



GRAND RAPIDS

African American Health Institute

# ECONOMIC IMPACT OF

# LEAD POISONING *in Grand Rapids, Michigan*



## THE PROBLEM

Grand Rapids ZIP code 49507 has the largest proportion of children under age 6 with elevated blood lead levels (EBLL) in Michigan.

In 2016, 15% of tested children in ZIP code 49507 had elevated blood lead levels. Over their lifetime this will cost residents:

Healthcare .....	\$10,902
ADHD/Special Ed .....	\$85,591
Crime .....	\$1,211,607
Lost earnings .....	\$7,498,078
<b>\$8,806,177</b>	

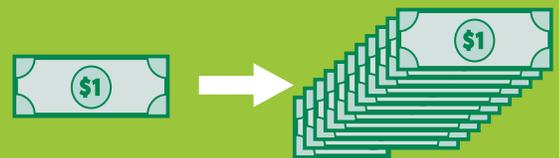
## COST PER CHILD UNDER 6 YEARS OLD | RATES OF TESTED CHILDREN WITH EBLLs (2016)



At the height of the water crisis in Flint, the elevated blood lead rate in children under 6 was **5%**. With the efforts and resources put into addressing the water crisis in Flint, the blood lead rate dropped to just under **2%** in 2016.



For every **\$1** spent on lead poisoning prevention, there is a **\$10.50** return.



# **The Economic Impact of Lead Poisonings in Grand Rapids, Michigan**

*“Making the Case for More Resources”*

## **Flint Water Crisis**

Lead poisoning is a major health problem in Michigan. In 2016, childhood lead poisonings in Michigan startled the country, when many reports and media outlets exposed the Flint Water Crisis to the world. Upon further investigation, the crisis actually began in 2014, when officials switched the city’s water sources, exposing thousands of residents to lead from aging pipes. From this incident, the rates of “elevated blood lead levels (EBLL) in children under age 6” doubled in a two-year span from 2.4% to 5% in Flint.<sup>1</sup> In response, public health officials, politicians, and citizens around the country expressed their frustrations with the preventable issue, while proposing solutions to correct it. In addition, many resources and opportunities were offered to Flint to repair the degrading nature and impact of lead poisonings in its population.

## **Childhood Lead Poisonings in Kent County, Michigan**

Childhood lead poisonings are also problematic in West Michigan, particularly Grand Rapids. In 2016, 6.2% of Kent County children under age 6 had EBLLs (*greater than 5 µg/dL*) compared to 3.6% of Michigan children and 3.3% (2015) of children in the entire nation.<sup>2</sup> To make matters worse, children in the 49507 zip code contained the highest EBLL rate in the state at 15.3% (2016).<sup>2</sup> Not only do these lead rates alarm professionals and local residents in Kent County, they also reveal troubling facts that must be addressed in the county. One study found that over 88% of the housing stock in Grand Rapids was built before 1978, while 48% was built before 1950. This is noteworthy, since deteriorating lead-based paint in older homes causes more than 90% of all childhood lead poisonings in Kent County, mainly from lead dust.<sup>3</sup> As for the effects of lead poisoning, it can cause learning and behavior complications, growth and development issues, and hearing and speech problems.<sup>4</sup> Thus, the lead issue in Grand Rapids is a serious matter that needs immediate support and attention.

### **Economic Impact of Lead Poisonings in Zip Code 49507**

The Grand Rapids African American Health Institute (GAAHI), which focuses on improving health equity for African Americans in Grand Rapids through research, education and advocacy, conducted a case study to determine the economic impact of childhood lead poisonings in Grand Rapids, Michigan, specifically in the 49507 zip code. The results of this case study, viewable in the attached infographic, are astonishing. The overall finding involved children living in 49507 with EBLs. After identifying several conditions associated with EBLs, the study found that children with EBLs in 2016 (just living in 49507) will cost Grand Rapids nearly \$9 million during their lifetime. Specifically, these lead poisoned children will cost Grand Rapids roughly \$10,902 in healthcare costs, \$85,591 in ADHD/Special Education costs, \$1,211,607 in crime costs, and \$7,498,078 in lost earnings during their lifetime. Remember, these calculations only included children with EBLs in the year 2016, so this concurring problem could continually cost Grand Rapids millions of dollars in the near future.<sup>2,5</sup>

The significant costs associated with lead poisonings are also troubling when viewing the lifetime cost per child (CPC) for children under age 6. While the lifetime CPC from lead poisonings was \$331 for Michigan children and \$1,385 for Kent County children in 2016, children in 49507 possessed the highest CPC of \$1,881. This further illuminates the lead issue in Kent County and the pressing need for more resources to address it. In addition, the attached infographic provides the economic benefit of investing in lead poisoning prevention efforts in Grand Rapids. For every dollar spent on lead poisoning prevention strategies, Grand Rapids would receive a \$10.50 return on that investment, potentially saving the city millions of dollars over time. Flint is one city that capitalized from improved resources for lead prevention, as the childhood EBL rate in that city reduced by more than 50% over the last few years. Thus, it is important and imperative for concerned parties to support Grand Rapids in its fight to combat the lead problem that currently harms thousands of Michiganders, especially their children.<sup>2,5</sup>

#### **Citations**

- 1) Journal Article on Flint Water Crisis— <http://ajph.aphapublications.org/doi/10.2105/AJPH.2015.303003>
- 2) Michigan Department of Health and Human Services
- 3) Healthy Homes Coalition of West Michigan— [www.healthyhomescoalition.org/lead](http://www.healthyhomescoalition.org/lead)
- 4) CDC's Childhood Lead Poisoning Prevention Program— [www.cdc.gov/nceh/lead/parents.htm](http://www.cdc.gov/nceh/lead/parents.htm)
- 5) BBC Research and Consulting Group