

# ARIZONA

2021

# ANNUAL REPORT

## BLOOD LEAD SURVEILLANCE

### CHILDHOOD LEAD POISONING PREVENTION PROGRAM



ARIZONA DEPARTMENT  
OF HEALTH SERVICES



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## EXECUTIVE SUMMARY

Per Arizona Administrative Code R9-4-302, all blood lead results are reportable to the Arizona Department of Health Services (ADHS). The 2021 Blood Lead Surveillance Annual Report describes the activities of and the childhood blood lead data maintained and analyzed by the Childhood Lead Poisoning Prevention Program (CLPPP) for the 2021 calendar year.

The intent of this report is to provide information for stakeholders to identify areas across Arizona to target interventions. The report contains an analysis of statewide and county level data, a breakdown of blood lead levels above the Center for Disease Control and Prevention's (CDC) blood lead reference value (BLRV), and screening rates for statewide and high-risk zip codes and high-risk census tracts. The high-risk zip codes used for analyses in this report came from the 2018 Targeted Lead Screening Plan for the Prevention of Childhood Lead Poisoning.

Data displayed are for children less than 6 years of age at the time of first reported blood lead level at or above the BLRV or first reported test. The CDC updated the blood lead reference value from 5 µg/dL to 3.5 µg/dL in October, 2021. For the purposes of this report, a child was considered to have had a blood lead level at or above the BLRV when a venous test was reported greater than or equal to 5 µg/dL in 2021. For 2022 data going forward, case counts will reflect the new BLRV.

Screening rates were calculated using venous and capillary blood lead test results reported to ADHS. These rates do not include verbal assessments or questionnaires administered by health care providers. Please note that there is a potential underestimation of counts and rates presented in this report due to ADHS' reliance on provider and laboratory reporting of blood lead test results.



## EXECUTIVE SUMMARY (CONT.)

Screening rates in Arizona are lower than the national average. AZ CLPPP strongly recommends all children receive a blood lead test, rather than attempting to determine if children have any risk factors. However, at a minimum, providers are required to test all children on AHCCCS at 12 and 24 months of age, respectively or at least once before the child reaches 6 years of age if not previously tested. Providers should also screen refugee children ages 6 months to 16 years within 90 days of arrival. Follow-up lead screening should occur again after 3-6 months of placement in a permanent residence, regardless of the results of the initial lead test. A top priority for AZ CLPPP is to increase outreach and collaboration efforts with partners to improve screening rates among vulnerable populations. In addition to improving screening rates, the program aims to improve the identification of common lead sources throughout the state of Arizona.

Historically, AZ CLPPP had the ability to complete a limited number of environmental investigations. However, the program acquired an X-ray fluorescence (XRF) Analyzer in 2023 which allowed staff to efficiently identify sources of lead during environmental investigations. The program is continuously working to increase the number of environmental investigations completed each year.

In 2021, 45,311 Arizona children received either a venous or capillary blood lead test. Of these, 160 were found to have a venous blood lead level (BLL) at or above the BLRV. Childhood lead screening rates had increased from 2018 to 2019. However, there was a decrease in the screening rates in 2020 and again 2021, likely due to the COVID-19 pandemic and the LeadCare® test kit recall.



## EXECUTIVE SUMMARY (CONT.)

Once a child is detected with a blood lead level at or above the BLRV through a screening test, a diagnostic follow-up test is recommended. ADHS provides case management services for all children with BLLs at or above the BLRV which includes educational mailings to families and faxing providers reminders to conduct follow-up testing. For the children that have a BLL greater than or equal to ( $\geq$ ) 10  $\mu\text{g}/\text{dL}$ , a questionnaire is completed over the phone with a parent or guardian to identify potential sources of lead. Investigation kits are offered to families depending on potential sources identified. Investigation kits include instructions on how to collect samples at their home and send them back to the Arizona State Public Health Laboratory (ASPHL) for analysis. For the children that have a BLL greater than or equal to ( $\geq$ ) 20  $\mu\text{g}/\text{dL}$ , an environmental investigations of the child's residence by CLPPP personnel is offered to the family.

In 2021, there were 33 children with confirmed blood lead levels greater than or equal to 10  $\mu\text{g}/\text{dL}$ ; 27 of these were newly identified. Parents that completed a verbal risk assessment most commonly reported living pre-1978 housing. They also reported that their children had a tendency to put soil or non-food items in their mouths.



## GLOSSARY OF DEFINITIONS

<b>Blood Lead Reference Value</b>	Reference value based on the 97.5th percentile of blood lead values among U.S. children ages 1-5 years from the National Health and Nutrition Examination Survey
<b>Capillary</b>	Test where a blood sample is taken from the finger or heel of a child, used for screening purposes
<b>Claritas® Data</b>	Demographic data sets and population projections produced annually at the Block Group and Zip Code level by Claritas, LLC
<b>Confirmed</b>	One venous blood specimen with lead concentration, or two capillary blood specimens, drawn within 12 weeks of each other, both with lead concentration at or above the blood lead reference value
<b>Incidence</b>	Number of new cases during a specified time period
<b>MEDSIS</b>	The Medical Electronic Disease Surveillance Intelligence System (MEDSIS) is the secure, web-based surveillance system used to manage blood lead data
<b>Prevalence</b>	Number of current cases (new and preexisting) over a specified time period
<b>STELLAR</b>	The Systematic Tracking of Elevated Lead Levels and Remediation was a Centers for Disease Control and Prevention (CDC) database previously used to maintain blood lead data
<b>Unique Child</b>	An individual child who had at least one blood lead test result within the dataset within the calendar year
<b>µg/dL</b>	The amount of lead in micrograms per deciliter of blood
<b>Venous</b>	Test where a blood sample is taken from a vein; typically used for diagnostic purposes and to confirm an initial capillary test that meets or exceeds the blood lead reference values
<b>Verbal Assessment</b>	Screening questions asked by the health care provider to determine the risk level of a child for lead exposure



## 2021 ANNUAL SURVEILLANCE REPORT HIGHLIGHTS



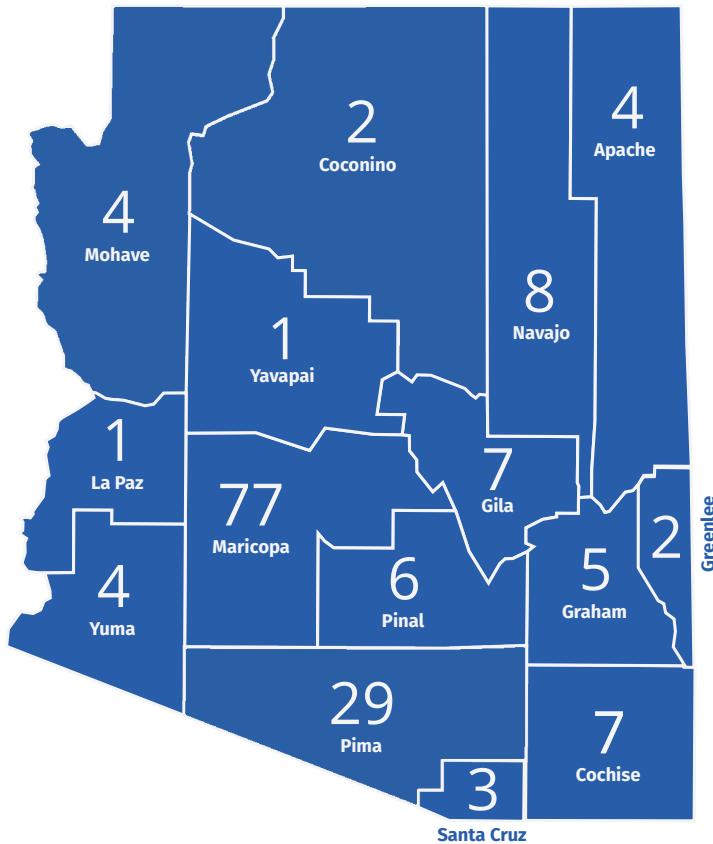
**160** total children had blood lead levels at or above the BLRV.

**81%** of cases lived in high-risk zip codes.

**45,311** children under the age of 6 had a blood lead test.

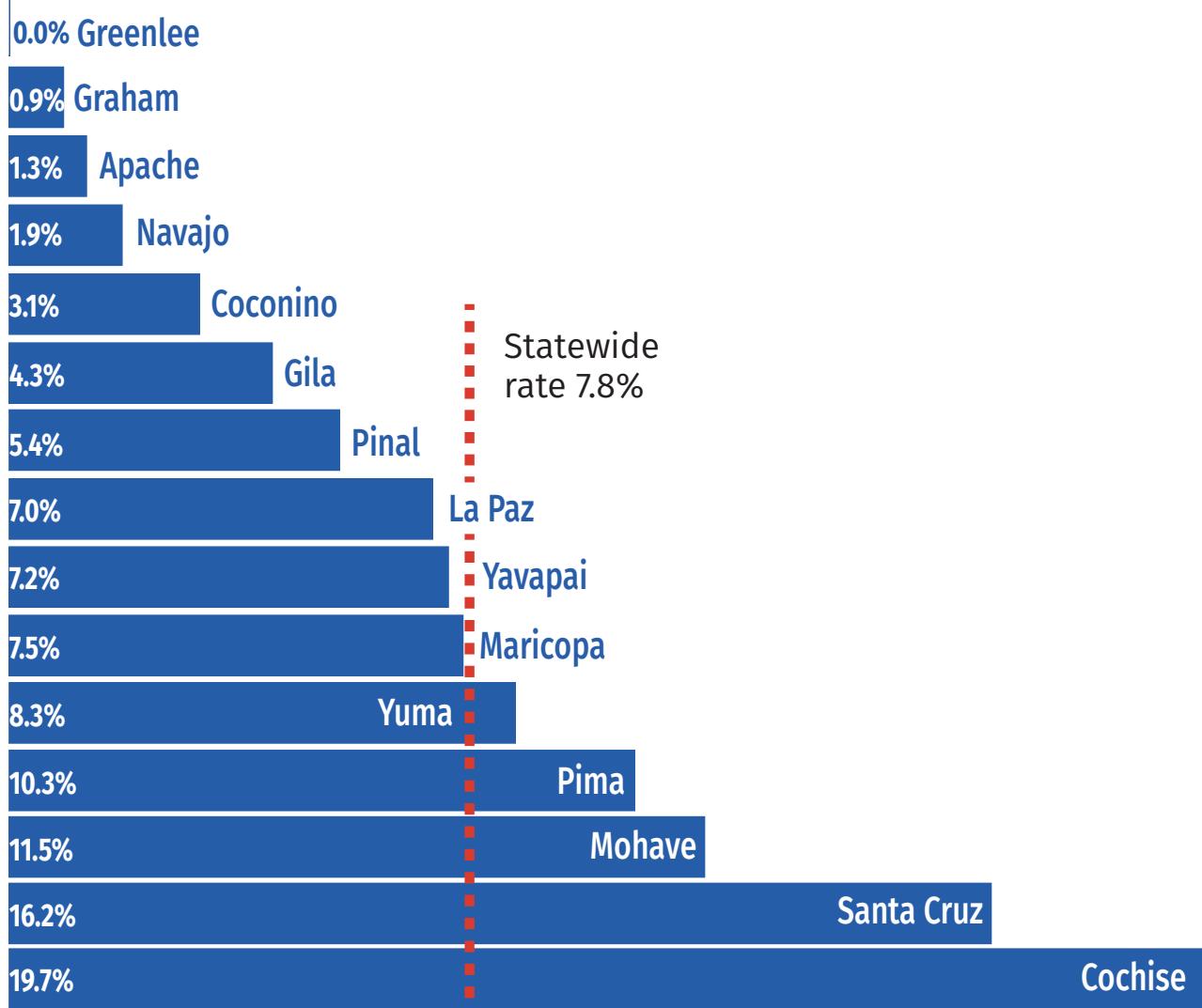
## Case Distribution Across the State

This map shows the distribution of unique children under the age of 6 years reported with a venous blood lead level at or above the BLRV in 2021.



