



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

Submitted by the New York City Department of Health and Mental Hygiene
August 30, 2018

About This Report

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

Data in the report are presented in three sections:

- *Section I* presents data on childhood lead poisonings for New York City children under six years old. Young children are at greatest risk for lead poisoning.
- *Section II* presents data on elevated blood lead levels for children under 18 years old, including data broken down by borough.
- *Section III* presents data on blood lead testing for children turning three years of age in 2016. New York State law requires health care providers to test all children at or around age one and age two. Consequently, before turning three years of age, children living in New York City should be tested twice.
- *Section IV* outlines strategies for continued progress in the prevention of childhood lead poisoning.

DOHMH publishes additional data on blood lead levels among New York City children in a new quarterly report and on the interactive Environment and Health Data Portal. Both are found on nyc.gov/health.

Definitions in This Report

Blood lead level (BLL) is the concentration of lead, measured in micrograms per deciliter of blood (mcg/dL).

Elevated blood lead level is used in this report to mean a blood lead level of 5 mcg/dL or above.

Lead poisoning is used in this report to mean a blood lead level of 10 mcg/dL or above, as defined by the NYC Health Code.

Section I: Preventing Childhood Lead Poisoning in New York City

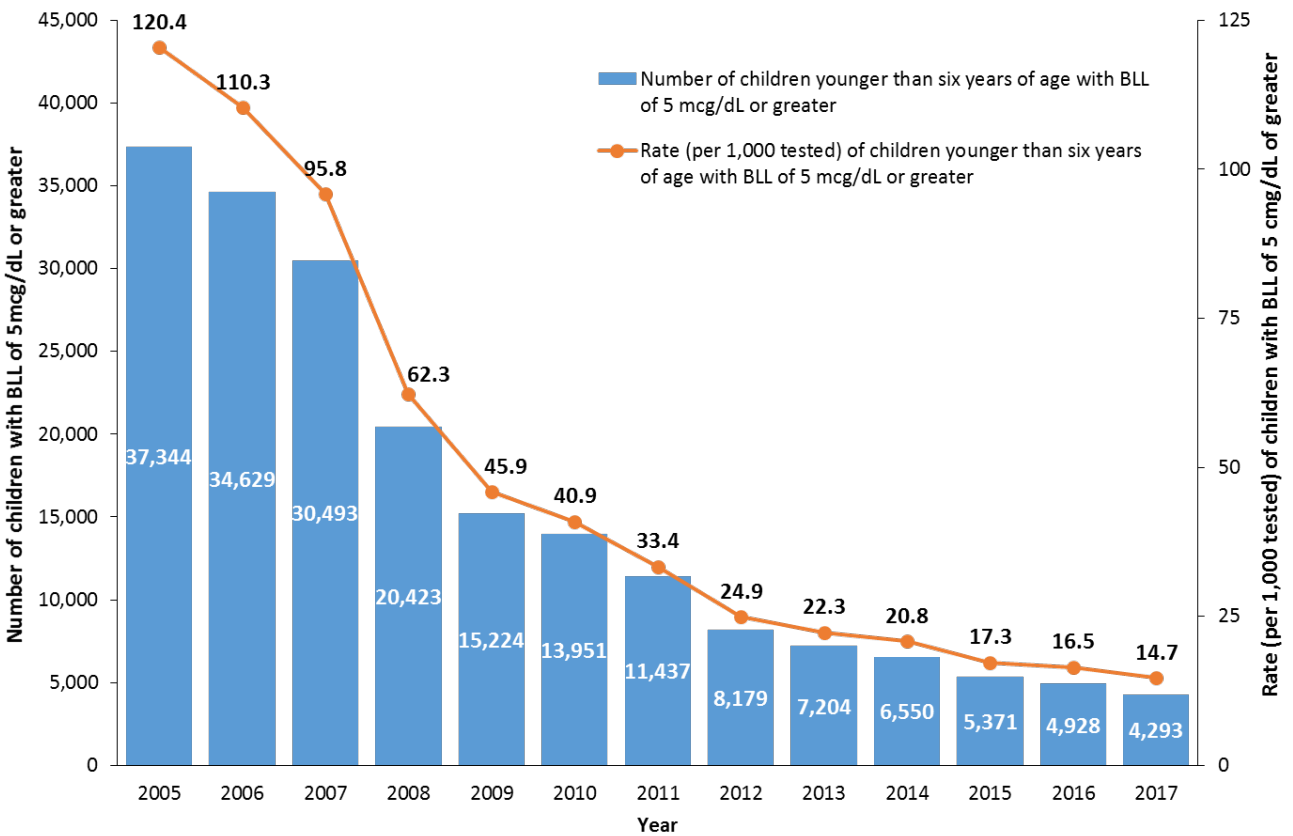
Childhood lead poisoning is a serious but preventable health problem, with lead paint hazards remaining the most commonly identified exposure for New York City children with lead poisoning. The number and rate of newly identified cases, as well as the associated blood lead levels, have greatly declined. Since 2005, there has been close to a 90% decline in the number and rate of children under six years old with a blood lead level at or above 5 micrograms per deciliter (mcg/dL).

