Childhood Lead Poisoning Advisory Committee
2021 Annual Report

To: Members of the General Assembly

From: Members of the Childhood Lead Poisoning Advisory Committee

Date: April 13, 2021

Subject: CLPAC 2021 Annual Report

As chartered in House Bill 89 of 2019, the reconstituted Childhood Lead Poisoning Advisory Committee (CLPAC) is to investigate and report to the Delaware General Assembly findings and recommendations on items outlined in Title 16, Chapter 26 of the Delaware Code, the Childhood Lead Poisoning Prevention Act.

The reconstituted CLPAC made considerable progress from its initial meeting on September 12, 2019 throughout the remainder of the year as well as 2020, despite the COVID-19 pandemic. The advisory committee elevates the attached recommendations as the 2021 annual report.

A summary of the advisory committee's work can be found on the Delaware General Assembly's webpage at https://legis.delaware.gov/TaskForceDetail?taskForceId=423.

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Executive Summary

Although children are exposed to lead from many sources, including water from leaded pipes and some consumer products, lead-based paint and lead-contaminated dust are the most widespread and dangerous sources of high dose lead exposure for young children.

Lead is a neurotoxin, causing permanent and irreversible damage to the human body. The human body does not require lead for any function. Once entering the bloodstream, lead finds its way to the brain, kidneys, and bones. Even low levels of lead in the body correlate to a lower IQ, reduce ability to pay attention, and impair academic achievement.

There are two public policy approaches to reducing children's exposure to lead:

- **Primary prevention -** policies that require housing and other environments to be safe from the dangers posed by lead paint and lead-contaminated dust and soil. Experts agree these policies have the most promise for reducing lead poisoning, but most states and municipalities have not made enough progress in this area, in part because of limited resources and authority.

- **Secondary prevention -** policies that require the identification, case management, and treatment of children with elevated blood lead levels (EBLL). Because lead exposure does not cause obvious symptoms until significant damage has already occurred, blood lead screening is used to identify exposed children. In Delaware, children are identified via a capillary blood lead test at 12 months, and, if necessary, a venous blood draw as follow up. A Medical Risk Assessment via a questionnaire administered by the medical provider to the parent is also mandated to identify children at 24 months, although the U.S. Preventive Services Task Force (USPTF) has determined that these instruments are inaccurate.

  Care when children are identified consists of medical and developmental follow up as well as nutritional recommendations and environmental interventions, if possible. According to the Centers on Disease Control and Prevention (CDC), "evidence suggests that the benefits of secondary prevention are limited… [but] the identification and provision of services to children with elevated BLLs remain components of a comprehensive lead poisoning prevention program."[1]

[1] Centers for Disease Control and Prevention. Advisory Committee on Childhood Lead Poisoning Prevention. Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of Lead Poisoning [Internet]. Atlanta: Centers for Disease Control and Prevention; 2004. Available from: http://www.cdc.gov/nceh/lead/publications/primarypreventiondocument.pdf.

Reconstituted in 2019, the Childhood Lead Poisoning Advisory Committee has worked diligently over the past year and a half (through a global health pandemic) to provide extensive recommendations to strengthen implementation of the Childhood Lead Poisoning Prevention Act.

A comprehensive set of forty-four program and policy recommendations are detailed in this report for the Division of Public Health. The advisory committee prioritizes the following for Delaware:

- The enactment of policies that mandate and enforce the use of lead safe and lead free housing certificates;
- Remediation of currently known lead "hot spots";
- Lowering the threshold for case management and early intervention services for children already poisoned; and
- Increasing the rates of identification for already poisoned children via a blood lead test so that resources can be better allocated for intervention, remediation, and prevention of future poisoning.

Background

Research continues to highlight the extreme dangers of lead poisoning even in low doses. Lead is a neurotoxin, stored in the bones, similar to calcium, and can remain in the body for thirty years or more. Lead poisoning causes permanent brain damage. Children are at a greater risk than adults of suffering from the neurotoxic effects of lead[2].

Lead ingestion interferes with other processes of the body, negatively impacting iron absorption and manufacturing of hemoglobin, which can cause anemia. Additionally, most with elevated lead have no obvious symptoms, but may have behavior or learning problems.[3] While chelation treatment is recommended at extremely high blood lead levels of 45 µg/dL or more, current trends indicate that pervasive, low levels of lead exposure are more common and the focus of the current public health threat. There is inadequate evidence on the effectiveness of treatment of elevated blood lead levels in asymptomatic children 5 years and younger.

Children with relatively low, yet elevated blood lead levels (2 µg/dL or more) have more than a 4 times increased risk of attention-deficit/hyperactivity disorder (ADHD), with approximately 1 in 5 cases of ADHD in the United States attributed to lead exposure. Research finds the detrimental effects of pervasive lead poisoning carry into adulthood as those adults with a history of lead poisoning are at an increased risk of delinquent behaviors. Exposure to lead in childhood is cited as substantially decreasing one's quality of life, as well as contributing costs to society.[4]

Current Delaware law mandates that the primary health care provider for a child shall order a blood lead test at or around 12 months of age. The provider shall determine based upon criteria promulgated by the Division of Public Health whether the child should be screened for lead poisoning at or around 24 months of age, and maintain records of this. For children in the Medicaid program, the national recommendation is to test blood for lead at ages 12 months and 24 months, or once between 24 and 72 months for children with no record of a previous blood lead test. Delaware requires proof of one blood lead test, at any age, up to age 6 years, for entry into licensed child care and public schools.

