



SOUTH DAKOTA
DEPARTMENT OF HEALTH

**South Dakota Childhood Lead Poisoning Prevention Program (SDCLPP)
Lead Advisory Group Meeting
September 22, 2023**

Welcome & Introductions



SOUTH DAKOTA DEPARTMENT OF HEALTH

Lead Result Reporting

ARSD 44:20:01:04

New Rule

- Lead, all blood levels
- Dates: Begins January 1, 2024
- Reportability: Category II disease, Within 3 days
- Approved by Interim Rules Review Committee on July 18, 2023

Old Rule

- Lead, elevated levels
- Dates: January 1, 2016 – December 31, 2023
- Reportability: Category II disease, Within 3 days



Media Campaign

- **Work Order issued with Insight Marketing Design, Inc. selected**
- **Period: July 25 – May 31, 2024**
- **Media funding: \$96,430**
- **Outputs:**
 - **CLPPP communication plan**
 - **Radio: 15 and 30-second PSA ad development and placement**
 - **Billboards**
 - **Digital and social media advertisements**
 - **Recommendation for potential print ad placements**
 - **Paid social media placement for preexisting content and recommendations for new development.**



Media Campaign **FEEDBACK**

- **Public and Provider Education and Outreach**
 - **Public**
 - **Radio: 15 and 30-second PSA ad development and placement**
 - **Billboards**
 - **Digital and social media advertisements**
 - **Recommendation for potential print ad placements**
 - **Paid social media placement for preexisting content and recommendations for new development**
 - **Provider**
 - **Print ad placement**



Survey Findings

We called a sample of pediatric providers all over the state to gather information on the best way to promote awareness of lead as a hazard using posters, brochures, and other educational materials for person in their clinic waiting room.

- 21 of 25 clinics responded.
- 14% (3/21) of clinics were not interested in receiving lead education in their waiting room.
- 90% (19/21) of clinics were open to receive lead brochures with 8X10 as the most preferred size.



Funding **FEEDBACK**

50% increase in funding

New activities

- **Hiring nurse educator that will be working with nursing, physician assistant, and physician training programs to incorporate information on the importance of lead-free development into existing curriculum**
- **Webinars (CME/CNE)**
- **Mini clips**
- **Training modules**



Partnership with SD Women, Infants, and Children (WIC)

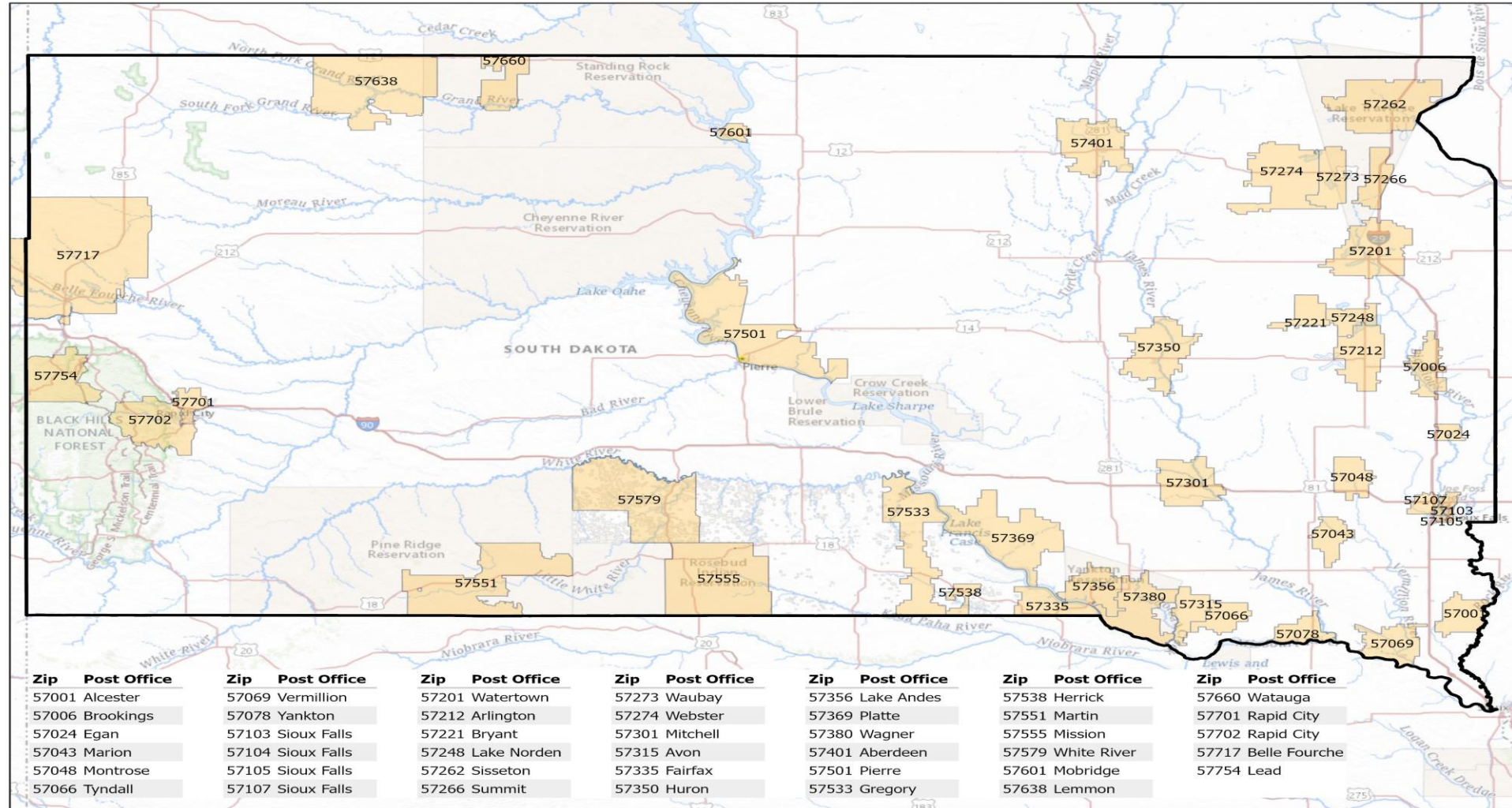
- **Request:** SD CLPPP sought and receive approval for a one-time, end-of-year expense to purchase 30 Magellan Lead Care analyzers and test kits
- **Budget:** \$100,000
- **Focus:** ~30 DOH offices that cover the high-risk zip codes
- **SD CLPPP collaborating with WIC leadership to place them**
- **1st Unit:** Health Fairs Mobile Unit



