



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Lead Poisoning Prevention Program

Childhood Blood Lead Surveillance in Maryland

2002 Annual Report

November, 2003



MARYLAND CHILDHOOD LEAD REGISTRY
2002 ANNUAL SURVEILLANCE REPORT
EXECUTIVE SUMMARY

The Maryland Department of the Environment's statewide Childhood Lead Registry (CLR) performs childhood blood lead surveillance for Maryland. The CLR receives the reports of all blood lead tests done on Maryland children 0 - 18 years of age, and provides blood lead test results to local health departments as needed for case management and planning.

Since 1995, the registry has released a comprehensive annual report on statewide childhood blood lead testing. This current report presents the childhood blood lead test results for calendar year 2002 (CY 2002). All numbers are based on blood lead testing on children. The CLR does not receive any reports on lead screening based on the lead risk assessment questionnaire.

CY 2002 Surveillance Highlights:

Testing statewide, particularly at ages 1 year and 2 years. The actual number of children tested at age 1 year and 2 years increased compared to 2001 (from 26,671 to 27,480 for age 1, and from 16,646 to 17,793 for age 2).

The number of children with elevated blood leads in 2002 decreased compared to 2001. Children with blood lead levels above 10 µg/dL, CDC's level of concern, decreased to 2,297 or 2.9% of children tested statewide from 2,841 or 3.7% in 2001. Children with blood lead levels of 20 µg/dL and above, or "lead poisoning", decreased to 260 or 0.3% of children tested statewide from 288 or 0.4% in 2001.

OVERVIEW

LEAD POISONING IN MARYLAND

Lead is one of the most significant and widespread environmental hazards for children in Maryland. Children are at the greatest risk from birth to age six while their neurological systems are being developed. Exposure to lead can cause long-term neurological damage that may be associated with learning and behavioral problems and with lowered intelligence.

There has been a steady decline in childhood lead poisoning in Maryland over the past decade at all levels of exposure (Fig. 1, 2). The reduction has occurred both statewide and in areas of highest risk such as Baltimore City.

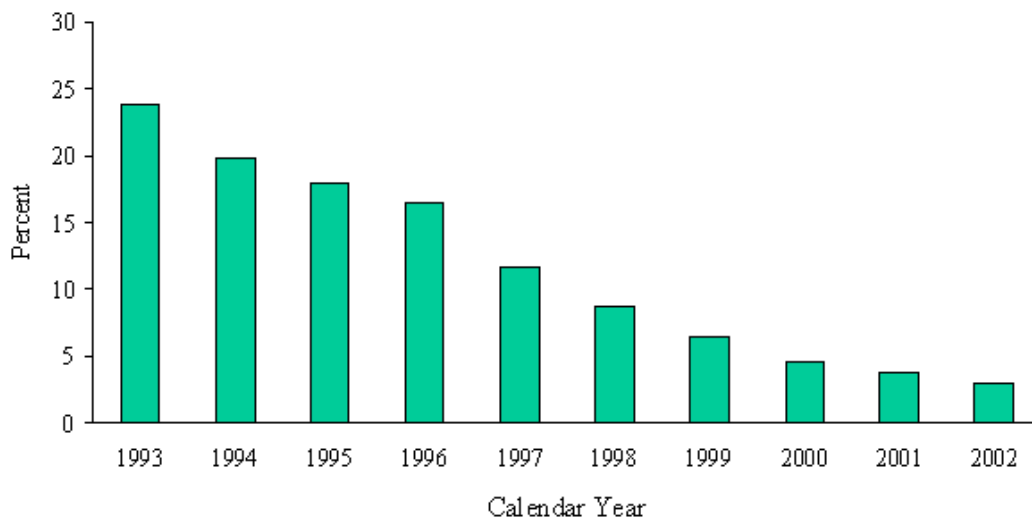
Sources of Childhood Lead Exposure

Lead paint dust from deteriorated lead paint or from renovation is the major source of exposure for children in Maryland. According to the US 2000 census, there are about 439,000 residential houses built before 1950 (95% likely to contain lead paint) and 692,000 houses built between 1950-1978 (75% likely to have lead paint).

Water, air, and soil, may provide low-level, "background" exposure, but rarely may cause childhood lead poisoning.

