

- In 1996, the U.S. Centers for Disease Control and Prevention issued guidance for public health officials on screening of young children for lead poisoning. The recommendations included the development of a statewide plan, and in the absence of a plan or other formal guidance, that universal screening should be carried out. Specifically, in jurisdictions that have 27% of its housing built before 1950. Source: Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials, CDC, 1996, https://stacks.cdc.gov/view/cdc/13364/cdc_13364_DS1.pdf
- New Jersey has some of the oldest housing stock in the United States with 77% built before *1980 including 30% built before 1950. Fifty-eight percent of all pre-1980 housing is concentrated in one-third of NJ's counties--Bergen, Essex, Hudson, Middlesex, Union, Monmouth and Camden. *Source: Census—lead-based paint was regulated for residential use in 1978 and in NJ in 1971.
- In 1996, New Jersey (N.J.A.C. 8:51A) began to require all children at both one and two years of age to be tested (universal screening) to determine their blood lead level (BLL), children between 3 and 5 years that have no screening history, and any child less than 6 years of age wherein a risk assessment indicates a new exposure. This requirement continues today and was readopted November 2018.
- In 1999, NJ (N.J.A.C. 8:44) began to require that all blood lead level results on children less than 17 years of age be reported to the NJ Department of Health. The NJ DOH in turn sends notifications to local public health agencies for intervention (case management and environmental inspections).
- In State Fiscal Year 2016 (Source: NJ's Childhood Lead Information Database [LeadTrax]), the number of children tested for lead was 214,741.
 - 44% of the children tested were between six and 26 months of age (which includes the universal screening ages)
 - 66% had at least one blood lead test in their lifetime by the age of 26 months.
 - 75% had at least one blood lead test in their lifetime by age three years.
 - 99% had at least one blood lead test in their lifetime by age six years.
 - 0.47% of all children (less than 17 years of age) screened in SFY 2016 had a blood lead level (BLL) at or above 10 µg/dL.
 - 1.3% of children aged 1-5 years were disproportionately affected having a BLL at or above 10 µg/dL.
- The City of Newark comprises 13% of the total number of children, less than 6 years old, with an elevated BLL in NJ, although it is home to only 3.8% of the entire State's population of children in that age group.
- Healthy NJ 2020 objectives mirror Healthy People 2020 objectives. NJ has made great strides in not only meeting, but surpassing its targets.
 - Reduce blood lead levels in children aged one to five years of age.
 - NJ Baseline: 8.0 µg/dL (Concentration level of lead in blood samples at which 97.5 percent of the population aged 1-5 years is measured level in 2005–08.)
 - NJ Target: 7.2 µg/dL
 - NJ FY 16: 5.0 µg/dL
 - US Baseline: 5.8 µg/dL (Concentration level of lead in blood samples at which 97.5 percent of the population aged 1-5 years is measured level in 2005–08.)
 - US Target: 5.2 µg/dL
 - Reduce mean blood lead levels in children aged one to five years to an average blood lead level of < 2.9 µg/dL.
 - NJ Baseline: 3.2 µg/dL in 2005-2008

NJ Target: 2.9 µg/dL

NJ FY 16: 1.7 µg/dL

- US Baseline: 1.8 µg/dL in 2005-2008

US Target: 1.6 µg/dL

- A wide variety of factors contribute to children's lead exposures specifically older housing and increasingly in NJ cultural practices as a result of its population growing more racially and ethnically diverse. (Census 2010)
 - The percentage of foreign-born persons (NJ: 17.5%; US: 11.1%) and the percentage of residents 5 years and older who spoke a language other than English at home (NJ: 25.5%; US: 17.9%) were substantially more than the entirety of the United States.
 - Hispanics, NJ's dominant minority group, make up nearly 17 % of New Jersey's 8.8 million residents. Union City (Hudson Co.) boasts the state's highest percentage of Hispanic residents (84.7%) while Newark (Essex Co.), is home to the largest number of Hispanics.
 - The Asian population, the third highest by percentage in the United States, comprises approximately 8% of the state's population.
 - Cultural practices that use non-paint sources of lead have been identified as contributing factors in several of NJ's elevated blood lead levels cases (e.g. Sindoor, spices—in particular turmeric, Ayurvedic medications, herbal supplements, Mexican candies, pottery, kohl). (NJ DOH, 2018)
 - Non-housing and non-cultural practices that contribute to lead exposures include NJ's industrial and agricultural heritage. The historic use of leaded gasoline in on-road vehicles and lead arsenate in agricultural processes continue to contribute to environmental contamination.
 - According to the American Housing Survey, in the Philadelphia, Pennsylvania-Southern New Jersey (PA-NJ) Metropolitan Statistical Area (MSA), 27.8% of all housing units were renter-occupied. Owner-occupied units were more likely than the U.S. average to have peeling paint and water leaks from the outside that contribute to deteriorating paint.
 - According to the American Housing Survey, in the New York City, New York-Northern New Jersey (NY-NJ) Metropolitan Statistical Area (MSA), 65.7% of all housing units were renter-occupied. Owner-occupied units were more likely than the U.S. average to have severe physical problems.
 - Based on multiple dwellings inspection data collected by the Department of Community Affairs (DCA), Division of Code Enforcement, the highest percentage of code violations were centered in 15 municipalities: Newark, Jersey City, Elizabeth, Paterson, East Orange, Hoboken, Union City, Irvington, Edison, West New York, Hackensack and Atlantic City, Fort Lee, Bayonne and city of Passaic. These same municipalities also comprised the highest percentages of violations among all units with violations within the state. This includes the presence of lead-based paint hazards.
 - The primary source of lead exposure for children in New Jersey remains to be their homes. The highest numbers of children with elevated blood lead levels in New Jersey are in the following counties: Essex, Hudson, Mercer, Passaic, Union, Middlesex, Monmouth, Camden, and Cumberland. Those counties account for more than 70% of the pre-1980 housing stock.