Program Updates



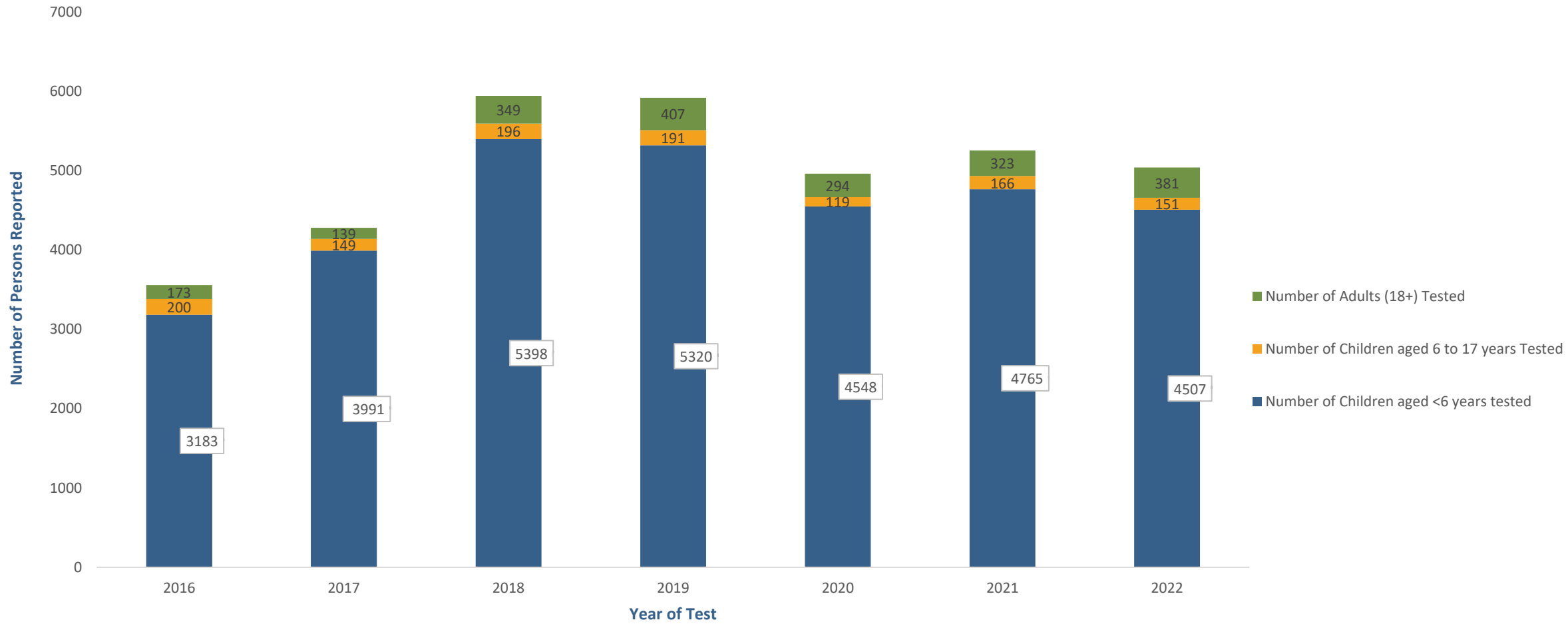
High-Risk Zip Code Map



Blood Lead Annual Report 2022



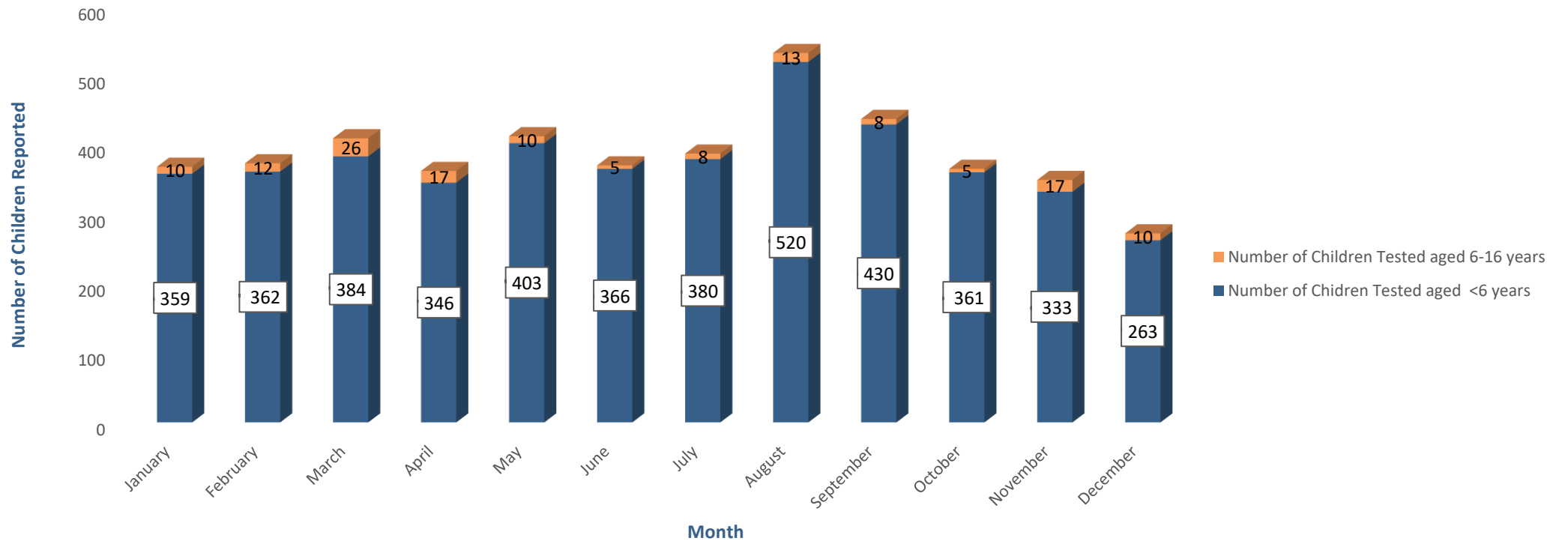
Number of Persons Blood lead Tested by Year and Age Group, South Dakota , 2016-2022