Screening, screening-related services and diagnostic evaluations as required by § 2602 of Title 16 shall be reimbursable under health insurance contracts and group and blanket health insurance as provided by Chapter 33 and Chapter 35, respectively, of Title 18. Moreover, the federal Medicaid program requires that lead testing and treatment be covered as part of the comprehensive EPSDT package.

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[2] Sanders, T., Liu, Y., Buchner, V., & Tchounwou, P. B. (2009). Neurotoxic effects and biomarkers of lead exposure: a review. *Reviews on Environmental Health*, *24*(1), 15–45. https://doi.org/10.1515/reveh.2009.24.1.15.

[3] Reuben, A., Elliott, M. L., Abraham, W. C., Broadbent, J., Houts, R. M., Ireland, D., Knodt, A. R., Poulton, R., Ramrakha, S., Hariri, A. R., Caspi, A., & Moffitt, T. E. (2020). Association of childhood lead exposure with MRI measurements of structural brain integrity in midlife. *JAMA*, *324*(19), 1970–1979. https://doi.org/10.1001/jama.2020.19998.

[4] Hamp, N., Zimmerman, A. & Hoffen, J. (2018). Advocating for automatic eligibility for early intervention services for children exposed to lead. *Pediatric Annuls*, 47(10). https://doi.org/10.3928/19382359-20180924-01.

Findings

Delaware Children at Risk

Delaware has collected lead levels on approximately 43.67% of children ages 12-14 months. Identification of 12-month-old children at risk has been hampered by a number of factors:

- Although in-office lead testing machines are available, many primary care offices instead refer families to a local laboratory. Families may not follow through with a laboratory visit.
- Although licensed child care facilities require that families enrolling a child obtain sign off from a health care provider that their child has received a lead test at 12 months of age (as part of the child health appraisal), only about half of Delaware's young children attend licensed child care. Therefore, for about half of Delaware families, there is no checkpoint to ensure that the 12 month lead test has been completed.

Known Geographic Areas of Risk

A report published by the Delaware Division of Public Health compiles the reported data from 2010 to 2017 and identifies the 34 zip codes in Delaware (out of a total of 96 zip codes) with the highest numbers of children with elevated blood lead levels (above the Centers for Disease Control reference level of concern). The eight zip codes with the highest number of children include three in Wilmington (19805, 19802, and 19801) and two in Newark (19702 and 19713) as well as 19973 in Seaford and 19947 in Georgetown.[5]

Given the limited data available to produce this analysis, there may be additional zip codes in Delaware with high numbers of children with elevated lead levels. It is possible, for instance, that the "highest" zip code for elevated blood lead levels in Delaware might, if the data were more accurate, actually be the second or third highest, and that some "safer" zip codes would be of even more concern than the data currently indicate. Nonetheless, it is clear that:

- There are a number of lead "hot spots" in Delaware. These are in areas with older housing stock and lower income families. As is the case nationally, lead poisoning is largely (but not exclusively) a problem faced by poorer families with limited capacity to move to better housing or remediate the contaminated housing on their own.

- Without a public policy commitment to primary prevention in these high risk areas, children will continue to be poisoned. Testing asymptomatic children after they have been exposed will do nothing to prevent more children from exposure unless the state invests in primary prevention.

The Universe of Delaware Homes

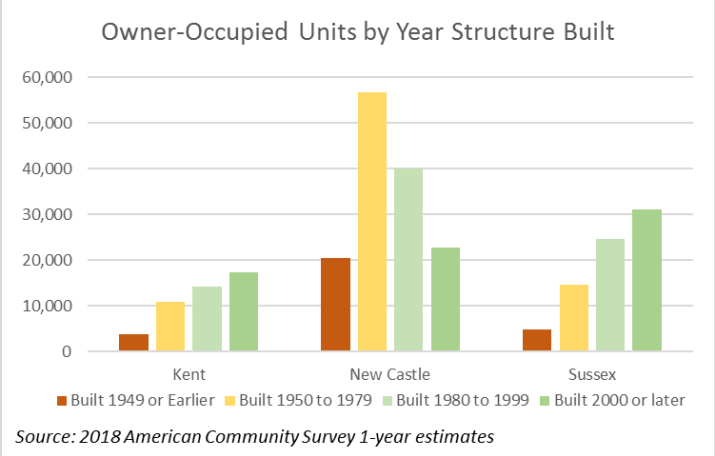
While there are other sources of lead poisoning, the primary source of lead poisoning is the home environment. In 1978, the federal government banned the use of lead paint for consumer purposes. However, many older homes still contain lead-based paint, especially homes built before 1978.

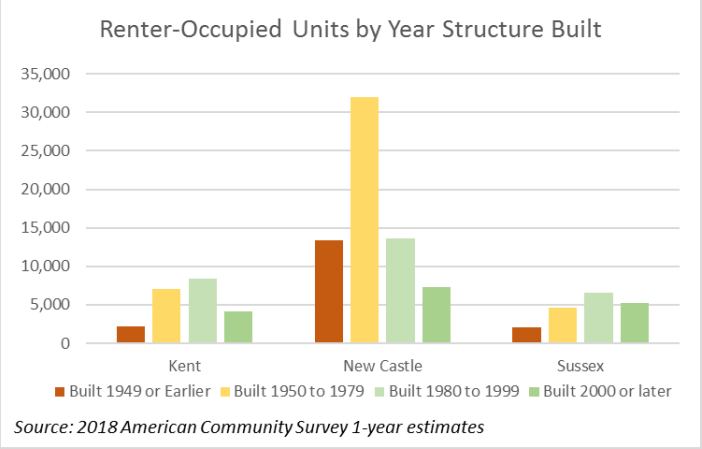
[5] Kuang, J. Worst Parts of Delaware for Elevated Lead Levels, Delaware News Journal, June 25, 2019. https://www.delawareonline.com/story/news/2019/06/24/high-lead-levels-impact-more-kids-wilmington-than-rest-state-data/1511596001.

