

HHAC + LSCC Subcommittee on Early Childhood Screening/Testing and Services Summary of landscape and subcommittee work, December 2020

This document describes the landscape of lead screening and testing, and the work of the HHAC + LSCC Subcommittee on Early Childhood Screening/Testing and Services from November 2019 to December 2020. The goal of this subcommittee was to improve the rate of lead screening and testing among children who are at highest risk for lead exposure by identifying and addressing the reasons for these unacceptable low rates. This goal became even more important with the recent policy change that makes children under age 3 with elevated blood lead levels automatically eligible for early intervention services so they may receive supports to help minimize lead's impact on their development.

In Cleveland, the primary source of lead exposure for children is deteriorating housing stock. The history of redlining, as well as disinvestment in neighborhoods where families of color live, has resulted in a disproportionate number of black and brown children being exposed to lead hazards resulting in elevated blood lead levels. Our work toward secondary prevention in this group, and toward primary prevention in the larger Coalition, is fundamentally about environmental justice and equity.

The subcommittee's work has taken place against the backdrop of a global coronavirus pandemic that further underscores the importance of the work on primary and secondary prevention, given how it has kept children and families inside their homes more than ever and led to far lower rates of lead testing than in recent years.

As we begin the new year in 2021, the work to improve secondary prevention efforts of lead screening and testing will continue in the newly formed Screening & Testing Commission at the City of Cleveland. This summary captures in one place the breadth of the work to date and outlines the agenda for continuing the collaborative work—city and county, public and private.

Continuing agenda of work:

- **Messaging:**
 - Should be consistent, streamlined, and consistent across family-facing agencies/organizations. Coordinate with relevant messaging campaigns (e.g., Department of Developmental Disabilities campaign about Early Intervention).
 - From healthcare settings: couple lead testing with immunizations in communication with families; message to and assess risk of pregnant moms as primary prevention. Each could be integrated into existing quality improvement efforts.
 - Include early childhood professionals in messaging—including child care, home visiting, and libraries. Offer trainings about lead and resources on how to engage families on this issue. Coordinate with early childhood organizations (e.g., Invest in Children, Starting Point, Bright Beginnings).

- Make information available in more settings where children are—for example, places of worship, community-based organizations, peer-based programs, CMHA housing, WIC.
- Data: improve data exchange so that
 - providers can see whether a child has had a lead test (prevent over-testing), and
 - information about lead testing is shared appropriately with service providers.
- Care coordination and Early Intervention:
 - Coordinate with and support the Better Health Pathways HUB in its work to find children needing lead tests and medical homes, and helping families meet those and other outcomes related to the social determinants of health.
 - Coordinate with and support Bright Beginnings and the Cuyahoga County Board of Developmental Disabilities in their work on Early Intervention.
- Collaboration with & advocacy to Medicaid managed care:
 - Advocate for incentives to providers when lead tests are completed. The details and/or need for incentives will depend on new contracts between the state and the plans.
- Coordinate with and support quality improvement efforts currently in progress. For example, messaging from providers to families (as mentioned above) could be integrated here.

BACKGROUND AND GOALS

The HHAC + LSCC Subcommittee on Early Childhood Screening/Testing and Services was formed at the confluence of three lines of work: the long-term work of the Healthy Homes Advisory Council's (HHAC) medical subcommittee to streamline lead testing practices and improve testing rates; the work of the Lead Safe Cleveland Coalition's (LSCC) Policy Committee, which at its inception was interested in identifying policy solutions to improve lead testing rates; and a January 2019 report¹ by Case Western Reserve University's (CWRU) Poverty Center showing only one-third to one-half of young Cuyahoga County children covered by Medicaid were being tested for lead at the mandated ages.² Invest In Children, who commissioned the CWRU report, convened an ad hoc group of clinical, public health, policy, and early childhood professionals to work on improving lead screening and testing rates. This group initially operated as a subcommittee of LSCC's Policy Committee. Given the overlap in the desired outcome of the subcommittee and the HHAC, the groups agreed to merge in fall 2019. The new HHAC + LSCC Early Childhood Screening/Testing and Services subcommittee began meeting in November 2019, during the regular meeting time of the HHAC. HHAC members agreed to put other work on pulmonary health on hold while the HHAC + LSCC subcommittee was convened.

¹ Anthony, E., Steh, S., Atwell, M. S., & Fischer, R. (2019). *Early childhood lead exposure in Cuyahoga County and the impact on kindergarten readiness*. Case Western Reserve University Center on Urban Poverty and Community Development. https://case.edu/socialwork/povertycenter/sites/case.edu.povertycenter/files/2019-01/IIC%20Lead%20Report%20Final%2010.17.2018_web.pdf.

