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The Oklahoma Breast and Cervical Cancer Act (OBCCA) was established in 1994 to implement plans to significantly decrease breast and cervical cancer morbidity and mortality in the state of Oklahoma (63 O.S. §1-554). In 2013, the OBCCA was amended and shifted the responsibility of annual reporting from the Breast and Cervical Cancer Prevention and Treatment (BCCPT) Advisory Committee to the Oklahoma State Department of Health (OSDH). The following items in this report are mandated in the OBCCA:

- Identification of populations at highest risk for breast and cervical cancer.
- Identification of priority strategies and emerging technologies, to include newly introduced therapies and preventive vaccines that are effective in preventing and controlling the risk of breast and cervical cancer.
- Funding information for breast and cervical cancer screening activities.
- Recommendations for additional funding, if necessary, to provide screenings and treatment for breast and cervical cancer for uninsured and underinsured women.
- Strategies or actions to reduce the costs of breast and cervical cancer in the state of Oklahoma.

The OBCCA established the Breast and Cervical Cancer Act Revolving Fund. The monies in the revolving fund consist of gifts, donations, and contributions from individual income tax returns. In addition, $20 of each Fight Breast Cancer license plate sold is deposited into the Breast and Cervical Cancer Act Revolving Fund. Samples of the Fight Breast Cancer license plates are shown to the right. All monies in the revolving fund are appropriated to the OSDH to support the implementation of the OBCCA. Past expenditures of funds have paid for breast and cervical cancer screening and diagnostic services for women enrolled in the “Take Charge!” program, Oklahoma’s Breast and Cervical Cancer Early Detection Program (BCCEDP).
Many Oklahomans suffer from the disproportionate burden of diseases attributable to modifiable risk factors including sedentary lifestyle, poor nutrition, and smoking. These three behaviors in particular, contribute to four chronic diseases - cardiovascular disease, cancer, diabetes, and lung disease that cause 65% of all deaths in Oklahoma.

3 BEHAVIORS

Tobacco Use
Poor Nutrition
Sedentary Lifestyle

4 CHRONIC CONDITIONS

Cardiovascular Disease
Cancer
Diabetes
Lung Disease

65% OF DEATHS

Three unhealthy behaviors influence four chronic diseases that account for 65% of all deaths in Oklahoma and for 60% of all deaths in United States.\(^1\)

3-4-65 DEATH PERCENTAGES*

*3-4-65 deaths as a percentage of all causes of death. Deaths include cardiovascular disease, cancer, diabetes, and lung disease.
Burden of Cancer in Oklahoma

Leading Causes of Death

Cancer is the 2nd leading cause of death in Oklahoma, accounting for 1 in 5 deaths in Oklahoma.

Cancer Incidence in Oklahoma

Breast cancer is the most common cancer among females.

American Indian and African American females have higher breast cancer rates than other racial and ethnic groups.

Cancer Mortality in Oklahoma

Breast cancer is the second most common site/cause of cancer mortality after lung cancer.

African American females have higher age-adjusted breast cancer mortality rates than other racial and ethnic groups.
BURDEN OF BREAST CANCER IN OKLAHOMA

RISK FACTORS

- female gender
- age >50 years
- breast cancer genes
- early menstrual period
- family history
- overweight or obese
- sedentary lifestyle
- drinking alcohol

BREAST CANCER INCIDENCE

Breast cancer incidence rate* is lower in Oklahoma compared to the United States.3

Breast cancer incidence rate* is lowest in Coal county and highest in Grant county.4

*Breast cancer (including in situ) incidence rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2007-2016.
The highest incidence* of breast cancer was 180.7 per 100,000 females among the American Indian race.5

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Age Group</th>
<th>Incidence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>20-24</td>
<td>141.0</td>
</tr>
<tr>
<td>Black</td>
<td>25-29</td>
<td>143.9</td>
</tr>
<tr>
<td>American Indian</td>
<td>30-34</td>
<td>180.7</td>
</tr>
<tr>
<td>Other*</td>
<td>35-39</td>
<td>167.3</td>
</tr>
<tr>
<td>Hispanic^</td>
<td>40-44</td>
<td>113.6</td>
</tr>
</tbody>
</table>

*Incidence rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2012-2016; Other category includes respondents who identify with "some other race" and do not identify with provided major categories; Hispanic origin drill level was used to determine rate while other races used IHS linked race.

