susan g. komen®

COMMUNITY PROFILE REPORT 2015

SUSAN G. KOMEN®
TRI-CITIES

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Acknowledgments

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Executive Summary

Introduction to the Community Profile Report

Susan G. Komen® Tri-Cities, located in the foothills of the Appalachian Mountains, covers 23-counties and two-cities throughout Western North Carolina, Northeast Tennessee, and Southwest Virginia. The area is geographically dispersed, largely rural, and mountainous. The Affiliate region is one of natural beauty, rich in history, and characterized by a tight-knit Southern Appalachian culture.

Discussion to establish an Affiliate began in 2002, when a local breast cancer support group indicated a lack of breast health resources and fundraisers in the region. The need for breast health services was identified and the Affiliate was incorporated in October 2005 with Mountain States Health Alliance, Wellmont Health System, and Eastman Chemical Company serving as the founding organizations.

The Affiliate has raised over $3 million dollars to provide breast health education, awareness, and life-saving resources through corporate and individual donations, third party fundraisers, and annual events—such as the Susan G. Komen Tri-Cities Race for the Cure®, Laugh for the Cure®, Pink Tie Gala and BigWigs Challenge. Of the $3 million raised, $2.6 million dollars—or 75 percent of net funds—has been awarded to 98 grantees through the Komen Tri-Cities Community Grants Program. The remainder of funds, approximately $870 thousand, has been contributed to the Susan G. Komen Research Programs which is dedicated to groundbreaking research and finding the cures.

Komen Tri-Cities is committed to impacting the lives of local women and men who have been or may be impacted by breast cancer through community grant programming, vital breast health education, and regional community outreach. Previously funded grants have executed screening programs, provided genetic testing opportunities, and instituted programs that will help reduce breast cancer in the Affiliate population for years to come. The impact has resulted in the detection of more than 135 breast cancers and the delivery of more than 11,000 mammograms to women who otherwise may not have received them.

The Community Profile is a professional resource for Komen Tri-Cities service area, as well as for persons looking to understand the breast health and breast cancer needs of the Affiliate's target communities. The primary goal of the Community Profile is to ensure Komen Tri-Cities aligns its mission outreach, grantmaking priorities, partnerships, and public policy initiatives towards Komen's promise—*to save lives and end breast cancer forever by empowering people, ensuring quality of care for all, and energizing science to find the cures.*

The purposes of the Community Profile include, but are not limited to, the following:

- Aligning strategic and operational plans to Komen's promise
- Driving inclusion efforts in local communities
- Driving public policy efforts in North Carolina, Tennessee, and Virginia
- Establishing focused granting priorities based on community needs
- Establishing focused breast health education needs
- Establishing directions for marking and outreach efforts throughout the Region

- Strengthening sponsorship efforts
- Engaging current partners
- Educating the Komen Tri-Cities Region on breast health information and statistics

The Community Profile Report will be available to the public via the Affiliate's website: www.komentricities.org.

Quantitative Data: Measuring Breast Cancer Impact in Local Communities

For the next four years, Komen Tri-Cities will focus strategic efforts on four target communities within the service area:

- Ashe County, North Carolina
- Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina
- Greene County, Tennessee
- Washington County, Virginia and Bristol City, Virginia

These communities were selected upon the Affiliate's review of Health People 2020 (HP 2020), a federal government initiative aimed at providing specific health objectives for communities and the United States as a whole. Goals around reducing women's death rate from breast cancer and reducing the number of breast cancers found at late-stage were analyzed. As a result of these reviews, the four priority communities were identified based upon the time needed to meet the HP 2020 targets for breast cancer.

Additional key indicators utilized by Komen Tri-Cities when selecting target communities included, but were not limited to the following:

- Incidence rates and trends
- Death rates and trends
- Late-stage rates and trends
- Below average screening percentages
- Residents living below poverty level
- Residents living without health insurance
- Unemployment percentages

Ashe County, bordering Northeast Tennessee and Southwest Virginia, is a rural county with 100 percent of the area characterized as medically underserved. The County was identified as one of the highest priority counties in the Affiliate region due to the amount of time needed to reach the HP 2020 target goals. According to HP 2020, the predicted number of years to reach the HP 2020 late-stage incidence target is 13 years or longer. There is not enough data to estimate the time to achieve the death rate target. Additionally, the incidence rate is a concern because it is less than both the US rate and the Komen Tri-Cities service area rate. Improving screening programs for early detection and providing access to care for the medically underserved community may impact these rates.

Avery, Mitchell, and Yancey Counties are grouped together as one community—the Toe River Health District—because of small population sizes, suppressed data information, and the proximity of each county to the other. In addition, the state of North Carolina services these three counties under one health district, combining them together as one entity. The community

is rural and characterized as being medically underserved, having employment issues, and a lack of insurance coverage with its inhabitants.

As estimated by HP 2020, it will take all three counties 13 years or longer to achieve the late-stage incidence target rate. While there is not enough data to estimate the time needed to achieve the death rate target for Avery and Mitchell Counties, HP 2020 estimates it will take Yancey County eight years to reach the goal. Low incidence rates and high late-stage diagnosis rates in Avery and Mitchell Counties show that breast cancer in these counties may not be diagnosed until the late-stages of the disease. While Yancey County's incidence rate is similar to the US incidence rate, its death rate remains elevated when compared to national rates. As a result, an inference may be drawn that there is a point of disconnection within the health system's continuum of care.

Greene County, a high priority county located in the southwestern corner of Northeast Tennessee, is rural with 74.3 percent of the population characterized as medically underserved. According to HP 2020, it will take Greene County 13 years or longer to achieve the target death rate. As for the late-stage incidence target, HP 2020 estimates it will take the county eight years to reach the pre-established goal. Regarding incidence rate, the county has a higher rate than that of the Affiliate service area, but a lower rate than the state of Tennessee and US in its entirety. Trends of increase in incidence and decrease in late-stage diagnosis coupled with the higher proportion of women being screened suggest that more women are receiving recommended screenings and more breast cancers are being diagnosed at an earlier stage, when prognosis is favorable. Additionally, rates may be improved by impacting current trends in the county, such as improving screening programs to decrease late-stage diagnosis.

Although **Washington County and Bristol City**, located in southwest Virginia, are different entities, they are considered a community for two primary reasons: (1) Bristol City is located within Washington County, Virginia, and (2) both areas share many of the same statistics and resources, thus increasing their functionality as a community. This rural community is characterized as medically underserved with employment problems for its inhabitants. As estimated by HP 2020, it will take both Washington County and Bristol City, Virginia 13 years or longer to achieve death rate target goals. The predicted times to achieve the late-stage incidence target rates for Washington County and Bristol City are 13 years or longer and one year, respectively.

Additionally both Washington County and Bristol City have incidence rates below that of the national average. With reports of both low incidence rates and high death rates, a conjecture can be drawn that women may not be receiving screening mammograms and that breast cancers are not being detected at early stages. Increasing screening percentages and providing breast health education to residents may improve incidence and death rate figures.

Health System and Public Policy Analysis

The Breast Cancer Continuum of Care (CoC) shows how a patient typically navigates through the health care system for breast care. In an ideal world, a man or woman will move through the CoC quickly with no system complications, receiving timely, quality care with the end goal of having the best outcomes.

Although an individual may enter the Continuum of Care at any point, it is preferable that he or she enters the continuum by being screened for breast cancer, utilizing a clinical breast exam and/or a screening mammogram. If screening test results are normal, a person will loop back into follow-up care where he or she will receive another screening mammogram at the appropriate time. If results are abnormal, diagnostic tests will be needed, and an individual will continue along the CoC. Providing breast health education can play a role in encouraging individuals to get screened while reinforcing the need for continual screenings thereafter. With education, an individual can be empowered to make informed decisions while managing anxiety and fear within a support system.