² <https://medicaid.ohio.gov/FOR-OHIOANS/Programs/Lead/Provider-Lead>

The mission of this subcommittee is to improve lead testing rates for high-risk children³ ages 0-2 and connect families to the services and support to which they are entitled until our community's housing is lead safe. We recognize that primary prevention—making homes lead safe, if not lead free—is the only way to prevent lead poisoning. Yet, because this work will take time, we also know children will continue to be exposed to and poisoned by lead in the meantime. Early identification of children with elevated blood lead levels (EBLLs; reference level $\geq 5\mu\text{g}/\text{dL}$) is critical for reducing their future exposure to lead. And thanks to advocacy from early childhood experts across the state, including many members of this subcommittee, early identification now also facilitates early intervention: effective July 2019, Ohio children with EBLLs are automatically eligible for Early Intervention services,⁴ even if they are not yet displaying developmental delays.

This group has been a collaborative space for members representing a wide range of community organizations and institutions, including members from health systems, public health, city and county government, early childhood education, home visiting, academia, social service organizations, advocacy groups, nonprofits, and insurers. The focus of the work has not been to improve lead testing rates in the city or the county exclusively but has transcended geographical boundaries. This is important given what we know about family residential mobility within and across city boundaries, and that the systems involved in lead testing typically transcend those boundaries as well.

EXISTING LEAD TESTING PROGRAMS & POLICIES

Where does lead testing occur?

- Doctors' offices, labs or lead clinics in health systems
- Cleveland Clinic Mobile Health Clinic/Pediatric School-Based Health Care⁵
- Partners in Health Project: CMSD/Case Western Reserve University School of Medicine Collaboration⁶
- Cleveland Department of Public Health screenings
- County Board of Health screening

Who should be tested and when

The Ohio Administrative Code sets forth policy on lead screening and assessment (OAC 3701-30).⁷ Primary care providers are to determine if the child has and/or needs a blood lead screening test, and if any child under 6 is determined to be at risk of lead poisoning but has not

³ The Ohio Department of Health requires targeted, rather than universal, testing of high-risk children. The Healthy Homes Advisory Council of Greater Cleveland develops guidance for local clinicians in line with ODH requirements.

⁴ <https://dodd.ohio.gov/wps/portal/gov/dodd/your-family/healthy-living/resource-lead-bll-ei>

⁵ <https://my.clevelandclinic.org/pediatrics/departments/primary-care/school-based-health-care#overview-tab>

⁶ <https://case.edu/nursing/research/research-studies-labs/cleveland-schools-lead-screening-project>

⁷ <http://codes.ohio.gov/oac/3701-30>

had a test or results are not available, the provider must order a test. Criteria for being “at risk” include being eligible for Medicaid, living in a high-risk zip code, and/or living in a home built before 1978, among others.⁸ The Ohio Department of Health (ODH) recommends tests given to at-risk children at ages 1 and 2, and between ages 3 and 6 if the child has no test history. The Ohio Department of Medicaid (ODM) requires universal testing of all 12- and 24-month-old Medicaid-eligible children, regardless of ZIP code or exposure to lead.⁹ Additionally, per Medicaid Manual section 5123.2.D.1, any child between ages 24 and 72 months with no record of a previous blood lead screening must receive one.

As the LSCC Policy Committee was discussing and drafting policy recommendations to Cleveland City Council, the possibility of a universal lead testing policy was raised. The HHAC has endorsed the recommendations of the American Academy of Pediatrics (AAP) and Centers for Disease Control and Prevention (CDC) that universal testing should only be done among children living in high-prevalence areas with increased risk factors.¹⁰ Ohio requirements are in line with these recommendations.

Type of test needed to confirm EBLL

Tests can be conducted by venous draw or capillary test (capillary tube or filter paper). As of 2017, only venous tests are considered confirmatory.¹¹ Elevated capillary test results must be confirmed with venous tests within 90 days. Confirmation with a venous test is required for medical and environmental interventions (e.g., Early Intervention). Point-of-care testing using waived test methods (e.g., Lead Care II device), may not be used for confirmatory tests. In 2016, HHAC asked ODH to redefine capillary test results collected via microtainer as equivalent to venous test results and thus as confirmatory. They cited increased convenience and a more positive experience for families as ways the microtainer method would better facilitate lead testing. ODH declined to consider HHAC’s proposal.

Proponents of the venous-as-confirmatory requirement acknowledge that capillary screening is useful to increase detection of EBLs¹² but recommend that medical and environmental interventions be based on venous tests, given the commonality of false positive capillary/microtainer tests. (See “Lead testing rates and types” in the Data section below for more details.)