Children under age six with blood lead levels at or above 5 mcg/dL

In January 2012, the Centers for Disease Control and Prevention (CDC) adopted a reference level of 5 mcg/dL to identify the number of children that have blood lead levels higher than the vast majority of children.

- In 2017, 4,261 New York City children younger than six years of age were identified with blood lead levels of 5 mcg/dL or greater. This represents a 14% decline from 2016 when there were 4,928 children with blood lead levels of 5 mcg/dL or greater, and an 89% decline since 2005 when there were 37,344 children with blood lead levels of 5 mcg/dL or greater.

Figure 1. The number and rate of New York City children younger than six years old with blood lead levels (BLL) at or above the national reference level (5mcg/dL)

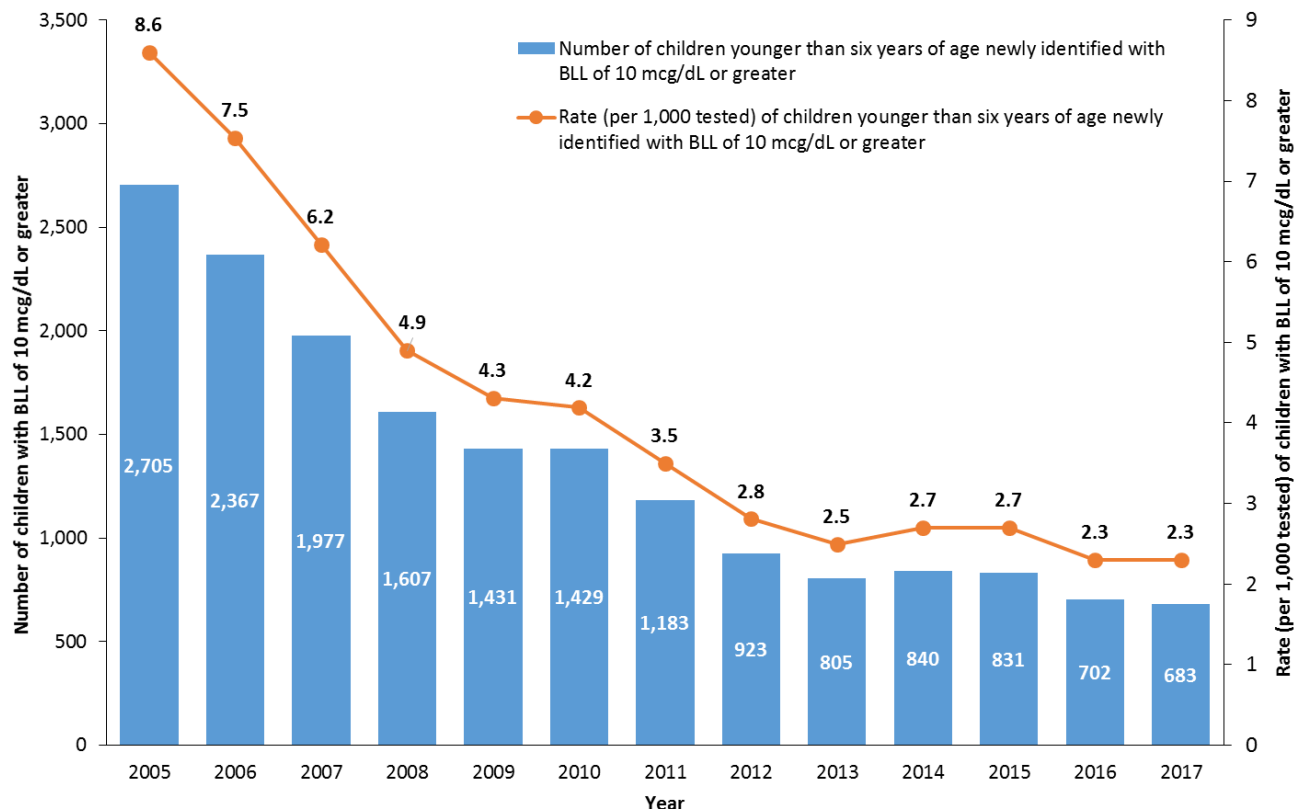