Ashe County

Ashe County has few breast health resources within the community. Ashe Memorial Hospital (AMH) has a mammography suite providing screening and diagnostic services. Unfortunately, the facility is limited with no breast surgeon or options for chemotherapy or radiation. As for other breast health outlets, residents may visit the Appalachian District Health Department, a North Carolina Breast and Cervical Cancer Control Program (NC BCCCP) site. Because of the NC BCCCP, eligible patients will be referred to an approved provider for necessary breast health services paid for by the program. Because there are no options for breast surgery, chemotherapy, or radiation within Ashe County, patients must travel to neighboring communities to receive these services. In addition, the community is located within the Blue Ridge Mountains, making travel difficult for patients.

Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina

Despite the rural area and small populations, residents within the Toe River Health District have several breast health resources at their disposal. The Blue Ridge Regional Hospital, located in Mitchell County, has both a Comprehensive Cancer Center and a Women's Imaging Center. Women may receive patient navigation, screening mammograms, diagnostic mammograms, oncologic surgery, some chemotherapy, and radiation treatments. More complex and specialized cancer management is referred to larger facilities in neighboring communities. Additionally, the Toe River Health District Health Departments offer free or low-cost breast health services to eligible women. Unfortunately, the majority or resources are centered in Mitchell County. As a result, many of community's residents drive lengthy distances to receive breast health care.

Greene County, Tennessee

Greene County is home to several facilities offering an array of breast health services. Laughlin Memorial Hospital has a comprehensive Center for Women's Health where women can receive services including: patient navigation, screening mammograms, diagnostic mammograms, breast health surgery, and treatment options. Other services offered span from financial assistance to exercise and nutrition programs. The Takoma Regional Hospital is equipped to perform screening mammograms, diagnostic mammograms, and MRIs through their Diagnostic Center for Women's Health. Unfortunately, the hospital does not offer surgery or treatment options. If women are unable to afford services, the Greene County Health Department offers free or low-cost breast health services to eligible women through the TBCCEDP. In summary, Greene County is well equipped to handle breast health services. If more complex treatments and surgeries are needed, residents can travel to neighboring facilities, such as the University of Tennessee in Knoxville, to receive necessary services.

Washington County, Virginia and Bristol City, Virginia
Of the five target communities, Washington County and Bristol City, Virginia have the most available breast health resources. The Bristol Regional Medical Center (BRMC), located in Bristol, is home to both the Leonard Family Comprehensive Breast Center and the J.D. and Lorraine Nicewonder Cancer Center. This hospital offers services along the entire continuum of care, from diagnosis and surgery to treatment and follow-up. The hospital also offers additional services including: support groups, side effect management, counseling, exercise/nutrition programs, financial assistance, and more.

Johnston Memorial Hospital, located in Abingdon, VA, has a Breast Care Center and a Women's Diagnostic Imaging Center. The facility offers screening mammograms, diagnostic services, and radiation. Persons seeking surgical and/or chemotherapy treatments must travel to another facility. In addition, being a TBCCEDP site, the Washington County Health Department offers free or low-cost breast health services to eligible women.

In conclusion, the Washington County/Bristol City, Virginia area has resources along the entire continuum of care. While there are many facilities offering screening and diagnostic services, only one facility offers chemotherapy treatments.

Public Policy Overview
The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) was established to provide free or low-cost mammograms and Pap tests to low-income, uninsured, and underinsured women who meet eligibility requirements (NBCCEDP Saves Lives, 2014). At this time, the NBCCEDP provides breast health funding to all 50 states, the District of Columbia, five US territories, and 11 American Indian/Alaska Native tribes ("National Breast & Cervical," 2014). While Federal guidelines establish a baseline for breast health program eligibility, states customize programs according to their own specifications (NBCCEDP Fact Sheet, 2013).

All three states in the Komen Tri-Cities Region—North Carolina, Tennessee, and Virginia—utilize NBCCEDP monies to fund state breast and cervical programs. Each state has different decrees according to their needs and purposes. In North Carolina, the program is known as the North Carolina Breast and Cervical Cancer Control Program (NC BCCCP), in Tennessee the program is named the Tennessee Breast and Cervical Cancer Early Detection Program (TBCCEDP), and in Virginia the program is referred to as Every Woman's Life (EWL). Each breast and cervical state establishment provides necessary breast and cervical health care to eligible women.

President Barack Obama signed the Affordable Care Act into law on March 23, 2010, initiating the largest reform in the United States health care system in 45 years (Focus on Health Reform, 2013 and Patient Protection, 2014). The ACA grants the American people the ability to make informed choices concerning their health while changes are made in the US health care paradigm ("Health Care," 2014).

The ACA hopes to shift the US health care system to one of quality over quantity with increased competition, guidelines, and incentives for delivery (Patient Protection, 2014). Several of the highlights include:

- Tax credits to qualifying families and small businesses to ensure health care is affordable (Fact Sheet, 2014).

- All US citizens and legal residents are required to obtain health care coverage from a plan he/she chooses from the marketplace. Individuals who do not obtain coverage and remain uninsured will receive a penalty ("Health Care," 2014 and Focus on Health Reform, 2013).
- There will be a cap on out-of-pocket expenses ("Health Care," 2014).
- Preventative care will be fully paid for without any out-of-pocket expenses ("Health Care," 2014).
- Insurance companies are banned from denying coverage because of pre-existing conditions ("Health Care," 2014).

On June 28, 2012, the US Supreme Court stated that states are not required to participate in Medicaid expansion (Patient Protection, 2014). As a result, each state has responded to Medicaid expansion in a different manner, with different outcomes anticipated (Patient Protection, 2014).

As of June 2015, the implications resulting from public policy are yet to be fully realized by each state with time being the most accurate indicator. All three states—North Carolina, Tennessee, and Virginia—voted not to expand Medicaid. As a result, there is a new coverage gap developing in the three states. Some residents do not make enough money to qualify for tax credits for the insurance marketplace, while others make too much to qualify for current Medicaid requirements. Currently, each state is proposing plans to establish feasible options to insurance this population of individuals. Another issue emerging is one seen with diagnostic mammograms. Under the ACA all preventative care procedures, such as screening mammograms, must be covered, but reports are indicating lack of coverage for diagnostics.

The impact of the ACA and public policy changes on the Affiliate has yet to be realized. Each state's Cancer Coalition will continue to battle for the best options for cancer patients within their respective state. Much of the impact will depend on changes with insurance companies, within health care administration, and plans to cover those persons impacted by the lack of Medicaid expansion. As changes occur, addendums will be added to the Community Profile to inform the regional breast health community of pertinent happenings.

Qualitative Data: Ensuring Community Input

Susan G. Komen Tri-Cities is focusing upon the Healthy People 2020 goals of reducing both breast cancer deaths and late-stage diagnosis of breast cancer throughout their 23-county, tri-state region. To address these goals, screening practices, attitudes, knowledge, and beliefs were fully investigated through a qualitative assessment. Peer reviewed literature was used as a guide to create a document review. Six precursors to screening were identified: attitudes toward, knowledge of, behavioral factors, access to, awareness of, and value of screening. These constructs were studied to see how they functioned in the priority populations of: (1) Ashe County, NC; (2) Avery, Mitchell, and Yancey Counties (Toe River Health District), NC; (3) Greene County, TN; (4) Washington County and Bristol City, VA.

Moderating these themes were socioeconomic status (SES), race/ethnicity, genetic predisposition, family history, and education. Appalachian culture was considered a direct influence on screening while community engagement was examined to accomplish objectives.

Key stakeholder interviews were conducted in the priority populations. Focus groups occurred in the priority populations of Greene County, TN; Washington County/Bristol City, VA; and the Toe River Health District, NC. Additional focus groups were scheduled, including a focus group for Ashe County, but were canceled due to inclement weather and stakeholder constraints. A document review was also conducted.

Each of the outlined interviews and focus groups provided necessary insight into four different community populations. A comprehensive document review provided triangulation of data confirming outlined breast health themes. While there are some underlying similarities that emerged from the interviews and focus groups, each community will require individual strategies developed and guided by the community to fight breast cancer incidence, late-stage diagnosis, and death.

