

Multigenerational Poisoning: Apprehending Lead Exposure in East Trenton, New Jersey

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Executive Summary

Trenton, New Jersey is experiencing a lead crisis. Currently, there are three significant pathways of lead exposure that residents are encountering—water, soil, and lead-based paints. Most of these pathways can be attributed to the city’s history. The degradation of outdated water infrastructure containing lead has resulted in the chemical leeching into the water as it enters residents’ homes. The city’s old housing stock, a majority of which was built long before lead-based paints were banned in 1978, contains significant amounts of lead paint hazards. Additionally, the city is continuing to uncover high levels of lead in the soil of certain neighborhoods, evidence of the city’s past as an industrial hub. Between these three pathways, Trenton residents are surrounded by lead, encountering lead both inside and outside of their homes.

As prevalent as lead issues are in the city, however, existing protocol is limited in which populations it seeks to minimize exposure to health hazards among. There is an obvious priority placed on children, which makes sense given the unique vulnerability they have to developmental delays due to lead exposure. However, this is done at the expense of adult residents who have also been exposed to lead and whose experiences are largely dismissed. I found this particularly concerning given the studies showing that lead exposure causes chronic health problems in adults.¹ **Thus, by examining this public health issues through a multigeneration lens, my work provides visibility to an unmet need I identified during the earlier stages of my research: lead mitigation efforts in New Jersey have forsaken adult residents.**

The goal of my thesis is to provide an alternative, though more inclusive, understanding of lead-related matters in the city. The paper identifies the gaps between scientific studies on lead exposure, current protocol for lead case management, and the community impact of lead policy. The paper urges the city to change its current approach to the lead crisis by adopting a more holistic approach that includes adult residents instead. In order for this to happen, officials must acknowledge the chronic nature of lead issues in Trenton, understanding that lead exposure can have lifetime impacts. **By doing so, the paper argues that lead issues in Trenton will be**

¹ (Katner et al., 2018, p. 80)

more effectively addressed once residents stop aging out of the threshold of concern established by current lead policy.

The purpose of this report is to teach people about the chronic nature of lead exposure in Trenton and emphasize the importance of ensuring that adult residents also receive adequate care under the law. My research emphasizes how ensuring the health of adults in the community does more to ensure the health of the children current policy is particularly invested in. By excluding this population, however, current policy has made it so that children who have been exposed to lead in the past will not receive the appropriate care to deal with the adverse health effects of lead exposure as they age.

Background on Lead Exposure and Study Objective

Lead exposure is not a public health issue unique to Trenton. In fact, it's a global wide matter. Historically, lead has been prevalent in many aspects of everyday life, from cosmetics to jewelry. Its presence, however, has been most famously noted in paints and infrastructure, such as water pipes. Such pathways have made lead an inescapable aspect of residential life despite ongoing remediation efforts both at the federal level and the local level.

As a Trenton resident, I was inspired to research lead exposure as it occurs in the city due to my own experiences. What I wanted most out of my work was to amplify the voices of community members that have mostly gone unheard or have been dismissed. I thought that as a resident and Princeton student, I'd be able to facilitate the introduction of my community's efforts to a larger audience that would be able to contribute to such efforts. Moreover, I planned to demonstrate the detriments not including all community perspectives in policy has on affected communities.

Methods

Scholarly research: To fully encompass the complexity of the lead crisis in Trenton, my research involved reading scholarly articles spanning across various disciplines, including sociology, anthropology, scientific studies, public health, American and global history, history of science, federal and state law, and municipal ordinances. With the historical context this research provided me, I was able to identify the discrepancies between residents' lived experiences, or community impact, and current policies during my fieldwork.

Ethnographic fieldwork: I spoke and worked with community organizers and workers at the following organizations:

- ❖ **Lead-Free New Jersey (LFNJ)**, a local collaborative working to eliminate lead hazards in New Jersey.
- ❖ **East Trenton Collaborative (ETC)** located in the East Trenton neighborhood, one of LFNJ's community hubs.

Interview with Martin Moore: I interviewed the retired Principal Registered Environmental Health Specialist, formerly the head of the Trenton Bureau of Environmental Health, about what he had encountered as in his lead remediation work throughout the years. He directed me to consider lead paint hazards in my research, expanding my view of lead-related matters in the city.

