

Residents Living in Boston Public Housing and Cardiovascular Disease Risk Factors

This is one of three fact sheets in a series on Health and Public Housing Data, Boston, 2001-2006. This information comes from the Partners in Health and Housing - Prevention Research Center, an equitable partnership of Boston University School of Public Health, Boston Housing Authority, Boston Public Health Commission, and the Community Committee for Health Promotion. This information was provided to the National Center for Health in Public Housing in order to increase awareness of the health disparities faced by public housing residents and to facilitate the process of developing solutions to eliminate these inequities.

Health and Public Housing Data, Boston, 2001-2006

Since 1999, the Boston Public Health Commission (BPHC) has collected health data among Boston adults utilizing a broad-based random telephone survey, the Boston Behavioral Risk Factor Surveillance System (BBRFSS). This project is based on a national model, which originated at the Centers for Disease Control and Prevention and has been conducted annually in every state since the 1990s. Beginning in 2001, as part of its partnership with the Partners in Health and Housing - Prevention Research Center, BPHC enhanced the BBRFSS health surveillance project by collecting information on type of residency among its respondents. This allowed for the first time the ability to assess the health of public housing residents across a range of health measures and directly compare their disease burden and behavioral health experiences with those of Boston residents who do not reside in public housing.

The data in this document are drawn from four BBRFSS data sets, collected in 2001, 2003, 2005 and 2006, from Boston residents. Data are weighted by gender and age to reflect the Boston population. Some indicators did not appear in all survey years and are noted.

The data contained in this document are derived from a telephone-based survey in which a number of Boston residents were asked to respond to a series of questions. The survey data were collected among a random sample of adults within a random sample of Boston households. The resulting data were applied to represent the entire adult population for the city of Boston and are described as percentages or point estimates. These numeric values are further described by a numeric range called a confidence interval. The confidence interval describes the likelihood that the true percentage estimate falls within the range of values given, and thus describes the error around the percentage estimate. To compare two percentage estimates and determine whether one is higher or lower than the other, one must look not only at the individual percentages but the associated confidence intervals. Comparisons described as "statistically different" have been determined to be highly likely to reflect actual differences between the groups compared. In this document, the difference between one percentage (point estimate) and another is described as "significantly higher", "significantly lower", or "statistically similar" based on statistical testing. Since point estimates are sometimes referred to as rates, similar terminology describes the statistical difference between two rates.

CARDIOVASCULAR DISEASE INDICATORS

Current Smokers, Boston, 2001, 2003, 2005 and 2006 Combined

	Public Housing (n=1,339)		Other Residents (n=6,868)	
	%	95% CI	%	95% CI
Overall	27.9	24.5-31.3	17.1	15.8-18.4
Sex				
Female	25.7	22.1-29.3	15.1	13.5-16.6
Male	32.6	25.3-39.9	19.2	17.1-21.3
Age				
18-34	24.4	18.5-30.3	18.2	15.8-20.6
35-49	36.8	30.7-43.0	19.4	17.4-21.5
50-64	31.9	25.3-38.4	17.1	14.7-19.5
≥65	20.5	14.6-26.3	9.5	7.1-12.0
Race/Ethnicity				
Black	29.4	23.6-35.2	13.5	11.0-16.1
Hispanic	15.7	10.4-20.9	18.1	13.1-23.2
White	42.5	35.4-49.5	18.0	16.5-19.6
Place of Birth*				
United States	39.9	33.6-46.2	19.5	17.6-21.4
Outside U.S.	16.9	9.3-24.4	14.5	10.9-18.1
Education				
<High School Grad	30.1	23.1-37.1	21.9	15.4-28.5
High School Grad	28.3	23.0-33.5	23.8	20.3-27.4
Some College	26.6	19.5-33.7	20.5	17.3-23.8
College Grad	24.3	15.1-33.4	13.0	11.6-14.5
Type of Living				
Development	25.1	20.3-29.9	---	---
Rental Assistance	30.8	26.0-35.5	---	---

