

**Report to the New York City Council on
Progress in Preventing Childhood Lead Poisoning
in New York City, 2004**

Submitted by New York City Department of Health & Mental Hygiene

About This Report

Local Law 1 of 2004 requires the New York City Department of Health & Mental Hygiene (DOHMH) to annually report to the New York City Council on the progress toward reducing childhood lead poisoning and increasing blood lead testing in NYC. This report is submitted in compliance with this requirement.

This report focuses on younger children since they are at greatest risk for lead poisoning. Data in the report are presented in two sections:

- Section I describes NYC's progress in reducing the number and severity of childhood lead poisoning cases. This section focuses on children ages 6 months to less than 6 years. In addition, because Local Law 1 applies to children less than 7 years, data for 6-year-old children are also presented.
- Section II presents data on blood lead testing for NYC children, focusing on 1- and 2-year-old children. New York State (NYS) law requires testing of all children at these ages.

Important Definitions in This Report

Blood lead level (BLL) is the concentration of lead, measured in micrograms in a deciliter of blood ($\mu\text{g}/\text{dL}$).

Elevated blood lead level is the term used by the U.S. Centers for Disease Control and Prevention (CDC) to describe a BLL equal to or greater than (\geq) 10 $\mu\text{g}/\text{dL}$.

Environmental Intervention Blood Lead Level (EIBLL) is the term used by the NYC Department of Health and Mental Hygiene (DOHMH) to refer to the BLL at which care coordination and environmental intervention for lead-poisoned children are initiated. In August 2004, the EIBLL was reduced to one $\text{BLL} \geq 15 \mu\text{g}/\text{dL}$. From July 1999 to August 2004, the EIBLL was defined as a $\text{BLL} \geq 20 \mu\text{g}/\text{dL}$ or two BLLs of 15-19 $\mu\text{g}/\text{dL}$ from tests taken at least 3 months apart.

Section I – Reducing Childhood Lead Poisoning in NYC

Childhood lead poisoning is a serious but preventable health problem. Over the past 35 years, NYC has made significant progress in preventing childhood lead poisoning. Both the number of lead-poisoned children and the severity of lead poisoning (as measured by blood lead levels) have decreased dramatically.

Fewer Lead-Poisoned Children

In 2004,

- 3,193 NYC children, 6 months to less than 6 years, were newly identified with BLLs ≥ 10 $\mu\text{g}/\text{dL}$; this was an 83% decrease from 19,232 children in 1995 and 6% decrease from 3,413 children in 2003 (Figure 1).
- Among 6-year-old children, 151 children were newly identified with BLLs ≥ 10 $\mu\text{g}/\text{dL}$; this was an 82% decrease from 822 children in 1995 and a 6% decrease from 160 children in 2003.

The DOHMH provides intervention services for lead-poisoned children. These interventions are guided by blood lead levels. The DOHMH sends letters to families and medical providers of children with blood lead levels ≥ 10 $\mu\text{g}/\text{dL}$ but below levels that trigger environmental intervention. These letters emphasize the importance of timely follow-up testing and suggest actions that parents can take to protect their children from exposure to lead. Educational materials are provided, including a brochure on tenant rights under Local Law 1, which requires building owners to inspect and safely repair lead paint hazards in pre-1960 multiple dwellings where children under 7 years reside. If repairs are not made, parents can call 311 for assistance from the Department of Housing Preservation and Development.

Fewer Environmental Intervention Cases

The DOHMH provides environmental intervention and case management services for NYC children with blood lead levels greater than or equal to the Environmental Intervention Blood Lead Levels (EIBLLs). The EIBLL has been reduced 6 times since it was first set at 60 $\mu\text{g}/\text{dL}$ in 1970. Between 1999 and 2004, environmental investigation occurred for children with one blood lead level ≥ 20 $\mu\text{g}/\text{dL}$ or two blood lead levels of 15-19 $\mu\text{g}/\text{dL}$ taken at least three months apart. In August 2004, the EIBLL was reduced to one blood lead level ≥ 15 $\mu\text{g}/\text{dL}$. This change resulted in DOHMH providing intervention services to more NYC children with elevated blood lead levels.