⁸ <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/childhood-lead-poisoning/for-healthcare-providers/lead-testing-requirements-and-zip-codes>

⁹ <https://medicaid.ohio.gov/FOR-OHIOANS/Programs/Lead/Provider-Lead>

¹⁰ <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/Detection-of-Lead-Poisoning.aspx>

¹¹ Before 2017, a second positive capillary test within 90 days was considered confirmation of an EBL.

¹² See also: US Preventive Services Task Force. (2019). Screening for elevated blood lead levels in children and pregnant women: US Preventive Services Task Force Recommendation Statement. *Journal of the American Medical Association*, 321(15), 1502-1509. doi:10.1001/jama.2019.3326.

<https://jamanetwork.com/journals/jama/fullarticle/2730621>

Incentives through Medicaid

Ohio Department of Medicaid offers a patient-centered medical home program called Ohio Comprehensive Primary Care (CPC),¹³ which is intended to improve population health outcomes by providing additional payment streams for participating practices meeting required benchmarks. Ohio CPC for Kids began in the 2020 program year.¹⁴ To receive payment, practices must pass one of the following metrics (in addition to others): at least one lead screening by age 2 (either capillary or venous), immunization for children, or immunization for adolescents.

FIVE AREAS OF WORK TO IMPROVE LEAD TESTING RATES

The group has thus far identified five areas of work that could improve testing rates among young high-risk children: messaging about the effects of lead and the importance of testing; using data to monitor rates and inform strategies; improving service and care coordination; collaborating with and advocating to Medicaid managed care organizations (MCOs); identifying potential changes within health-systems. Each section below describes issues and potential barriers to testing, work done, and next steps.

MESSAGING

Families receive many different pamphlets, information sheets, and letters about lead testing from different sources across the county and from the state. Members of this subcommittee report that this is often overwhelming for families. Additionally, subcommittee members mentioned issues such as the stigma of lead poisoning (e.g., avoiding the test/label, saying it's "not a problem for us"), the lack of awareness of how important it is to act early even when delays are not evident, and the sense that the lead test is optional or an "add on" to vaccinations.

The group agrees that messaging about lead screening and testing should be cohesive, streamlined, and consistent among family-facing entities as much as possible. Four key recommendations emerged from the subcommittee's discussions:

1. Standardized messaging to parents and families about the importance of lead testing, what to expect, how to talk to children about the experience of getting a lead test, what to do if child has EBL (e.g., follow-up, referrals). Many examples of messaging already exist, and at the time of this report are being compiled by members of this subcommittee. These examples may be useful in developing a standardized information packet for families, available through the Lead Safe Resource Center. Coordinate with LSCC, as this work may fit with Phase 3 of their communications campaign.

¹³ <https://medicaid.ohio.gov/Provider/PaymentInnovation/CPC>

¹⁴ <https://medicaid.ohio.gov/Portals/0/Providers/PaymentInnovation/CPC/CPC-For-Kids.pdf?ver=2019-06-20-131208-510>

2. Primary care providers should encourage, educate, repeat, and be accountable. Coordinate with existing quality improvement projects in health care practices (e.g., those led by the Ohio chapter of American Academy of Pediatrics and by Better Health Partnership).
 - a. Information on lead testing should be included in all immunization/vaccination literature. Ideally, lead testing is seen as normalized as immunization.
 - b. Pregnant mothers should be assessed for risk. If needed, information on nutritional guidance and resources for lead abatement/remediation can be given. These conversations can serve as primary prevention of lead poisoning in the child. A maternal risk assessment could be included in quality improvement projects.
 - c. Providers can also discuss lead testing with pregnant mothers at prenatal visits to educate and prepare mother for the child to be tested for lead at age 12 and 24 months (if covered by Medicaid or screens positive for risk).
 - d. Providers should track whether child/pregnant mother is screened during appointment and follow-up as needed.
3. Resources to educate early childhood professionals on lead. Coordinate with local early childhood agencies including Invest in Children, Starting Point, Bright Beginnings and other home visiting organizations, and the public library systems. (Note: Bright Beginnings is working with Department of Developmental Disabilities on communications/messaging regarding referrals to Early Intervention. They want to coordinate with LSCC.) Examples of resources include:
 - a. Trainings on lead—its sources, its impact on children, the importance of getting tested, resources available to families whose children have EBLLs. (These may already exist or need to be created/updated.)
 - b. Standardized information packets for the early childhood professionals
 - c. Resources explicitly geared toward engaging and educating families. Could include talking points or even scripts to help those who may feel uncomfortable speaking off the cuff.
4. Provide information in more settings where children are, especially those viewed as trusted community partners. Examples include religious organizations/places of worship, community-based organizations, peer-based programs, CMHA housing, WIC.