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- A significantly higher percentage of public housing residents were current smokers than non-public housing residents. This difference persisted among gender groups and age groups [note: the comparison for the 18-34 year old group was not statistically significant, but by a slim margin ($p=0.056$).]
- Among racial/ethnic groups, a significantly higher percentage of White and Black public housing residents were current smokers compared with their respective non-public housing counterparts. A significantly higher percentage of White public housing residents were current smokers than Black or Hispanic public housing residents.
- A significantly higher percentage of U.S.-born public housing residents were current smokers than U.S.-born non-public housing residents.
- Differences by educational level were not significant except among the *college graduate* group in which a significantly higher percentage of public housing residents were current smokers than the non-public housing group.

Regular Physical Activity†, Boston, 2001, 2003, 2005 and 2006 Combined

	Public Housing (n=1,335)		Other Residents (n=6,874)	
	%	95% CI	%	95% CI
Overall	45.4	41.4-49.4	57.2	55.6-58.8
Sex				
Female	43.0	38.6-47.3	56.8	54.8-58.9
Male	50.6	42.3-58.9	57.6	55.0-60.2
Age				
18-34	54.5	47.3-61.7	62.0	59.0-64.9
35-49	39.1	33.0-45.2	59.5	56.9-62.0
50-64	37.7	30.8-44.5	53.2	50.1-56.2
≥65	36.0	28.8-43.2	41.3	37.3-45.4
Race/Ethnicity				
Black	42.5	35.8-49.2	46.5	42.4-50.9
Hispanic	41.3	33.9-48.6	41.9	36.3-47.5
White	53.7	46.7-60.8	63.0	61.1-64.9
Place of Birth*				
United States	49.9	43.4-56.3	60.1	57.9-62.3
Outside U.S.	41.5	31.3-51.7	44.6	39.2-50.0
Education				
<High School Grad	34.4	26.6-42.2	35.1	27.2-43.1
High School Grad	43.9	37.7-50.2	45.8	41.6-49.9
Some College	59.5	51.0-68.0	55.9	51.8-60.1
College Grad	54.1	44.2-64.1	64.1	62.1-66.1
Type of Living				
Development	45.8	39.8-51.9	---	---
Rental Assistance	45.0	39.8-50.1	---	---

†Regular physical activity is defined as vigorous exercise at least three times per week for at least 20 minutes at a time, or moderate exercise at least five times per week for at least 30 minutes at a time.

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- A significantly lower percentage of public housing residents reported adequate weekly physical activity than non-public housing residents. This difference persisted among women, but not among men.
- Although physical activity levels for both residency groups showed higher activity levels among younger age groups, the rate of activity among 35-49 and 50-64 year old age groups was significantly lower for public housing residents than non-residents.
- Among racial/ethnic groups, a significantly lower percentage of White public housing residents reported adequate weekly physical activity than White non-public housing residents. However, White public housing residents reported higher levels of weekly activity than Black or Hispanic public housing residents.
- A comparison of reported activity levels by educational level did not show significant differences between public housing and non-public housing groups.

Ever Diagnosed Hypertension, Boston, 2003, 2005 and 2006 Combined

	Public Housing (n=1,139)		Other Residents (n=5,752)	
	%	95% CI	%	95% CI
Overall	31.5	28.0-35.1	18.7	17.5-19.9
Sex				
Female	29.2	25.6-32.9	18.6	17.1-20.1
Male	36.3	28.4-44.3	18.9	17.1-20.6
Age				
18-34	11.8	6.5-17.0	5.6	4.2-7.0
35-49	29.4	23.5-35.2	13.9	12.0-15.8
50-64	58.6	51.3-66.0	33.6	30.6-36.6
≥65	67.9	61.7-74.0	58.0	54.5-61.5
Race/Ethnicity				
Black	32.7	26.5-38.9	24.9	21.4-28.5
Hispanic	27.4	20.8-33.9	17.2	13.5-20.9
White	34.6	28.3-40.9	18.5	17.1-19.8
Place of Birth*				
United States	34.2	28.0-40.4	19.1	17.3-20.8
Outside U.S.	31.1	21.7-40.5	17.9	14.1-21.7
Education				
<High School Grad	44.4	36.4-52.5	24.3	18.4-30.3
High School Grad	27.6	22.4-32.8	30.2	26.8-33.6
Some College	24.0	16.6-31.3	21.4	18.4-24.4
College Grad	28.2	19.2-37.2	13.0	11.8-14.3
Type of Living				
Development	28.8	23.7-33.9	---	---
Rental Assistance	34.5	29.6-39.4	---	---