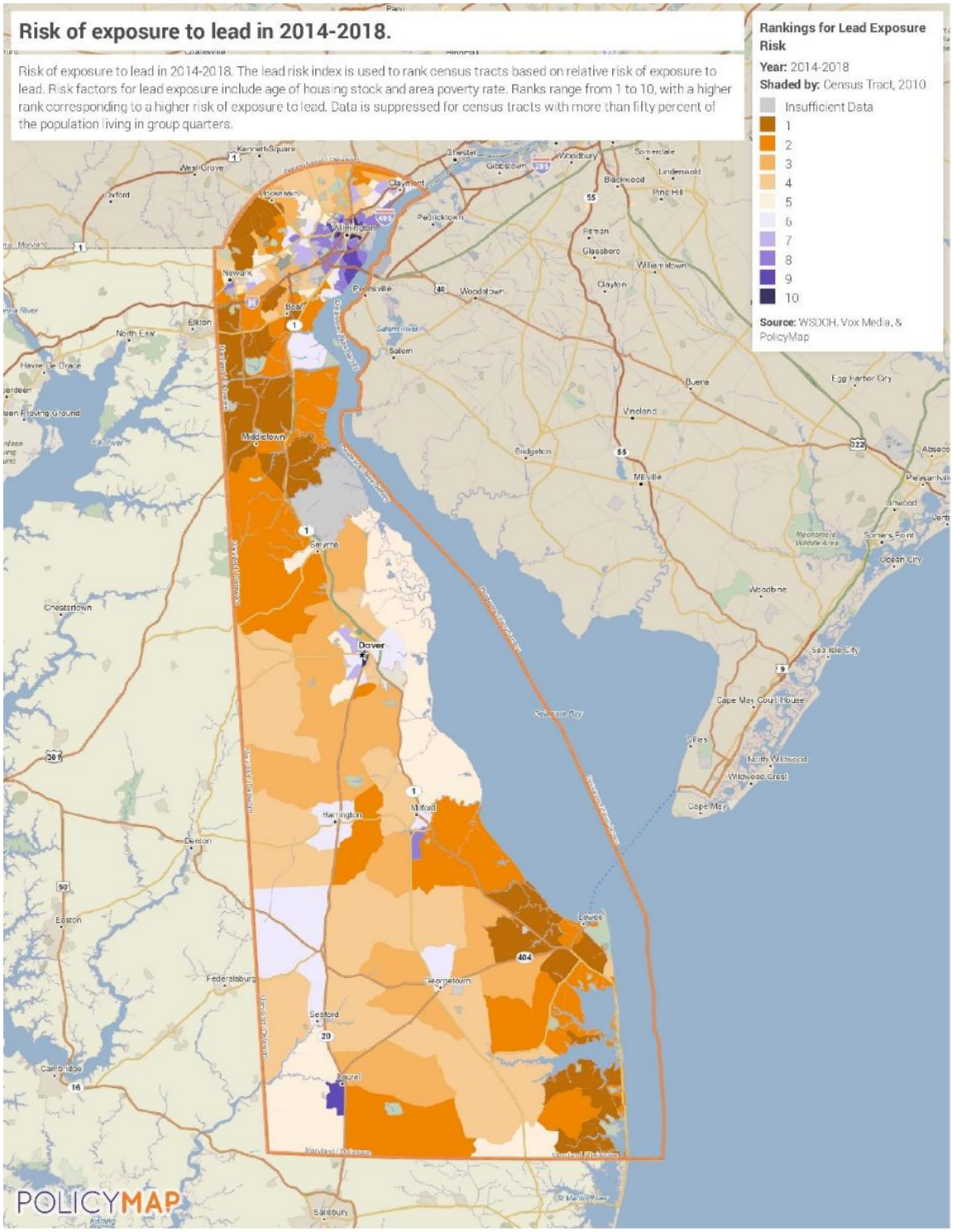
Data from the Delaware Division of Public Health show that 60-65% of children with elevated blood lead levels reside in renter-occupied homes. 57% of rental homes in Delaware were built before 1979, and 17% before 1950. Delaware's rental housing stock is oldest in New Castle County, where 68% of rental homes were built before 1979 and 20% before 1950.

	Kent	New Castle	Sussex	Delaware
Owner Occupied				
Built 2000 or later	17,410	22,725	31,001	71,136
Built 1980 to 1999	14,155	40,158	24,594	78,907
Built 1950 to 1979	10,782	56,664	14,622	82,068
Built 1949 or Earlier	3,776	20,528	4,730	29,034
Total	**46,123**	**140,075**	**74,947**	**261,145**
Renter Occupied				
Built 2000 or later	4,078	7,314	5,251	16,643
Built 1980 to 1999	8,392	13,629	6,613	28,634
Built 1950 to 1979	7,034	32,006	4,569	43,609
Built 1949 or Earlier	2,214	13,327	2,099	17,640
Total	**21,718**	**66,276**	**18,532**	**106,526**

Source: 2018 American Community Survey 1-year Estimates






Risk of exposure to lead in 2014-2018.
Risk of exposure to lead in 2014-2018. The lead risk index is used to rank census tracts based on relative risk of exposure to lead. Risk factors for lead exposure include age of housing stock and area poverty rate. Ranks range from 1 to 10, with a higher rank corresponding to a higher risk of exposure to lead. Data is suppressed for census tracts with more than fifty percent of the population living in group quarters.
Rankings for Lead Exposure Risk
Year: 2014-2018
Shaded by: Census Tract, 2010
Insufficient Data
1
2
3
4
5
6
7
8
9
10
Source: WSDOH, Vox Media, & PolicyMap
POLICYMAP

Delaware Requirements

Delaware's current requirements focus on abatement and safe renovation and repairs. Training and certification are mandated for firms doing a variety of work on pre-1978 homes (painters, general contractors, plumbers, roofers, maintenance workers, property managers, HVAC contractors, electricians, landlords if doing work themselves, electricians, carpenters, and weatherization contractors).