Source: New York City Department of Health and Mental Hygiene Childhood Blood Lead Registry

Children under age six newly identified with a blood lead level at or above 10 mcg/dL

- In 2017, 683 New York City children under six years of age were newly identified with blood lead levels of 10 mcg/dL or greater, a 3% decline compared to 2016, when the total was 702.
- The rate of the new cases of childhood lead poisoning stayed constant compared to 2016, with 2.3 cases per 1,000 children tested in 2017.

Figure 2. The number and rate of New York City children younger than six years old with blood lead levels (BLL) of 10 mcg/dL or greater



Source: New York City Department of Health and Mental Hygiene Childhood Blood Lead Registry

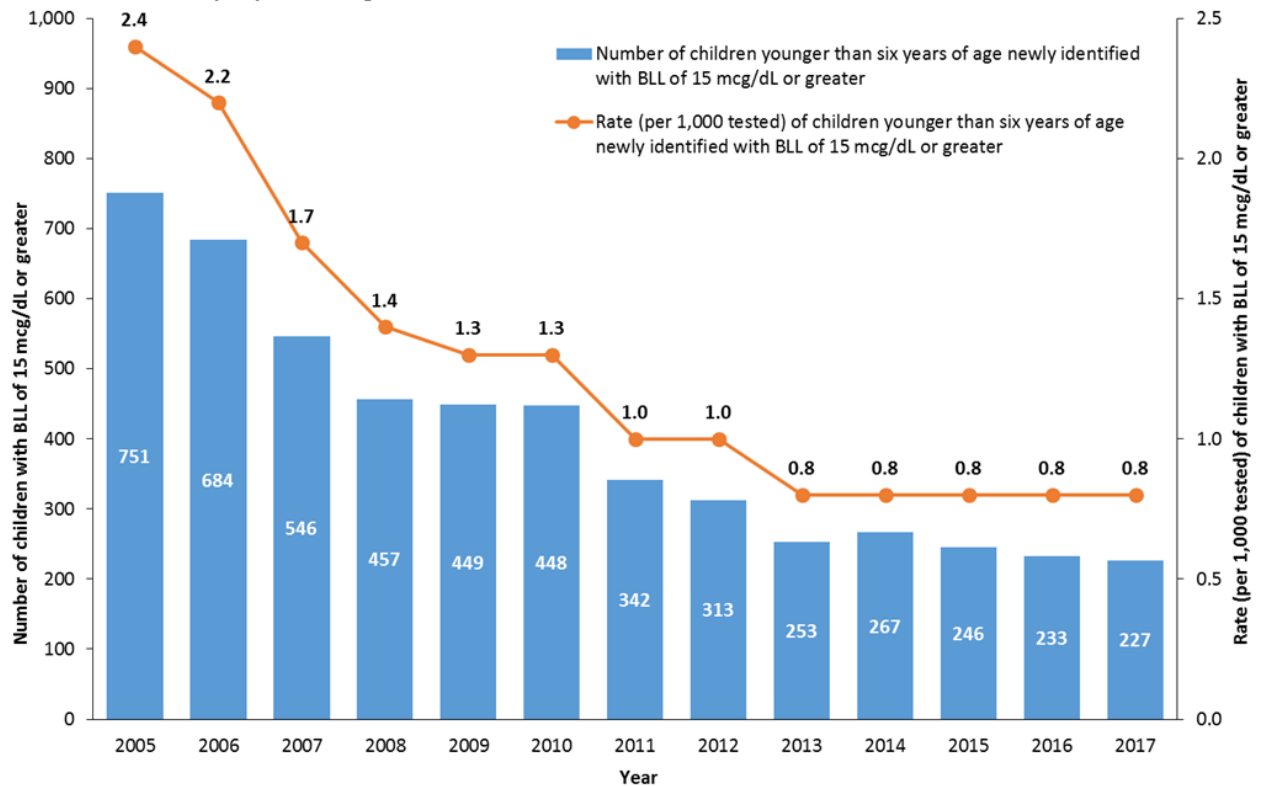
Children newly identified as requiring environmental intervention under Local Law 1