*NOTE: 2022 data is provisional



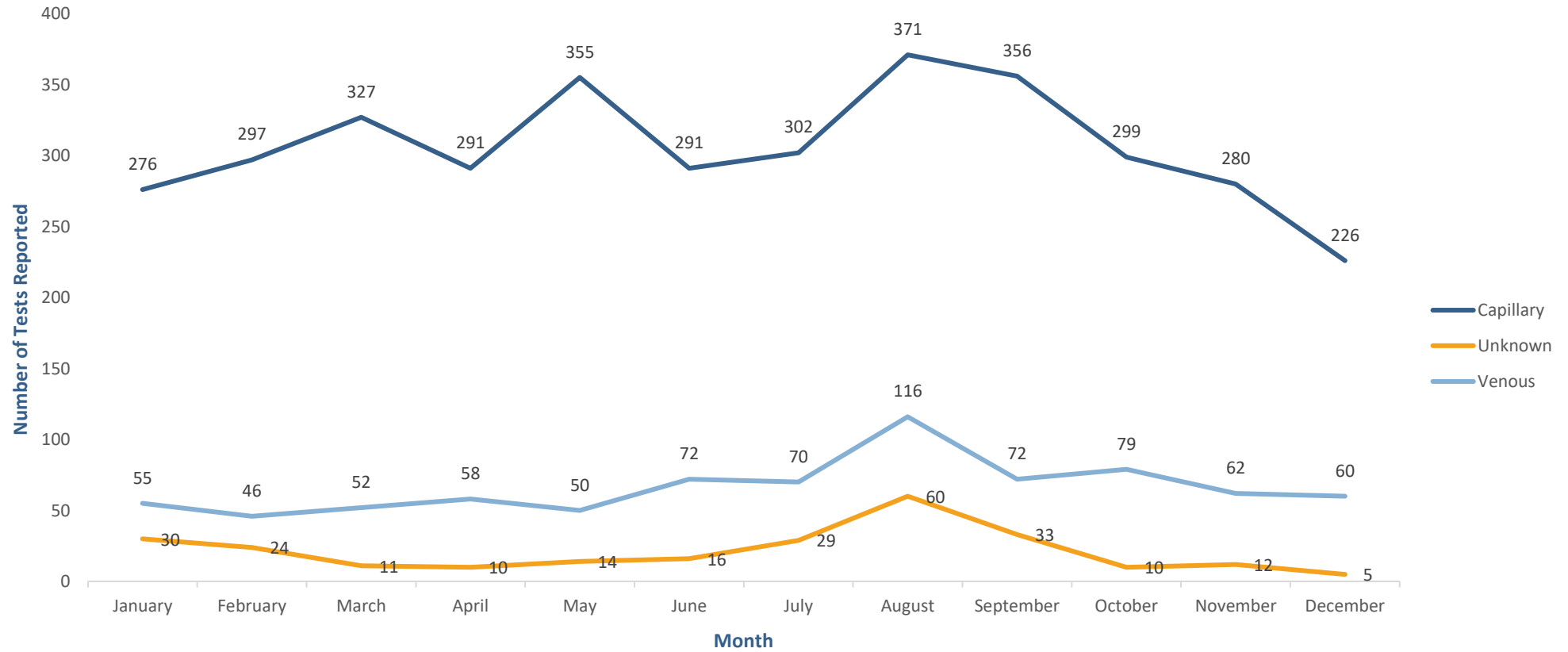
Number of Children Tested By Age Group, Per Month South Dakota 2022



*NOTE: 2022 data is provisional



Capillary and Venous Testing Volume for Children under Age 6 by month, 2022



*NOTE: 2022 data is provisional



Summary of Blood Lead Tests Performed in 2022 by Age Group

| Age Category | Total Number of Tests | Capillary Test | | Venous Test | | Unknown Test | |
|--------------|-----------------------|----------------|-----|-------------|-----|--------------|-----|
| | | N | % | N | % | N | % |
| 0 < 6 years | 4717 | 3671 | 78% | 792 | 17% | 254 | 5% |
| 6–16 years | 149 | 149 | 14% | 110 | 74% | 18 | 12% |