BREAST CANCER MORTALITY

While the breast cancer mortality rate* has declined in the United States over the last 10 years, Oklahoma’s rates spiked in 2010 and has leveled off in the last five years while remaining higher than the nation.1

Breast cancer mortality rate* is lowest in Greer county and highest in Grant county.6

*Incidence rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2012-2016; Other category includes respondents who identify with "some other race" and do not identify with provided major categories; Hispanic origin drill level was used to determine rate while other races used IHS linked race.
BURDEN OF CERVICAL CANCER IN OKLAHOMA

CERVICAL CANCER INCIDENCE

Cervical cancer incidence rate* is **higher** in Oklahoma compared to the United States.³

RISK FACTORS⁷

- lack of HPV immunization
- smoking
- multiple sexual partners
- immunosuppression
- 5+ years on birth control pills

Cervical cancer incidence rate* is **lowest** in Wagoner county and **highest** in Kiowa county.⁴

---

*Incidence rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2007-2016.
The highest incidence* of cervical cancer was 18.6 per 100,000 females among the Other race.5

White | 8.7
Black | 6.9
American Indian | 13.0
Other$ | 18.6
Hispanic* | 12.5

*Incidence rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2012-2016; $Other category includes respondents who identify with "some other race" and do not identify with provided major categories; *Hispanic origin drill level was used to determine rate while other races used IHS linked race.

While the cervical cancer mortality rate* has remained constant in the United States over the last 10 years, Oklahoma’s rates have fluctuated while remaining higher than the nation.1

The highest incidence* of cervical cancer was 18.9 and 19.1 per 100,000 females among those 40-44 and 45-49 years.5

Cervical cancer mortality rate* is lowest in Garfield county and highest is in Latimer county.6

*Mortality rate is per 100,000 females and age adjusted to the 2000 U.S. population, 2008-2017.
PRIORITY STRATEGIES: PROGRAMS & ACTIVITIES

BREAST AND CERVICAL CANCER EARLY DETECTION PROGRAMS (BCCEDP)

Oklahoma has three screening programs serving low-income, uninsured, and underinsured women.

- Cherokee Nation Breast and Cervical Cancer Early Detection Program
- Kaw Nation Women’s Health Program
- Oklahoma State Department of Health Take Charge! Program

Oklahoma’s BCCEDP receive funding through a cooperative agreement with the Centers for Disease Control and Prevention (CDC) and work in partnership to ensure Oklahoma women are enrolled in the screening program that best fits their needs.

PURPOSE

facilitate early screening

ensure prompt diagnosis

improve access to treatment

PROVIDES ACCESS TO SCREENING SERVICES

- Clinical breast exam
- Mammogram
- Pelvic exam
- Pap test
- HPV co-testing

HIGH RISK

In SFY 18, a greater proportion of African American and Hispanic women received screening through Take Charge! than was represented among the population of the state.

It should be noted that American Indian women are also served through the Cherokee Nation and Kaw Nation BCCEDPs, in addition to Take Charge!.

Note: White and Hispanic clients served through Take Charge! are not mutually exclusive.
**OKLAHOMA DIAGNOSTIC AND TREATMENT PROGRAM: OKLAHOMA CARES**

Women with **abnormal findings** on breast and/or cervical cancer screening examinations receive a **referral** and access to diagnostic and treatment services.

**OKLAHOMA CARES**
SoonerCare Medicaid program

Women must be:
- 19-64 years of age
- Not insured
- Low income
- Meet medical eligibility requirements

Oklahoma’s three screening programs encourage women in need of diagnostic or treatment services to apply for **Oklahoma Cares**. Additionally,

- **Cherokee Nation BCCEDP** provides diagnostic services for women who are screened regardless of their eligibility for Oklahoma Cares.
- **Take Charge! Program** provides diagnostic services for women who are screened through Take Charge! and are ineligible for Oklahoma Cares.