Interview with the Trenton Lead Team: I conducted a three-hour group interview with the Trenton Lead Team at Trenton City Hall. The team is comprised of members of the city's Bureau of Environmental Health and Bureau of Lead Case Management. During this interview, I learned about the city's protocol for childhood lead cases, ranging from testing and detection of elevated blood lead levels in children to abatement practices performed once lead hazards in the home are identified.

Interview with Tia: Over Zoom, I informally interviewed Tia, an East Trenton resident, about her and her family's experiences with lead exposure and water quality concerns she's had as a lifetime Trenton resident. Her experiences provided insight into risk communication inadequacies both from the city and the local water system.

Interview with Shereyl Snyder: Over Zoom, I interviewed Shereyl about her experiences as the ETC's Community Organizer, the collaborations she facilitated with Rutgers and EPA researchers, and how her role in the community shaped her understanding of environmental justice issues.

Interview with Deandrah Cameron: Over Google Meets, I spoke with the Policy Manager at NJ Future, whose office is located in Downtown Trenton, about her work with LFNJ and the ETC. She provided me with details about the bills she was working on getting passed at the state level, including a lead disclosure bill that would require landlords to notify tenants of lead hazards in their home and a water filter bill that would require rental properties being used as childcare facilities to have water filters installed.

Interview with Joel Petty (EPA): I interviewed Joel, a Remedial Project Manager, about the EPA's role in the East Trenton neighborhood throughout the years, the status of the city under the agency's contaminated site clean-up program (Superfund), and how instrumental the established relationship between him and the ETC, particularly Shereyl Snyder, has been to ensuring the success of the intervention.

Interview with Sean Stratton (Rutgers): I conducted an interview with Sean, a PhD candidate at Rutgers, about his project examining various pathways of lead exposure in the East Trenton neighborhood and evaluating the amounts of lead present in residents' blood as a result.

January 2024 Lead Listening Session: With the help of Shereyl and Kurt Lituma, the ETC's program coordinator, I coordinated a Lead Listening Session at the East Trenton Center. The gathering provided residents, city officials, and local organizations with the opportunity to listen to the residents' experiences with lead. Four subject matter specialists from NJ Future, ISLES Inc., Rutgers, and the EPA also spoke. The space was meant to empower fellow residents to share

their experiences with one another so that they did not feel isolated in the issues they were facing in their homes. Additionally, city officials were confronted with the realities of current lead policy and its impact on the community.

Community Panel with Tia and Kisa: In the second half of the meeting, I facilitated a community panel, during which Tia and Kisa, another neighborhood resident, shared their experiences as mothers whose children had tested for elevated BLLs. The two women discussed in detail the impact lead had on their children’s development as well as the lack of support they received from the city and medical providers in the aftermath of the testing.

LFNJ/ANT219/ProCES Collaboration: During Fall 2024, I collaborated with LFNJ, ProCES, and my Anthropology of Disasters class (ANT219) on a project measuring the community impact of P.L. 2021, c. 182, a state law updating the requirements for lead-based paint inspections in rental properties. With the help of 6 other classmates, I conducted a policy review of P.L. 2021, c. 182 and its corresponding municipal ordinances across counties, I attended various LFNJ committee meetings to assess local organizations’ response to this law, and spoke with community organizers to get a sense of how residents were impacted by the law and whether they found it effective. The consensus was that residents were not well-informed about the law and saw no changes in their experience in rental properties since its passing.

Childhood Lead Case Experience: In July 2024, I shadowed the Trenton Lead Team during a home inspection done in response to a child testing for elevated BLLs. The experience allowed me to observe the city’s protocol in action and compare the measures taken to what was mandated under New Jersey Administrative Code (NJAC) § 8:51.

Policy Review of NJAC § 8:51: I reviewed the state law surrounding childhood lead case management, which covered testing, case management and the personnel necessary to carry out each task, home inspections, abatement procedures, and care plans for lead affected children. This revealed the lack of legal provisions made for adults exposed to lead as well as the lack of resources and personnel the city has to enforce this law as intended. This means that while children are accounted for under the law, they’re still exposed to risks as proper case management cannot be guaranteed given the limited number of workers addressing lead issues in Trenton.

