

Lead Poisoning: An Invisible Public Health Emergency



by **DR INDU BHUSHAN**, *Founder-CEO, Ayushman Bharat*

Lead poisoning is one of the most under-recognised public health challenges in the country. We should learn from a recent tragedy known as the Flint Water Crisis. In 2014, Flint city in Michigan USA switched its water supply from Lake Huron to the Flint River to save costs. This seemingly small decision led to a public health catastrophe—Flint’s new water supply was contaminated with lead, putting the entire city at risk. Over time, this discovery led to a community-driven campaign to reverse the decision and mitigate the damage. What began as an effort to save \$200,000 a year ended up costing the government nearly a billion dollars, including a \$600 million settlement for Flint’s residents.

The Flint crisis occurred in one of the world’s most advanced countries, just a decade ago. If such a disaster can happen in the United States, the risk in developing nations, including India, becomes even more pressing.

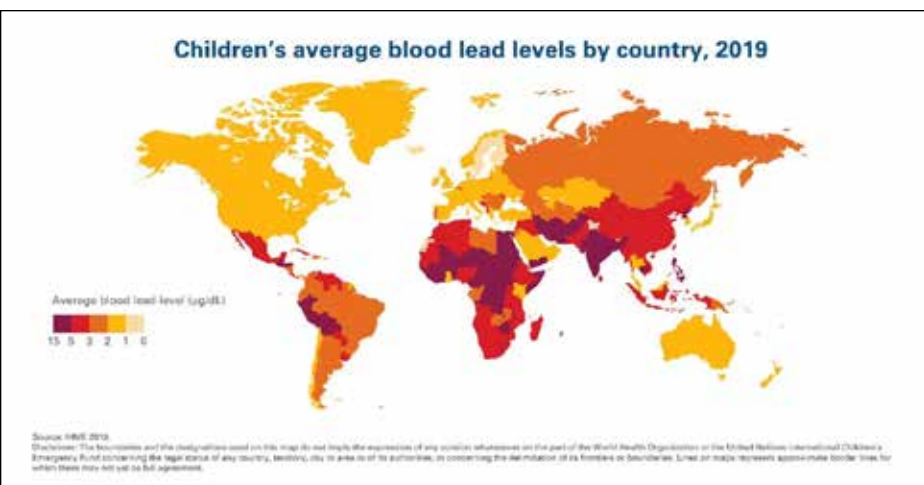
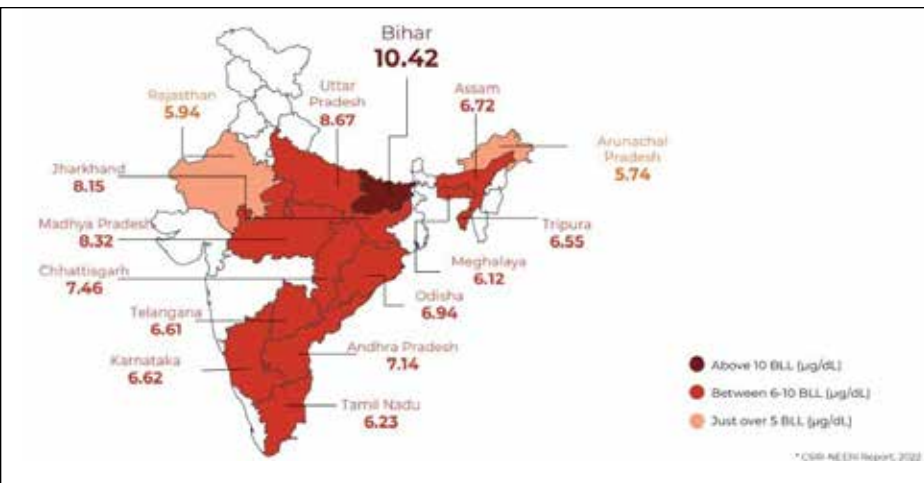
This crisis has been documented in several books including “What Eyes Don’t See” by the paediatrician Mona Hanna Attisha, who started the movement. The title of the book captures the essence of the problem. Lead is a silent, invisible killer—it cannot be seen, tasted, or smelled, but its effects, especially on children, are devastating. Lead exposure leads to cognitive deficits, developmental delays, and numerous long-term health problems. Sadly, more than half of Indian children have

