The Ubiquity of Disparities Pertaining to Cervical Cancer in Black Women Compared to the General Massachusetts Population

By: Shakendine Kelkboom, Melissa Dorzin, Liana Munoz, Ewaldine Fedna
Cervical Cancer

What is Cancer?
  ○ Disease where cells grow uncontrollably and spreads throughout the body
    ■ Cervical Cancer: Tumors that grow and develop from abnormal cell changes in the cervix which starts in the lower uterus to the vagina.

Who is At Risk?
  ○ All Women
    ■ Ages 35-44; average diagnosed at age 50
    ■ Rare for ages younger than 20

Prognosis
  ○ 5-year survival rate for all people with cervical cancer is 66%
    ■ 5-year survival rate: white women (71%), black women (58%)
What Is A Disparity?

“What Health disparities are health differences that adversely affect socially disadvantaged groups. Health disparities are systematic, plausibly avoidable health differences according to race/ethnicity, skin color, religion, or nationality; socioeconomic resources or ...other characteristics associated with discrimination or marginalization” (Braveman et al. 2011).
Disparities in Cervical Cancer

There is a disparity among Preventative Care, Diagnosis, and Treatment among Black women in cervical cancer compared to the general Massachusetts population.

Massachusetts Department of Public Health:

- Demographics (MA)
  - The incidence rate of cervical cancer was 1.7 times higher among non-Hispanic Black women than non-Hispanic White women.
  - The mortality rate of cervical cancer was 1.8 times higher among non-Hispanic Black women than non-Hispanic White women.
Social Determinants of Health

- Economic Stability
- Social & Community Context
- Education
- Health Care
- Neighborhood & Environment
Socioeconomic Status

**INCOME**

- **Cervical Cancer Screening - Less than $25,000**
  - MA: 89.7%
  - U.S.: 79.8%
- **Cervical Cancer Screening - $25-$49,999**
  - MA: 88.2%
  - U.S.: 82.8%
- **Cervical Cancer Screening - $50-$74,999**
  - MA: 88.9%
  - U.S.: 86.7%
- **Cervical Cancer Screening - $75,000 or More**
  - MA: 91.5%
  - U.S.: 88.2%

Percentage of women ages 21-44

**EDUCATION**

- **Cervical Cancer Screening - High School Grad**
  - MA: 78.9%
  - U.S.: 79.4%
- **Cervical Cancer Screening - Some College**
  - MA: 85.6%
  - U.S.: 85.3%
- **Cervical Cancer Screening - College Grad**
  - MA: 88.9%
  - U.S.: 87.1%

Percentage of women ages 21-44

Lower income = Less likely get screened

More Education = More likely to get screened

Preventative Care

“Preventive care helps detect or prevent serious diseases and medical problems before they can become major” (Cigna et al. 2021).

What Can Women Do to Prevent This?

○ HPV Vaccine: The HPV vaccine protects against the types of HPV that most often cause cervical, vaginal, and vulvar cancers.

○ Get regular Screening tests
  ■ Pap Test (Pap Smear)
  ■ HPV Test

How to Lower Your Risks According to The CDC:

■ Don’t smoke
■ Use condoms during sex
  ● Condoms prevent STI’s including HPV which is directly linked to Cervical Cancer
■ Limit your number of sexual partners
What is Screening?

“Cervical cancer screening is used to find changes in the cells of the cervix that could lead to cancer.”
-The American College of Obstetricians and Gynecologists

Pap Test (Pap Smear)
- Ages 21-65 every 3 years
- Cells are scraped from cervix and studied:
  - Abnormal cells = repeat test after 6 months

HPV Papillomavirus (HPV)
- Ages 30+ every 5 years
- Cause of most cervical cancer
- Tested for most common high-risk HPV (HPV 16/18)
- **Reasoning:** Abnormal Pap Test
Though Black women are getting screened they are still getting diagnosed at later stages compared to White women.
Diagnosis

