

PREVENTING LEAD POISONING IN DANE COUNTY

2022



There is no safe level of lead, especially for children

While lead can hurt anyone, the health effects of lead exposure are [particularly damaging for young children](#).

Children can be exposed to lead through:

- **Paint.** House paint that was made before 1978 had lead in it. If a child eats paint chips or breathe in paint dust from sanding or construction, they can be exposed. This is the most common route of childhood lead exposure.
- **Soil.** Lead particles from exterior paint, leaded gasoline, aviation fuel and other sources can last in soil for years. Children can be exposed by eating or playing in soil with lead.
- **Water.** Some older water pipes, plumbing, and faucets may contain lead. The City of Madison has replaced all known lead service pipes, but pipes in your home could still have lead, and some outlying areas in the county could still have some lead service lines.
- **Toys and other consumer products.** [Lead paint on toys is banned in the U.S.](#), but is still widely used in some other countries. Older or antique toys, collectibles, and other items may also contain lead.
- **Other sources.** Imported foods, spices and medicines, certain jobs and hobbies, and other sources could contribute to a child's lead level.

Childhood lead testing in Dane County

We [recommend lead testing](#) when children meet one of the following criteria:

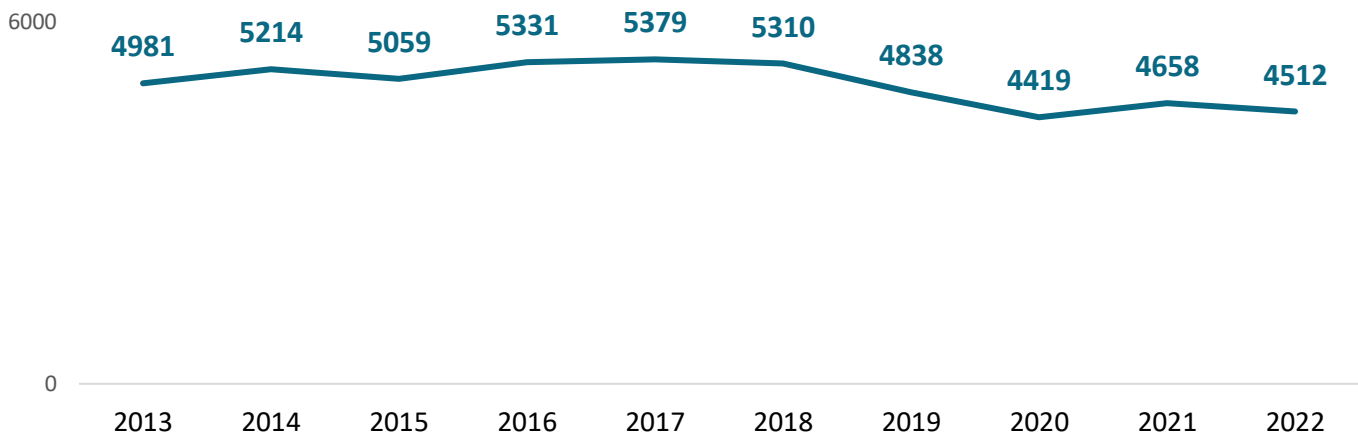
1. Does the child live in or visit a house built before 1950 (including childcare centers and homes of friends or relatives)?
2. Does the child live in or visit a house or building built before 1978 that's recently undergone or currently undergoing renovations (including childcare centers and homes of friends or relatives)?
3. Does the child have a sibling or playmate with lead poisoning?
4. Is the child enrolled in Medicaid or WIC?

When children are tested for lead poisoning, the results of the blood test are reported to us. We use this information to work with families to address lead poisoning, as well as monitor community trends in blood lead levels.

An average of 4,970 children per year were tested for lead in Dane County over the past decade. The number of children tested started to trend downward in 2018, and has not yet rebounded to pre-pandemic testing levels. Data on race and ethnicity of children tested are sparse—in 2022, over half of reports had an unknown race listed. It is important to document race and ethnicity so that racial disparities in testing can be monitored and addressed. Missing race data are partly related to a reporting error. The state health department is actively working on the issue and anticipates improved race data next year.



In the past decade, the number of children tested for blood lead levels in Dane County has remained steady overall, trending downward starting in 2018.