DATA

Data on lead testing is an integral piece of the work to improve testing rates. At the population level it allows us to track progress across the community and help inform community outreach strategies. At the meso-level, such as from insurers or health care practices, it can help drive quality improvement efforts. Additionally, appropriate access to child-level test results can help make testing more efficient by preventing over-testing of the same children, and perhaps can better identify children who have not been tested.

One advance around practice-level data has come out of this group's work. Invest in Children, on behalf of this subcommittee, requested Better Health Partnership's (BHP) help to improve lead

testing rates. This request facilitated the addition of lead as a health metric included in BHP's ongoing collection of individual-level data from partnering health care providers. With funding from the Bruening Foundation, BHP is using these data to identify best practices on lead testing and work with lower-performing providers/practices to implement quality improvement strategies (see the Changes within Health Systems section below). This quality improvement project will coordinate with the Ohio AAP's quality improvement project, which started in June 2020. By the end of 2020, BHP plans to have data on the following metrics for about 100,000 children in Cuyahoga County (with specific attention to the 10,000 children aged 2 and under):

- % of kids that have been referred to get a lead test
- % of kids that have been tested for lead (recently or ever)
- % of kids that have had a confirmatory test (in the event of a positive capillary test)
- % of kids that have ever had an elevated blood lead level
- % of kids that currently have an elevated blood lead level

Lead testing rates and types

In Ohio, Cuyahoga County, and Cleveland, lead testing rates are not optimal. A few data points:

- Center for Medicare and Medicaid data on state EPSDT performance shows Ohio in the lowest quintile nationally for lead testing in 2018. Just under half (44%) of 1-2 year-olds and 15% of 3-5 year-olds who should have received a lead screening, did receive a screening in 2018.¹⁵
- In a sample of 18,000 Cuyahoga County kindergartners covered by Medicaid in their first two years of life, 50% had been tested at age 1 and 35% had been tested at age 2. One-third of the sample had an EBLL by age 2.¹⁶
- Looking over 2015-18, 65-73% of Cleveland kids 13-24 months were tested, and 51-55% of kids 25-36 months were tested. These numbers include all insurance types.¹⁷
- In the same data from 2015-18, disaggregation by Cleveland neighborhood shows where testing rates were lower than city average, and where EBLL rates were higher than city average (e.g., Broadway-Slavic Village, Mount Pleasant, Stockyards). Targeted outreach in these neighborhoods may have the biggest impact in terms of identifying untested children with EBLs and connecting them to Early Intervention services.
- Some MCOs have provided testing rates for kids by age 2. In subcommittee meetings, UnitedHealthcare shared that 58% of its members in Cuyahoga were tested by age 2; Paramount reported 66%. Note that not all tests are billed to/claimed by Medicaid, so these percentages may reflect undercounts.

¹⁵ <https://www.medicare.gov/medicaid/benefits/early-and-periodic-screening-diagnostic-and-treatment/index.html>

¹⁶ Anthony, E., Steh, S., Atwell, M. S., & Fischer, R. (2019). *Early childhood lead exposure in Cuyahoga County and the impact on kindergarten readiness*. Case Western Reserve University Center on Urban Poverty and Community Development. https://case.edu/socialwork/povertycenter/sites/case.edu.povetycenter/files/2019-01/ILC%20Lead%20Report%20Final%2010.17.2018_web.pdf.

¹⁷ Data come from the Ohio Department of Health and were presented to the subcommittee by CWRU Center on Urban Poverty and Community Development.

The data ODH shares with CWRU include helpful information like test type (venous, capillary, unknown), the child's address, and the lab that processed the test. However, some fields that would be helpful are frequently blank—for example, insurance type or the physician who orders the test.

- Of all 2018 lead tests: 27% processed by Cleveland Department of Public Health (CDPH), 26% by University Hospitals, 20% by Cleveland Clinic. The remaining 27% of tests were conducted by 15 different labs (including Quest, Nationwide, Laboratory Corporation of America).
- Proportionally few records include Medicaid number (6%) or provider identifier (15%).

