

Rhode Island's Lead Problem

Why does this public health issue persist in 2017?



Illustration by Michelle Kondrich

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By Ellen Liberman

After cramming two adults and three daughters in a two-bedroom apartment, Christine Jett thought the Dutch Colonial in Edgewood was going to be a step up. The street was leafy and sloped down to Narragansett Bay. The cedar-shake rental had plenty of space and buckets of vintage charm - including the proverbial white picket fence. But in time, she came to think of that house as an enemy.

"I thought, I won't be so stressed. Everyone has their own room. I'll have a spot to study," says Jett, who was working on her nursing degree at the time. "But I should have never moved here. It was my ignorance, and it turned into a battle for my daughter."

The house, built in 1904, was loaded with lead paint. The pine green trim paint on the exterior and interior surfaces flaked freely, releasing fine lead particles that announced their presence in the blood tests of Jett's youngest. Rhode Island law requires health care providers to conduct at least two blood lead screening tests on all children by age three. In August 2015, two-year-old Avery's check-up revealed a blood lead level of seven micrograms per deciliter. That triggered a home visit from a lead safety educator. The landlord wasn't happy - it turned out that he had never had the property certified for lead safety - but he sent over a crew to scrape and repaint. The Jetts got a non-medical intervention, and Christine was advised to feed her daughter foods high in vitamin C and iron.

"I was confident it was going to be going down," she recalls. "We'd been doing everything right."

In November, Avery was re-checked, and on Black Friday, Jett and her family were out Christmas shopping when her pediatrician called. Avery's blood lead level had risen to forty-one.

"Everything blurred," she says. "I started crying. Oh my God - she's going to have brain damage."

Lead is an accumulative toxin that courses through the blood to the brain, liver and kidneys, and is stored in the bones and teeth. Young children, with their developing brains and bodies, are especially susceptible to its adverse effects of neurological disruption; they can absorb four to five times more lead than an adult from a single source. The Centers for Disease Control has determined there is no safe level of lead exposure for young children.

"We have nearly 1,000 children in Rhode Island lead poisoned every year and that's completely unacceptable," says Laura Brion, executive director of the Childhood Lead Action Project, which has been at the forefront of the effort to eliminate lead hazards for twenty-five years. "It's a matter of money and political will to eliminate the remaining lead hazards. It wouldn't be easy or cheap, but it would be possible."

Yet, lead poisoning is more expensive. Over the last two decades, epidemiologists, medical doctors, economists and other researchers have linked it to lowered IQs and occupational status, and antisocial and violent criminal behavior in adulthood. In May, the National Bureau of Economic Research published a working paper by Brown University economist Anna Aizer and Princeton University economist Janet Currie demonstrating a robust connection between lead exposure, school suspensions and juvenile detention, especially for racially and economically disadvantaged children.

Their research took advantage of data opportunities unique to Rhode Island; 80 percent of children here are screened for lead, compared to 25 percent nationwide. And the state is able to link data sets among different departments, such as the Department of Health and Department of Education.

Aizer and Currie followed 120,000 children born between 1990 and 2004, establishing pre-school blood lead levels, and then correlating those data with school suspensions during the 2007/2008 and 2013/2014 school years.

Aizer and Currie also followed lead-exposed children into the state juvenile detention system. They found that children with elevated blood lead levels were more likely to be suspended and that suspended children were ten times more likely to end up in the juvenile detention system.

Aizer, who studies the causes of intergenerational poverty, says that a ubiquitous environmental toxin like lead "is an important factor in explaining why poor kids grow up to be poor themselves. It reduces what an economist would call their human capital - your cognitive abilities; your behavioral, physical and mental health - all the things that make you into a good worker. Lead reduces the ability of these children to develop the human capital that will allow them to become productive workers."

The results are not as surprising as the fact that the strong connections between lead poisoning and poor outcomes persist in a state that has done much to attack the problem.

Lead in paint was federally outlawed in 1978 and in gasoline in 1986. Five years later, the state began passing hazard mitigation and poisoning prevention laws that mandate blood lead level screenings before age six; require landlords to attend a lead safety class and ensure that their properties are lead-safe; and mandate that lead mitigation workers and inspectors are licensed and certified by the state Department of Health.

