

***Protecting Our Children from Lead:  
The Success of New York's Efforts to Prevent  
Childhood Lead Poisoning***

**New York State  
Department of Health**

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## Executive Summary

***New York's efforts in the prevention and early detection of childhood lead poisoning are paying off. The incidence and prevalence of childhood lead poisoning are declining.***

Childhood lead poisoning is a serious health problem that can have a devastating effect on a child, and has serious repercussions for society as a whole. Human interaction with lead in the environment is most dangerous for children under age six. Exposure to even small amounts of lead can contribute to behavior problems, learning disabilities, and lowered intelligence. Screening and prompt and effective intervention have been shown to prevent some of the more advanced effects of lead poisoning, such as seizures and severe kidney and nervous system damage.

In the four-year period (1996-99) covered by this report, New York has made significant progress in the prevention and early detection of childhood lead poisoning.

◆ ***The incidence and prevalence of childhood lead poisoning are declining.***

The number of children newly identified with lead poisoning, meaning children with blood lead levels of 20 micrograms per deciliter or higher, has decreased by 46% over the four years studied, from 1,111 in 1996 to 601 in 1999. This represents a decrease in incidence from 55/1000 (0.55%) to 34/1000 (0.34%). Nearly every county had a decrease in the prevalence of childhood lead poisoning from 1996-1999.

In 1999, the prevalence rate of children with levels of 10 micrograms per deciliter or greater was 5.8%. Over the four-year period studied, the prevalence rate decreased by 36%.

◆ ***New York's lead screening rate remains at a high level.***

In 1998, seventy percent of children under age six enrolled in Medicaid managed care were screened for lead in New York State. Analysis of screening rates for children born between 1994 and 1997 under age two shows New York's screening rates have remained steady at approximately 61%. The screening rate for those children enrolled in Medicaid was higher than for the rate for the state as a whole.

In high incidence communities, screening rates remain at a high level. Screening rates may be lower in some communities where providers know their patients live in newer housing and are at lower risk for lead poisoning.

◆ ***In 1996, 22 of the State's 1700 non-New York City zip codes had greater than a 10% incidence rate for children with blood lead levels over ten micrograms per deciliter. By 1999, there were only five non-New York City zip codes with incidence rates at 10% or higher.***

Thirty percent (or 1,006) of the children under age six who were identified in 1999 with first time levels 10 micrograms per deciliter or higher lived in just 1.8% (or 26) of the state's zip codes.

The children who were found to have blood lead readings of 10 micrograms per deciliter or higher were most likely to live in areas of high socioeconomic need and of poor housing. In 1999, data shows that these children were clustered mostly in urban areas, but children with elevated blood lead readings were found in virtually every county.

Six zip codes had incidence of first-time elevated blood lead rates of 10 percent or higher in at least three of the four years between 1996 and 1999. They include 13204 and 13205 in Onondaga County; 14208, 14211 and 14212 in Erie County; and 12307 in Schenectady County. These six zip codes

accounted for 12.7% of the total number of children under age six identified for the first time with a confirmed blood lead level of 10 micrograms per deciliter or greater outside of New York City in 1999.

◆ ***New York City reported a similar decline in new childhood lead poisoning cases.***

The New York City Department of Health recently reported a similar decline in the incidence of childhood lead poisoning over the period from 1996 to 2000. (See Appendix H for a copy of the report prepared by the New York City Department of Health.)

The number of new cases of children ages six months to six years with elevated blood leads of ten micrograms per deciliter or higher declined from 14,109 cases in 1996 to 6,861 cases in 2000, a decline of 51% even as the number of New York City children tested increased. Due to differences in methodology of counting, these data cannot be directly compared to those figures for the rest of the State.