Health practices differ in their testing procedures. In many practices, the pediatrician refers families to the lab for (venous) lead testing; typically these labs are in the same building as the practice. Some practices perform capillary tests in-office. Each approach has strengths and limitations:

- From 2012-2017, most completed lead tests (76%) were venous tests.¹⁸ This high rate is good because it means most children are getting a confirmatory test that does not require follow-up testing to be eligible for services.
- About 22% of lead tests were capillary tests. Research shows capillary tests to be a more effective screener than risk assessment questionnaires.¹⁹ However, practices with on-site labs may not have the capacity or person-power to process and report additional capillary screening results in accordance with ODH requirements.²⁰
 - Of all capillary tests, 13% were elevated. Only 30% of elevated capillary tests were followed-up. Most of the follow-up tests were venous (86%).
 - Of the elevated capillary tests, 40% are false positives (i.e., venous test is below 5 µg/dL). Elevated capillaries may be picking up lead on the skin; whether confirmed or not, these elevated tests are still an opportunity to talk about healthy development, education, and intervention from pediatrician.
 - Note: before 2017, two elevated capillary tests were considered confirmation of a child's EBL. In 2017 the rule changed and required venous confirmation of elevated capillary tests.
 - ODH sends a letter to the provider and family when a capillary test is elevated, encouraging venous confirmation.
- Subcommittee members report a gap between lead tests ordered and lead tests completed—for example, at MetroHealth about 25% of ordered tests are not completed. Anecdotal explanations for the gap include the barriers families face (e.g., having to make a separate trip to the lab). Better Health Partnership, with data they receive from

¹⁸ Based on 2012-2017 ODH data presented by CWRU at the December 2019 meeting. Two percent of lead tests are of an unknown type.

¹⁹ US Preventive Services Task Force. (2019). Screening for elevated blood lead levels in children and pregnant women: US Preventive Services Task Force Recommendation Statement. *Journal of the American Medical Association*, 321(15), 1502-1509. doi:10.1001/jama.2019.3326. <https://jamanetwork.com/journals/jama/fullarticle/2730621>

²⁰ <http://codes.ohio.gov/oac/3701-30-05v1>

local health systems and practices, will be able to evaluate this gap at a practice level and identify best practices to help close the gap.

Data exchange is a barrier to efficient testing and follow-up.

Members of this subcommittee have expressed concern that some children are being tested for lead more frequently than necessary while others are not being tested at all. This happens, in part, because records of lead testing stay within the systems doing the testing. Electronic medical record (EMR) platforms do not “talk” to each other, meaning medical history only follows the patient within the health system. If a child has a lead test within one health system and sees a provider in a different system, the provider does not automatically see the test result. This may happen if a family moves primary care providers, does not have a medical home, or is tested in the community (e.g., at child care center) by a different health system.

The lab that analyzes blood to determine lead levels must report to ODH.²¹ ODH sends information on lead levels weekly to Ohio Impact Statewide Immunization Information System (ImpactSIIS), which also contains records of immunizations. We learned from Brian Napier at ODH²² that, because of federal incentive programs, many EMRs can send immunization information to ODH and request the information to import into the EMR. ODH has this connection primarily with users of Epic, Allscripts, Cerner, eClinicalWorks, and NextGen. However, because many states don’t combine lead and immunization records in one system, there has not been a national push for EMRs to develop the capability to add lead test results. If ODH were to develop the functionality to send lead test information, they would need multiple EMRs around the country to develop a corresponding ability to read the lead test results, display to user, and store in the EMR. Brian is not aware of any plans to implement this capability, but says he would support its development. As a work-around, clinicians can log into ImpactSIIS to see the child’s lead testing history. We’ve heard this doesn’t really happen because visits are already busy. Brian suggested working with the ImpactSIIS trainer to manage the workflow of finding this information in ImpactSIIS with the fewest clicks.

Another area where data exchange can be improved is in referrals. Entities that provide services for children with EBLs, such as community-based organizations and school districts, do not know lead levels unless reported by the family or the state (ODH automatically refers children with EBLs (ages 0-3) to Bright Beginnings, which does central intake for Ohio Early Intervention). There has been discussion of a closed-loop social referral platform that would facilitate the information flow from clinicians and community-based organizations to Early Intervention central intake, and the ability to share the result of the referral back to the referral source.

Existing data sources

- CWRU Center on Urban Poverty and Community Development receives individual-level data on lead testing annually from the Ohio Department of Health (ODH)

²¹ <http://codes.ohio.gov/oac/3701-30-05v1>

²² Email communication January 2020

- Includes test type (capillary, venous, unknown), lead level, child’s address at time of test, lab that processed test.
- MCOs keep track of the % of their members tested. They can provide this in aggregate form.
- Aggregate data are available at the state and county levels, through the Ohio Public Health Information Warehouse²³ and Cuyahoga County Board of Health (CCBH)²⁴ maps and reports, which also include breakdowns by Cleveland neighborhoods.
- Partners in Health program tests kindergartners & preschoolers in the Cleveland Metropolitan School District (CMSD).²⁵ They can report these data in aggregate form.
- Better Health Partnership data from partnering health systems and practices. These data are presented in aggregate form across systems, practices, geographies.