Outside of regulations on how abatement, renovation and repair work is done and required training and certifications for individuals and firms performing this work, Delaware's requirements are only reactive to incidences of elevated blood lead levels. This is a significant gap compared to many other states and units of local government (cities and counties) of comparable or greater size to Delaware, which have requirements focused on actively identifying units where lead hazards may be present and ensuring they are addressed.

Delaware does not have a statewide rental housing registration or licensing requirement. New Castle County and the Cities of Wilmington, Dover, and a few others do. This is important to note, as some local and state programs are connected to the administration of a rental-licensing requirement.

Federal Requirements

Federal requirements are focused on disclosures and notices to tenants. Federally subsidized housing has separate requirements imposed and enforced by the U.S. Department of Housing and Urban Development (HUD).

Units rented with rental assistance vouchers are inspected using federal Housing Quality Standards (HQS), which do include inspecting for potential hazards like chipping paint, which must be secured to pass, but are not in-depth on potential lead hazards. Approximately 4,000 federal vouchers are in use in New Castle County and the City of Wilmington, and another 1,300 in Kent and Sussex. The Delaware State Housing Authority also administers another approximately 700 state-funded rental assistance vouchers. The state's Public Housing Authorities (which administer voucher programs) coordinate with the Division of Public Health.

Loan and Grant Programs to Assist Landlords

Loan programs are more complex to administer and there are fewer successful models nationally. In addition, most loan programs are reactive to incidences of childhood lead poisoning and not preventive. Maryland is one of two states with a successful pilot program in cooperation with the Centers for Medicare & Medicaid Services (CMS) to address lead hazards in homes where children are identified with lead poisoning. This pilot program applies to both owner-occupied and renter-occupied homes. In rental homes, work is done as a grant. This has worked well, but staff note that it is expensive in most cases and funding may be unsustainable.

Funding under HUD's Office of Lead Hazard Control and Healthy Homes[6] has expanded in recent years and shifted priorities to renter-occupied homes. This is one of the few HUD programs to have seen funding increases at the federal level in recent years. In the past, the Delaware Division of Public Health applied for and administered funding under this program. Local governments more commonly administer this program. New Castle County and the City of Wilmington recently were awarded a $3.3 million grant[7] under this program to address lead hazards and have recruited experienced program administrators to oversee implementation. Delaware should continue to build capacity for the use of this federal funding stream.

Recommendations

Comprehensive recommendations address both primary and secondary prevention. In order to effectively lower the incidence of lead poisoning a multi-faceted approach is necessary, involving a range of interventions and policy change.[8]

Indoor Lead Abatement – Homes, Schools
Recommendations under this and the subsequent three categories address critical primary prevention. Measures will identify, remediate, contain, seal or eliminate environmental sources of lead exposure(s).

1. All owners of residential rental properties built before 1978 must register each property annually. Assess a penalty for non-compliance.

2. Residential rental property owners shall have (for each rental unit) a one-time Lead Risk Assessment completed by an independent, accredited environmental testing and inspection company certified by the State of Delaware's Lead Poisoning Prevention Program

3. Residential rental property owners whose properties have no lead paint hazards identified by the Lead Risk Assessment shall obtain (for each rental unit) a one-time Lead-Free Housing Certificate from the State of Delaware's Lead Poisoning Prevention Program

4. Residential rental property owners shall cover the costs for temporary relocation of tenant(s) during lead remediation

5. Residential rental property owners shall have a one-time Lead Risk Assessment completed by an independent, accredited environmental testing and inspection company certified by

[6] U.S. Department of Housing and Urban Development, Office of Lead Hazard Control and Healthy Homes. Lead-Based Paint & Lead Hazard Reduction Demonstration Grant Programs. Retrieved March 12, 2021 from https://www.hud.gov/program_offices/healthy_homes/lbp/lhc.
[7] New Castle County, Delaware. Lead Program. Retrieved March 12, 2021 from https://www.nccde.org/1982/Lead-Program.
[8] Maine Affordable Housing Coalition. (2019). *Comparative Assessment of Lead Poisoning Screening Practices in Maine & New England*. Health Justice Innovations, LLC. https://mainehousingcoalition.org/wp-content/uploads/2019/03/Lead-Screening-Report-Final-Full-Report-2.pdf.

the State of Delaware's Lead Poisoning Prevention Program for 50% of their pre-1950 rental property portfolio structures within 5 years

6. Residential rental property owners shall have a one-time Lead Risk Assessment completed by an independent, accredited environmental testing and inspection company certified by the State of Delaware's Lead Poisoning Prevention Program for the remaining 50% of their pre-1950 rental property portfolio structures within 10 years

7. Residential rental property owners shall have a one-time Lead Risk Assessment completed by an independent, accredited environmental testing and inspection company certified by the State of Delaware's Lead Poisoning Prevention Program for pre-1978 rental property portfolio structures within 15 years