◆ ***New York State Department of Health's Childhood Lead Poisoning Prevention Program, in partnership with local health departments and the State's health care providers, are addressing this serious issue.***

The program, in partnership with local health departments and with the provider community:

- Coordinates efforts to prevent, detect and treat childhood lead poisoning;
- Educates the public and health professionals about prevention, early detection and appropriate treatment of childhood lead poisoning;
- Provides effective case management for children with elevated blood leads, including environmental assessment and lead hazard control;
- Ensures that families of children with lead poisoning are given appropriate advice and assistance in locating and eliminating sources of lead within the child's environment, whether in their home, a child care setting or wherever the child spends a significant amount of time;
- Collects and analyzes statewide data on the extent and severity of childhood lead poisoning;
- Assists pediatric care providers in the appropriate medical management of lead poisoning through the establishment of regional lead poisoning prevention resource centers; and
- In areas with a high number of cases, provides lead-safe interim housing for families of children who are being treated for lead poisoning while the lead hazards are being removed from their homes.

◆ ***Preventive environmental interventions aim to make New York's housing stock "lead safe."***

Working in concert with housing agencies, the Department provides several direct and indirect environmental interventions to identify sources of lead in the lead-poisoned child's environment, to eliminate possible sources of lead and to prevent further exposure of the child to residential lead paint hazards.

- Federal funding was obtained by the following localities to fund lead hazard control activities: New York City, Albany, Monroe County, Westchester County, Chautauqua County, Syracuse, Buffalo, and Utica.
- Local health departments expanded provision of environmental assessment to the homes of children with elevated blood lead levels at the 15 to 19 microgram per deciliter level. (Previously, only lead poisoned children with blood lead levels above 20 micrograms per deciliter were visited.)

- All new child care facilities are assessed prior to licensure for presence of lead hazards.
- The Department and the Division of Housing and Community Renewal have partnered to ensure that 40,000 housing related staff (landlords, maintenance workers, remodeling contractors and painters) are trained to assist in lead hazard evaluation at Federally-assisted housing. It is expected this will impact 80,000 housing units involving \$86 million in Federal funds annually.
- Seminars are provided for health and housing professionals to keep them abreast of new developments in the field.

◆ ***The Department is working to ensure that families, consumers and landlords are educated about lead hazards.***

The Department is using a variety of means to ensure an educated public, including radio scripts, videos, posters and mini-posters targeted toward parents. Informed parents are more likely to request lead screening and to make themselves aware of lead hazards in the home. \$200,000 has been appropriated by the State to enhance current education efforts.

Sellers of residential property built before 1978 are required to supply buyers with a booklet regarding lead paint hazards from the Environmental Protection Agency. Landlords are also responsible for distributing this material to renters. Outreach and education on this regulation has been done to increase compliance.

The Healthy Neighborhoods Program provides preventive environmental health services to families in targeted geographic areas where children may be at greater risk for lead poisoning. The program provides assessment for the presence of lead paint hazards and other environmental hazards, ensures that children in the home are appropriately lead screened, and makes referrals if they have not. Over the four years between 1996 and 1999, 32,414 dwellings were assessed for lead hazards under the Healthy Neighborhoods Program.

***Next Steps***

Continued efforts to screen all children under age two and continued attention to areas with high incidence and prevalence of childhood lead poisoning are expected to result in continued declines in childhood lead poisoning.

The Department of Health plans several strategies to improve the public's knowledge of childhood lead poisoning prevention, to increase the number of children screened for elevated blood leads before age two and to implement prevention strategies to make New York's housing stock "lead safe" especially in the inner cities.

Building on considerable progress to date, next steps include:

- ◆ Governor Pataki has directed the Department to use Child Health Plus to ensure that children get screened.
- ◆ A "Dear Physician" letter will be issued by Commissioner Novello to all doctors in the State, alerting them of the requirements for universal blood lead screening of one- and two-year old children.
- ◆ Continued emphasis will be placed on universal screening of one- and two-year-olds, with a special emphasis on reaching young children in low income areas where there is very old housing.
- ◆ The Department will move to a secure internet-based reporting system that will provide improved access to program data and enable use of computer mapping technology to target screening and other interventions.
- ◆ Further research will be conducted into the reasons children are not being screened.
- ◆ Greater emphasis will be placed on assisting primary care providers,

including provider education and assistance with setting up in-office recall systems, similar or identical to those set up for immunization recall.

