exposure risk data identified via the DOH Washington Tracking Network (WTN), and lead testing rates, reported to DOH by laboratories and providers through Washington Disease Reporting System (WDRS), the state's notifiable condition reporting system.

Based on WTN maps we have identified the following areas of increased risk for environmental lead exposure: **See maps in Appendix B*

- Tacoma Smelter Plume - impacted areas are in King, Pierce, Kitsap, and Thurston counties.
- Upper Columbia Smelter Plume- impacted areas are in Stevens County.
- Former orchard lands - impacted areas are in Benton, Chelan, Douglas, Klickitat, Okanogan, and Yakima counties.
- Older housing - While all homes built before 1978 are more likely to have lead, the highest concentrations of older housing are in the following counties: Columbia, Garfield, Grays Harbor, Lincoln, Spokane, Walla Walla, Whitman, and Yakima.

CLPPP testing promotion efforts will be directed toward the identified areas of highest risk. For the identified counties, the CLPPP will maintain and/or increase connection with the local health jurisdictions to ensure that local efforts are in place. In partnership with local health, we will enhance outreach to providers and programs with greatest access to young children, including WIC and Head Start, in the areas identified.

Additionally, we will use data on the testing rates of specific counties in deciding where to promote testing. In 2020, testing rates in Washington's 39 counties were universally low and in need of increased testing promotion. While the state average for 2020 was 4.2%, 17 counties are equal to or above the state average and 22 are below the state average. As we work toward the goal of increasing testing rates, we can identify counties that continue to have low testing rates and then focus our efforts on specific counties.

Collaboration with various partners broadens the reach of program efforts and has allowed for new, innovative projects. Current partners include local health jurisdictions, health care providers, Head Start, Women, Infants and Children Nutrition Program (WIC), the Northwest Pediatric Environmental Health Specialty Unit (PEHSU), the Refugee and Immigrant Health Program, and the Health Care Authority (HCA). See Appendix A for a more complete list of current partners. We continue to seek out new partnerships with agencies and groups that serve children and their families who are more likely to be exposed to lead, such as agencies serving refugee and immigrant communities and programs focused on families with young children.

Program efforts to increase testing rely primarily on increased knowledge and awareness, with the assumption that if parents and providers have increased knowledge and awareness of lead exposure risk as well as testing recommendations, testing rates would increase. Using the social-ecological framework for behavior change, we see that individual actions are influenced by relationships, by the community network, and by society. In order to influence individual

behavior related to testing, families and community partners they come into contact with must all share an understanding of the importance, and requirements, of testing.

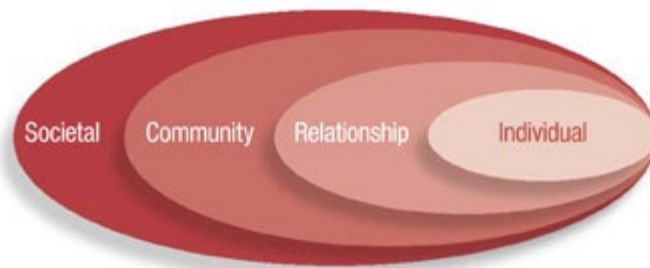


Figure 1.2. The Social-Ecological Model: A Framework for Prevention

For this reason, testing promotion efforts must reach a broad range of people and groups who interact with children. The program will continue to utilize existing and new data sources, review our current efforts, learn from the experiences of similar childhood blood lead poisoning prevention programs around the state and nationally, monitor for new sources of lead exposure and identify affected populations to adjust testing outreach efforts accordingly.

Testing Promotion Goals

Overarching goal of testing promotion: To identify children at risk of lead exposure so they can receive appropriate services to reduce the harms related to lead exposure.

- Increase testing of children under age 6, with primary focus on those with identified higher risk levels.
- Increase awareness of Medicaid blood lead testing requirements among health care providers, parents, and other partners.
- Increase knowledge of sources of lead exposure among health care providers, parents, and other partners.
- Increase knowledge of adverse health effects of lead exposure among health care providers, parents, and other partners.
- Increase knowledge of resources for children with elevated blood lead levels (EBLLs) among health care providers, parents, and other partners.
- Form new connections and strengthen existing relationships with partners.

While some testing promotion efforts are ongoing, with renewed funding and staffing the program is exploring new and innovative approaches.