## 2021 ANNUAL SURVEILLANCE REPORT HIGHLIGHTS (CONT.)

### 12 & 24 Month Screening Rates in High-Risk Zip Codes\*



\*Children living in high-risk zip codes were recommended a blood lead test at both 12 and 24 months of age. For current high-risk areas, visit [www.azhealth.gov/leadmap](http://www.azhealth.gov/leadmap).



## Statewide Data

**45,311** unique children under the age of 6 had a venous or capillary blood lead test in 2021. 160 had a venous blood lead level greater than or equal to the blood lead reference value (BLRV). Of the 160 children, over 76% had their first reported blood lead level at or above the BLRV in 2021. 127 children had blood lead levels between 5 and 9.9 µg/dL, and 33 children had levels greater than or equal to 10 µg/dL. The highest venous blood lead level identified in a child was 35 µg/dL.

### Prevalent Cases of Lead At or Above the BLRV

**160** total children had a blood lead level at or above the BLRV.



### Incident Cases Lead At or Above the BLRV

**122** of the 160 children had their first reported blood lead level at or above the BLRV.



### High-Risk Zip Code Screening Rates

Children living in high-risk zip codes\* in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. 19.2% of children living in a high-risk zip code had a blood lead test at 12 months of age. Even fewer, 12.6%, had a blood lead test at 24 months of age. Even fewer still, 7.8%, had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes
12 & 24 months	7.8% †
12 months	19.2%†
24 months	12.6%†

\* A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Statewide Overall Screening Rate

While Arizona's current screening guidelines recommend that children living in high-risk neighborhoods should receive a blood lead test at 12 and 24 months of age, this targeted approach may not detect children with lead levels higher than the CDC BLRV living in non-high-risk neighborhoods. Therefore, AZ CLPPP wants to emphasize that all children be screened for lead to help identify any children that may be at risk of lead exposure regardless of where they live.

In 2021, screening rates for children living in high-risk zip codes were higher than the screening rates for children in all zipcodes regardless of risk.

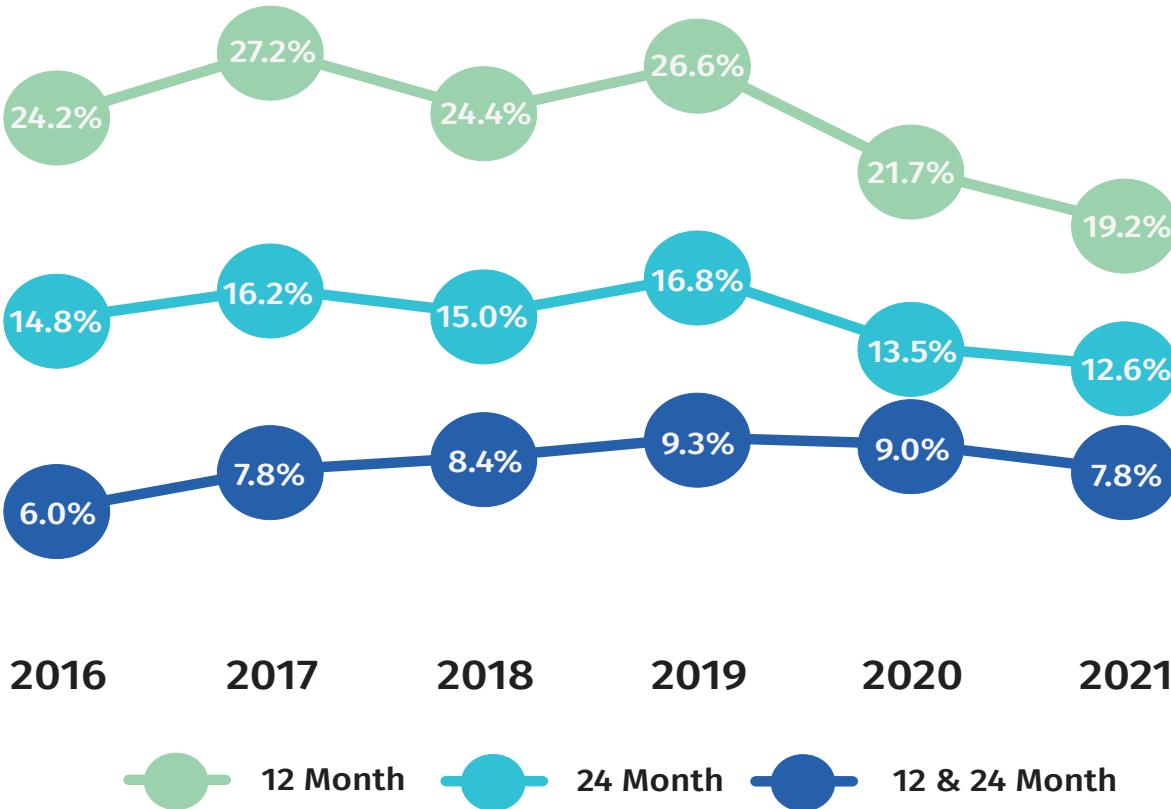
Screening Age	Zip Codes	
	High-Risk	All
12 & 24 months	7.8%	6.9%
12 months	19.2%	17.6%
24 months	12.6%	11.1%

See [appendix L](#) for a full list of screening rates for the state and counties.



## Statewide High-Risk Screening Rate Trends

Overall, screening rates for children living in high-risk zip codes continued to decline from 2020 to 2021. The 12 month high-risk screening rate experienced the largest decrease, dropping 2.5% while the 24 month and 12 & 24 month high risk screening rates experienced a 1.1% and 1.2% decrease, respectively. This decline in lead testing can be attributed to a number of causes but most notably, the COVID-19 pandemic that began in 2020 and the LeadCare recall that lasted from June, 2021 to February, 2022.



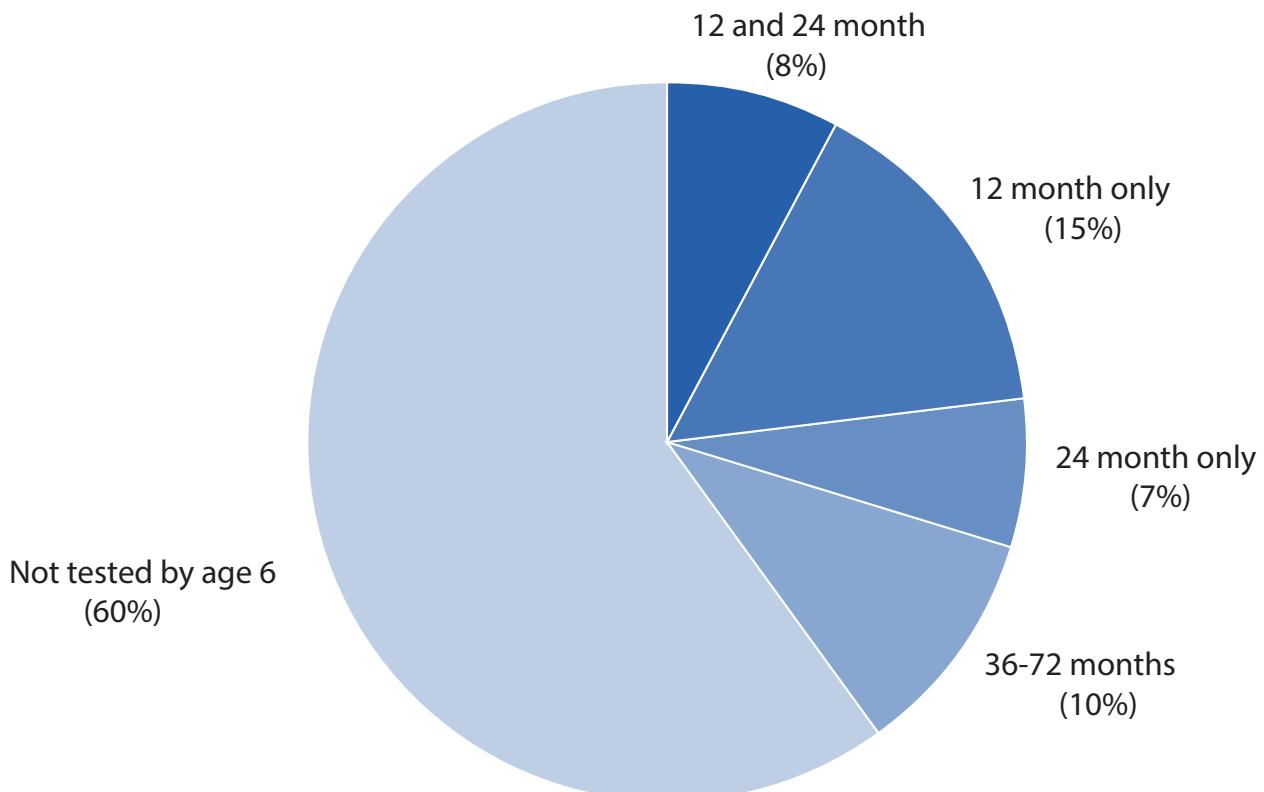
See [appendix K](#) for a full list of screening rates for the state and counties.



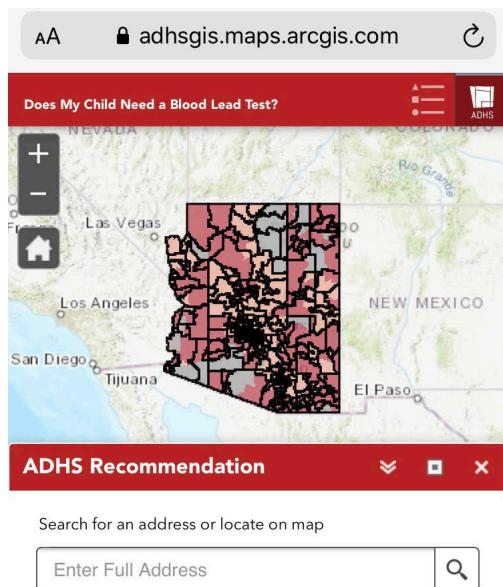
## Statewide High-Risk Screening Compliance

According to current screening recommendations outlined in the 2018 Targeted Lead Screening Plan for the Prevention of Childhood Lead Poisoning, children living in high-risk zip codes should have a blood lead test at both 12 and 24 months of age. Children aged 36 to 72 months should be tested if they have not been previously tested. Blood lead testing children at a young age helps to identify children exposed to lead as early as possible. Once a lead-exposed child is identified, the appropriate education and resources can be provided to the family to reduce and prevent ongoing exposure.