*NOTE: 2022 data is provisional



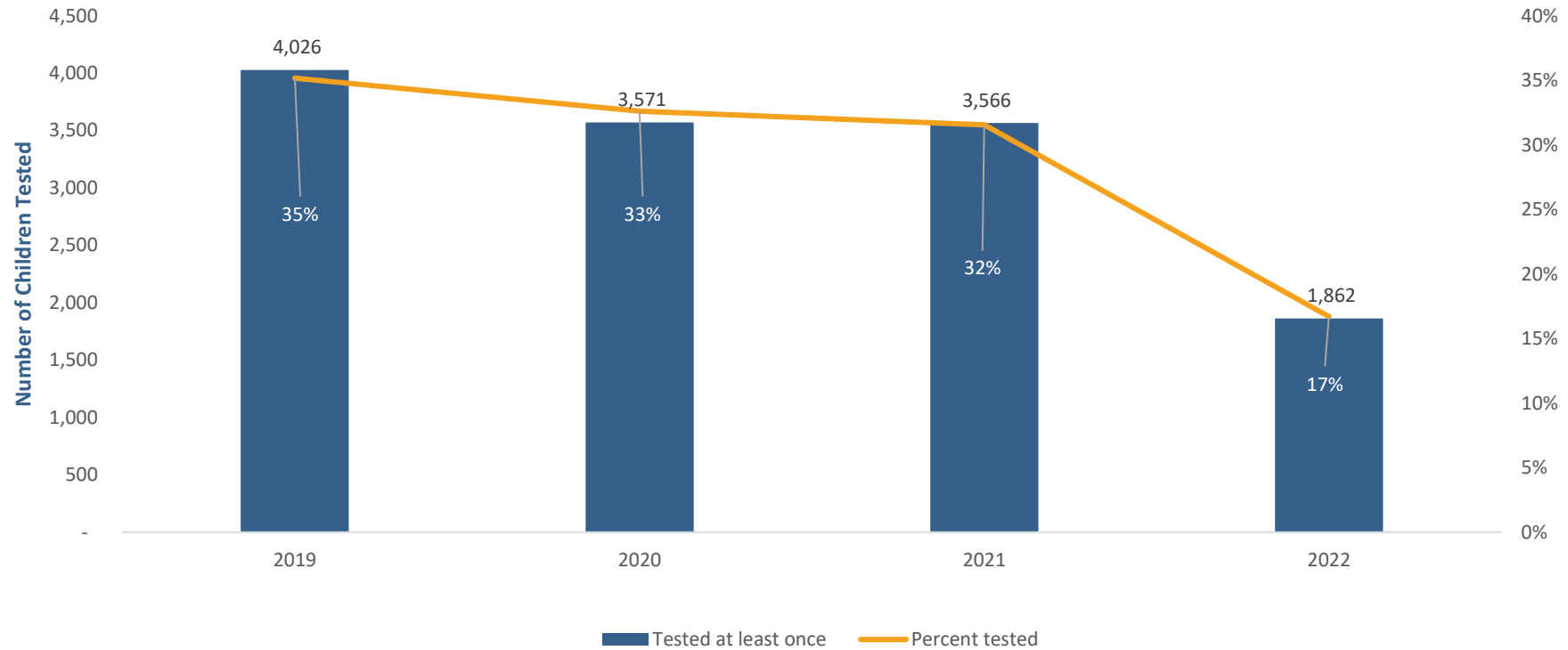
Age Distribution of Children Receiving an Initial Blood Lead Test, South Dakota, 2022

| Age Distribution of Children receiving an Initial Blood Lead Level (BLL) Test | Percent of Total | |
|---|------------------|-------|
| 0-24 months | 3374 | 74.9% |
| 25-48 months | 712 | 15.8% |
| 49 months and over | 421 | 9.3% |
| Total BLL tests | 4507 | 100% |
| Elevated Blood Lead Level (EBLL), in $\mu\text{g}/\text{dL}$ | | |
| Total EBLL ≥ 3.5 - < 10 $\mu\text{g}/\text{dL}$ | 161 | 3.6% |
| Total EBLL ≥ 10 $\mu\text{g}/\text{dL}$ | 17 | 0.4% |
| Total EBLL tests | 178 | 4% |

*NOTE: 2022 data is provisional



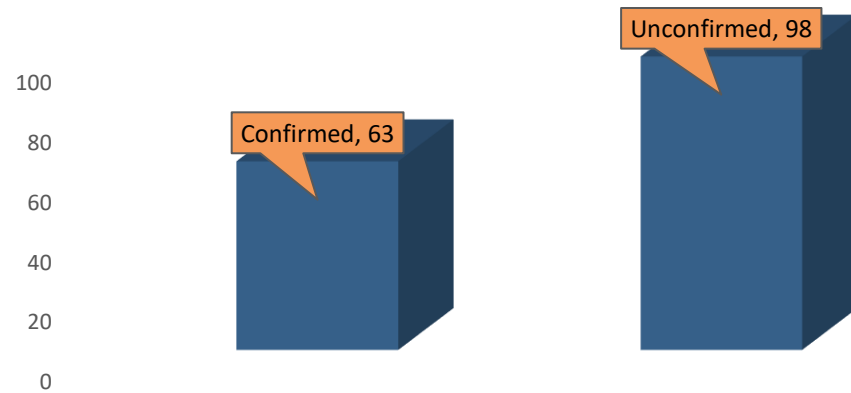
Number and Percent of Children Tested at Least Once by Age 3 Years, by Birth Cohort



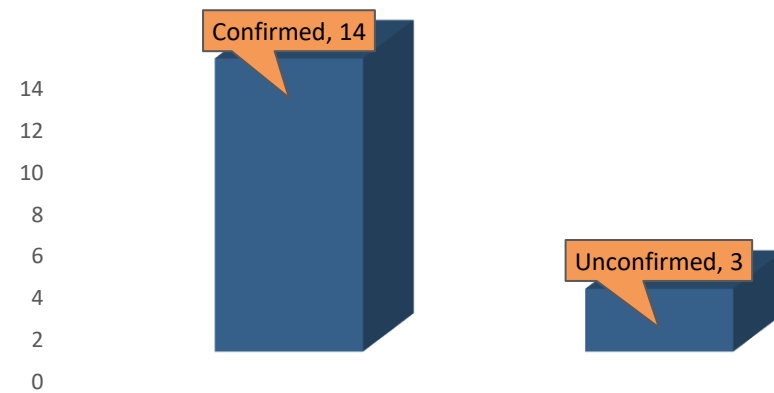
*NOTE: 2022 data is provisional



Number of Children with Confirmed and Unconfirmed Elevated Blood Lead Levels ≥ 3.5 - $< 10 \mu\text{g}/\text{dL}$ 2022