- ◆ The Department will continue support for local health departments to target clinical and environmental interventions to neighborhoods identified as having a high rate of children with elevated blood leads.
- ◆ The Department will increase the number of "lead-safe" housing units in the State through preventive environmental interventions like the Healthy Neighborhoods Project.
- ◆ There will be continued collaboration with an extensive network of state and local partners who are key to the success of the program.

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## Chapter One. Background and Purpose

### **Why is Lead a Problem**

**Childhood lead poisoning can have a devastating effect on the affected child and serious implications for society as a whole.**

Lead is a common element that has no biologic function; the human body has no need or use for it. Human interaction with lead in the environment is most dangerous to children under age six, while their nervous systems are still forming. Young children are also at higher risk because they tend to put their hands and other objects in their mouths, thereby introducing lead dust into their system, and because their gastrointestinal systems absorb lead more efficiently than that of adults. Exposure to even small amounts of lead can contribute to behavior problems and learning disabilities, and has been shown to lower intelligence.

Screening and prompt and effective treatment for elevated blood lead has virtually eliminated deaths and poisoning severe enough to cause a condition called "lead encephalopathy," a condition that was quite common just 30 years ago. But even at low levels of lead poisoning, the presence of lead in the body can slow the growth of children, impede hearing, interfere with healthy formation of key components of blood, and cause direct damage to the kidneys and the nervous system.

Generally, unless children have a very high lead level, they may have either no symptoms or subtle developmental difficulties that may be interpreted as being within the acceptable range of child behavior. Blood lead screening identifies those children at risk.

### **Sources of Lead**

The manufacture and sale of lead-based paint for residential use has been banned nationally since 1978, and lead has also been removed from gasoline. The most common source of lead exposure in children is lead-based paint that remains in older homes and dust created by the disintegration of surfaces painted with lead-based paint. Other sources that may contribute to the burden of lead in children are:

- ◆ Lead in soil from lead paint, gasoline or industry;
- ◆ Drinking water contaminated with lead from leaded solder, brass fittings or older lead service lines;
- ◆ Lead brought into the home by adults who work at occupations or hobbies that expose them to lead;
- ◆ Folk remedies that contain lead oxide (such as *greta*) and lead tetroxide (such as *azarcon*) which are used by some ethnic groups to treat common illnesses; and
- ◆ A number of household items such as crystal, fishing and curtain weights, pewter, plastic mini-blinds, candle wicks, imported crayons, antique toys and ceramic ware.

### **Challenges Putting New York Children at Risk**

**Poor children and children who live in older housing are at higher risk.**

There are two major challenges for New York in addressing childhood lead poisoning: the age of the housing stock and the number of children living in poverty.

New York has the highest number of housing units built prior to 1950 in the nation. Of the 7,226,891 housing units in this state, 63.4% were built prior to 1960 and 46.9% were built prior to 1950. The federal Department of Housing and Urban Development has estimated that 75% of pre-1950 housing contains lead paint.

Lead poisoning can reach across all socioeconomic levels, but poor children tend to be at greater risk. More than 627,000 children under the age of six were eligible for Medicaid benefits during 1998. As a result of their economic standing, these children are more likely to live in older, deteriorating housing with lead paint hazards.



***Recognizing and  
Addressing the Problem***

***New York State  
Department of Health's  
Childhood Lead Poisoning  
Prevention Program***

***New York is a Universal  
Lead Screening State***

***The Purpose of this Report***

There have been active Childhood Lead Poisoning Prevention Programs in New York State since the early 1970s. The program is presently funded with a grant from the Centers for Disease Control and Prevention, Federal block grant dollars, and funds from New York State and local municipalities.