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- Public housing residents are burdened with hypertension at levels that exceed those found among non-public housing residents. Significant differences were found across all the demographic groups shown above with the exception of *high school graduates* and those who had *some college*. The percentage of persons reporting hypertension in these two groups did not differ statistically when public housing residents were compared to non-public housing residents.
- The rates of hypertension reported by public housing development and rental assistance recipients did not statistically differ.

Ever Diagnosed with High Cholesterol, Boston, 2001, 2003, 2005 and 2006 Combined

	Public Housing (n=1,284)		Other Residents (n=6,658)	
	%	95% CI	%	95% CI
Overall	29.2	25.9-32.4	23.6	22.3-25.0
Sex				
Female	26.4	23.0-29.7	21.8	20.0-23.5
Male	35.2	27.9-42.5	25.5	23.5-27.6
Age				
18-34	11.2	6.7-15.7	11.0	9.1-12.8
35-49	30.1	24.3-36.0	23.7	21.5-25.9
50-64	53.8	46.5-61.2	40.1	37.1-43.1
≥65	54.4	47.0-61.8	48.0	43.9-52.0
Race/Ethnicity				
Black	22.8	17.9-27.6	23.7	20.3-27.2
Hispanic	27.2	21.1-33.2	22.2	17.8-26.5
White	42.5	35.5-49.4	24.7	23.1-26.3
Place of Birth*				
United States	30.7	25.2-36.2	23.2	21.4-25.0
Outside U.S.	26.9	19.4-34.4	23.3	18.0-28.6
Education				
<High School Grad	38.4	31.3-45.4	30.3	24.0-36.5
High School Grad	26.7	21.7-31.7	30.7	26.8-34.5
Some College	21.1	14.7-27.5	21.5	18.6-24.4
College Grad	29.7	20.9-38.5	21.3	19.7-22.9
Type of Living				
Development	28.2	23.6-32.8	---	---
Rental Assistance	30.2	25.6-34.7	---	---

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- Overall a significantly higher percentage of public housing residents reported ever being diagnosed with high cholesterol than non-public housing residents. Findings by demographic subgroups were mixed.
- Significantly higher percentages of both women and men who live in public housing reported high cholesterol than their respective non-public housing resident groups.
- A significantly higher percentage of public housing residents ages 35-49 and 50-64 years old reported high cholesterol than their respective non-public housing resident groups. Differences were not statistically significant among the youngest and oldest age groups.
- When comparing public housing residents to non-public housing residents by racial/ethnic group, only White public housing residents reported high cholesterol at a significantly higher rate than White non-public housing residents

Overweight and Obesity†, Boston, 2001, 2003, 2005 and 2006 Combined

	Public Housing (n=1,236)		Other Residents (n=6,518)	
	%	95% CI	%	95% CI
Overall	62.5	58.5 – 66.5	49.0	47.3 – 50.8
Sex				
Female	61.4	56.8 – 66.0	42.0	39.8 – 44.2
Male	64.9	57.0 – 72.7	55.9	53.2 – 58.6
Age				
18-34	56.6	49.1 – 64.1	37.6	34.6 – 40.6
35-49	64.2	57.7 – 70.6	55.1	52.5 – 57.7
50-64	70.4	63.3 – 77.5	62.6	59.5 – 65.6
≥65	68.2	61.0 – 75.4	61.7	58.0 – 65.4
Race/Ethnicity				
Black	62.6	55.7 – 69.6	65.1	60.8 – 69.4
Hispanic	62.2	54.7 – 69.7	58.9	53.0 – 64.8
White	62.1	54.9 – 69.3	45.6	43.6 – 47.6
Place of Birth*				
United States	56.8	50.1 – 63.6	48.7	46.4 – 51.0
Outside U.S.	63.2	53.0 – 73.4	48.9	43.2 – 54.6
Education				
<High School Grad	61.6	53.5 – 69.6	61.0	52.7 – 69.3
High School Grad	65.0	58.8 – 71.2	60.8	56.6 – 65.1
Some College	63.4	54.2 – 72.6	51.5	47.2 – 55.9
College Grad	53.5	43.1 – 64.0	42.9	40.8 – 44.9
Type of Living				
Development	62.9	56.8 – 68.9	---	---
Rental Assistance	62.2	56.8 – 67.5	---	---