Number of Children with Confirmed and Unconfirmed Elevated Blood Lead Levels $\geq 10 \mu\text{g}/\text{dL}$ 2022

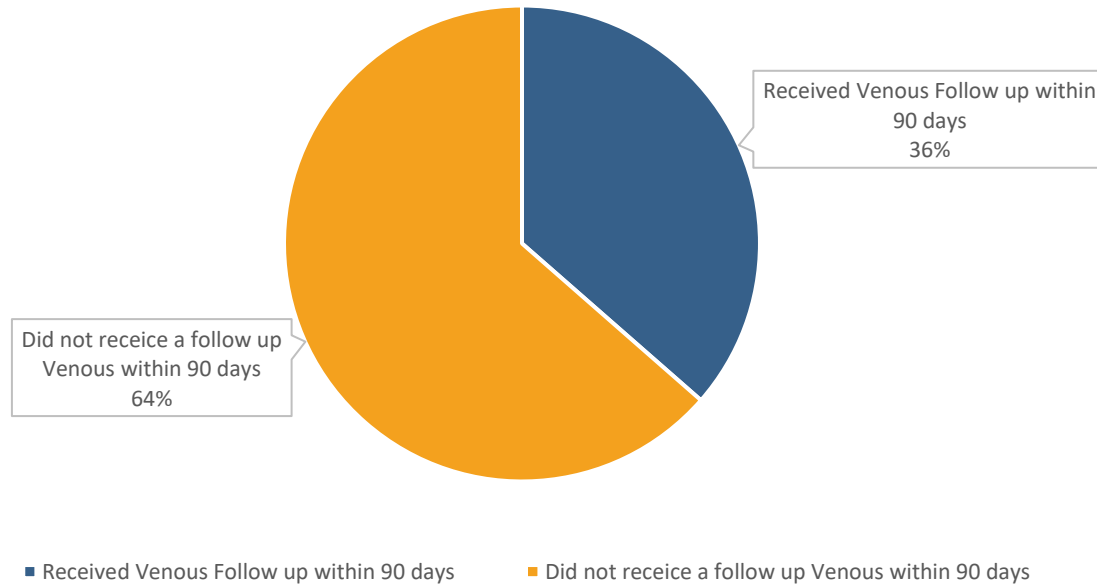


- Confirmed elevated blood lead level is any elevated venous blood lead test result or any elevated capillary blood lead test followed by a second elevated capillary test within 90 days (12 weeks).
- An unconfirmed elevated blood lead level is an elevated capillary blood lead test without a follow up test.

*NOTE: 2022 data is provisional



Percent of Children with Initial Capillary Test ≥ 3.5 $\mu\text{g}/\text{dL}$ Receiving follow up venous Test within 90 days



*NOTE: 2022 data is provisional



Summary of Reported Demographic Characteristics of Children aged < 6 years Blood Lead Tested in 2022 and EBLL cases (confirmed $\geq 3.5 \mu\text{g/dL}$)

| Demographic: Sex | Tested, n | % | EBLL Cases, n | Percent EBLL |
|---------------------|--------------|-----|------------------|-----------------|
| Female | 2208 | 49% | 28 | 1.3 % |
| Male | 2288 | 51% | 49 | 2.1% |
| Unknown | 11 | 0% | 0 | 0.0% |

Summary of Reported Demographic Characteristics of Children aged < 6 years Blood Lead tested in 2022 and EBLL cases (Unconfirmed $\geq 3.5 \mu\text{g/dL}$)

| Demographic: Sex | Tested, n | % | EBLL Cases, n | Percent EBLL |
|---------------------|--------------|-----|------------------|-----------------|
| Female | 2208 | 49% | 53 | 2.4% |
| Male | 2288 | 51% | 48 | 2.1% |
| Unknown | 11 | 0% | 0 | 0.0% |

*NOTE: 2022 data is provisional



Number of Lead Tested Children ages 0-<72 months by Ethnicity, Case Total and EBLL % 2022 Confirmed and Unconfirmed

| Ethnicity | Number Tested | EBLL Cases | %EBLL | Ethnicity % of Total Tested |
|--------------|---------------|------------|--------|-----------------------------|
| Hispanic | 408 | 11 | 2.70% | 9.05% |
| Non-Hispanic | 2795 | 111 | 3.97% | 62.01% |
| Unknown | 1304 | 56 | 4.29% | 28.93% |
| Total | 4507 | 178 | 10.96% | |