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Not surprisingly, in India, the dangers of lead exposure have been largely overlooked. Government programmes and policies do not focus on mitigating the danger of lead exposure and addressing its impact. A recent survey in Jharkhand found that more than 80% of healthcare professionals are not even aware of the issue of lead poisoning. Government health facilities are not equipped to test lead levels in blood. Without awareness and action, lead poisoning will continue to harm the most vulnerable, especially children. To address this crisis, a multi-faceted approach is needed, with government leadership, healthcare reforms, and public awareness campaigns playing a central role.

The first step in addressing lead poisoning is understanding the scale of the problem. The country needs a robust national surveillance program that monitors blood lead levels, especially among children, pregnant women, and industrial workers. Establishing a national lead registry could be a critical first step. This would allow policymakers to gain a comprehensive view of where lead poisoning is most prevalent, helping to direct resources and interventions where they are needed most. Collecting data at this scale is crucial for informing policy and public health measures.



Identifying the sources of lead exposure is the next priority. In India, lead enters the body through many channels, including contaminated water, lead-based paints, certain spices, cosmetics, and even air pollution. Mapping out the regions where lead exposure is most likely to occur, such as industrial areas, urban slums, and informal recycling sites, will allow for targeted interventions. For example, informal recycling of lead-acid batteries is a major contributor to lead exposure. In such cases, informal recycling practices must be discouraged, while formal recycling processes should be incentivized through tax reductions and better regulatory frameworks.

Strengthening the regulatory framework is essential to controlling the sources of lead exposure. India already has some regulations governing lead content in products like food, cosmetics, paints, and water. However, the enforcement of these regulations is often inadequate. Enforcement agencies need to ensure that standards are followed strictly, especially in sectors where informal practices dominate. Expanding “extended producer responsibility” could be one way to hold manufacturers accountable for the safe disposal of lead-containing products, ensuring that lead is handled properly from production through to disposal.

Alongside regulatory efforts, the healthcare system must be strengthened to deal with lead poisoning more effectively. Doctors and health workers should be trained to recognize the symptoms of lead poisoning, and lead screening should become a routine part of health check-ups, especially for children and pregnant women. Ayushman Bharat Arogya Mandirs and schools could play a critical role in screen-

ing, and positive cases must be followed up with investigations to eliminate the sources of exposure. Moreover, investing in cost-effective technologies for testing blood lead levels and detecting environmental contamination is vital to long-term success. Integrating this issue into medical and public health education would ensure that future healthcare workers are equipped to tackle lead poisoning.

Public awareness is the backbone of any successful health intervention. Lead poisoning remains largely invisible to the general public in India, meaning many do not know how they or their children might be at risk. National awareness campaigns should focus on educating people about the dangers of lead exposure and how to prevent it. This can involve partnerships with NGOs, schools, and community groups to spread the message, while advocacy aimed at policymakers and industries highlights the economic and social costs of inaction.

Addressing lead poisoning is not a challenge that any one organization or sector can take on alone. It requires a multi-sectoral effort, involving various ministries, government departments, private industries, and community organizations. Ministries focused on health, environment, and industry all need to work together to reduce the sources of exposure and protect public health. Collaboration between the public and private sectors will be key, especially in regulating industries that contribute to lead contamination.

The Flint Water Crisis serves as a reminder of what can happen when invisible health threats are ignored. India cannot afford to let lead poisoning continue unchecked, nor can it wait for a disaster to take action. This is not just an environmental issue—it is a public health emergency that affects millions of children across the country. India must take this warning seriously, for the future health of its children, and by extension, the future of the country, rests on it. **DI**



ABOUT THE AUTHOR

Dr Indu Bhushan is a former Indian bureaucrat and economist. He was the first CEO of Ayushman Bharat, an Indian government agency providing

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