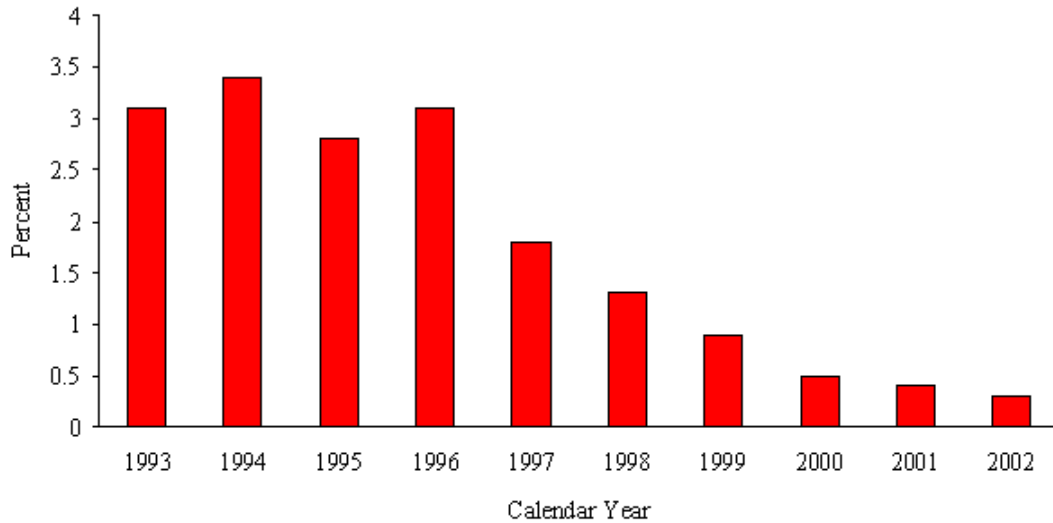
Imported products, parental occupations, hobbies, and imported traditional medicines occasionally may cause lead exposure among children.

Figure 1
Percent of Children Tested With Elevated Blood Lead Level*



* Children 0-72 months old with highest venous blood lead test (capillary if no venous) ≥ 10 $\mu\text{g}/\text{dL}$ for each year.
Source: Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Lead Registry, Statewide data: 1993-2003

Figure 2
Percent of Children Tested With Lead Poisoning*



* Children 0-72 months old with a venous blood lead test ≥ 20 $\mu\text{g/dL}$ for each year.
 Source: Maryland Department of the Environment, Childhood Lead Registry, Statewide data: 1993-2002

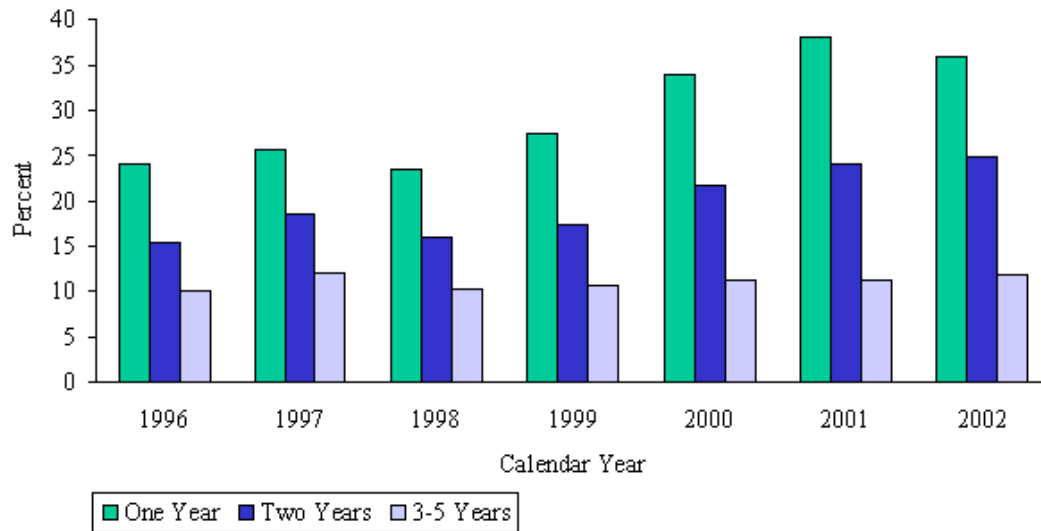
Much of the decline in blood lead levels is the result of lead poisoning prevention efforts. Increased enforcement of the state law “Reduction of Lead Risk in Housing”, increased awareness by parents and property owners of the hazards of lead poisoning, improved maintenance and prevention of lead exposure, moving away from older housing into more recently built city or suburban housing, and outreach and education to families and health care providers all contribute to fewer children with elevated blood lead levels.

State Laws and regulations with impact on childhood lead poisoning

- ✓ Requirements to perform lead hazard reduction at each turnover in rental housing built before 1950. [Environment Article (EA) §6-8]
- ✓ Outreach programs to parents, health care providers, and property owners, especially in at-risk areas. [EA§ 6-8, Health Article §18-106]

Maryland requires that children living in at risk areas be tested at ages one and two years. The State has a targeted testing plan that identifies at risk areas. Universal blood lead testing applies to Baltimore City children (Ordinance 20 effective July 2000) and children on Medicaid (covered by EPSDT). The percentage of one and two year old children tested increased for the last 5 years. (Fig. 3).