*NOTE: 2022 data is provisional



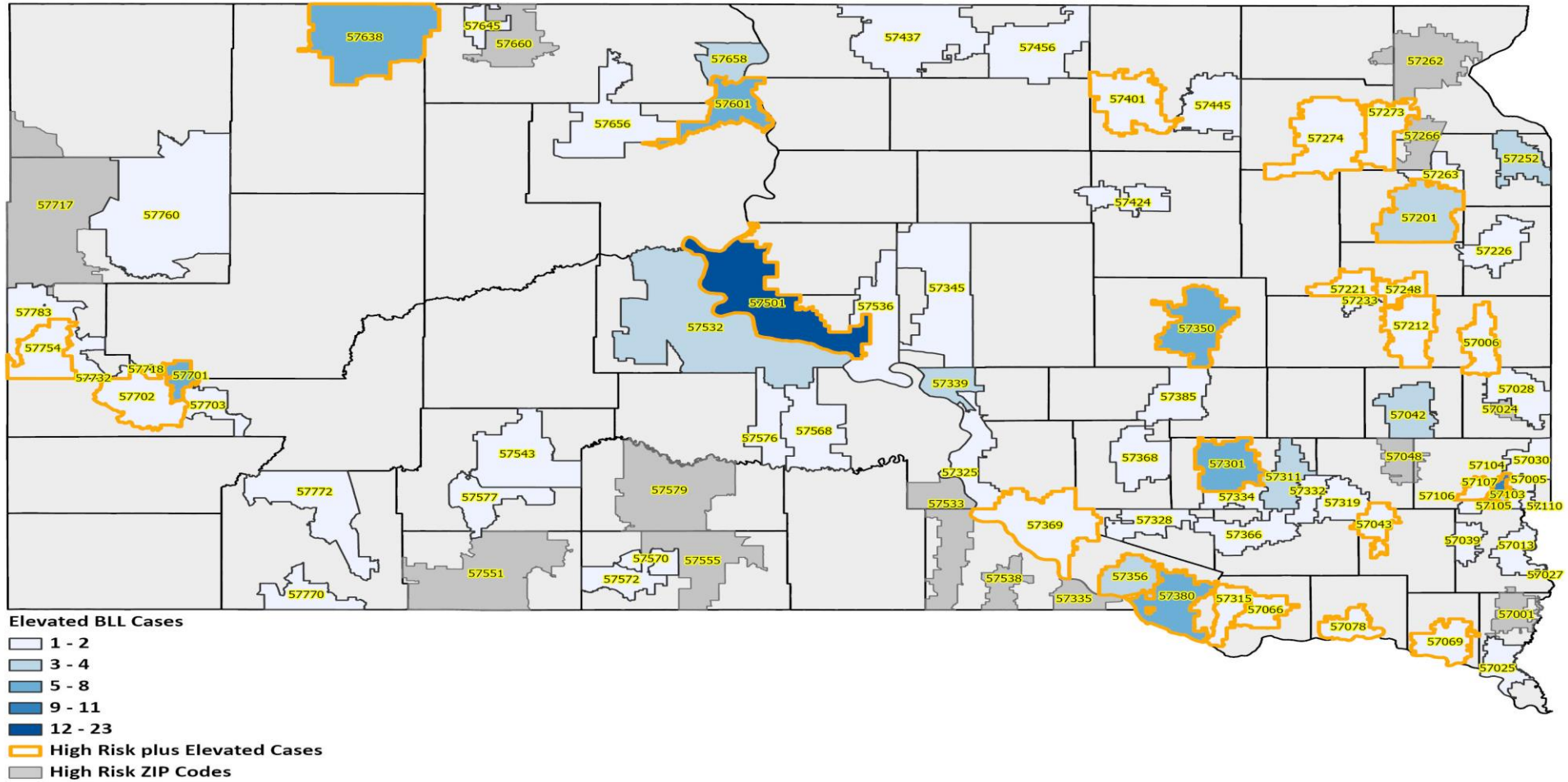
Number of Lead Tested Children ages 0-<72 months by Race, Case Total and EBLL % 2022 (Confirmed and unconfirmed)

| Race | Number Tested | EBLL Cases | %EBLL | Race % of Total Tested |
|-----------------------------------|---------------|------------|-------|------------------------|
| American Indian /Alaskan Native | 636 | 57 | 8.96% | 14.11% |
| Asian | 75 | 7 | 9.33% | 1.66% |
| Black /African American | 262 | 8 | 3.05% | 5.81% |
| Native Hawaiian /Pacific Islander | 1 | 0 | 0.00% | 0.02% |
| White | 2901 | 92 | 3.17% | 64.37% |
| Refused to answer | 2 | 0 | 0.00% | 0.04% |
| Unknown | 275 | 5 | 1.82% | 6.10% |
| Other | 355 | 9 | 2.54% | 7.88% |
| Total | 4507 | 178 | | |

