SUMMARY OF FINDINGS

Global health burden and cost of lead exposure in children and adults: a health impact and economic modeling analysis

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The findings indicate the global health risks of lead exposure are similar to PM2.5 and household air pollution combined, and three times greater than unsafe drinking water, sanitation, and handwashing.

A central implication for future research and policy is that LMICs bear an extraordinarily large share of the health and cost burden of lead exposure; consequently, research, policies, and practices are very urgently needed to address that burden.

THE COST OF LEAD EXPOSURE—2019

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<th>CARDIOVASCULAR DEATHS—CVD</th>
<th>IQ POINTS LOST</th>
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<td>5.5 million adults died from CVD in 2019 due to lead exposure.</td>
<td>Children under age five lost 765 million IQ points.</td>
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<td>90–95% of this burden was in low- and middle-income countries (LMICs).</td>
<td>IQ loss in LMICs is nearly 80% higher than a previous estimate.</td>
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<td>CVD deaths are 6 times GBD 2019's estimate.</td>
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CONCLUSION

“Reducing environmental lead exposure has almost immediate benefits for young children in terms of preventing cognitive impairment.

Reducing exposure also has long-term adult CVD benefits for today’s children of all ages. A question is, however, if reducing exposure can also benefit today’s adults who have been exposed to lead throughout their lives. Some studies shed some light on this which have shown that EDTA chelation therapy very effectively removes lead from the body and reduces the risk of adverse cardiovascular events over a five-year follow-up period in patients with prior myocardial infarction.”

—LARSEN AND SANCHEZ-TRIANA

The global financial cost of lead exposure in 2019 was US $6 trillion, equivalent to 7% of global GDP. In LMICs, it accounted for more than 10% of GDP.

Welfare cost of CVD mortality: 77%

Present value of future income losses from IQ loss: 23%