Figure 2 shows the downward trend in number and rate of children with environmental intervention blood lead levels. The increase in the number of children who received environmental intervention services in 2004 (659 children) as compared to 2003 (473 children) reflects the lowered threshold for providing these services, and not a rise in number of children with elevated blood lead levels. This can be illustrated by the steady decline in the number and rate (per 1,000 children tested) of children newly identified

with blood lead levels ≥ 20 $\mu\text{g}/\text{dL}$. Blood lead levels in this range have been included in the definition of EIBLL since 1993.

- In 2004, 354 children, 6 months to less than 6 years old, were newly identified with a BLL ≥ 20 $\mu\text{g}/\text{dL}$, a 78% decline compared to 1,578 children in 1995 and a 15% decline compared to 418 children identified in 2003 (Figure 2).
- In both 2003 and 2004, 14 6-year-old children were identified with a BLL ≥ 20 $\mu\text{g}/\text{dL}$.

Fewer Severe Cases

NYC's progress in reducing severe cases of lead poisoning has been striking. Today, the vast majority of children with elevated blood lead levels have no clinical symptoms of lead poisoning and few require medical treatment. Chelation, a medical treatment for removing lead from the blood is recommended by the U.S. Centers for Disease Control and Prevention (CDC) at blood lead levels ≥ 45 $\mu\text{g}/\text{dL}$.

In 2004,

- 12 children, 6 months to less than 6 years, were newly identified with BLLs ≥ 45 $\mu\text{g}/\text{dL}$, as compared to 77 children in 1995 and 24 children in 2003 (Figure 3).
- One child 6 year of age was newly identified with BLLs ≥ 45 $\mu\text{g}/\text{dL}$; two children 6 years of age were newly identified with BLLs ≥ 45 $\mu\text{g}/\text{dL}$ in 1995 and none was identified with BLLs ≥ 45 $\mu\text{g}/\text{dL}$ in 2003.

Section II - Blood Lead Testing

Early identification of lead-poisoned children allows lead sources in their environment to be identified and removed as quickly as possible. Since most children with elevated blood lead levels have no symptoms, blood lead testing is the only practical way to identify these children.

In NYS, blood lead testing is required for all 1-year-old and 2-year-old children, and for high-risk children from 6 months up to age 6. The DOHMH monitors progress in blood lead testing among NYC children using two methods. In the first method, a population of children is followed over time from birth to determine the age at which they were tested for lead poisoning. In the first method, all blood lead tests for children born in a certain year are examined to determine whether these children are tested as per NYS guideline for testing age 1 and age 2.

- For children born in 2001, about 88% were tested for lead poisoning at least once before their third birthday; yet only 37% had been tested at both ages 1 and 2; This is an increase from 84% of children born in 2000 who were tested at least once before their third birthday, with only 30% of them having been tested at both ages 1 and 2.

The second method for monitoring blood lead testing examines tests drawn in a single year and does not consider testing over time. The earliest test for a child in a single year is used to represent the age at testing for that child.

In 2004,

- 72% of 1-year-olds and 60% of 2-year-olds were tested; as compared to 66% of 1-year-olds and 56% of 2-year-olds tested in 2003 (Figure 4).