*NOTE: 2022 data is provisional



Elevated Blood Lead Levels (3.5+ $\mu\text{g}/\text{dL}$) by ZIP Code



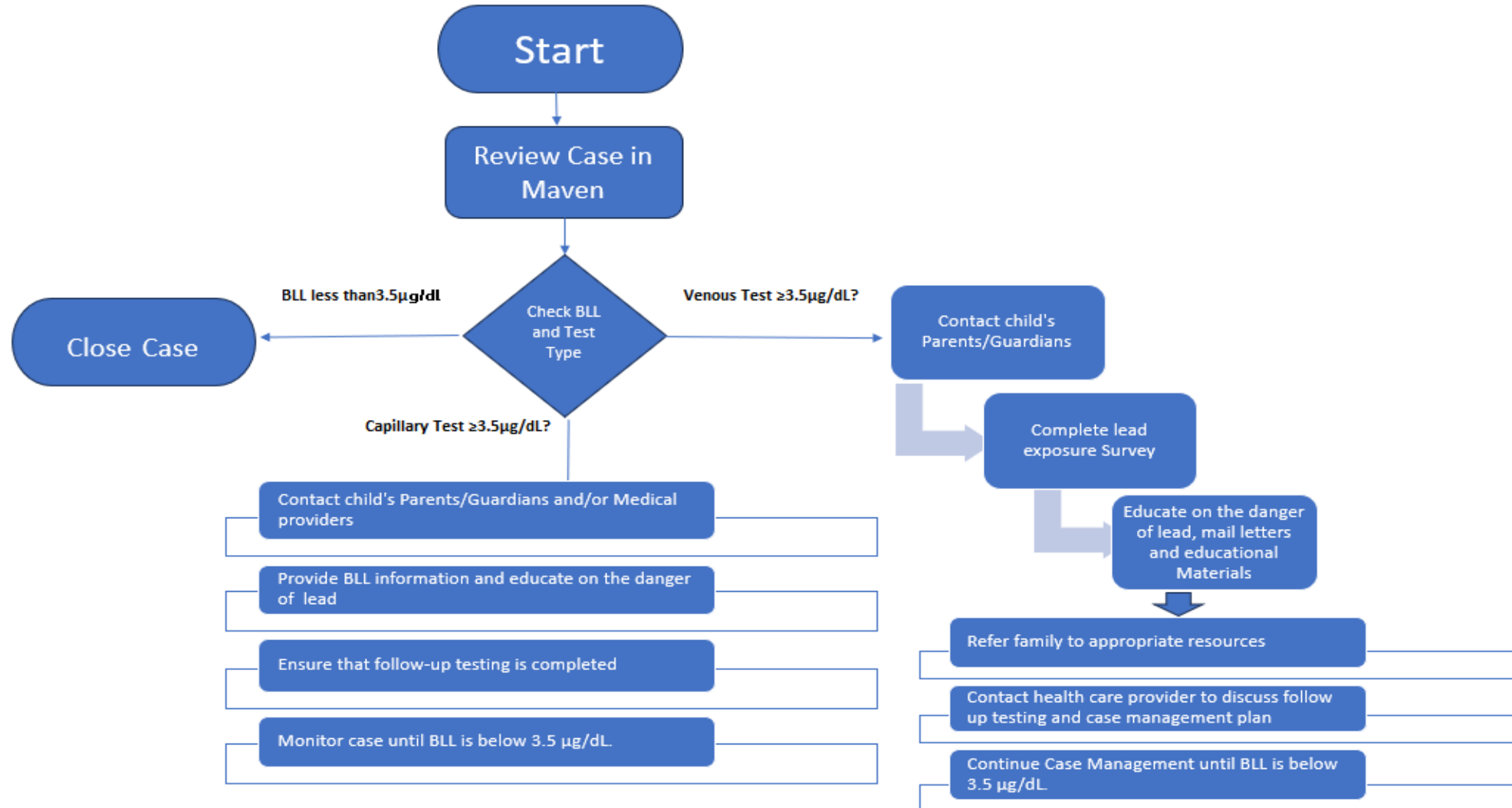


Data Summary for Year 2022

- **Of the 4,507 initial blood lead test reported to South Dakota Department of health in 2022, a total of 178 children tested at or above CDC reference level of ≥ 3.5 micrograms per deciliter ($\mu\text{g}/\text{dL}$). This equates to 3.94% of the total reported results with an elevated blood lead levels.**
- **The age range with the largest percentage of testing occurred at 0-24 months at 74.9%. This might be the result of Medicaid testing requirement.**
- **The reported gender data indicated more males than females were tested.**
- **Among those children 0- <72 months of age, those identified as White made up the highest portion with 64.36% tested followed by those identified as American Indian / Alaskan Native at 14.11%.**
- **Those identified as Asian had the highest EBLL percentage at 9.33% followed by American Indian / Alaskan Native at 8.96% , White at 3.17 % , Black / African American at 3.05 % all other race categories exhibited EBLL rates less than 3.00%.**
- **28.9% of the reported ethnicity data were indicated as unknown. The Non-Hispanic category made up approximately 62% and the Hispanic category was 9%.**



Overview of Calendar Year 2023





Overview of Calendar Year 2023

- **3,148 children tested as of 08/31/2023**
- **114 children had an initial blood lead levels that was ≥ 3.5 ug/dL**
 - **11 (9.6%) children had initial elevated blood lead levels in 2022. (Case management)**
 - **27 (23.7%) children with a capillary test had a follow-up venous test within 90 days that was less than 3.5 ug/dL (no program follow-up needed)**
 - **44 (38.6%) children received calls to a parent or guardian to educate them on the danger of Lead**
 - **32 (28.1%) children were attempted to be contacted by the CLPPP**
 - 11 cases were closed as unable to locate/contact



DANR Service Line Assessment and K-12 School/Daycare Water Testing Program Updates

Mark Mayer





National Lead Poisoning Prevention Week 2023 **FEEDBACK**

- October 22-28, 2023
- Outreach opportunity around 3 key messages:
 - **Get the Facts:** Learn about lead exposure and the hazards of lead
 - **Get Your Child Tested:** A simple blood test can detect lead. Consult your health care provider for advice
 - **Get Your Home Tests:** Minimize your risk of lead exposure by hiring a certified professional to test your home for lead if it was built before 1978
- **2022 Focus:** social media and SD Medicine ad
- <https://www.epa.gov/lead/national-lead-poisoning-prevention-week>

SOUTH DAKOTA Childhood Lead Poisoning Prevention Program

The South Dakota Department of Health received funding from Centers for Disease Control and Prevention (CDC) for a Childhood Lead Poisoning Prevention Program (SD CLPPP). The Program provides lead exposure prevention education and support to the families of children younger than six that are exposed to lead.

The CDC recently updated its blood lead reference value (BLRV) from 5 µg/dL to 3.5 µg/dL in response to the Lead Exposure Prevention and Advisory Committee (LEPAC) recommendation made on May 14, 2021.

SD CLPPP Recommends Confirmation and Follow-up Schedule for Pediatric Blood Lead Levels ≥ 3.5 µg/dL

Confirm all capillary blood lead level ≥ 3.5 µg/dL with a venous sample, according to the following schedule.

| Capillary Blood Lead Level | Confirm test with venous within* |
|----------------------------|----------------------------------|
| 3.5 - 9 µg/dL | 3 months |
| 10 - 44 µg/dL | 1 month |
| 45 - 59 µg/dL | 48 hours |
| 60 - 69 µg/dL | 24 hours |
| ≥ 70 µg/dL | immediately as an emergency test |

*The higher the capillary test result, the more urgent the need for a confirmatory venous test.

Venous Lead Test Follow-up Schedule

For all venous blood lead levels ≥ 3.5 µg/dL, conduct follow-up venous blood lead tests, according to the following schedule.

| Venous Blood Lead Level | Follow-up Venous Test Schedule | Long-Term Follow-Up** | South Dakota Response |
|-------------------------|---|-----------------------------|---|
| 3.5 - 9 µg/dL | 3 months | 6-9 months | Educational materials sent to family's home |
| 10 - 19 µg/dL | Within 3 months | 3-6 months | Case management by phone |
| 20 - 44 µg/dL | 2 weeks-1 month | 1-3 months | |
| ≥ 45 µg/dL | Repeat venous blood test Immediate Chelation therapy | Based on chelation protocol | Referrals to community resources |

**Long-term follow-up should only begin after blood lead is declining and child is living in a lead-safe environment

Find more information at DOH.SD.GOV/BloodLead/

LEAD EXPOSURE TESTING for CHILDREN

The SD Childhood Lead Poisoning Prevention Program recommends testing ALL CHILDREN for lead exposure regardless of risk factors.