The program, in partnership with Local Health Departments and with the provider community, strives to:

- ◆ Coordinate efforts to prevent, detect and treat childhood lead poisoning;
- ◆ Educate the public and health professionals about prevention, early detection and appropriate treatment of childhood lead poisoning;
- ◆ Provide effective coordination of care for children with elevated blood leads, including environmental assessment and lead hazard control;
- ◆ Ensure that families of children with lead poisoning are given appropriate advice and assistance in locating and eliminating sources of lead within the child's environment, whether in their home, a child care setting or wherever the child spends a significant amount of time;
- ◆ Collect and analyze statewide data on the extent and severity of childhood lead poisoning;
- ◆ Assist pediatric care providers in the appropriate medical management of lead poisoning through the establishment of regional lead poisoning prevention resource centers; and
- ◆ Provide lead-safe interim housing for families of children who are being treated for lead poisoning while the lead hazards are being removed from their homes.

New York is a universal lead screening state. The State's Public Health regulations require all health care providers to screen all one- and two-year-olds for elevated blood lead, preferably as a part of routine well child care. Additionally, pediatric health care providers must assess all children ages six months to six years for risk of high-dose exposure to lead and to provide lead screening if the child is at risk for high-dose exposure.

Providers are also required to:

- ◆ Provide parents with written documentation of blood lead testing;
- ◆ Provide risk reduction education and nutrition counseling to parents of children with blood lead levels of ten micrograms per deciliter or greater;
- ◆ Provide follow-up testing to children with blood lead levels of ten micrograms per deciliter or greater;
- ◆ Confirm fingerstick blood leads equal to or greater than 15 micrograms per deciliter with a venous sample;
- ◆ Provide a complete diagnostic evaluation and complete assessment of lead exposure, nutritional status, and development, with medical treatment as needed, for those children at 20 micrograms per deciliter or higher;
- ◆ Refer children with readings of 20 micrograms per deciliter or higher to local or state health units for environmental assessment and management; and
- ◆ Notify the local health department within 24 hours of a blood lead level result of 45 micrograms per deciliter or higher.

In addition, child care providers must, prior to or within three months of admission of any child over the age of one year, request proof of screening for that child.

The purpose of this report is to present current data on the scope of childhood lead poisoning in New York State and to outline current activities of the Department and its partners in monitoring, treating and preventing childhood lead poisoning. This report will also provide information about New York State laws related to the control of lead poisoning and information about the roles of the State and Local Health Departments and other agency partners.

The data presented in this report describe the level of screening for childhood lead poisoning accomplished in the State and provide information on the occurrence (incidence and prevalence) of elevated blood lead levels in New York's children for the years 1996-1999.

### **Definitions**

In this discussion of lead poisoning data, it is helpful to know the definition of certain terms.

**Tested** - Testing is defined as any blood lead test performed on a child under six years of age.

**Screened** - A child is screened if his or her lead levels were tested in the year noted and he/she had not previously had an elevated test that was validated by a follow-up test.

**Validated or Confirmed** - Elevated blood lead levels can be validated or confirmed by a single sample of blood taken directly from a vein (also called a "venous sample" or by two fingerstick-type samples (also called "capillary samples") when the elevated test results occurred within 12 weeks of each other.

**Elevated** - Test results are elevated if the confirmed blood lead level is found to be greater than or equal to 10 micrograms per deciliter (ug/dL).

**Lead Poisoning** - The current definition of lead poisoning in children less than six years of age is presence of a confirmed blood lead level equal to or greater than 20 micrograms lead per deciliter (ug/dL) of whole blood.

**Incidence** - Incidence is the proportion of all children screened in a given year who had a confirmed elevated blood lead level in that year. Only children who did not previously have an elevated blood lead level are included in this calculation. Incidence represents the new cases in the given year.

**Prevalence** - The prevalence is the proportion of all children tested in a given year who ever had a confirmed elevated blood level.