Figure 3
 Percent of children one and two years tested for lead vs. children of other ages*



* Children 0-72 months old with highest blood lead test for each year.
 Source: Maryland Department of the Environment, Childhood lead Registry, Statewide data: 1996-2002.

Identifying children with lead exposure

The critical issue in childhood lead poisoning is early detection. Because there are no specific clinical symptoms, a blood lead test is the most reliable technique to identify children with elevated blood lead levels. If there is any suspicion that a child is exposed to lead, do a blood lead test.

Maryland's Lead Poisoning Prevention Program has well-established case management and environmental investigation protocols for follow-up of lead poisoned children. In 2002, a graduate student at MDE conducted an evaluation to assess the performances in the process of case management in 156 childhood lead poisoning cases opened for an environmental investigation in 2000 and 2001 in the Maryland counties. The findings were as follows: all children with very high blood lead levels received prompt services; a majority of the children received home visits and environmental investigations within the current protocol; and children in the case management program had blood lead levels that significantly decreased over time. Table One is a 1-page summary of Maryland's case management protocol.

Table One: Case Management Protocol

Environmental investigations are required at 2 consecutive venous levels of $\geq 15 - 19 \mu\text{g/dL}$ or 1 venous level at $\geq 20 \mu\text{g/dL}$.

| Blood Lead Level | Local Health Department | Health Care Provider | Statewide Law Enforcement |
|--------------------------|--|--|--|
| < 9 $\mu\text{g/dL}$ | Anything above zero indicates some exposure or contact with lead. No Community Health Nurse case management services are indicated. | <ul style="list-style-type: none"> • General education about lead and lead poisoning • Risk Assessment Questionnaire at all routine child health visits • Repeat blood lead level according to protocol | Footnote 2 |
| 10 – 14 $\mu\text{g/dL}$ | This is the CDC <u>level of concern</u> . Provide education to decrease exposure, including information about Special Loans Housing Program. | As above plus <ul style="list-style-type: none"> • Educate to decrease exposure • Track blood lead levels according to CDC protocol | |
| 15 – 19 $\mu\text{g/dL}$ | If capillary test, coordinate with provider and guardian to validate with a venous blood lead test within 1 month. If venous test <ul style="list-style-type: none"> • Make telephone contact and do home visit • Provide educational materials to family (mail or in person) • Send Official Notice of Elevated Blood Lead, when applicable, to Tenant and Rental Property Owner • Coordinate with the provider and guardian for follow-up activities, such as housing and follow-up blood tests If two consecutive venous tests between 15-19 $\mu\text{g/dL}$ at least 90 days of each other, treat as next level. | As above plus <ul style="list-style-type: none"> • Evaluate for iron deficiency • Take environmental history | As in footnote 2, plus MDE enforcement of Lead Risk in Housing law’s subsections on Notice of Elevated Blood Lead |
| 20 – 44 $\mu\text{g/dL}$ | If capillary test, coordinate validation of level with a venous blood lead level within 1 week If venous test. <ul style="list-style-type: none"> • Contact and make a home visit in coordination with the Environmental Lead Sanitarian who will complete an environmental investigation within 10 working days • Discuss with the health care provider possible referral to tertiary care centers specializing in management of childhood lead poisoning • Provide appropriate referrals to other agencies (Social Services, Housing, etc.) | As above plus <ul style="list-style-type: none"> • Complete medical/nutritional history and physical examination • Obtain developmental / psychological evaluation • Consider chelation consultation | As above, plus MDE and local health department enforcement of <ul style="list-style-type: none"> • Notice of Violations • Lead Risk in Housing law, subsections on Qualified Offer |
| $\geq 45 \mu\text{g/dL}$ | If capillary, contact provider within 2 working days. Inform provider to mark all specimens STAT (Highest Priority) and request immediate processing and report from laboratory. If venous, contact provider within 1 working day. Same as above. | As above plus <ul style="list-style-type: none"> • Consult with lead specialist • Perform urgent chelation | |
| > 70 $\mu\text{g/dL}$ | Contact the health care provider within 24 hours. If capillary, confirm the result immediately with a STAT venous test. If venous, verify hospitalization as a medical emergency. Same as above. | Hospitalize: Medical emergency: | |

1) Maryland Department of the Environment Protocol, based on Centers for Disease Control and Prevention guidance

2) Environment Article §6-8, “Reduction of Lead Risk in Housing” subsections on Rental Property Registration, Risk Reduction Treatments at Turnover and Notice of Defect are ongoing primary prevention activities not triggered by blood lead levels.

