# Baltimore City Health Disparities Report Card 2013

Baltimore City Health Department

Office of Epidemiologic Services

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## Contents

Overview ... 3

Background ... 4

Methods ... 4

Disparity Ratios and Change ... 6

Grading ... 6

Mortality ... 7

Individual Health Status ... 13

Healthy Homes and Communities ... 15

Health Care Access ... 16

Role of Income in Health Disparities ... 17

Latino Health ... 19

Summary and Conclusions ... 20

Data Sources ... 21

References ... 21

## Overview

The 2013 Baltimore City Health Disparities Report Card is the second in a series examining both progress and ongoing challenges in health disparities within Baltimore City. The report reflects that while there have been many areas of improvement in recent years, Baltimore City residents are still experiencing significant health disparities. *Healthy Baltimore 2015*, the city's comprehensive health policy agenda, has focused on key indicators in order to realize its goal of ensuring all Baltimore City residents realize their full health potential. *Healthy Baltimore 2015* brings attention to health inequalities by race, gender, education and income.

**All-Cause Mortality, Selected Years**

| | 2000 | 2005 | 2008 | 2012 |
|---|---|---|---|---|
| **Baltimore City** | 1,288.5 | 1,186.7 | 1,022.0 | 1,001.7 |
| **Maryland** | 823.2 | 801.6 | 778.3 | 749.6 |
| **Black** | 1,205.5 | 1,158.9 | 1,065.9 | 1,047.6 |
| **White** | 1,631.7 | 1,399.1 | 1,072.6 | 1,078.1 |
| **Men** | 1,410.0 | 1,300.2 | 1,130.2 | 1,087.2 |
| **Women** | 1,182.3 | 1,089.7 | 926.9 | 925.6 |
| **Black Men** | 1,418.8 | 1,341.1 | 1,223.1 | 1,175.9 |
| **White Men** | 1,591.0 | 1,413.1 | 1,111.3 | 1,099.9 |
| **Black Women** | 1,026.4 | 1,013.2 | 935.0 | 939.1 |
| **White Women** | 1,669.6 | 1,386.1 | 1,035.6 | 1,056.7 |

The overall mortality rate in Baltimore City has declined in the past 12 years; a similar trend has been noted in the state of Maryland. Throughout the past decade, Baltimore City has experienced improvements in the mortality rates of several major health indicators, including certain cancers, stroke, diabetes and HIV/AIDS. However, Baltimore City continues to have a mortality rate 1.34 times that of Maryland, despite declines in specific cancer sub-groups such as prostate and breast. Baltimore City continues to experience higher mortality rates and burden of disease than both the rest of Maryland, and the overall US population.

It is important to note that this disparities report reflects the difference between two groups – by gender, income, education or race. Disparities can fluctuate through either the improvement of one group or the decline of another. The recognition of these disparities, and subsequent targeted prevention and treatment efforts, is a critical part of improving the overall health of all of Baltimore City's residents.

This report highlights disparities in several key health indicators so that future policies and programs can be targeted towards those sub-groups most in need. The 2013 Baltimore City Health Disparities Report Card provides a comprehensive, but not all-inclusive, overview of the status of health disparities in Baltimore City.

## Background

The 2013 Baltimore City Health Disparities Report Card focuses on health disparities, also known as health inequalities, which are traditionally defined as a difference in the rate, incidence, prevalence, or impact of disease or other health indicator as a result of a particular demographic characteristic. Common areas of disparity include race, ethnicity, gender, income, educational attainment, age, and language proficiency. Health disparities are a serious concern, and therefore the focus of the efforts of many local, state and federal agencies related to healthcare and access.

When health disparities can be attributed to systematic social, political, economic, or environmental policies and constructs, they are termed health inequities. Health inequities are health disparities that result from systematic and unjust socioeconomic policies that, with appropriate intervention, can and should be avoided.

Most disparities are rooted in unequal access to resources and opportunities to promote healthy behaviors. These elements of our surroundings that predict our ability to engage in healthy behaviors are termed social determinants of health (SDoH) and include the places where people live, work, learn, and play. SDoH are recognized by many leading public health organizations, including the World Health Organization, to be the main source of health inequities. As an example, individuals with higher education or income levels tend to have more access to and control over resources and opportunities. This relative advantage is typically associated with longer life expectancy and lower burden of disease.[1]

## Methods

The 2013 Baltimore City Health Disparities Report Card is an aggregate of multiple health indicators that are representative of the health equity of our community. The chosen health indicators are divided into four main categories: Mortality (12 indicators), self-reported Health Status (8 indicators), self-reported Healthcare (2 indicators), and self-reported Healthy Homes and Communities (3 indicators).

Data from the Maryland Department of Health and Mental Hygiene's Vital Statistics Administration (VSA), the US Census Bureau's American Community Survey (ACS), and Maryland Behavioral Risk Factor Surveillance System (BRFSS) was used for analysis. ACS 1-year estimate data was utilized as the denominator for the majority of calculations. Additional supplementary data regarding inpatient hospital admissions was obtained from the Maryland Health Services Cost Review Commission (HSCRC), with total number of hospital admissions used as the denominator for these rates.

The Mortality tables are divided into six columns; the 2012 Rates and Disparity Ratios are calculated as absolute rates and ratios, with no weighting or age-adjustment applied. The 2008 Disparity Ratios were recalculated using this same method, and therefore are slightly different from those published in the 2010 Health Disparities Report Card (published by Baltimore City Health Department, 2011). Grades were assigned based upon 2012 Disparity Ratios (see details below). The 2008-2012 disparity change was also calculated to provide context and demonstrate progress. The Health Status, Healthy Homes and Communities and Health Access sections use percentage; this reflects percent of respondents reporting "yes" or answering in the affirmative to a given health indicator. The final average grade at the end of the report reflects a combination of all grades awarded to indicators within a table; no

weighting was applied. The final grade was calculated using the median of all grades noted in the Cumulative Report Card section of this report.