Approximately 40% of children turning 6 years of age in 2021 that lived in high-risk zip codes had received at least one blood lead test. Only 8% were tested at 12 and 24 months as recommended by the Arizona Department of Health Services.



# Screening in High-Risk Neighborhoods



In 2018, the Childhood Lead Poisoning Prevention Program created a new web-based interactive map ([www.azhealth.gov/leadmap](http://www.azhealth.gov/leadmap)) for families and health care providers to easily identify children living in high-risk areas around the state who need blood lead testing. The goal of this map is to provide screening recommendations at a smaller geographical scale.

An analysis was performed for 2021 blood lead data, to identify the number of children living in high-risk neighborhoods who received a blood lead test at the recommended ages of 12 months and 24 months.

## High-Risk Census Tracts Screening Rates

Screening rates are calculated at both the zip code and census tract levels. While individuals are able to identify the zip codes that they live in, census tracts are not as common knowledge. Having a zip code screening rate allows for easier reference to better known geographic areas. Zip codes are considered high-risk if there is at least one high-risk census tract within the zip code's boundaries. Alternatively, screening rates by census tracts allows for a more accurate representation of screening rates in a specific area.

Of the 45,311 children <6 years of age screened in 2021, 29,982 (66.2%) were children living in high-risk census tract areas. 17,468 of these children were either 12 or 24 months of age when they were screened, as recommended.

In 2021, there were 10,331 children 12 months of age and 7,137 children 24 months of age tested. The 12 months screening rate decreased from 23.7% in 2020 to 21.0% in 2021. A similar decrease was seen in the 24 months screening rate, which dropped from 15.0% in 2020 to 14.1% in 2021.

4,302 children received both recommended tests by the end of 2021. Only 8.5% of children living in high-risk areas received blood tests at the recommended ages of 12 and 24 months. The goal is to have all children living in high-risk areas to receive blood lead tests at these two ages.

Screening Age	High-Risk Census Tracts
12 & 24 months	8.5% <sup>†</sup>
12 months	21.0% <sup>†</sup>
24 months	14.1% <sup>†</sup>

<sup>†</sup> Significantly different from 2020 rate ( $p < 0.05$ )



## LeadCare® Test Kit Recall

The LeadCare® testing platforms are used in physician's offices and laboratories to analyze blood lead. The LeadCare® II platform is currently the only CLIA-waived point-of-care blood lead test available and is used to test capillary blood specimens. Higher complexity methods are an alternative to point-of-care testing and are more sensitive and therefore able to detect lead at lower concentrations. Higher complexity tests are used to test both capillary and venous blood specimens.

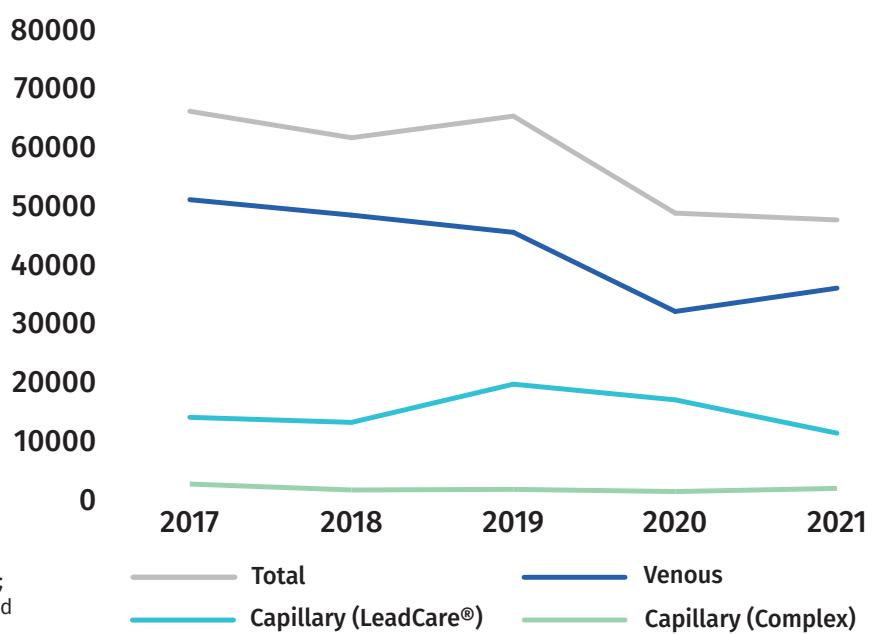
In June of 2021 the Magellan BioScience and the Food and Drug Administration issued a recall for LeadCare® Blood Lead Tests for the LeadCare II, LeadCare Plus, and LeadCare Ultra. These lots were distributed between October 27, 2020 and June 15, 2021.

ADHS CLPPP notified lead reporters throughout the state of the recall and provided periodic outreach to determine which facilities were impacted and to provide recommendations on retesting. Additional guidance was provided to physician's offices that experienced interruptions of point-of-care testing due to the recall to discuss options on how to continue to screen children for lead.

During the time this recall took place, the COVID-19 pandemic was still ongoing. It is difficult to determine the extent to which the pandemic and the recall each impacted lead screening, but both impacted lead screening rates in 2021. Many healthcare provider offices reported a decrease or complete halt in point-of-care testing due to the unavailability of test kits.

### Blood Lead Tests by Specimen Type, 2017-2021\*

There was a sharp decrease in capillary and venous testing done in 2020 due to the COVID-19 pandemic. A subsequent decrease in point-of-care capillary testing is seen in 2021 due to the recall in addition to the ongoing pandemic.



\* Tests with missing specimen types were excluded; 160 for 2017, 125 for 2018, 98 for 2019, 42 for 2020, and 41 for 2021.

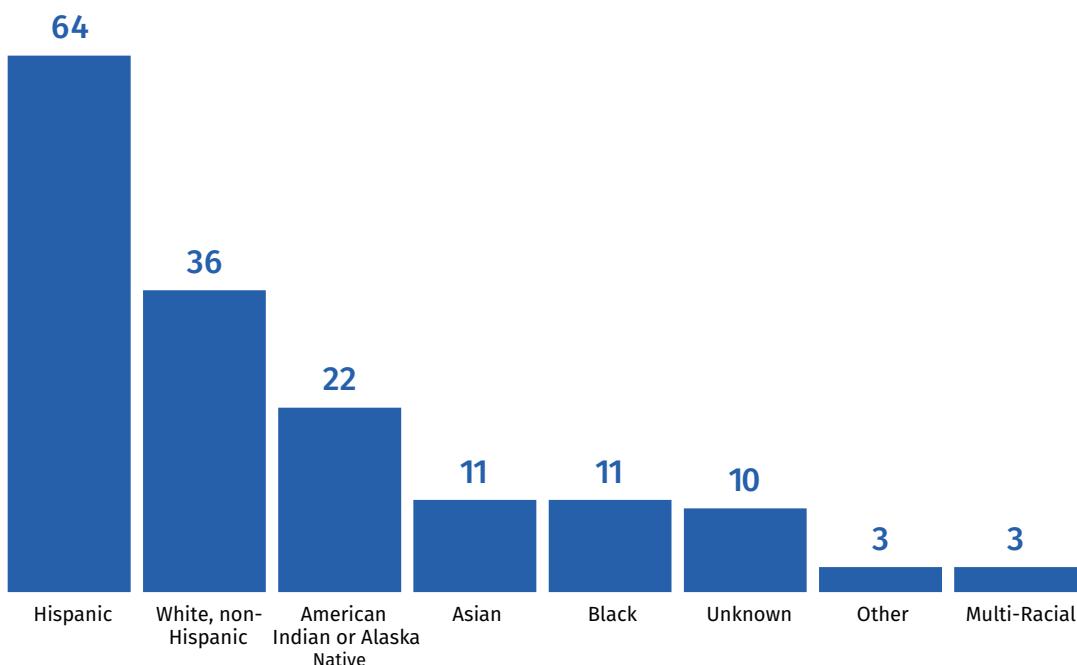


## Statewide Case Demographics

Lead poisoning can disproportionately affect young children based on risk factors such as race or ethnicity, household income, immigrant or refugee status, and age of housing.

### Race/Ethnicity

160 children in Arizona had blood lead levels at or above the BLRV, however, race and ethnicity information is not available for all children. Efforts to improve completeness for race and ethnicity data are underway. 64 (40.0%) of the children under the age of 6 with a confirmed blood lead level at or above the BLRV were Hispanic, followed by 36 (22.5%) white, non-Hispanic and 22 (13.8%) American Indian or Alaska Native. Children who identified as Asian, Black, Other, or Multi-Racial made up 17.5% of cases. Children who identified as a race other than those listed are included under Other. Of the children with a blood lead level at or above the BLRV, 10 (6.3%) had missing race or ethnicity data.



## Statewide Sources

In order to gather more information about a child's environment and behavior, CLPPP makes efforts to complete a questionnaire regarding potential sources of lead exposure with the families. When a potential source is identified, CLPPP provides guidance to families on ways to reduce exposure. The information summarized below has been reported by parents and guardians for children identified with an BLL at or above the BLRV in 2021. Not all sources can be or have been confirmed as the source of lead exposure for each child, but this summary may give a better understanding of the possible sources of lead that impact Arizona children.

**62** children had a history of **living in pre-1978 housing in Arizona**.

**41** children were reported to have **mouthed or eaten soil and/or non-food items**.

**29** children were reported to have **products from another country** in their home, such as candy, spices, or makeup.

**13** children were reported to have **imported or handmade glazed ceramics, pewter, crystal, or porcelain** in their home.

**28** children were reported to **live with someone who has an occupation or hobby with a potential lead exposure**.

**17** children were reported to have **lived or visited outside of the U.S.** in the past year.

Among the samples collected during environmental investigations in 2021 for children identified with a BLL at or above the BLRV in the same year, CLPPP identified the following confirmed lead sources: pre-1978 paint, soil, pottery, toys or jewelry, and makeup brought from another country.



## Apache County

**239** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 4 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 1 child in 2020.

### Unique children with BLL $\geq$ BLRV

**4** children had a blood lead level exceeding the BLRV in 2021. All of these children had their first reported BLL exceeding the BLRV in 2021.