### **Data Sources**

The data in this report were obtained from the Childhood Lead Poisoning Prevention Program for the years 1996-1999. New York State regulations (10NYCRR, Part 67-Subpart 3) require all laboratories to transmit reports of blood lead reports to the State Department of Health. Over 3.6 million reports have been received by the Department since this reporting began in February 1994. Each local health department collects additional demographic and program data including address, inspections, and housing abatement information.

These data were compiled by the State Health Department from the childhood lead databases of local health departments. Data from New York City is appended to this report. Data from Hamilton County is included only in summary format because the number of children in that county is too small to require use of the electronic data system. As a word of caution in use of the data presented here, data from this report should not be compared to earlier data released from the Department as definitions for some data elements have been changed.

**Chapter Two.**  
**The Scope of**  
**Childhood Lead**  
**Poisoning in New**  
**York State**

***Measuring Lead Screening***

Screening is defined as any blood lead test performed on a child under six years of age who has never previously had an elevated blood lead test. The purpose of screening is to identify children with elevated levels. Once a child has a confirmed elevated lead level, their subsequent tests are not counted as screening tests again. Therefore, the pool of eligible children to be counted as having a screening test diminishes slightly as children are identified with elevated levels.

***Screening Rate***

***Numerator*** = Number of children screened in the cohort before they reached age two.

***Denominator*** = Number of children born in the given year (a birth "cohort").

To make valid comparisons from year to year, the number of children screened is converted to a rate. A screening rate is calculated for a "cohort" of children defined as all children who were born in the given year. Screening rates track the percent of children in the cohort who were screened at least once before they reached age two. That number is compared with the total number of children born in that year, then reported as a percentage.

Excluding NYC, the proportion of children in New York State who were screened for lead poisoning prior to age two remained stable among birth cohorts in 1994 (60%), 1995 (61%), 1996 (63%), and 1997 (62%).

Children born in 1994 were tested between 1994 and 1996, children born in 1995 were tested between 1995 and 1997, those born in 1996 were tested between 1996 and 1998, and those born in 1997 were tested between 1997 and 1999.

***Tracking Screening Rates by County***

Screening rates for blood lead by county for the 1994-1997 birth year cohorts are shown in *Table 1*.

To understand incidence and prevalence rates, a certain level of screening is necessary. In counties and zip codes with low population or where few children are screened, one or two cases of elevated blood lead will raise the incidence and prevalence rates, giving a false impression of the severity of the problem, because those few cases represent a relatively larger proportion of those screened. This is called "small numbers phenomenon."

Counties with large urban centers tend to have screening rates that are well above the state average. There are probably several reasons for this. First, these counties have had local childhood lead poisoning prevention programs a decade longer than other counties in the state, so there is a more established infrastructure for testing. Also, the urban areas in these counties often have higher numbers of children at risk of lead exposure, prompting health care providers to place a higher priority on ensuring that children in their care are tested.

**Table 1. Percentage of Children Screened for Elevated Blood Lead Levels by County, by Age 24 months, by birth cohort  
New York State, Excluding New York City**