CARE COORDINATION AND EARLY INTERVENTION

This section describes the work of two organizations: Better Health Partnership (BHP), which operates the Better Health Pathways HUB, and Bright Beginnings, which serves as central intake for Ohio Early Intervention (EI) and coordinates EI services in Cuyahoga County.

Care Coordination with Better Health Pathways HUB

The Pathways HUB model is an evidence-based centralized care coordination model designed to improve health, reduce costs, and promote equity.²⁶ In a nutshell, the model works as follows: A family is referred to the HUB, which assigns the referral to one of its partner care coordination agencies. At intake, a community health worker (CHW) assesses the referred family to determine physical, behavioral, and social risk factors. Families are then assigned to “pathways” based on the risk assessment, and the CHW provides care coordination and navigation to help the family achieve the pathway’s outcome. The HUB model has a pay-for-outcomes structure; once the family has achieved the outcome(s) for a pathway, the agency submits documentation to the HUB, which in turn provides the documentation to an end payer (e.g., a Medicaid managed care organization) for payment, and pays the agency for achieving the outcome.

BHP has developed strategic partnerships for use of the Better Health Pathways HUB, one of which focuses on lead exposure in children. Many local care coordination agencies and their CHWs are participating in the HUB. In late 2020 and early 2021, BHP is training CHWs on lead and compiling resources for CHWs to provide to families. The Lead Safe Resource Center will be a key source of information for CHWs.

²³ <http://publicapps.odh.ohio.gov/EDW/DataBrowser/Browse/LeadData>

²⁴ <https://www.ccbh.net/lead-level-maps/>

²⁵ <https://case.edu/nursing/research/research-studies-labs/cleveland-schools-lead-screening-project>

²⁶ For information on the Pathways HUB model, see <https://pchi-hub.com/>.

The Better Health Pathways HUB will use data from partnering health systems and practices to inform where to leverage CHWs. BHP is working with practices participating in the quality improvement project develop practice-specific workflows in assigning a HUB CHW to help in the improvement of lead testing rates. This could take the shape through a number of scenarios (which will be determined by the system/FQHC):

- The HUB CHW may work with a selected practice in enrolling children with EBLI in the HUB and providing a warm hand-off to Bright Beginnings for Early Intervention. The CHW would assess the family for other needs that can be addressed through the HUB pathways.
- The HUB CHW may work further upstream in enrolling children that have missed a blood test and getting them tested. The CHW would also provide a warm hand-off to Bright Beginnings if the child has an EBLI, and assess the family for other needs.
- The HUB CHW may work further upstream in enrolling children that have had their blood lead test ordered and helping the family complete the blood lead test. This effort could target “at-risk” groups based on what the data show – e.g. uninsured children, or children living in a certain neighborhood.
- Finally, the HUB CHW may work even further upstream by reaching out and enrolling all children at a practice that are at high risk – e.g. kids without a medical home, or have a history of missing appointments. (The lack of medical home has been a related longstanding concern of the HHAC.)

In addition to working with health care practices, BHP and the HUB will:

- Employ a holistic family-centered approach to lead by assessing children in families already enrolled in the HUB, to ensure that they have been tested for lead and helping them complete lead tests if they have not been tested.
- Work with Medicaid MCOs to identify children who are insured by the plans but who have not attended visits or had the recommended blood lead tests. CHWs will follow up on these lists to enroll families in the HUB for connection to a medical home and lead testing.
- Partner with MCOs to supply testing kits, with which CHWs could do point-of-care (capillary) testing. While this would not be confirmatory, it would at least get the ball rolling and make it easier for families with transportation issues.

Early Intervention services

Beginning July 1, 2019, children ages 0 to 35 months with EBLIs are automatically eligible for Early Intervention services in Ohio.^{27,28} ODH sends lists of children with EBLIs to the Department of Developmental Disabilities, who narrows the lists to children ages 0 to 35 months and sends these referrals to Bright Beginnings, the state’s central intake for Help Me Grow Early Intervention and Home Visiting services. Health care providers and community-based organizations working with children and families may also refer families directly to Bright Beginnings. Documentation of the

²⁷ <https://ohioearlyintervention.org/>

²⁸ Children younger than 36 months with EBLI should be referred to Bright Beginnings for Early Intervention. Children 36 months and older should be referred to local school district for a global developmental evaluation.

child's EBL is required to be automatically eligible for services. Without documentation, a child would first go through the eligibility determination process to determine Early Intervention eligibility. Bright Beginnings has reported to this subcommittee that engaging families is often easier with warm hand-off referrals from local entities than with the automatic referrals from the state, because the family is expecting to hear from Bright Beginnings, but local entities sometimes lack the documentation needed to provide services. When Bright Beginnings calls a family to offer Early Intervention services, the number that will show on caller ID is 216-698-7500.