As stated above, this is the second iteration of a regularly produced report examining health disparities within Baltimore City. Some changes have been made relative to the 2010 Health Disparities Report in order to provide the most current data available and to include information that is most representative of the current health of Baltimore City residents. For example, whereas the 2010 Health Disparities Report Card noted mortality from heart disease, this report expands the definition to include all cardiovascular mortality, which incorporates deaths from diseases of the heart, cerebrovascular disease, and hypertension/hypertensive kidney disease. The education classification system has been updated to use the following categories: less than high school, high school graduate or equivalent, and some college or higher.

Instead of the 2009 Baltimore City Community Health Survey, which was a key source of information in the 2010 Health Disparities Report Card, alternate data was obtained from BRFSS and HSCRC, with an attempt to match the original themes and demographic breakdowns. BRFSS is a survey administered to individuals on a nationwide basis by the Centers for Disease Control and Prevention in cooperation with each of the states. If fewer than fifty individual responses were noted within a demographic subcategory, results were not reported in an effort to preserve integrity of the data. Therefore, there are instances where BRFSS data is not available in certain stratifications.

A key determinant of health disparities, as well as social determinants of health, is income and the distribution of income/wealth in society. In fact, a portion of disparities by other stratifications (such as race) may well be attributed to inequalities in income and substantial proportions of the sub-population living in poverty. In this report, we both provide income-stratified information on disparities amongst health indicators, and also discuss this issue in greater detail in a separate section, the Role of Income on Health Disparities on page 17.

Unfortunately, the total population numbers are too small to report direct comparisons across all parameters for Latinos, Pacific Islanders, and Native American/Alaskan Natives. However, because of the increasing proportion of Hispanics/Latinos living in Baltimore City, an additional section has been added to this Report Card highlighting health trends experienced by this subpopulation, Latino Health on page 19.

While this Report Card focuses primarily on disparities between race, gender, education, and income, it is important to note that disparities also exist between geographic locations, language proficiency, occupation, and many other markers. These disparities remain important for intervention efforts, but are not highlighted in this report.

## Disparity Ratios and Change

Disparity Ratios were calculated by dividing the first group (the comparator) by the latter (the reference). In the case of education and income, the lowest level with available data was compared to the highest. The following demonstrates ratio calculations used; additional subgroup calculations follow the same patterns:

**Geography**: Baltimore City Rate/Maryland (including Baltimore City) Rate
**Race**: Non-Hispanic Black Rate/Non-Hispanic White Rate
**Gender**: Male Rate/Female Rate
**Education**: Less than high school Rate/Some college or higher Rate
**Income**: <$15,000 Rate/≥$75,000 Rate

The Disparity Change was calculated by subtracting the 2012 Disparity Ratio from the 2008 Disparity Ratio divided by the 2008 Disparity Ratio. A positive percentage reflects worsening disparity (color coded in red), while a negative percentage represents improving disparity (color coded in green).

Avertable deaths in the Role of Income in Health Disparities section represent deaths that could have been avoided if all neighborhoods in Baltimore City had the same opportunities in health, assuming that the death rates experienced in those Community Statistical Areas (CSAs) with the highest median incomes are achievable in every community. The map displays the ranges of proportion of deaths that would have been avoided by CSA in quintiles, meaning that every quintile contains an equal number of data points.

## Grading

Grading was based upon the 2012 Disparity Ratio. The grading scale was adjusted from the 2010 Report Card in order to better represent deviation from equivalence and to show variation across a wider range.

A: 0.95 - 1.05

B: 0.8 - 0.95 OR 1.05 - 1.2

C: 0.6 - 0.8 OR 1.2 - 1.5

D: 0.2 - 0.6 OR 1.5 - 3

F: less than 0.2 OR greater than 3

This grading system was developed by the Office of Epidemiologic Services as a way to evaluate progress in disparity reduction within Baltimore City. It is not meant to be compared to other studies or locations outside of Baltimore City. Of note, with the adjustment in the grading system, direct grade comparisons cannot be made to the 2010 Health Disparities Report Card.