Not all children who need to be tested are getting tested

All children enrolled in Medicaid are required to be tested for lead poisoning. However, in Dane County, only one third of Medicaid-enrolled children are receiving their required lead test. This may be a clue that in the wider community, many more children should be tested who are not.

Table 1: Childhood lead testing among children enrolled in Medicaid

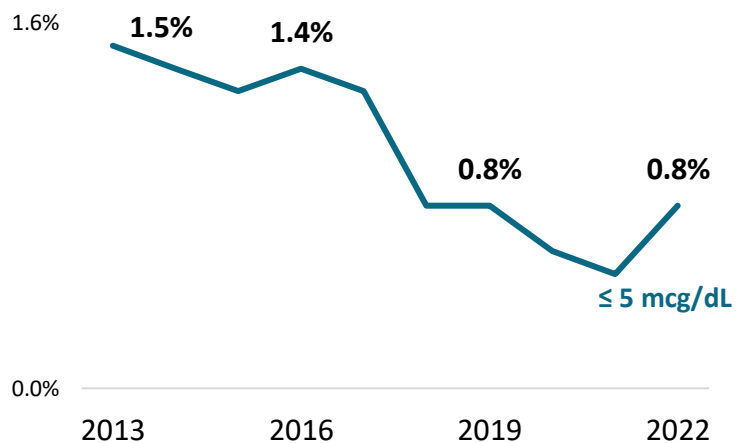
Year	Total required to be tested	Total that received required testing	Percent that received the required test
2018	5624	2148	38%
2019	5543	1915	35%
2020	5513	1704	31%
2021	5880	1886	32%

Data source: Wisconsin Department of Health Services

Childhood lead poisoning has been trending downward, but work remains

- Over the past decade, lead poisoning has decreased among children tested in Dane County.
- In 2022, 38 children under age 6 had a blood lead level greater than 5 micrograms per deciliter of blood (mcg/dL), which is the level at which we follow up. 4,512 total children were tested in 2022.
- In 2013, 1.5% of children who were tested had lead greater than 5 mcg/dL; in 2022, it was 0.8%.
- Despite this progress, children with reported blood lead levels over 10 mcg/dL have not decreased, and has stayed consistent at an average of 10 children per year.

Reported elevated childhood lead poisoning levels have trended downward from 2012-2022.*



Data source: Wisconsin Department of Health Services
*2022 data are preliminary.

Table 2: Number of children tested and found to have elevated blood lead levels, Dane County, 2012 - 2022

Year	Number of children <6 tested	Number of children tested with blood lead levels >5mcg/dL (blood poisoning)	Percentage of children tested with lead poisoning	Number of children under age 6 with a blood lead level 3.5-4.9 mcg/dL	Total number of children tested with lead levels above 3.5mcg/dL
2013	4981	62	1.24	121	183
2014	5214	59	1.13	145	204
2015	5059	55	1.09	98	153
2016	5331	64	1.2	132	196
2017	5379	58	1.08	70	128
2018	5310	40	0.75	60	100
2019	4838	39	0.81	48	87
2020	4419	29	0.66	40	69
2021	4658	28	0.6	41	69
2022*	4512	38	0.8	42	80

Data source: Wisconsin Department of Health Services

*2022 data are preliminary

CDC now recommends follow-up at 3.5 mcg/dL, which is lower than the level we currently take action

- [Recently, the CDC lowered the threshold](#) for lead follow up, recommending follow up for children with blood levels of 3.5 or more.
- If Wisconsin were to follow these new guidelines, we would be providing case management to roughly 80 additional children per year. This is based on a 10 year average of children reporting blood lead levels between 3.5 and 4.9 mcg/dL (see table above).
- This increased work would require an additional 0.5 FTE for Risk Assessor and 0.5 FTE for Nurse Case Manager.

In 2022, we worked with 47 families.



If we followed updated CDC guidance, we would have worked with **89 families-- nearly twice the workload.**



We prevent and respond to lead exposure in young children

2022 staff work

In 2022, we worked with 47 families that had children with lead levels 5 mcg/dL or higher. Some of these families had elevated lead levels in previous years and needed continued follow up. We also inspected 23 homes or childcare sites and sent 128 prevention letters as a result of elevated lead levels. While some intervention services are brief, others can be extensive—home inspections alone take 8-10 hours.