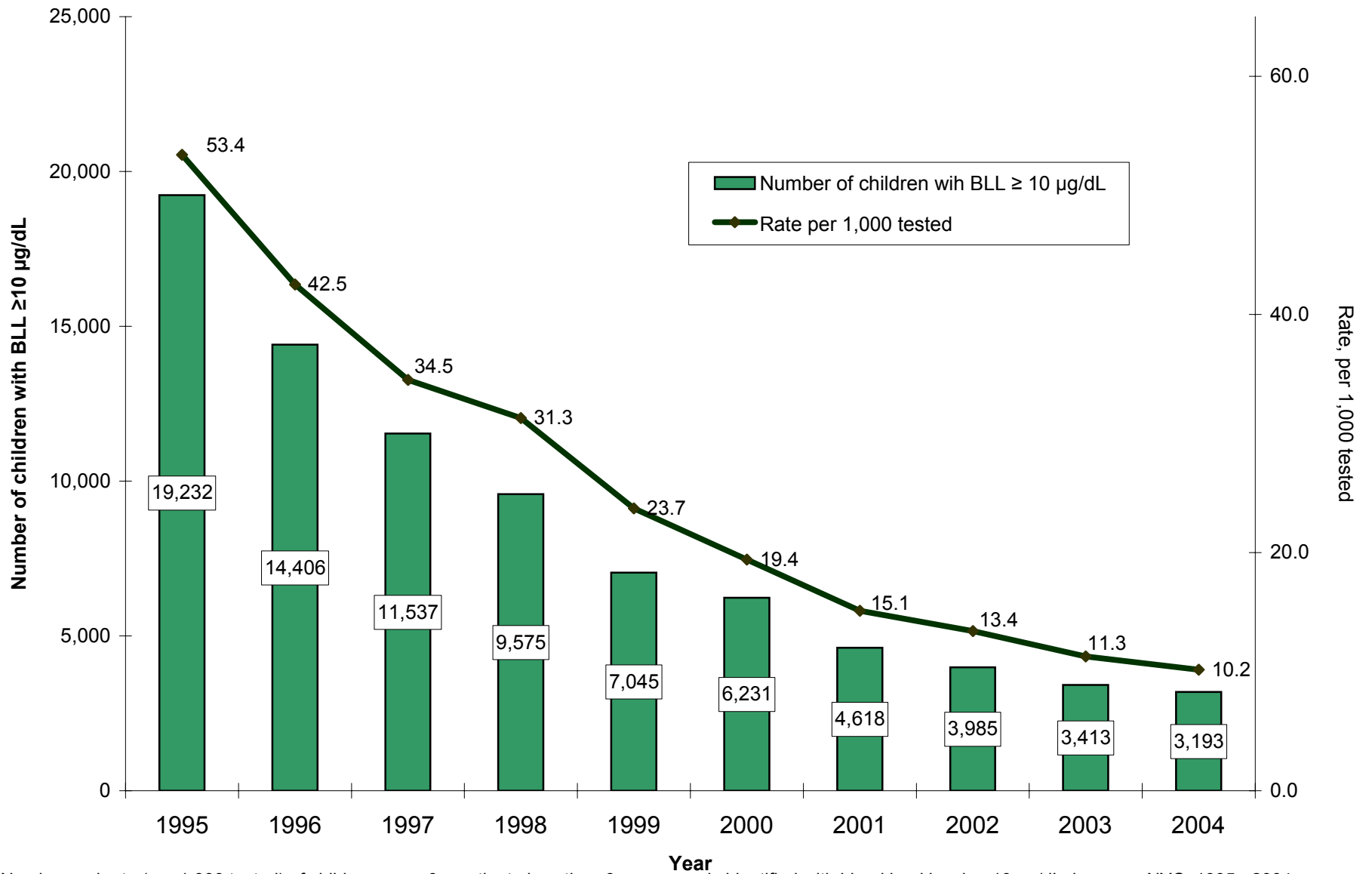
In recent years, DOHMH has expanded its efforts to promote testing among high-risk children by working with health care providers and organizations that provide services to young children and their families. An example is an ongoing data matching partnership, established in 2003, with Medicaid managed care organizations, which systematically identifies children who have not been tested for lead poisoning so that appropriate testing and follow-up occurs by the medical provider.

Strategies for Continued Progress

The DOHMH is committed to further preventing childhood lead poisoning and promoting blood lead testing. Despite NYC's dramatic progress, childhood lead poisoning remains a significant problem in some NYC communities. Low-income children living in older, deteriorated housing and children of color are particularly at risk. In addition, children residing in Brooklyn are over-represented among lead-poisoned children.