Local Law 1 requires DOHMH to conduct environmental investigations for New York City children with blood lead levels greater than or equal to 15 mcg/dL. At this blood lead level, DOHMH provides an environmental inspection in the child's home, risk assessment to identify potential environmental sources of lead exposure, and care coordination with the child's health care provider.

- In 2017, 266 children younger than 18 years of age were newly identified with blood lead levels of 15 mcg/dL or greater.
 - Of these children, 227 were younger than six years of age, the age group at highest risk. This represents a decrease of 3% compared to 2016 when there were 233 children younger than six years of age newly identified with blood lead levels of 15 mcg/dL or greater.

- The rate of new cases among children younger than six years of age with blood lead levels of 15 mcg/dL stayed constant compared to 2016, with 0.8 cases per 1,000 children tested in 2017.

Figure 3. The number and rate of New York City children younger than six years old with blood lead levels (BLL) of 15 mcg/dL



Source: New York City Department of Health and Mental Hygiene Childhood Blood Lead Registry

The burden of lead poisoning is highest among children of color and children living in high-poverty neighborhoods

While the number of children with blood lead levels of 15 mcg/dL or greater has decreased over time across racial and ethnic groups and neighborhoods, the burden of lead poisoning remains high for children of color and children living in high-poverty neighborhoods.

