The Mortality Rate of Black Women with Breast Cancer Compared to the General Population in Massachusetts

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
SUMMER ENRICHMENT PROGRAM 2021

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What is Breast Cancer?

Breast cancer is the uncontrollable growth of breast cells.

There are different types of breast cancers depending on the type of breast cell and the location in which the cancer develops.

The two most common types of breast cancer are Invasive ductal carcinoma and Invasive lobular carcinoma.

Invasive ductal carcinoma—Occurs when cancerous breast cells grow outside of the ducts and spread into other areas within the breast.

Invasive lobular carcinoma—Occurs when cancerous breast cells move from the lobules and spread to nearby breast tissues.

Cancer cells that are invasive have the ability to spread and grow in other regions of the body.
Symptoms

- Changes in shape, color, touch, or size of the breast(s)
- Changes in the appearance of one or both nipples
- Painful, swollen, irritated, or itchy breasts
- Nipple discharge
- Dryness or flaking of the skin of the nipple
- Lumps or thickening of the skin on or inside of the breasts
- Pitting of the breast skin (skin resembles that of an orange)

Treatments

- **Surgery** - An operation where physicians surgically remove cancerous cells and tissues
- **Chemotherapy** - Utilizes medication to eliminate or decrease the size of cancerous tissues. This medication can be administered intravenously or in the form of a pill
- **Hormonal Therapy** - Prevents the cancerous cells from receiving the hormones necessary for growth
- **Biological Therapy** - Partners with your immune system to fight cancerous cells. It also helps regulate side effects from other treatments
- **Radiation Therapy** - Utilizes high-intensity rays to destroy cancerous cells
Introduction

- Early Breast Cancer diagnosis
- Incidence vs. Mortality rate in Massachusetts
- Socioeconomic status
- Mammogram screenings
- Breastfeeding among Black mothers and its potential correlation with breast cancer
What is a Health Disparity?

A health disparity is defined as “differences that exist among specific population groups in the attainment of full health potential and in incidence, prevalence, mortality, and burden of disease and other adverse health conditions.” (NIH, 2010)
INCIDENCE RATE OF BREAST CANCER IN MASSACHUSETTS COMPARED TO NATIONAL INCIDENCE RATE

Massachusetts Breast Cancer Coalition
As of 2019 (United States Census Bureau):

- Total population of women: 3.547 million
- Population of Black women: 268,694
- Black women account for ~7.57% of women in Massachusetts
INCIDENCE RATE IN MASSACHUSETTS (2017)

United States Cancer Statistics, CDC
MORTALITY RATE IN MASSACHUSETTS (2017)

United States Cancer Statistics, CDC
## SOCIOECONOMIC STATUS IN MASSACHUSETTS

### UNINSURED RATES FOR THE NONELDERLY (2019)

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian/Native Hawaiian and Pacific Islander</th>
<th>American Indian/Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>3.0%</td>
<td>5.5%</td>
<td>5.8%</td>
<td>2.8%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### POVERTY LEVEL (2019)

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian/Native Hawaiian and Pacific Islander</th>
<th>American Indian/Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>6.5%</td>
<td>17.8%</td>
<td>19.2%</td>
<td>10.7%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

BOSTON'S ZIP CODE SIGNIFICANCE

Black Residential Patterns (ACS 2013 – 2017)

American Community Survey, 2011-2015, U.S. Census Bureau
BOSTON'S ZIP CODE SIGNIFICANCE

American Community Survey, 2011-2015, U.S. Census Bureau
MEDIAN EARNINGS AND POVERTY RATE BY SEX

American Community Survey, 2015, U.S. Census Bureau
MAMMOGRAM RATES IN MASSACHUSETTS

Percent of women ages 40 and older who report having had a mammogram within the past 2 years

<table>
<thead>
<tr>
<th></th>
<th>All Women</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>Asian &amp; Native Hawaiian or Pacific Islander</th>
<th>American Indian/Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>68%</td>
<td>68%</td>
<td>n/a</td>
<td>54%</td>
<td>n/a</td>
<td>66%</td>
</tr>
</tbody>
</table>

NOTES: Some estimates are “n/a” because point estimates do not meet the minimum standards for statistical reliability.

- Women at the age of 40 should be screened every year or more depending on cancer level.
- Early detection leads to early diagnosis for the appropriate treatment.
- Insurance coverage pose some limitations.

Kaiser Family Foundation analysis of the Center for Disease Control and Prevention (CDC)’s Behavioral Risk Factor Surveillance System (BRFSS) 2014-2016 Survey Results.
Limitations of Insurance coverages

- Women enrolled in a Medicare Part D drug plan who are at high risk for breast cancer may have coverage for chemoprevention drugs, but there is no requirement for Part D plans to cover these drugs without cost sharing.

- State Medicaid programs are permitted to charge nominal cost sharing amounts, which can be an obstacle since women on the program have very low incomes by definition, and even a few dollars can pose a barrier to receiving care.

Note: Among 2,751 women ages 18-64 with insurance
STAGE OF DIAGNOSIS

Figure 8: Stage at Diagnosis by Race/Ethnicity in Massachusetts Females, Breast Cancer, 2011-2015

Data source: Massachusetts Cancer Registry
Ongoing research shows that breastfeeding reduces the risk of breast cancer.

Fewer non-Hispanic Black infants (73.7%) are ever breastfed compared with Asian infants (90%), non-Hispanic White infants (86.7%) and Hispanic infants (84.1%). (CDC)
Evidence shows that there is a disparity of breast cancer mortality among Black women in Massachusetts.

Early detection and treatment is key!

Socio-psychological phobia due to Tuskegee Syphilis Study and histories like Henrietta Lacks' are barriers that cause resistance in screening and treatments.
Coverage for genetic counseling and testing for mutation of the BRCA1 and BRCA2 genes in some women with a personal or family history of breast, ovarian, fallopian tube, or peritoneal cancer.

Screening mammography at least every 2 years and as frequently as once a year for women ages 40 to 74 with average-risk for breast cancer.

Provide information to those that are not informed about how to perform at home screenings.

Start educating young women earlier in life about the warning signs, symptoms, and age to start screening for breast cancer. This can be accomplished through commercials, radio programs, school health classes, and visits with their primary care provider.

Increasing the likelihood of black women to attend the necessary appointments as consistently as they should. We can achieve this by providing child care for patients at health care facilities.

Azuonye C. “The Impact of Access, Socioeconomic Status, and Education on Breast Cancer Screening in Boston, MA.” Walden University, 2019. https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=9183&context=dissertations.


Family Foundation, Kaiser. “Poverty Rate by Race/Ethnicity.” KFF, 23 Oct. 2020, www.kff.org/other/state-indicator/poverty-rate-by-raceethnicity/?currentTimeframe=0&selectedRows=%7B%22states%22%3A%7B%22massachusetts%22%7D%7D&sortModel=%7B%22colId%22%3A%22location%22%2C%22sort%22%3A%22asc%22%7D.


Any Questions?