

## Water Contamination Raises Health Concerns for Flint Students

By **Corey Mitchell**

Educators in Flint, Mich., have long taught students buffeted by the pressures of poverty and urban blight.

Now, they're facing a new crisis: toxic tap water.

City and school officials are dealing with the fallout of a contaminated-water crisis, after it was discovered several months ago that hundreds of children in the financially strapped city have high levels of lead in their blood, in part because of the state's decision to switch Flint's water supply.

Over the weekend, President Barack Obama declared a federal emergency in the city, which frees up as much as \$5 million in federal aid to help with the public health crisis. And amid growing calls for his resignation, Michigan Gov. Rick Snyder apologized for the crisis in his State of the State speech Tuesday night, pledging to fix the problem and telling Flint residents, "You did not create this crisis and you do not deserve this."

The Republican governor also said his office would release emails related to the water crisis, a demand that many watchdog groups have been making.

The manmade catastrophe started nearly two years ago, while the city was under the control of a state-appointed emergency manager. That's when officials decided to save money by switching its water supply from Lake Huron to the Flint River, a tributary with water so corrosive that General Motors didn't want it used at its engine plant in the city.

The cost-cutting move introduced lead and iron into the water. In the time since the switch, the percentage of infants and children with elevated blood-lead concentrations that can cause permanent IQ loss and developmental delays has doubled, rising to nearly 5 percent, according to researchers and local health officials.

This school year, water from faucets and drinking fountains at four city schools have tested above the federal limits for lead content. One of those schools tested at more than six times the federal limit.

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The advertisement features a young girl with dark skin and curly hair, wearing a blue jacket over a green and white striped shirt and blue pants. She is pointing upwards with her right hand. The background is a light blue gradient with a wavy pattern at the top.

The city ended its use of the contaminated Flint River for drinking water in the fall, but concerns remain because the old pipes and service lines that supply the city's water still release lead.

Months after the water crisis emerged, the 5,500-student district is still supplying students and staff members with bottled water in an effort to reduce their exposure.

"In light of what high levels of lead can do to our children's cognitive and emotional well-being, we clearly need a long-term solution to ensure our children have access to clean, safe drinking water," first-year schools Superintendent Bilal Tawwab said last fall.

Mayor Karen Weaver estimates that it could cost upwards of \$1 billion to repair the city's lead-damaged infrastructure.

The human cost for the city's families is already steep.

The lead poisoning could have lifelong consequences. Research has tied high levels of lead in blood to learning disabilities, poor classroom performance, impaired growth, and even hearing loss.

Numerous studies detail the significant negative effects of lead toxicity on learning and educational attainment, and the associated costs, including the rise in special education services for developmentally delayed students.

"It is impossible, at this point, to forecast how it will impact us, our schools and our children, but there is no question we will be challenged to pull together," Tawwab wrote to district parents earlier this month.

Guidance from the U.S. Centers for Disease Control and Prevention released last April indicates that children with disabilities or brain trauma benefit from early-childhood-education programs such as Head Start, but found no large-scale studies that "specifically examine" the impact of educational interventions on cognitive or behavioral outcomes for children with lead exposure.

Most students with lead poisoning aren't identified until early-elementary school, and by then, schools are often unprepared to deal with the issues and skyrocketing special education costs, said Sue Gunderson, the executive director of Community Lead Education and Reduction Corps, or CLEARCorps, a national nonprofit group.

"You want to get out ahead of this early and find out who's been exposed," Gunderson said. "But there aren't any cookie-cutter solutions. It's different for every kid."

### **'Devastating Impact'**

Fallout from the lead contamination of Flint's drinking water has been widespread.

Gov. Snyder, a Republican, has publicly apologized for the state's role in the catastrophe and declared a state of emergency in Flint and surrounding areas because of "ongoing health and safety issues."

The state has offered to conduct additional water testing at all the city schools, including charter and private schools.