SURVEY

A survey for pediatric medical providers was created to understand when and how providers discuss lead screening and testing with parents of young children. Findings from the anonymous survey can help inform SD CLPPP of current practices and will be shared in aggregate.



Scan to take the Survey

NATIONAL LEAD POISONING PREVENTION WEEK is Oct. 23-29





Referral Updates

- **Inter-Lakes Community Action Partnership:** <https://www.interlakescap.com/>
- **Birth to Three Program:** <https://www.usd.edu/Academics/Colleges-and-Schools/sanford-school-of-medicine/Research-and-Outreach-Centers/Center-for-Disabilities/Programs-and-Services/Birth-to-Three>
- **South Dakota Parent Connection:** <https://www.sdparent.org/family-resources/family-life/child-development/>
- **Sioux Falls School District:** <https://www.sf.k12.sd.us/page/early-childhood>
- **Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)/ South Dakota Well-Child Care:** <https://dss.sd.gov/medicaid/providers/programinfo/epsdt/>



Referral Challenges

- A routine blood lead screening was performed on a 3-year 9-month-old female on July 12, 2022; the result was remarkable, with a capillary level of 43 $\mu\text{g}/\text{dL}$ (CDC Reference level 3.5 $\mu\text{g}/\text{dL}$).
- A repeated test was performed on July 18, 2022 (specimen date 07/18 , date reported to physician 07/21) with a Venous level of 46.5 $\mu\text{g}/\text{dL}$, with no significant changes from the previous result. (Meets Confirmed Case Definition)
- The child was immediately referred to Avera McKennan Hospital in Sioux Falls for further evaluation and necessary treatment. Poison Control was contacted and was recommended a succimer oral.
- The patient started one succimer treatment as an in-patient on July 26, 2022, and was discharged on the same day.
- The patient and mother were advised to return to Avera McKennan on July 27, 2022, to pick up the remaining doses and get a repeat blood lead test (1-2 days following initiation of succimer) as per poison control recommendations.
- SD CLPPP and the attending physician from Avera discussed the case management plan of care on 07/26/23.
- CLPPP contacted the child's parents on 07/27/23 after several unsuccessful attempts to discuss exposure identification.



Referral Challenges

Interview Findings

- The child lives in a rented single-family home built in 1909 and has lived there since birth.
- There is no history of elevated lead levels from other children or family members living in the house.
- Exposure Risk Assessment:
 - The child usually plays in the front yard with bare soil
 - Some painting peeling chips were outside the home at the front door.
 - The child's primary source of drinking water was tap water.
 - No repair or plumbing has been done in the last years.
 - The child's uncle, who also lives in the home, works at a welding company, work and shoes and clothes are worn in the house.
 - The uncle usually interacts with the child before changing clothes after work.
- The mother was educated on the danger of lead and preventive measures. Educational materials were mailed to the child's address, and follow-up testing in 2 weeks was scheduled.
- The child's mother was advised to discuss having her house tested for lead hazards with her landlord and was also provided resources in her area to help address lead hazards.



Referral Challenges

SD CLPP contacted the primary care physician, discussed findings, and followed up on testing guidelines. The primary care physician referred the child to Birth to Three for assessment of developmental delays. The child continues to take oral succimer as follows.

- **07/26/2022 CHEMET CAP 100MG Route: ORAL for 18 days**
Testing result : 07/29 was 14.7 µg/dL
Testing : 08/15/2022 was 11.1
Testing : 09/09/2022 was 27.2
Testing : 09/16/2022 was 28.0
- **09/19/2022 CHEMET CAP 100MG Route: ORAL for 19 days**
Testing : 09/30/2022 was 5.2
Testing : 10/07/2022 was 5.2
Testing : 10/27/2022 was 20.1
- **11/03/2022 CHEMET CAP 100MG Route: ORAL for 19 days**
Testing : 11/17/2022 was 3.5
Testing : 12/09/2022 was 5.4 (Last test for 2022)



Referral Challenges

- In December 2022, SD CLPPP connected with the primary physician and agreed to have the child retested in the next well-child visit.
- The child was retested on 07/11/2023 at a well-child checkup and the result was 20.8 µg/dL.
- CLPPP program connected with the child's Head Start Nurse and medical provider to discuss the plan due to continued testing at a high lead level.
- The Nurse was able to have the child's home tested for lead by the weatherization program in July 2023.
- The Nurse and the child's mother stated that lead was found in the house.
- CLPPP connected the Nurse with the poison control center.
- The poison control recommended that the best thing was to remove the child from exposure and continue monitoring lead levels.
- The Nurse has been trying to help the family relocate, but it has been challenging because of the subsidized housing available where the child lives.
- The latest test was on 08/28/23, and the Lead level was 18.2.
- As of August 31st, the Child still has been able to relocate.



Additional LAG Members **FEEDBACK**

Current Members

- **Ashley Lauing, Policy Strategy Manager – Department of Social Services**
- **Kelly Thomas, Laboratorian – Indian Health Service**
- **Mark Mayer, Engineering Manager – Department of Agriculture and Natural Resources**
- **Matt Cerny, Program Analyst -US Department of Housing and Urban Development**
- **Rea Riggle, Environmental Coordinator – South Dakota Department of health**
- **Rochelle Boote, MD – American Academy of Pediatrics (SD Chapter)**
- **Tim Jurgens, Director -LSS Center for New Americans**

Next Steps

- Next meeting /topics interest
- Closing