Current Efforts

Primary Audience	Activity	Outreach & Education Goals
Health Care Providers	DOH loans LeadCare II Analyzers and donates test kits to Head Start, tribal clinics, health departments, community clinics, and child care centers.	Increase blood lead testing, especially where access to blood lead testing might be limited.
Health Care Providers	Annual mailing to providers and clinics located in focus areas including information on blood lead testing, the Medicaid testing mandate, and reporting requirements. The 2023 mailings include a “Provider Tool Kit” with educational materials on lead testing and lead exposure guidance.	Increase provider knowledge of: <ul style="list-style-type: none"> - importance of blood lead testing - high risk areas - Medicaid mandate - reporting requirements
Women, Infant, and Child Program (WIC) Certifiers and Recipients	Partner with WIC to promote lead testing questions for their annual child nutrition assessment visits.	Increase lead testing and lead awareness with families accessing WIC services.
Health Care Providers and Community Health Workers	Partner with the Northwest Pediatric Environmental Health Specialty Unit (PEHSU) to create lead training for physicians, nurses, medical students, and community health workers.	Increase awareness of the ongoing dangers of childhood lead exposure and the methods of prevention and treatment, Medicaid testing requirements for children enrolled in Medicaid, and testing recommendations for children not enrolled in Medicaid.
Child Care Providers	Partner with Snohomish County Health Department to create on-demand training for child care providers.	Increase lead awareness among child care workers and increase usage of lead-safe practices in child care centers.

Various Audiences	Educational newsletter articles, blog posts, listserv and email messages reaching general audiences and health care providers.	Increase awareness of lead exposure risk, available resources, and promote blood lead testing.
Various Audiences	Creating and running monthly social media posts on Facebook, Instagram, and Twitter.	Increase lead exposure awareness in the general population and promote blood lead testing.
Parents and Caregivers	Lead Test Card distributed widely through mailings, local health departments, clinics and the Web. Recently updated and translated into 17 languages. Lead testing information sent to parent of children at 12 and 36 months through the Watch Me Grow program.	Increase lead exposure awareness and promote blood lead testing.

Outreach and Education Goals:

Outreach and Education Goals	Process Measures	2022 Outputs	2023 Outputs	2024 Goals
Increase knowledge of:	Number of Lead Test Cards distributed;	134,500	190,000	210,000
- When a child should be tested for lead,				
- Adverse health effects of lead exposure,	Number of social media posts yearly;	7 social media posts	12 social media posts	14 social media posts
- Sources of lead exposure,	Number of newsletter/ listserv articles published	3	5	7
- Medicaid blood lead testing requirements, and				
- Follow-up testing and resources for children with EBLLs				

<p><i>Promote blood lead testing at pediatric well child visits, and educate health care providers on available methods of blood lead testing</i></p>	<p>Number of providers educated</p>	<p>266 Pediatric Health Care Provider/Clinics educated through mailings</p> <p>0 providers educated through on-demand education/webinars</p>	<p>258 Pediatric Health Care Provider/Clinics educated through mailings</p> <p>20 providers educated through on-demand education/webinars *</p>	<p>260 Pediatric Health Care Provider/Clinics educated through mailings</p> <p>50 providers educated through on-demand education/webinars</p>
<p><i>Form new connections and strengthen existing relationships with partners</i></p>	<p>Number of partners engaged</p>	<p>10</p>	<p>25</p>	<p>50</p>