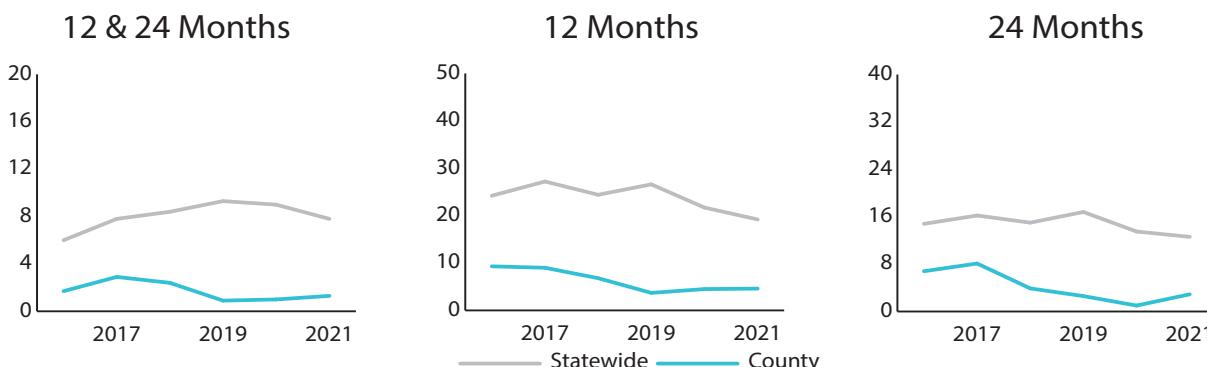


### Screening Rates\*

4.6% of children living in a high-risk zip code in Apache County had a blood lead test at 12 months of age. 2.9% of children had a blood lead test at 24 months of age and 1.3% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Apache	Statewide
12 & 24 months	<b>1.3%</b>	7.8% <sup>†</sup>
12 months	<b>4.6%</b>	19.2% <sup>†</sup>
24 months	<b>2.9%</b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Cochise County

**1,245** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 7 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 9 children in 2020.

### Unique children with BLL ≥ BLRV

**7** total children had a blood lead level exceeding the BLRV in 2021. 5 of these children had their first reported BLL exceeding the BLRV in 2021.

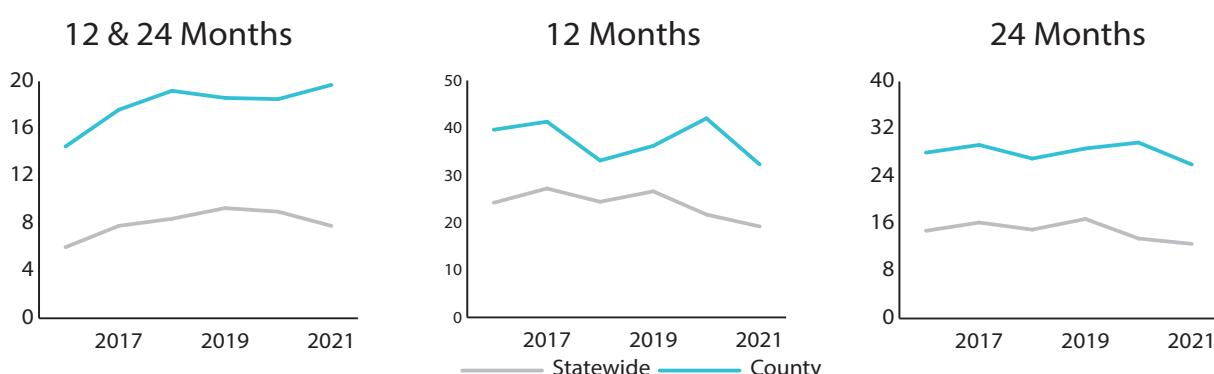


### Screening Rates\*

32.3% of children living in a high-risk zip code in Cochise County had a blood lead test at 12 months of age. 26.0% of children had a blood lead test at 24 months of age and 19.7% of children had received both recommended blood lead tests at 12 and 24 months of age.

	High-Risk Zip Codes	
Screening Age	Cochise	Statewide
12 & 24 months	<b>19.7%</b>	7.8%†
12 months	<b>32.3%†</b>	19.2%†
24 months	<b>26.0%</b>	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Coconino County

**791** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 2 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 5 children in 2020.

### Unique children with BLL $\geq$ BLRV

**2** total children had a blood lead level exceeding the BLRV in 2021. Both of these children had their first reported BLL exceeding the BLRV in 2021.

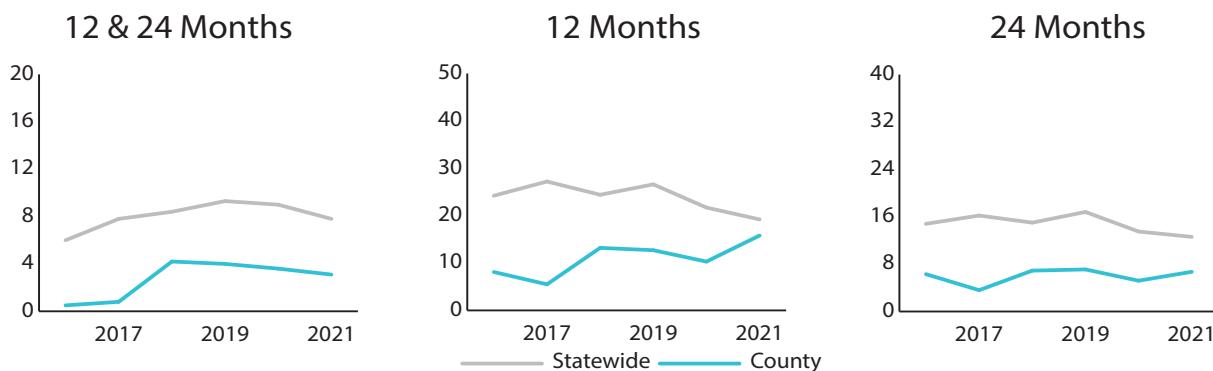


### Screening Rates\*

15.8% of children living in a high-risk zip code in Coconino County had a blood lead test at 12 months of age. 6.7% of children had a blood lead test at 24 months of age and 3.1% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Coconino	Statewide
12 & 24 months	<b>3.1%</b>	7.8%†
12 months	<b>15.8%†</b>	19.2%†
24 months	<b>6.7%</b>	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Gila County

**487** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 7 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 6 children in 2020.

### Unique children with BLL ≥ BLRV

**7** total children had a blood lead level exceeding the BLRV in 2021. 4 of these children had their first reported BLL exceeding the BLRV in 2021.

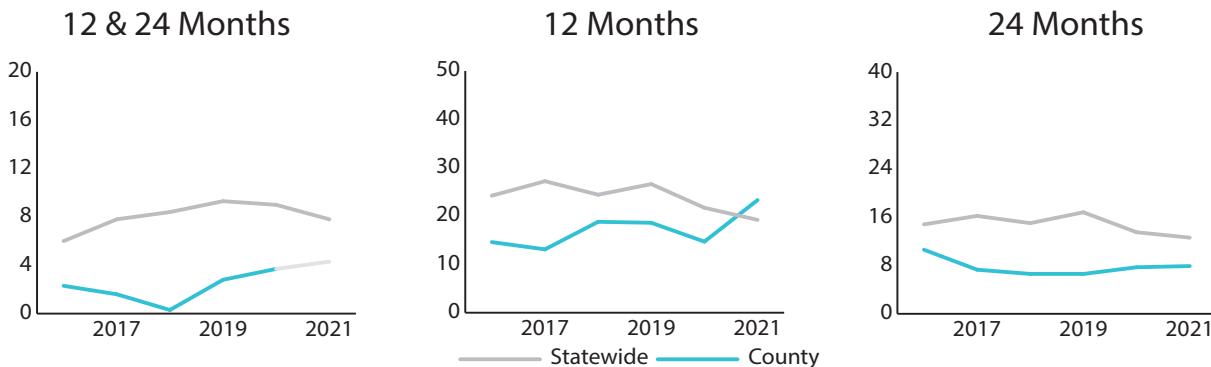


### Screening Rates\*

23.3% of children living in a high-risk zip code in Gila County had a blood lead test at 12 months of age. 7.9% of children had a blood lead test at 24 months of age and 4.3% of children had received both recommended blood lead tests at 12 and 24 months of age.

High-Risk Zip Codes		
Screening Age	Gila	Statewide
12 & 24 months	<b>4.3%</b>	7.8%†
12 months	<b>23.3%</b>	19.2%†
24 months	<b>7.9%</b>	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Graham County

**221** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 5 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 6 children in 2020.

### Unique children with BLL ≥ BLRV

**5** total children had a blood lead level exceeding the BLRV in 2021. 2 of these children had their first reported BLL exceeding the BLRV in 2021.

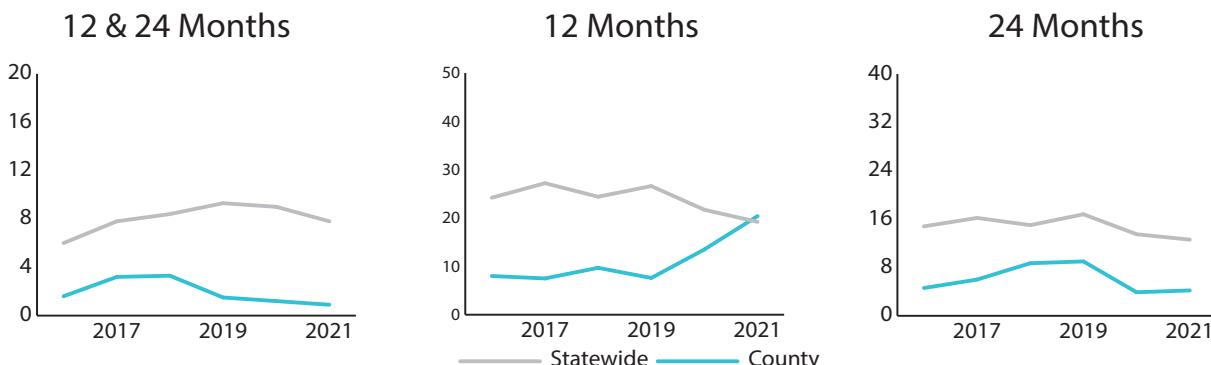
**5**  
5-9 µg/dL  
First EBLL

### Screening Rates\*

20.4% of children living in a high-risk zip code in Graham County had a blood lead test at 12 months of age. 4.2% of children had a blood lead test at 24 months of age and 0.9% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Graham	Statewide
12 & 24 months	<b>0.9%</b>	7.8% <sup>†</sup>
12 months	<b>20.4%</b>	19.2% <sup>†</sup>
24 months	<b>4.2%</b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Greenlee County

**43** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 2 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 3 children in 2020.

### Unique children with BLL ≥ BLRV

**2** children had a blood lead level exceeding the BLRV in 2021. Both of these children had their first reported BLL exceeding the BLRV in 2021.

