

Recommendation #1

Targeting the housing and housing problems that make children sick

A. Asthma, Injury, and Lead Make Boston's Children Sick

The specific childhood illnesses most commonly associated with unhealthy housing are asthma and other respiratory issues, unintentional injury, and lead poisoning. A review of Boston specific data reveals a continuing need to target efforts toward these environmental health issues. See Appendix C for more detailed health indicator data.

Asthma: Boston's asthma rates continue to be high – particularly among young children. Boston's rates are almost twice the state rate. Boston's emergency room visit rates for asthma are also highest among children under age 5.

	Hospitalizations rate per 100,000 age 0-4 per (2003-2005 discharge data)	Emergency Room visits per 100,000 age 0-4 (2005 ER data)
Boston	1207.2	3045
Massachusetts	645.5	1764

(Source: Massachusetts Department of Public Health CHIP Program)

Injury: Boston's unintentional injury rates among young children are higher than the state rate (102.83 per 1,000), with housing related falls being comparable to asthma for emergency room visits. Falls are the number one cause of unintentional fatal and non-fatal injury ER visits and hospital stays among Boston children. For young children, falls occur more than twice as often as the second leading cause of injury.

	ED/ER visits per 1,000	Hospitalization
Unintentional injury 0-5 general	108.01	4.47
Unintentional injury 0-5 falls	37.27	1.98
Unintentional injuries 0-5 housing related falls	26.09	1.28
Asthma 0-4	28	6.8

(Source: Massachusetts Department of Public Health Injury Surveillance Program)

Lead: Boston's lead poisoning rates have shown a significant decline, yet Boston still ranks 8th in the state in risk for childhood lead poisoning. Boston's elevated lead rates are twice the state rate.

	Elevated Blood Leads (2006 data)
Boston	2%
Massachusetts	.84%
National	1.21%

(Source: U.S. Centers for Disease Control Surveillance Data)

B. Sick Children are Concentrated in Several Neighborhoods

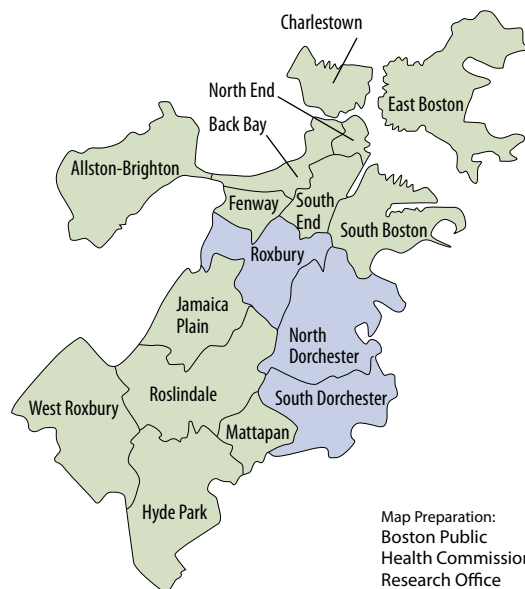
According to local health data, asthma, lead, and injury incidence in children overlap in just a handful of Boston neighborhoods – Roxbury, North Dorchester, and South Dorchester. These same neighborhoods also experience high emergency room visits and hospitalization rates, a clear indicator that that these neighborhoods are high priority areas for prevention efforts.

Although several Boston neighborhoods have high asthma hospitalization rates for children under the age of five, Roxbury’s rate is the highest. The rate for Roxbury is almost 50% higher than the rate for Boston overall.

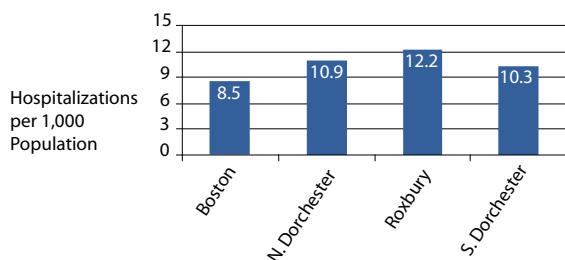
Similarly, the risk for childhood lead poisoning is not shared equally across neighborhoods. Elevated blood lead levels are highest in North Dorchester, with a rate almost double the overall Boston rate.

Roxbury and South End residents have the city’s highest emergency department visit rates. Those rates are nearly double the rate for the city overall. North Dorchester and South Dorchester follow, with rates well above the citywide rate. Emergency department visit rates also tend to be highest for children under age 10. Although data on type of ER visit by neighborhood was not available, we know that injury and asthma are among the top causes of ER visits for young Boston children.

Boston Neighborhoods

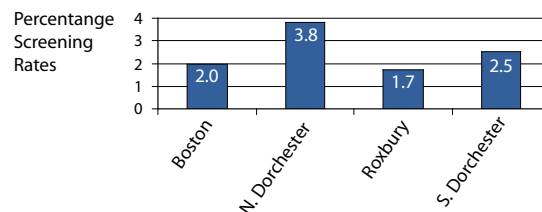


Asthma Hospitalizations for Children Under 5 By Neighborhood



Source: Health of Boston 2007

Children with EBL By Neighborhood, Percentage Screened Population



Source: Health of Boston 2007



C. Housing Condition Impacts Asthma, Injury, and Lead

Housing in poor condition is known to influence health. Lead poisoning is most frequently the result of elevated lead dust levels from deteriorated paint. Frequently the paint deterioration is related to either moisture or structural decay. Similarly, many falls are the result of structural defects such as broken stairs

and railings. Several housing conditions are known to exacerbate asthma. The National Cooperative Inner City Asthma Study Phase I found the asthma risk factors most present in urban families included cockroach allergen; high levels of tobacco smoking among family members and caretakers; and high indoor levels of nitrogen dioxide, a respiratory irritant produced by inadequately vented stoves and heating appliances. The National Academy of Science has concluded that damp indoor spaces also increase the risk of asthma attacks and respiratory issues. With the exception of smoking, the pest and indoor air quality issues are tied to core housing quality.

Targeting health and housing efforts toward poor condition housing in these three neighborhoods - Roxbury, North Dorchester, and South Dorchester - is critical to reaching the most at-risk families. Looking closely at the housing conditions in these neighborhoods alongside the health data will further illuminate the factors causing asthma, injury, and lead poisoning in these homes and allow for targeted repairs. Marketing core housing quality improvement programs to homeowners and landlords in high-risk neighborhoods will have multiplying effects on health.