All participants identified poverty and mixed messaging on screening recommendations as direct influences on breast health in their communities. Because poverty was mentioned in all stakeholder interviews and focus groups, it was identified as a main moderator. Rurality, education, and community involvement were also mentioned as important promoters to breast cancer screening. Because additional themes were identified from collected data, they were added to the conceptual model, including poverty as an overarching moderator.

Mission Action Plan

After completing Quantitative, Health Policy/Health System, and Qualitative analyses, Komen Tri-Cities assessed the main problems and barriers to breast health for the priorities communities of: (1) Ashe County, North Carolina; (2) Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina; (3) Greene County, Tennessee; (4) Washington County and Bristol City, Virginia. As a response to revealed problems and barriers, the Affiliate has assimilated a four-year Mission Action Plan, as stated below, to address identified issues in each individual community.

Ashe County

Problem: Ashe County is unlikely to meet the HP 2020 goal for late-stage incidence of breast cancer. The health system analysis showed the county is 100 percent medically underserved with no breast surgery or treatment options. Additionally, the state did not expand Medicaid coverage under the ACA. The qualitative analysis indicated that poverty related issues and lack of breast health education/knowledge impact screening percentages.

> ***Priority 1:*** Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments in Ashe County.
>
> > ***Objective 1:*** By November of each year (2015-2018) conduct an annual grant-writing workshop in Ashe County discussing the current Community Profile and released Community Grant Request for Application (RFA) that also includes information on how to incorporate best practices and evidence-based programs into their projects.

Objective 2: By November of each year (2015-2018), disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP provider, and/or nonprofit servicing breast health care in Ashe County.

Objective 3: By August of 2016, develop a Small Grants program with an objective focused on providing necessary funds for Ashe County residents with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in neighboring communities.

Priority 2: Partner with community-based organizations and health departments through the "I am Carolina PINK" program to spread consistent breast health education messages and promote available services for Ashe County residents.

Objective 1: By August 2015, provide the Ashe County Health Department with one "Susan G. Komen Breast Health On-the-Go Kit" containing Komen educational materials and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2*:* Collaborate with the Ashe County Health Department's NCBCCP employees to develop a six-month running public service announcement in FY2016 and FY2017, delivered by a local physician or survivor via the radio, with consistent breast health education messaging to educate Ashe County residents.

Objective 3*:* By December of 2016, Komen Tri-Cities will have performed a minimum of six breast health education events to increase breast health knowledge and move residents towards sharing information and/or receiving breast health services in Ashe County.

Objective 4: By December of 2016, Komen Tri-Cities will have organized two Community Komen Event(s) to increase breast health awareness and perpetuate education and community events in Ashe County.

Objective 5*:* By FY2019, Komen Tri-Cities will have recruited two "Pink Ambassadors" from Ashe County who are trained volunteers willing to represent Komen professionally and maintain community breast health awareness and perpetuate education and community events.

Priority 3: Increase local provider understanding of breast cancer screening recommendations and Susan G. Komen education messages and knowledge of various referral processes to better navigate their patients through the continuum of care in Ashe County.

Objective 1: Using evidence-based programming, hold at least one program in Ashe County in FY2016 and FY2018 with continuing medical education credits to educate providers about the most current breast health recommendations, resources available in the community, and other evidence-based programs that would increase the community's screening percentages.

***Priority 4**:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

Objective 1: In FY2016, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the North Carolina Breast and Cervical Cancer Control Program's agenda for the state.

Objective 2: By December 2016, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

Objective 1: In FY2016, develop a strong relationship with state Affiliates and hold an initial conference call to determine Affiliate roles to develop a five-year plan to advocate Susan G. Komen policy efforts forward at the state level.

Objective 2: From FY2016 through FY2019, annually participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCCP funding.

Objective 3: From FY2016 through FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Avery, Mitchell, and Yancey Counties (Toe River Health District)

Problem: Avery, Mitchell, and Yancey Counties—known as the Toe River Health District—are unlikely to meet the HP 2020 target for late-stage incidence of breast cancer. There is not enough data available to predict the likelihood of the community reaching the HP 2020 target breast cancer death rate. The health system analysis revealed the community is 100 percent underserved with only one facility having a Women's Imaging Center and a Comprehensive Cancer Center. Patients seeking specialized care treatment must travel to neighboring areas such as Asheville, NC. The qualitative analysis revealed that poverty related issues and lack of breast health education/knowledge impact screening percentages.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments for residents in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Objective 1: By August of each year (2015-2018), revise the Community Grant RFA by evaluating the ACA's effect on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer

screening, diagnostic, treatment, and/or supportive services for residents of Avery, Mitchell, and Yancey Counties (Toe River Health District).

***Objective 2**:* By November of each year (2015-2018), disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP providers, and/or nonprofit servicing breast health care in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Objective 3: By November of each year (2015-2018), conduct an annual grant-writing workshop discussing the current Community Profile and released RFA that also includes information on how to incorporate Best Practices and Evidence-Based Programs into their projects.

***Objective 4**:* By August of 2016, develop a Small Grants program with the objective of providing necessary funds for Avery, Mitchell, and Yancey County (Toe River Health District) residents with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in neighboring communities.

Priority 2: Partner with local churches, community-based organizations, and health departments through the "I am Carolina PINK" program to spread consistent breast health education messages and promote available services for Avery, Mitchell, and Yancey County (Toe River Health District) residents.

Objective 1: By August 2015, provide the Avery, Mitchell, and Yancey County (Toe River Health District) health departments with one "Susan G. Komen Breast Health On-the-Go Kits" containing Komen educational materials (English and Spanish) and a Komen breast health information display to better educate country residents on breast health issues.

***Objective 2**:* By August of 2015 and 2016 collaborate with Avery, Mitchell, and Yancey County (Toe River Health District) NCBCCP employees to develop a six-month running Public Service Announcement, delivered by a local physician, survivor, or health educator via the radio, with consistent breast health education messaging and information about available local resources to educate area residents.

***Objective 3**:* By FY2019, Komen Tri-Cities will have gained 12 (two per county) "Pink Ambassadors" from Avery, Mitchell, and Yancey Counties (Toe River Health District) who are trained volunteers willing to represent Komen professionally and maintain community breast health awareness and perpetuate education and community events.

***Objective 4**:* By December 2016, Komen Tri-Cities will have performed a minimum of nine breast health education events in Avery, Mitchell, and Yancey Counties (Toe River Health District) to increase breast health knowledge and move residents towards sharing information and/or receiving breast health services.

Objective 5: By December 2016, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in Avery, Mitchell, and Yancey Counties (Toe River Health District) by contacting local outlets for use by both the Affiliate and medical outlets to better assist patients who are in financial need.

Priority 3: Increase local provider understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and Susan G. Komen education messages supported by Susan G. Komen accompanied with knowledge of various referral processes to better navigate patients through the continuum of care.

Objective 1: In FY2016 and FY2018, using evidence-based programming, hold at least one program in Avery, Mitchell, and Yancey Counties (Toe River Health District) with continuing medical education credits to educate providers about the most current breast health recommendations, cultural sensitivity, resources available in the community, and other evidence-based programs that would increase their patients' screening percentages.

Objective 2*:* In FY2015 and FY2016, Komen Tri-Cities will work through the "I am Carolina PINK" program to provide culturally appropriate English and Spanish Susan G. Komen breast health educational materials to at least three local providers and breast health service outlets in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Priority 4*:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

Objective 1: In FY2016, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the North Carolina Breast and Cervical Cancer Control Program's agenda for the state.

Objective 2: By FY2016, identify and train at least two key volunteers and/or Board Members from Avery, Mitchell, and Yancey Counties (Toe River Health District) to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

Objective 1: In FY2016, develop a strong relationship with state Affiliates and an initial conference call to determine Affiliate roles and develop a five-year plan to push Susan G. Komen policy efforts forward at the state level.

Objective 2: In FY2016 through FY2019, annually participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCP funding.

