



## OFFICE OF RACIAL EQUITY AND SOCIAL JUSTICE


Marc Elrich  
County Executive

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Director and Chief Equity Officer

### MEMORANDUM

April 6, 2023

To: Jennifer Bryant, Director  
Office of Management and Budget

From: Tiffany Ward, Director  
Office of Racial Equity and Social Justice 

Re: Racial Equity Impact Assessment (REIA) Supplemental Appropriation (SA) #23-67  
Childhood Lead Poisoning and Environment Case Management Grant

- I. **FINDING:** The Office of Racial Equity and Social Justice (ORESJ) finds that Supplemental Appropriation #23-67 *Childhood Lead Poisoning and Environment Case Management Grant* will expand access to childhood asthma and lead poisoning prevention and treatment services but it's unclear, based on available information, to what extent strategies and implementation plans will target and respond to the structural nature of the racial disparities that characterize incidence of these two health conditions.
- II. **BACKGROUND:** The purpose of Supplemental Appropriation #23-67 Childhood Lead Poisoning Prevention and Environment Case Management Grant is to allocate funding (\$550,000) from the Maryland Department of Health Healthy Homes: Lead Poisoning and Asthma Prevention grant program. The goal of the program is to improve health outcomes and reduce disparities for eligible children with either blood lead exposure, moderate to severe persistent asthma, or both. The grant will be used to create two full-time term Community Services Aide III positions and one full-time term Community Health Nurse position. Activities involved with this grant include the delivery of targeted services to children and their families experiencing lead poisoning and severe asthma.

To assess the extent to which this supplemental appropriation is likely to advance racial equity and social justice, we first looked at racial disparities in the prevalence of childhood lead poisoning and asthma and the factors that contribute to the disproportionate risk children of color and low-income children experience. We then looked at research, effective practices, and models for addressing disproportionalities to

determine whether the activities outlined in this supplemental appropriation align with those practices and are likely to shrink disparities in lead poisoning and asthma. The remainder of this REIA will discuss each condition and environmental hazard in turn.

### **Lead poisoning:**

According to the Centers for Disease Control (CDC), there are no safe Blood Lead Levels (BLL) in children, and even low levels in the blood can cause developmental delays, difficulty learning, behavioral issues, and neurological damage—all of which can be disabling and permanent<sup>1</sup>. The long-term effects of lead poisoning—because of their health and behavioral health impacts—can also exacerbate dropout risk and involvement with the juvenile justice system<sup>2</sup>. Children less than six years old are at a higher risk of lead exposure, in particular children living in housing built before 1978 (before 1978 the use of lead paint was not banned), non-Hispanic Black or African American children, children eligible for Medicaid, and children living in areas with higher poverty rates<sup>3</sup>. Children who are immigrants, refugees, or adopted from less developed countries are also at a higher risk of being exposed to lead due to less strict rules around lead exposure, in their country of origin<sup>4</sup> or potential exposure through cultural practices, traditional medicines, and consumer products<sup>5</sup>. A common risk factor for both immigrant and non-immigrant children is exposure from living in pre-1978 housing stock, a disparity rooted in redlining<sup>6</sup> and the present-day effects of those policies<sup>7</sup>.

Progress toward identifying and preventing lead poisoning spans 50 years and is marked by three distinct eras of federal policymaking. In the most recent era: 2014-2022, the water crisis in Flint, Michigan set in motion renewed increases in federal funding. Most recently, this included funding to reduce lead contamination in drinking water in H.R. 3684 Infrastructure Investment and Jobs Act<sup>8</sup>. Since the mid-1970s blood lead levels have trended downward, but multiple studies show that racial disparities persist<sup>9</sup>, particularly in housing lead paint hazards<sup>10</sup>. As previously mentioned, redlining, housing segregation, and the effects of systemic economic inequities have exacerbated these disparities.