| Year                 | 1994 Birth Cohort |                |            | 1995 Birth Cohort |                |            | 1996 Birth Cohort |                |            | 1997 Birth Cohort |               |            |
|----------------------|-------------------|----------------|------------|-------------------|----------------|------------|-------------------|----------------|------------|-------------------|---------------|------------|
|                      | Scrnd*            | Births         | %          | Scrnd*            | Births         | %          | Scrnd*            | Births         | %          | Scrnd*            | Births        | %          |
| <b>NYS, exc. NYC</b> | <b>89,044</b>     | <b>148,618</b> | <b>60%</b> | <b>88,061</b>     | <b>144,879</b> | <b>61%</b> | <b>87,928</b>     | <b>140,661</b> | <b>63%</b> | <b>84,962</b>     | <b>138,07</b> | <b>62%</b> |
| Albany               | 2,176             | 3,539          | 61%        | 2,023             | 3,530          | 57%        | 1,977             | 3,307          | 60%        | 1,935             | 3,276         | 59%        |
| Allegany             | 285               | 608            | 47%        | 228               | 594            | 38%        | 295               | 581            | 51%        | 208               | 560           | 37%        |
| Broome               | 1,306             | 2,474          | 53%        | 1,261             | 2,501          | 50%        | 1,145             | 2,258          | 51%        | 1,078             | 2,201         | 49%        |
| Cattaraugus          | 748               | 1,100          | 68%        | 575               | 1,062          | 54%        | 576               | 1,109          | 52%        | 592               | 1,046         | 57%        |
| Cayuga               | 657               | 1,016          | 65%        | 678               | 1,008          | 67%        | 678               | 991            | 68%        | 778               | 933           | 83%        |
| Chautauqua           | 907               | 1,756          | 52%        | 870               | 1,659          | 52%        | 880               | 1,689          | 52%        | 934               | 1,624         | 58%        |
| Chemung              | 435               | 1,156          | 38%        | 452               | 1,146          | 39%        | 442               | 1,078          | 41%        | 442               | 1,037         | 43%        |
| Chenango             | 428               | 687            | 62%        | 380               | 617            | 62%        | 397               | 621            | 64%        | 386               | 609           | 63%        |
| Clinton              | 577               | 1,054          | 55%        | 569               | 951            | 60%        | 613               | 891            | 69%        | 509               | 795           | 64%        |
| Columbia             | 327               | 726            | 45%        | 406               | 731            | 56%        | 394               | 670            | 59%        | 330               | 664           | 50%        |
| Cortland             | 435               | 655            | 66%        | 417               | 631            | 66%        | 421               | 583            | 72%        | 408               | 562           | 73%        |
| Delaware             | 412               | 536            | 77%        | 357               | 466            | 77%        | 320               | 454            | 70%        | 334               | 491           | 68%        |
| Dutchess             | 1,976             | 3,452          | 57%        | 2,035             | 3,451          | 59%        | 2,222             | 3,348          | 66%        | 2,020             | 3,399         | 59%        |
| Erie                 | 9,867             | 12,850         | 77%        | 9,048             | 12,364         | 73%        | 9,190             | 12,031         | 76%        | 8,767             | 11,635        | 75%        |
| Essex                | 206               | 459            | 45%        | 168               | 429            | 39%        | 203               | 413            | 49%        | 183               | 391           | 47%        |
| Franklin             | 283               | 615            | 46%        | 298               | 581            | 51%        | 290               | 510            | 57%        | 185               | 465           | 40%        |
| Fulton               | 409               | 701            | 58%        | 375               | 654            | 57%        | 397               | 641            | 62%        | 404               | 626           | 65%        |
| Genesee              | 335               | 859            | 39%        | 356               | 782            | 46%        | 369               | 753            | 49%        | 357               | 755           | 47%        |
| Greene               | 204               | 542            | 38%        | 304               | 518            | 59%        | 322               | 499            | 65%        | 277               | 491           | 56%        |
| Hamilton             | 19                | 41             | 46%        | 36                | 54             | 67%        | 13                | 43             | 30%        | 9                 | 46            | 20%        |
| Herkimer             | 516               | 820            | 63%        | 488               | 754            | 65%        | 456               | 704            | 65%        | 450               | 700           | 64%        |