Improving Surveillance Data

The amended law and regulations* of 2001 and 2002 require that:

1-Following child's demographic data should be included in each blood lead test reported:

- Date of Birth
- Sex
- Address
- Test date
- Sample type
- Blood lead level

2- Blood lead results ≥ 20 $\mu\text{g/dL}$ to be reported (fax) within 24 hours after result is known. All other results to be reported every two weeks.

3- Reporting format should comply with the format designed and provided by the Registry.

4- Data should be provided electronically.

* EA 6-303, Blood lead test reporting (COMAR 26.02.01, Blood lead test reporting)

In calendar year 2002, 79,507 children 0-72 months were tested for lead exposure statewide, 2,765 more than 2001. Table Two provides summary statewide statistics of blood lead testing in 2002, and Table Three provides the breakdown of blood lead testing and the status of lead poisoning by jurisdiction in 2002. Table Three-A provides numbers of children by age groups of 0-35 months and 36-72 months. Table Four shows summary results for 8 years at the State, Baltimore City and Counties levels.

Address Completeness Most Probable Reason for Differences Between 2001 and 2002 Annual Reports

Address completeness improved in 2002 as a result of new laboratory reporting regulations with improved enforcement capacity. In 2001, less than one-third of the reports had an address with sufficient completion for accurate assignment of a census tract. When a child address was missing, the address of the Health Care Provider was used to assign the child to a jurisdiction. Baltimore City has a high concentration of Health Care Providers, so it is likely that children's reports without an address were assigned to Baltimore City even though their residence might have been in one of the surrounding counties. In contrast, more than one-half of all reports in 2002 had an address with sufficient completion for accurate assignment of a census tract. In summary, in 2001, more children were assigned to the jurisdiction in which their Health Care Provider was located which resulted in the 2001 data showing a higher rate of testing in Baltimore City than in 2000 and 2002.

Table Two
Calendar Year (CY) 2002 Statistical Report

| Item | Number | Percent (%) |
|---|---------------------|-------------|
| Number to tests | 99,626 ¹ | |
| Number of children | 79,507 | 100.0 |
| Age | | |
| Under One | 11,475 | 14.4 |
| One Year | 27,480 | 34.6 |
| Two Years | 17,793 | 22.4 |
| Three Years | 9,576 | 12.0 |
| Four Years | 8,412 | 10.6 |
| Five Years | 4,754 | 6.0 |
| Age Unknown ³ | 17 | 0.0 |
| Medicaid Status⁴ | | |
| Yes | 38,617 | 48.6 |
| No | 40,890 | 51.4 |
| Highest Blood Lead Level (µg/dL) | | |
| 0-9 | 77,210 | 97.1 |
| 10-14 | 1,561 | 2.0 |
| 15-19 | 432 | 0.5 |
| 20-24 | 157 | 0.2 |
| >=25 | 147 | 0.2 |
| Mean BLL (Geometric mean) | 2.4 | |
| Blood Specimen | | |
| Capillary | 11,115 | 14.0 |
| Venous | 62,609 | 78.7 |
| Undetermined ⁵ | 5,783 | 7.3 |

1. For detailed analysis and breakdown of data refer to Supplementary Data Tables 1-6.
2. The 99,626 tests were from 89,636 children 0-18 years, of whom 79,507 were 0-72 months old. Data in this statistical table is based on children 0-72 months.
3. Children with wrong or missing date of birth were assumed to be under six years of age.
4. The Registry file was matched against Medicaid file using multistage matching process.
5. In further analyses, the undetermined blood specimens were counted as capillary.

Table Three
MARYLAND DEPARTMENT OF THE ENVIRONMENT
Lead Poisoning Prevention Program: Childhood Lead Registry
Blood Lead Testing of Children 0-72 months by Jurisdiction in 2002