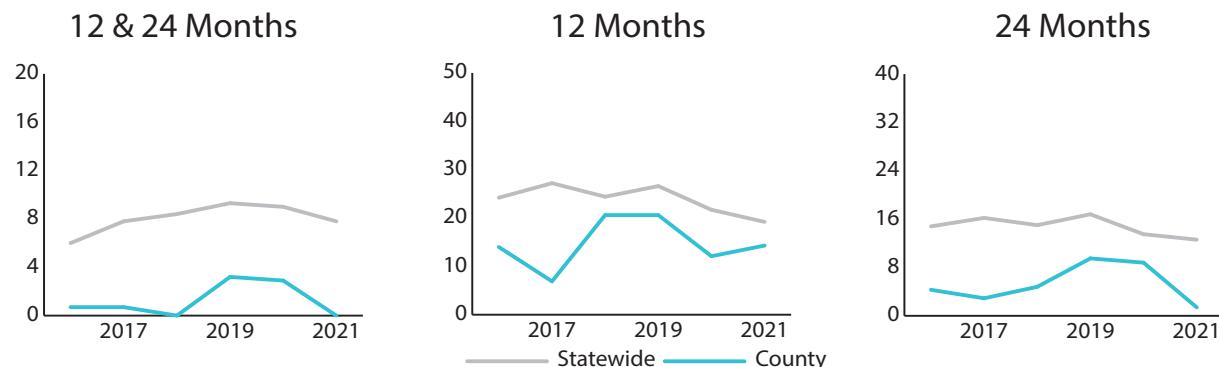


### Screening Rates\*

14.3% of children living in a high-risk zip code in Greenlee County had a blood lead test at 12 months of age. 1.4% of children had a blood lead test at 24 months of age and 0.0% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Greenlee	Statewide
12 & 24 months	0.0%†	7.8%†
12 months	14.3%	19.2%†
24 months	1.4%	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## La Paz County

**67** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, one child had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 0 children in 2020.

### Unique children with BLL $\geq$ BLRV

**1** children had a blood lead level exceeding the BLRV in 2021. This child had their first reported BLL exceeding the BLRV in 2021.

**1**

$\geq 10 \mu\text{g}/\text{dL}$

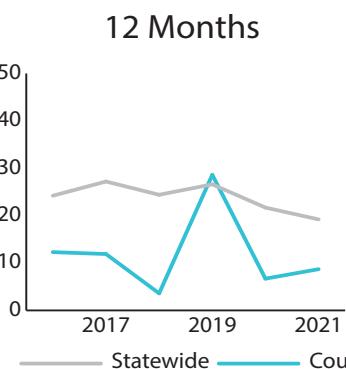
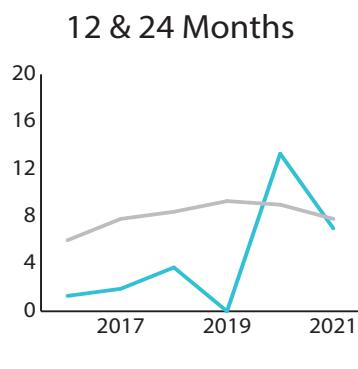
First EBLL

### Screening Rates\*

8.7% of children living in a high-risk zip code in La Paz County had a blood lead test at 12 months of age. 4.7% of children had a blood lead test at 24 months of age and 7.0% of children had received both recommended blood lead tests at 12 and 24 months of age.

	High-Risk Zip Codes	
Screening Age	La Paz	Statewide
12 & 24 months	7.0%	7.8% <sup>†</sup>
12 months	8.7%	19.2% <sup>†</sup>
24 months	4.7%	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )

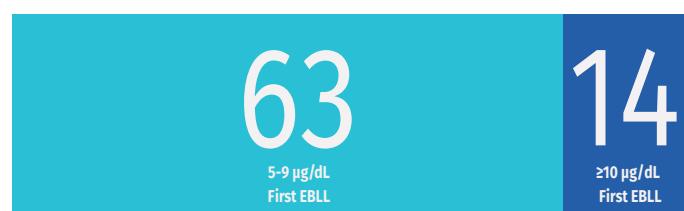


## Maricopa County

**26,404** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 77 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 82 children in 2020.

### Unique children with BLL ≥ BLRV

**77** total children had a blood lead level exceeding the BLRV in 2021. 61 of these children had their first reported BLL exceeding the BLRV in 2021.

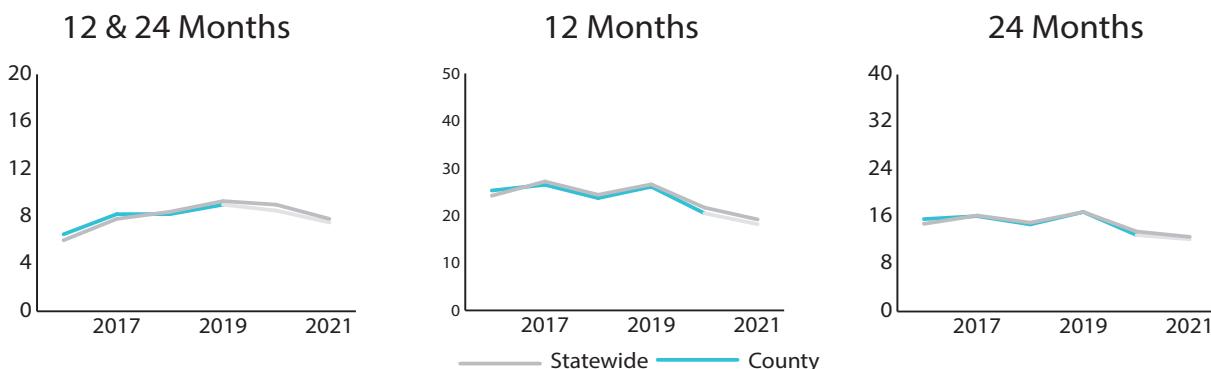


### Screening Rates\*

18.2% of children living in a high-risk zip code in Maricopa County had a blood lead test at 12 months of age. 12.2% of children had a blood lead test at 24 months of age and 7.5% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Maricopa	Statewide
12 & 24 months	<b>7.5%†</b>	7.8%†
12 months	<b>18.2%†</b>	19.2%†
24 months	<b>12.2%†</b>	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Mohave County

**1,138** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 4 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 8 children in 2020.

### Unique children with BLL $\geq$ BLRV

**4** total children had a blood lead level exceeding the BLRV in 2021. All of these children had their first reported BLL exceeding the BLRV in 2021.

**4**

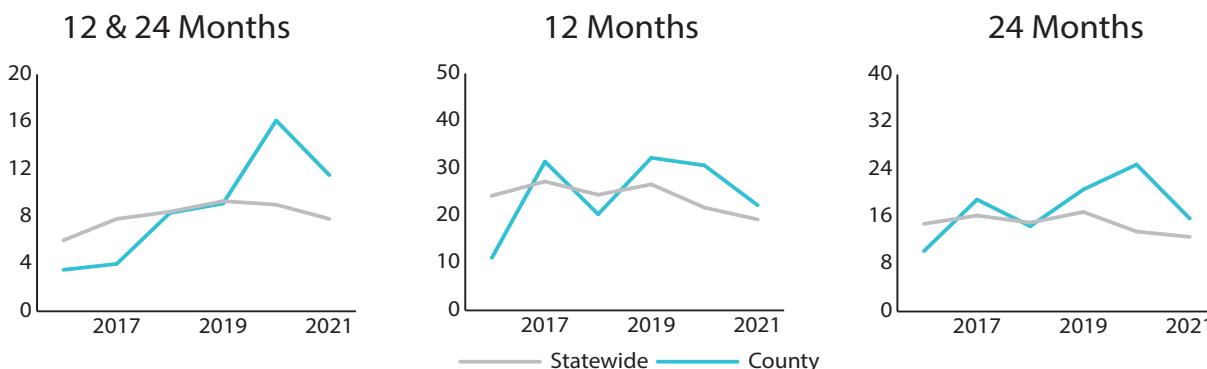
5-9 µg/dL  
First EBLL

### Screening Rates\*

22.2% of children living in a high-risk zip code in Mohave County had a blood lead test at 12 months of age. 15.7% of children had a blood lead test at 24 months of age and 11.5% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Mohave	Statewide
12 & 24 months	<b>11.5%<sup>†</sup></b>	7.8% <sup>†</sup>
12 months	<b>22.2%<sup>†</sup></b>	19.2% <sup>†</sup>
24 months	<b>15.7%<sup>†</sup></b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Navajo County

**730** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 8 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 8 children in 2020.

### Unique children with BLL $\geq$ BLRV

**8** total children had a blood lead level exceeding the BLRV in 2021. 6 of these children had their first reported BLL exceeding the BLRV in 2021.

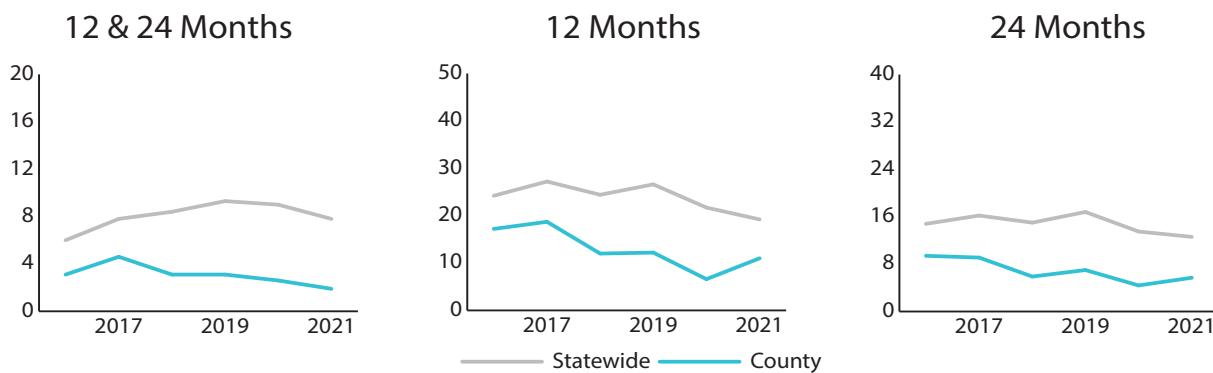


### Screening Rates\*

11.0% of children living in a high-risk zip code in Navajo County had a blood lead test at 12 months of age. 5.7% of children had a blood lead test at 24 months of age and 1.9% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	Navajo	Statewide
12 & 24 months	<b>1.9%</b>	7.8% <sup>†</sup>
12 months	<b>11.0%<sup>†</sup></b>	19.2% <sup>†</sup>
24 months	<b>5.7%</b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

<sup>†</sup> Significantly different from 2020 rate ( $p < 0.05$ )



## Pima County

**6,554** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 29 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 25 children in 2020.

### Unique children with BLL $\geq$ BLRV

**29** total children had a blood lead level exceeding the BLRV in 2021. 19 of these children had their first reported BLL exceeding the BLRV in 2021.