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<sup>1</sup> <https://www.cdc.gov/nceh/lead/overview.html>

<sup>2</sup> <https://www.baltimoresun.com/news/investigations/bs-md-lead-poisoning-gaps-20151213-story.html>

<sup>3</sup> [https://www.cdc.gov/mmwr/volumes/70/wr/mm7043a4.htm?s\\_cid=mm7043a4\\_w](https://www.cdc.gov/mmwr/volumes/70/wr/mm7043a4.htm?s_cid=mm7043a4_w)  
<https://www.cdc.gov/nceh/lead/prevention/populations.htm>

<sup>4</sup> <https://www.cdc.gov/nceh/lead/prevention/populations.htm>

<sup>5</sup> <https://www.kff.org/racial-equity-and-health-policy/issue-brief/mitigating-childhood-lead-exposure-and-disparities-medicare-and-other-federal-initiatives/>

<sup>6</sup> <https://www.childtrends.org/blog/redlining-left-many-communities-color-exposed-lead>

<sup>7</sup> <https://storymaps.arcgis.com/stories/8918cfe7fbd64e36a5c05458fabe2edb>

<sup>8</sup> <https://www.congress.gov/bill/117th-congress/house-bill/3684>

<sup>9</sup> [https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood\\_Lead\\_Poisoning\\_1970\\_2022\\_Charting.16.aspx](https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood_Lead_Poisoning_1970_2022_Charting.16.aspx)

<sup>10</sup> [https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood\\_Lead\\_Poisoning\\_1970\\_2022\\_Charting.16.aspx](https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood_Lead_Poisoning_1970_2022_Charting.16.aspx)

According to research cited by Child Trends, “elevated blood levels in black and other minority children have been observed in redlined, segregated cities”<sup>11</sup>.

**Data:**

While there are many national studies demonstrating the above-described racial disparities, ORESJ was not able to identify any disaggregated data at the state or local level. In fact, in a December 2022 report, the Maryland Department of the Environment reported that only half of the blood lead tests conducted contained information on the race/ethnicity of the child<sup>12</sup>. While data was not available by race and ethnicity, data by source of lead exposure at the County level revealed some interesting insights:

**Source of Lead Hazard CY16-20, Montgomery County, MD**

| Lead Hazard   | Number    | Percentage of total environmental investigations |
|---|-----------|--|
| Total number of environmental hazards                           | 96        | 100%   |
| Lead paint  | 10        | 10%  |
| Lead dust   | 15        | 16%  |
| Water soil  | 4         | 4%   |
| Cosmetics   | 13        | 14%  |
| <b>Spices</b>   | <b>41</b> | <b>43%</b>                                       |
| Personal items (jewelry)  | 8         | 8%   |
| Hobbies (ammunition, stained glass)                             | 3         | 3%   |
| <b>Recent Travel Outside the US or Recent Arrival to the US</b> | <b>31</b> | <b>32%</b>                                       |
| Pottery or Cookware   | 12        | 13%  |
| Renovation  | 2         | 2%   |
| Occupation  | 2         | 2%   |
| Consumer Products (Toys, other)                                 | 1         | 1%   |

**Data source:** Table Eleven: Lead Hazards by County Cumulative CY16-20. 2020 Annual Report, childhood Blood Lead Surveillance in Maryland:

<https://mde.maryland.gov/programs/land/Documents/LeadCommission/2020%20Annual%20Report%2C%20Childhood%20Blood%20Lead%20Surveillance%20in%20Maryland%20%282%29.pdf>

<sup>11</sup> <https://www.childtrends.org/blog/redlining-left-many-communities-color-exposed-lead>

<sup>12</sup> [https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation\\_122022.pdf](https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation_122022.pdf)

It's important to note that this distribution is based on lead hazards identified during environmental investigations between Calendar Years (CY) 16 and 20. It does not encompass all known lead exposures in the reporting period. According to available information, environmental investigations are conducted on properties where new cases of blood lead levels are  $\geq 5$   $\mu\text{g}/\text{dL}$ . In CY20 environmental investigations were conducted on about 50% of new cases<sup>13</sup>; research suggests this is related to the Covid-19 pandemic and residents' concerns about health and safety. In addition to pandemic-related under-testing, and of continued concern, is how a lack of access to or distrust of healthcare systems, may continue to result in under-testing (despite Code of Maryland Regulations 10.11.04 which requires licensed healthcare providers to test all children ages 1 and 2 years (12 and 24 months) for lead, either by a capillary test or a venous blood draw<sup>14</sup>). ORESJ has written multiple REIAS<sup>15</sup> on systemic health inequities and their impact on residents' trust in and access to healthcare systems. Since these inequities are likely to continue, under-testing may persist and continue to affect the number of environmental investigations, resulting in an incomplete picture of lead exposure in the County and across the state.