## Mortality

| All-Cause Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 1001.7 | 1.34 | **C** | 1022.0 | 1.31 | **1.78%** |
| **Maryland** | 749.6 | | | 778.3 | | |
| **Black, Non-Hispanic** | 1056.5 | 0.93 | **B** | 1074.1 | 0.97 | **-4.58%** |
| **White, Non-Hispanic** | 1138.1 | | | 1104.0 | | |
| **Men** | 1087.2 | 1.17 | **B** | 1130.2 | 1.22 | **-3.68%** |
| **Women** | 925.6 | | | 926.9 | | |
| **Black Men** | 1170.4 | 1.09 | **B** | 1124.1 | 1.03 | **6.40%** |
| **White Men** | 1069.8 | | | 1093.2 | | |
| **Black Women** | 933.5 | 0.89 | **B** | 935.0 | 0.91 | **-1.72%** |
| **White Women** | 1046.2 | | | 1029.8 | | |
| **Less than HS completion** | 2608.0 | 4.44 | **F** | 2672.7 | 4.72 | **-6.08%** |
| **HS Graduate or GED** | 2107.2 | | | 2133.1 | | |
| **Some College or Higher** | 588.0 | | | 565.9 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Cardiovascular Disease Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 300.3 | 1.27 | **C** | 326.4 | 1.28 | **-1.04%** |
| **Maryland** | 236.8 | | | 254.7 | | |
| **Black, Non-Hispanic** | 322.9 | 0.99 | **A** | 329.0 | 0.86 | **15.18%** |
| **White, Non-Hispanic** | 326.1 | | | 382.7 | | |
| **Men** | 322.6 | 1.15 | **B** | 343.4 | 1.10 | **4.36%** |
| **Women** | 280.5 | | | 311.5 | | |
| **Black Men** | 342.6 | 1.05 | **A** | 325.2 | 0.89 | **18.65%** |
| **White Men** | 325.3 | | | 366.4 | | |
| **Black Women** | 298.1 | 1.06 | **B** | 303.8 | 0.82 | **28.69%** |
| **White Women** | 281.3 | | | 368.9 | | |
| **Less than HS completion** | 759.1 | 4.06 | **F** | 845.4 | 5.04 | **-19.52%** |
| **HS Graduate or GED** | 627.9 | | | 697.1 | | |
| **Some College or Higher** | 187.2 | | | 167.8 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Diabetes Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 29.0 | 1.41 | **C** | 29.2 | 1.33 | **6.11%** |
| **Maryland** | 20.5 | | | 22.0 | | |
| **Black, Non-Hispanic** | 35.2 | 1.50 | **C** | 34.4 | 1.43 | **4.75%** |
| **White, Non-Hispanic** | 23.5 | | | 24.0 | | |
| **Men** | 29.7 | 1.05 | **A** | 30.9 | 1.11 | **-5.62%** |
| **Women** | 28.3 | | | 27.7 | | |
| **Black Men** | 33.2 | 1.14 | **B** | 35.7 | 1.78 | **-35.79%** |
| **White Men** | 29.1 | | | 20.1 | | |
| **Black Women** | 36.0 | 2.44 | **D** | 30.1 | 1.16 | **110.16%** |
| **White Women** | 14.7 | | | 25.9 | | |
| **Less than HS completion** | 65.1 | 3.64 | **F** | 95.8 | 8.12 | **-55.20%** |
| **HS Graduate or GED** | 69.9 | | | 51.4 | | |
| **Some College or Higher** | 17.9 | | | 11.8 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Stroke Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 45.5 | 1.20 | **B** | 49.3 | 1.23 | **-2.98%** |
| **Maryland** | 38.0 | | | 39.9 | | |
| **Black, Non-Hispanic** | 50.6 | 1.09 | **B** | 49.7 | 0.85 | **27.96%** |
| **White, Non-Hispanic** | 46.4 | | | 58.3 | | |
| **Men** | 41.7 | 0.85 | **B** | 43.6 | 0.80 | **5.90%** |
| **Women** | 49.0 | | | 54.3 | | |
| **Black Men** | 47.5 | 1.38 | **C** | 40.3 | 0.80 | **72.29%** |
| **White Men** | 34.5 | | | 50.3 | | |
| **Black Women** | 51.9 | 1.00 | **A** | 53.8 | 0.88 | **14.76%** |
| **White Women** | 51.6 | | | 61.5 | | |
| **Less than HS completion** | 130.3 | 4.46 | **F** | 127.7 | 4.29 | **3.86%** |
| **HS Graduate or GED** | 86.3 | | | 98.8 | | |
| **Some College or Higher** | 29.2 | | | 29.8 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| All Cancer Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 217.1 | 1.23 | **C** | 218.4 | 1.19 | **3.27%** |
| **Maryland** | 176.8 | | | 183.6 | | |
| **Black, Non-Hispanic** | 227.2 | 0.90 | **B** | 231.0 | 0.97 | **-7.40%** |
| **White, Non-Hispanic** | 252.1 | | | 237.4 | | |
| **Men** | 233.8 | 1.16 | **B** | 239.3 | 1.20 | **-3.42%** |
| **Women** | 202.3 | | | 200.0 | | |
| **Black Men** | 241.5 | 0.97 | **A** | 232.1 | 0.93 | **3.97%** |
| **White Men** | 248.9 | | | 248.6 | | |
| **Black Women** | 209.3 | 0.95 | **B** | 209.8 | 1.01 | **-5.55%** |
| **White Women** | 220.2 | | | 208.5 | | |
| **Less than HS completion** | 517.3 | 3.41 | **F** | 521.8 | 3.73 | **-8.52%** |
| **HS Graduate or GED** | 470.9 | | | 483.5 | | |
| **Some College or Higher** | 151.8 | | | 140.1 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Lung Cancer Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 56.7 | 1.23 | **C** | 60.6 | 1.19 | **2.97%** |
| **Maryland** | 46.1 | | | 50.8 | | |
| **Black, Non-Hispanic** | 54.9 | 0.73 | **C** | 62.2 | 0.89 | **-18.76%** |
| **White, Non-Hispanic** | 75.6 | | | 69.6 | | |
| **Men** | 67.7 | 1.44 | **C** | 72.8 | 1.46 | **-1.13%** |
| **Women** | 46.8 | | | 49.9 | | |
| **Black Men** | 66.9 | 0.87 | **B** | 69.5 | 0.90 | **-2.46%** |
| **White Men** | 76.5 | | | 77.5 | | |
| **Black Women** | 43.5 | 0.68 | **C** | 50.2 | 0.89 | **-23.62%** |
| **White Women** | 64.3 | | | 56.7 | | |
| **Less than HS completion** | 161.6 | 5.62 | **F** | 149.7 | 4.17 | **34.79%** |
| **HS Graduate or GED** | 123.3 | | | 135.7 | | |
| **Some College or Higher** | 28.8 | | | 35.9 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Breast Cancer Mortality (Women, per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 29.8 | 1.07 | **B** | 31.3 | 1.10 | **-2.94%** |
| **Maryland** | 27.9 | | | 28.4 | | |
| **Black, Non-Hispanic** | --- | | | --- | | |
| **White, Non-Hispanic** | --- | | | --- | | |
| **Men** | --- | | | --- | | |
| **Women** | --- | | | --- | | |
| **Black Men** | --- | | | --- | | |
| **White Men** | --- | | | --- | | |
| **Black Women** | 31.8 | 1.12 | **B** | 34.7 | 1.20 | **-7.14%** |
| **White Women** | 28.4 | | | 28.8 | | |
| **Less than HS completion** | 57.8 | 1.98 | **D** | 48.2 | 1.79 | **10.59%** |
| **HS Graduate or GED** | 62.1 | | | 74.4 | | |
| **Some College or Higher** | 29.2 | | | 26.9 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Colon Cancer Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 21.2 | 1.32 | **C** | 20.6 | 1.20 | **10.18%** |
| **Maryland** | 16.0 | | | 17.1 | | |
| **Black, Non-Hispanic** | 24.9 | 1.28 | **C** | 22.6 | 1.08 | **18.77%** |
| **White, Non-Hispanic** | 19.5 | | | 21.0 | | |
| **Men** | 20.8 | 0.97 | **A** | 20.8 | 1.02 | **-5.59%** |
| **Women** | 21.6 | | | 20.4 | | |
| **Black Men** | 22.7 | 1.05 | **A** | 22.1 | 1.22 | **-13.98%** |
| **White Men** | 21.5 | | | 18.1 | | |
| **Black Women** | 26.2 | 1.77 | **D** | 21.0 | 0.95 | **86.81%** |
| **White Women** | 14.7 | | | 22.1 | | |
| **Less than HS completion** | 56.4 | 3.99 | **F** | 52.8 | 5.42 | **-26.48%** |
| **HS Graduate or GED** | 41.9 | | | 45.0 | | |
| **Some College or Higher** | 14.1 | | | 9.7 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Prostate Cancer Mortality (Men, per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| * Denominator includes men only | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 25.6 | 1.48 | **C** | 30.2 | 1.54 | **-3.77%** |
| **Maryland** | 17.3 | | | 19.6 | | |
| **Black, Non-Hispanic** | --- | | | --- | | |
| **White, Non-Hispanic** | --- | | | --- | | |
| **Men** | --- | | | --- | | |
| **Women** | --- | | | --- | | |
| **Black Men** | 34.3 | 2.45 | **D** | 35.2 | 1.75 | **39.77%** |
| **White Men** | 14.0 | | | 20.1 | | |
| **Black Women** | --- | | | --- | | |
| **White Women** | --- | | | --- | | |
| **Less than HS completion** | 52.4 | 2.69 | **D** | 88.0 | 3.50 | **-23.30%** |
| **HS Graduate or GED** | 57.7 | | | 43.6 | | |
| **Some College or Higher** | 19.5 | | | 25.1 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| HIV/AIDS Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 21.1 | 4.87 | **F** | 38.2 | 4.99 | **-2.44%** |
| **Maryland** | 4.3 | | | 7.7 | | |
| **Black, Non-Hispanic** | 30.5 | 4.85 | **F** | 56.9 | 6.95 | **-30.32%** |
| **White, Non-Hispanic** | 6.3 | | | 8.2 | | |
| **Men** | 28.0 | 1.88 | **D** | 53.0 | 2.12 | **-11.10%** |
| **Women** | 14.9 | | | 25.1 | | |
| **Black Men** | 41.4 | 5.50 | **F** | 73.5 | 6.08 | **-9.67%** |
| **White Men** | 7.5 | | | 12.1 | | |
| **Black Women** | 20.6 | 4.88 | **F** | 36.9 | 9.61 | **-49.26%** |
| **White Women** | 4.2 | | | 3.8 | | |
| **Less than HS completion** | 51.4 | 10.89 | **F** | 103.5 | 7.20 | **51.23%** |
| **HS Graduate or GED** | 58.4 | | | 82.7 | | |
| **Some College or Higher** | 4.7 | | | 14.4 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Homicide Mortality (per 100,000 residents) | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 33.6 | 4.78 | **F** | 33.4 | 3.57 | **33.99%** |
| **Maryland** | 7.0 | | | 9.4 | | |
| **Black, Non-Hispanic** | 49.8 | 7.24 | **F** | 48.7 | 7.32 | **-1.00%** |
| **White, Non-Hispanic** | 6.9 | | | 6.7 | | |
| **Men** | 65.6 | 12.69 | **F** | 62.4 | 7.84 | **61.88%** |
| **Women** | 5.2 | | | 8.0 | | |
| **Black Men** | 100.6 | 11.67 | **F** | 88.1 | 17.50 | **-33.33%** |
| **White Men** | 8.6 | | | 5.0 | | |
| **Black Women** | 5.6 | 1.33 | **C** | 8.7 | 1.13 | **17.99%** |
| **White Women** | 4.2 | | | 7.7 | | |
| **Less than HS completion** | 115.2 | 10.18 | **F** | 109.0 | 9.65 | **5.49%** |
| **HS Graduate or GED** | 73.1 | | | 71.5 | | |
| **Some College or Higher** | 11.3 | | | 11.3 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration*