**This project started in 2023 and will be fully implemented in 2024*

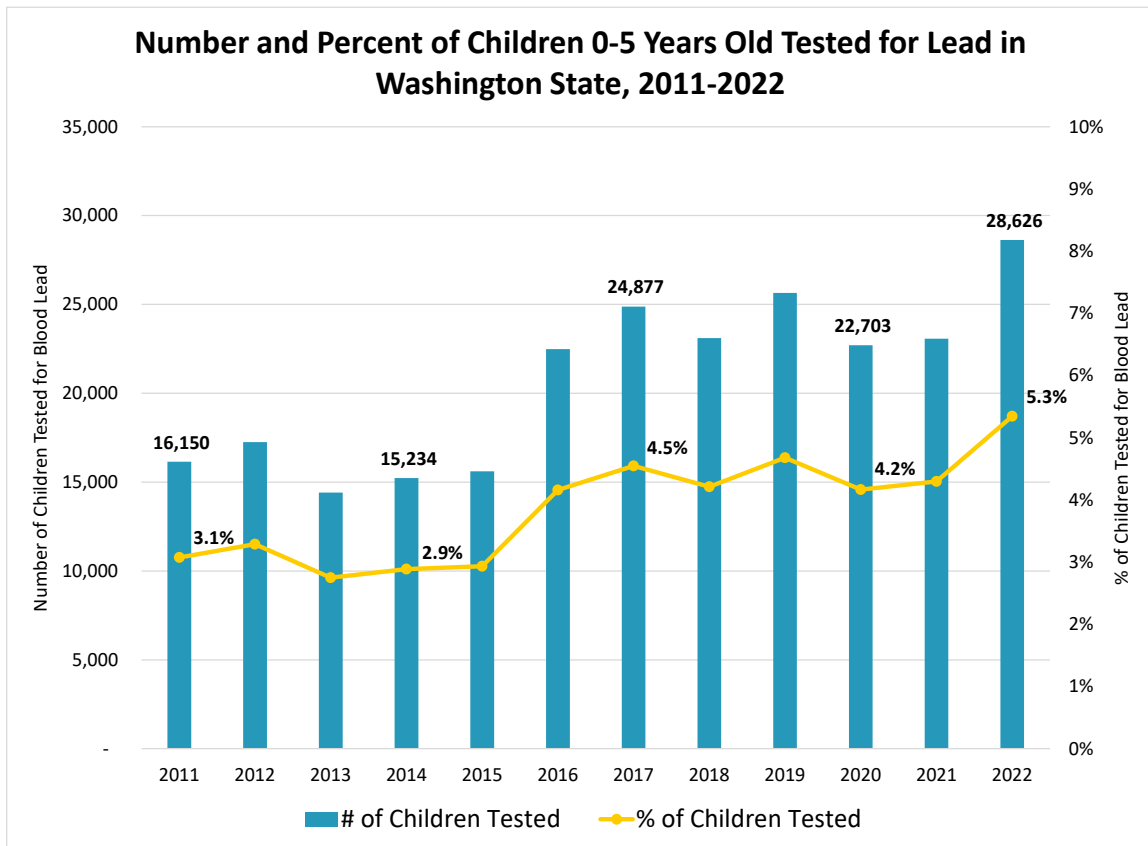
New and Upcoming Opportunities

In addition to current activities, the CLPPP continues to explore new approaches to promote testing including:

- New lead testing education materials are in development and plans are in progress to update the Department of Health’s lead webpages to make materials easy to access and use.
- Exploring outreach opportunities with Head Start and the Early Childhood Education and Assistance Program (ECEAP).
- Connecting with Strong Start, Washington State’s developmental screening data system, to increase awareness about the link between lead exposure and a child’s development.
- Working with HCA to increase knowledge of the Medicaid mandate for testing, and to improve children’s access to case management services.
- Using HCA Medicaid enrollment data to identify populations most in need of testing.
- Collaborating with the Lead in School Drinking Water and Water Infrastructure Improvements for the Nation (WIIN) grant teams on lead education material development and distribution, and other efforts for lead exposure awareness.
- Working with local health jurisdictions (LHJs) to develop local testing promotion activities through the Foundational Public Health Services Model Program, including creating lead education materials and lead event materials which can be easily used as needed for local events and opportunities.
- Working to improve testing recommendation guidance on our webpages and in our publications to reduce confusion and improve testing rates.
- Partnering with the Washington Chapter of the American Academy of Pediatrics (WCAAP) on increasing lead testing awareness with health care providers.

Evaluation

Ongoing program evaluation is integral to the testing promotion plan and will be used to gauge the effectiveness of program activities and to support continuous program improvement. The overarching goal is to increase testing and reporting rates for children less than 6 years (or 72 months) of age at risk for lead. Of note, testing promotion activities were re-started in June 2022 after a pause due to the pandemic and staffing changes. All our activities are done with the long-term outcome goal from our Centers for Disease Control and Prevention (CDC) grant of increasing our testing rates by 10% a year through 2026.



The most recently available lead testing data for children 0-5 years old show that:

- From 2018-2022, on average 4.5% (24,630) of children 0-5 years old were tested for lead in Washington every year. In 2022, about 28,500 children 0-5 years old were tested for lead, compared to about 23,000 in 2021.
- In 2018-2022, an average of 2% (478) of children tested had a blood lead level (BLL) of 5µg/dL (micrograms of lead per deciliter) or greater per year. Most (77%) children with BLL ≥5µg/dL had a BLL between 5-9.9µg/dL, and 23% had a BLL 10µg/dL or higher.
- From 2018-2022, the majority (about 77%) of children 0-15 years old tested with BLL ≥5µg/dL were 0-5 years old.

Sustainability

The CLPPP will ensure regular data review and updates to screening/testing recommendations by bringing this plan to our Lead Advisory Committee for review and updates annually. We will review data we collect from the Washington Disease Reporting System to continue to focus our effort in areas of greatest need. Additionally, we will use data gathered from our data sharing agreements with our partners to shape our efforts.

Section 2: Screening, Testing, and Reporting Guidance

The following section offers screening, testing, and reporting guidance for health care providers, clinicians, and others who work with families and would benefit from detailed guidance for child blood lead testing. Health care providers play a key role in screening for risk factors and appropriately testing children. By consistently following the guidelines below, more children at risk for lead exposure will be identified, tested, and receive follow-up services as needed.

Screening Recommendations

Health care providers should screen all children for risk of lead poisoning at 12 and 24 months of age. The Department of Health recommends performing a blood lead test based on the guidance in the clinical algorithm (Appendix C) and the questionnaire below for all children not covered by Medicaid (Apple Health). Federal regulations require that all children covered by Medicaid receive a blood lead test at 12 and 24 months of age, or 24 to 72 months of age if no record of previous test exists. The screening questionnaire does not replace the federal regulation requiring blood lead testing of children covered by Medicaid.