So, while data from CY16-20 indicates that the leading cause of lead exposure in Montgomery County is spices, followed by recent travel outside of the US or recent arrival to the US (making up more than 75% of lead hazards); there may be undercounts in other categories such as lead paint, lead dust, or water soil.

Using the data available, it is clear that spices and travel outside of the US are linked to lead exposure in the County and therefore should be the focus of prevention, identification, and treatment outreach. The CDC provides information about which food, cosmetics, and medicines may be sources of lead<sup>16</sup>, but ultimately only testing products in a laboratory can confirm lead content. Without more specific information about the types of spices identified in Montgomery County or the demographics of children with lead poisoning, it is difficult to determine where targeted interventions may be most impactful. At the same time, general knowledge of the geographic distribution of the following in the County can help to identify where risk may be greater and where resources and support may be most impactful:

- housing built before 1978
- Medicaid recipients

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<https://mde.maryland.gov/programs/land/Documents/LeadCommission/2020%20Annual%20Report%2C%20Childhood%20Blood%20Lead%20Surveillance%20in%20Maryland%20%282%29.pdf>

<sup>14</sup> [https://health.maryland.gov/phpa/OEHFP/EH/Shared%20Documents/Lead/Physician%20follow-up%20Lead%20Letter\\_01252022.pdf](https://health.maryland.gov/phpa/OEHFP/EH/Shared%20Documents/Lead/Physician%20follow-up%20Lead%20Letter_01252022.pdf)

<sup>15</sup> <https://www.montgomerycountymd.gov/ore/Resources/Files/22-49.pdf> and <https://www.montgomerycountymd.gov/ore/Resources/Files/23-66.pdf>

<sup>16</sup> <https://www.cdc.gov/nceh/lead/prevention/sources/foods-cosmetics-medicines.htm>

- poverty rates
- participation in the free and reduced meals program
- immigrant-serving organizations
- proximity to stores selling spices or other goods identified as having elevated lead exposure risk.

In addition, given that spices made up the largest portion of lead exposure in the County between CY16-20, it is worthwhile to revisit the County's publicly available Childhood Lead Poisoning Case Management<sup>17</sup> site so that it reflects other sources of lead poisoning in addition to lead paint and dust. Child Trends advocates for a similar approach, "where local data indicate that children are being exposed to lead from sources such as candy, health remedies, or cosmetics, state, and local agencies should target education and outreach to at-risk neighborhoods; support cultural awareness among physicians; and increase investigation and enforcement of small retailers."<sup>18</sup> It's important to note that in no way should target strategies delivered by the positions named in the supplemental appropriation (or any other) include punitive or enforcement measures from the state or landlords, particularly given that lead poisoning is an environmental hazard from which parents and families have very little protection.

In the formulation of targeted strategies, it is important to be aware of the larger policy context around lead poisoning prevention. A few highlights include:

Recommendations from a December 2022 Maryland Department of Health Environmental Health Bureau evaluation state that MDH and MDE should work with the provider community to increase testing rates and improve provider reporting of blood lead test results and data on race and ethnicity<sup>19</sup>. This data will help assess the equity of testing and lead hazard mitigation measures. In addition, the report states that state agencies need to carefully evaluate the messaging, effort, resources, and health equity implications of the CDC's recently released blood lead reference value as it will likely increase the number of children who require some clinical and/or case management follow-up<sup>20</sup>. The report also notes the importance of assessing testing strategies to ensure that they do not "dilute efforts to increase testing in populations that have historically not had as much testing and risk potentially exacerbating inequities in testing resources and efforts"<sup>21</sup>.