| Infant Mortality (<1 year), denominator - total live births | | | | | | |
|---|---|---|---|---|---|---|
| | 2012 Rate | 2012 Ratio | 2012 Grade | 2008 Rate | 2008 Ratio | 2008-12 Change |
| **Baltimore City** | 9.7 | 1.53 | **D** | 12.1 | 1.51 | **1.34%** |
| **Maryland** | 6.3 | | | 8.0 | | |
| **Black** | 12.5 | 3.02 | **F** | 14.3 | 1.55 | **94.44%** |
| **White** | 4.1 | | | 9.2 | | |
| **Men** | 9.7 | 1.04 | **A** | 14.4 | 1.64 | **-36.51%** |
| **Women** | 9.3 | | | 8.8 | | |
| **Black Men** | 12.9 | 3.21 | **F** | 16.4 | 1.36 | **136.16%** |
| **White Men** | 4.0 | | | 12.0 | | |
| **Black Women** | 12.1 | 2.82 | **D** | 11.0 | 2.05 | **37.41%** |
| **White Women** | 4.3 | | | 5.4 | | |
| **Less than HS completion** | 10.1 | 2.36 | **D** | 9.4 | 1.02 | **131.55%** |
| **HS Graduate or GED** | 13.4 | | | 14.8 | | |
| **Some College or Higher** | 4.3 | | | 9.2 | | |

**Source: BCHD Analysis of data from the Maryland Vital Statistics Administration, race and education status are of the mother, gender is that of the infant*