After the child is referred and assigned a Service Coordinator, the evaluator conducts a comprehensive assessment to identify a child and family's strengths and needs, and the services appropriate to meet those needs. The child is assigned to an Early Intervention team, which includes the family; the service coordinator from Bright Beginnings; at least one occupational therapist, physical therapist, speech language pathologist, and developmental specialist from the Cuyahoga County Board of Developmental Disabilities; an Early Childhood Mental Health therapist funded by the ADAMHS Board; a registered dietician; a Licensed Social Worker from Bright Beginnings; a dedicated evaluator; and other specialists as needed (e.g., vision, hearing, nutrition). The social worker and nutritionist were added specifically for children with EBLs. One of the specialists serves as the Primary Service Provider. If no delay is detected for children with EBLs, the Licensed Social Worker would most likely serve as the child's Primary Service Provider.

Services are provided to children until they turn three (36 months). Beginning at two years of age (24 months) and at least 90 days before a child turns three, the Bright Beginnings Service Coordinator discusses and holds a transition planning conference with the family and other relevant parties to ensure continuity of services upon the child's third birthday. The team determines transition goals and locations, which could include special education services at the local school district, Head Start services, or other high quality preschool services, or to other supports, programs, or resources.

Early Intervention teams also distribute cleaning kits supplied by ODH to families whose child's lead level is 5-9 µg/dL. Local health departments distribute kits to families when the child's lead level is ≥ 10 µg/dL.

COLLABORATION WITH & ADVOCACY TO MEDICAID MANAGED CARE ORGANIZATIONS

Managed care organizations (MCOs) are key stakeholders in the lead landscape, invested in primary and secondary prevention of lead poisoning. In Ohio, most people enrolled in Medicaid are covered by one of five MCOs: Buckeye, CareSource, Molina, Paramount, and UnitedHealthcare. All five MCOs had representatives attending subcommittee meetings.

The managed care plans have several initiatives they have used in the past or that are currently in progress:

- Mailings to members, including reminders and newsletters about the importance of lead testing
- In-home lead testing kits
 - UnitedHealthcare did a small pilot, but proportionally few kits were returned. They are considering doing this again in Cleveland.
 - As noted above, The Better Health Pathways HUB is exploring the opportunity for CHWs to perform point-of-care testing with these kits.
- Incentives to moms and families for getting child's blood lead level tested (e.g., gift card, diaper bag)
 - CareSource and UnitedHealthcare have done this, and both said this is not very effective at improving lead testing rates.
- Community events. MCO reps note that community involvement, awareness, and education is a critical component to improving lead testing rates.
- Incentives to providers/practices. UnitedHealthcare currently has a provider rewards program offered to FQHCs. They implemented this because the amounts physicians were receiving were so small it wasn't enough of an incentive. They just rolled this program out in mid-2020:
 - 5% improvement over previous year = \$10/attributed child
 - 10% improvement = \$15/attributed child
 - 80% of children included in the Healthcare Effectiveness Data and Information Set (HEDIS) get a lead test = \$30/attributed child

Before the COVID-19 pandemic, MCOs were working with Ohio AAP and partnered with practices enrolled in Ohio AAP's Lead Quality Improvement Program. Per a directive from ODM, the plans shifted their focus shifted to immunizations, which were down substantially while provider offices were closed due to the pandemic. In the third quarter of 2020, MCOs began to turn back to their work on lead and collaboration with AAP.

Looking forward, there is momentum and incentive for MCOs to continue work on lead testing. Ohio's 2020-2022 State Health Improvement Plan, released in April 2020, includes the reduction/elimination childhood lead poisoning as a desired outcome.²⁹ Strategies to achieve this outcome include both primary prevention (e.g., abatement) and secondary prevention efforts (e.g., lead screening and testing). The State Health Improvement Plan calls out Medicaid managed care plans as key partners in achieving its vision, and has likely informed the plans' proposals and the procurement process.

