Childhood Lead Exposure

DESCRIPTION

Lead poisoning causes many serious health problems for both children (including learning difficulties and behavioral issues) and adults (such as damage to kidneys and reproductive organs, and high blood pressure). Younger children are especially at risk because their bodies absorb more lead as their brains are still developing.[1] The most common source of lead exposure in a home is deteriorated lead-based paint and household dust containing lead. Less common sources include contaminated drinking water and soil, keys, imported toys, spices, cosmetics, pottery and ceramics, and other consumer products.[1] Lead testing is not universal in Minnesota. Children with risk factors for lead exposure (such as older housing or poverty status) are targeted for testing. This includes all children who live in Minneapolis or Saint Paul and all children on public insurance, as well as any child who lives in or regularly visits a home, child care, or other building built before 1978.[2] Recent studies indicate there is no safe level of exposure to lead.[3]

HOW WE ARE DOING

The Minnesota Department of Health Childhood Blood Lead Screening Guidelines direct physicians to order blood lead tests for children at high risk for exposure.[2] The percentage of Ramsey County children under 6 who get tested for lead has been declining since 2011 even though the child population continues to steadily increase. The Centers for Disease Control and Prevention (CDC) lowered the level of concern for children's blood lead levels in 2012 from 10 to 5 micrograms per deciliter (µg/dL).[3] This has resulted in an increase in the number of Ramsey County children requiring intervention, but that number has been decreasing over time. Ramsey County has one of the largest numbers of children with elevated blood lead levels in Minnesota.[4]

BENCHMARK INDICATOR

Healthy People 2020[5]:
1) Reduce blood lead levels in children aged 1-5 years.
U.S. Target: 5.2 µg/dL of lead
2) Reduce the mean blood lead levels in children aged 1-5 years.
U.S. Target: 1.6 µg/dL average blood lead level

DISPARITIES

According to the CDC, young children living in poverty are exposed to more sources of lead than children who are not in poverty.[6] Nationally, African-American children have the highest concentrations of blood lead compared to other children.[7]

RISK FACTORS

Children who are younger than 6 and live in homes built before 1950 are most at risk for lead exposure, because the paint in these homes may contain higher concentrations of lead (continued on back)

Information to note

- Lead poisoning is considered to be 100% avoidable.
- The number of Ramsey County children receiving lead tests has declined since 2011 even though the eligible child population continues to steadily increase.

Identified by the community

"Most of my Karen people live in old apartment complexes, I think this can also be unhealthy for them."

509 people (24%) mentioned physical environment as a factor that helps them or keeps them from being healthy.

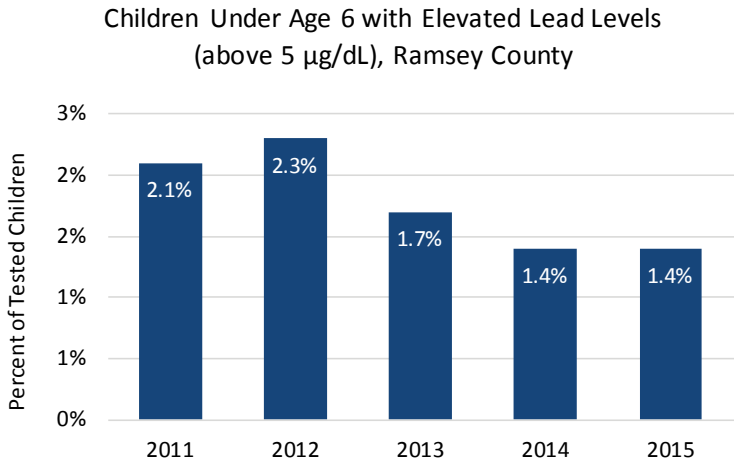
Within these 509 responses, there were 124 responses about clean living spaces and housing.

[1] What Do Parents Need to Know to Protect Their Children? Centers for Disease Control and Prevention. https://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm. Accessed May 10, 2018.
[2] Minnesota Department of Health. Childhood Blood Lead Screening Guidelines for Minnesota. http://www.health.state.mn.us/divs/eh/lead/reports/screening/blsg4mn.pdf. Accessed July 2, 2018.
[3] Minnesota Department of Health. Lead poisoning prevention programs biennial report 2017. https://www.leg.state.mn.us/docs/2017/mandated/170690.pdf. Accessed May 11, 2018.
[4] Minnesota Department of Health. Annual elevated blood lead levels: facts and figures. https://data.web.health.state.mn.us/web/mndata/lead_annual_level. Accessed May 10, 2018.
[5] Healthy People 2020. https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health/objectives. Accessed July 3, 2018.
[6] Minnesota Department of Health. Risk factors for childhood lead exposure: facts & figures. https://data.web.health.state.mn.us/lead_risk. Accessed May 10, 2018.
[7] Disparities Overview by Race and Ethnicity. HealthlyPeople.gov. https://www.healthypeople.gov/2020/data/disparities/summary/Chart/4356/3. Accessed May 10, 2018.

(lead-based paint was phased out of residential use in 1950 and eventually banned in 1978 in the U.S.).[8] In Ramsey County 33.2 percent of homes were built before 1950, and 73.6 percent were built prior to 1980.

WHAT RAMSEY COUNTY GOVERNMENT IS DOING

Saint Paul – Ramsey County Public Health coordinates follow-up and confirmation testing if a child's blood lead level is 5 µg/dL or greater. Information is provided to caregivers on how to reduce and/or avoid exposure to lead. Referrals for educational interventions are also offered. Minnesota law requires environmental interventions for children at 15 µg/dL or greater and pregnant woman who test positive for blood lead levels at 10 µg/dL or greater.[9] Interventions include a housing risk assessment, visits from a public health nurse, enforcement orders, lead-hazard reduction or remediation, and clearance testing. Saint Paul – Ramsey County Public Health staff work closely with homeowners, property managers, the Minnesota Department of Health, the City of Saint Paul and several neighborhood organizations to ensure that all lead-based paint hazards are corrected. Public health nurses monitor the child's development and nutrition until the lead level drops below 5 µg/dL.



Source: Minnesota Department of Health.[10]

[8] Minnesota Department of Health. Risk factors for childhood lead exposure: facts & figures. https://data.web.health.state.mn.us/lead_risk. Accessed May 10, 2018.
[9] 2017 Minnesota Statutes Section 144.9504. https://www.revisor.mn.gov/statutes/cite/144.9504. Accessed July 2, 2018.
[10] Minnesota Department of Health, Minnesota Public Health Data Access Portal. http://data.web.health.state.mn.us/lead_query. Accessed July 2018.