Investing In Michigan’s Children:
Economic benefits of reducing lead exposure and the costs of inaction

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About us

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Outline

1. Review of studies on costs of lead exposure
   - National focus
   - Michigan focus

2. Facilitated Discussion: What analyses on cost would help you?

3. Available Funding to reduce lead exposure


5. Q/A
The Cost of Lead Exposure: National Studies
The Lancet Commissions

- 2018 Philip Landrigan, et. al.
- Burden of disease attributable to pollution
- The economic costs of pollution and pollution-related disease
- Pollution-related disease, poverty, and the SDGs
- Effective interventions against pollution: priorities, solutions, and benefits
10 Policies to Prevent and Respond to Childhood Lead Exposure

• 2017, Pew Charitable Trusts, Robert Wood Johnson Fnd., Health Impact Project
• NHANES surveys (2011-14) for baseline childhood BLL
• Top 3 Policy Priorities
• Additional sources
• Poisoning response
• Data and research
Top 3 Policy Priorities

• Reduce lead in drinking water in homes built before 1986 and other places children frequent.

• Remove lead paint hazards from low-income housing built before 1960 and other places children spend time.

• Increase enforcement of the federal renovation, repair, and painting rule.
Table 1
Keeping Blood Lead Levels of Children Born in 2018 at Zero Would Generate $84 Billion in Benefits
Future savings and increased earnings by source and recipient

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Value (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased lifetime earnings for entire 2018 cohort</td>
<td>$77.2</td>
</tr>
<tr>
<td>Health savings</td>
<td>$1.7</td>
</tr>
<tr>
<td>Education savings</td>
<td>$1.9</td>
</tr>
<tr>
<td>Quality-adjusted life years benefits</td>
<td>$3.1</td>
</tr>
<tr>
<td><strong>Total future benefits</strong></td>
<td><strong>$84.0</strong></td>
</tr>
<tr>
<td>Share to the federal government</td>
<td>$18.5</td>
</tr>
<tr>
<td>Share to state and local governments</td>
<td>$9.6</td>
</tr>
<tr>
<td>Share to households, private sector, and other nongovernmental entities</td>
<td>$55.9</td>
</tr>
</tbody>
</table>

Notes: Analysis is based on the 2018 birth cohort, estimated at approximately 4 million children. Future benefits are discounted at 3 percent per year to account for the changing value of money over time. Quality-adjusted life years is the number of additional healthy years of life resulting from an intervention, which the research team conservatively valued at $50,000 for each additional year of healthy life. Total future benefits include small changes in incarceration costs, which are not itemized in the table.

Source: Altarum Institute Value of Prevention Tool calculation. See the appendix for details on the model methodology and underlying data sources.

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The Cost of Lead Exposure: Michigan Studies

- Price of Pollution, 2010 – Ecology Center & Michigan Network for Children’s Environmental (MNCEH)
- Health Economic Impacts of Lead Exposure and Remediation in Michigan, 2014 – UM Risk Science Center & MNCEH
- Health Economic Impacts of Lead Exposure and Remediation in Michigan: Update, 2016 – Ecology Center & MNCEH
- Valueofleadprevention.org – Altarum 2019
Earlier Michigan Studies

Total Lead Cost $3.2-4.85 Billion/yr – looks at all EBLLs, uses means from MI and CDC

Total Lead Cost $330 Million/yr
Looks at EBLL > 5µ/dL
2016 Economic Impacts of Lead Exposure in MI

Total Cost 270 million/yr
- Decreased lifetime earnings $171M
- Increased lead associated crime and juvenile delinquency $77M
- Increased health care costs $18M
- Increased special education costs $2.5M

Summary of Costs Associated with Lead Exposure, 2014

- Blood lead treatment
- Treatment of lead-related ADHD
- Increases in special education
- Reduction lifetime earnings, NPV
- Increased crime, direct costs
- Juvenile incarceration related to childhood lead
- Adult crimes related to childhood lead
Michigan

**Total Cost**

$2.3B

*Lifetime economic burden of childhood lead exposure in Michigan.*

Calculated for the 2019 birth cohort. Includes costs of reduced lifetime productivity; increased health care, education, and social assistance spending; and premature mortality.

**Number of Children Exposed**

12,161

*Blood levels >2 μg/dL*

Children in the 2019 birth cohort predicted to have blood lead levels >2μg/dL. This is 11% of all births in Michigan.