Kyaira Donald, 6, gets her finger poked to test her blood for lead levels, at Freeman Elementary School in Flint, Mich.  
—Jake May/The Flint Journal-MLive.com/AP

The director of the state's Department of Environmental Quality and the agency's lead spokesman recently resigned. And the U.S. attorney's office and the Environmental Protection Agency are investigating the matter.

None of that has satisfied residents and child advocates, many of whom have called for Snyder's resignation.

"The children of Flint will need more than new declarations of emergency, state-level resignations, and public apologies to help reverse the damage that has been done to their young bodies and developing brains," wrote Matt Gillard, the CEO of Michigan's Children, a statewide advocacy group that focuses on reducing disparities in child outcomes, **in an opinion piece in [The Flint Journal](#)**.

Dr. Mona Hanna-Attisha, a pediatrician at Hurley Medical Center, which serves many of the city's poorest families, found elevated levels of lead in her patients' blood, triggering more screenings in recent months and drawing public attention to the problem. State and city officials initially dismissed her findings.

For some, the debacle also raises concerns about which children are most likely to be exposed.

According to the CDC, black children are three times more likely than white children to have elevated levels of lead in their blood—and Flint's students are overwhelmingly black and from low-income homes.

Flint is home to some of the state's lowest-performing school systems. Among the worst is Eisenhower Elementary School, one of the buildings where elevated lead levels were discovered.

Lead exposure is nothing new for Flint, a city long plagued by environmental-health issues.

Many homes in the Rust Belt city are laced with lead paint. Dust and paint chips from the highly toxic metal pose an increased health risk for learning disabilities, central nervous system damage, and other harmful health effects.

"Lead-based paint has been a problem for Flint, for Michigan, and for poor families for a long time," said Ann Richards, a senior communications officer for the Charles Stewart Mott Foundation. "The impact of the problem has just exploded, but there's always been a problem with lead poisoning and poor kids."

The Flint-based philanthropy contributed more than \$4.1 million to help reconnect the city to Lake Huron water and to help provide free water filters to Flint residents.

School, municipal, and philanthropic leaders have already begun talks about long-term education interventions to address the needs of the lead-poisoned children.

"We literally are still getting our hands around this problem," Richards said.



Bottles of water filled by Flint, Mich., residents sit on the table outside of city council chambers as Michigan Gov. Rick Snyder speaks during a news conference last week. Snyder pledged that officials would make contact with every household in Flint to check whether residents have bottled water and a filter and want to be tested for lead exposure while his embattled administration works on a long-term solution to the city's water crisis.

—Jake May/The Flint Journal-MLive.com/AP

Reporting by The Flint Journal and other news organizations revealed that the city brushed off federal requirements for water testing. Lax state oversight may have led the city and state to underestimate the extent of the contaminated-water crisis for months.

Marc Edwards, an environmental-engineering professor at Virginia Tech University and a national expert on water treatment, leads a team of researchers studying the city's water. Edwards says it is still "not safe" to drink.

### **Mitigating the Problem**

There are actions that can help mitigate the lead exposure such as proper nutrition and early-childhood education. But that's difficult in a city with scarce resources.

Dr. Hanna-Attisha will head up a team of epidemiologists, educators, and nutrition specialists to help mitigate the developmental and behavioral challenges faced by the children poisoned by lead-tainted water.

The school system and city faced myriad challenges well before the water crisis.

Once a manufacturing hub flush with auto-industry jobs, the city has suffered significant job losses and dimming prospects for its young people for decades.

Districtwide, nearly a quarter of its students drop out of high school before graduating, and poverty is pervasive. More than 80 percent of students qualify for free or reduced-price lunches, an indicator of poverty in K-12 education.

Overall, student enrollment in Flint's public school district has declined 75 percent in the past 20 years as families fled the city in search of other options.

The lead poisoning matter has only complicated matters in the troubled district.

"This is definitely something that's keeping me up at night," Superintendent Tawwab said in an interview. "It's a question of how we best prepare ourselves to meet the needs of all our children. I do believe we can work our way through this."

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