Reducing Disparities in Women’s Cancers

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Objectives

• Health Disparities

• Breast & Cervical Cancer Data

• Disparities

• What can you do?

• Resources for your patients
National Cancer Institute Cancer Disparities

Definition:

• adverse differences in cancer incidence (new cases)
• cancer prevalence (all existing cases)
• cancer death (mortality)
• cancer survivorship
• burden of cancer or related health conditions that exist among specific population groups in the United States

Population of the United States by Race & Hispanic Origin:
2010 & Projected 2050

% Percent of Total U.S. Population

<table>
<thead>
<tr>
<th>Race</th>
<th>2010</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>74.8</td>
<td>77.3</td>
</tr>
<tr>
<td>non-Hispanic White</td>
<td>63.7</td>
<td>49.1</td>
</tr>
<tr>
<td>African American</td>
<td>13.6</td>
<td>15.0</td>
</tr>
<tr>
<td>American Indian / Alaska Native</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Asian</td>
<td>5.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Hispanic / Latino</td>
<td>16.3</td>
<td>30.3</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau.
What has the highest impact in determining health?

A. Genetics
B. Access to health care
C. Lifestyle
D. Environment

*Lifestyle*
The World Health Organization Commission defined social determinants of health as the conditions in which people are born, grow, live, work and age, including the health system.”
Social Conditions and Policies
- Culture, Norms, Racism, Sexism
- Discrimination, Public Policies, Poverty

Institutions
- Health Care System, Families, Churches,
  Community-based organizations, Legal System, Media, Political System

Social/Physical Context
- Collective Efficacy, Social Capital,
  Access to Resources, Social Cohesion,
  Segregation, Neighborhood Disadvantage,
  Neighborhood Stability

Social Relationships
- Social Networks, Social Support
- Social Influences, Social Engagement

Individual Risk Factors
- Age, SES, Education, Obesity,
  Tobacco Use, Acculturation,
  Diet, Race

Biologic/Genetic Pathways
- Allostatic Load, Metabolic Processes,
  Physiological Pathways, Genetic Mechanisms

Fundamental Causes

Patterns of Social Organization

Cancer/Health Disparities

Individual Characteristics

Biology

Source: Warnecke et al., AJPH 2008
What is the most common female cancer in the U.S.?

A. Lung Cancer
B. Cervical Cancer
C. Ovarian Cancer
D. Breast Cancer

Breast Cancer
2009 Estimated U.S. Cancer Deaths

Breast cancer is the most common female cancer in the United States

Breast Cancer is the second most common cause of cancer death in women

Breast Cancer is the main cause of death in women ages 45 to 55

- 26% Lung & bronchus
- 15% Breast
- 9% Colon & rectum
- 6% Pancreas
- 5% Ovary
- 4% Non-Hodgkin lymphoma
- 3% Leukemia
- 3% Uterine corpus
- 2% Liver & intrahepatic bile duct
- 2% Brain/ONS*
- 25% All other sites

ONS=Other nervous system.
Breast Cancer: 1 in 8 women (12%) Lifetime Risk

Three main parts:

- **Lobules** - produce milk - **Lobular carcinoma in situ (LCIS)**
- **Ducts** - passages that carry milk to the nipple - **Ductal carcinoma in situ (DCIS)**
- **Connective tissue** - consists of fibrous and fatty tissue connects and holds everything together
Rates of new cases (incidence) and death (mortality) from invasive breast cancer by race and ethnicity, United States (2005-2009)

- Non-Hispanic White: 123.3 new cases, 22.4 death
- African American: 118.0 new cases, 31.6 death
- Hispanic*/Latina: 93.0 new cases, 14.9 death
- American Indian/Alaska Native: 89.1 new cases, 16.6 death
- Asian American/Pacific Islander: 85.9 new cases, 11.9 death

*Women of Hispanic origin may be any race.