Objective 3: In FY2016 through FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Greene County

Problem: Greene County is unlikely to meet the HP 2020 targets for both late-stage incidence of breast cancer and the female breast cancer death rate. The quantitative analysis showed that 74.3 percent of the population is medically underserved with a need to improve screening programs and provide socioeconomic relief. The health system analysis revealed the community is well equipped to handle breast health services with services encompassing the entire continuum of care. If more complex treatments are warranted residents must travel to neighboring communities (i.e. Johnson City, TN; Knoxville, TN; etc.). The qualitative analysis showed that socioeconomic issues, lack of breast health education/knowledge, and the large service area of Greene County impact screening percentages.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments for Greene County residents.

Objective 1: By August of each year (2015-2018), revise the RFA by evaluating the ACA's impacted on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer screening, diagnostic, treatment, and/or supportive services among the priority population groups and target geographic areas identified in the Community Profile for residents of Greene County.

Objective 2*:* By November of each year (2015-2018), annually disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP provider, and/or nonprofit servicing breast health care in Greene County.

Objective 3: By November of each year (2015-2018), conduct an annual grant-writing workshop in Greene County discussing the current Community Profile and released RFA that also includes information on how to incorporate best practices and evidence-based programs into their projects.

Objective 4*:* By August 2016, develop a Small Grants program with the objective of providing necessary funds for Greene County individuals with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in the community or neighboring communities.

Priority 2: Partner with local community-based organizations, health departments, long-standing breast health programs, and local providers to provide Susan G. Komen approved breast health education messages and draw awareness to available services for Greene County residents.

Objective 1: By May of 2016, stock the Greene County Health Department with one “Susan G. Komen Breast Health On-the-Go Kit” containing Komen education materials and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2: In FY2017, set up one meeting with local breast health personnel to develop a plan, method, and means to establish consistent breast health messages targeting men and women that will be focused on screening recommendations and breast health information to be permeated throughout the community.

Objective 3*:* By FY2019, Komen Tri-Cities will have recruited two “Pink Ambassadors” from the Greene County community who are trained volunteers willing to represent Komen professionally, maintain community breast health awareness, perpetuate education and community events, and combat negative attitudes towards mammography/breast health.

Objective 4*:* In FY2015 through FY2018, Komen Tri-Cities will annually collaborate with local Komen volunteers, Greene County “Pink Ambassadors,” and/or Komen staff to attend two high school events where young women are targeted to receive vital breast health education messaging and appropriate materials.

Objective 5: By FY2017, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in Greene County by contacting local outlets for use by both the Affiliate and medical personnel to better assist patients who are in financial need.

Priority 3: Increase local provider and health care team understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and Susan G. Komen education messages and information about various referral processes to better navigate patients through the continuum of care.

Objective 1: In FY2016 and FY2018, using evidence-based programming, hold one program in Greene County with continuing medical education credits to educate providers about the most current breast health recommendations, local attitudes towards breast health, resources available in the community, and other evidence-based programs that would increase their patients’ screening percentages.

Objective 2*:* In FY2016 through FY2019, Komen Tri-Cities will collaborate with local breast health workers to provide culturally appropriate, targeted breast health education materials to local providers and breast health service outlets in Greene County.

***Priority 4**: D*evelop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

Objective 1: In FY2017, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the Tennessee Breast and Cervical Cancer Early Detection Program's agenda for the state.

Objective 2: By FY2017, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

Objective 1: In FY2017, develop a strong relationship with state Affiliates and an plan an initial conference call with Affiliates to determine roles and develop a five-year plan to push Susan G. Komen policy efforts forward at the state level.

Objective 2: In FY2017 through FY2019, participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCP funding.

Objective 3: In FY2017 through FY2019, work in collaboration with other Affiliates to contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Washington County and Bristol City, Virginia

Problem: The Washington County and Bristol City, Virginia community is unlikely to meet the HP 2020 targets for both late-stage incidence of breast cancer and the female breast cancer death rate. The quantitative analysis revealed the area is 100 percent medically underserved with incidence rates, late-stage rates, and death rates revealing breast cancer may not be diagnosed in its early stages and/or residents may be experiencing barriers to screening mammograms and/or treatment. The health system analysis illustrated that the community has a plethora of breast health resources encompassing the entire continuum of care. The qualitative analysis illustrated the impact of poverty on breast health and the need for education of both providers and laypersons.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments.

Objective 1: By August of each year (2015-2018) revise the RFA by evaluating the ACA's impact on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer screening, diagnostic, treatment,

and/or supportive services among the priority population groups and target geographic areas identified in the Community Profile.

Objective 2*:* By November of each year (2015-2018) disseminate the released RFA calling for Community Health Grant applicants to every health department, EWL provider, and/or nonprofit servicing breast health care in the community.

Objective 3: By November of each year (2015-2018) conduct an annual grant-writing workshop discussing the current Community Profile and released RFA that also includes information on how to incorporate Best Practices and Evidence-Based Programs into their projects.

Objective 4*:* By August of 2016, develop a Small Grants program with one objective providing necessary funds for individuals with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in the community or neighboring communities.

Priority 2: Partner with local community-based organizations, health departments, long-standing breast health programs, and local providers to provide Susan G. Komen approved breast health education messages and draw awareness to available services for Washington County and Bristol City, Virginia residents.

Objective 1: By May of 2016, stock the Washington County and Bristol City health departments with one “Susan G. Komen Breast Health On-the-Go Kit” containing culturally relevant Komen education materials to be disseminated and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2: In FY2017 set up one meeting with local breast health personnel to develop a plan, method, and means to establish consistent breast health messaging clarifying current screening recommendations and health education messages that will be permeated throughout the community.

Objective 3*:* By FY2019, Komen Tri-Cities will have recruited three “Pink Ambassadors” from the Washington County/Bristol City, VA community who are trained volunteers willing to represent Komen professionally, maintain community breast health awareness, perpetuate education and community events.

Objective 4: By FY2017, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in the community by contacting local outlets for use by both the Affiliate and medical personnel to better assist patients who are in financial need.

Priority 3: Increase local provider understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and education messages accompanied with knowledge of various referral processes to better navigate patients through the continuum of care.

> ***Objective 1:*** In FY2016 and FY2018 us with evidence-based programming, hold one program with continuing medical education credits to educate providers about the most current breast health recommendations, local barriers towards breast health, resources available in the community, and other evidence-based programs that would increase their patients' screening percentages.
>
> ***Objective 2****:* In FY2016 through FY2018 Komen Tri-Cities will collaborate with local breast health workers to provide culturally appropriate, targeted breast health education materials to local providers and breast health service outlets in the community to disseminate for education purposes.

Priority 4*:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

> ***Objective 1:*** In FY2018, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with Every Woman's Life's (EWL) agenda for the state.
>
> ***Objective 2:*** In FY2018, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

> ***Objective 1****:* In FY2018, develop a strong relationship with state Affiliates and an initial conference call to determine Affiliate roles and develop a five-year plan to push Susan G. Komen policy efforts forward at the state level.
>
> ***Objective 2****:* In FY2018 and FY2019, participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state EWL funding.
>
> ***Objective 3****:* In FY2018 and FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Disclaimer: Comprehensive data for the Executive Summary can be found in the 2015 Susan G. Komen® Tri-Cities Community Profile Report.

Affiliate History

Susan G. Komen® Tri-Cities, nestled in the foothills of the Appalachian Mountains, spans 23 counties and two-cities throughout Western North Carolina, Northeast Tennessee, and Southwest Virginia. Along with those who generously support the Affiliate with their talents, time, and resources—Komen Tri-Cities works to better the lives of local men and women facing breast cancer. The Affiliate joins more than three million breast cancer survivors and activists around the globe as part of the world's largest and most progressive grassroots network fighting breast cancer organization.

Discussions to establish a Komen Affiliate began in 2002 when a local breast cancer support group indicated a lack of breast health resources and fundraisers in the area. This need was brought to the attention of two major hospital systems—Mountain States Health Alliance (MSHA) and Wellmont Health System—who immediately began assessing breast health gaps with the aid of professionals and local volunteers. A need for breast health resources was identified, solutions were presented, and an application was submitted to the Susan G. Komen Headquarters in hopes of establishing a local Affiliate. Susan G. Komen Tri-Cities was founded in October 2005 with MHSA, Wellmont Health System, and Eastman Chemical Company—the region's largest employer—serving as the founding organizations.

