

Childhood Lead Exposure Indicators, Measures, and Related Terms: New York City Environment and Health Data Portal

Data Portal Indicator	Data Portal Measure	How Measure is Calculated	Rationale for Measure
Children tested for lead by age three years	The number and percent of children tested for lead poisoning	Annual birth cohort data from the NYC Bureau of Vital Statistics are matched to the NYC Healthy Homes Program childhood blood lead registry to determine the number of children who have had a blood lead test before turning three years of age. The data are limited to children born in NYC to women who were NYC residents at time of child's birth. For example, data for 2014 represent children born in 2011 in NYC to NYC resident mothers who received a blood lead test before turning three years old. Borough and neighborhood data are reported based on mother's residence at time of child's birth.	Early identification of lead-poisoned children is important in order to identify and prevent further exposures 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 New York State, health care providers are required by law to test all children at or around age 1 and age 2 years. To best estimate the percent of children who received required tests, Childhood lead registry data are matched at the individual level to NYC birth data. However, this measure cannot account for children born in NYC who moved out of NYC before receiving a lead test. Furthermore, this measure does not include data on children who were born elsewhere but have since moved into the city and were tested for lead poisoning before age 3 years.
Children younger than 6 years of age with elevated blood lead levels (BLL)	Number and rate of children under 6 years of age with blood lead levels of 5 mcg/dL or greater	Children under 6 years of age tested for lead poisoning who had a blood lead level of 5 mcg/dL or greater. The rates are expressed per 1,000 children under 6 who were tested for lead poisoning. Children may be tested for lead poisoning multiple times in a given year but are only counted once based on the highest confirmed test result during that year. If the child does not have a confirmed test in a given year, the child's blood lead level is based on the highest unconfirmed test.	The measure describes the total current burden of blood lead levels at or above 5 mcg/dL among children under 6 years of age. All children tested in a given year are included, regardless of any tests they might have had in previous years.
	Number and rate of children under 6 years of age with blood lead levels of 10 mcg/dL or greater	Children under 6 years of age tested for lead poisoning who had a blood lead level of 10 mcg/dL or greater. The rates are expressed per 1,000 children under 6 who were tested for lead poisoning. Children may be tested multiple times in a given year but are only counted once based on the highest confirmed test result during that year. If the child does not have a confirmed test in a given year, the child's blood lead level is based on the highest unconfirmed test.	The measure describes the total current burden of blood lead levels at or above 10 mcg/dL among children under 6 years of age. All children tested in a given year are included, regardless of any tests they might have had in previous years.
	Number and rate of children under 6 years of age with blood lead levels of 15 mcg/dL or greater	Children under 6 years of age tested for lead poisoning who had a blood lead level of 15 mcg/dL or greater. The rates are expressed per 1,000 children under 6 who were tested for lead poisoning. Children may be tested multiple times in a given year but are only counted once based on the highest confirmed test result during that year. If the child does not have a confirmed test in a given year, the child's blood lead level is based on the highest unconfirmed test.	The measure describes the total current burden of blood lead levels at or above 15 mcg/dL among children under 6 years of age. All children tested in a given year are included, regardless of any tests they might have had in previous years.
	Number of children tested	Children under 6 years of age tested for lead poisoning in a given year. Children may be tested multiple times in a given year but are only counted once. All children are counted regardless of blood specimen type (confirmed or unconfirmed).	This measure represents the total number of children younger than 6 years of age who were tested in a given year. This measure differs from the total number of children tested by age 3 (see definition above).

Last updated: June 2016

Childhood Lead Exposure Related Measures Used by NYC Department of Health and Mental Hygiene

Name	Measure	How Measure is Calculated	Rationale
Lead Poisoning	Number and rate of children under 6 years of age who are newly identified with blood lead levels of 10 mcg/dL or greater	Children under 6 years of age tested for lead poisoning who had a first occurrence of blood lead level of 10 mcg/dL or greater in a given year. The rates are expressed per 1,000 children under age 6 years tested for lead poisoning in a given year. This measure is an incidence measure and is restricted to children who have no previous history of blood lead level of 10 mcg/dL or higher in any prior year. This measure includes children with both confirmed and unconfirmed blood lead levels of 10 mcg/dL or higher.	This measure represents new cases of lead poisoning as defined by the New York City Health Code. Lead poisoning is reportable condition in New York City and is defined as a blood lead level of 10 mcg/dL or greater. This measure is currently reported annually by the NYC Healthy Homes Program to the City Council in compliance with Local Law 1.
Environmental Intervention Blood Lead Level	Number and rate of children under 18 years of age who are newly identified with confirmed blood lead levels of 15 mcg/dL or greater	Children under 18 years of age tested for lead poisoning who had a first occurrence of blood lead level of 15 mcg/dL or greater. The rates are expressed per 1,000 children under 18 who were tested for lead poisoning. This measure is an incidence measure and is restricted to children who have no previous history of blood lead levels of 15 mcg/dL or higher in any prior year. It includes only children with confirmed blood lead tests.	This measure represents new cases of lead poisoning for whom environmental intervention is mandated by Law. This measure is currently reported annually by the NYC Healthy Homes Program to the City Council in compliance with Local Law 1.

Definition of Terms:

Annual Birth Cohort

Children born in New York City in a given year, based on birth data records maintained by the NYC Department of Health and Mental Hygiene, Bureau of Vital Statistics.

Childhood Blood Lead Registry

A collection of data on all blood lead tests performed on children under 18 years of age, maintained by the NYC Department of Health and Mental Hygiene, Healthy Homes Program.

Test

Any blood draw (capillary, venous or unknown sample type) that produces a quantifiable lead level result and is analyzed by a Clinical Laboratory Improvement Amendments (CLIA)-certified facility or an approved portable device. A blood lead test may be collected for screening, confirmation, or follow-up.

Confirmed Test

A venous blood specimen that produces a quantifiable lead level result and is analyzed by a Clinical Laboratory Improvement Amendments (CLIA)-certified facility. A confirmed blood lead test may be collected for screening, confirmation of a capillary or an unknown test type, or follow-up.

Unconfirmed Test

A single capillary or unknown type of blood specimen.

Reference Level

The blood lead level set by the United States [Centers for Disease Control and Prevention](#) (CDC) to identify children with elevated blood lead levels. The current CDC reference level is 5 mcg/dL based on the 97.5 percentile of the 2007-2010 National Health and Nutrition Examination Survey's child blood lead level distribution. The measure that closely corresponds to the CDC's reference level on the Environment & Health Data Portal is number and rate of children under 6 years of age with blood lead levels of 5 mcg/dL or greater (see table above).