8. Enact legislation prohibiting owner retaliation against tenant(s) who may need to be relocated due to a property's failed lead inspection or for reporting lead remediation violations

9. Establish an office to process registration of all Delaware pre-1978 residential rental properties, collection of related fees/penalties and/or investigation/prosecution of non-compliance. The state should establish a variety of enforcement mechanisms and resources to support this process.[9]

10. All Divisions within the Department of Health and Social Services (DHSS) shall incorporate lead poisoning prevention and education in all contracts and programs where there is outreach in homes, including in The Low Income Home Energy Assistance Program (LIHEAP)

11. Require the Delaware Department of Natural Resources and Environmental Control (DNREC) to add lead dust testing of residential structures as part of the State Weatherization Assistance Program

12. Establish financial assistance for abatement and relocation by way of tax credits or deferred loans

13. Mandate that lead safe demolition, renovation and repair practices shall be followed by independent, accredited contractors for commercial and school properties

Outdoor Abatement

14. Conduct an epidemiological study; a retrospective, case controlled analysis using data that has been collected by the Childhood Lead Poisoning Prevention Program to date to identify priority areas of high exposure and for potential future enhanced environmental contaminant surveillance. The study will incorporate aforementioned data as well as additional datasets as needed, and should include the number of lead tests per year, location

[9] Trust for America's Health. (2017). *Maryland's Efforts to Prevent and Respond to Childhood Lead Exposure*. https://www.tfah.org/story/marylands-efforts-to-prevent-and-respond-to-childhood-lead-exposure.

of the residences of the children with elevated blood lead levels, housing data (age of the home), income data, demographic data (race), and specific information from the Department of Public Health's *Environment* tab. The study should encompass residential and non-residential environmental sources of lead, including outdoor structures, exposures from schools, soils, and other areas where children may have contact with lead or lead dust.

15. DNREC shall establish standards and a permit structure for the removal of lead paint from all outdoor structures, including bridges and utility towers, as well as the demolition of commercial and industrial buildings that contain lead or lead paint. Standards should be developed for structures that present an environmental risk due to peeling paint, and a mechanism should be established to address abandoned structures that pose a health risk. These recommendations should include best practices, including community notification, dust monitoring, soil sampling, and should apply to the removal of lead paint by any means, not just via dry abrasive blasting.

16. Establish a task force to evaluate standards for the remediation and upgrade of playgrounds and park spaces, provide for the testing of soil and painted equipment at playgrounds (state, county, municipal, school, community, day-care, and privately-owned), and remediate playgrounds with lead contamination

17. Clean contaminated soil. The EPA should collaborate with businesses to remediate dangerous conditions at and near facilities that extract lead from batteries and other electronics. HUD, the EPA, and the Centers for Disease Control and Prevention (CDC) should work with states and local governments to treat toxic soil in and around homes with non-encased lead paint.

18. Reduce air lead emissions. The EPA and other federal agencies should collaborate to curtail new discharges by reducing concentrations of lead into the environment, such as from aviation gas and lead smelting and battery recycling facilities.

Water Abatement

19. The Delaware Department of Education shall conduct routine lead testing of potable water (water fountains and drinking/cooking water) in schools and facilities utilized by children

20. The Delaware Department of Education shall appoint a member of the Childhood Lead Poisoning Advisory Committee to the oversight team for the Water Infrastructure Improvement for the Nation (WIIN) grant that is currently sampling water in Delaware public schools

21. The Delaware Office of Childcare Licensing shall require child care providers to include routine lead testing of potable water in child care centers and home based care environments as part of the lead-risk assessment

22. States and municipalities, with support from federal agencies, should fully replace lead service lines, from street to structure, that provide drinking water to homes and other locations children frequent built before the EPA banned their use in 1986

Alternate Sources of Contamination

23. Regulations shall be developed with standards and an enforcement mechanism to eliminate lead in consumer products, including those sold at Dollar Stores and import retailers based on best practices from other jurisdictions

24. DNREC shall adopt an environmental justice approach by engaging in a transparent and inclusive process to review and update standards for environmental remediation at contaminated sites (including Brownfields, SIRB, HSCA, and National Priorities List sites, among others) to incorporate cumulative environmental risk and to account for the proximity of contaminated properties to at-risk communities

25. The Delaware Sportsmen's Caucus shall convene a task force to evaluate the potential for lead exposure through childhood marksmanship, fishing, and hunting, and shall make recommendations based on best practices to firing ranges, marksmanship programs, hunters education, and fishing programs

26. The Delaware Department of Natural Resources and Environmental Control (DNREC), Division of Fish and Wildlife shall add lead poisoning prevention to fishing and hunting manuals and training programs

27. A task force shall be established in collaboration with the Delaware Department of Labor, labor unions, police departments, firing ranges, and other stakeholder groups to design a strategy and enforcement framework to lower state thresholds for blood lead levels below current OSHA levels to prompt removal and return to work policies to reflect the Council of State and Territorial Epidemiologists (CSTE) recommendations, which uses a health-outcome based levels and has special precautions for pregnant women

Clinical

Recommendations under this category address secondary prevention; the identification and treatment of all children who have been exposed to lead. Goals include removal or abatement of lead from a targeted environment after the child is exposed and connection to appropriate educational, developmental, or health-related interventions and services.

28. Provide more point-of-care blood lead testing analyzers to increase testing and compliance rates. Place machines in state service centers, community centers, primary care offices, and shared by elementary school wellness centers (1-2 machines shared per school district).

