



**Report to the New York City Council on
Progress in Preventing Elevated Blood Lead Levels in New York City**

**Submitted by New York City Department of Health & Mental Hygiene
September 30, 2019**

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 City's progress toward reducing elevated blood lead levels among children 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 four sections:

- *Section I* presents data on New York City children under six years of age with elevated blood lead levels at or above 5 micrograms per deciliter (mcg/dL). Young children are at greatest risk for elevated blood lead levels.
- *Section II* presents data on elevated blood lead levels for children under 18 years of age including by type of housing (public or private), and by borough.
- *Section III* presents data on blood lead testing for children turning 3 years of age in 2018. New York State law requires health care providers to test all children at or around age 1 and age 2. Most New York City children are tested at least once before age 3.
- *Section IV* outlines strategies for continued progress in the prevention of children with elevated blood lead levels. More protective public health laws have been proposed and promulgated, and initiatives intended to prevent elevated blood lead levels have been expanded since this report was last issued.

DOHMH publishes additional data on childhood lead exposure in quarterly reports and on the interactive Environment and Health Data Portal. Both can be found on nyc.gov/health and nyc.gov/leadfreenyc.

Important Definitions in This Report

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

Reference level is a blood lead level of 5 mcg/dL. New York City's Local Law 66, defines it as the action level triggering environmental investigations.

Section I: Preventing Elevated Blood Lead Levels in New York City

Lead exposure in childhood can lead to serious, long-term consequences, including learning difficulties and behavioral problems. Young children are especially at risk because they explore their environment by placing non-food items in their mouths, potentially exposing them to lead in dust and paint. Lead-based paint hazards remain the most commonly identified exposure source for New York City children with elevated blood lead levels. The number and rate of children whose blood lead levels are at or exceed 5 micrograms per deciliter (mcg/dL) are at a historic low and continue to decline.

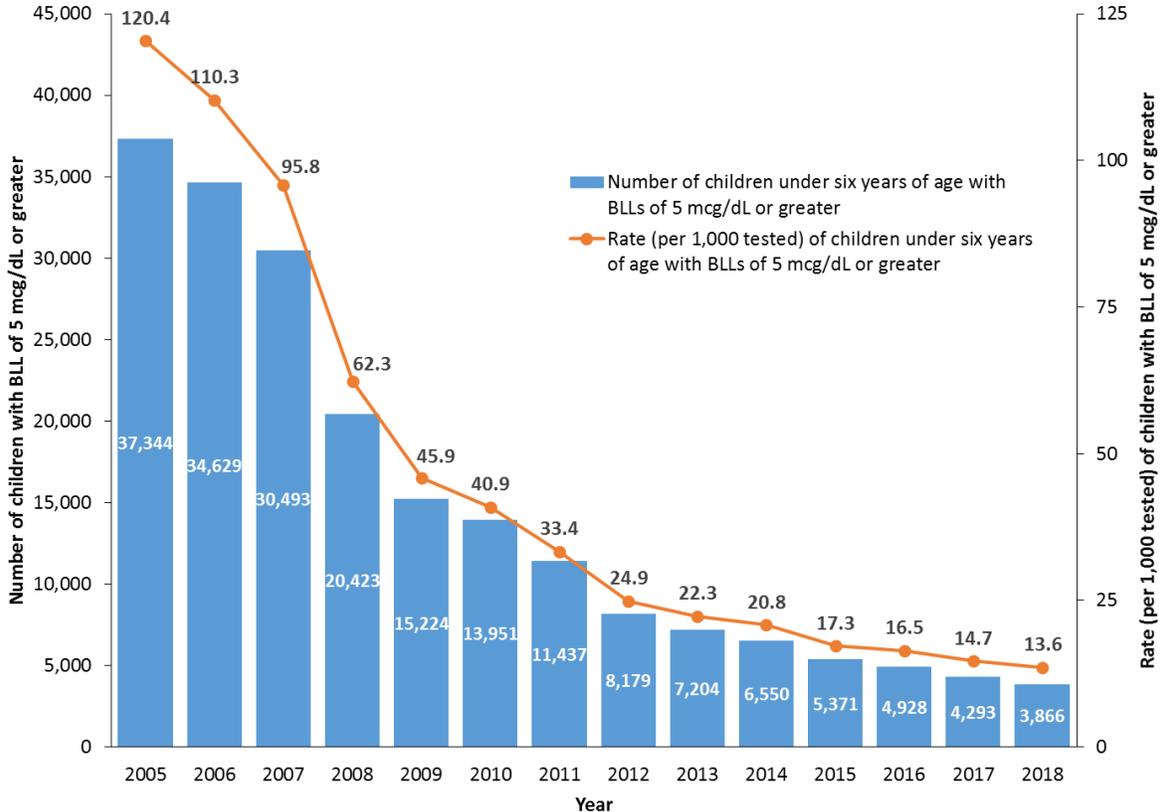
Since 2005, there has been a 90% decline in the number of children under six years old with a blood lead level at or above 5 mcg/dL.

