

CASE EXAMPLE: ASTHMA IN ROXBURY

To illustrate how these different factors come together to affect health and how to think about racial and ethnic disparities in a particular neighborhood, we present the example of asthma in Roxbury. We chose Roxbury because it is an ethnically diverse, low-income community in Boston. We chose asthma because it is a chronic disease affecting both adults and children, its symptoms can be triggered by numerous irritants in the environment, and there are clear guidelines about how it should be treated.

Roxbury is disproportionately affected by asthma, especially among children. Between 1998 and 2002, Roxbury children under the age of five were nearly twice as likely to be hospitalized for asthma as children in all other neighborhoods of Boston (14.6 hospitalizations per 1,000 children in Roxbury, compared with 7.9 for the rest of Boston). Hispanic and Black children were 50% more likely to be hospitalized for asthma than Whites in this neighborhood.¹⁴⁹

Compared with Boston as a whole, Roxbury has a larger Black and Latino population: it is 53% Black, 22% Latino, 15% White, and 5% Asian.¹⁵⁰ Roxbury is also among the poorest of Boston's neighborhoods. As of the 2000 census, 29% of Roxbury's population was below the poverty level, compared with 20% of Boston's overall population.¹⁵¹

Also, 29% of Roxbury's population had less than a high school education or GED, compared with 21% of Boston's overall population.¹⁵² A study in 2002 showed that Roxbury's median monthly rent consumed 70% of neighborhood residents' median income.¹⁵³

Roxbury's poverty fosters an environment that can trigger asthma or make it worse. For example, as of the 2000 census just 23.7% of Roxbury's Black residents, 11.7% of Asian residents, and 10.7% of Hispanic residents owned their homes, compared with 43.7% of non-Hispanic White residents.¹⁵⁴

Renting instead of owning a home gives people less control over their home environment.^{155,156} Poor housing conditions can give rise to dust and household pests, two well-established asthma triggers.^{157,158} These triggers are highly concentrated in poor neighborhoods and often even more highly concentrated where poor Blacks and Hispanics live.¹⁵⁹ Roxbury also has a disproportionate number of garbage disposal sites, which generate dust and invite infestation by rodents and insects.

Poverty puts particular pressure on families whose children have a chronic illness. Children with asthma may require multiple prescriptions, each with its own co-pay; families that are strapped for money may have to choose which prescriptions to fill and which to save for later. When children unexpectedly get sick or need to see a doctor, parents may have to miss work, which reduces their badly needed earnings and threatens their employment. This is a special challenge for single parents. Poverty also increases stress for families, which in itself can worsen a chronic illness.

Behavioral risk factors for asthma are also more prevalent in Roxbury. For example, smoking or being exposed to secondhand smoke can trigger or exacerbate asthma symptoms. Roxbury has the second-highest rate of smoking during pregnancy among all Boston neighborhoods (7.3% of all births, compared with 4.5% for Boston as a whole). In part this reflects the tobacco industry's targeted marketing to racial and ethnic minorities. In a study of tobacco advertising in the Boston area, Roxbury residents were exposed to about six times as many brand advertisements as they were to No Smoking signs. Beacon Hill residents, on the other hand, were exposed to only about 1.6 and 1.2 times as many brand advertisements. Advertising to youth, especially, increases their likelihood of smoking.^{164,165}

Evidence suggests that safe, supervised exercise improves asthma among children, but high school surveys show that Black and Latino adolescents get less exercise than their peers. Part of this disparity may have to do with neighborhood safety and walkability. Though the media image of Roxbury as a crime center may be unfairly exaggerated, Roxbury did have a homicide rate of 14.1 deaths per 100,000 in 1999–2002, the fourth-highest rate among all neighborhoods (the figure for Boston as a whole was 7.2).¹⁶⁶ Concern for safety may dissuade families from sending children outside to play, and neighborhood surveys show that Roxbury has proportionately fewer supervised recreation facilities than more affluent parts of the city.

Finally, access to health insurance and quality health care is critical for managing asthma. Although data on the actual prevalence of asthma are inadequate, the rate at which children of color are hospitalized for asthma suggests that they are not receiving the most effective care. Massachusetts is fortunate in that all children are eligible for some form of insurance, regardless of their family's ability to pay. Nonetheless, certain children's insurance programs severely limit prescription coverage, and multiple co-pays and out-of-pocket expenses stress families' limited economic resources.

Closing the Black-White gap in asthma complications will require a broad range of specific interventions. But some general conclusions that emerged from this example are applicable to many other health disparities.

For example:

- ♦ We need better data to evaluate racial disparities.
- ♦ Environment and health are inextricably linked.
- ♦ Housing plays a major role in health and health disparities.
- ♦ Addressing residential segregation can help reduce health disparities.
- ♦ Poor communities need more economic opportunity.
- ♦ Safe neighborhoods are essential to promoting exercise and recreation.
- ♦ Access to affordable health insurance and health care makes a big difference for poor people and people of color.
- ♦ Community-based organizations must educate patients to help them prevent and manage disease.

These programs must be culturally competent—in other words, care providers should be familiar with the communities they serve and refrain from stereotyping or making inaccurate assumptions about patients of color.

Community Assets

Strong in human assets and spirit, the Roxbury community has already responded to some of these needs. The many passionate organizations, churches, and individuals devoted to the community have worked to keep its residents well. The community health centers in Roxbury—Whittier Street, Dimock, and Roxbury Comprehensive Community Health Center—provide vital services that are sensitive and responsive to the needs in their neighborhoods. They form the front line of asthma treatment in the community.

Community coalitions, health centers, community-based organizations, city agencies, churches, health care providers, and businesses have devoted time and resources to the problem of asthma in Roxbury.

For example:

- ♦ Resident-guided community-development initiatives such as the Roxbury Action Program have addressed housing issues in Roxbury.
- ♦ The Boston Urban Asthma Coalition has brought together a broad range of community partners in Roxbury, Jamaica Plain, and Dorchester.
- ♦ Health insurers such as Neighborhood Health Plan and Harvard Pilgrim Health Care have developed disease-management to help control asthma symptoms among their patients.
- ♦ The Neighborwalk, Steps to Wellness, and Kids with Asthma Can Swim programs launched by the Boston Public Health Commission encourage physical activity in Roxbury and other neighborhoods.
- ♦ The Boston Public Health Commission's Asthma Prevention and Control Program works with the community to improve housing conditions. It offers help with pest management and air-quality testing, and provides a Healthy Homes guide online.¹⁶⁷
- ♦ Boston now restricts smoking in city workplaces. The smoking ban means that people with asthma will be exposed to much less secondhand smoke when they go to work or visit a restaurant or public space.

These measures are important steps toward reducing racial disparities in asthma for Roxbury residents, but they are only a start toward reducing health disparities in Boston as a whole. The recommendations that follow were developed as a guide for eliminating racial and ethnic disparities in health without regard to neighborhood or specific disease condition. They are not meant to derail or supplant current initiatives. Rather, they are meant to engage a much broader community in the short- and long-term work of achieving health equality in Boston. Addressing racial and ethnic health disparities is more than just the leading public health enterprise for the city; it is the core of building a stronger community and a better Boston.