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<sup>17</sup> <https://www.montgomerycountymd.gov/HHS-Program/PHS/PHSChildLeadPos-p264.html#faq>

<sup>18</sup> <https://www.pewtrusts.org/en/research-and-analysis/reports/2017/08/10-policies-to-prevent-and-respond-to-childhood-lead-exposure>

<sup>19</sup> [https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation\\_122022.pdf](https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation_122022.pdf)

<sup>20</sup> [https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation\\_122022.pdf](https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation_122022.pdf)

<sup>21</sup> [https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation\\_122022.pdf](https://health.maryland.gov/phpa/OEHFP/EH/Documents/MDLeadTestingEvaluation_122022.pdf)

Finally, engagement with landlords, housing advocacy organization, and state-level stakeholders is necessary to help address other gaps in policy that lead to increased lead poisoning risk among children of color and low-income children. For example, the State of Maryland requires landlords to have their properties inspected for lead paint hazards, but there is a lack of proactive enforcement<sup>22</sup>. At the federal level, tenant-based Section 8 housing choice vouchers do not require lead paint risk assessments (Title X Section 1012)<sup>23</sup>.

### **Asthma:**

Asthma is a chronic lung disease characterized by airway inflammation, the symptoms of which include wheezing, shortness of breath, chest tightness, and/or cough in addition to airflow limitations<sup>24</sup>. Asthma attacks can be brought on by air pollution, allergens, tobacco smoke, exercise, and infections<sup>25</sup>. It is estimated that four million children, under the age of 18, had asthma in 2020<sup>26</sup>. In Maryland, 7.6% of children had asthma in 2018<sup>27</sup>. As with lead exposure and poisoning, there are racial disparities in the prevalence of the disease, indicating that children of color are at a higher risk of asthma-related emergency department visits and associated negative health and education outcomes. While not exclusive to children, the below graphic shows, even while asthma emergency department visit rates have been declining for Black Marylanders, large gaps still persist compared to other groups of Marylanders, with the largest gap being between Black and White Marylanders in 2018.

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<sup>22</sup> <https://www.baltimoresun.com/news/investigations/bs-md-lead-poisoning-gaps-20151213-story.html>

<sup>23</sup> [https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood\\_Lead\\_Poisoning\\_1970\\_2022\\_Charting.16.aspx](https://journals.lww.com/jphmp/Fulltext/2023/03000/Childhood_Lead_Poisoning_1970_2022_Charting.16.aspx)

<sup>24</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8461584/>

<sup>25</sup>

<https://health.maryland.gov/phpa/OEHFP/EH/pages/asthma.aspx#:~:text=In%20Maryland%2C%207.6%25%20of%20children,was%2019.4%20per%2010%2C000%20residents.>

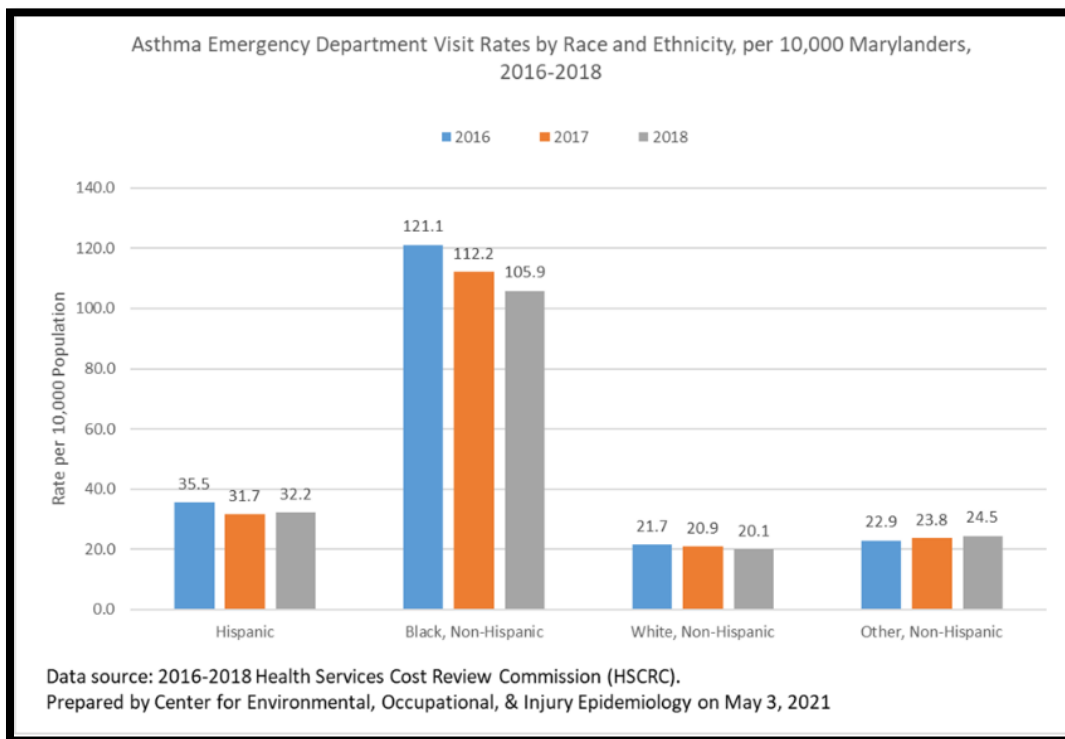
<sup>26</sup> [https://www.cdc.gov/asthma/most\\_recent\\_national\\_asthma\\_data.htm](https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm)