American Cancer Society, Cancer Facts & Figures, 2013

http://ww5.komen.org/uploadedFiles/Content_Binaries/806-373a.pdf
Female Breast Cancer Incidence Rates* by State, 2010

Female Breast Cancer Death Rates* by State, 2010

Breast Cancer Disparities

Compared to White Women:

- African-American- **higher** risk of late-stage breast cancer at any age

Poverty strongly affects the probability of a late stage diagnosis of breast cancer, regardless of race

- A 10% increase in rate of poverty ↑ increases OR for a late stage by 1.07

Young women of color are more likely to get aggressive cancer and more likely to present with late stage breast cancer

(Campbell, et al, Health and Place. 2009)
Breast Cancer Disparities

Latinas

- have lower breast cancer rates than white women
- more likely than whites to be diagnosed at a later stage (i.e. cancer is more advanced and harder to treat)
- even with early diagnosis, are more likely to have tumors that are larger and harder to treat than white women
- seem to get breast cancer at younger ages

Women with breast cancer from neighborhoods with high immigration

- 10% more likely to present with late stage diagnosis
- Immigrants less likely to be eligible Medicaid which is main payer for Community Health Centers

Breast Cancer: What can you do?

Provider:
- educate yourself
- preventive services
- partners in the community/society
- resources for patient & family
Which is not a risk factor for breast cancer?

A. Having at least one alcoholic drink a day
B. BRCA1 or BRCA2 carrier
C. Having your first baby at age 31
D. BMI 26 (normal BMI)

**BMI 26 (normalBMI)**
Breast Cancer Risk Factors

Reproductive Risk Factors
- Early Menarche
- Late menopause
- Older age at delivery
- Never giving birth
- Not breastfeeding
- Long-term use of hormone replacement therapy

- Getting older
- Personal history of breast cancer or some non-cancerous breast diseases
- Family history of breast cancer (mother, father, sister, brother, daughter, or son)
- Treatment with radiation therapy to the breast/chest
- Dense breasts by mammogram
- Being overweight (increases risk for breast cancer after menopause)
- BRCA1 or BRCA2 carrier
- Drinking alcohol (more than one drink a day)
- Not getting regular exercise
## Breast Cancer Screening Recommendations

<table>
<thead>
<tr>
<th></th>
<th>Mammography</th>
<th>Clinical Breast Examination</th>
<th>Breast Self-Examination Instruction</th>
<th>Breast Self-Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>American College of Obstetricians and Gynecologists</td>
<td>Age 40 years and older annually</td>
<td>Age 20–39 years every 1–3 years</td>
<td>Consider for high-risk patients</td>
<td>Recommended</td>
</tr>
<tr>
<td>American Cancer Society</td>
<td>Age 40 years and older annually</td>
<td>Age 20–39 years every 1–3 years</td>
<td>Optional for age 20 years and older</td>
<td>Recommended</td>
</tr>
<tr>
<td>National Comprehensive Cancer Network</td>
<td>Age 40 years and older annually</td>
<td>Age 20–39 years every 1–3 years</td>
<td>Recommended</td>
<td>Recommended</td>
</tr>
<tr>
<td>National Cancer Institute</td>
<td>Age 40 years and older annually</td>
<td>Recommended</td>
<td>Not recommended</td>
<td>—</td>
</tr>
<tr>
<td>U.S. Preventive Services Task Force</td>
<td>Age 50–74 years biennially</td>
<td>Insufficient evidence</td>
<td>Not recommended</td>
<td>—</td>
</tr>
</tbody>
</table>

ACOG Practice Bulletin: Breast Cancer Screening: Number 122, August 2011
Women aged 50–74 years who reported having a mammogram within the past 2 years, by race and ethnicity, in 2010

• Federal program
• uninsured and underinsured women at or below 250% of federal poverty level;
• ages 21–64 for cervical screening;
• ages 40–64 for breast screening.
• Priority populations include older women for breast cancer screening, women rarely or never screened for cervical cancer, and racial and ethnic minority women.
• Between 2006 and 2011, 27% of women screened for cervical cancer and 24% of women screened for breast cancer were Hispanic.
• Between 2006 and 2011, 14% women screened for cervical cancer and 19% of women screened for breast cancer were black, non-Hispanic.
• **BRCA** counseling about genetic testing for women at higher risk

• **Breast Cancer Mammography** screenings every 1 to 2 years for women over 40

• **Breast Cancer Chemoprevention** counseling for women at higher risk

• **Breastfeeding** comprehensive support and counseling from trained providers, as well as access to breastfeeding supplies, for pregnant and nursing women*

• **Well-woman visits** to obtain recommended preventive services*

Services marked with an asterisk (*) must be covered with no cost-sharing in plan years starting on or after August 1, 2012.
Breast Health Apps

• iPhone – 4 stars with 283 ratings - Free

- A prevention and education tool all in one, The Keep a Breast Foundation breast cancer awareness app is the reminder every woman needs. The app provides monthly automatic reminders and instructions for breast self-exams.