29. Mandate universal blood lead testing around 2 years of age (21-27 months), with one catch up test before age 6 for all those with no previous tests, or whose one previous test was before 21 months of age

30. Offer incentive to providers to ensure that blood lead testing is completed, not only ordered. This could be a quality improvement project or woven into a value based payment structure as a quality metric/measure.

31. Lower the Department of Public Health's threshold for home visits and intervention by a public health nurse from 10 µg/dL to 5 µg/dL. Delaware should align with the recommended CDC threshold of 5 µg/dL.

32. Begin case management for all children with a blood lead level equal to or higher than the current blood lead reference value as set by the Centers for Disease Control and Prevention (currently 5 micrograms per deciliter (µg/dL)). Delaware currently begins case management at 10 µg/dL[10].

33. Align developmental and neuropsychological assessments and appropriate high-quality programs for children with elevated blood lead levels at lower thresholds for IDEA Part C for federal funding for pre-K intervention services from 10 µg/dL to 5 µg/dL

34. Expand the advisory committee/subcommittee membership to include expertise from the maternal health and obstetrics community to develop lead poisoning education and testing programs, including possible screening and/or testing during pregnancy

35. Refrain from use of questionnaires to identify asymptomatic children for elevated lead levels. The United States Preventive Services Taskforce (USPSTF) found that such questionnaires are not predictive and should not be used[11]

Data

Recommendations in this category seek to improve the timeliness and public availability of data collected by the Division of Public Health with a goal of geographically targeting communities, neighborhoods, or specific locations so that resources can be better allocated for prevention.

36. Collect additional points of data at the time of a child's blood lead test including address(es) at which child currently resides and/or spends a majority of time, and rental or owned dwelling to be reported along with blood lead test results to the Division of Public Health

37. Include blood lead level results on the DelVAX Immunization Registry, widely accessible to school nurses, school wellness and community providers

38. Enroll Delaware in the CDC Adult Blood Lead Epidemiology and Surveillance (ABLES) program

39. Produce a report with key indicators and criteria for evaluating the state's progress on lead poisoning prevention, reduction, remediation efforts and routine reporting to be updated annually and published on the Division of Public Health webpage. A prevention scorecard

[10] Centers for Disease Control and Prevention. Blood Lead Reference Value. Retrieved March 12, 2021 from https://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm.

[11] Cantor AG, Hendrickson R, Blazina I, Griffin J, Grusing S, McDonagh MS. Screening for elevated blood lead levels in childhood and pregnancy: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2019;321(15):1510–1526. doi:10.1001/jama.2019.1004

can assign a progress "score", scale of impact/prediction of public health threat or risk[12], and include the following indicators:

- Funding allocated for lead poisoning prevention in Delaware by source;
- Elevated blood lead levels among children, organized on a map by census tract or census block, where appropriate;
- Number of cases where a public health nurse has assisted a child with elevated blood lead levels, and any meaningful aggregate data about such cases, including sources of exposure and provision of additional state resources;
- Number of housing units remediated by a lead-certified contractor, also mapped as appropriate;
- Lead-contaminated properties, including those currently under management by a state or federal program, those not yet part of environmental remediation, and those where cleanup has been completed, mapped;
- Sources of lead emissions in the environment, including industrial emissions to air and water, mapped;
- Non-human indicators of lead poisoning occurring in the environment, including poisoning cases among birds that are tracked by groups such as the Tri State Bird Rescue.

Education/Awareness

40. Ease administrative burden and punitive measures directed toward school nurses and families by educating and providing awareness as to the importance of blood lead testing for school administrators, school board associations, parent-teacher associations, pediatricians, family practice providers, nursing community, parents and caregivers

41. Conduct outreach through cultural and religious organizations on the risks of lead poisoning from products imported from certain countries, including toys, cosmetics, supplements, and food, and household items. This can should include targeted education and outreach to at-risk neighborhoods, support for cultural awareness among physicians, and increasing investigation and enforcement of small retailers.

42. Improve education for providers and caregivers/parents regarding follow-up and connection to services should a child receive an elevated blood lead test

43. Ensure findings from the Water Infrastructure Improvement for the Nation (WIIN) grant work and/or larger efforts for sampling water in Delaware public schools are presented in an appropriate format, easily understood, and shared with the public including parent-teacher associations, neighborhood associations, school administration and staff, and parents and caregivers

44. Use state and local data and reports to inform policy makers, families, and advocates. Lead data should be available to all stakeholders who need information about sources of

[12] Potash E, Ghani R, Walsh J, et al. Validation of a machine learning model to predict childhood lead poisoning. *JAMA Netw Open*. 2020;3(9):e2012734. doi:10.1001/jamanetworkopen.2020.12734.

exposure, such as property-specific information on leaded drinking water pipes and lead in the water, dust, paint, and soil at or near homes, schools, and child care facilities.

Conclusion

Primary and secondary prevention are both essential components of lead poisoning prevention policy. There is no question that children who have been exposed need to be identified and parents need to be provided with essential tools, including medical and developmental monitoring, nutrition and home cleaning advice, as well as case management and access to early invention services. These services can make a difference for children. However, all experts agree that focusing largely on testing and providing services misses the larger point: lead poisoning is entirely preventable. Lack of resources and political will has hampered too many states and cities from addressing the root causes.