| County¹ | Population of children 0-72 months old ² | Children Tested ³ | | Children with Elevated Blood Lead Level ⁴ | | Children with Lead Poisoning ⁵ | |
|---------------------------|---|------------------------------|-------------|--|------------|---|------------|
| | | Number | Percent | Number | Percent | Number | Percent |
| Allegany | 4,618 | 1,183 | 25.6 | 29 | 2.5 | 2 | 0.2 |
| Anne Arundel | 40,257 | 5,944 | 14.8 | 30 | 0.5 | 4 | 0.1 |
| Baltimore | 55,444 | 10,499 | 18.9 | 148 | 1.4 | 12 | 0.1 |
| Baltimore City | 52,744 | 16,595 | 31.5 | 1,558 | 9.4 | 183 | 1.1 |
| Calvert | 6,252 | 899 | 14.4 | 8 | 0.9 | 2 | 0.2 |
| Caroline | 2,168 | 699 | 32.2 | 48 | 6.9 | 3 | 0.4 |
| Carroll | 11,888 | 978 | 8.2 | 10 | 1.0 | 1 | 0.1 |
| Cecil | 7,104 | 1,018 | 14.3 | 9 | 0.9 | 2 | 0.2 |
| Charles | 10,812 | 1,790 | 16.6 | 8 | 0.4 | 0 | 0.0 |
| Dorchester | 1,902 | 513 | 27.0 | 36 | 7.0 | 5 | 1.0 |
| Frederick | 17,434 | 1,584 | 9.1 | 22 | 1.4 | 2 | 0.1 |
| Garrett | 2,046 | 297 | 14.5 | 3 | 1.0 | 0 | 0.0 |
| Harford | 18,530 | 2,216 | 12.0 | 26 | 1.2 | 2 | 0.1 |
| Howard | 22,090 | 1,796 | 8.1 | 16 | 0.9 | 2 | 0.1 |
| Kent | 1,095 | 149 | 13.6 | 1 | 0.7 | 0 | 0.0 |
| Montgomery | 75,588 | 12,082 | 16.0 | 61 | 0.5 | 8 | 0.1 |
| Prince George's | 73,365 | 14,930 | 20.4 | 98 | 0.7 | 10 | 0.1 |
| Queen Anne's | 3,079 | 444 | 14.4 | 7 | 1.6 | 1 | 0.2 |
| Saint Mary's | 7,533 | 1,059 | 14.1 | 10 | 0.9 | 0 | 0.0 |
| Somerset | 1,461 | 512 | 35.0 | 21 | 4.1 | 0 | 0.0 |
| Talbot | 2,173 | 441 | 20.3 | 19 | 4.3 | 4 | 0.9 |
| Washington | 9,552 | 1,500 | 15.7 | 19 | 1.3 | 4 | 0.3 |
| Wicomico | 6,714 | 1,747 | 26.0 | 74 | 4.2 | 9 | 0.5 |
| Worcester | 2,968 | 542 | 18.3 | 34 | 6.3 | 4 | 0.7 |
| County Unknown | | 90 | | 2 | 2.2 | 0 | 0.0 |
| Statewide | 436,817 | 79,507 | 18.2 | 2,297 | 2.9 | 260 | 0.3 |

1. County assignment in the order of priority was based on child's census tract, child's zip code address, and provider's zip code address.
2. Adapted from US Census population estimate for 2002.
3. Blood lead reports with missing or wrong date of birth were assumed to be from children under six (6) years of age with exact age unknown.
4. Any blood lead level ≥ 10 $\mu\text{g/dL}$
5. Defined as a venous blood lead level ≥ 20 $\mu\text{g/dL}$

Table Three-A
MARYLAND DEPARTMENT OF THE ENVIRONMENT
Lead Poisoning Prevention Program: Childhood Lead Registry
Blood Lead Testing of Children 0-72 months by Jurisdiction in 2002

| Age Group | Population of children | Children Tested | | Children with Elevated Blood Lead Level | | Children with Lead Poisoning | |
|----------------------------|------------------------|-----------------|---------|---|---------|------------------------------|---------|
| | | Number | Percent | Number | Percent | Number | Percent |
| Allegany County | | | | | | | |
| 0-35 Months | 2,383 | 1,073 | 45.0 | 21 | 2.0 | 1 | 0.1 |
| 36-72 Months | 2,235 | 110 | 4.9 | 8 | 7.3 | 1 | 0.9 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 4,618 | 1,183 | 25.6 | 29 | 2.5 | 2 | 0.2 |
| Anne Arundel County | | | | | | | |
| 0-35 Months | 20,711 | 4,788 | 23.1 | 25 | 0.5 | 3 | 0.1 |
| 36-72 Months | 19,546 | 1,156 | 5.9 | 5 | 0.4 | 1 | 0.1 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 40,257 | 5,944 | 14.8 | 30 | 0.5 | 4 | 0.1 |
| Baltimore County | | | | | | | |
| 0-35 Months | 28,397 | 8,215 | 28.9 | 106 | 1.3 | 6 | 0.1 |
| 36-72 Months | 27,046 | 2,282 | 8.4 | 42 | 1.8 | 6 | 0.3 |
| Age Unknown | | 2 | | 0 | | 0 | |
| Total | 55,444 | 10,499 | 18.9 | 148 | 1.4 | 12 | 0.1 |
| Baltimore City | | | | | | | |
| 0-35 Months | 27,523 | 11,690 | 42.5 | 939 | 8.0 | 109 | 0.9 |
| 36-72 Months | 25,221 | 4,902 | 19.4 | 617 | 12.6 | 73 | 1.5 |
| Age Unknown | | 3 | | 2 | | 1 | |
| Total | 52,744 | 16,595 | 31.5 | 1,558 | 9.4 | 183 | 1.1 |
| Calvert County | | | | | | | |
| 0-35 Months | 3,126 | 741 | 23.7 | 6 | 0.8 | 2 | 0.3 |
| 36-72 Months | 3,126 | 158 | 5.1 | 2 | 1.3 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 6,252 | 899 | 14.4 | 8 | 0.9 | 2 | 0.2 |
| Caroline County | | | | | | | |
| 0-35 Months | 1,085 | 525 | 48.4 | 34 | 6.5 | 2 | 0.4 |
| 36-72 Months | 1,082 | 174 | 16.1 | 14 | 8.0 | 1 | 0.6 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 2,168 | 699 | 32.2 | 48 | 6.9 | 3 | 0.4 |
| Carroll County | | | | | | | |
| 0-35 Months | 5,942 | 750 | 12.6 | 10 | 1.3 | 1 | 0.1 |
| 36-72 Months | 5,945 | 228 | 3.8 | 0 | 0.0 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 11,888 | 978 | 8.2 | 10 | 1.0 | 1 | 0.1 |