If the parent or caregiver does not know if the child has one of the following risk factors, a blood lead test should be performed. Testing for blood lead levels is the best way to be certain if a child is being exposed to lead. The following list of screening questions is from Department of Health's clinical algorithm. For more details, see the full clinical algorithm for targeted childhood lead testing (Appendix C).

The Department of Health recommends performing a blood lead test on children with the following risk factors:

- Lives in or regularly visits any house built before 1950.*
- Lives in or regularly visits any house built before 1978 with recent or ongoing renovations or remodeling.
- From a low-income family (defined as incomes <130% of the poverty level).**
- Known to have a sibling or frequent playmate with an elevated blood lead level.
- Is a recent immigrant, refugee, foreign adoptee, or child in foster care.
- Has a parent or principal caregiver who works professionally or recreationally with lead. (Examples: remodeling and demolition; painting; works in or visits gun ranges; mining; battery recycling; makes lead fishing weights or shotgun pellets; hobbies involving stained glass, pottery, soldering, or welding).
- Uses traditional, folk, or ethnic remedies or cosmetics. (Examples: Greta, Azarcon, Ghasard, Ba-baw-san, Sindoor, and Kohl).

*Testing may not be indicated if the home has previously undergone lead abatement or tested negative for lead after remodeling.

**Federal law mandates blood lead testing for all children covered by Medicaid.

Health care providers should consider testing children per clinical judgement, in situations such as:

- Children whose parents have concerns or request testing (including older children that have risk of exposure).
- Children living within a kilometer of an airport or lead emitting industry, or on former orchard land.
- Children with pica behavior.
- Children with neurodevelopmental disabilities or conditions, such as autism, ADHD, and learning delays.
- Other consumer products found to have lead risk are informally imported foods and spices. Some candies imported from Mexico have been found to contain lead. Certain ingredients used in the candies, such as chili powder and tamarindo, are found to be the most common source of exposure. Lead has also been found in the ink of some imported candy wrappers as well as in nonregulated imported spices, such as turmeric.

These questions and recommendations will be updated with the clinical algorithm to reflect the most current information on sources.

Testing Recommendations

Blood lead testing is the only acceptable laboratory test for confirming lead exposure. Venipuncture is preferred for specimen collection, but finger stick (capillary) collection is acceptable if care is taken to properly cleanse the finger of any potential lead-containing dust and dirt. Capillary samples may be easier to obtain and may increase a family's willingness to get a blood lead test as it can be less upsetting for children and caregivers and can be done during office visits. Children with capillary specimens testing ≥ 5 $\mu\text{g}/\text{dL}$ on a point of care test should undergo confirmatory testing, ideally with a venous specimen.

<i>Blood lead level</i>	<i>Recommendations for follow-up testing</i>
<5 $\mu\text{g}/\text{dL}$ *	Repeat the blood lead level in 12 months if the child is at high risk or risk changes during the timeframe.
5-14 $\mu\text{g}/\text{dL}$	Re-test venous blood lead level within 1-3 months to ensure the lead level is not rising. If it is stable or decreasing, retest the blood lead level in 3 months.
15-44 $\mu\text{g}/\text{dL}$	Confirm the blood lead level with repeat venous sample within 1 to 4 weeks.

≥45 µg/dL	Confirm the blood lead level with repeat venous lead level within 48 hours.
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*While the CDC changed their Blood Lead Reference Value (BLRV) to 3.5 µg/dL in 2021, Washington state continues to use the 5 µg/dL as our action level. However, some local health jurisdictions have begun responding at the lower level. Providers may consider following up or offering information on lead at the lower blood lead level as they see fit.

Diagnostic Blood Lead Testing

Blood lead testing should also be considered as part of a diagnostic work-up of any child regardless of age with the following symptoms:

- **Behavioral problems:** aggression, hyperactivity, attention deficit, school problems, learning disabilities, excessive mouthing or pica behavior, and other behavior disorders.
- **Developmental problems:** growth, speech and language delays, and/or hearing loss.
- **Symptoms or signs consistent with lead poisoning:** irritability, headaches, vomiting, seizures or other neurological symptoms, anemia, loss of appetite, abdominal pain or cramping or constipation.
- **Ingestion of foreign body.**

The CDC’s Recommendations for Refugee Children

Newly arrived refugees have been found to have higher elevated blood lead level rates than the general population and testing is particularly important for this population. Washington state follows federal blood lead testing guidelines as part of its Domestic Medical Screening for Newly Arriving Refugees.

Recommended Testing*	Group
Initial lead exposure screening with blood test	<ul style="list-style-type: none"> • All refugee infants and children ≤ 16 years of age. • Refugee adolescents > 16 years of age if there is a high index of suspicion, or clinical signs/symptoms of lead exposure. • All pregnant and lactating people. **
Follow-up testing with blood test, 3-6 months after initial testing	<ul style="list-style-type: none"> • All refugee infants and children ≤ 6 years of age, regardless of initial screening result. • Refugee children and adolescents 7–16 years of age who had BLLs at or above 3.5 µg /dL, and for any child older than 7 years of age who has a risk factor (e.g., sibling with BLL at or above 3.5 µg /dL, environmental exposure risk factors) regardless of initial test result. • Pregnant or lactating adolescents (<18 years of age) who had BLLs at or above 3.5 µg /dL at initial screening.