## Individual Health Status

### Fair or Poor Health Status

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 22.96% | 1.46 | **C** |
| **Maryland** | 15.76% | | |
| **Black** | 26.54% | 1.81 | **D** |
| **White** | 14.66% | | |
| **Men** | 23.28% | 1.02 | **A** |
| **Women** | 22.72% | | |
| **<HS** | 44.65% | 4.56 | **F** |
| **HS Grad or Equiv** | 26.92% | | |
| **College Graduate** | 9.80% | | |
| **Income <$15,000** | 40.05% | 6.14 | **F** |
| **$15,000-24,999** | 39.39% | | |
| **$25,000-49,999** | 26.88% | | |
| **$50,000-74,999** | 10.38% | | |
| **>=$75,000** | 6.52% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"How is your health in general?"***

### Diabetes (ever diagnosed)

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 13.65% | 1.33 | **C** |
| **Maryland** | 10.24% | | |
| **Black** | 18.58% | 2.50 | **D** |
| **White** | 7.44% | | |
| **Men** | 11.98% | 0.81 | **B** |
| **Women** | 14.87% | | |
| **<HS** | 28.56% | 4.94 | **F** |
| **HS Grad or Equiv** | 12.42% | | |
| **College Graduate** | 5.78% | | |
| **Income <$15,000** | 32.94% | 6.80 | **F** |
| **$15,000-24,999** | 9.86% | | |
| **$25,000-49,999** | 18.91% | | |
| **$50,000-74,999** | 6.14% | | |
| **>=$75,000** | 4.84% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Ever told by a doctor that you have diabetes?"***

### Obesity (BMI ≥ 30)

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 30.76% | 1.11 | **B** |
| **Maryland** | 27.61% | | |
| **Black** | 38.49% | 2.05 | **D** |
| **White** | 18.82% | | |
| **Men** | 26.72% | 0.79 | **C** |
| **Women** | 34.00% | | |
| **<HS** | 35.37% | 1.67 | **D** |
| **HS Grad or Equiv** | 27.73% | | |
| **College Graduate** | 21.18% | | |
| **Income <$15,000** | 31.33% | 1.50 | **C** |
| **$15,000-24,999** | 36.09% | | |
| **$25,000-49,999** | 27.93% | | |
| **$50,000-74,999** | 37.14% | | |
| **>=$75,000** | 20.88% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Weight classifications based on body mass index (BMI)"***

### High Blood Pressure (ever diagnosed)

| | 2011 Percent | 2011 Ratio | 2011 Grade |
|---|---|---|---|
| **Baltimore City** | 36.10% | 1.13 | **B** |
| **Maryland** | 32.00% | | |
| **Black** | 41.34% | 1.36 | **C** |
| **White** | 30.44% | | |
| **Men** | 38.18% | 1.10 | **B** |
| **Women** | 34.64% | | |
| **<HS** | 39.10% | 1.52 | **D** |
| **HS Grad or Equiv** | 76.29% | | |
| **College Graduate** | 25.72% | | |
| **Income <$15,000** | N/A | | |
| **$15,000-24,999** | 57.63% | 2.97 | **D** |
| **$25,000-49,999** | 33.16% | | |
| **$50,000-74,999** | 37.16% | | |
| **>=$75,000** | 19.38% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Ever been told by a health professional that you have high HBP?"***

## Adult Asthma

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 17.24% | 1.29 | **C** |
| **Maryland** | 13.40% | | |
| **Black** | 18.63% | 0.99 | **A** |
| **White** | 18.85% | | |
| **Men** | 12.16% | 0.58 | **D** |
| **Women** | 21.11% | | |
| **<HS** | 10.40% | 0.84 | **B** |
| **HS Grad or Equiv** | 21.06% | | |
| **College Graduate** | 12.32% | | |
| **Income <$15,000** | 16.97% | 1.30 | **C** |
| **$15,000-24,999** | 20.45% | | |
| **$25,000-49,999** | 11.81% | | |
| **$50,000-74,999** | 11.02% | | |
| **>=$75,000** | 13.01% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Ever been told by a health professional that you had asthma?"***

## Childhood Asthma (ever diagnosed)

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 33.69% | 1.95 | **D** |
| **Maryland** | 17.30% | | |
| **Black** | 38.16% | 3.36 | **F** |
| **White** | 11.36% | | |
| **Men** | 15.96% | 0.41 | **D** |
| **Women** | 39.41% | | |
| **<HS** | 32.74% | 2.14 | **D** |
| **HS Grad or Equiv** | 26.10% | | |
| **College Graduate** | 15.32% | | |
| **Income <$15,000** | 57.05% | 2.76 | **D** |
| **$15,000-24,999** | 23.79% | | |
| **$25,000-49,999** | 61.99% | | |
| **$50,000-74,999** | 17.95% | | |
| **>=$75,000** | 20.70% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Ever diagnosed as a child with asthma?"***

## Smoking (current)

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 21.20% | 1.31 | **C** |
| **Maryland** | 16.17% | | |
| **Black** | 25.18% | 1.34 | **C** |
| **White** | 18.76% | | |
| **Men** | 27.62% | 1.70 | **D** |
| **Women** | 16.29% | | |
| **<HS** | 40.23% | 3.54 | **F** |
| **HS Grad or Equiv** | 27.72% | | |
| **College Graduate** | 11.35% | | |
| **Income <$15,000** | 28.32% | 2.29 | **D** |
| **$15,000-24,999** | 37.12% | | |
| **$25,000-49,999** | 20.55% | | |
| **$50,000-74,999** | 17.49% | | |
| **>=$75,000** | 12.34% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Current Smoker (100+ cigarettes in lifetime and currently smoke)"***