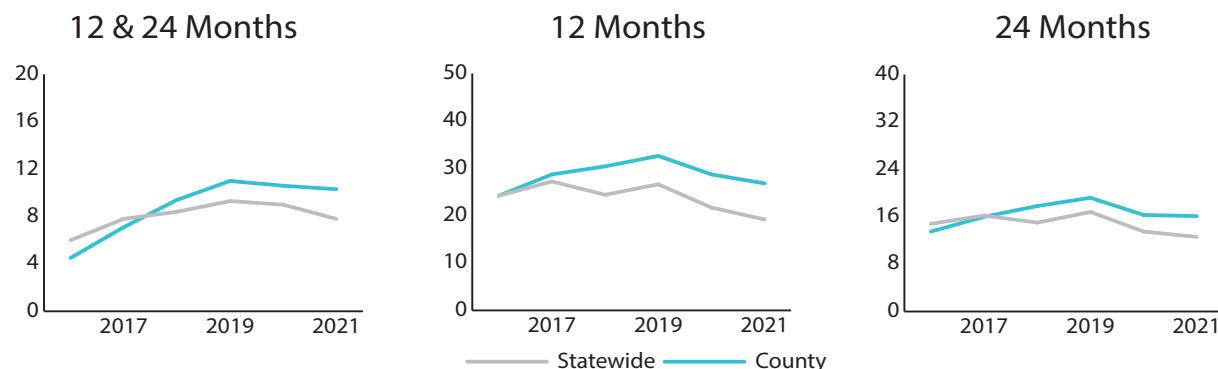


### Screening Rates\*

26.8% of children living in a high-risk zip code in Pima County had a blood lead test at 12 months of age. 16.1% of children had a blood lead test at 24 months of age and 10.3% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Pima	Statewide
12 & 24 months	<b>10.3%</b>	7.8% <sup>†</sup>
12 months	<b>26.8%</b>	19.2% <sup>†</sup>
24 months	<b>16.1%</b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Pinal County

**2,617** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 6 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 6 children in 2020.

### Unique children with BLL $\geq$ BLRV

**6** total children had a blood lead level exceeding the BLRV in 2021. 4 of these children had their first reported BLL exceeding the BLRV in 2021.

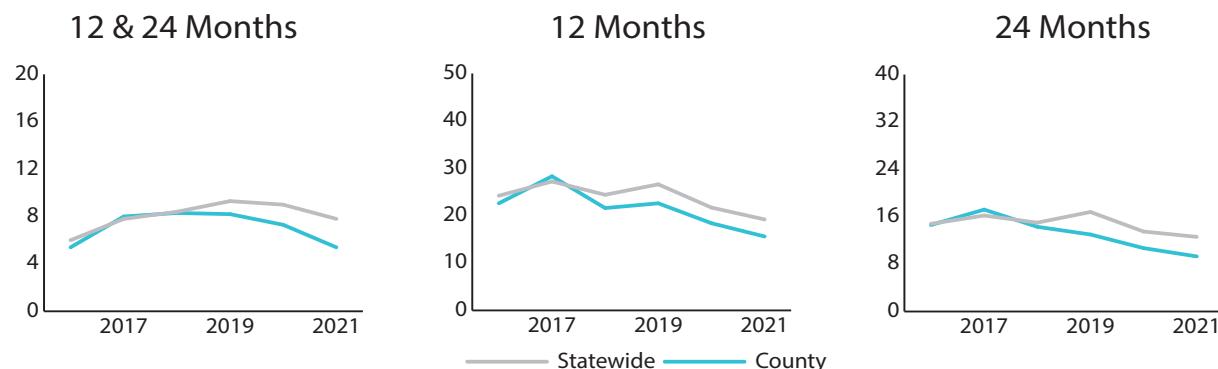


### Screening Rates\*

15.6% of children living in a high-risk zip code in Pinal County had a blood lead test at 12 months of age. 9.3% of children had a blood lead test at 24 months of age and 5.4% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Pinal	Statewide
12 & 24 months	5.4%†	7.8%†
12 months	15.6%†	19.2%†
24 months	9.3%	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Santa Cruz County

**884** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 3 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 1 child in 2020.

### Unique children with BLL $\geq$ BLRV

**3** children had a blood lead level exceeding the BLRV in 2021. All of these children had their first reported BLL exceeding the BLRV in 2021.

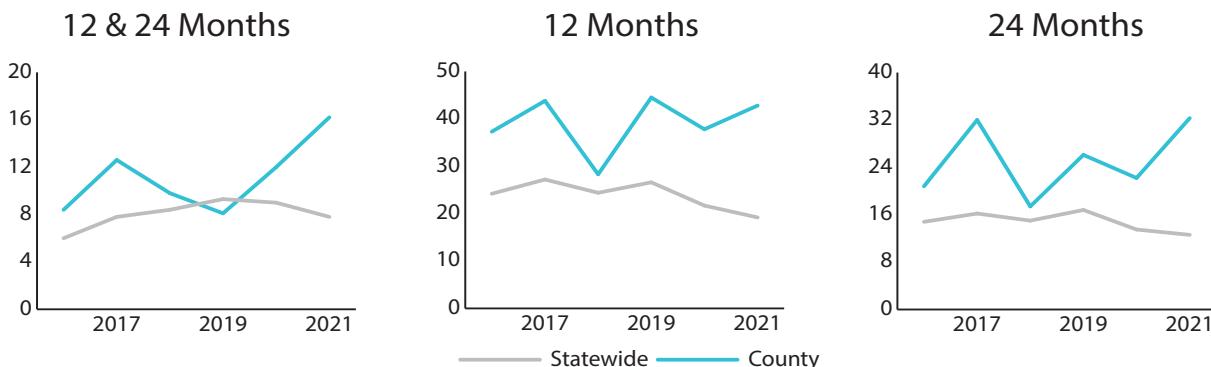


### Screening Rates\*

42.8% of children living in a high-risk zip code in Santa Cruz County had a blood lead test at 12 months of age. 32.3% of children had a blood lead test at 24 months of age and 16.2% of children had received both recommended blood lead tests at 12 and 24 months of age.

Screening Age	High-Risk Zip Codes	
	Santa Cruz	Statewide
12 & 24 months	<b>16.2%</b>	7.8% <sup>†</sup>
12 months	<b>42.8%</b>	19.2% <sup>†</sup>
24 months	<b>32.3%<sup>†</sup></b>	12.6% <sup>†</sup>

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Yavapai County

**571** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there was 1 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 1 child in 2020.

### Unique children with BLL ≥ BLRV

**1** child had a blood lead level exceeding the BLRV in 2021. This child had their first reported BLL exceeding the BLRV in 2021.

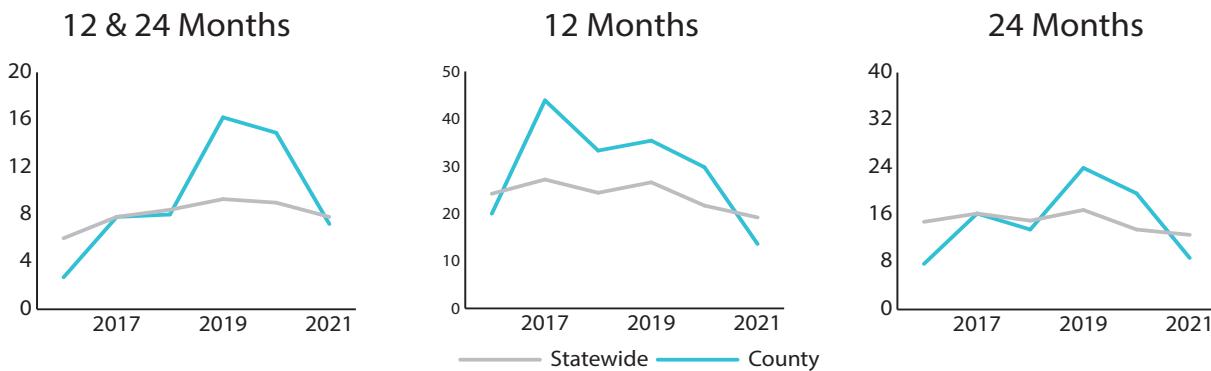


### Screening Rates\*

13.6% of children living in a high-risk zip code in Yavapai County had a blood lead test at 12 months of age. 8.7% of children had a blood lead test at 24 months of age and 17.2% of children had received both recommended blood lead tests at 12 and 24 months of age.

	High-Risk Zip Codes	
Screening Age	Yavapai	Statewide
12 & 24 months	7.2%†	7.8%†
12 months	13.6%†	19.2%†
24 months	8.7%†	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## Yuma County



**2,029** unique children under the age of 6 had a venous or capillary blood lead test in 2021. Of those children tested, there were 4 who had a venous blood lead level (BLL) greater than or equal to 5 µg/dL, compared to 2 children in 2020.

### Unique children with BLL $\geq$ BLRV

**4** total children had a blood lead level exceeding the BLRV in 2021. All of these children had their first reported BLL exceeding the BLRV in 2021.

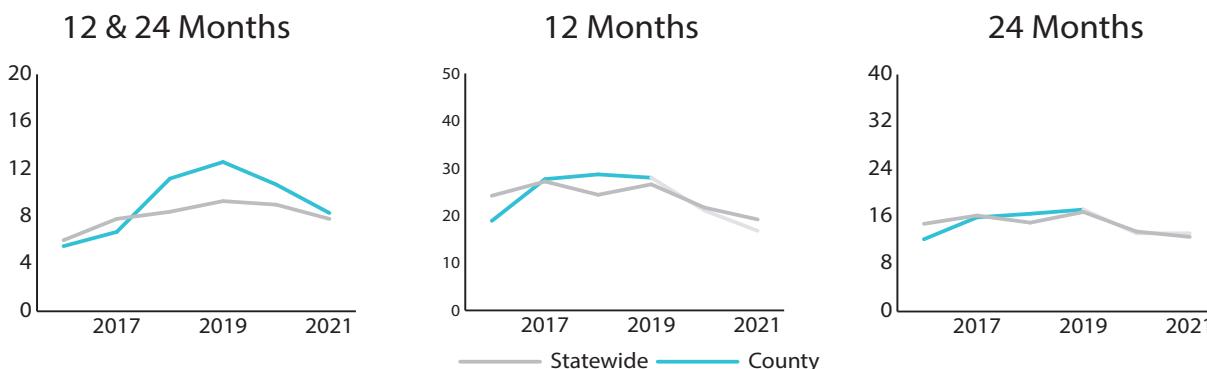


### Screening Rates\*

16.8% of children living in a high-risk zip code in Yuma County had a blood lead test at 12 months of age. 13.2% of children had a blood lead test at 24 months of age and 8.3% of children had received both recommended blood lead tests at 12 and 24 months of age.

	High-Risk Zip Codes	
Screening Age	Yuma	Statewide
12 & 24 months	<b>8.3%†</b>	7.8%†
12 months	<b>16.8%†</b>	19.2%†
24 months	<b>13.2%</b>	12.6%†

### Screening Rate Trends, 2016-2021



\* Children living in high-risk zip codes in Arizona should receive a blood lead test at 12 and 24 months of age through their health care provider. A list of high-risk zip codes by county can be found in Appendix F.