* From CDC Screening for Lead during the Domestic Medical Examination for Newly Arrived Refugees, Lead Screening Guidelines: Domestic Guidelines | CDC

** All newly arrived pregnant or breastfeeding people should be prescribed a prenatal or multivitamin with adequate iron and calcium. Referral to a health care provider with expertise in high-risk lead exposure treatment and management may be indicated for EBLLs.

Reporting Requirements

The Washington Administrative Code (WAC 246-101) requires laboratories (including facilities who use Point of Care Machines) to report all blood lead test results to the Washington State Department of Health. All elevated blood lead levels (5 µg/dL or higher) must be reported within two business days. All other test results must be reported within 30 days.

Requests to be set up to report lead data and general questions should be directed to the Lead Team by email (lead@doh.wa.gov) or by phone (800) 909-9898.

Blood lead test results are uploaded to the Washington Disease Reporting System (WDRS). WDRS notifies local health jurisdictions (LHJs) when test results of 5 µg/dL or higher are uploaded to the database so that they can begin case investigation.

Additional Resources for Health Professionals

Agency	Contact
Washington State Department of Health Childhood Lead Poisoning Prevention Program	www.doh.wa.gov/lead lead@doh.wa.gov 360-236-4280 1-800-909-9898
NW Pediatric Environmental Health Specialty Unit (PEHSU) Network	www.pehsu.net/Lead_Exposure.html pehsu@uw.edu 1-206-221-8671
Centers for Disease Control and Prevention (CDC)	www.cdc.gov/nceh/lead/ 1-800-232-4636
Washington Poison Center (WAPC)	www.wapc.org 1-800-222-1222
American Academy of Pediatrics (AAP)	www.aap.org/en/patient-care/lead-exposure/ 1-800-433-9016
Environmental Protection Agency (EPA)	www.epa.gov/lead/ 1-800-424-5323

Appendix A: Current CLPPP Partner List

Afghan Health Initiative	A community-based organization that supports recent immigrant and refugee families with re-settlement in the United States. AHI has a focus on increasing equity for their community through public health interventions that address social determinants of health.
Department of Commerce	Regulates certification, accreditation, enforcement, and compliance for firms and individuals to use lead-safe work practices when working on pre-1978 homes or child-occupied facilities. Administers two programs related to lead-based paint: the Renovation, Repair and Painting (RRP) program and the Lead-Based Paint Abatement (LBP) program. Provides information and connects families with renovation, repair, and painting contractors who are certified in lead-safe practices.
Department of Ecology	Works with the Washington State Department of Health, along with industry and environmental partners, to identify and take action to phase out the use, release, and exposure to lead in Washington. Uses a Chemical Action Plan for lead to reduce and eliminate the use of lead. Monitors rivers and streams for lead contamination. Provides resources and information on occupational lead, lead waste disposal, and other lead topics.
Environmental Protection Agency	Develops and enforces regulations related to laws that protect air, land, and water for the safety of people in the US. EPA conducts studies and publishes information for educational purposes.
Health Care Authority	DOH and HCA have partnered to improve funding for childhood lead prevention programs that support and promote the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit for Medicaid eligible children.
Individuals interested in promoting lead awareness in Washington	<ul style="list-style-type: none"> • Pediatric health care providers (University of Washington Medicine, Snoqualmie Valley Hospital) • University of Washington Asst. Professor (Dept of Environmental and Occupational Health Sciences)
Labor and Industries	Responds to lead exposure for people over the age of 15. Provides information to families about “take-home lead” where lead from their occupation can get on their hands and clothing and be brought home to potentially harm their families.
Local Health Jurisdictions	Each local health jurisdiction provides different services to their constituents. They may provide families with information on lead, lead case management, and other lead awareness and testing activities. Additionally, two LHJs currently serve on our Lead Advisory Committee:

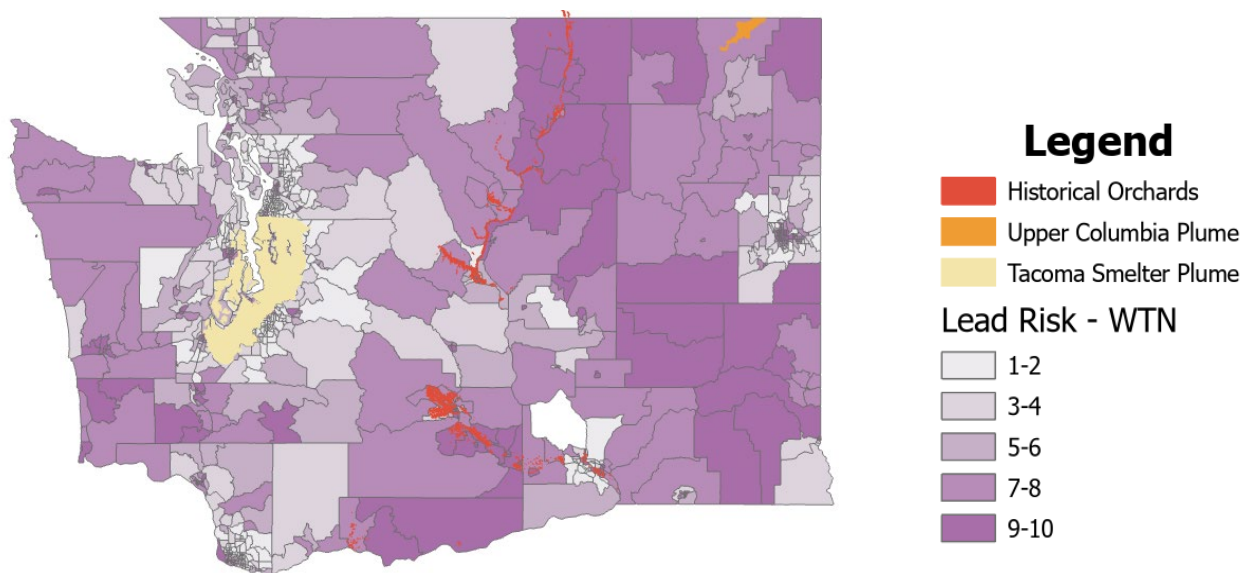
	Snohomish County Health Department and Public Health Seattle-King County.
Mother Africa	A community-based organization that supports immigrant and refugee women and their families as they relocate in the United States. Mother Africa advances racial equity and has a focus on empowering women through many avenues like education, safety, health, wellness, and environmental justice.
Northwest Pediatric Environmental Health Specialty Unit (PEHSU)	Develops and conducts training for health care providers, nurses, medical students, nursing students, and Community Health Workers. Provides lead information to providers, families, health departments and the general public.
Office of Head Start	Income-based Early Learning program that provides the state's most vulnerable families with services that include education, family services, mental health and behavioral support, health, and nutrition services.
Refugee and Immigrant Health Program	Supports health and wellness in refugee and immigrant communities in Washington state by cultivating a community of trusted support, health equity centered systems, and evidence-based practices. Works with CLPPP to identify and support families from refugee and immigrant communities who come from countries where lead exposure is more common and have a greater chance of childhood lead exposure.
UDS Strong Start System	Provides an online tool where parents, caregivers, and providers can securely store, share, and track children's developmental screening information from birth through age 5.
Washington Poison Center	Serves as a resource to all people in Washington who may have been exposed to toxins. Medical staff at the Poison Center provide information to health care professionals, and the public on poisons, trends, and best practices for treating them, including lead.
Women, Infants and Children Nutrition Program (WIC)	Provides participating families with information on nutrition which can reduce lead absorption in children, and provides information on getting children tested for lead by handing out our Lead Test Card.

Appendix B: Washington Tracking Network Maps

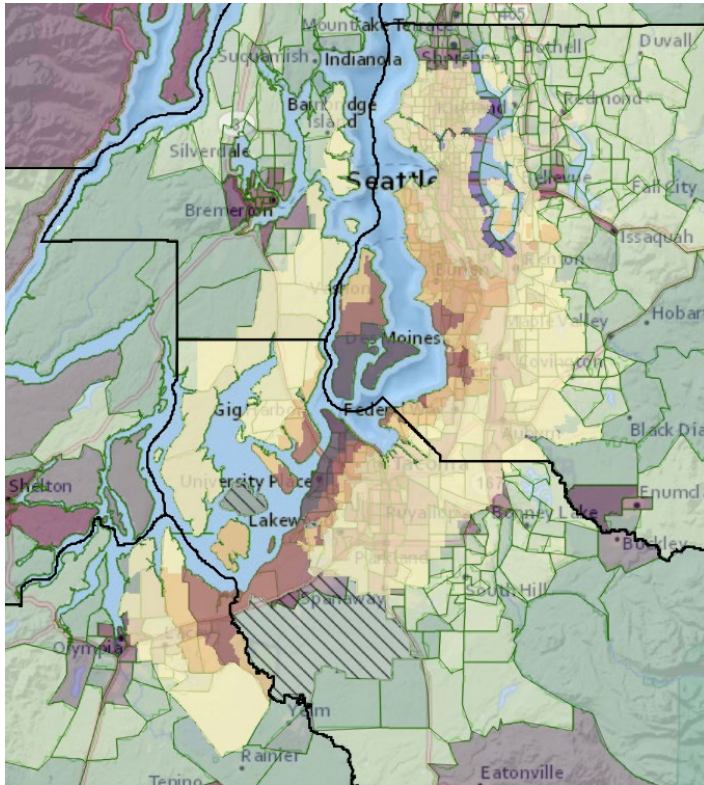
Washington State Lead Risk Map with smelter plumes and formal orchard lands highlighted.