The advisory committee respectfully elevates the comprehensive set of recommendations included in this report, prioritizing the following:

Primary prevention

Delaware should adopt primary prevention policies that have worked in other states and municipalities.
For example, Rochester, New York is considered a national model for its ordinance requiring all rental property owners to obtain a certificate of occupancy deeming that their dwellings have been inspected for lead hazards, primarily peeling paint. Special provisions apply to "high risk" neighborhoods, identified through existing blood lead screening data. At the time the city ordinance was passed, as many as 90 percent of children living in high-risk neighborhoods reported elevated blood-lead levels. Since that time, the number of poisoned children has dropped to a tenth of what it was.[13]

Philadelphia similarly requires owners of rental properties built before 1978 to provide a "lead free" or "lead safe" certificate anytime there is a change of occupancy and the new tenants will include a child under the age of 6.

Delaware should direct resources to remediation in currently identified lead "hot spots." Although new data may add new trouble spots to the picture, what is currently known is more than sufficient to target investment. Some homes can be made safe with minimal investments; others will require more extensive work and families may need to be relocated.

[13] Katrina Smith Korfmacher, University of Rochester, cited in Orr, S., McDermott, M M., Lead Poisoning Still An Issue in Rochester, Democrat and Chronicle, Feb. 5, 2016.

Case Management

Delaware should increase case management services and interventions for children already poisoned at the current blood lead reference value as set by the Centers for Disease Control and Prevention which is presently 5 micrograms per deciliter (µg/dL). This will permit children exposed to lead to receive an assessment by the Division of Public Health as well as receive critical, developmental assessments, early intervention services, and appropriate high-quality programs at a time when they are likely to be most effective and least expensive[4].

Testing and Compliance

Delaware needs to analyze the existing reporting system for blood lead levels and determine whether significant increases in the number of tests being reported from the 12-month old screening could be obtained by (a) additional office based testing equipment (so that families do not need to go to a laboratory), (b) linkages with Medicaid, insurers or the Delaware Health Information Network (DHIN) to ensure that all reports are captured, or (c) an outreach campaign to health care providers and families focused on the importance of completing blood lead testing.

How can Delaware move from the almost exclusive focus on testing and gathering data on lead poisoning to a systematic approach to solving the problem? As David Jacobs, chief scientist at the National Center for Healthy Housing and a former director in charge of lead hazard control at the U.S. Department of Housing and Urban Development said recently, "We'll never medically test our way out of this."[14] It is time for Delaware policymakers to integrate this fact into the state's approach to address the health needs of its most vulnerable children.

[14] Almendrala, A. Poisoned By Their Homes: How the US is Failing Children Exposed to Lead, The Guardian, June 26, 2019. https://www.theguardian.com/us-news/2019/jun/26/lead-exposure-us-childrens-blood-as-detectors.

Appendix

CLPAC Members

Dr. Jonathan Miller	Pediatrician, Chief of Primary Care at Nemours, *Chair*
Dr. Tammy Croce	Executive Director of DE Association of School Administrators, *Vice-Chair*
Kim Klein	Associate Secretary of Operations Support for Dept. of Education
Jamie Mack	Chief of Health Systems Protection for Dept. of Health and Social Services
Meredith Seitz	Chief Policy Advisor for Dept. of Services for Children, Youth, & Their Families
Marlena Gibson	Director of Policy & Planning for DE State Housing Authority
Carl Wahlig	President of the New Castle Board of Realtors
Dr. Frank Malone	Doctor of Psychology in New Castle County
Sandra Spence	Public Member from Sussex County

Charter of the Childhood Lead Poisoning Advisory Committee

The Childhood Lead Poisoning Advisory Committee is directed to have their first meeting within 3 months of enactment and to investigate and report to the Delaware General Assembly, within the first 12 months after commencing meetings, the Committee's findings and recommendations on all of the following:

1. The current status of compliance with the Childhood Lead Poisoning Prevention Act:
    a. Including mandatory testing at 12 months;
    b. Screening at 24 months;
    c. Screening prior to childcare or school enrollment.

2. Mechanisms to improve the Childhood Lead Poisoning Prevention Act:
    a. Including expanding universal testing to include older children;
    b. Preventive measures in rental housing built before 1978 to protect children from lead dust and degrading paint;
    c. Testing or medial risk assessment screening of pregnant and breastfeeding mothers.

3. Improving DHSS regulations:
    a. Regarding the monitoring and enforcement of blood lead level testing;
    b. The use of medical risk assessment screening, and reporting of compliance by childcare facilities and schools.

4. Improving participation in blood lead testing and medical risk assessment screening programs.

5. Practices that the Department of Education can implement to:
    a. Improve the identification of lead poisoning cases among school age children including those with learning disabilities, behavioral problems, and attention deficit disorder.

6. Improve lead poisoning prevention across state agencies and programs:
    a. Including DHSS, DNREC, DSCYF, DOE.

7. Delaware's public education needs to prevent childhood lead poisoning:
    a. Including those that address lead exposure in homes, para-occupational exposure from parents or family members, recreational sources of exposure, and lead found in cosmetics, toys and food.