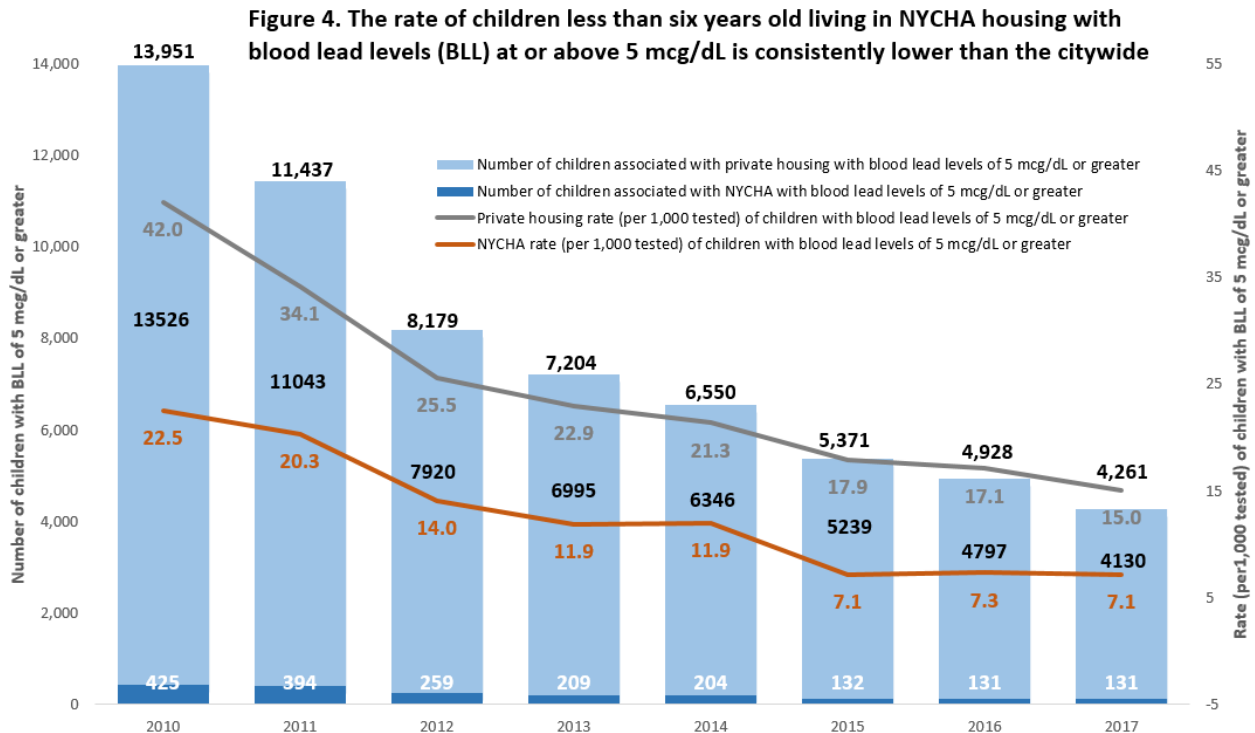
- In 2017, 63% of children younger than six years of age with blood lead levels of 15 mcg/dL or greater were from high-poverty neighborhoods (defined as zip codes with 20% or more of the population living below poverty level), yet an estimated 50% of children citywide live in high-poverty neighborhoods.
- In 2017, Latino, Black, and Asian children represented 79% of children younger than six with blood lead levels of 15 mcg/dL or greater.
- In 2017, 26% of children under six years of age with blood lead levels 15 mcg/dL or greater were Asian, more than double the percentage of Asian children citywide (11%). Children of South Asian

descent comprise the greatest percentage of Asian children with blood lead levels of 15 mcg/dL or greater (68%).

Children living in public housing had a lower risk for lead exposure than children citywide

Children living in public housing represent an estimated 6% of all New York City children less than six years old who are tested for lead poisoning, yet they represent just 3% of children with blood lead levels at or above 5 mcg/dL. This proportion indicates that children living in New York City Housing Authority (NYCHA) housing have, on average, a lower risk of lead exposure than expected for New York City children. This difference in risk is likely because housing stock throughout the city is older than housing maintained by NYCHA. Among children tested for lead poisoning citywide in which the age of the housing is known, 64% lived in homes built prior to 1950, while only 19% of children in NYCHA housing lived in homes built prior to 1950, when the use of lead-based paint was much more common.

- In 2017, of the more than 18,000 children younger than six living in NYCHA housing and tested for lead poisoning, 131 children had blood lead levels at or above the national reference level of 5 mcg/dL, a similar number as in the past two years. This number has declined 69% since 2010, with an average annual rate of decline of 14%.
- In 2017, the rate of children less than six years old living in NYCHA housing with blood lead levels at or above the national reference level of 5 mcg/dL was 7.1 per 1,000 children tested, less than half the citywide rate. This rate declined 3% since 2016.