As a result, childhood blood lead levels have dropped steadily in the last two and a half decades. In 1993, 10,026 of Rhode Island children younger than six - or 35 percent - had a blood lead level of more than ten micrograms per deciliter. In 2016, 1,201 - 4.9 percent - of the 24,738 Rhode Island children younger than six who were screened had confirmed elevated blood lead levels of five.

"Things were much different twenty years ago when I first started," says June Tourangeau, who runs St. Joseph's Lead Clinic. "It was acceptable to have a level less than twenty-five and we did not do outreach. And there were so many children at those levels."

Nine years ago, the state's lead advocates thought they had put themselves out of business. In late 1996, the state attorney general sued three major manufacturers of leaded paint - Sherwin-Williams, NL Industries and Millennium Holdings - under the state's public nuisance law. Nearly seven years of litigation produced a landmark jury verdict. In 2006, the companies were found guilty of producing and selling leaded paint while knowing and concealing its dangers to children. Experts had drawn up maps and plans for a \$2.4 billion remediation. Two years later, the Rhode Island Supreme Court overturned the verdict, ruling that the public nuisance law had been misapplied.

"It was one of most devastating parts of the Rhode Island history of lead," Brion says.

Without the infusion of a large settlement, the fight against lead has bumped up against Rhode Island's wealth of pre-1978 housing stock - an estimated 76 percent - plus smaller federal grants to fund mitigation and gaps in the laws.

For example, landlords of owner-occupied rentals with three units or fewer are exempted from the requirement to obtain a lead mitigation certificate. And tenants can refuse to allow a lead inspector

to enter the property. In a state with a dearth of affordable housing, some do, says Barbara Morin, chief of the Department of Health's Center for Healthy Homes and Environment.

"The parents are afraid of losing an apartment, or think the rent will go up," she says. "Sometimes it's their immigration status and not wanting the government involved. We can't insist."

Enforcement efforts have dropped off, and in 2010 the lead poisoning rate of children living in the core cities - Providence, Woonsocket, Pawtucket and Central Falls - was twice as high as that in the rest of the state. And although Rhode Island has integrated the data sets among various departments, there is less coordination among departments that interact with lead poisoned children.

In the past, the Rhode Island Department of Education has responded to previous lead poisoning studies with statements of concern, but little inclination to act. Current Commissioner Ken Wagner found the question of what RIDE might do about Aizer's research vexing.

The factors that produce the cognitive and behavioral profile of an individual student are "complicated and multi-causal," he says. Definitively connecting poor academic performance or misbehavior to lead exposure "isn't fair to kids or families," and -gross over-simplification."

Nonetheless, a representative of RIDE is now part of a multiagency workgroup that shares data and research on lead exposure mitigation. And, Aizer adds, "If the government wants to make improvements in third grade test scores, it needs to be much more expansive in its view. It can't just focus on the educational interventions. It should consider all of the needs of the child."

This past legislative session, Governor Gina Raimondo allocated funds in her proposed budget to move the lead abatement and certification functions from the Housing Resources Commission to the Department of Health, creating one centralized authority. The proposal was to be funded by diverting a small portion of the real estate transfer tax, but it was sacrificed to other priorities.

"After revenue projections came in lower than expected in May, the state was presented with very difficult choices, with much of the focus on closing the revenue gap. The governor hopes to revisit this reform in the future," says spokesperson Catherine Rolfe in a statement.

These detours frustrate advocates like Peter Simon, a pediatrician, epidemiologist and retired medical director of the health department's Division of Community, Family Health and Equity.

"We have good policies coming out of the Department of Health," he says. "We have better data on child well-being than any place in the world. We are doing spectacular work to describe the problem and we can't have any support from our legislature because they are more interested in protecting landlords."

Christine Jett's story illustrates the strength of Rhode Island's lead safety net even as it reveals the holes. The medical protocols caught Avery's exposure early on and the law compelled the landlord to mitigate the hazard. But, the system failed to notice that his rental property was never lead-

certified in the first place, and it didn't penalize him for allowing the mitigation work to be done by untrained workers who wound up making the problem much worse.

The Dutch Colonial is now within the regulatory bounds, but Jett will be left with her worries for a long time to come. From a blood lead level high of fifty-six, her four-year-old daughter's lead level was decreased to twelve this past July. Avery is a smart little girl, hitting all of her developmental marks. But she has a tendency toward hyperactivity that sets off a well-practiced debate in her mother's mind.

"As a parent, it is so scary. I blame myself. I see little things and I think: Is this because of the lead? This goes through my mind all the time."