| Jefferson            | 1,304             | 1,910          | 68%        | 1,372             | 1,882          | 73%        | 1,248             | 1,793          | 70%        | 1,139             | 1,734         | 66%        |
| Lewis                | 211               | 382            | 55%        | 168               | 367            | 46%        | 213               | 369            | 58%        | 236               | 336           | 70%        |
| Livingston           | 398               | 734            | 54%        | 379               | 706            | 54%        | 385               | 712            | 54%        | 377               | 706           | 53%        |
| Madison              | 516               | 897            | 58%        | 500               | 885            | 56%        | 544               | 858            | 63%        | 486               | 826           | 59%        |
| Monroe               | 7,434             | 10,500         | 71%        | 7,486             | 10,010         | 75%        | 7,038             | 9,669          | 73%        | 6,738             | 9,622         | 70%        |
| Montgomery           | 245               | 672            | 36%        | 242               | 614            | 39%        | 240               | 575            | 42%        | 303               | 594           | 51%        |
| Nassau               | 9,425             | 17,903         | 53%        | 10,500            | 18,084         | 58%        | 11,392            | 17,722         | 64%        | 11,069            | 17,100        | 65%        |
| Niagara              | 1,877             | 2,909          | 65%        | 1,824             | 2,807          | 65%        | 1,879             | 2,744          | 68%        | 1,775             | 2,641         | 67%        |
| Oneida               | 1,677             | 3,134          | 54%        | 1,671             | 2,881          | 58%        | 1,741             | 2,702          | 64%        | 1,729             | 2,702         | 64%        |
| Onondaga             | 5,103             | 6,752          | 76%        | 4,920             | 6,478          | 76%        | 4,855             | 6,283          | 77%        | 4,821             | 5,972         | 81%        |
| Ontario              | 704               | 1,275          | 55%        | 742               | 1,293          | 57%        | 652               | 1,146          | 57%        | 637               | 1,180         | 54%        |
| Orange               | 2,065             | 5,030          | 41%        | 2,265             | 4,914          | 46%        | 2,416             | 4,893          | 49%        | 2,215             | 4,869         | 45%        |
| Orleans              | 360               | 578            | 62%        | 384               | 575            | 67%        | 324               | 526            | 62%        | 367               | 550           | 67%        |
| Oswego               | 1,166             | 1,721          | 68%        | 1,149             | 1,614          | 71%        | 1,080             | 1,509          | 72%        | 1,086             | 1,445         | 75%        |
| Otsego               | 589               | 662            | 89%        | 547               | 645            | 85%        | 453               | 549            | 83%        | 454               | 586           | 77%        |
| Putnam               | 757               | 1,275          | 59%        | 691               | 1,218          | 57%        | 765               | 1,282          | 60%        | 739               | 1,227         | 60%        |
| Rensselaer           | 1,322             | 2,018          | 66%        | 1,224             | 1,956          | 63%        | 1,243             | 1,945          | 64%        | 1,164             | 1,784         | 65%        |
| Rockland             | 1,682             | 4,279          | 39%        | 2,192             | 4,168          | 53%        | 2,266             | 4,239          | 53%        | 2,411             | 4,341         | 56%        |
| Saratoga             | 1,361             | 2,619          | 52%        | 1,394             | 2,561          | 54%        | 1,436             | 2,523          | 57%        | 1,223             | 2,405         | 51%        |
| Schenectady          | 1,305             | 2,035          | 64%        | 1,256             | 1,962          | 64%        | 1,064             | 1,777          | 60%        | 1,003             | 1,750         | 57%        |
| Schoharie            | 222               | 379            | 59%        | 184               | 334            | 55%        | 206               | 364            | 57%        | 171               | 341           | 50%        |
| Schuyler             | 133               | 248            | 54%        | 119               | 237            | 50%        | 93                | 206            | 45%        | 83                | 205           | 40%        |
| Seneca               | 213               | 397            | 54%        | 250               | 392            | 64%        | 204               | 395            | 52%        | 180               | 374           | 48%        |
| St. Lawrence         | 753               | 1,335          | 56%        | 797               | 1,266          | 63%        | 700               | 1,242          | 56%        | 554               | 1,181         | 47%        |
| Steuben              | 500               | 1,346          | 37%        | 513               | 1,257          | 41%        | 330               | 1,136          | 29%        | 366               | 1,186         | 31%        |