Children under age six with blood lead levels of 5mcg/dL or greater

Since July 2018, DOHMH has been conducting environmental investigations for all children with an elevated blood lead level at or above 5 mcg/dL.

In 2018, 3,866 New York City children under six years of age were identified with blood lead levels of 5 mcg/dL or greater. This represents a 7% decline from 2017 when there were 4,261 children with blood lead levels of 5 mcg/dL or greater, and a 90% 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 under six year of age with blood lead levels (BLL) at or above the national reference level (5mcg/dL)



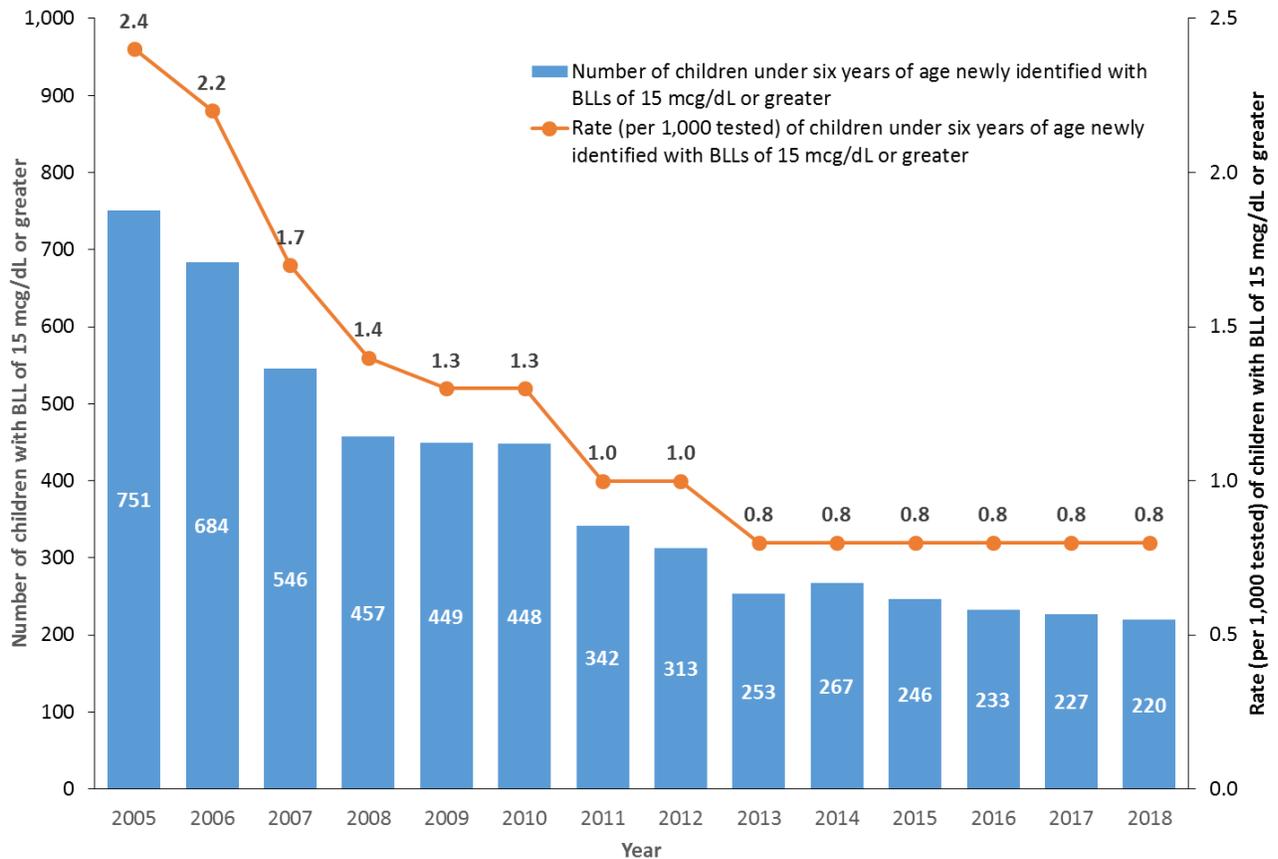
Source: New York City Department of Health and Mental Hygiene Childhood Blood Lead Registry.