Tacoma smelter plume is highlighted in yellow. Former orchard lands are highlighted in red.

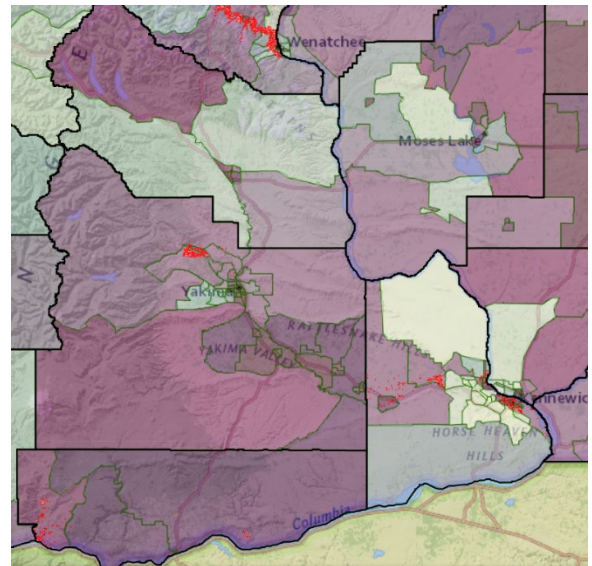
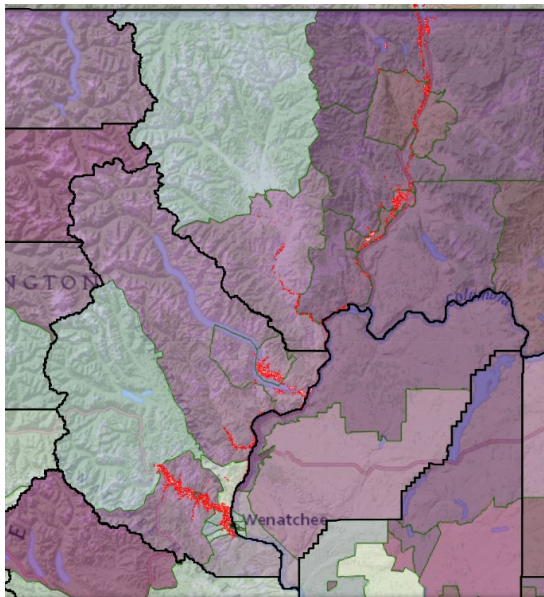
Lead exposure risk is shown in varying degrees of purple with darkest meaning areas of high risk.



Washington Tracking Network Map: Close up of Tacoma smelter plume area



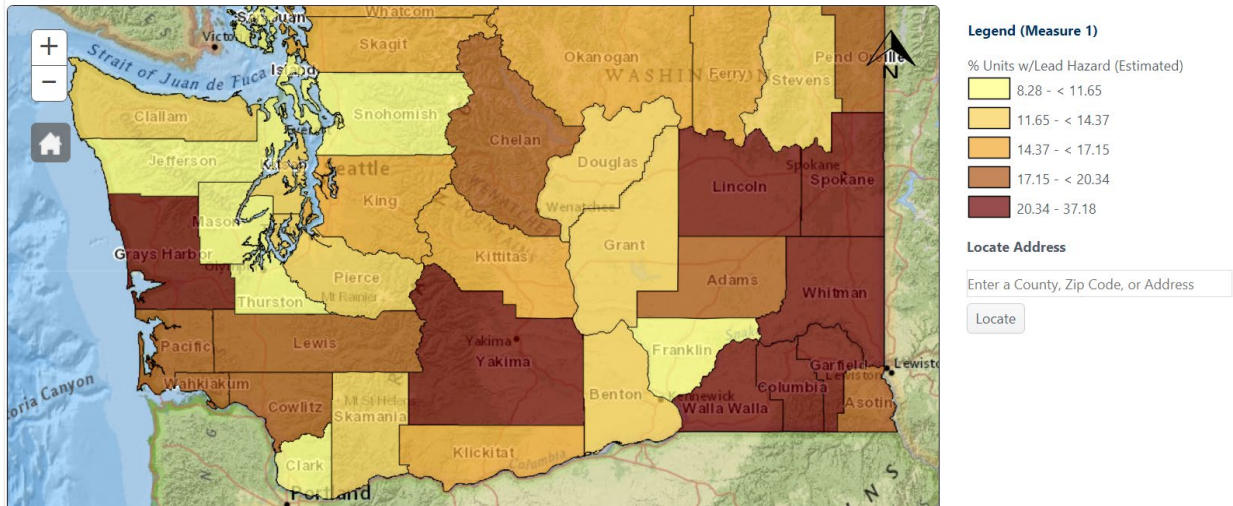
Washington Tracking Network Map: Close up of former orchard lands



Washington Tracking Network Map: Lead Risk from Housing

Lead Risk From Housing (%)

Geography: County, Year: 2013-2017



Appendix C: Clinical Algorithm

RECOMMENDATIONS FOR BLOOD LEAD TESTING OF CHILDREN IN WASHINGTON STATE

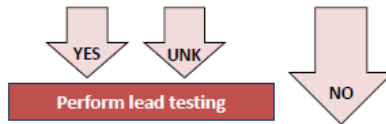
The Department of Health recommends screening children using the below algorithm at 12 and 24 months of age.