Through generous corporate and individual donations, third party fundraisers, and annual events—such as the Susan G. Komen Tri-Cities Race for the Cure®, Laugh for the Cure, and Pink Tie Gala—the Affiliate has raised over $3 million dollars to further Komen's mission to *save lives and end breast cancer forever by empowering others, ensuring quality care for all, and energizing science to find the cures*. Of these monies, $2.6 million dollars—or 75.0 percent of net funds—has been awarded to 98 grantees through the Komen Tri-Cities Community Grants Program.

Komen Tri-Cities Community Grants Program funds applications that impact the Affiliate service area by providing vital breast health education and services to men and women who would otherwise not receive them. Past grantees have funded breast health education projects, screening programs, genetic testing opportunities, and programs that will help reduce breast cancer deaths—especially for those who are disproportionately affected by this disease in the underserved/underinsured Affiliate population. Through the Komen Tri-Cities Community Grants Program, over 11,000 mammograms have been provided and more than 135 breast cancers detected.

Komen Tri-Cities is known as a leading breast health and breast cancer expert in the region. As a Susan G. Komen Affiliate—the world's largest funder of breast cancer research outside of the US Government—the Affiliate has the most progressive resources, experts, scientists, doctors, and advocates at its fingertips. Affiliate Board members consist of well-connected professionals, health care personnel, and survivors. Affiliate staff persons have been trained by Komen Headquarters and are knowledgeable about the most up-to-date happenings surrounding breast health. Additionally, the Affiliate has strong leadership throughout the region. Komen Tri-Cities staff and Board members are involved in several breast health related organizations including,

but not limited to: Tennessee Cancer Coalition, Mountain Laurel Cancer Coalition, North Carolina Cancer Coalition, and Virginia Cancer Coalition. Additionally, many of these individuals are not only active in these coalitions, but serve as members of Boards, lead committees, plan education sessions, and are involved in annual State Cancer Summit planning and execution.

Affiliate Organizational Structure

Susan G. Komen Tri-Cities is led by an eleven member, volunteer, working Board of Directors (Figure 1.1). The Board of Directors has diverse members representing major regional health organizations, private companies, businesses, survivors, activists, volunteers, and breast health professionals in the region. Assigned Board Members chair the Governance, Finance, and Fund Development Committees. Although other committees (such as Race, Special Events, Public Relations & Social, Education, and Survivor) are frequently led by non-Board members, many Board members actively serve in these groups.

As of December 2015, the Affiliate has two full-time employees: an Executive Director and a Mission Director. Additionally, there is one part-time employees including an Affiliate Administrator and a Marketing and Events Coordinator; and one part-time, independently contracted Accountant. The staff executes daily activities, events, and organization management with oversight from the Board of Directors.

Aside from the Board of Directors and Affiliate staff, many active community volunteers support Komen Tri-Cities. These individuals facilitate the execution of major events, breast health education services, community outreach efforts, and much more.

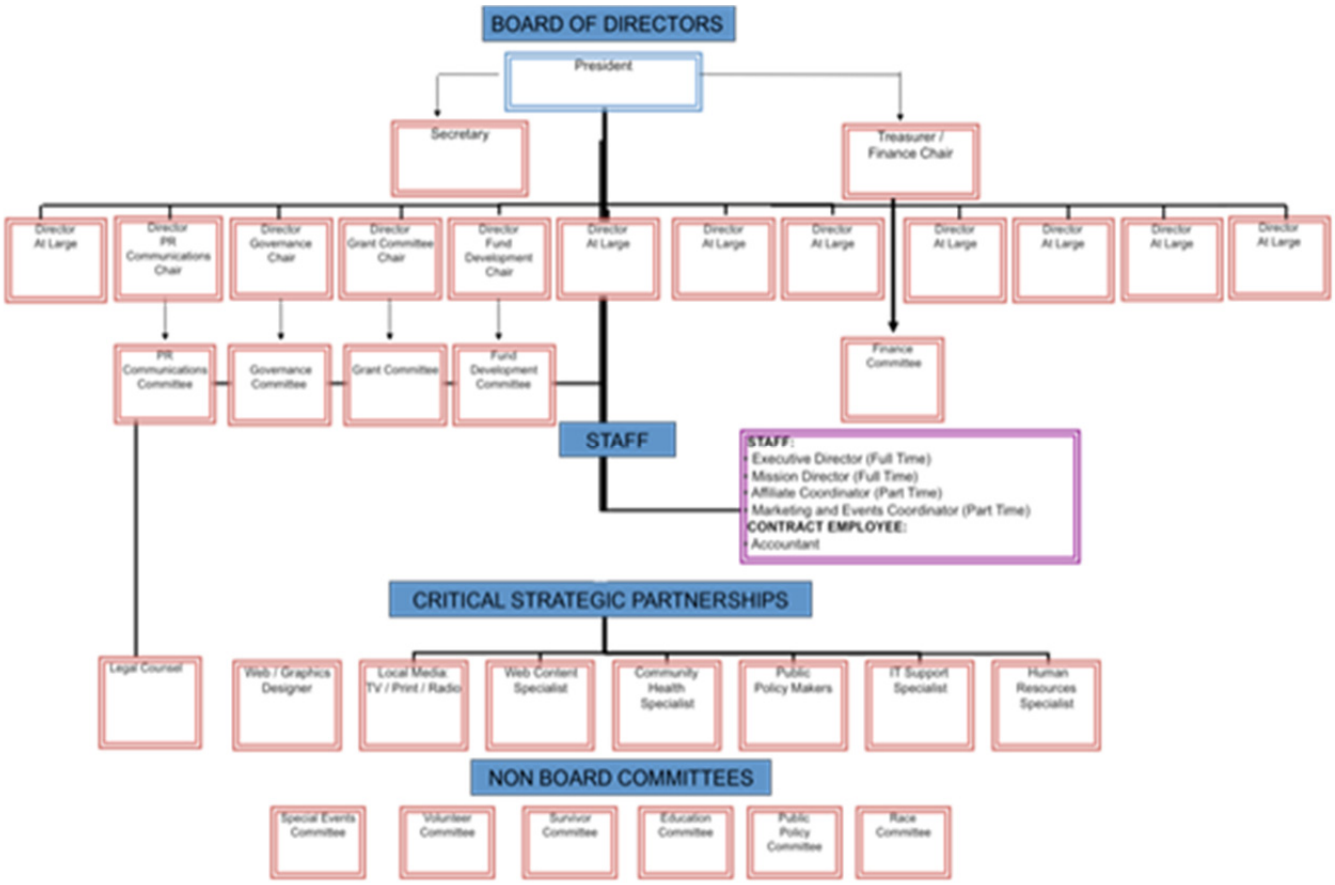

Figure 1.1. Susan G. Komen Tri-Cities organizational chart

Affiliate Service Area

Komen Tri-Cities service area spans a section of Appalachia covering 23 counties and two-cities throughout Western North Carolina, Northeast Tennessee, and Southwest Virginia (Figure 1.2). The area is geographically dispersed, largely rural, mountainous, and has no consistent form of public transportation—such as a subway, metro, or Amtrak system—throughout the region. Some communities offer sporadic bus transportation, but most residents travel the region by a personal automobile.

The Affiliate region is an area of natural beauty, rich in history, and a tight-knit Southern Appalachian culture. The area takes its name from the presence of three cities in close proximity: Johnson City, Tennessee; Kingsport, Tennessee; and Bristol, Tennessee-Virginia. While the cities have developed individually, they have worked collaboratively to become the economic and service hub for the area. Recognized as a distinct metropolitan area by the federal government and located more than 100 miles from the nearest neighboring metropolitan area, this region remains unique due to its location within the Blue Ridge and Appalachian mountain chains.