This subcommittee has identified incentives from MCOs to providers as one strategy that could improve lead testing rates—specifically incentives for completed lead tests, which would reduce the gap in lead tests ordered vs. lead tests completed. There are incentives through Ohio CPC for Kids, but lead screening/testing is only one of three ways to receive payment. Representatives

²⁹ <https://odh.ohio.gov/wps/portal/gov/odh/about-us/sha-ship>

from all five MCOs have indicated interest in and support of an initiative similar to United's provider rewards pilot program (see above). Such a proposal would need to be taken to plan leadership, ideally after ODM has issued award letters to selected plans in late January 2021. Given BHP's work with MCOs and providers in their provider quality improvement pilot and the HUB, BHP should be involved in these discussions.

Additionally, this subcommittee had discussed the potential for MCOs to submit attribution lists to providers to help flag children in need of their 12- or 24-month lead test. In its work to identify families for enrollment in the HUB, BHP has begun receiving reports on children missing lead tests from at least one MCO. BHP will work with CHWs to follow-up on these reports.

CHANGES WITHIN HEALTH SYSTEMS

Health systems have different procedures for lead testing. MetroHealth does mostly venous testing. Cleveland Clinic does both venous and capillary—most practices are located in Family Health Centers, which have labs in building, so kids are sent to lab for venous; other practices without a lab would do capillary test. UH is moving toward more capillary testing in-office in community practices that see a high percentage of Medicaid-insured children but don't have ready access to phlebotomy. In practices where there is a lab on-site, a venous test is ordered. Although capillary testing is a better screening tool than the questionnaire (it more accurately captures kids with EBLLs), there is paperwork involved in all tests and increasing number of capillary tests may mean additional capacity is needed to process/submit paperwork to the state.

Key barriers to testing have been discussed by members of this subcommittee:

- Vaccinations at 12-month visit are often prioritized over lead test and after those shots the parent and/or child may be stressed, discouraged, etc., and not want to do the lead test.
- Lines may be long at the lab and/or parents have waited a long time in the clinic
- Lead orders expire after a certain amount of time (e.g., 30 days)
- Parent forgot to return for a blood draw ordered by physician
- Physician fails to order blood draw for screening or follow-up

There are two quality improvement (QI) projects in progress that may address the above barriers:

1. American Academy of Pediatrics QI program:
 - The program started June 2020. Two trainings took place in 2020, with more scheduled for 2021.
 - Three practices in Cuyahoga are participating.
 - Outcomes: lead tests ordered and completed at 12 & 24 (± 1) months for Medicaid and high-risk children. Also looking at risk measures at 6 months.
 - Development of materials: rack cards, documentation on anticipatory guidance

- Baseline data indicate that testing rates in participating practices are fairly high already, but that there is room for improvement. High baseline rates could reflect the voluntary participation in the program (i.e., practices already doing well may be more likely to participate).
 - Rates are higher at 12 months than at 24 months. AAP is looking into this. Could be because far fewer vaccines are due at 24-month visit, thus visit rates may be lower.
 - AAP is also looking at whether variation in the testing process matters (e.g., if there is a lab in the building).
 - As part of their participation in this program, UH has created a lead registry to enable easier population follow-up by a “lead champion.” This allows testing implementation strategies to use data in real time. It is possible that the EMR can be modified to make this easier; they are looking into it.
2. Better Health Partnership QI project:
- Funded by the Bruening Foundation.
 - Participating systems and practices include: MetroHealth, UH Rainbow, Neighborhood Family Practice, CareAlliance, and Senders Pediatrics.
 - Metrics being collected include:
 - % of kids that have been referred to get a lead test
 - % of kids that have been tested for lead (recently or ever)
 - % of kids that have had a confirmatory test (in the event of a positive capillary test)
 - % of kids that have ever had an elevated blood lead level
 - % of kids that currently have an elevated blood lead level
 - Data will be used to identify “best practices” in the lead testing space and develop clinical QI projects to spread to all providers/practices.
 - BHP will examine correlates of lead testing, including insurance types, socioeconomic status, geography, and asthma.

GLOSSARY

AAP	American Academy of Pediatrics
BHP	Better Health Partnership
CCBH	Cuyahoga County Board of Health
CDC	Centers for Disease Control and Prevention
CDPH	Cleveland Department of Public Health
CHW	Community Health Worker
CMSD	Cleveland Metropolitan School District
CPC	Comprehensive Primary Care
CWRU	Case Western Reserve University
EBLL	Elevated blood lead level (≥ 5 micrograms per deciliter)
EI	Early Intervention
EMR	Electronic medical record
HHAC	Healthy Homes Advisory Council
LSCC	Lead Safe Cleveland Coalition
MCO	Managed care organization
ODH	Ohio Department of Health
ODM	Ohio Department of Medicaid