Children under 6 with blood lead levels of 15 mcg/dL or higher

Prior to June 2019, Local Law 1 of 2004 required DOHMH to conduct environmental investigations for New York City children with an elevated blood lead level of 15 mcg/dL or greater

In 2018, 220 children younger than 6 years of age were newly identified with blood lead levels of 15 mcg/dL or greater. This represents a decrease of 3% compared to 2017 when there were 227 children, and a decline of 71% compared to 2005 when there were 751 children.

Figure 2. The number and rate of New York City children under six years of age newly identified with blood lead levels (BLL) of 15mcg/dL or greater



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

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

While the number of children with blood lead levels of 5 mcg/dL or greater has decreased over time across racial and ethnic groups and neighborhoods, the burden of lead exposure remains high for children of color and children living in high-poverty neighborhoods.

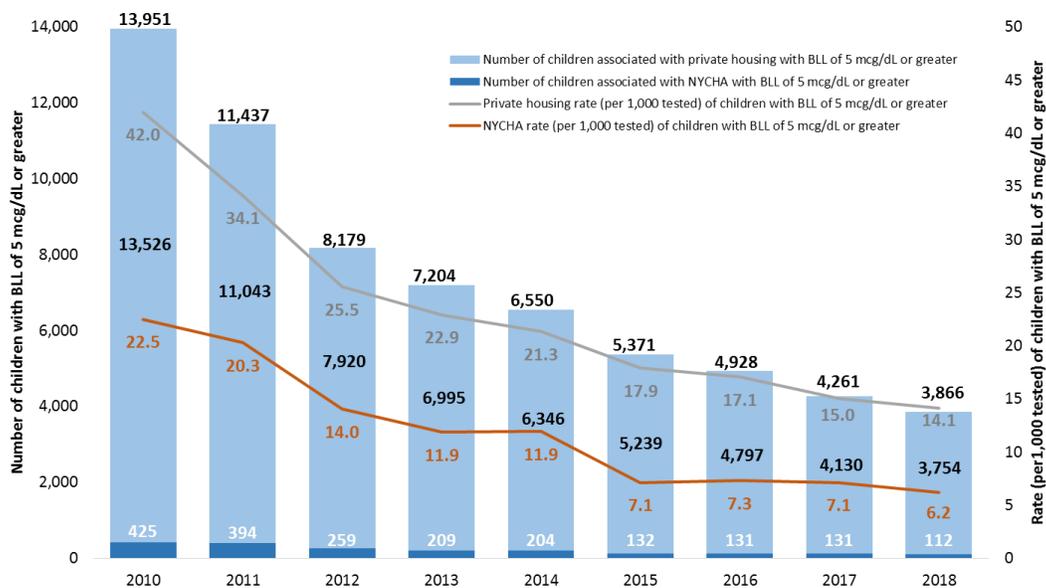
- In 2018, 66% of children under six years of age with blood lead levels of 5 mcg/dL or greater were from high poverty neighborhoods (defined as zip codes with 20% or more of the population living below poverty level).
- The rate of children under six years of age with blood lead levels of 5 mcg/dL or greater in high poverty areas was 15.3 per 1,000 children tested, almost twice the rate in the wealthiest areas (8.9 per 1,000 children tested).
- In 2018, Asian, Black, and Latinx children represented 84% of children under age six with blood lead levels of 15 mcg/dL or greater.

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

Children living in homes maintained by New York City Housing Authority (NYCHA) have, on average, a lower risk of lead exposure than those living in private housing. This difference in risk of exposure is likely because housing stock throughout the city is older than housing maintained by NYCHA.