Breast Cancer: Beyond the Shock

iPhone – 4.5 stars with 5 ratings - Free

Beyond the Shock literally helps users get beyond the emotional paralysis of the first weeks of breast cancer. The app is designed for everyone touched by breast cancer: women who have been diagnosed, their loved ones, and interested health professionals. Filled with education about breast cancer, this app also lets users ask questions and interact with women who have been in their shoes and lived to tell their stories. It can be an invaluable tool to help the newly diagnosed readjust to their new life.

Breast Health Websites
Cervical Cancer: A Marker for Healthcare Disparities

- The incidence of cervical cancer has decreased 50% over the last 30 years because of widespread screening with cervical cytology.
- 50% of new cervical cancers were never screened or inadequately screened.
- 60% of cervical cancers are a result of inadequate screening.
2009 Estimated U.S. Cancer Deaths

- Over 95% of Cervical Cancer is caused by HPV
- HPV 16 and 18 account for ~70% of cervical cancer

ONS=Other nervous system.
Source: American Cancer Society, "Cancer Statistics 2009: A presentation from the American Cancer Society,”

- 26% Lung & bronchus
- 15% Breast
- 9% Colon & rectum
- 6% Pancreas
- 5% Ovary
- 4% Non-Hodgkin lymphoma
- 3% Leukemia
- 3% Uterine corpus
- 2% Liver & intrahepatic bile duct
- 2% Brain/ONS*
- 25% All other sites

Cervical Cancer Disparities

Hispanics

- Highest cervical cancer rates
- 15.8 per 100,000 Hispanic females
- Almost twice the incidence rate of white females

**African American/Black** women are more likely to be diagnosed with cervical cancer

- The disproportionate burden of cervical cancer in Hispanic/Latino and African American/Black women is primarily due to a *lack of screening*
Cervical Cancer: What can you do?

Provider:
- educate yourself
- preventive services
- partners in the community/society
- resources for patient & family
Risk Factors for Cervical Cancer

• HPV infection
• Smoking
• Having HIV or immunocompromised
• Using birth control pills for a long time (five or more years).
• Having given birth to three or more children.
• Having several sexual partners.
A pap test can detect the cell changes that can be caused by high risk HPV.

True
Stages of Cancer Progression

HPV Vaccine

- 15-20 Oncogenic HPV
- Adjunct to a Pap smear, not a replacement for a Pap smear
Percentage of U.S. Women Aged 18 Years and Older Who Have Had a Pap Test in the Last 3 Years by Race* and Ethnicity†

Screening Methods for Cervical Cancer: Joint Recommendations of the American Cancer Society, the American Society for Colposcopy and Cervical Pathology, and the American Society for Clinical Pathology

<table>
<thead>
<tr>
<th>Population</th>
<th>Recommended Screening Method</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women younger than 21 years</td>
<td>No screening</td>
<td></td>
</tr>
<tr>
<td>Women aged 21–29 years</td>
<td>Cytology alone every 3 years</td>
<td></td>
</tr>
<tr>
<td>Women aged 30–65 years</td>
<td>Human papillomavirus and cytology co-testing (preferred) every 5 years</td>
<td>Screening by HPV testing alone is not recommended</td>
</tr>
<tr>
<td></td>
<td>Cytology alone (acceptable) every 3 years</td>
<td></td>
</tr>
<tr>
<td>Women older than 65 years</td>
<td>No screening is necessary after adequate negative prior screening results</td>
<td>Women with a history of CIN 2, CIN 3 or adenocarcinoma in situ should continue routine age-based screening for at least 20 years</td>
</tr>
<tr>
<td>Women who underwent total hysterectomy</td>
<td>No screening is necessary</td>
<td>Applies to women without a cervix and without a history of CIN 2, CIN 3, adenocarcinoma in situ, or cancer in the past 20 years</td>
</tr>
<tr>
<td>Women vaccinated against HPV</td>
<td>Follow age-specific recommendations (same as unvaccinated women)</td>
<td></td>
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</tbody>
</table>

ACOG Practice Bulletin: Screening for Cervical Cancer: Number 131, November 2012
Which is true?