† Significantly different from 2020 rate ( $p < 0.05$ )



## APPENDIX A: DESCRIPTION OF DATA

Per Arizona Administrative Code R9-4-302, all blood lead results are reportable to the Arizona Department of Health Services (ADHS). 2011-2016 data were maintained in the Arizona lead registry database, Systematic Tracking of Elevated Lead Levels and Remediation (STELLAR), and 2017-2021 data were maintained in the Arizona Medical Electronic Disease Surveillance Intelligence System (MEDSIS). Data were combined and managed in SAS (statistical analysis system) version 9.4. Prior to analyses, efforts were taken to de-duplicate test results and children based on demographic and test result data. Analyses were performed on first reported blood lead result or blood lead result at or above the blood lead reference value (BLRV) per child in 2021 whose age was less than 72 months. Test results were excluded when the child's address was outside of Arizona. Children with a blank address were assumed to have resided in Arizona at the time of the test. Claritas 2021 population estimates were used to calculate screening rates. Results are not representative of all children living in Arizona because blood lead testing is not universal. Please note that there is a potential underestimation of counts and rates presented in this report due to ADHS' reliance on provider and laboratory reporting of blood lead test results. Rates based on counts less than 20 may be unstable and should be interpreted with caution. Children with missing address information were not included in screening rate calculations. Test results reported for PO Box zip codes were excluded from screening rate calculations due to lack of population estimate data for these zip codes with the exception of 86015, 86018, 85532, 85135, 85141, 85191, 85329, 85721, 85352, 85336, and 85334.



## APPENDIX B: BACKGROUND

Lead is a naturally occurring heavy metal, but most high levels in the environment that people are exposed to come from human activities. Lead has properties that make it easy to work with and has been widely used in a variety of products and materials such as pipes, paints, ceramics, and gasoline. When ingested or inhaled, lead can have adverse effects on nearly all organ systems in the body. Children under the age of six years are especially at risk because they are still developing, have a tendency to put objects and their hands in their mouth, and absorb lead easily. Lead exposure often occurs with no obvious signs and symptoms. In children, lead poisoning can cause slowed development, reading and other learning problems, behavioral problems, as well as brain, liver, and kidney damage. Pregnant women can also pass lead to their unborn babies. For these reasons, major public health campaigns have focused on eliminating childhood lead poisoning.

Childhood lead poisoning is entirely preventable; however, it remains one of the most common environmental health dangers to children. In October, 2021 the Centers for Disease Control and Prevention (CDC) adopted the blood lead reference value of 3.5 µg/dL. This reference level was determined as the 97.5th percentile of the blood lead distribution in children one to five years of age from the National Health and Nutrition Examination Survey (NHANES). Children with blood lead levels at the reference level or higher are considered to have been exposed to more lead than most other children.



## APPENDIX C: SUMMARY OF ADHS SCREENING RECOMMENDATIONS

The Arizona Department of Health Services developed and used the following recommendations in 2021 to identify children with blood lead levels at or above the BLRV in order to eliminate exposure and reduce the effects of lead on Arizona children.

A more in-depth discussion of our current screening recommendations can be found in Arizona's Targeted Lead Screening Plan for the Prevention of Childhood Lead Poisoning. For current high-risk areas, visit [www.azhealth.gov/leadmap](http://www.azhealth.gov/leadmap).

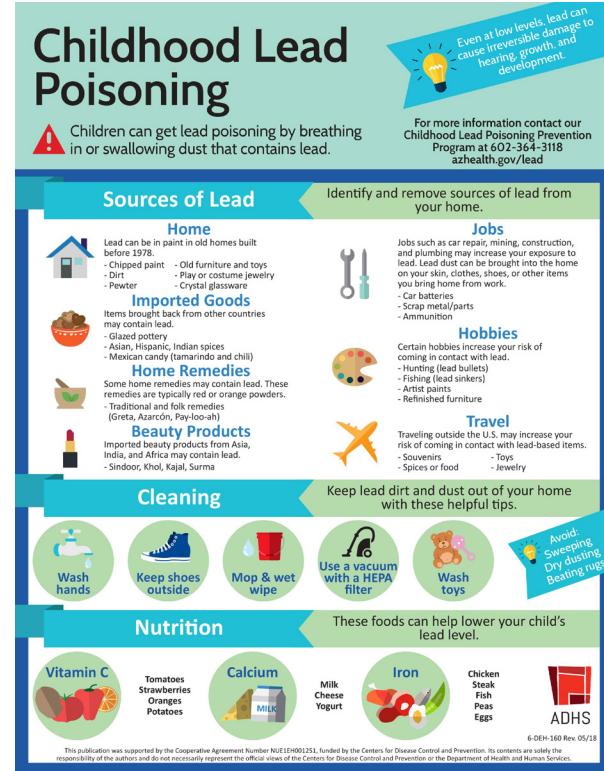
- 1. Children living in high-risk zip codes:** All children living in high-risk zip codes should have had a blood lead test at 12 and 24 months of age. Children aged 36 to 72 months should be tested if they have not been previously tested.
- 2. Children living outside of high-risk zip codes:** Children living in Arizona, but not in a high-risk zip code, should have received an individual risk assessment questionnaire at 12 and 24 months of age.



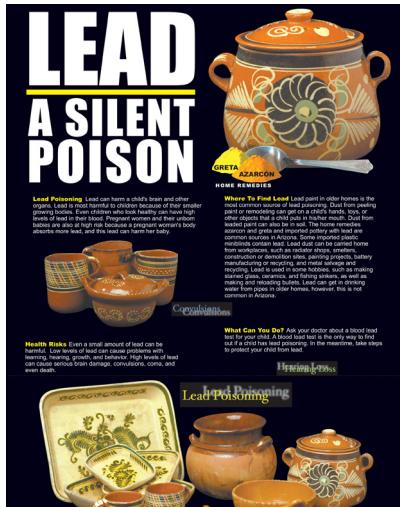
## APPENDIX D: RESOURCES - EDUCATIONAL MATERIALS

Educational handouts are provided to the public and to health care professionals. Every family that has a child with a BLL at or above the BLRV will receive the primary educational handout (right) that details various sources of lead, cleaning techniques, and nutritional tips to increase awareness on preventative techniques for lead poisoning. Several of the educational handouts are available in both English and Spanish.

Each of these handouts and are available on the [AZDHS website](#).



## Additional Educational Handouts



**Don't Take Lead Home from Your Job!**

You can bring lead dust into your home and vehicle on your clothes, boots, skin, hair and tools. Lead dust can get on furniture, floors and carpets. Your child can get lead poisoning by swallowing this dust.

**Lead poisoning can harm your child by causing:**

- 1 Learning problems
- 2 Behavioral problems
- 3 Developmental problems

**You may be exposed to lead on the job if you:**

- Work at a shooting range
- Do construction or remodel houses and buildings
- Work at a mine/smelter
- Make/fix batteries or radiators
- Repair cars
- Solder/work with scrap metal
- Fish with lead sinkers
- Hunt or reload bullets
- Refinish old or antique furniture
- Make stained glass

**To protect your family from lead from your hobby/job:**

- 1 Wash your hands well with soap and water after working with lead and before eating.
- 2 Wear specific clothes for work or hobbies.
- 3 Wash work/hobby clothes separately from the rest of the family's clothes.
- 4 Shower and wash your hair at work if possible. (If no showers are available, wash face & hands and shower as soon as you come home.)
- 5 Never wear lead-contaminated work clothes in your home or in your vehicle.
- 6 Put on clean clothes & shoes before leaving work or as soon as you get home.
- 7 Keep work shoes outside or in the garage.

**There are many other jobs and hobbies that may have lead exposure. If you are unsure whether you work with lead, ask your employer.**

**Questions? Call (602) 364-3118 or visit [www.azhealth.gov/lead](#)**

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**Are you expecting a child or have a young toddler at home?**

**Is your home LEAD safe?**

Lead can be harmful when it gets into the body, especially for young children and pregnant women.

Lead can be exposed to lead through a wide range of sources.

**Lead poisoning can cause permanent developmental, hearing, behavioral, and learning problems.**

**We can be exposed to lead through:**

- Lead-based paint
- Glazed ceramics
- Spices & seasonings
- Household items
- Work-related
- Make-up

**Complete this checklist to find sources of lead in your home.**

**Was your home built before 1978?**

Yes, then it is likely to contain lead-based paint.

**Complete these actions to prevent exposure to lead-based paint:**

- Have an EPA-certified professional repair peeling, chipping, or flaking paint on windows, doors, or trim.
- Have an EPA-certified professional remove lead-based paint.
- Cover bare lead-contaminated soil with topsoil or mulch.
- Establish a cleaning routine.

**Cleaning**

- Use wet surface-cleaning methods.
- Clean laundry with a separate load.
- Keep shoes outside, take them off, and wash them often.

**Lead-based paint is dangerous when it peels, flakes, or cracks because it becomes a hazardous fine dust that can be breathed out.**

**The Environmental Protection Agency (EPA) regulates laws about lead-based paint. The EPA trains and certifies contractors to remove lead-based paint to protect your family from lead. Visit the EPA website for an EPA certified professional in Arizona: <http://az.epa.gov/lead/>**

For more information visit our website at [www.azhealth.gov/lead](#) or call (602) 364-3118.

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## APPENDIX E: RESOURCES - CLPPP COALITION

In 2018, the Childhood Lead Poisoning Prevention Coalition was created with the purpose of establishing a network of partners to address lead poisoning prevention among various sectors and to provide a range of perspectives and expertise to address challenges encountered. The coalition aims to identify, prioritize, and address community and partner needs regarding lead poisoning prevention efforts and to achieve a widespread reach within our communities, connecting families to vital resources.

### Current Priorities

- Increasing blood lead testing in high-risk areas
- Increasing education and awareness of lead poisoning in Arizona provided to health care providers and families
- Implementing new lead poisoning prevention activities

If you would like to participate in the CLPPP coalition, please send an email to [HealthyHomes@azdhs.gov](mailto:HealthyHomes@azdhs.gov).