**STATEWIDE BREAST AND CERVICAL CANCER ACTIVITIES**

Over 5,000 Oklahomans participated in **public education awareness events** or **outreach campaigns** through multiple **community organizations** in State Fiscal Year (SFY) 2019.

Community organizations and partners:
- American Cancer Society Making Strides against Breast Cancer Walk®
- Cherokee Nation Breast and Cervical Cancer Program
- Kaw Nation Breast Cancer
- Susan G. Komen Race for the Cure®
- Oklahoma Health Care Authority
- Oklahoma Project Woman
- Take Charge!
## BCCEDP Program

<table>
<thead>
<tr>
<th>Priority Population</th>
<th>Cherokee Nation</th>
<th>Kaw Nation</th>
<th>Take Charge! Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian (AI) women enrolled in a federally recognized tribe, 40-64 years of age, with an income at or below 250% of the federal poverty level (FPL), and uninsured or underinsured.</td>
<td>Cherokee Nation Health Facilities, Cherokee Nation W.W. Hastings Hospital, Cherokee Nation healthcare providers, Mobile mammography facility</td>
<td>AI women 50-64 years of age, with an income at or below 250% of the FPL, and uninsured or underinsured.</td>
<td>Oklahoma women 50-65 years of age, with an income at or below 185% of the FPL, and uninsured or underinsured.</td>
</tr>
</tbody>
</table>

| Cervical Cancer Screening | Cherokee Nation Health Facilities, Cherokee Nation W.W. Hastings Hospital, Cherokee Nation healthcare providers, Mobile mammography facility | AI women 21-64 years of age who have not had a Pap test in five or more years, with the same income and insurance guidelines as breast cancer screening. | Oklahoma women 35-65 years of age who have not had a Pap test in five or more years, with the same income and insurance guidelines as breast cancer screening. |

### Provides Services Through

- Cherokee Nation Health Facilities
- Cherokee Nation W.W. Hastings Hospital
- Cherokee Nation healthcare providers
- Mobile mammography facility

- Memorandums of Understanding (MOUs) with:
  - Kanza Clinic
  - Ponca Tribe clinics
  - Pawnee Tribe clinics
  - Osage Tribe clinics
  - Iowa Tribe clinics

- Federally Qualified Health Centers (FQHC)
- Health care organizations
- Laboratories
- Surgical consultants
- Mammography facilities
- Colposcopy providers
<table>
<thead>
<tr>
<th>Services Provided in SFY 2018</th>
<th>Cherokee Nation</th>
<th>Kaw Nation</th>
<th>Take Charge! Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eligible Women Screened</strong></td>
<td>25,443</td>
<td>4,715</td>
<td>72,175</td>
</tr>
<tr>
<td>Since Inception</td>
<td>1,173 breast cancer screenings</td>
<td>352 breast cancer screenings</td>
<td>1,174 breast cancer screenings</td>
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<tr>
<td></td>
<td>1,156 cervical cancer screenings</td>
<td>207 cervical cancer screenings</td>
<td>1,107 cervical cancer screenings</td>
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**Funding SFY 18**

<table>
<thead>
<tr>
<th>Source</th>
<th>Funding SFY 18</th>
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<tbody>
<tr>
<td><strong>Federal</strong></td>
<td><strong>Tribal</strong></td>
</tr>
<tr>
<td>Cherokee Nation</td>
<td>$845,000</td>
</tr>
<tr>
<td>Kaw Nation</td>
<td>$397,367</td>
</tr>
<tr>
<td>Take Charge! Program</td>
<td><strong>$1,133,193</strong></td>
</tr>
<tr>
<td>Tribal</td>
<td><strong>$135,640</strong></td>
</tr>
</tbody>
</table>

Notes:
- Federal BCCEDP funds require a $3:$1 match in the amount of $281,667.
- Tribal BCCEDP funds require a $3:$1 match in the amount of $135,640.
- State funds and Revolving funds require a $3:$1 match in the amount of $377,731.
EMERGING TECHNOLOGIES

This section covers newly introduced therapies and preventive vaccines that are effective in preventing and controlling the risk for breast and cervical cancer.