- “Children younger than five years are at greater risk for elevated blood lead levels and lead toxicity because of increased hand-to-mouth activity, increased lead absorption from the gastrointestinal tract, and the greater vulnerability of the developing central nervous system. Risk factors for increased blood lead levels in children [and adults] include minority race or ethnicity; urban residence; low income; low educational attainment; older housing (pre-1950); recent or ongoing home renovation or remodeling; pica exposure; use of ethnic remedies or certain cosmetics; exposure to lead-glazed pottery; occupational and para-occupational exposures; and recent immigration.” “Community-based interventions for the primary prevention of lead exposure are likely to be more effective and may be more cost-effective than office-based screening, treatment, and counseling. Relocating children who do not yet have elevated blood lead levels but who live in settings with high lead exposure may be especially helpful. Community, regional, and national environmental lead hazard reduction efforts, such as reducing lead in industrial emissions, gasoline, and cans, have been proven highly effective in reducing population blood lead levels.” Source: U.S. Preventive Services Task Force, Screening for Elevated Blood Lead Levels in Children and Pregnant Women: Recommendation Statement, *Am Fam Physician*. 2007 Sep 1;76(5):691-694. <http://www.aafp.org/afp/2007/0901/p691.html>

 - NJ’s population is disproportionately at risk for the factors listed in this report. NJ supports primary prevention efforts through its three Regional Lead and Healthy Homes Coalitions, Interagency Task Force on the Prevention of Lead Poisoning, and through various state department regulatory authorities. Both the Coalitions and Task Force bring together federal, state, and local governmental agencies as well as local key stakeholders. Despite these efforts NJ continues to see children with elevated blood lead levels. Screening provides a means of evaluation to determine if NJ’s combined efforts are having a meaningful impact. In other words---are we doing collectively doing the right things, in the right places, in the right amount- to address deficiencies in older housing, in a culturally competent manner, using data to target interventions, developing policies, and enforcing codes. The cost of screening, regardless of setting (e.g. in-office or at a clinical laboratory), and related counseling are cost-effective evaluation measures.
- In December 2009, Peter Muennig of Columbia University and Pichchenda Bao of the City College of New York issued a report on the social costs of childhood lead exposure in New Jersey commissioned by the New Jersey Department of the Public Advocate. The study found that childhood lead exposure remains a significant problem in New Jersey, with the majority of children in New Jersey having a blood lead level greater than or equal to 1 µg/dL. In addition, reducing blood lead levels among all New Jersey children aged 0 to 6 years today to less than 1 µg/dL would both reduce future crime and increase on-time high school graduation rates leading to large reductions in future costs to New Jersey government and to society at large. Since these costs would be incurred in the future, and are worth less in today’s dollars, the future savings were “discounted” to present-day dollars. What the researchers found was that when the standard 3% discount rate was applied, the net societal benefits arising from these improvements in high school graduation rates and reductions in crime amounted to \$31,000 per child resulting in an overall savings of approximately \$27 billion across all children aged 0 to 6 years.

- NJ's strategic and response plans address policy recommendations in the Trust for America's Health policy brief. Examples include:
 - Providing technical assistance and professional guidance to municipal water suppliers, public health officials and elected leader when elevated levels of lead are found in drinking water.
 - State financial assistance is provided to remediate lead hazards in housing.
 - Renovation, Repair and Painting Rule compliance information is promoted to contractors.
 - As indicated in a case finding, sources of lead from food and consumer products are referred to the U.S. FDA and Consumer Product Safety Commission for investigation.
 - The NJ Department of Environmental Protection has rules in place to monitor air emissions and abate contaminated soils.
 - The NJ Department of Health provides \$12M to local health departments to increase access to screening of uninsured and underinsured children and to provide case management and environmental investigations for any child found to have a blood lead level of venous 5 ug/dL or greater. Public health interventions include referring affected children for developmental assessments and subsequent enrollment in enrichment opportunities through quality child care and early childhood education services.
 - Through the Environmental Public Health Tracking Network state data is mapped to identify "hot spots" for state internal planning and evaluation.
 - All of these efforts combine to identify best practices for NJ, address challenges, and enhance collaborations.
 - Sources: Recommendations to Prevent and Mitigate the Effects of Lead Poisoning, Trust for America's Health, 2017, www.healthyamericans.org; NJ DOH, 2018