<sup>27</sup>

<https://health.maryland.gov/phpa/OEHFP/EH/pages/asthma.aspx#:~:text=In%20Maryland%2C%207.6%25%20of%20children,was%2019.4%20per%2010%2C000%20residents.>



**Data:**



**Source:** “Asthma Disparities in Maryland”.

<https://health.maryland.gov/phpa/OEHFP/EH/pages/asthma.aspx#:~:text=In%20Maryland%2C%207.6%25%20of%20children,was%20119.4%20per%2010%2C000%20residents.>

**Image description:** Bar chart comparing Asthma emergency department visit rates per 100,000 Marylanders, between 2016 and 2018. From left to right: Hispanic rate: 35.5 (2016), 31.7 (2017), and 32.2 (2018); Black, Non-Hispanic rate: 121.1 (2016), 112.2 (2017), 105.9 (2018); White, Non-Hispanic rate: 21.7 (2016), 20.9 (2017), 20.1 (2018); Other, Non-Hispanic rate: 22.9 (2016), 23.8 (2017), 24.5 (2018).

According to a study led by Harvard T.H. Chan School of Public Health, “Black and Hispanic children were at significantly higher risk of developing asthma than white children, regardless of income levels”<sup>28</sup>. What was most significant about the study is that it confirmed the role of structural factors, including racism, discrimination, discriminatory policies, education, the physical environment, and healthcare inequities<sup>29</sup>. Another study named poor housing quality and lack of homeownership<sup>30</sup>—both legacies of redlining—as factors perpetuating racial and

<sup>28</sup> <https://www.hsph.harvard.edu/news/hsph-in-the-news/childrens-asthma-rates-linked-with-neighborhood-characteristics-race-ethnicity/>

<sup>29</sup> <https://www.hsph.harvard.edu/news/hsph-in-the-news/childrens-asthma-rates-linked-with-neighborhood-characteristics-race-ethnicity/>

<sup>30</sup> <https://howhousingmatters.org/research-summary/can-housing-explain-racial-disparities-childhood-asthma>

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ethnic disparities in asthma outcomes. So, lead poisoning, housing, and other health inequities have exacerbated risks and negative outcomes.

While the Maryland Childhood Lead Poisoning Prevention and Environmental Case Management Program is intended to reduce exposures to lead and to asthma triggers by providing in-home services, the details related to how this supplemental appropriation will be implemented and how related data will be tracked in Montgomery County were not available. Given the racial disparities that characterize both childhood lead poisoning and asthma rates and the role of structural factors like access to high-quality affordable housing and health care play, it is likely that this supplemental appropriation will expand needed services but it's unclear whether it will help to close gaps.

cc: Dr. James Bridgers, Director, Department of Health and Human Services  
Ken Hartman, Director, Strategic Partnerships, Office of the County Executive