As the economic and service hub, the greater Tri-Cities region is integrated through common culture, economics, industries, regional governmental bodies, and social/retail services. As a result, the Tri-Cities area is home to many organizations and industries. The two major health systems for the Affiliate region, MSHA and Wellmont Health System, are headquartered in this area. Facilities for both institutions are spread throughout the region offering health care and services to local and regional residents. Additionally, Eastman Chemical Company, a global, US-based, Fortune 500 company employing approximately 13,500 people, is headquartered in Kingsport, offering employment opportunities to local constituents.

As previously stated, Bristol, Johnson City, and Kingsport, developed independently, but through their own strengths and characteristics together enrich the region.

Bristol, known as the Birthplace of Country Music, lies in two states, Tennessee and Virginia. This city is the rail center for the south and home of the Bristol Motor Speedway, where two NASCAR races are held annually.

Johnson City is the medical and education hub of the region. This city is home to East Tennessee State University (ETSU), which contains the James H. Quillen College of Medicine, the Bill Gatton College of Pharmacy, and the College of Public Health, the only accredited school of public health in Tennessee. Johnson City is also home to MSHA headquarters, a large Veterans' Administration Hospital, and the St. Jude Nicewonger Children's Hospital.

Kingsport is largely dominated by major industrial and manufacturing employers such as Eastman Chemical Company, Domtar Paper Company, and the AFG Corporation. The success of early manufacturers in Kingsport created an atmosphere resulting in the attraction of industry throughout Northeast Tennessee. With many large employers, persons living in North Carolina or Virginia frequently commute to the Kingsport area for work. Small towns and communities located throughout Komen Tri-Cities service area are listed in Table 1.1.

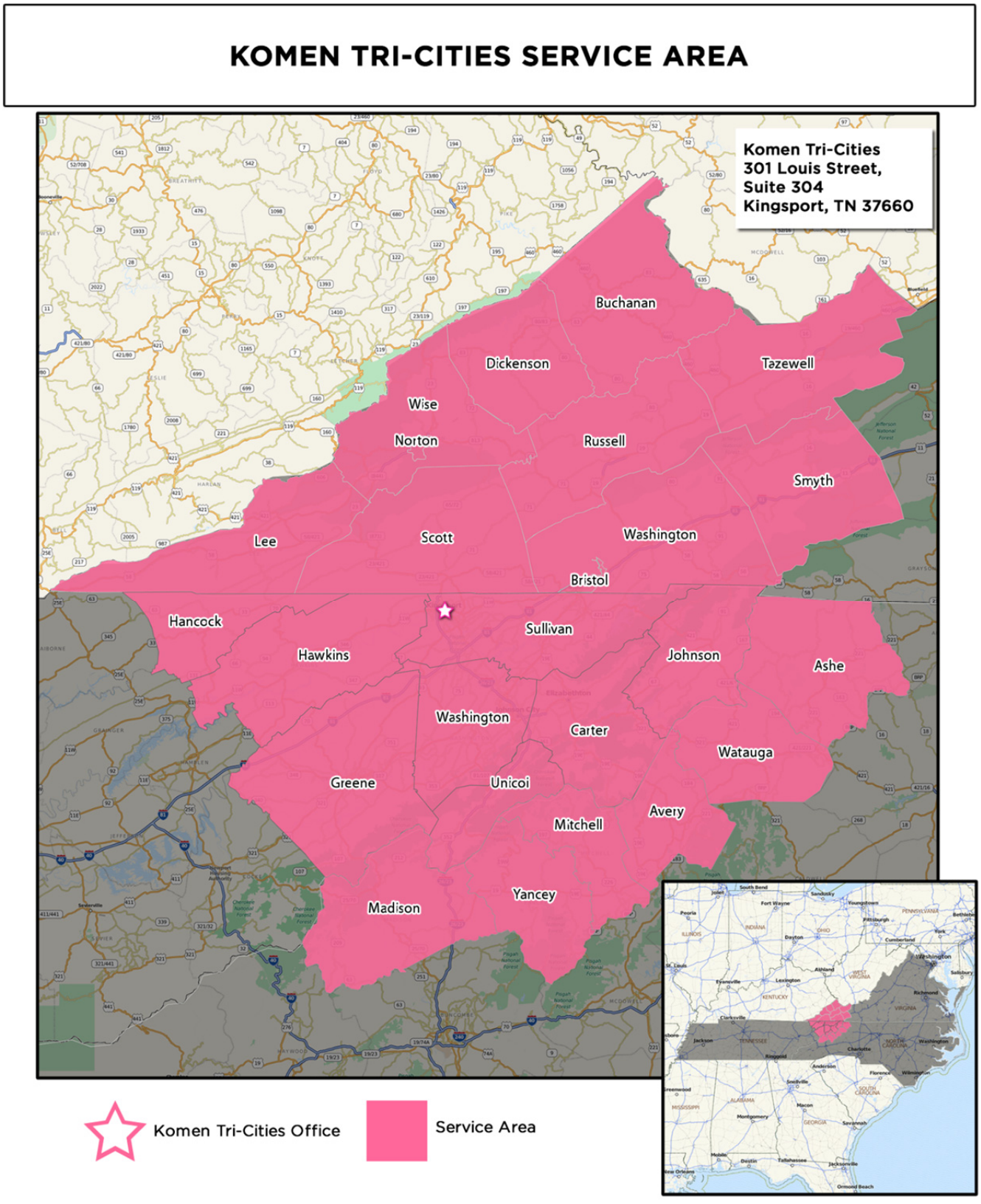

Figure 1.2. Susan G. Komen Tri-Cities service area

Table 1.1. Small counties and communities within Komen Tri-Cities service region

County	State	Small Towns & Communities
Ashe	NC	Jefferson, Lansing, West Jefferson
Avery	NC	Banner Elk, Crossnore, Elk Park, Gragg, Grandfather Mountain, Linville, Minneapolis, Newland, Pineola, Sugar Mountain
Madison	NC	Hot Springs, Mars Hill, Marshall
Mitchell	NC	Bakersville, Spruce Pine
Watauga	NC	Beech Mountain, Blowing Rock, Boone, Deep Gap, Foscoe, Seven Devils, Sugar Grove, Valle Crucis, Zionville
Yancey	NC	Brush Creek, Burnsville, Cane River, Crabtree, Egypt, Green Mountain, Jacks Creek, Pensacola, Price's Creek, Ramseytown, South Toe
Carter	TN	Elizabethton, Hampton, Hunter, Milligan, Pine Crest, Roan Mountain
Greene	TN	Afton, Baileyton, Chuckey, Greeneville, Mohawk, Moshiem, Tusculum
Hancock	TN	Kyles Ford, Sneedville, Treadway
Hawkins	TN	Bulls Gap, Church Hill, Mount Carmel, Rogersville, Surgoinsville
Johnson	TN	Butler, Laurel Bloomery, Mountain City, Shady Valley, Trade
Sullivan	TN	Bloomingdale, Blountville, Bluff City, Colonial Heights, Piney Flats, Spurgeon, Sullivan Gardens, Walnut Hill
Unicoi	TN	Banner Hill, Erwin, Flag Pond, Town of Unicoi
Washington	TN	Fall Branch, Gray, Jonesborough, Limestone, Midway, Oak Grove, Telford, Watauga
Buchanan	VA	Grundy, Big Rock, Council, Davenport, Harman, Harman Junction, Hurley, Keen Mountain, Mavisdale, Maxie, Oakwood, Prater, Shortt Gap, Stacy, Vansant, Royal City, Whitewood
Dickenson	VA	Clinchco, Clinchwood, Haysi
Lee	VA	Jonesville, Pennington Gap, St. Charles, Ben Hur, Dryden, Ewing, Keokee
Russell	VA	Cleveland, Honaker, Lebanon, Castlewood, Dante, Rosedale, Willis, Belfast, Swords Creek
Scott	VA	Clinchport, Duffield, Dungannon, Gate City, Nickelsville, Weber City
Smyth	VA	Chilhowie, Marion, Adwolf, Atkins, Seven Mile Ford, Sugar Grove
Tazewell	VA	Bluefield, Cedar Bluff, Pocahontas, Richlands, Tazewell
Washington	VA	Abingdon, Damascus, Emory-Meadowview, Glade Spring, Mendota, Saltville
Wise	VA	Norton (independent city), Appalachia, Big Stone Gap, Coeburn, Pound, Wise, St. Paul

Demographically, the women of the Affiliate region are predominately White (96.8 percent), which is higher than the national rate of 78.8 percent. In comparison, the minority population of this area is very small with 2.2 percent of the residents identifying as Black/African-American, 0.3 percent American Indians and Alaska Natives (AIAN), 0.7 percent Asians and Pacific Islanders (API), 98.2 percent non-Hispanic/Latina, and 1.8 percent Hispanic/Latina (Table 2.4). Additionally, the female population of this area is slightly older than the US as a whole with 55.1 percent of the population age 40 plus, 41.5 percent of the population age 50 plus, and 19.4 percent of the population age 65 plus. Respectively, the US statistics are 48.3 percent, 34.5 percent, and 14.8 percent.