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Lead Poisoning Prevention Program: Childhood Lead Registry
Blood Lead Testing of Children 0-72 months by Jurisdiction in 2002

| Age Group | Population of children | Children Tested | | Children with Elevated Blood Lead Level | | Children with Lead Poisoning | |
|--------------------------|------------------------|-----------------|---------|---|---------|------------------------------|---------|
| | | Number | Percent | Number | Percent | Number | Percent |
| Cecil County | | | | | | | |
| 0-35 Months | 3,591 | 709 | 19.7 | 6 | 0.8 | 2 | 0.3 |
| 36-72 Months | 3,513 | 309 | 8.8 | 3 | 1.0 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 7,104 | 1,018 | 14.3 | 9 | 0.9 | 2 | 0.2 |
| Charles County | | | | | | | |
| 0-35 Months | 5,494 | 1,256 | 22.9 | 4 | 0.3 | 0 | 0.0 |
| 36-72 Months | 5,318 | 533 | 10.0 | 4 | 0.8 | 0 | 0.0 |
| Age Unknown | | 1 | | 0 | | 0 | |
| Total | 10,812 | 1,790 | 16.6 | 8 | 0.4 | 0 | 0.0 |
| Dorchester County | | | | | | | |
| 0-35 Months | 959 | 390 | 40.7 | 27 | 6.9 | 5 | 1.3 |
| 36-72 Months | 943 | 123 | 13.0 | 9 | 7.3 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 1,902 | 513 | 27.0 | 36 | 7.0 | 5 | 1.0 |
| Frederick County | | | | | | | |
| 0-35 Months | 8,879 | 1,206 | 13.6 | 17 | 1.4 | 2 | 0.2 |
| 36-72 Months | 8,555 | 378 | 4.4 | 5 | 1.3 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 17,434 | 1,584 | 9.1 | 22 | 1.4 | 2 | 0.1 |
| Garrett County | | | | | | | |
| 0-35 Months | 1,023 | 245 | 23.9 | 3 | 1.2 | 0 | 0.0 |
| 36-72 Months | 1,022 | 52 | 5.1 | 0 | 0.0 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 2,046 | 297 | 14.5 | 3 | 1.0 | 0 | 0.0 |
| Harford County | | | | | | | |
| 0-35 Months | 9,382 | 1,634 | 17.4 | 22 | 1.3 | 2 | 0.1 |
| 36-72 Months | 9,148 | 581 | 6.4 | 4 | 0.7 | 0 | 0.0 |
| Age Unknown | | 1 | | 0 | | 0 | |
| Total | 18,530 | 2,216 | 12.0 | 26 | 1.2 | 2 | 0.1 |
| Howard County | | | | | | | |
| 0-35 Months | 11,166 | 1,251 | 11.2 | 14 | 1.1 | 2 | 0.2 |
| 36-72 Months | 10,924 | 545 | 5.0 | 2 | 0.4 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 22,090 | 1,796 | 8.1 | 16 | 0.9 | 2 | 0.1 |

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Lead Poisoning Prevention Program: Childhood Lead Registry
Blood Lead Testing of Children 0-72 months by Jurisdiction in 2002