Section II: Blood Lead Levels among children under 18 years old

Figure 5. The number and rate of children under 18 years old with blood lead levels at or above 5 mcg/dL, by year and housing type, New York City 2010-2017

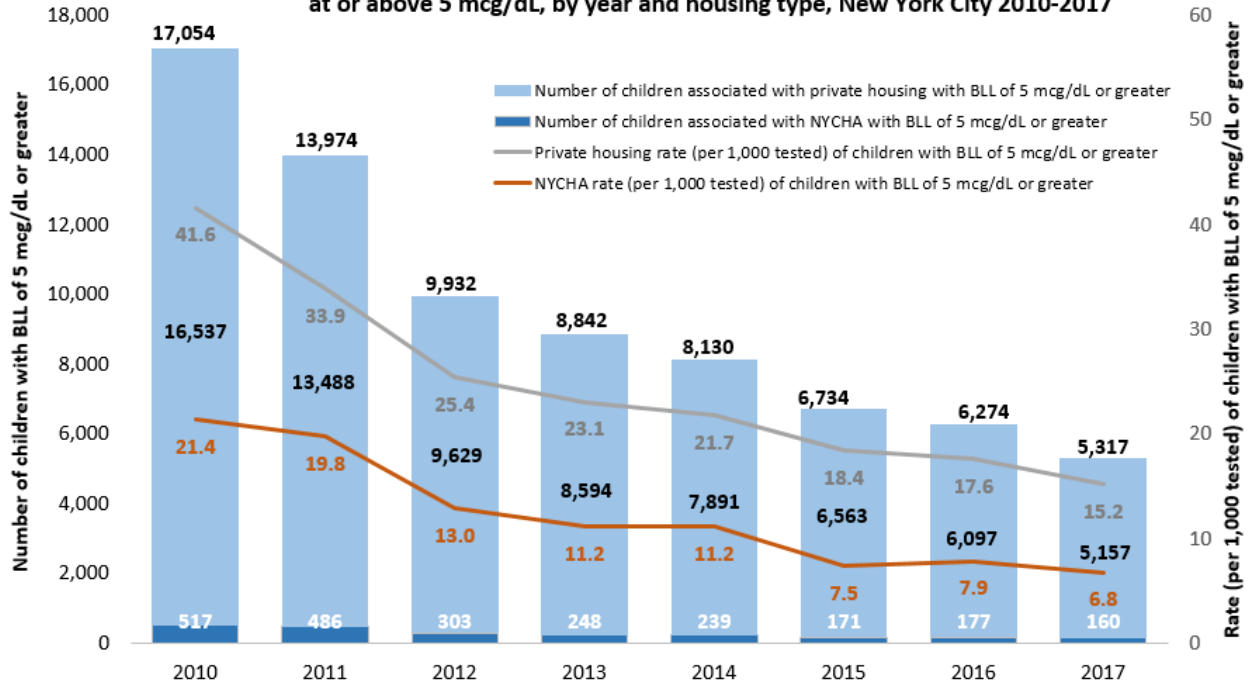
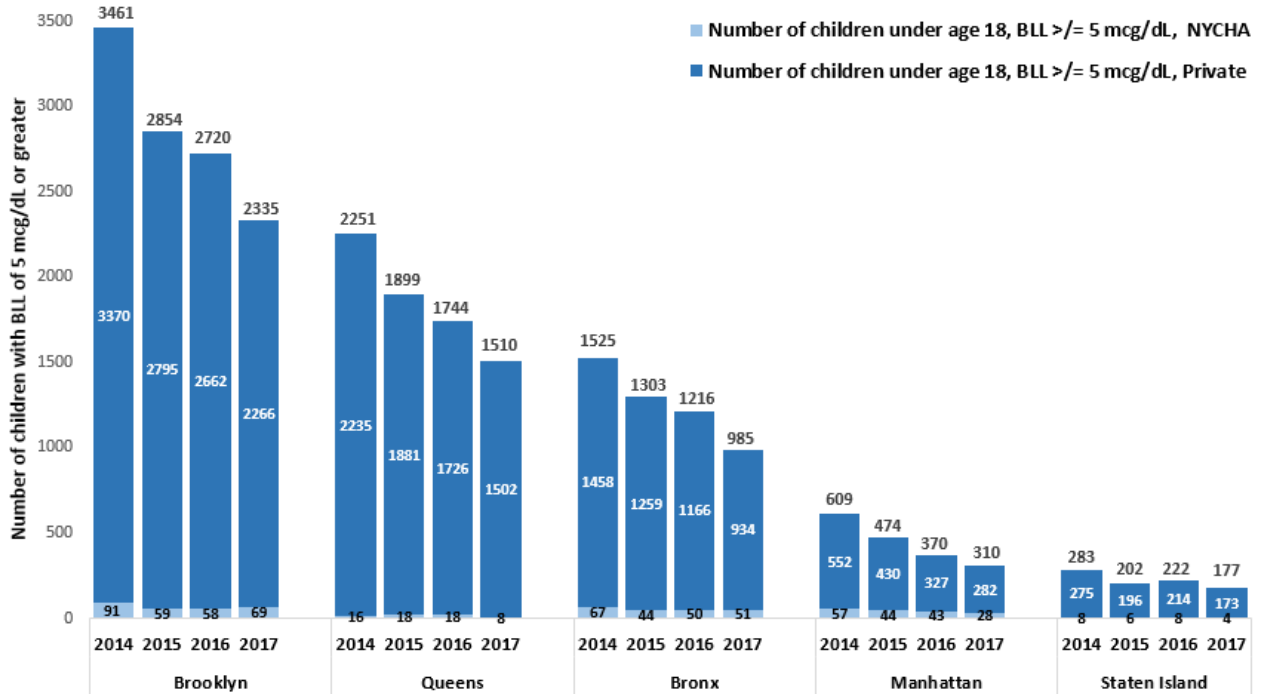