Findings

Through my research and fieldwork, I identified **four key issues that exacerbate the lead crisis in Trenton, making it a generational issue.**

Key Issue #1: *The city’s industrial history has greatly contributed to high levels of lead in the East Trenton neighborhood soil, meaning that residents are exposed to lead both inside and outside of their homes.*

- ❖ The city’s former booming pottery industry in the late 19th century resulted in a significant amount of lead glaze circulating throughout the city and its environment. As

the industry continued its operations up until the mid-20th century, lead dust was emitted into the atmosphere, settling into the ground over time.²

- ❖ As exhibited by the soil samples taken both by Sean Stratton and the EPA, the traces of the city's industrial history can still be found in residents' backyard, gardens, playgrounds, and schoolyards. Especially, as residents continue to unearth lead glazed pottery scraps in their backyards.
- ❖ Furthermore, when you consider the other industries operating simultaneously or at different periods of the city's history, the idea of toxic layering is helpful in understanding how different industrial toxins present in the environment can potentially interact to worsen the lead crisis in the city.³

Key Issue #2: *While the law regarding childhood lead case management is extensive, the city does not have enough workers staffed to handle the overwhelming number lead of cases around the city.*

- ❖ When I interviewed the Trenton Lead Team, I noted how extensive their lead case management was. At the time of the interview, I spoke with four Lead Inspectors/Risk Assessors (LI/Ras). However, if we were to use the city's online staff directory as an indicator of how many people the city has at its disposal to investigate lead cases and conduct home inspections, we would only be able to identify three certified LI/RAs, two of whom work under the Bureau of Environmental Health and one of whom works under the Bureau of Lead Case Management. Furthermore, the Bureau of Environmental Health holds responsibilities that span beyond lead-related issues in the city, including pest control and other public health nuisances.⁴ This means that the two LI/RAs within the bureau are also expected to attend to other environmental health cases, increasing their workload significantly.
- ❖ Within the Bureau of Lead Case Management, the staff directory lists six individuals, half of whom are public health nurses and half of whom are health aides. Currently, there are six individuals that are expected to cover the extensive list of responsibilities under case management as mandated by NJAC § 8:51. Technically, however, the regulation solely names public health nurses as those who "shall perform case management," which further limits that number to three individuals.⁵
- ❖ Based on my observations, § 8:51 thoroughly outlines the procedures necessary to respond to elevated BLLs in children. However, the city of Trenton has underestimated the amount of labor required to realize this policy as intended. The reality is that many lead cases take several months to resolve and there simply aren't enough people to ensure that each child and their perspective case receive the attention they need, potentially placing children in harm's way.

² (NJ DEP Historic Preservation Office, 2016)

³ (Goldstein & Hall, 2015, p. 640)

⁴ (Bureau of Environmental Health, n.d.)

⁵ N.J. Admin Code § 8:51 (2017)

- ❖ This can be seen in the experiences described by Kisa and Tia, who both stated they did not receive guidance from the city following their children’s BLL tests.

Key Issue #3: *Under the New Jersey Administrative Code, there is no protocol for adults who have been exposed to lead. This also means that there are no standard medical interventions for adults who have been exposed to lead as children.*

- ❖ While there is a chapter dedicated to childhood lead case management under the NJAC, there is no chapter dedicated to adult lead case management. This has had significant repercussions for adult residents, both those who have been exposed to lead as children and those who continue to be exposed to lead as adults.
- ❖ During the January 2024 Lead Listening Session, an elderly woman from the neighborhood spoke up about concerns regarding her elevated BLLs, which had been discovered through Sean Stratton’s study. Upon voicing her concerns about what adult residents like her should do, a doctor in the room addressed her saying, “The key to remember is that the most vulnerable populations are kids below the age of 6. That’s when most of the neurodevelopment takes place. That’s where lead is its worst. We got to protect the kids first and foremost.” The doctor’s answer seemed to dismiss the woman’s concerns, though also revealed that there was no official protocol for lead experts to refer to regarding adults who have been exposed to lead.
- ❖ Moreover, during my interview with Martin Moore, he revealed that as a lifetime Trenton resident, he had been exposed to lead himself, though had not been tested despite significant lead hazards being discovered throughout the neighborhood he grew up in. He explained that the city’s reasoning for not testing adults is that they’re wise enough to not put paint chips in their mouths, though acknowledged that this doesn’t account for the inhalation of lead dust, which impacts everyone in the home.
- ❖ The doctor’s response to the elderly resident’s concerns and the absence of protocol regarding adult lead case management make it evident that the risks lead poses to adults are not widely recognized.