A. The HPV vaccine can only be used in females

B. The HPV vaccine can help prevent the types of HPV associated with about 70% of cervical cancer.

C. The HPV vaccine can replace a pap test

**B. HPV vaccine can help prevent the types of HPV associated with about 70% of cervical cancer**
Recommended age for routine HPV vaccination is 11 or 12 years

**HPV4 Quadrivalent**
- Approved: females 9 through 26 yo for the prevention of cervical cancers, precancers and genital warts
- Males 9 through 26 yo for the prevention of genital warts
- Contains types 16 and 18 (high risk) and types 6 and 11 (low risk)
- 0, 2, 6 months

**HPV2 Bivalent**
- Approved: females 10 through 25 years of age for the prevention of cervical cancers and precancers
- Not approved for males or for the prevention of genital warts
- Contains types 16 and 18 (high risk)
- 0, 1, 6 months

http://www.cdc.gov/vaccines/ed/webcasts.htm
Parental Acceptance

• Studies demonstrate parents have high level of interest in HPV vaccine; are willing to have their children vaccinated

• Important factors for parental acceptability
  • Vaccine efficacy
  • Disease severity
  • Physician recommendation

• Physician skills in describing vaccines to adolescents/preadolescents and their parents and discussing sexuality – key for acceptance

Estimated Vaccination Coverage*, † among Adolescents Aged 13-17 Years§, by Race/ethnicity National Immunization Survey-Teen, United States, 2012

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>White only, non-Hispanic % (95% C.I.)</th>
<th>Black only, non-Hispanic % (95% C.I.)</th>
<th>Hispanic % (95% C.I.)</th>
<th>American Indian/Alaska Native only, non-Hispanic % (95% C.I.)</th>
<th>Asian, non-Hispanic % (95% C.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HPV↑↑↑</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>FEMALE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥1 dose</td>
<td>51.1(±2.1)</td>
<td>50.1(±5.4)</td>
<td>62.9(±4.9)</td>
<td>67.7(±15.5)</td>
<td>55.9(±10.9)</td>
</tr>
<tr>
<td>≥2 doses</td>
<td>41.8(±2.1)</td>
<td>39.5(±5.1)</td>
<td>49.3(±5.1)</td>
<td>43.2(±17.7)</td>
<td>48.1(±11.1)</td>
</tr>
<tr>
<td>≥3 doses</td>
<td>33.7(±2.0)</td>
<td>29.0(±4.7)</td>
<td>35.5(±4.8)</td>
<td>*</td>
<td>36.8(±16.5)</td>
</tr>
<tr>
<td><strong>MALE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥1 dose</td>
<td>15.2(±1.4)</td>
<td>25.9(±4.6)</td>
<td>31.7(±4.7)</td>
<td>*</td>
<td>24.9(±12.0)</td>
</tr>
<tr>
<td>≥2 doses</td>
<td>9.0(±1.1)</td>
<td>15.6(±3.8)</td>
<td>20.1(±4.1)</td>
<td>*</td>
<td>17.1(±7.8)</td>
</tr>
<tr>
<td>≥3 doses</td>
<td>4.6(±0.8)</td>
<td>5.4(±1.9)</td>
<td>12.9(±3.5)</td>
<td>*</td>
<td>NA</td>
</tr>
<tr>
<td><strong>3 dose series completion↑↑↑</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>71.8(±2.7)</td>
<td>63.7(±7.1)</td>
<td>59.3(±6.8)</td>
<td>55.4(±27.4)</td>
<td>61.8(±15.8)</td>
</tr>
<tr>
<td></td>
<td>45.2(±6.2)</td>
<td>27.8(±9.2)</td>
<td>52.1(±10.3)</td>
<td>*</td>
<td>62.7(±23.6)</td>
</tr>
</tbody>
</table>

• **Cervical Cancer** screening for sexually active women

• **Human Papillomavirus (HPV) DNA Test:** high risk HPV DNA testing every three years for women with normal cytology results who are 30 or older*

• **Well-woman visits** to obtain recommended preventive services*

Services marked with an asterisk (*) must be covered with no cost-sharing in plan years starting on or after August 1, 2012.
Tamale Lesson,
Video uses narrative storytelling to educate women about cervical cancer screening

Results showed Tamale Lesson to be highly effective in changing knowledge, attitudes and cancer screening behaviors.

http://www.youtube.com/watch?v=-s4fm1DaAG0#t=167
Cervical Cancer Apps

Cervical Cancer Prevention & Screening Information
By RSi/FocalSearch LLC

Cervical cancer screening medical app by ASCCP
Cancer: What can you do?

Provider:
- educate yourself
- preventive services
- partners in the community/society
- resources for patient & family
Thank You!
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