

BALTIMORE CITY HEALTH DISPARITIES REPORT CARD 2013

Baltimore City Health Department

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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.

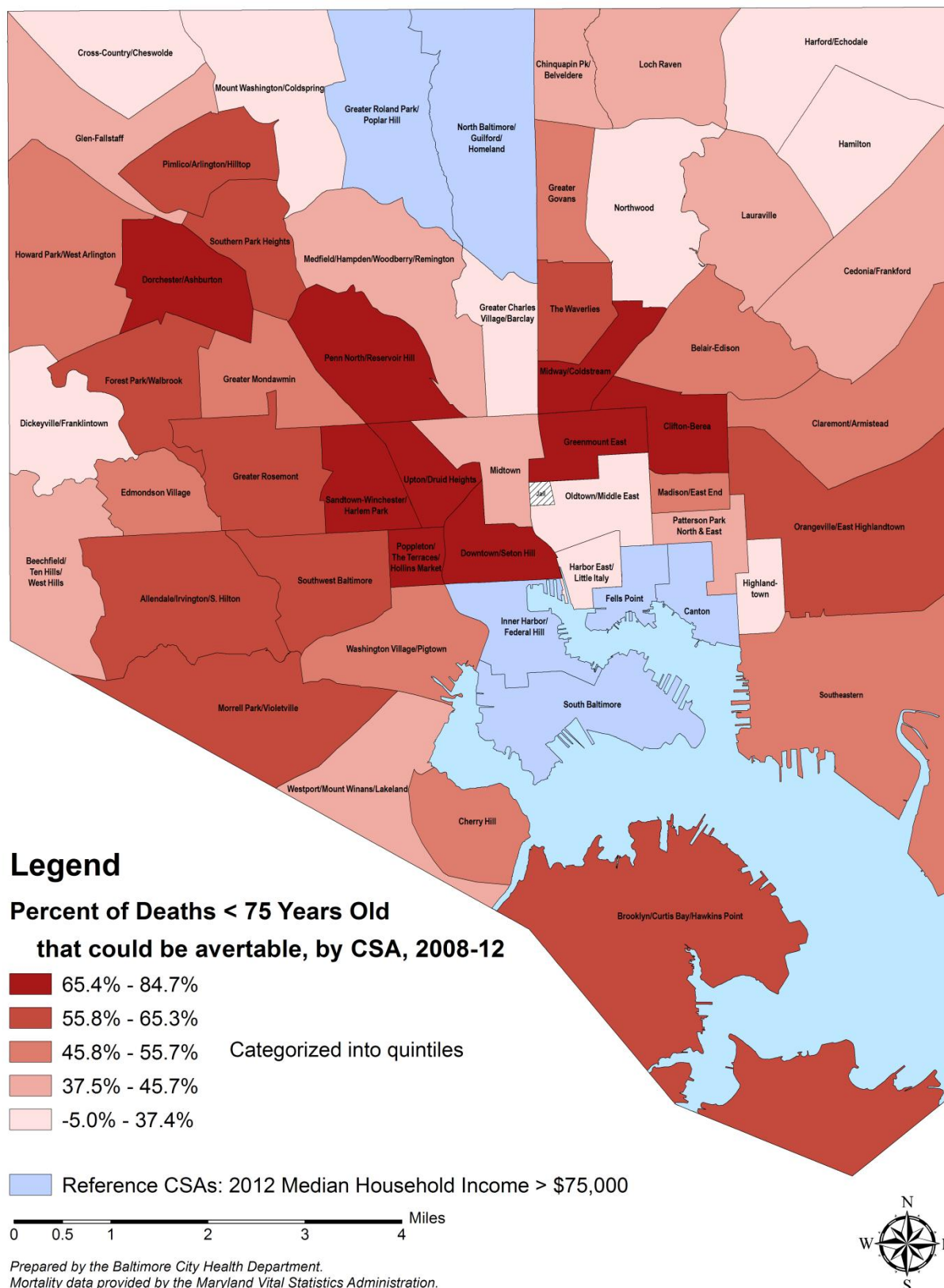
More than one third of Baltimore households earn less than \$25,000²; these households are more likely to have unmet healthcare needs and to be uninsured. These are also areas of enormous health disparities; according to the BRFSS survey, comparing the lowest income earners (less than \$15,000) to the 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



Latino Health

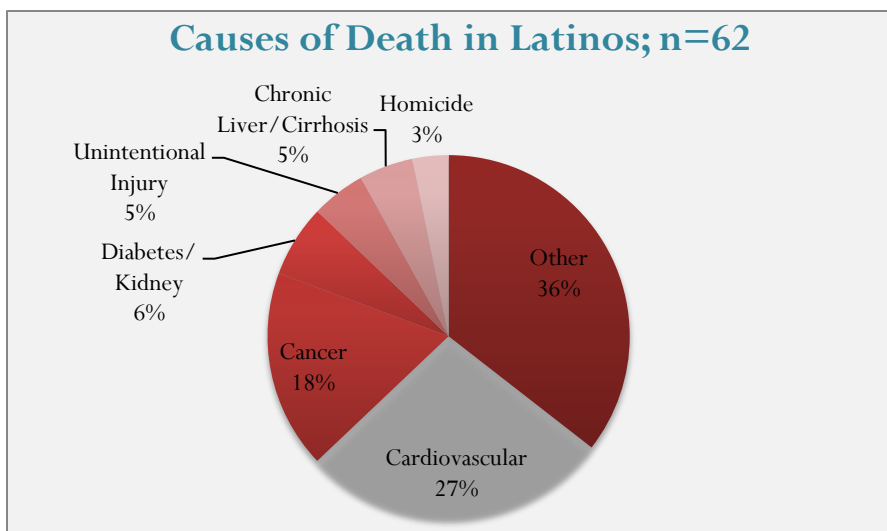
While the Hispanic/Latino community remains a relatively small proportion of the overall population of Baltimore City, the rate of population growth is unmatched by any other group. In 2000, the US Census recorded 11,061 Latino individuals residing in Baltimore; by 2012, that number more than doubled 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

Maryland Department of Health and Mental Hygiene, Vital Statistics Administration. 2012:
<http://www.vsa.state.md.us/html/reports.html>

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U.S. Census Bureau: 2012 Population Estimates Program, 2012 American Community Survey American Fact Finder: http://factfinder.census.gov/home/saff/main.html?_lang=en

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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.

⁴ Office of Epidemiology Services, Baltimore City Health Department (2011). *The Health of Latinos in Baltimore City 2011*. http://www.baltimorehealth.org/press/2011_10_20_Health_of_Latinos_Report_ENG.pdf

⁵ Maryland Department of Health and Mental Hygiene, Vital Statistics Administration (2012). *Maryland Vital Statistics Report 2012*. <http://dhmh.maryland.gov/vsa/Documents/12annual.pdf>