- **What ways do they Diagnose?**
  - Pap Smears, HPV tests, Colposcopies, Bimanual pelvic examination, and biopsies

- **What do they look for?**
  - Early signs of Cervical Cancer
    - Asymptomatic

- **Signs and Symptoms**
  - Abnormal vaginal bleeding
  - Increased vaginal discharge
  - Bleeding after going through menopause
  - Pain during sex
  - Pelvic pain

Stages of Cancer

- **Normal**: Nothing abnormal detected. Continue routine screening.
- **Precancerous Lesion**: Remove precancerous lesion to prevent cancer development.
- **STAGE I Localized**: Cancer is detected at an early stage. Treat as appropriate for the type of cancer and the exact stage of disease at diagnosis.
- **STAGE II Early Locally Advanced**: Cancer is detected at an early stage. Treat as appropriate for the type of cancer and the exact stage of disease at diagnosis.
- **STAGE III Late Locally Advanced**: Cancer is detected at a late stage. Treat as appropriate for the type of cancer and the exact stage of the disease at diagnosis.
- **STAGE IV Metastasized**: Metastasized cancer.

*American Association for Cancer Research (AACR) Cancer Disparities Progress Report 2020*
Racial Disparities Within Diagnosis

**PATTERNS OF CERVICAL CANCER BY STAGE AT DIAGNOSIS**

<table>
<thead>
<tr>
<th>Stage at diagnosis</th>
<th>Stage I N (%)</th>
<th>Stage II N (%)</th>
<th>Stage III N (%)</th>
<th>Stage IV N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1,102 (50.3)</td>
<td>741 (33.8)</td>
<td>289 (13.2)</td>
<td>61 (2.8)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>White, non-Hispanic</td>
<td>817 (49.8)</td>
<td>552 (33.6)</td>
<td>232 (14.1)</td>
<td>41 (2.5)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>86 (44.8)</td>
<td>66 (34.4)</td>
<td>30 (15.6)</td>
<td>10 (5.2)</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>64 (53.8)</td>
<td>38 (31.9)</td>
<td>14 (11.8)</td>
<td>-</td>
</tr>
<tr>
<td>Hispanic</td>
<td>110 (56.4)</td>
<td>73 (37.4)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Based on SEER summary staging; N = number; percentages may not add up to 100% due to rounding; 45 cases with unknown race/ethnicity; cells with less than 10 observations not shown; Data source: Massachusetts Cancer Registry

- Black women have an incidence rate of 8.3% where as white women have an incidence rate of 7.3%
- Black, non-Hispanic women were less likely to be diagnosed with stage I or II disease when compared with white, non-Hispanic women (79.2% vs 83.4% respectively)
Racial Disparities Within Treatment

- **Surgery**: Hysterectomy procedure
  - 2nd most common procedure in U.S.
  - This is the **removal** of the **uterus / womb**
  - Cultural barriers/ Gap of knowledge

- **Radiation Therapy + Chemotherapy**: Concurrent chemoradiation

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Cook, E. E. et al. (2018)
Nardi, C. et al. (2016)
Malpractice

“Medical malpractice occurs when a hospital, doctor or other health care professional, through a negligent act or omission, causes an injury to a patient” (Nolan et al. 2015).

- **Malpractice in 2016**: “I had an abnormal pap smear and they wanted to freeze my cervix, so I left that provider. They told me that they would watch me but I didn't trust him, he waited until my warts turned into cancer.” - Cervical Cancer Survivor

Incidence: The incident cases of cervical cancer are the number of people who are newly diagnosed with the disease during a specific time period.

Mortality: The number of deaths is the number of people who died due to cervical cancer during a specific time period.
Black women compared to the general population do not receive the same amount of care/treatment in terms of cervical cancer.

Conclusion & Why This Matters


Chowdhry,V . (2020). The Future of SDoH: The Power of Personal Determinants of Health


https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5899047/


Any Questions?