The Affiliate's education level is substantially lower—approximately 20 percent of persons have less than a high school education—than the US as a whole (Table 2.4). In turn, the income level of this region is slightly less than that of the US overall. In terms of unemployment levels, 8.4

percent of the Affiliate area is unemployed, only slightly lower than the national rate of 8.7 percent. The Affiliate service area has a substantially smaller number of people who are foreign-born (1.9 percent) than the US (12.8 percent) (Table 2.4). As expected, this correlates with much of the population, 0.5 percent, being less linguistically isolated than the nation, 4.7 percent (Table 2.4). Additionally, there are a substantially larger percentage of people living in rural areas, 55.9 percent, a slightly larger percent of people without health insurance, 17.0 percent, and a much larger percentage of people living in medically underserved areas, 65.4 percent, when compared to the corresponding US rates of, 19.3 percent, 23.3 percent, and 16.6 percent (Table 2.4).

Purpose of the Community Profile Report

The Community Profile Report is a professional resource for Komen Tri-Cities service area, as well as for partners in the community looking to understand the breast health and breast cancer needs of the Affiliate's target communities. The overarching goal of the Report is to help Komen Tri-Cities align its mission outreach, grantmaking, partnerships, and public policy activities towards Komen's promise—*to save lives and end breast cancer forever by empowering people, ensuring quality care for all, and energizing science to find the cures.*

Purposes of the Community Profile include:

- Aligning strategic and operational plans to Komen's promise
- Driving inclusion efforts in local communities
- Driving public policy efforts in North Carolina, Tennessee, and Virginia
- Establishing focused granting priorities based upon community needs
- Establishing focused breast health education needs
- Establishing directions for marketing and outreach efforts throughout the Region
- Strengthening sponsorship efforts
- Engaging current partners
- Educating the Komen Tri-Cities Region on breast health information and statistics

The Community Profile will be available to the public via the Affiliate's website, www.komentricities.org. Additionally, the Profile in its entirety, along with its assessment and conclusions, will be communicated with the Affiliate staff and Board of Directors—who represent diverse regional organizations. The Community Profile will be shared and utilized with the following entities:

- Mountain States Health Alliance (MSHA)
- Wellmont Health System (WHS)
- Appalachian Regional Healthcare System (ARHS)
- Laughlin Memorial Hospital (LMH)
- East Tennessee State University – College of Public Health
- Local & state health departments
- State & local legislatures throughout North Carolina, Tennessee, and Virginia
- Susan G. Komen Tri-Cities Committees
- News stations
- Media outlets
- Sponsors
- Partnerships

Quantitative Data: Measuring Breast Cancer Impact in Local Communities

Quantitative Data Report

Introduction

The purpose of the quantitative data report for Susan G. Komen® Tri-Cities is to combine evidence from many credible sources and use the data to identify the highest priority areas for evidence-based breast cancer programs.

The data provided in the report are used to identify priorities within the Affiliate's service area based on estimates of how long it would take an area to achieve Healthy People 2020 objectives for breast cancer late-stage diagnosis and death rates (http://www.healthypeople.gov/2020/default.aspx).

The following is a summary of Komen Tri-Cities' Quantitative Data Report. For a full report please contact the Affiliate.

Breast Cancer Statistics

Incidence rates

The breast cancer incidence rate shows the frequency of new cases of breast cancer among women living in an area during a certain time period (Table 2.1). Incidence rates may be calculated for all women or for specific groups of women (e.g. for Asian/Pacific Islander women living in the area).

The female breast cancer incidence rate is calculated as the number of females in an area who were diagnosed with breast cancer divided by the total number of females living in that area. Incidence rates are usually expressed in terms of 100,000 people. For example, suppose there are 50,000 females living in an area and 60 of them are diagnosed with breast cancer during a certain time period. Sixty out of 50,000 is the same as 120 out of 100,000. So the female breast cancer incidence rate would be reported as 120 per 100,000 for that time period.

When comparing breast cancer rates for an area where many older people live to rates for an area where younger people live, it's hard to know whether the differences are due to age or whether other factors might also be involved. To account for age, breast cancer rates are usually adjusted to a common standard age distribution. Using age-adjusted rates makes it possible to spot differences in breast cancer rates caused by factors other than differences in age between groups of women.

To show trends (changes over time) in cancer incidence, data for the annual percent change in the incidence rate over a five-year period were included in the report. The annual percent change is the average year-to-year change of the incidence rate. It may be either a positive or negative number.

- A negative value means that the rates are getting lower.
- A positive value means that the rates are getting higher.

- A positive value (rates getting higher) may seem undesirable—and it generally is. However, it's important to remember that an increase in breast cancer incidence could also mean that more breast cancers are being found because more women are getting mammograms. So higher rates don't necessarily mean that there has been an increase in the occurrence of breast cancer.

Death rates

The breast cancer death rate shows the frequency of death from breast cancer among women living in a given area during a certain time period (Table 2.1). Like incidence rates, death rates may be calculated for all women or for specific groups of women (e.g. Black/African-American women).

The death rate is calculated as the number of women from a particular geographic area who died from breast cancer divided by the total number of women living in that area. Death rates are shown in terms of 100,000 women and adjusted for age.

Data are included for the annual percent change in the death rate over a five-year period.

The meanings of these data are the same as for incidence rates, with one exception. Changes in screening don't affect death rates in the way that they affect incidence rates. So a negative value, which means that death rates are getting lower, is always desirable. A positive value, which means that death rates are getting higher, is always undesirable.

Late-stage incidence rates

For this report, late-stage breast cancer is defined as regional or distant stage using the Surveillance, Epidemiology and End Results (SEER) Summary Stage definitions (http://seer.cancer.gov/tools/ssm/). State and national reporting usually uses the SEER Summary Stage. It provides a consistent set of definitions of stages for historical comparisons.

The late-stage breast cancer incidence rate is calculated as the number of women with regional or distant breast cancer in a particular geographic area divided by the number of women living in that area (Table 2.1). Late-stage incidence rates are shown in terms of 100,000 women and adjusted for age.

Table 2.1. Female breast cancer incidence rates and trends, death rates and trends, and late-stage rates and trends