BREAST CANCER

Precision medicine is an emerging strategy for breast cancer prevention and treatment.

- Traditionally, breast cancer treatment has focused on hormone receptors and immunohistochemistry.
- Precision medicine focuses on multiple aspects of an individual for treatment.
- The focus includes environment, lifestyle, and genes.
- Scientists at National Cancer Center Hospital in Japan indicate that utilizing advanced precision medicine along with genome medicine could improve the outcome of breast cancer patients.

CERVICAL CANCER

Cancer screening: Multicomponent interventions for cervical cancer.

- The Community Prevention Services Task Force conducted a systematic review of multiple studies for cervical cancer screening.
- Intervention approaches are categorized into three strategies: increasing community demand, increasing community access, or increasing provider delivery of screening.
  - Compared with no intervention, multicomponent interventions increased cervical cancer screening by a median of 6.1 percentage points. Multicomponent interventions that used strategies to increase community demand and access increased cancer screening by a median of 11.2 percentage points. Multicomponent interventions that used all three strategies increased cancer screening by a median of 24.2 percentage points.
  - Interventions that used five or more approaches showed a larger increase than interventions with fewer approaches.
  - Cancer screening increased independent of which approaches were used.
- They can be used to increase screening among underserved populations.
- Multicomponent interventions to increase screening for cervical cancer are cost-effective.
Recommendations for Additional Funding

Promote the Belle Maxine Hilliard Breast and Cervical Cancer Treatment Revolving Fund which provides funding for breast and cervical cancer treatment.

Promote the Breast and Cervical Cancer Revolving Fund which provides mammograms for uninsured and underinsured women.

Recommended Cost Reducing Strategies

Increase high quality breast and cervical cancer screening in Oklahoma in collaboration with partners.

Encourage evidence-based breast and cervical cancer public education and targeted outreach to women at highest risk.

Utilize policy approaches and health systems changes to improve implementation of breast and cervical guidelines and practices for healthcare professionals.

Encourage patient navigation services to assist with access to screening and diagnostic services.

Decrease structural barriers (transportation, availability, and accessibility) that limit access to breast and cervical cancer screening, and diagnostic and treatment services in collaboration with partners.
The Advancement of Wellness Advisory Council (63 O.S. §1-103a.1) is comprised of seven members serving three-year terms who are appointed by the Governor, Speaker of the House of Representatives, President Pro Tempore of the Senate, and the Oklahoma State Board of Health.

All members of the council are knowledgeable of issues that arise in the area of advancing the health of all Oklahomans with one member being an expert in breast and cervical cancer issues. The Oklahoma Breast and Cervical Cancer Annual Report is authorized by statute (63 O.S. §1-556) and must give consideration to the recommendations of the council.

**COUNCIL RECOMMENDATIONS**

- The State of Oklahoma should continue to support the efforts of the breast and cervical cancer screening program and maintain the funds in the Breast and Cervical Cancer Act Revolving Fund (63 O.S. §1-557).

- The Oklahoma State Department of Health should increase education and promotion efforts around the Human Papillomavirus (HPV) and the importance of vaccinations.

- The State of Oklahoma should review the income guidelines for breast and cervical cancer services in partnership with Medicaid to determine if the guidelines could be changed to 200% or 250% of FPL.

- The State of Oklahoma should ensure vacancies are filled within six months of staff departures to maintain program continuity and should increase funding beyond the required 3:1 match of the federal grant to support program needs as needed.

- The Oklahoma State Department of Health should increase education and promotion efforts around cancer risk reduction areas such as nutrition, physical activity, tobacco prevention and alcohol use.
REFERENCES