Prevention Services

Who: Children under 6 years old, with a detectable lead result below 5 mcg/dL, and who live in a zip code with a large number of houses built before 1950.

What we do: We send a letter with information about preventing lead. We also provide contact information for our staff if they would like to ask any questions.

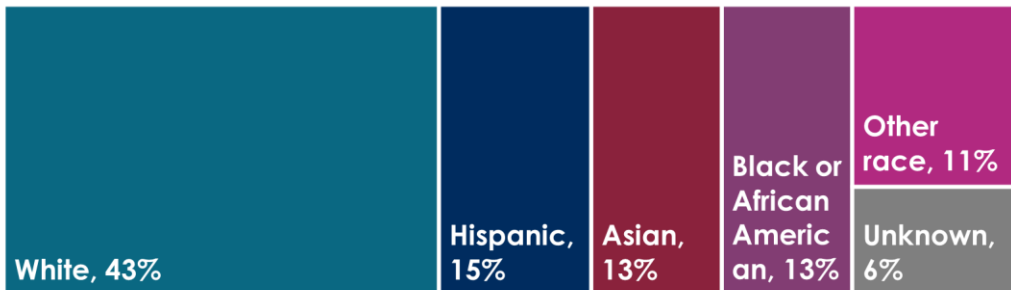


Case Management

Who: Children under 6 years old with a lead result of 5 mcg/dL or higher.

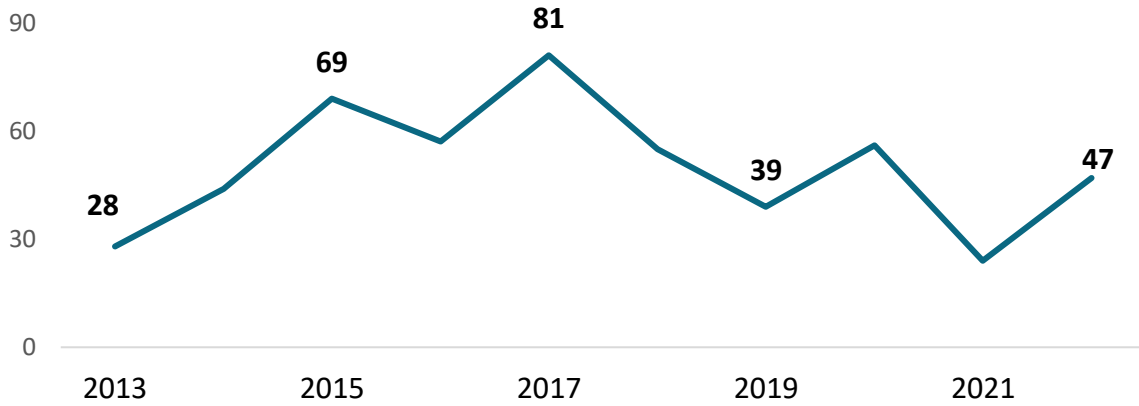
What we do: A public health nurse follows up with the family to provide support. This may include providing education about lead, healthy nutrition, assistance in finding medical care, lead testing or community resources such as WIC, Birth to 3 or Early Childhood Education. Our nurse is also the link between the Environmental Health team and local medical providers. We follow families until the child turns 6 or their lead level falls below 5. For over 10 years, we have provided a more proactive lead follow up for children than state requirements. Wisconsin requires case management for children with lead level of 20 mcg/dL or more.

2022 Lead Case Management by Race/Ethnicity



Note: due to testing data collection limitations described on page 1, we aren't able to conclude to what extent these children represent the underlying population in need of services.

Case management peaked in 2017, when testing also peaked.



Home inspections

Who: Offered to families of all children under 6 years old with a lead result of 5 mcg/dL or higher. This service is strongly encouraged for families of a child under 6 with a lead result of 10 mcg/dL or higher and required for those with lead result of 20 mcg/dL or more.

What we do: A Certified Risk Assessor visits the family's home and conducts a risk assessment to determine sources of lead exposure. A full risk assessment includes testing surfaces with dust wipes and using a machine that can detect lead. Orders are issued to fix lead hazards, and [help is available](#) for income-eligible families and pregnant people.