Figure 6. Number of children under age 18 with blood lead levels (BLL) at or above the CDC reference level (5 mcg/dL) by borough and type of residence, New York City 2014 - June 2017



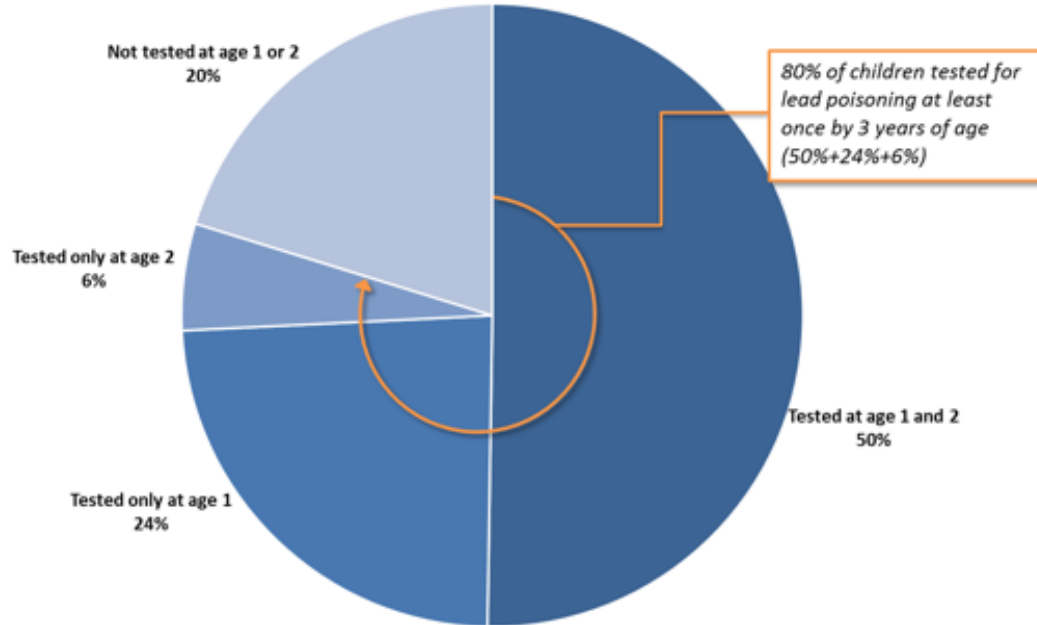
Section III: Blood Lead Testing

Early identification of children with elevated blood lead levels is critical to prevent further exposures as quickly as possible. Since most children with elevated blood lead levels have no symptoms, blood lead testing is the most efficient and effective way to identify these children. In New York State, health care providers are required by law to test all children at or around age one and age two, and to annually assess children and test those at risk of lead poisoning starting at age six months up to age six.

Most children were tested for lead poisoning at least once before age three

- In 2017, an estimated 80% of New York City children turning three years of age were tested for lead poisoning at least once. Yet, only about half (50%) of them were tested at or around both age one and age two, as required by New York State law.

Figure 7. Most (80%) New York City children tested for lead poisoning at least once before age three



Source: New York City Department of Health and Mental Hygiene Childhood Blood Lead Registry and Office of Vital Statistics

Section IV: Strategies for Continued Progress

New York City has made great progress in reducing childhood lead poisoning. Between 2005 and 2017, there was an almost 90 percent decline in the number of children younger than six years of age with a blood lead level of 5 mcg/dL. In that same period, the number of children under six newly identified with blood lead levels of 10 mcg/dL or greater fell by 75%. This success is the result of strong policies and a proactive and comprehensive approach to lead poisoning prevention, including home inspections by DOHMH. Living in older, poorly maintained housing with lead-based paint continues to be the most common source of lead exposure among New York City children.

As such, efforts are targeted to those communities most at risk. Prevention strategies include:

- Eliminating or reducing lead-based paint hazards and other sources of lead in homes and communities through investigation, enforcement, training, and technical assistance.
- Promoting blood lead testing for children, pregnant women, and newborns through outreach to families, health care providers, and Medicaid Managed Care organizations.