## Mental Health Not Good

| | 2012 Percent | 2012 Ratio | 2012 Grade |
|---|---|---|---|
| **Baltimore City** | 15.54% | 1.13 | **B** |
| **Maryland** | 13.79% | | |
| **Black** | 16.40% | 1.12 | **B** |
| **White** | 14.58% | | |
| **Men** | 6.52% | 0.29 | **D** |
| **Women** | 22.40% | | |
| **<HS** | 13.87% | 1.26 | **C** |
| **HS Grad or Equiv** | 18.77% | | |
| **College Graduate** | 10.99% | | |
| **Income <$15,000** | 27.11% | 3.16 | **F** |
| **$15,000-24,999** | 21.31% | | |
| **$25,000-49,999** | 7.63% | | |
| **$50,000-74,999** | 18.08% | | |
| **>=$75,000** | 8.57% | | |

**Source: BCHD Analysis of data from the Maryland Behavior Risk Factor Surveillance System*
*Question:* ***"Number of days mental health not good?" (≥8 of 30 days).***

## Healthy Homes and Communities

| Physical Activity (do not meet any current recommendations.) | | | |
|---|---|---|---|
| | 2012 Percent | 2012 Ratio | 2012 Grade |
| **Baltimore City** | 47.07% | 1.21 | **C** |
| **Maryland** | 39.02% | | |
| **Black** | 45.27% | 1.02 | **A** |
| **White** | 44.39% | | |
| **Men** | 43.76% | 0.88 | **B** |
| **Women** | 49.50% | | |
| **<HS** | 52.74% | 1.18 | **B** |
| **HS Grad or Equiv** | 45.77% | | |
| **College Graduate** | 44.87% | | |
| **Income <$15,000** | 43.42% | 1.17 | **B** |
| **$15,000-24,999** | 53.51% | | |
| **$25,000-49,999** | 56.19% | | |
| **$50,000-74,999** | 44.58% | | |
| **>=$75,000** | 36.96% | | |

**Source: BCHD Analysis of data from the Maryland Behavioral Risk Factor Surveillance System Question:* ***"Meet 150min aerobic or 75min vigorous aerobics and strengthening guidelines per week"***

| Seatbelt Use (less than always) | | | |
|---|---|---|---|
| | 2012 Percent | 2012 Ratio | 2012 Grade |
| **Baltimore City** | 11.87% | 1.26 | **C** |
| **Maryland** | 9.44% | | |
| **Black** | 11.41% | 1.18 | **B** |
| **White** | 9.65% | | |
| **Men** | 11.50% | 0.95 | **B** |
| **Women** | 12.15% | | |
| **< HS** | 8.65% | 0.77 | **C** |
| **HS Grad or Equiv** | 18.82% | | |
| **College Graduate** | 11.21% | | |
| **Income <$15,000** | 11.56% | 0.81 | **B** |
| **$15,000-24,999** | 11.09% | | |
| **$25,000-49,999** | 12.45% | | |
| **$50,000-74,999** | 7.33% | | |
| **>=$75,000** | 14.32% | | |

**Source: BCHD Analysis of data from the Maryland Behavioral Risk Factor Surveillance System; BRFSS Question:* ***"How often do you wear a seatbelt while in a car"***

# Health Care Access

| No health insurance | | | |
|---|---|---|---|
| | 2012 Percent | 2012 Ratio | 2012 Grade |
| **Baltimore City** | 16.57% | 1.26 | **C** |
| **Maryland** | 13.17% | | |
| **Black** | 14.53% | 0.98 | **A** |
| **White** | 14.81% | | |
| **Men** | 22.97% | 1.97 | **D** |
| **Women** | 11.65% | | |
| **<HS** | 30.83% | 5.85 | **F** |
| **HS Grad/Equiv** | 20.88% | | |
| **College Graduate** | 5.27% | | |
| **Income <$15,000** | 22.25% | 35.77 | **F** |
| **$15,000-24,999** | 29.48% | | |
| **$25,000-49,999** | 19.78% | | |
| **$50,000-74,999** | 4.56% | | |
| **>=$75,000** | 0.62% | | |

**Source: BCHD Analysis of data from the Maryland Behavioral Risk Factor Surveillance System Question:* ***"Have any kind of health insurance coverage?"***

| Unmet Healthcare Needs (12 mo) | | | |
|---|---|---|---|
| | 2012 Percent | 2012 Ratio | 2012 Grade |
| **Baltimore City** | 17.66% | 1.51 | **D** |
| **Maryland** | 11.67% | | |
| **Black** | 16.51% | 1.11 | **B** |
| **White** | 14.89% | | |
| **Men** | 21.15% | 1.41 | **C** |
| **Women** | 14.98% | | |
| **<HS** | 40.36% | 6.86 | **F** |
| **HS Grad/Equiv** | N/A | | |
| **College Graduate** | 5.89% | | |
| **Income <$15,000** | 20.48% | 25.33 | **F** |
| **$15,000-24,999** | 36.92% | | |
| **$25,000-49,999** | 19.53% | | |
| **$50,000-74,999** | 4.84% | | |
| **>=$75,000** | 0.81% | | |

**Source: BCHD Analysis of data from the Maryland Behavioral Risk Factor Surveillance System Question:* ***"Was there a time in the past 12 months when you could not afford to see a doctor?"***

| 2 or More Years Since Last Dental Visit | | | |
|---|---|---|---|
| | 2012 Percent | 2012 Ratio | 2012 Grade |
| **Baltimore City** | 18.02% | 1.22 | **C** |
| **Maryland** | 14.80% | | |
| **Black** | 16.85% | 1.05 | **B** |
| **White** | 16.05% | | |
| **Men** | 21.56% | 1.41 | **C** |
| **Women** | 15.31% | | |
| **<HS** | 32.49% | 3.89 | **F** |
| **HS Grad/Equiv** | 16.03% | | |
| **College Graduate** | 8.34% | | |
| **Income <$15,000** | 32.91% | 5.49 | **F** |
| **$15,000-24,999** | 49.51% | | |
| **$25,000-49,999** | 14.50% | | |
| **$50,000-74,999** | 7.48% | | |
| **>=$75,000** | 5.99% | | |

**Source: BCHD Analysis of data from the Maryland Behavioral Risk Factor Surveillance System Question:* ***"How long since you last visited a dentist for any reason?"***

# Role of Income in Health Disparities

Underlying factors, the social determinants of health, impact the conditions in which residents live, learn, work, and play. Important facets of this include access to healthy food, appropriate housing, quality schools, and safe places to be active. Therefore it is not surprising that income plays a significant role in the health outcomes of Baltimore City residents.

