

# Children's Health Protection Advisory Committee

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March 24, 2017

Administrator Scott Pruitt  
United States Environmental Protection Agency  
1200 Pennsylvania Ave, NW  
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RE: Highest Priorities for Childhood Lead Exposure Prevention

Dear Administrator:

Congratulations on your appointment as Administrator of the Environmental Protection Agency (EPA). As the Agency's advisory committee on children's health, we are responding to the following request:

*In the context of the recent attention on childhood lead exposure and considering past recommendations from the Children's Health Protection Advisory Committee (CHPAC) and considering current activities (regulatory actions, research, outreach, enforcement, and the Task Force efforts), what is your highest priority advice for EPA?*

The current medical and scientific consensus is that there is no safe blood lead level in children.<sup>1</sup> CDC set a reference level of 5 micrograms of lead per deciliter of blood ( $\mu\text{g}/\text{dL}$ ) to identify children who are priorities for public health intervention and case management.<sup>2</sup> Even levels below 5  $\mu\text{g}/\text{dL}$  are associated with decreased academic achievement, lower IQ scores, attention-related behavior problems, and antisocial behavior.<sup>3</sup> These neurological effects have lifelong impacts on individuals, families, communities and our society, and may be irreversible. Thus, public health actions must focus on exposure prevention rather than just remedial interventions for children exposed to lead.

Since the 1970s, mean blood levels in young children have dropped dramatically, by more than 94%, as a result of policy actions primarily by reducing lead in paint, gasoline and consumer products; managing existing lead in paint and plumbing more carefully; and removing lead whenever it cannot be safely managed in place.<sup>4</sup> Despite this substantial progress, data from the Centers for Disease Control and Prevention (CDC) show that millions of U.S. children are still being exposed to lead.<sup>5</sup>

In addition, economic and racial disparities in childhood lead exposure persist. Children in low-income households are still three times more likely than children from high-income households, and African-American children are twice as likely as white children, to have elevated blood lead levels.<sup>6</sup> Cost benefit analysis has shown that every dollar invested in controlling those exposures returns at least \$17 in social and economic benefits.<sup>7</sup>

To further prevent childhood exposure to lead, CHPAC identified the four highest priorities for EPA action. These are:

- Strengthen the Agency's Lead-Based Paint Hazards Standard for lead in paint, dust, and soil;
- Revise the Lead and Copper Rule to reduce lead in drinking water;
- Improve risk communication efforts to provide clarity and consistency; and
- Encourage the Administration's infrastructure investment program to support healthy housing, childcare facilities, and schools, and safe drinking water.

### **Strengthen the Agency's Lead-Based Paint Hazards Standard for lead in paint, dust, and soil**

Lead-based paint is the most significant source of elevated blood lead levels in young children. The current Lead-Based Paint Hazards Standard<sup>8</sup> at 40 CFR Part 745 Subpart B defines the amount of lead in paint, dust, and soil that poses a significant hazard to children in housing and child-occupied facilities. The standard was established in 2001<sup>9</sup> and needs updating to reflect the current reference level for public health intervention set by CDC. The standard also needs to reflect the latest health research on the risks posed by low levels of exposure to lead in young children, especially in toddlers due to their high hand-to-mouth activity.

The best evidence shows that a young child living in a home meeting the current lead dust standard still has a 50% chance of exceeding the CDC reference level for blood lead. In 2012, EPA's Science Advisory Board recommended that the Agency revise its scientific model to better reflect this risk.<sup>10</sup> In addition, the Department of Housing and Urban Development (HUD) substantially lowered its dust lead standards for its Lead Hazard Control grants on February 1, 2017.<sup>11</sup> These actions indicate that EPA needs to strengthen its dust-lead standards.

For these reasons, CHPAC recommends that EPA, in coordination with HUD, make strengthening the Lead-Based Paint Hazards Standard for paint, dust, and soil one of its highest priorities in its efforts to reduce children's blood lead levels.

### **Revise the Lead and Copper Rule to reduce lead in drinking water**

Drinking water is also a significant source of exposure to lead, as highlighted by several high-profile episodes of municipal drinking water contamination with lead (e.g., Flint, MI, Sebring, OH and Washington, DC) over the last decade.<sup>12</sup> Health risks are highest for formula-fed infants because they drink the most water of all age groups in proportion to their body weight.<sup>13</sup>

In 2015, EPA's National Drinking Water Advisory Council (NDWAC) recommended<sup>14</sup> that the Agency overhaul its Lead and Copper Rule. NDWAC laid out specific recommendations drawn from the lessons learned from the recent experiences. The recommendations included:

- Making lead service line replacement an essential and ongoing part of a long-term program rather than only a last resort when other methods fail. These lead pipes that connect the water main under the street to homes are the source of most of the lead in tap water.
- Establishing a water concentration at which a formula-fed infant is likely to have an elevated blood lead level.
- Requiring water utilities to notify the local health department and residents when tap water tests for lead exceed the abovementioned health-based water concentration.
- Updating how water testing for lead is performed to make it more accurate and relevant.