†Overweight is defined as having a Body Mass Index (BMI) of 25.0-29.9, and obesity is defined as a BMI of 30 and over. For more information on BMI please see www.cdc.gov/nccdphp/dnpa/obesity/defining.htm.

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- Overall, and for several demographic groups, significantly higher percentages of public housing residents were considered overweight or obese compared to non-public housing residents.
- Among age groups, only public housing residents ages 65 and over did not have a significantly higher percentage of individuals considered overweight or obese compared to their non-public housing counterparts.
- Among racial/ethnic groups, only White public housing residents had a significantly higher percentage of individuals considered overweight or obese than White non-public housing residents. There were no statistical differences among Blacks or Hispanics.
- By place of birth, significantly higher percentages of both those born within the U.S. and outside the U.S. who lived in public housing were considered overweight or obese than their respective non-public housing residents.

Obesity†, Boston, 2001, 2003, 2005 and 2006 Combined

	Public Housing (n=1,236)		Other Residents (n=6,518)	
	%	95% CI	%	95% CI
Overall	30.6	27.0 – 34.3	16.2	15.0 – 17.4
Sex				
Female	31.3	27.4 – 35.3	17.4	15.7 – 19.0
Male	29.0	21.2 – 36.9	15.1	13.3 – 16.9
Age				
18-34	25.0	18.5 – 31.6	10.6	8.7 – 12.6
35-49	34.7	28.8 – 40.6	19.2	17.0 – 21.4
50-64	40.6	33.3 – 48.0	24.7	22.0 – 27.4
≥65	29.4	22.5 – 36.4	21.1	17.9 – 24.3
Race/Ethnicity				
Black	32.1	26.3 – 37.9	30.9	26.9 – 35.0
Hispanic	26.5	20.0 – 32.9	20.9	15.3 – 26.5
White	33.1	25.2 – 40.9	12.9	11.7 – 14.1
Place of Birth*				
United States	32.1	26.4 – 37.9	16.4	14.6 – 18.1
Outside U.S.	27.4	16.3 – 38.5	13.2	9.6 – 16.7
Education				
<High School Grad	29.5	23.2 – 35.8	21.2	15.3 – 27.1
High School Grad	33.9	27.8 – 40.0	24.1	20.7 – 27.6
Some College	30.4	22.1 – 38.7	19.7	16.4 – 23.1
College Grad	21.1	14.0 – 28.1	11.7	10.4 – 12.9
Type of Living				
Development	32.2	26.6 – 37.8	---	---
Rental Assistance	29.1	24.4 – 33.8	---	---

†Obesity is defined as having a Body Mass Index (BMI) over 30. For more information on BMI please see www.cdc.gov/nccdphp/dnpa/obesity/defining.htm.

*Data on place of birth were not collected in 2006. Data for this indicator are from 2001, 2003 and 2005 combined only.

- Overall and for most demographic groups shown here, significantly higher percentages of public housing residents were considered obese than their non-public housing counterparts. Exceptions are noted here.
- Statistically similar percentages of Black and Hispanic public housing residents were considered obese as their respective non-public housing resident groups.
- A statistically similar percentage of public housing residents without a high school diploma as non-public housing residents without a high school diploma were considered obese, but this was by a slim margin (p=0.0594).

DATA SOURCE: Boston Behavioral Risk Factor Survey, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission, Research and Evaluation Office