| Age Group | Population of children | Children Tested | | Children with Elevated Blood Lead Level | | Children with Lead Poisoning | |
|-------------------------------|------------------------|-----------------|---------|---|---------|------------------------------|---------|
| | | Number | Percent | Number | Percent | Number | Percent |
| Kent County | | | | | | | |
| 0-35 Months | 556 | 123 | 22.1 | 1 | 0.8 | 0 | 0.0 |
| 36-72 Months | 538 | 26 | 4.8 | 0 | 0.0 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 1,095 | 149 | 13.6 | 1 | 0.7 | 0 | 0.0 |
| Montgomery County | | | | | | | |
| 0-35 Months | 39,113 | 7,919 | 20.2 | 38 | 0.5 | 4 | 0.1 |
| 36-72 Months | 36,476 | 4,160 | 11.4 | 23 | 0.6 | 4 | 0.1 |
| Age Unknown | | 3 | | 0 | | 0 | |
| Total | 75,588 | 12,082 | 16.0 | 61 | 0.5 | 8 | 0.1 |
| Prince George's County | | | | | | | |
| 0-35 Months | 37,823 | 9,261 | 24.5 | 61 | 0.7 | 7 | 0.1 |
| 36-72 Months | 35,542 | 5,664 | 15.9 | 37 | 0.7 | 3 | 0.1 |
| Age Unknown | | 5 | | 0 | | 0 | |
| Total | 73,365 | 14,930 | 20.4 | 98 | 0.7 | 10 | 0.1 |
| Queen Anne's County | | | | | | | |
| 0-35 Months | 1,556 | 322 | 20.7 | 6 | 1.9 | 1 | 0.3 |
| 36-72 Months | 1,523 | 122 | 8.0 | 1 | 0.8 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 3,079 | 444 | 14.4 | 7 | 1.6 | 1 | 0.2 |
| Saint Mary's County | | | | | | | |
| 0-35 Months | 3,831 | 933 | 24.4 | 8 | 0.9 | 0 | 0.0 |
| 36-72 Months | 3,701 | 126 | 3.4 | 2 | 1.6 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 7,533 | 1,059 | 14.1 | 10 | 0.9 | 0 | 0.0 |
| Somerset County | | | | | | | |
| 0-35 Months | 747 | 372 | 49.8 | 15 | 4.0 | 0 | 0.0 |
| 36-72 Months | 715 | 140 | 19.6 | 6 | 4.3 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 1,461 | 512 | 35.0 | 21 | 4.1 | 0 | 0.0 |
| Talbot County | | | | | | | |
| 0-35 Months | 1,104 | 331 | 30.0 | 14 | 4.2 | 3 | 0.9 |
| 36-72 Months | 1,069 | 110 | 10.3 | 5 | 4.5 | 1 | 0.9 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 2,173 | 441 | 20.3 | 19 | 4.3 | 4 | 0.9 |

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Lead Poisoning Prevention Program: Childhood Lead Registry
Blood Lead Testing of Children 0-72 months by Jurisdiction in 2002

| Age Group | Population of children | Children Tested | | Children with Elevated Blood Lead Level | | Children with Lead Poisoning | |
|--------------------------|------------------------|-----------------|---------|---|---------|------------------------------|---------|
| | | Number | Percent | Number | Percent | Number | Percent |
| Washington County | | | | | | | |
| 0-35 Months | 4,882 | 1,146 | 23.5 | 12 | 1.0 | 1 | 0.1 |
| 36-72 Months | 4,670 | 354 | 7.6 | 7 | 2.0 | 3 | 0.8 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 9,552 | 1,500 | 15.7 | 19 | 1.3 | 4 | 0.3 |
| Wicomico County | | | | | | | |
| 0-35 Months | 3,463 | 1,377 | 39.8 | 59 | 4.3 | 8 | 0.6 |
| 36-72 Months | 3,251 | 368 | 11.3 | 15 | 4.1 | 1 | 0.3 |
| Age Unknown | | 2 | | 0 | | 0 | |
| Total | 6,714 | 1,747 | 26.0 | 74 | 4.2 | 9 | 0.5 |
| Worcester County | | | | | | | |
| 0-35 Months | 1,525 | 422 | 27.7 | 26 | 6.2 | 3 | 0.7 |
| 36-72 Months | 1,443 | 120 | 8.3 | 8 | 6.7 | 1 | 0.8 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | 2,968 | 542 | 18.3 | 34 | 6.3 | 4 | 0.7 |
| County Unknown | | | | | | | |
| 0-35 Months | | 69 | | 1 | 1.4 | 0 | 0.0 |
| 36-72 Months | | 21 | | 1 | 4.8 | 0 | 0.0 |
| Age Unknown | | 0 | | 0 | | 0 | |
| Total | | 90 | | 2 | 2.2 | 0 | 0.0 |
| Statewide | | | | | | | |
| 0-35 Months | 224,263 | 56,748 | 25.3 | 1,475 | 2.6 | 164 | 0.3 |
| 36-72 Months | 212,554 | 22,742 | 10.7 | 820 | 3.6 | 95 | 0.4 |
| Age Unknown | | 17 | | 2 | | 1 | |
| Total | 436,817 | 79,507 | 18.2 | 2,297 | 2.9 | 260 | 0.3 |

1. Population of children was adapted from US Census Bureau.
2. Blood lead reports with missing or wrong date of birth were assumed to be from children under six (6) years of age with exact age unknown.
3. Elevated blood lead level defined as any blood lead level ≥ 10 $\mu\text{g}/\text{dL}$.
4. Lead poisoning defined as a venous blood lead level ≥ 20 $\mu\text{g}/\text{dL}$.
5. County assignment was in the order of child's census tract address, child's zip code address, and provider's zip code address.