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**Map of Current Exposure Risks**

Lead exposure risks for children born in 2019, shown as the estimated percent of children who will have blood lead levels above 2 μg/dL for each county in the State of Michigan. Darker shades indicate greater risks of lead exposure for children.
Discussion:
What cost estimates do you need?
What is most compelling to you?

• Costs of specific policies?
  • see example on re: lead in school water
• Cost comparison of different types of remediation?
• Primary prevention, estimated abatement, case management?
• Annual costs?
• Per child costs?
• Community level (county, city, zip, etc)?
Available Resources

- HH & CLPPP Dollars
- CHIP $
- GF $
- HUD $
- DUFB
- Lead & Cu Rule/A.L.E
- Other
Innovative Initiatives

- MIALSH policy priorities
- $ to local communities
- Daycare pilot
- Essential Local Public Health Service
- CLEEC
Policy Priorities

- **Universal lead testing**
- **Require a lead-based paint inspection**
- **Shift the burden of proof to landlords**
- **Alert prospective buyers or renters to Repeat Homes**
- **Identify and secure a dedicated funding**
- **Have the state of Michigan takeover the federal RRP program**
- **Support workforce development efforts**
- **Get match for Michigan’s federal Children’s Health Insurance Program (CHIP)**
Lead Hazard Control Programs

- Lead Safe Home Program
- Lead Safe Home Program Target Areas
- Lead Hazard Control Community Development Grantees (LHCCD)
- LHCCD Future FY20
Daycare Pilots

• Year one pilot
• In home residential childcare
• 9,222 Licensed childcare facilities in Michigan
• Outreach, education and interventions
• Goal to cover gaps & validate approach
Making Lead Response an Essential Local Public Health Service

- [Essential Local Public Health Service](#) - PA 368 of 1978
- New budget boilerplate - Sec. 1238 of PA 67 of 2019
- State-wide baseline
- Even the playing field
- Unmet need
- Supporting families
- Preparing for a bump
Child Lead Exposure Elimination Commission (CLEEC)

Established 2017 - executive order by Gov. Snyder
https://www.michigan.gov/leadcommission

• 15 members appointed by Governor

• Main goal: Primary Prevention of lead Exposure

• Tina and Becca proud to serve on the CLEEC!
CLEEC Policy Priorities - 2018 Action Plan

• Lead inspection, risk assessments (LIRA) before transfer or lease transfer of pre-1978 housing.

• Rental certification program for high-risk housing requiring lead inspection risk assessment until deemed lead-free.

• Require LIRA in childcare and adult-care facilities every two years in pre-1978 buildings, and require dust, soil, and water testing in post-1978 buildings.

• Update “Landlord Penalty” law: use when child’s blood level $\geq$ 5 μg/dL.

• Set a health-based household action limit for drinking water.

• Adopt statewide housing code enforcement addressing exposure from lead based paint.

• Require a contractor seeking a building permit on a pre-1978 home to prove Lead-Safe Certification.
CLEEC Funding Priorities

• Find adequate, dedicated, sustained funding.
• Permanent source of funding for EBLL investigations.
• Funding for Lead Safe Housing Registry.
• Incentives for local health departments to build capacity.
• Funding for follow-up when owner fails to remediate hazards.
• Funding for LIRAs in high-lead neighborhoods.
• Funding, IT, and infrastructure support to local communities.
Child Lead Exposure Elimination Commission

2018 RFP Focus: primary prevention - 11 Funded Projects, $757,500

- District Health Department #10 - Primary Lead Exposure Prevention Project for Pregnant Women and Families
- Healthy Homes Coalition of West Michigan, Inc.- Infant/Toddler Home Screening Project
- Institute for Population Health, Inc. - Protect Michigan’s Children: Actions to Prevent Childhood Lead Poisoning
- Jackson County Health Department - Preventing Lead Exposure in Pregnant Women
- Michigan State University Division of Occupational and Environmental Medicine - Worksite Intervention to Mitigate Child Take-Home Lead Exposure
- National Center for Healthy Housing - Technical Assistance for Code Transformation and Innovation Collaborative
- Oakland County Health Division - Multi-Component Lead Poisoning Testing and Education Initiative for Oakland County
- Our Kitchen Table - Educate to Elevate
- Southeastern Michigan Health Association/CLEARCorps Detroit - Lead Safe Blocks: 48206 Primary Prevention Project

2019 RFP: primary prevention and universal testing - 13 Funded Projects
Questions and Discussion
Contact us!

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Materials from our organizations are available at the Ecology Center’s booth. Stop by and visit us!