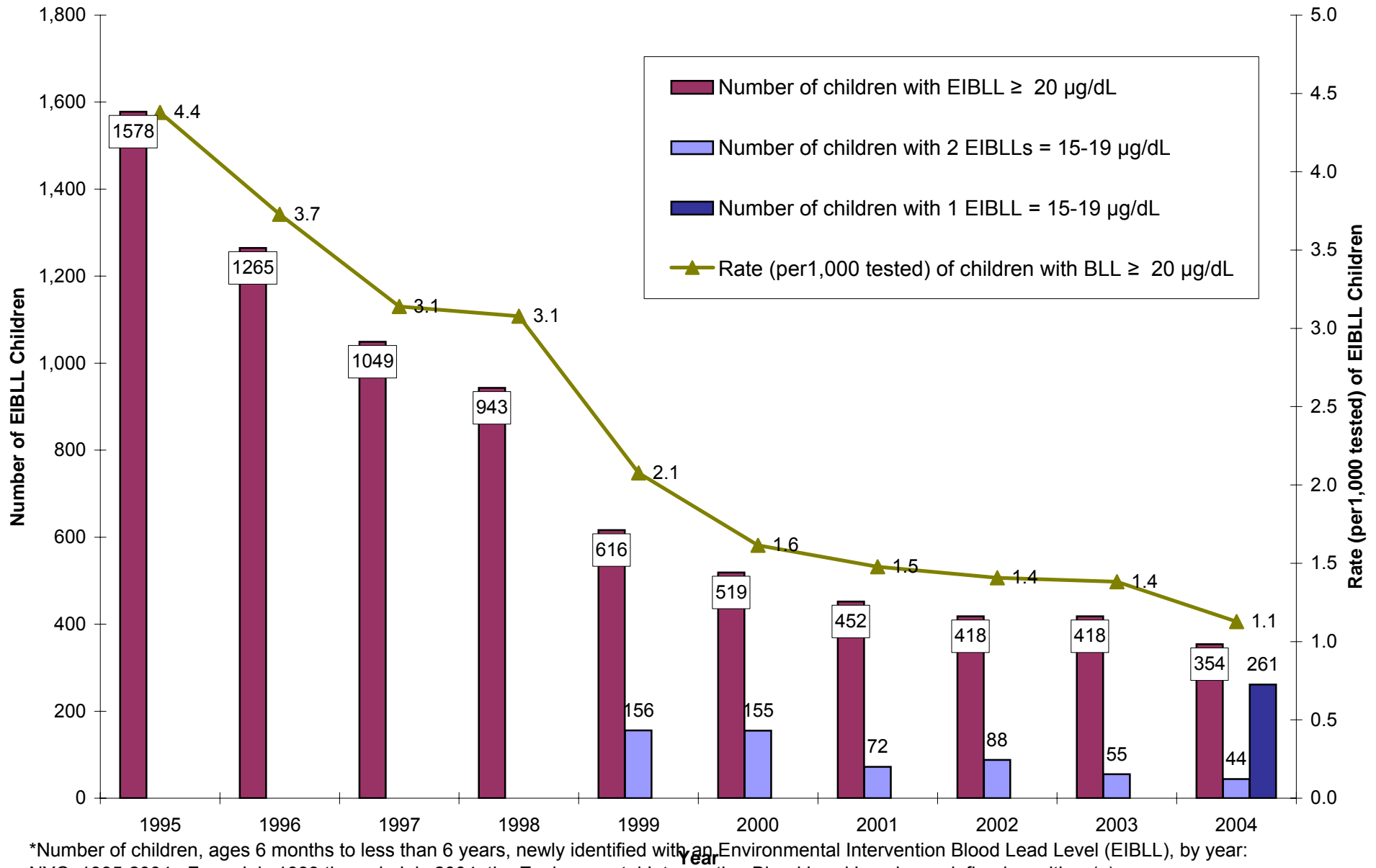
Continued progress will require focused attention to the communities most at risk. The DOHMH has intensified its prevention efforts, collaborating with new partners and embarking on interventions targeted to communities and populations at greatest risk. Two important examples include: (1) Allocating \$500,000 for lead hazard reduction in residential buildings in the high risk neighborhood of Bushwick and (2) the Newborn Project, which provides inspections for lead and other environmental hazards during home visits made to first-time parents in the highest risk areas of Central and North Brooklyn and Central and East Harlem. The DOHMH is also identifying high-risk communities, which would be eligible to receive tax credits for work done to reduce lead hazards in multiple dwelling buildings.