- Providing care coordination services to children with elevated blood lead levels as well as lead poisoned pregnant women and their newborns.
- Building partnerships with community, social service, and faith-based organizations; home visiting programs; weatherization groups; neighborhood housing groups; medical providers; and agencies concerned with child and environmental health.
- Addressing other home-based health issues during lead poisoning prevention efforts, such as reducing home asthma triggers and safety hazards.

Mayor, Speaker and Health Commissioner announce dramatically expanded home inspection program

During the period of this report, DOHMH conducted home inspections for: (1) children up to 18 with a blood lead level of 15 mcg/dL or greater; (2) children under age six with a blood lead level of 10 mcg/dL or greater; and (3) children under 16 months of age with a blood lead level of 8 mcg/dL or greater. For children with a blood lead level of 5-14 mcg/dL that were not captured by this inspection protocol, DOHMH sent letters to families and medical providers of children, emphasizing the importance of timely follow-up testing and good nutrition. The letters included educational materials, including a brochure on tenant rights under Local Law 1 of 2004, and suggested actions that parents can take to protect their children from exposure to lead, including to call a landlord or 311 about peeling paint.

On July 1, 2018, Mayor De Blasio, Speaker Johnson and Health Commissioner Bassett announced that DOHMH would conduct home inspections for all children under 18 years old with blood lead levels of 5 mcg/dL and above. This change sets a single threshold for environmental investigation for all New York City children and will enable DOHMH to dramatically expand its work to reach the thousands of children with elevated blood lead levels. DOHMH began implementing the change immediately and will be expanding in phases over the course of months.

This report and more information about childhood lead poisoning are available through the NYC DOHMH website at: <http://www1.nyc.gov/site/doh/data/health-tools/childhood-lead-poisoning.page>

Additional data on childhood lead exposure are also available through the NYC DOHMH Environment and Health Data Portal at <http://www1.nyc.gov/site/doh/data/health-tools/environmental-public-health-tracking-program.page>