## APPENDIX F: 2021 HIGH-RISK LEAD POISONING ZIP CODES

	85071	86405	85721	
	85072		85724	
	85074	86440	85725	
	85075	86446	85726	
	85078	Yucca 86438	85730	
	85079		85731	
	85080		85732	
	85082		85733	
	85086	Cibecue 85911	85734	
Queen Creek	85142	Clay Springs 85923	85735	
Scottsdale	85250	Fort Apache 85926	85736	
	85251	Holbrook 86025	85745	
	85252	Hotevilla 86030	85746	
	85256	Indian Wells 86031	85754	
	85257	Pinedale 85934	85755	
	85260	Pinon 86510	85756	
	85261	Polacca 86042	85757	
	85267	Shonto 86054		
	85271	Show Low 85901		
Sun City	85351	Sun Valley 86029	85117	
	85372	White Mountain Lake 85912	85119	
	85373		85120	
Surprise	85378	Whiteriver 85941	85178	
	85379	Winslow 86047	85123	
	85387	Woodruff 85942	85122	
Tempe	85280		85130	
	85281		85194	
	85282	Ajo 85321	85128	
	85283	Catalina Foothills 85751	85131	
	85285		85132	
Tolleson	85353	Marana 85658	85118	
Tonopah	85354	Sahuarita 85629	85135	
Tortilla Flat	85190	Sasabe 85633	85138	
Wickenburg	85358	Sells 85634	85139	
	85390	Topawa 85639	85623	
Wittmann	85361	Tucson 85701	85141	
Youngtown	85363		85631	
		85702	85631	
		85703	San Tan Valley 85140	
MOHAVE			85143	
Bullhead City	86442	85705		
	86439	85706	85173	
Chloride	86431	85710	Valley Farms 85191	
Colorado City	86021	85711		
Golden Valley	86413	85712		
Kingman	86401	85713	SANTA CRUZ	
	86402	85714	Nogales 85621	
Lake Havasu City	86403	85715	Patagonia 85624	
	86404	85716	Rio Rico 85628	
		85717		
		85719	Tubac 85648	
			85662	
			85646	



## APPENDIX G: NUMBER OF CHILDREN <6 YEARS WHO HAD A VENOUS OR CAPILLARY TEST, 2021

<b>County</b>	<b>Total Children Screened</b>
<b>Arizona</b>	<b>45,311*</b>
Apache	239
Cochise	1,245
Coconino	791
Gila	487
Graham	221
Greenlee	43
La Paz	67
Maricopa	26,404
Mohave	1,138
Navajo	730
Pima	6,554
Pinal	2,617
Santa Cruz	884
Yavapai	571
Yuma	2,029

\*1,291 screened children from 2021 were missing address information and were not counted at the county level.



## APPENDIX H: PREVALENT CASES OF CHILDREN <6 YEARS OLD IDENTIFIED WITH A BLL AT OR ABOVE THE BLRV, 2021

County	Total children	Children with 5-9 µg/dL	Children with ≥10 µg/dL
Arizona	160	127	33
Apache	4	3	1
Cochise	7	5	2
Coconino	2	2	0
Gila	7	5	2
Graham	5	5	0
Greenlee	2	1	1
La Paz	1	0	1
Maricopa	77	63	14
Mohave	4	4	0
Navajo	8	6	2
Pima	29	23	6
Pinal	6	5	1
Santa Cruz	3	2	1
Yavapai	1	0	1
Yuma	4	3	1



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## APPENDIX I: PERCENT OF CHILDREN <6 YEARS SCREENED WHO HAD A BLL AT OR ABOVE THE BLRV, 2021

---

County	Percent Positivity
Arizona	0.4*
Apache	1.7
Cochise	0.6
Coconino	0.3
Gila	1.4
Graham	2.3
Greenlee	4.7
La Paz	1.5
Maricopa	0.3
Mohave	0.4
Navajo	1.1
Pima	0.4
Pinal	0.2
Santa Cruz	0.3
Yavapai	0.2
Yuma	0.2

\*1,291 screened children from 2021 were missing address information and were not counted at the county level.



## APPENDIX J: SCREENING RATES OF CHILDREN <6 YEARS OLD IN HIGH-RISK CENSUS TRACTS (%), 2021

County	At both 12 & 24 months*	At 12 months only*	At 24 months only*
Arizona	8.5 <sup>†</sup>	21.0 <sup>†</sup>	14.1 <sup>†</sup>
Apache	2.1	8.0	4.9
Cochise	15.4	29.6 <sup>†</sup>	23.5
Coconino	1.4	15.0	5.6
Gila	6.6	37.2	13.5
Graham	0.4	18.9 <sup>†</sup>	3.9
Greenlee	0.0 <sup>†</sup>	10.5	1.0
La Paz	4.4	3.9	5.1
Maricopa	8.4 <sup>†</sup>	20.4 <sup>†</sup>	14.0 <sup>†</sup>
Mohave	10.9	21.5	15.5 <sup>†</sup>
Navajo	4.6	17.4	9.7
Pima	10.2	26.9 <sup>†</sup>	16.5
Pinal	6.5	17.4 <sup>†</sup>	10.7
Santa Cruz	15.9	43.2	32.5 <sup>†</sup>
Yavapai	6.6 <sup>†</sup>	11.6 <sup>†</sup>	8.6 <sup>†</sup>
Yuma	9.6	18.5 <sup>†</sup>	14.8

\* Children living in a high-risk zip code were recommended a blood lead test at both 12 & 24 months of age. Screening rates for 12 & 24 month and 24 months only indicators were calculated for children who were 24 months old in 2021. Screening rates for the 12 months only indicator was calculated for children who were 12 months old in 2021.

† Significantly different from 2020 rate ( $p < 0.05$ )



## APPENDIX K: SCREENING RATES OF CHILDREN <6 YEARS OLD IN HIGH-RISK ZIP CODES (%), 2021

County	At both 12 & 24 months*	At 12 months only*	At 24 months only*
Arizona	7.8†	19.2†	12.6†
Apache	1.3	4.6	2.9
Cochise	19.7	32.3†	26.0
Coconino	3.1	15.8†	6.7
Gila	4.3	23.3	7.9
Graham	0.9	20.4	4.2
Greenlee	0.0†	14.3	1.4
La Paz	7.0	8.7	4.7
Maricopa	7.5†	18.2†	12.2†
Mohave	11.5†	22.2†	15.7†
Navajo	1.9	11.0†	5.7
Pima	10.3	26.8	16.1
Pinal	5.4†	15.6†	9.3
Santa Cruz	16.2	42.8	32.3†
Yavapai	7.2†	13.6†	8.7†
Yuma	8.3†	16.8†	13.2

\* Children living in a high-risk zip code were recommended a blood lead test at both 12 & 24 months of age. Screening rates for 12 & 24 month and 24 months only indicators were calculated for children who were 24 months old in 2021. Screening rates for the 12 months only indicator was calculated for children who were 12 months old in 2021.

† Significantly different from 2020 rate ( $p < 0.05$ )



## APPENDIX L: SCREENING RATES OF CHILDREN <6 YEARS OLD IN ALL ZIP CODES (%), 2021

County	At both 12 & 24 months*	At 12 months only*	At 24 months only*
Arizona	6.9	17.6	11.1
Apache	1.2	4.4	2.8
Cochise	18.7	30.9	24.6
Coconino	7.4	21.1	10.9
Gila	4.5	23.5	9.8
Graham	0.8	14.5	3.3
Greenlee	0.0	13.1	1.3
La Paz	3.9	5.4	4.9
Maricopa	6.5	16.5	10.6
Mohave	12.2	23.3	15.2
Navajo	3.6	13.1	7.6
Pima	8.7	23.9	13.8
Pinal	5.7	15.5	9.3
Santa Cruz	15.9	42.1	32.0
Yavapai	7.3	13.4	9.0
Yuma	5.1	11.4	8.7

\* Children living in a high-risk zip code were recommended a blood lead test at both 12 & 24 months of age. Screening rates for 12 & 24 month and 24 months only indicators were calculated for children who were 24 months old in 2021. Screening rates for the 12 months only indicator was calculated for children who were 12 months old in 2021.



## APPENDIX M: INCIDENT CASES AND RATES OF CHILDREN <6 YEARS OLD IDENTIFIED WITH AN BLL $\geq 5 \mu\text{g/dL}$ , 2021

County	Newly identified cases	Case rates per 10,000
Arizona	122	2.3
Apache	4	6.9
Cochise	5	5.6
Coconino	2	2.2
Gila	4	11.3
Graham	2	5.6
Greenlee	2	22.0
La Paz	1	8.3 <sup>†</sup>
Maricopa	61	1.7
Mohave	4	3.5
Navajo	6	6.2
Pima	19	2.7
Pinal	4	1.3
Santa Cruz	3	7.7
Yavapai	1	0.8
Yuma	4	2.2

<sup>†</sup> Significantly different from 2020 rate ( $p < 0.05$ )



## APPENDIX M: INCIDENT CASES AND RATES OF CHILDREN <6 YEARS OLD IDENTIFIED WITH AN BLL 5-9.9 µg/dL, 2021

County	Newly identified cases	Case rates per 10,000
Arizona	95	1.8
Apache	3	5.2
Cochise	3	3.3
Coconino	2	2.2
Gila	3	8.5
Graham	2	5.6
Greenlee	1	11.0
La Paz	0	0.0
Maricopa	48	1.4
Mohave	4	3.5
Navajo	5	5.2
Pima	16	2.3
Pinal	3	0.9
Santa Cruz	2	5.1
Yavapai	0	0.0 <sup>†</sup>
Yuma	3	1.6

<sup>†</sup> Significantly different from 2020 rate ( $p <0.05$ )



## APPENDIX M: INCIDENT CASES AND RATES OF CHILDREN <6 YEARS OLD IDENTIFIED WITH A BLL $\geq 10 \mu\text{g}/\text{dL}$ , 2021

County	Newly identified cases	Case rates per 10,000
Arizona	27	0.5
Apache	1	1.7 <sup>†</sup>
Cochise	2	2.2
Coconino	0	0.0
Gila	1	2.8 <sup>†</sup>
Graham	0	0.0
Greenlee	1	11.0
La Paz	1	8.3 <sup>†</sup>
Maricopa	13	0.4
Mohave	0	0.0
Navajo	1	1.0
Pima	3	0.4
Pinal	1	0.3
Santa Cruz	1	2.6 <sup>†</sup>
Yavapai	1	0.8 <sup>†</sup>
Yuma	1	0.5

<sup>†</sup> Significantly different from 2020 rate ( $p < 0.05$ )



## APPENDIX N: DEMOGRAPHICS OF CASES, 2021

Race/Ethnicity	Count	Percent
American Indian or Alaska Native	22	13.8
Asian	11	6.9
Black	11	6.9
Hispanic	64	40.0
Multi-Racial	3	1.9
Native Hawaiian or Pacific Islander	0	0.0
Other	3	1.9
White, non-Hispanic	36	22.5
Unknown	10	6.3

Age (in Years)	Male		Female	
	Count	Percent	Count	Percent
0 - <1	2	1.3	3	1.9
1	25	15.6	22	13.8
2	24	15.0	28	17.5
3	9	5.6	19	11.9
4	10	6.3	12	7.5
5	2	1.3	4	2.5



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## APPENDIX O: NUMBER OF BLOOD LEAD TESTS FOR CHILDREN <6 YEARS OLD BY SPECIMEN TYPE, 2017-2021

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	2017	2018	2019	2020	2021
Capillary (Complex)	1,847	832	941	566	1,101
Capillary (LeadCare®)	13,203	12,341	18,847	16,175	10,508
Venous	50,259	47,629	44,697	31,226	35,198
Unknown	160	125	98	42	41