More than one third of Baltimore households earn less than $25,000[2]; these households are more likely to have unmet healthcare needs and to be uninsured. These are also areas of enormous health disparities; according to the BRFSS survey, comparing the lowest income earners (less than $15,000) to the highest income earners (greater than $75,000) results in disparity ratios of 35.77 to 1 for no health insurance coverage, 25.33 to 1 for unmet healthcare needs, and 6.8 to 1 for 'poor' or 'fair' health status.

The Affordable Care Act (ACA) has extended both Medicaid benefits and private insurance subsidies to those with the lowest incomes. Prior to this, many low-wage jobs did not offer employee-sponsored health insurance, and individual policies were often too expensive for individuals. Recent experience with a large group of previously uninsured individuals gaining health insurance coverage indicate that the most notable proximate effects of gaining insurance are financial stability and some modest improvement in mental health outcomes.[3] Given the complexity that social determinants of health contribute to health outcomes, it may take years to realize statistically measurable statistically significant health improvements at the population level.

Overall, it has been well documented that level of income directly affects overall health and mortality. Within this report, disparities among the lowest income earners (household median income <$15,000 per year) and the highest income earners (household median income ≥$75,000 per year) are persistent in childhood asthma (ratio 2.76:1), mental health (ratio 3.16:1), diabetes (ratio 6.8:1), and smoking (ratio 2.29:1).

If we were to consider how many premature deaths (deaths before age 75 years of age) could be avoided if all Baltimore residents had equal opportunity to good health by using income as a sole determinant of mortality, 50.1% of deaths citywide could potentially be averted. This is determined by applying the premature mortality rate of the Community Statistical Areas (CSAs) with a 2012 median household income of >=$75,000 (6 total) to the remaining 49 CSAs. The map below shows the percent of deaths that could be averted in each CSA if its death rate also equaled that of the 6 highest-income CSAs. In 26 of the 49 CSAs (53%) with median household incomes <$75,000 per year, ≥50% of deaths could be avertable.

Percent of Premature Deaths (<75 Years Old) that Could Be Avertable if all Community Statistical Areas had the Same Mortality Rate as the 6 CSAs with a Median Household Income of >$75,000

Cross-Country/Cheswolde
Mount Washington/Coldspring
Greater Roland Park/Poplar Hill
North Baltimore/Guilford/Homeland
Chinquapin Pk/Belvedere
Loch Raven
Harford/Echodale
Hamilton
Glen-Fallstaff
Pimlico/Arlington/Hilltop
Greater Govans
Northwood
Lauraville
Southern Park Heights
Howard Park/West Arlington
Dorchester/Ashburton
Medfield/Hampden/Woodberry/Remington
Cedonia/Frankford
Greater Charles Village/Barclay
The Waverlies
Belair-Edison
Penn North/Reservoir Hill
Midway/Coldstream
Forest Park/Walbrook
Greater Mondawmin
Dickeyville/Franklintown
Clifton-Berea
Claremont/Armistead
Greenmount East
Greater Rosemont
Midtown
Upton/Druid Heights
Edmondson Village
Jail
Oldtown/Middle East
Madison/East End
Sandtown-Winchester/Harlem Park
Patterson Park North & East
Orangeville/East Highlandtown
Beechfield/Ten Hills/West Hills
Poppleton/The Terraces/Hollins Market
Downtown/Seton Hill
Harbor East/Little Italy
Southwest Baltimore
Allendale/Irvington/S. Hilton
Fells Point
Highland-town
Canton
Inner Harbor/Federal Hill
Washington Village/Pigtown
Southeastern
Morrell Park/Violetville
South Baltimore
Westport/Mount Winans/Lakeland
Cherry Hill
Brooklyn/Curtis Bay/Hawkins Point

## Legend

### Percent of Deaths < 75 Years Old that could be avertable, by CSA, 2008-12

- 65.4% - 84.7%
- 55.8% - 65.3%
- 45.8% - 55.7%
- 37.5% - 45.7%
- -5.0% - 37.4%

Categorized into quintiles

Reference CSAs: 2012 Median Household Income > $75,000

Miles: 0 0.5 1 2 3 4

*Prepared by the Baltimore City Health Department.*
*Mortality data provided by the Maryland Vital Statistics Administration.*

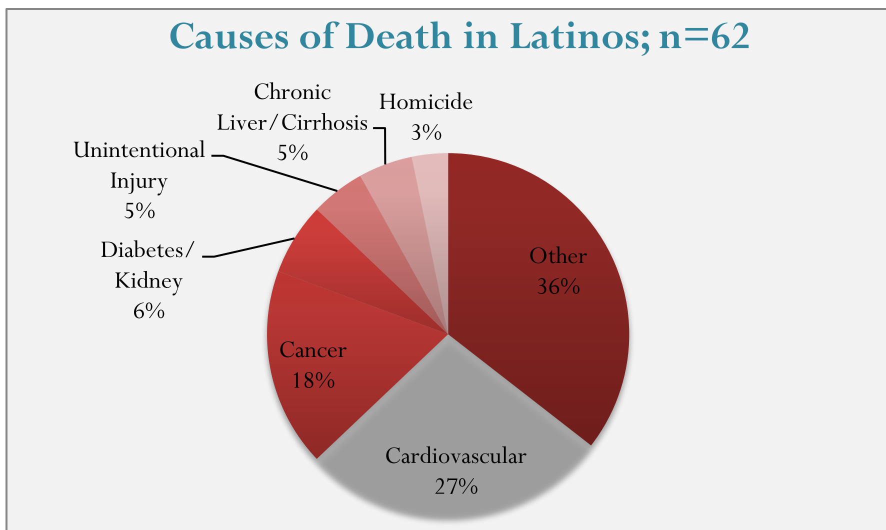
## Latino Health

While the Hispanic/Latino community remains a relatively small proportion of the overall population of Baltimore City, the rate of population growth is unmatched by any other group. In 2000, the US Census recorded 11,061 Latino individuals residing in Baltimore; by 2012, that number more than doubled to 27,571. Meanwhile, the total population of Baltimore City declined slightly from 651,154 to 621,342 over the same period of time.[2]