The American Water Works Association, the primary association representing drinking water utilities, has endorsed NDWAC's recommendations and called for EPA to strengthen the Lead and Copper Rule.<sup>15</sup>

EPA committed to publishing a proposed rule in 2017 and promulgating a final rule as soon as possible after considering public comments. CHPAC recommends that EPA strengthen its lead in drinking water standards in 2017 consistent with NDWAC's recommendations and the lessons learned from recent water system lead contaminations.

### **Improve risk communication efforts to provide clarity and consistency**

Increasing the public's understanding of the risks posed by lead will enable individuals to take action to prevent harm. A key means of communicating this risk is EPA's "Protect Your Family from Lead in Your Home" booklet that is given to every family who is buying or renting a home built before 1978.<sup>16</sup> This booklet, distributed tens of millions of times each year, focuses on lead-based paint hazards, but insufficiently describes other important lead sources including, but not limited to, drinking water faucets, plumbing, traditional and cultural products, and take-home exposures from work. It also treats all homes built before 1978 as equal and does not explain that the likelihood of having lead-based paint varies dramatically based on the age of the home. Finally, it relies heavily on text rather than graphics making it less effective for some audiences.

CHPAC recommends that EPA update the booklet to more effectively communicate the risks posed by lead and more fully describe the various sources and actions people can take to protect their family from lead in their home.

Due to the high level of intra-agency and inter-agency coordination necessary to create consistent, culturally-sensitive, multi-lingual, and impactful messaging about lead and the need for expertise in pediatric environmental health and in risk communication, CHPAC recommends that the Office of Children's Health Protection (OCHP) coordinate pediatric lead risk communication activities within EPA including the update to the booklet.

Beyond updating the "Protect Your Family from Lead in Your Home" booklet, EPA can greatly amplify and extend its lead poisoning prevention communications through partnerships. CHPAC recommends that EPA leverage its limited resources through the following:

- The President's Task Force on Environmental Health Risks and Safety Risks to Children serves as a key body to coordinate federal risk communication regarding lead to provide greater clarity and consistency. Its 2016 report highlights the critical work of nine agencies and departments that protect children from lead.
- The Pediatric Environmental Health Specialty Units (PEHSUs) continue to serve EPA as a conduit for information for the public and health care providers on the hazards of lead in the home, childcare facilities, schools, and other venues in which children may be exposed. Staffed by pediatricians, medical toxicologists, nurses and other health care providers with expertise in pediatric environmental health, PEHSUs are optimally positioned to communicate the risks of lead.
- State and local health departments conduct extensive outreach to the communities they serve. They are a respected source of lead exposure reduction information and, with sufficient resources, effectively reach landlords, renovation contractors, health professionals, and community members.

In sum, CHPAC recommends that in order to achieve the goal of reducing lead exposure EPA should, with OCHP coordinating the effort: strengthen and expand its communication materials; use the President's Task Force to coordinate efforts with other federal agencies; and collaborate more actively with and support PEHSUs and state and local health departments.

**Encourage the Administration's infrastructure investment program to support healthy housing, childcare facilities, and schools, and safe drinking water**

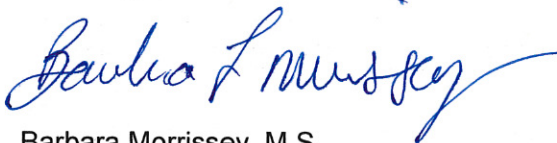
Infrastructure is often thought of as roads and airports. Reducing lead from all of these sources including eliminating lead in aviation gas and preventing release of lead during bridge repairs remain important. However, CHPAC maintains that healthy housing, childcare facilities, and schools, and safe drinking water are also essential parts of our country's infrastructure and central to reducing exposure to lead. Congress recognized this when it authorized the Water Infrastructure Improvements for the Nation Act and authorized EPA "to establish a \$300 million grant program to replace lead service lines on residential property in disadvantaged communities."<sup>17</sup> Congress also provided ongoing support for HUD's lead hazard control grants program in low income housing.

CHPAC recommends that EPA work closely with HUD, CDC, Department of Agriculture, and other sister agencies through the President's Task Force on Environmental Health Risks and Safety Risks to Children to help ensure that all Administration infrastructure investment programs make housing, childcare facilities, and schools healthier, and drinking water safer.

