

Insights

Lead Poisoning Continues to Put Too Many Children at Risk



In more than [4 million homes](#) across America, children

are living and playing while being exposed to the damaging effects of lead. This means that millions of children have a [higher risk of neurological damage](#) and are more likely to face learning difficulties, behavior and speech problems, hearing loss, and other health and developmental concerns. At its highest levels, lead exposure can even result in death.

“These health risks are especially significant because children ingest and absorb lead at a greater rate than adults, and are more vulnerable to its effects,” says NICHQ Chief Health Officer Elizabeth Coté, MD, MPA. “Kids are curious, which makes them more likely to grab or mouth hazardous items—like a piece of furniture with lead or chipped lead paint. And other sources are even more insidious, such as the lead dust that floats through many homes built before 1978, lead in water pipes and lead in the paint of some imported toys.”

Environmental hazards can too easily compromise the safety of homes: as Coté explains, older houses are at risk for lead-based paint and plastic toys and costume jewelry made outside the U.S. often contain lead. Even drinking water has the potential for lead exposure. Low-income families and racial and ethnic minority groups are more likely to live in outdated housing where these environmental hazards are more common, making lead poisoning a critical focal point for efforts seeking to improve population health and reduce health inequities.

NICHQ is currently providing quality improvement expertise and technical assistance for the Maternal and Child Environmental Health Collaborative Improvement and Innovation Network ([MCEH ColIN](#)), a national initiative led by the [Association of Maternal and Child Health Programs](#). The MCEH ColIN seeks to improve states' systems of coordinated care so they can better address the needs and improve the health of children and families exposed to lead.

Below we're sharing a story from the Alabama MCEH ColIN team that illustrates why improving provider education is an important driver for states seeking to improve systems of care; it leads to earlier testing, early and effective interventions, and the coordinated care families need so that more children have the opportunity to grow up in healthy, safe environments.

Alabama's Story

Sarah* is a single mom with four children under the age of 13. When her youngest child—a 3-year-old—tested positive for lead poisoning in January of 2017, Sarah found herself faced with the burden of removing the lead from her home. As recommended by her health department, Sarah began a regimen of constantly mopping areas where lead and dust might collect, and she painted over peeling and chipping paint. She did all of this while still managing the demands of her home and the care of her four small children.

Cleaning tip: dirty lead water should be flushed in the toilet rather than the sink so that lead residue does not get into food or dishware.

“Too often, families affected by lead poisoning have trouble correcting the cause of it,” says Seratia Johnson, RN, program director for Alabama Childhood Lead Prevention Program and team lead for Alabama's ColIN team. “It's not a lack of willingness to change; it's a lack of resources. Time constraints, financial challenges and other social determinants can make it difficult for families to make the change quickly. Each day that goes by without that change becomes one more hazardous day for the children in the home.”

Moreover, Johnson shares, families are often left confused about the severity of lead poisoning. Sarah's provider shared her child's test results, but Sarah didn't understand why heightened lead levels were so harmful for her child's development. It wasn't until months later, after talking to other specialists, that Sarah realized she'd been given inadequate and unclear advice at the initial diagnosis.

Two months after the initial diagnosis, a follow-up test revealed that the lead levels of Sarah's 3-year-old had continued to increase. The child required more intensive care through bi-weekly trips to the neighboring children's hospital—a more than four-hour round trip—further weighing on Sarah's already strained time and resources.

“If her child had been diagnosed earlier and she had been provided more timely supports and services, or if she had fully understood the risks, the spike in lead levels may have been prevented,” says Johnson. “Many providers aren’t familiar with lead poisoning and the current recommendations, or the available resources. As a result, children’s diagnoses are often delayed, and families aren’t able to take advantage of the services meant to support them.”

During this time, none of Sarah’s other three young children were tested for lead poisoning, despite the proven environmental risks. This oversight was especially significant given that her 5-year-old daughter had autism and pica—a disorder that causes children to eat nonfood items—so was at an increased risk for putting lead-based and lead containing items in her mouth.

Unsurprisingly, when finally tested that summer, Sarah’s 5-year-old’s results confirmed lead poisoning. Had all of Sarah’s children been tested when the 3-year-old was diagnosed, Sarah could have addressed the needs of her 5-year-old six months earlier.

Now, both Sarah’s 5-year-old and 3-year-old are being treated for lead poisoning and benefitting from the assistance of a state care coordinator. The coordinator connected Sarah’s family with the Women Infants and Children nutrition program, so they can access foods rich in calcium and iron that can improve lead recovery. Sarah is also benefiting from transportation resources, like vouchers for gasoline, to help ease the burden of traveling to the hospital for additional treatments.

“We have the systems in place to support families,” says Johnson, “It’s just a matter of assuring families can access them. This story is just one instance of how children are getting missed, and preventative measures and treatments are delayed. We want *all* children to receive the supports they need. That’s why we’re working to ensure that all providers have the right recommendations at their fingertips. By helping providers understand who should be tested and when, and standardizing what they share with families, we can do a better job of helping families and responding with coordinated services.”

Over the next two years, Alabama and its fellow state teams will continue to apply quality improvement methodologies to address and decrease the risks of lead poisoning in children and families. Interested in keeping up with their work? [Sign up for NICHQ news](#) and receive weekly emails with stories, interviews, resources and webinars about improving children’s health systems.

**Names have been changed to protect privacy.*