Latinos now comprise 4.4% of the city's population, and we can expect that number to increase in the coming years.[2] The Latino Health Report published by the Baltimore City Health Department in 2011 highlighted many of unique positive health features of this population, among which were lower median age, lower mortality rates, and lower rates of smoking. Unfortunately, it also noted the increased risk of being uninsured, and higher rates of binge alcohol consumption, unintentional injury and accidental death.[4]

Due to the relatively low total population, many of the tools employed for data collection, such as the Maryland Behavioral Risk Factor Surveillance System, have not captured Latino individuals in large enough numbers for data to be relied upon to represent the entire community or to be compared with other racial/ethnic sub-groups. In 2012 in Baltimore City, Latinos remain a younger population than their ethnic counterparts: median age is 28.5 years for Latinos, 36.4 for Non-Hispanic Whites, and 34.5 for Blacks.[2] Additionally, Latinos experienced a significantly lower mortality rate in 2012 at 224.9 per 100,000, compared to 1,056.6 and 1,138.1 in the non-Hispanic white and black populations, respectively.[5] Discordantly, Latinos in Baltimore City have a considerably higher risk of being uninsured, with 35.9% reporting no health insurance coverage in 2012 compared to 3.8% for Whites and 27.9% for Blacks.[2] Furthermore, despite the low overall mortality rate, unintentional injury and chronic liver disease/cirrhosis are tied as the fourth leading cause of death amongst Latinos. These causes of death are considerably less common in the White and Black populations.[5]

When analyzing mortality data, it is important to note that the total number of deaths recorded within the Latino community in Baltimore City in 2012 was only 62.[5] Of the 62 Latino deaths in Baltimore City, cardiovascular disease and cancer were among the most prevalent causes of death.




Considering the trends we continue to see within the Latino community, it is apparent that disparities already exist. Therefore, despite data limitations, these statistics highlight key areas that should continue to be tracked so that interventions can appropriately address the most salient health issues for the Latino population in Baltimore City.

## Summary and Conclusions

| Cumulative Report Card | | |
|---|---|---|
| **Mortality** | **Median Disparity** | **Median Grade** |
| All-Cause | 1.13 | B |
| Cardiovascular | 1.11 | B |
| All-Cancer | 1.44 | C |
| Lung Cancer | 1.05 | A |
| Breast Cancer | 1.12 | B |
| Colon Cancer | 1.30 | C |
| Prostate Cancer | 2.21 | D |
| Stroke | 1.14 | B |
| Diabetes | 1.45 | C |
| HIV/AIDS | 4.87 | F |
| Homicide | 8.71 | F |
| Infant Mortality | 2.59 | D |
| **Individual Health Status** | | |
| Fair/Poor Health | 1.81 | D |
| Obesity | 1.50 | C |
| Diabetes | 2.50 | D |
| High Blood Pressure | 1.24 | C |
| Adult Asthma | 0.99 | A |
| Childhood Asthma | 2.14 | D |
| Smoking status | 1.70 | D |
| Mental Health | 1.13 | B |
| **Healthy Homes and Communities** | | |
| Physical Activity | 1.09 | B |
| Seatbelt Use | 0.95 | B |
| **Healthcare** | | |
| Uninsured | 1.97 | D |
| Unmet Healthcare needs | 1.51 | D |
| ≥ 2 years since last dental visit | 1.41 | C |

Despite improvements in many key areas, significant health disparities persist in Baltimore City. The distribution of disparities based on race, gender, education, and income highlights opportunities for more targeted efforts that can assist in accelerating better health outcomes for all Baltimore residents and attaining health equity.
A glaring area of focus is the difference between residents of distinct education levels and income brackets. Lower education and income levels resulted in significant disparities, receiving F's in the majority of Mortality markers examined.

Additionally, gender and race present opportunities to address disparities in mortality by homicide and from HIV/AIDS, with males faring worse than females. Females had higher rates of adult and childhood asthma, obesity, diabetes, and reported mental health outcomes. With regard to race, Blacks had poorer outcomes in specific areas, including mortality from colon cancer, prostate cancer, HIV/AIDS, and homicide. Substantial disparities were also seen in the prevalence of diabetes and obesity, with Blacks disproportionately affected. White counterparts experienced higher rates of mortality from lung cancer, despite a smaller prevalence of tobacco use between the two races.

**FINAL GRADE**

**C-**

As Baltimore City focuses on the goals of *Healthy Baltimore 2015* and continues to monitor progress made across many of these health indicators, it is also important to note how disparity information can inform future efforts. Policies, public works, education programs, and outreach endeavors focusing on the demographic groups most affected stand to accelerate achieving not only improved health status but also health equity for all Baltimore City residents.

## Data Sources

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[1] Commission on the Social Determinants of Health (2008). *Closing the gap in a generation: health equity through action on the social determinants of health*. Final Report, Geneva, World Health Organization.

[2] U.S. Census Bureau, 2012 American Community Survey.

[3] Baicker K, Taubman SL, Allen HL, et al. (2013). *The Oregon Experiment – Effects of Medicaid on Clinical Outcomes.* New England Journal of Medicine 2013; **368**: 1713-22.

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