Does the child have any of the following risk factors:

- Lives in or regularly visits any house built before 1950.*
- Lives in or regularly visits any house built before 1978 that has recent or ongoing renovations or remodeling.
- From a low income family (defined as incomes <130% of the poverty level).**
- Known to have a sibling or frequent playmate with elevated blood lead level.
- Is a recent immigrant, refugee, foreign adoptee, or child in foster care.
- Has a parent or principal caregiver who works professionally or recreationally with lead. (See sidebar for examples.)
- Uses traditional, folk, or ethnic remedies or cosmetics (such as Greta, Azarcon, Ghasard, Ba-baw-san, Sindoor or Kohl.)

* Screening may not be indicated if the home has previously undergone lead abatement or tested negative for lead after remodeling.

** Federal law mandates testing for all children covered by Medicaid.



Healthcare providers should consider testing additional children per clinical judgment, such as:

- Child whose parents have concern or request testing (including older children that have risk of exposure.)
- Child living within a kilometer of an airport or lead emitting industry or on former orchard land.
- Child with pica behavior.
- Child with neurodevelopmental disabilities or conditions such as autism, ADHD, and learning delays.

LEAD RISK EXPOSURE EXAMPLES:

Occupations and Hobbies:

- Remodeling and demolition
- Painting
- Work or visit gun range
- Mining, smelting, battery recycling
- Making lead fishing weights or ammunition
- Stained glass
- Soldering and welding

Consumer Products:

- Pottery or porcelain with lead glaze
- Informally imported foods, candies and spices
- Antique furniture and inexpensive jewelry

Healthcare providers are encouraged to use the [Department of Health's Lead Risk Index Map](#) to better understand which areas in their community are at higher risk for lead exposure. See <https://fortress.wa.gov/doh/wtn/WTNIBL/>

Interpretation and Medical Management of Blood Lead Levels:

If blood lead level is ≥ 5 mcg/dL: See [PEHSU Recommendations on Medical Management of Childhood Lead Poisoning](#)



Lead Screening Recommendations for Children in Washington State

The prevalence and severity of elevated blood lead levels in children have been greatly reduced since the removal of lead from paint and gasoline in the 1970s. However, legacy lead paint remains in some homes in Washington and continues to serve as the primary source of lead exposure in our children. At the present time, housing age, as an indication of potential residential lead hazards, is the most established risk factor for lead poisoning.

Even relatively low levels of blood lead (<10 µg/dl) have been shown to have subtle effects on the developing central nervous system in children resulting in IQ loss, learning difficulties, poor school performance, decreased attention span, and inappropriate behavior.

Anticipatory Guidance: Healthcare providers should educate parents of children 6 months to 6 years of age by providing lead anticipatory guidance during routine check-ups. Prevention requires reducing environmental exposures from paint, dust, soil, and water. Efforts to increase awareness of lead hazards and nutritional interventions to increase iron and calcium, which can reduce lead absorption, are other key components of a successful prevention strategy.

Targeted Screening: Healthcare providers should assess all children for risk of lead poisoning at 12 and 24 months of age. The Department of Health recommends performing a blood lead test based on the guidance in the attached algorithm. If the parent or caregiver does not know if the child has one of the following risk factors, a blood lead test should be performed. Testing for blood lead levels is the only way to definitely know if a child is being exposed to lead.

Testing Methods: Blood lead testing is the only acceptable laboratory test for screening and confirming lead poisoning. Venipuncture is preferred for specimen collection, but finger stick (capillary) collection is acceptable if care is taken to properly clean and prepare the finger. Capillary samples are easier to contaminate because of the possibility of lead containing dust and dirt on the hand or under the fingernails. Children with capillary specimens testing ≥5 µg/dL on a point of care test should undergo confirmatory testing, ideally with a venous specimen.

Confirmatory Testing:

Blood Lead Level	Recommendations on confirmatory screening
<5 mcg/dL	Repeat the blood lead level in 12 months if the child is at high risk or risk changes during the timeframe.
5-14 mcg/dL	Re-test venous blood lead level within 1-3 months to ensure the lead level is not rising. If it is stable or decreasing, retest the blood lead level in 3 months.
15-44 mcg/dL	Confirm the blood lead level with repeat venous sample within 1 to 4 weeks.
≥45 mcg/dL	Confirm the blood lead level with repeat venous lead level within 48 hours.



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