- In 2018, of the more than 18,000 children under six years of age living in NYCHA housing who were tested for lead, 112 had blood lead levels at or above 5 mcg/dL. This represents a decline of 15% compared to 2017 when there were 131 children, and a decline of 74% since 2010, when there were 425 children living in NYCHA housing with an elevated blood lead level at or above 5 mcg/dL.
- In 2018, the rate of children less than six years old living in NYCHA housing with blood lead levels at or above 5 mcg/dL was 6.2 per 1,000 children tested, less than half the citywide rate of 13.6 per 1,000 children tested. This rate has declined 13% since 2017.

Figure 3. The rate of children under six years of age with blood lead levels (BLL) of 5 mcg/dL or greater living in NYCHA housing is consistently lower than the citywide rate



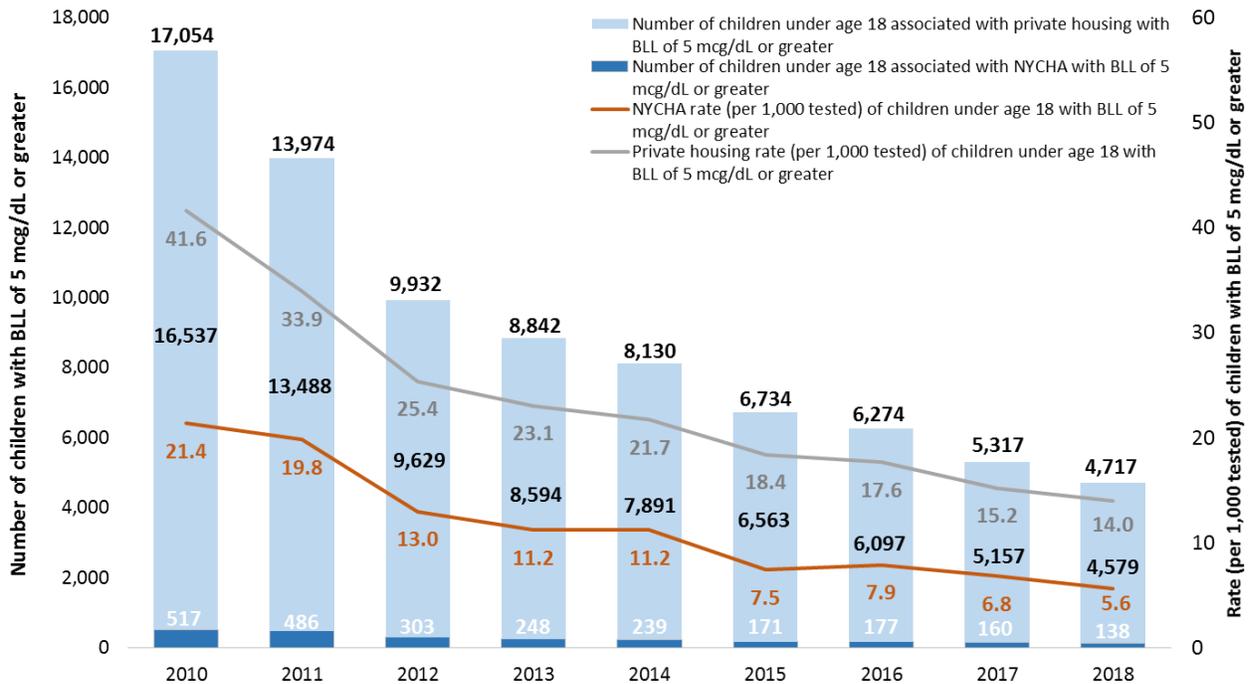
Source: New York City Department of Health and Mental Hygiene Childhood Lead Registry.

Section II: Blood Lead Levels Among Children Under 18 Years Old

Blood lead levels among children under age 18 follow similar pattern as blood lead levels for younger children.