In conclusion, public policies reducing lead exposure have resulted in tremendous health benefits for children. Despite this progress, we know that even low levels pose harm to children's brain development and that there is no safe amount of lead in blood. In addition, low-income children and children of color continue to be disproportionately exposed to lead. To reduce ongoing exposures to lead, CHPAC recommends that the Agency continue current activities to protect children from environmental lead exposure and take stronger and swifter action on our four highest priorities described above.

Thank you for your commitment to protecting children's health and for the opportunity to provide you with this guidance. Please let us know if you or your team have questions or comments.

Sincerely,



Barbara Morrissey, M.S.  
Chair

cc: Barry Breen, Office of Land and Emergency Management  
Eric Burneson, Office of Water  
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<sup>1</sup> American Academy of Pediatrics, Council on Environmental Health, *Prevention of Childhood Lead Toxicity*, *Pediatrics*. 2016;138(1):e20161493. See

<http://pediatrics.aappublications.org/content/pediatrics/early/2016/06/16/peds.2016-1493.full.pdf>.

<sup>2</sup> CDC, What Do Parents Need to Know to Protect Their Children?, accessed February 1, 2017 at [https://www.cdc.gov/nceh/lead/acclpp/blood\\_lead\\_levels.htm](https://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm).

<sup>3</sup> National Toxicology Program, *Monograph on Health Effects of Low-Level Lead*. Research Triangle Park, NC: National Institute of Environmental Health Sciences; 2012:xiii, xv–148. See [http://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealththeeffectslowlevellead\\_newissn\\_508.pdf](http://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealththeeffectslowlevellead_newissn_508.pdf).

<sup>4</sup> Environmental Defense Fund, A national commitment to reduce exposure, 2016. See <https://www.edf.org/health/national-commitment-reduce-exposure>.

<sup>5</sup> CDC, Childhood Lead Poisoning Data, Statistics, and Surveillance, accessed March 13, 2017 at <https://www.cdc.gov/nceh/lead/data/index.htm>.

<sup>6</sup> Centers for Disease Control and Prevention, Blood Lead Levels in Children Aged 1-5 Years – United States, 1999-2010, *MMWR*, April 5, 2013 / 62(13);245-248. See [https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm?s\\_cid=mm6213a3\\_e](https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm?s_cid=mm6213a3_e).

<sup>7</sup> Gould, Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control, *Environ Health Perspectives* 117:1162–1167 (2009). doi:10.1289/ehp.0800408. See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717145/pdf/ehp-117-1162.pdf>.

<sup>8</sup> 40 CFR Part 745 Subpart B.

<sup>9</sup> 66 FedReg 1237, January 5, 2001. See <https://www.federalregister.gov/documents/2001/01/05/01-84/lead-identification-of-dangerous-levels-of-lead>.

<sup>10</sup> EPA, SAB Review of EPA's Approach for Developing Lead Dust Hazard Standards for Residences (November 2010 Draft) and Approach for Developing Lead Dust Hazard Standards for Public and Commercial Buildings (November 2010 Draft), 2011. See [https://yosemite.epa.gov/sab/sabproduct.nsf/CD05EA314294B683852578C60060FB08/\\$File/EPA-SAB-11-008-unsigned-revised.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/CD05EA314294B683852578C60060FB08/$File/EPA-SAB-11-008-unsigned-revised.pdf).

<sup>11</sup> S.612. P.L. 114-322. See <https://www.congress.gov/bill/114th-congress/senate-bill/612>.

<sup>12</sup> AAP, *Prevention of Childhood Lead Toxicity*, *Pediatrics*. 2016;138(1):e20161493.

<sup>13</sup> EPA, Proposed Modeling Approaches for a Health-Based Benchmark for Lead in Drinking Water, 2017. See <https://www.epa.gov/dwstandardsregulations/lead-modeling-peer-review>.

<sup>14</sup> <https://www.epa.gov/sites/production/files/2016-01/documents/ndwacrecommtoadmin121515.pdf>.

<sup>15</sup> AWWA, Press Release, AWWA Board supports recommendation for complete removal of lead service lines, 2016. See <https://www.awwa.org/Portals/0/files/resources/publicaffairs/pdfs/030816ndwacrecommendations.pdf>.

<sup>16</sup> Protect Your Family Form Lead In Your Home, accessed February 1, 2017 at <https://www.epa.gov/lead/protect-your-family-lead-your-home>.

<sup>17</sup> S.612. P.L. 114-322 (2106). See <https://www.congress.gov/bill/114th-congress/senate-bill/612>.