**Table 1. Percentage of Children Screened for Elevated Blood Lead Levels by County by Age 24 months  
New York State, Exclusive of New York City (Continued)**

| Year                 | 1994 Birth Cohort |                |            | 1995 Birth Cohort |                |            | 1996 Birth Cohort |                |            | 1997 Birth Cohort |               |            |
|----------------------|-------------------|----------------|------------|-------------------|----------------|------------|-------------------|----------------|------------|-------------------|---------------|------------|
|                      | Scrnd*            | Births         | %          | Scrnd*            | Births         | %          | Scrnd*            | Births         | %          | Scrnd             | Births        | %          |
| <b>NYS, exc. NYC</b> | <b>89,044</b>     | <b>148,618</b> | <b>60%</b> | <b>88,061</b>     | <b>144,879</b> | <b>61%</b> | <b>87,928</b>     | <b>140,661</b> | <b>63%</b> | <b>84,96</b>      | <b>138,07</b> | <b>62%</b> |
| Suffolk              | 10,098            | 20,502         | 49%        | 10,109            | 20,302         | 50%        | 10,070            | 19,953         | 50%        | 9,799             | 19,862        | 62%        |
| Sullivan             | 391               | 972            | 40%        | 377               | 870            | 43%        | 417               | 839            | 50%        | 433               | 839           | 52%        |
| Tioga                | 299               | 667            | 45%        | 269               | 632            | 43%        | 233               | 630            | 37%        | 328               | 642           | 51%        |
| Tompkins             | 821               | 1,035          | 79%        | 608               | 922            | 66%        | 552               | 851            | 65%        | 561               | 857           | 65%        |
| Ulster               | 963               | 2,143          | 45%        | 1,021             | 2,085          | 49%        | 1,117             | 1,976          | 57%        | 1,075             | 1,922         | 56%        |
| Warren               | 430               | 788            | 55%        | 373               | 724            | 52%        | 406               | 673            | 60%        | 381               | 689           | 55%        |
| Washington           | 422               | 719            | 59%        | 446               | 726            | 61%        | 379               | 695            | 55%        | 355               | 610           | 58%        |
| Wayne                | 592               | 1,329          | 45%        | 640               | 1,248          | 51%        | 624               | 1,217          | 51%        | 594               | 1,261         | 47%        |
| Westchester          | 10,797            | 13,002         | 83%        | 9,706             | 12,980         | 75%        | 9,329             | 12,696         | 73%        | 9,152             | 12,655        | 72%        |
| Wyoming              | 193               | 509            | 38%        | 206               | 488            | 42%        | 237               | 471            | 50%        | 208               | 443           | 47%        |
| Yates                | 208               | 316            | 66%        | 213               | 313            | 68%        | 197               | 327            | 60%        | 164               | 331           | 50%        |

\*Scrnd: Screened

**Prevalence of Elevated Blood Level**

Prevalence data are gathered to understand how many children in the population in a given year have ever had elevated blood lead levels. Prevalence is the proportion of all children under 6 years of age tested (includes screening, confirming, and follow-up tests) for blood lead level in a given year who had an elevated blood lead level during that year or a prior year. Many of these children who had a high level in the past and continue to be monitored do not currently have an elevated blood lead level. This measure, then, reflects current and past-elevated levels of blood lead in the population.

**Prevalence Rate**

**Numerator** = Children under age 6 tested in a given year with a confirmed elevated blood lead level of (greater than or equal to ten micrograms per deciliter) in that year or in previous years.

**Denominator** = All children under age 6 tested (any test) in that year, multiplied by 100 to yield results in percent form.

Nationally, prevalence is the most commonly used measure of blood lead elevations. The measure is different from measures of incidence, which assess the occurrence of new cases. Prevalence rates are higher than incidence rates because they include children with elevated levels from prior years who are still receiving monitoring tests. The Centers for Disease Control and Prevention have reported prevalence of elevated blood leads in the nation as a whole for the years 1996 as 6.4%, for 1997 as 5.6%, and for 1998 as 4.8%.

In 1999, the prevalence rate of New York children outside New York City with elevated blood lead levels (greater than or equal to 10 micrograms per deciliter) was 5.8%. Over a four-year period from 1996 to 1999, the prevalence rate decreased by 36% with nearly every county showing a decrease. Figure 1 shows the number and percentage of children at each point with confirmed elevation that year or any prior year.