Figure 1 - Steady Decline in Number of Lead-Poisoned Children*



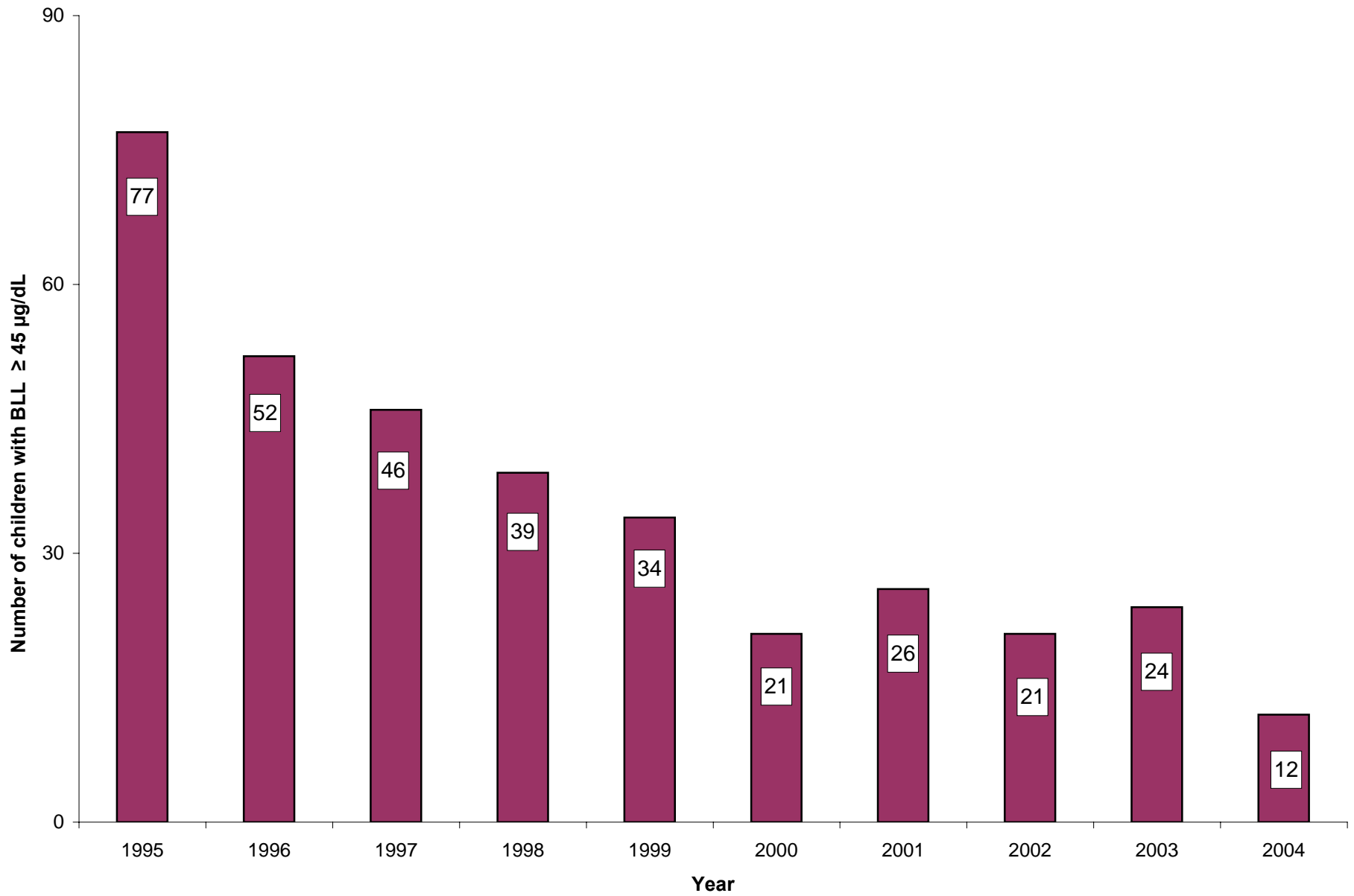
*Number and rate (per 1,000 tested) of children, ages 6 months to less than 6 years, newly identified with blood lead levels ≥ 10 $\mu\text{g/dL}$, by year: NYC, 1995 - 2004.

Figure 2 - Fewer Children With Environmental Intervention Blood Lead Levels (EIBLL)*