Table Four
MARYLAND DEPARTMENT OF THE ENVIRONMENT
Childhood blood lead surveillance in Maryland: 1995-2002
Children 0-72 months old

| Calendar Year | | Population of Children | <u>Blood Lead Tests</u> | | <u>Elevated Blood Lead</u> | | <u>Lead Poisoning</u> | |
|---------------|----------|------------------------|-------------------------|---------|----------------------------|---------|-----------------------|---------|
| | | | Number | Percent | Number | Percent | Number | Percent |
| 1995 | City | 65,958 | 38,794 | 58.8 | 10,258 | 26.4 | 1,633 | 4.2 |
| | Counties | 383,210 | 25,600 | 6.7 | 1,327 | 5.2 | 199 | 0.8 |
| | Total | 449,168 | 64,394 | 14.3 | 11,585 | 18.0 | 1,832 | 2.8 |
| 1996 | City | 60,834 | 29,630 | 48.7 | 7,816 | 26.4 | 1,646 | 5.6 |
| | Counties | 369,538 | 27,006 | 7.3 | 1,264 | 4.7 | 160 | 0.6 |
| | Unknown | | 3,110 | | 804 | | 24 | |
| | Total | 430,372 | 59,746 | 13.9 | 9,884 | 16.5 | 1,830 | 3.1 |
| 1997 | City | 58,262 | 21,423 | 36.8 | 5,983 | 27.9 | 1030 | 4.8 |
| | Counties | 362,935 | 44,546 | 12.3 | 1654 | 3.7 | 202 | 0.5 |
| | Unknown | | 1,149 | | 126 | | 1 | |
| | Total | 421,197 | 67,118 | 15.9 | 7,763 | 11.6 | 1233 | 1.8 |
| 1998 | City | 56,759 | 17,753 | 31.3 | 3,949 | 22.2 | 669 | 3.8 |
| | Counties | 359,726 | 40,164 | 11.1 | 1,082 | 2.7 | 103 | 0.3 |
| | Unknown | | 668 | | 37 | | 0 | |
| | Total | 416,485 | 58,585 | 14.1 | 5,068 | 8.7 | 772 | 1.3 |
| 1999 | City | 55,401 | 17,414 | 31.4 | 2,902 | 16.7 | 446 | 2.6 |
| | Counties | 363,511 | 43,524 | 12.0 | 925 | 2.1 | 102 | 0.2 |
| | Unknown | | 591 | | 77 | | 7 | |
| | Total | 418,912 | 61,529 | 14.7 | 3,904 | 6.4 | 555 | 0.9 |
| 2000 | City | 50,380 | 18,033 | 36.8 | 2,198 | 12.2 | 266 | 1.5 |
| | Counties | 377,559 | 51,210 | 13.6 | 847 | 1.7 | 85 | 0.2 |
| | Unknown | | 5,273 | | 357 | | 2 | |
| | Total | 427,939 | 74,516 | 17.4 | 3,402 | 4.6 | 353 | 0.5 |
| 2001 | City | 50,380 | 21,231 | 42.1 | 2,027 | 9.5 | 230 | 1.1 |
| | Counties | 377,559 | 55,470 | 14.7 | 814 | 1.5 | 58 | 0.1 |
| | Unknown | | 41 | | 0 | | 0 | |
| | Total | 427,939 | 76,742 | 17.9 | 2,841 | 3.7 | 288 | 0.4 |
| 2002 | City | 52,744 | 16,595 | 31.5 | 1,558 | 9.4 | 183 | 1.1 |
| | Counties | 384,073 | 62,822 | 16.4 | 737 | 1.2 | 77 | 0.1 |
| | Unknown | | 90 | | 2 | | 0 | |
| | Total | 436,817 | 79,507 | 18.2 | 2,297 | 2.9 | 260 | 0.3 |

Notes:

1. Population for 1995-1999 is based on US Census Bureau annual population estimate for states and counties. Population for 2000 and 2001 both use the US 2000 population count, as the Census Bureau did not release population estimate for 2001 by 11/2002. Population for 2002 is adapted from Census Bureau population estimate for 2002.
2. Elevated blood lead is defined as a venous or a capillary blood lead level ≥ 10 $\mu\text{g/dL}$.
3. Lead poisoning is defined as a venous blood lead level ≥ 20 $\mu\text{g/dL}$.
4. City/county assignment is based on zip code address. USPS zip code county file was used for the assignment. In the absence of a valid zip code, the jurisdiction was considered unknown. For 2002 census tract was the first order of priority to assign county.