Subcommittees Formed

1. Testing & Compliance Subcommittee
2. Real Estate Sales & Home/Apartment Rentals Subcommittee
3. Epidemiological Study & Environmental Surveillance Subcommittee
4. Education & Parental Engagement Subcommittee

Future Meeting Dates

The Childhood Lead Poisoning Advisory Committee is scheduled to meet as a full committee on:

- Monday, July 12, 2021, 1:30 PM – 3:00 PM
    - Virtual Meeting

The Epidemiological Study & Environmental Surveillance Subcommittee is scheduled to meet on:

- Thursday, May 13, 2021, 9:00 AM – 10:00 AM
    - Virtual Meeting

The Education & Parental Engagement Subcommittee is scheduled to meet on:

- Wednesday, April 28, 2021, 12:00 PM – 1:00 PM
    - Virtual Meeting

Past Meeting Dates

The Childhood Lead Poisoning Advisory Committee met as a full committee on:

- November 19, 2020 – Virtual Meeting
- January 25, 2021 – Virtual Meeting

- April 13, 2021 – Virtual Meeting

The following CLPAC subcommittees met on the following dates:

Testing & Compliance Subcommittee

- October 8, 2020 – Virtual Meeting
- December 18, 2020 – Virtual Meeting
- January 5, 2021 – Virtual Meeting

Real Estate Sales & Home/Apartment Rentals Subcommittee

- October 20, 2020 – Virtual Meeting
- November 5, 2020 – Virtual Meeting

Epidemiological Study & Environmental Surveillance Subcommittee

- October 15, 2020 – Virtual Meeting
- December 17, 2020 – Virtual Meeting
- February 11, 2021 – Virtual Meeting
- March 11, 2021 – Virtual Meeting
- April 8, 2021 – Virtual Meeting

Education & Parental Engagement Subcommittee

- February 23, 2021 – Virtual Meeting
- March 31, 2021 – Virtual Meeting

Joint Finance Committee, Division of Public Health Hearing Testimony
February 24, 2021

Hello, honorable members of the Joint Finance Committee. I am Dr. Jonathan Miller, pediatrician and Medical Director for the Value Based Service Organization at Nemours. I serve as Chair of the Childhood Lead Poisoning Advisory Committee.

I would first like to extend our deepest gratitude to those public and elected officials, legislative and department staff, and countless state employees and health professionals who have tirelessly worked this past year responding to the pandemic and addressing the needs of Delawareans.

While emergency management functions of our public health system are currently front and center, I bring to your attention a silent and pervasive public health threat – that of lead poisoning.

Alarmingly, we often think of lead poisoning as an issue of the past—one we have corrected for. But this is not true. Lead contamination is ever present in our current environment—from concentrated levels, like we hear of in poisoned water supplies, in chipping and old paint on playgrounds, on utility poles, bridges or water towers, or pervasive low levels in our homes from lead paint dust or soil contamination.

Lead is a neurotoxin, causing permanent and irreversible damage to the human body. Once entering the bloodstream, lead finds its way to the brain, kidneys, and bones never to leave. No level of lead is safe. Even low levels of lead in the body correlate to a lower IQ, reduce ability to pay attention, and impair academic achievement.

Reconstituted in 2019, the Childhood Lead Poisoning Advisory Committee has continued to meet during the pandemic, driven to provide recommendations to strengthen and improve the Childhood Lead Poisoning Act included in Title 16 of Delaware Code.

Comprehensive recommendations will be shared in the upcoming month that will strongly advise the lead program to take additional courses of action. The Division of Public Health efficient uses only federal dollars as the sole source of funding to support the entire Delaware Lead Poisoning Prevention Program. It should be noted though, that this is an anomaly. In fact, Delaware is only one of two states on the East Coast not using state funds to address and prevent lead poisoning.

Prevention of lead poisoning will be prioritized in our forthcoming recommendations. While ubiquitous in the environment, lead poisoning is preventable. More than half of the forty recommendations we elevate will address primary prevention, directly remediating the source of lead poisoning and finding hidden and unknown sources of lead contamination in Delaware.

Additionally, the advisory committee will recommend measures to support our current law that one year olds be tested. Right now, only 1 in 4 Delaware children receive the mandated blood lead test at age one. The committee will also strongly recommend increasing case management services to care for poisoned children at lower blood lead concentration levels – 5 micrograms per deciliter as opposed to the current level of 10 micrograms per deciliter. Our recommendations align with literature and best practice recommendations from the Centers for Disease Control and Prevention, the American Academy of Pediatrics, and leading states and localities who are effectively addressing this issue.

We look forward to your continued engagement and support in remediating this grave public health threat. We thank the Division of Public Health for their partnership and commitment. Thank you for your time.

Summary of Jurisdictions Researched

Properties Covered	Specific Requirements	Enforcement (Agency/Funding)
Maryland		
Pre-1950 properties (enacted 1993) Expanded to pre-1978 properties (enacted 2015)	• Rental units must be inspected by certified inspector (paid for by owner) at unit turnover • Registration fee of $30 per unit • Owners can get a one-time lead-free certification and be exempt from future inspections and fee, or limited lead free that must be re-inspected every two years • 10 year phase in: 5 years to get 50% of properties in compliance, 10 years for 100% • Local governments with rental licensing requirements must ask for documentation of state compliance	Maryland Department of the Environment (funded by fees)
Philadelphia		
Pre 1978 properties (enacted 2019)	• Excludes dorms, units owned or subsidized by Philadelphia Housing Authority (including with vouchers) • Must have certification of inspection within 48 months of start of lease • Allows lead-free certification • Applies to units where a child under age 6 will reside • Application to units where a child under age 6 does not reside is phased in by Regions (ZIP codes) based on prevalence of screened children with elevated blood lead levels • Includes publication of info on units $2,000 fine	
New Jersey		
All properties (enacted 2003)	• Modeled on federal Lead Safe Housing Rule	
Washington, D.C.		
Pre-1978 rental properties	• Requires owners of pre-1978 properties containing lead based paint to provide notification to tenants, provide tenants with a lead dust report, and to conduct abatement and remediation • Allows a lead free certification • Units not certified lead free must have lead dust tests performed and visual inspection, provide a "clearance report" where potential tenants include a pregnant woman or child under 6 • Complex enforcement structure that has only more recently been fully implemented	District Department of the Environment