Key Issue #4: *Risk communication of lead hazards is not equal among residents and continues to mostly exclude adults from dialogue.*

- ❖ As I spoke with Tia, she described an instance during which she asked a plumber to install a water filter for her shower. The plumber, a Trenton resident himself, refused, claiming it would be useless as she wasn’t consuming her shower water.
- ❖ This highlighted the disparity in water quality concerns among residents due to unequal risk communication. As a mother whose child tested for elevated BLLs, Tia has been made privy to information regarding lead exposure that isn’t necessarily made available to residents who haven’t been in her position. This has caused her concerns to be heightened and led her to seek out preventative measures that other residents may not find useful. Given that her child drank bathwater in the past, which exposed him to lead, Tia’s concerns are valid, though not understood by community members. This has caused

her experiences to be dismissed and has even barred her from taking preventative measures within her home that would give her and her children peace of mind.

- ❖ Furthermore, as I reviewed communication from Trenton Water Works alerting residents of the presence of lead service lines in their homes, I noticed that the guidance regarding lead testing upon potential exposure only discussed children. While pregnant women and adults with certain medical conditions were mentioned as being more vulnerable, the only resources provided with more information on testing involved children, even excluding the adults pertaining to the aforementioned groups. The communication also reiterated similar rhetoric as the doctor from the Lead Listening Session, insisting that lead was primarily dangerous to young children and minimizing its impact on adults.
- ❖ The communication from Trenton Water Works, the local water system, exemplified that even when lead hazards are identified in a home, there is not much thought given to how the toxin would impact adults in the home, just the children.

Conclusion

My ethnographic work has revealed the discrepancy between what scientific studies have shown about the chronic nature of the impacts of lead exposure and environmental toxins and the policy currently in place to respond to this public health issue. In my research, I identified the exclusion of a population that has significantly been impacted by lead but has mostly been excluded from dialogue surrounding community health. I also reported on the inadequacies in risk communication, which in dismissing adult experiences, ultimately harm children affected by lead as well. Furthermore, both through my involvement in this project as a Trenton resident and my involvement with the East Trenton Collaborative, I've demonstrated how community expertise is essential to effective community-centered interventions. Despite what current policy seems to suggest, lead issues in Trenton are not contained to certain ages, or periods in the city's history. **Thus, the interventions created in response to this public health issue should reflect its chronic nature by expanding the scope of care to include adult residents who have also been impacted.** I believe that by ensuring the health and safety of all individuals within the community, the health and safety of the most vulnerable among us will be guaranteed. **After all, children are not raised in isolation, but in community, so the health of their caretakers and surrounding community members should also be looked after.**

Policy Recommendations

- ❖ The state's testing protocol should be expanded to include adult residents in order to capture a significant portion of the population whose experiences with lead exposure have largely been dismissed. This would mean adding an additional chapter under the NJAC that specifically addresses protocol for adult lead cases. Furthermore, testing in older residents should include the use of **X-ray fluorescence (XRF) technology, as it**

provides a more accurate measurement of the lead the body has accumulated throughout a resident's lifetime through its measurement of bone lead levels.⁶

- ❖ In order to accommodate for the increasing number of lead cases including adult residents would create, **the city of Trenton should expand the Trenton Lead Team.** This would involve increasing the number of staff working within the existing bureaus, particularly the Bureau of Lead Case Management, **and also creating a Bureau of Adult Lead Case Management.** The Bureau of Adult Lead Case Management would be dedicated solely to adult residents who have been exposed to lead as children and who continue to be exposed in adulthood.

- ❖ Future risk communication regarding lead exposure, both from the city and local water system, **should include resources with more information for how adult residents should get tested.** Furthermore, it should include a similar summary of the long-term impacts lead has on adults as it currently does for children. **Risk communication should also be sent out to all Trenton residents,** so as to ensure that all residents, not simply those directly impacted by the crisis, remain well-informed on the public health issue. **This would also empower communities to convene and decide amongst themselves what preventative measures they'd like to take as a collective to maintain the health of their community.**

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⁶ (Ambrose et al., 2000)

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