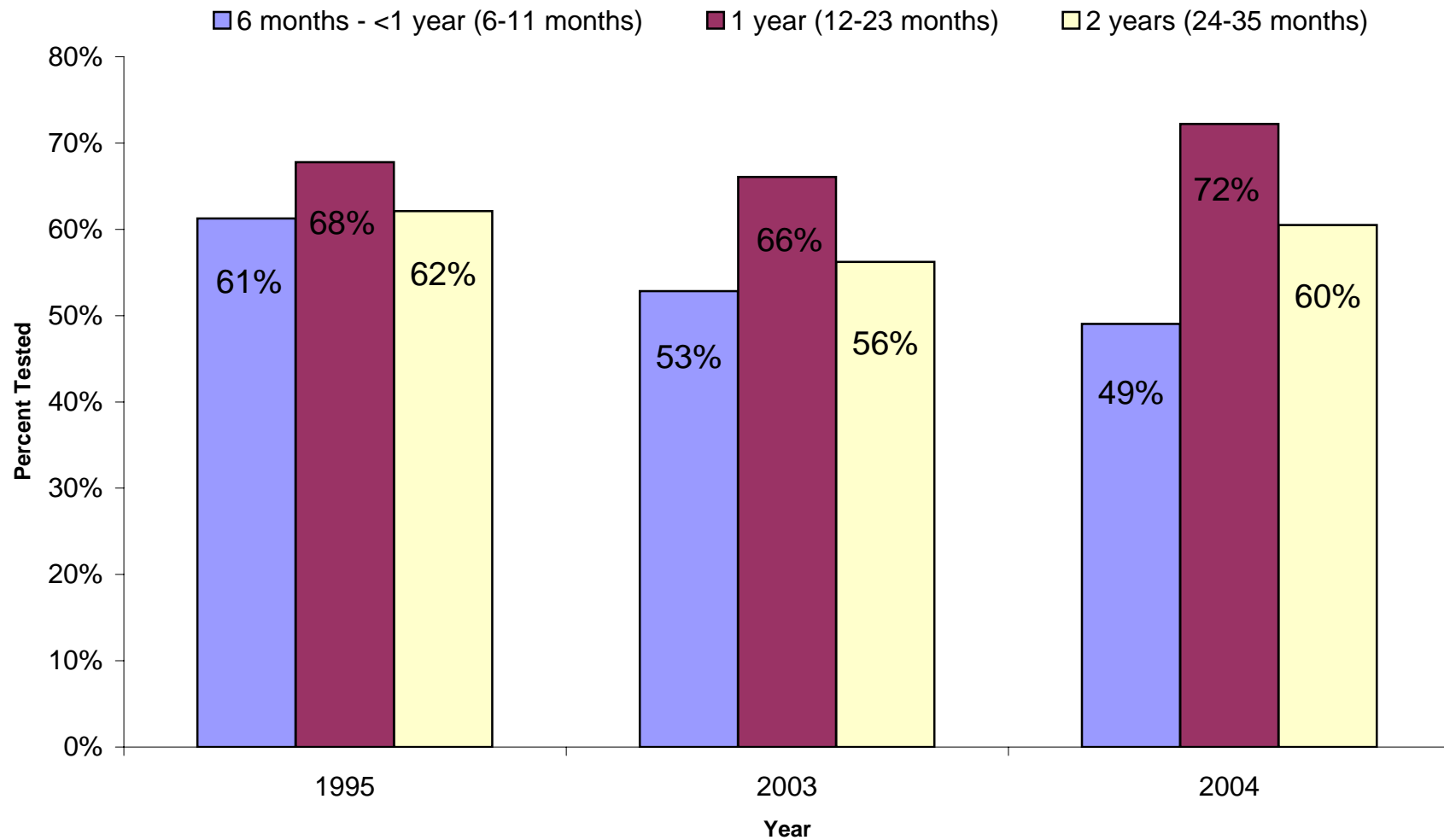
*Number of children, ages 6 months to less than 6 years, newly identified with an Environmental Intervention Blood Lead Level (EIBLL), by year: NYC, 1995-2004. From July 1999 through July 2004, the Environmental Intervention Blood Lead Level was defined as either (a) one venous blood lead level $\geq 20 \mu\text{g/dL}$, or (b) two blood lead levels $15\text{-}19 \mu\text{g/dL}$ that were drawn at least 3 months apart, where the second test was a venous test. As of August 2004, the EIBLL is defined as one venous blood lead level $\geq 15 \mu\text{g/dL}$.

Figure 3 - Fewer Severe Cases of Childhood Lead Poisoning*



*Number of children, ages 6 months to less than 6 years, newly identified with blood lead levels ≥ 45 µg/dL, by year: NYC, 1995-2004.

Figure 4 - More One- and Two-Year-Old Children Need Testing*



*Number and percent of children, ages 6 months to less than 3 years, tested for lead poisoning, by age: NYC, 1995, 2003, and 2004. Sources: NYC DOHMH LPPP and US Census 2000 (Summary File 1).