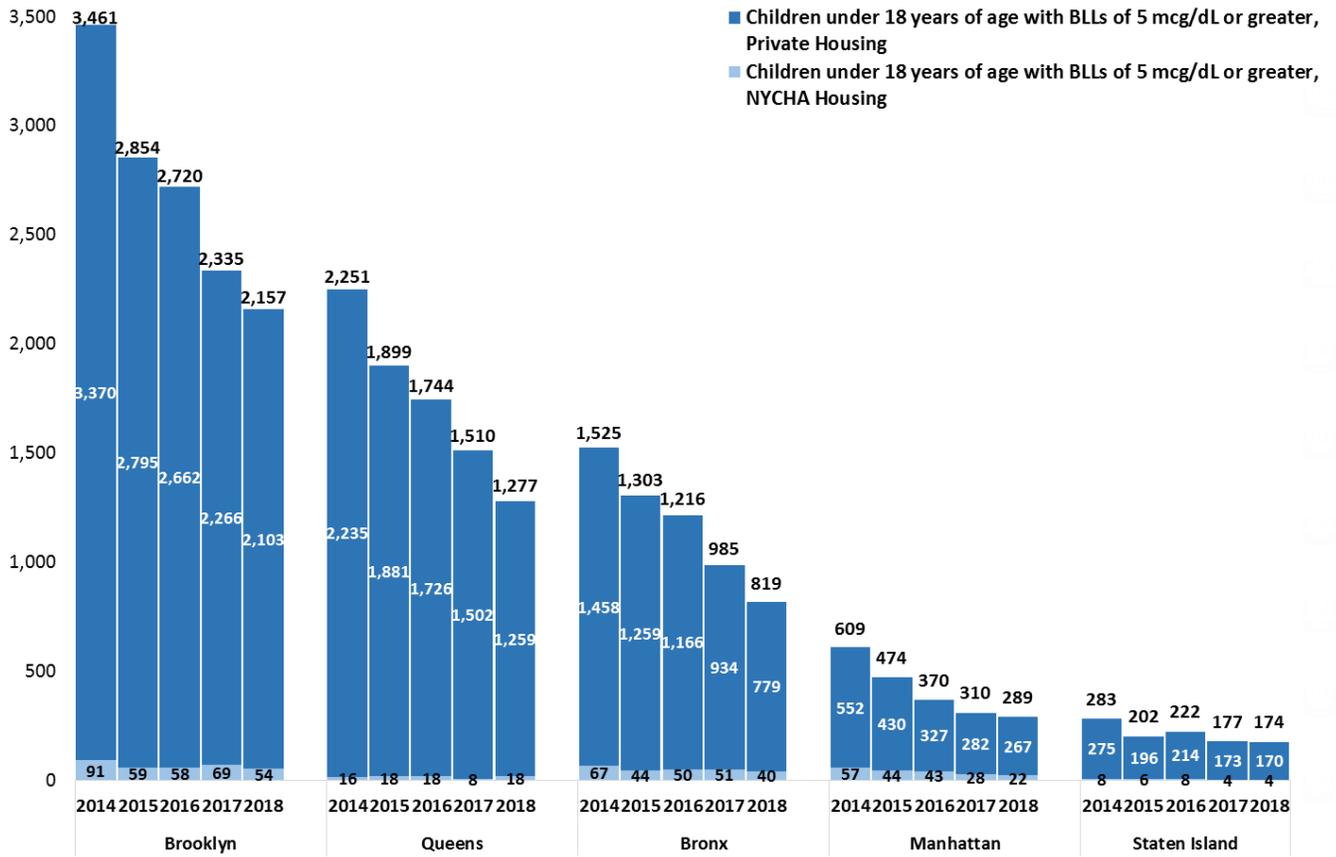
- In 2018, the rate of children under age 18 living in NYCHA housing with blood lead levels at or above 5 mcg/dL was 5.6 per 1,000 children tested, less than half the citywide rate (13.4 per 1,000 children tested).

Figure 4. The rate of children under 18 years of age with blood lead levels (BLL) of 5 mcg/dL or greater living in NYCHA housing is consistently lower than the citywide rate



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

Figure 5. Number of children under 18 years of age with blood lead levels (BLL) of 5 mcg/dL by borough and type of residence, New York City 2014-2018



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

- Between 2014 and 2018 the number of children under age 18 with blood lead levels of 5 mcg/dL has declined across all boroughs. These declines ranged from 38% in Brooklyn to 52% in Manhattan.

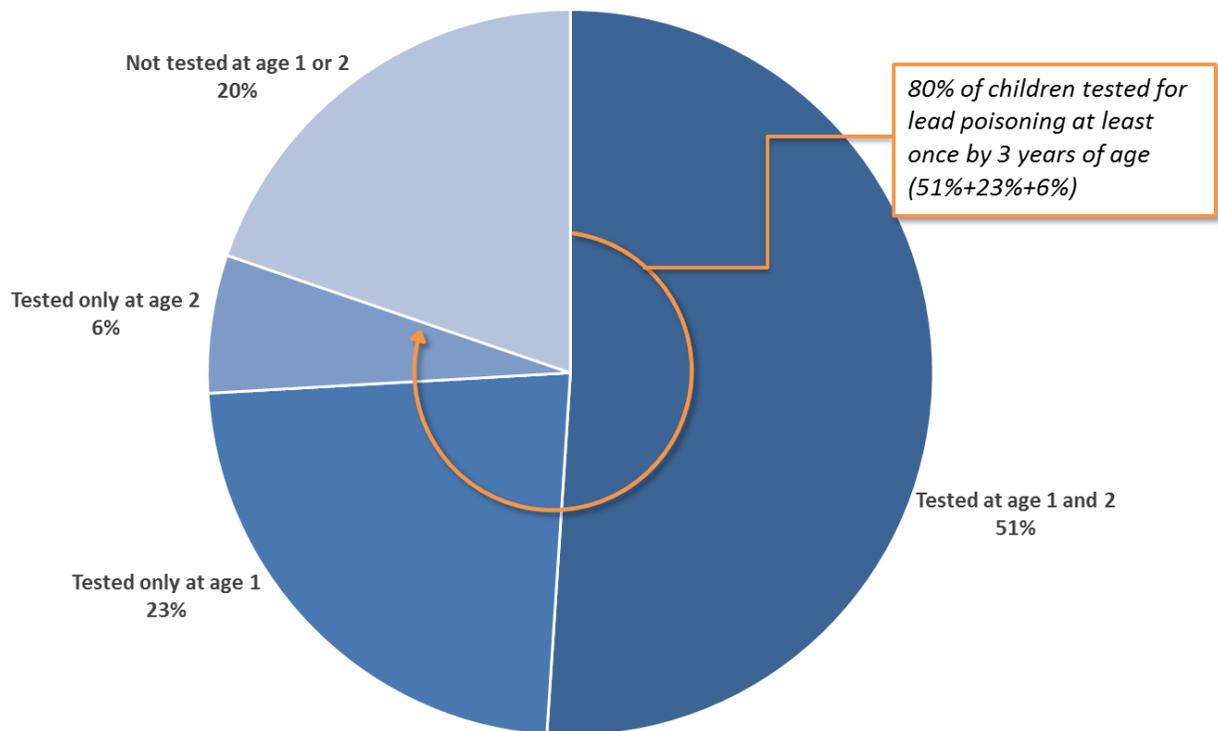
Section III: Blood Lead Testing

Early identification of lead-exposed children 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 only way to identify them. In New York State, health care providers are required by law to test all children at or around age 1 year and age 2 year, and to annually assess and test those at risk of lead poisoning starting at age six months up to age six years.

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

- In 2018, an estimated 80% of New York City children turning 3 years of age were tested for lead poisoning at least once. About half (51%) of them were tested at or around age 1 and age 2, as required by New York State law.

Figure 6. Most (80%) New York City children are 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 elevated blood levels in children. Between 2005 and 2018, there was a 90 percent decline in the number of children younger than six years of age with a blood lead level of 5 mcg/dL. This success is the result of a proactive and comprehensive approach to elevated blood lead level prevention. Nevertheless, living in older, poorly maintained housing where lead-based paint exists continues to be the most common risk factor for lead exposure among NYC children.

DOHMH implements targeted interventions for 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.
- Increasing awareness about risk factors for lead exposure by targeting culturally appropriate advertising campaigns to communities at risk.
- Providing care coordination services to children with an elevated blood lead level as well as pregnant women with an elevated blood lead level 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 prevention efforts, such as reducing home asthma triggers and safety hazards.

This report and more information about childhood lead levels are available through the NYC DOHMH website at: www.nyc.gov/lead

Additional data on childhood lead exposure are also available through the NYC DOHMH Environment and Health Data Portal at: www.nyc.gov/health/trackingportal