		Incidence Rates and Trends			Death Rates and Trends			Late-stage Rates and Trends		
Population Group	Female Population (Annual Average)	# of New Cases (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)	# of Deaths (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)	# of New Cases (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)
US	154,540,194	198,602	122.1	-0.2%	40,736	22.6	-1.9%	70,218	43.7	-1.2%
HP2020	.	-	-	-	-	20.6*	-	-	41.0*	-
North Carolina	4,751,657	6,681	124.9	0.1%	1,260	23.1	-1.7%	2,401	45.4	-0.5%
Tennessee	3,195,539	4,363	118.8	0.0%	880	23.3	-1.6%	1,605	44.1	-3.0%
Virginia	3,993,827	5,420	124.8	1.3%	1,074	24.0	-1.9%	1,896	43.9	0.1%
Komen Tri-Cities Service Area	487,236	704	111.3	-0.8%	158	23.3	NA	257	41.7	-1.4%
White	473,653	694	111.8	-0.8%	155	23.3	NA	253	41.9	-1.1%
Black/African-American	9,355	6	77.9	-6.4%	SN	SN	SN	SN	SN	SN
American Indian/Alaska Native (AIAN)	1,221	SN	SN	SN	SN	SN	SN	SN	SN	SN
Asian Pacific Islander (API)	3,008	SN	SN	SN	SN	SN	SN	SN	SN	SN
Non-Hispanic/ Latina	479,748	702	111.5	-0.8%	158	23.5	NA	256	41.7	-1.2%
Hispanic/ Latina	7,488	SN	SN	SN	SN	SN	SN	SN	SN	SN
Ashe County - NC	13,548	20	100.3	-4.0%	4	16.9	NA	8	42.9	12.0%
Avery County - NC	8,181	11	98.9	7.9%	4	29.4	NA	5	46.7	30.7%
Madison County - NC	10,375	19	138.1	0.7%	SN	SN	SN	6	40.3	-6.7%
Mitchell County - NC	8,022	12	99.5	5.3%	4	28.0	NA	5	45.3	4.1%
Watauga County - NC	24,762	29	118.7	-16.6%	4	17.1	-0.7%	11	49.4	-14.8%
Yancey County - NC	9,116	16	122.9	5.6%	3	24.3	-2.3%	5	39.5	6.2%
Carter County - TN	29,523	38	99.4	-2.5%	7	18.8	-1.9%	14	36.6	-4.2%
Greene County - TN	34,768	55	116.7	7.1%	11	23.5	0.0%	20	43.0	-0.6%
Hancock County - TN	3,428	4	98.2	0.4%	SN	SN	SN	SN	SN	SN
Hawkins County - TN	28,882	40	107.8	0.0%	11	28.8	0.3%	14	39.2	-7.9%
Johnson County - TN	8,374	10	88.4	-11.4%	SN	SN	SN	5	40.7	-20.6%
Sullivan County - TN	80,576	134	120.5	1.1%	26	22.6	-1.8%	46	42.5	-3.7%
Unicoi County - TN	9,312	15	117.1	-9.5%	4	23.8	NA	6	44.5	-21.9%
Washington County - TN	61,257	90	122.1	4.3%	17	21.5	-2.4%	31	42.5	1.2%
Buchanan County - VA	11,955	14	84.0	1.6%	5	27.5	-1.6%	5	29.8	-11.8%
Dickenson County - VA	7,992	11	106.5	2.9%	SN	SN	SN	SN	SN	SN
Lee County - VA	12,161	16	101.0	8.9%	3	19.2	1.2%	4	26.7	-3.3%
Russell County - VA	14,728	16	83.9	3.0%	4	21.4	-1.6%	6	34.0	-6.0%
Scott County - VA	11,733	21	131.9	-11.0%	5	30.8	-0.5%	8	51.1	-10.6%
Smyth County - VA	16,617	25	108.6	-2.0%	5	19.0	-3.2%	7	33.0	2.9%
Tazewell County - VA	22,744	27	89.5	-11.0%	10	29.2	-0.4%	9	30.1	-4.2%

		Incidence Rates and Trends			Death Rates and Trends			Late-stage Rates and Trends		
Population Group	Female Population (Annual Average)	# of New Cases (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)	# of Deaths (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)	# of New Cases (Annual Average)	Age-adjusted Rate/ 100,000	Trend (Annual Percent Change)
Washington County - VA	27,569	42	113.7	4.0%	11	28.0	-0.7%	16	44.7	0.2%
Wise County - VA	20,095	34	138.7	-11.7%	6	24.5	-2.7%	11	45.6	-11.4%
Bristol City - VA	9,425	12	92.1	-16.1%	5	33.5	1.0%	5	41.2	-10.2%
Norton City - VA	2,091	3	123.5	2.0%	SN	SN	SN	SN	SN	SN

*Target as of the writing of this report.
NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).
Data are for years 2006-2010 except for the incidence and late-stage data for Virginia counties and the Affiliate as a whole which are from 2005-2009.
Rates are in cases or deaths per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source of incidence and late-stage data: North American Association of Central Cancer Registries (NAACCR) – Cancer in North America (CINA) Deluxe Analytic File.
Source of death rate data: Centers for Disease Control and Prevention (CDC) – National Center for Health Statistics (NCHS) death data in SEER*Stat.
Source of death trend data: National Cancer Institute (NCI)/CDC State Cancer Profiles.

Incidence rates and trends summary

Overall, the breast cancer incidence rate and trend in the Komen Tri-Cities service area were lower than that observed in the US as a whole. The incidence rate of the Affiliate service area was significantly lower than that observed for the State of North Carolina and the incidence trend was not significantly different than the State of North Carolina. The incidence rate of the Affiliate service area was significantly lower than that observed for the State of Tennessee and the incidence trend was not significantly different than the State of Tennessee. The incidence rate of the Affiliate service area was significantly lower than that observed for the State of Virginia and the incidence trend was not significantly different than the State of Virginia.

For the United States, breast cancer incidence in Blacks/African-Americans is lower than in Whites overall. The most recent estimated breast cancer incidence rates for Asians and Pacific Islanders (APIs) and American Indians and Alaska Natives (AIANs) were lower than for Non-Hispanic Whites and Blacks/African-Americans. The most recent estimated incidence rates for Hispanics/Latinas were lower than for Non-Hispanic Whites and Blacks/African-Americans. For the Affiliate service area as a whole, the incidence rate was lower among Blacks/African-Americans than Whites. There were not enough data available within the Affiliate service area to report on APIs and AIANs so comparisons cannot be made for these racial groups. Also, there were not enough data available within the Affiliate service area to report on Hispanics/Latinas so comparisons cannot be made for this group.
The following county had an incidence rate **significantly higher** than the Affiliate service area as a whole:

- Wise County, VA

The incidence rate was significantly lower in the following counties:

- Buchanan County, VA
- Russell County, VA
- Tazewell County, VA

The rest of the counties had incidence rates and trends that were not significantly different than the Affiliate service area as a whole or did not have enough data available.

It's important to remember that an increase in breast cancer incidence could also mean that more breast cancers are being found because more women are getting mammograms.

Death rates and trends summary

Overall, the breast cancer death rate in the Komen Tri-Cities service area was similar to that observed in the US as a whole and the death rate trend was not available for comparison with the US as a whole. The death rate of the Affiliate service area was not significantly different than that observed for the State of North Carolina. The death rate of the Affiliate service area was not significantly different than that observed for the State of Tennessee. The death rate of the Affiliate service area was not significantly different than that observed for the State of Virginia.

For the United States, breast cancer death rates in Blacks/African-Americans are substantially higher than in Whites overall. The most recent estimated breast cancer death rates for APIs and AIANs were lower than for Non-Hispanic Whites and Blacks/African-Americans. The most recent estimated death rates for Hispanics/Latinas were lower than for Non-Hispanic Whites and Blacks/African-Americans. There were not enough data available within the Affiliate service area to report on Blacks/African-Americans, APIs and AIANs so comparisons cannot be made for these racial groups. Also, there were not enough data available within the Affiliate service area to report on Hispanics/Latinas so comparisons cannot be made for this group.

Significantly less favorable trends in breast cancer death rates were observed in the following county:

- Bristol City, VA

The rest of the counties had death rates and trends that were not significantly different than the Affiliate service area as a whole or did not have enough data available.

Late-stage incidence rates and trends summary

Overall, the breast cancer late-stage incidence rate and trend in the Komen Tri-Cities service area were slightly lower than that observed in the US as a whole. The late-stage incidence rate of the Affiliate service area was significantly lower than that observed for the State of North Carolina and the late-stage incidence trend was not significantly different than the State of North Carolina. The late-stage incidence rate and trend of the Affiliate service area were not significantly different than that observed for the State of Tennessee. The late-stage incidence rate and trend of the Affiliate service area were not significantly different than that observed for the State of Virginia.

For the United States, late-stage incidence rates in Blacks/African-Americans are higher than among Whites. Hispanics/Latinas tend to be diagnosed with late-stage breast cancers more often than Whites. There were not enough data available within the Affiliate service area to report on Blacks/African-Americans, APIs and AIANs so comparisons cannot be made for these racial groups. Also, there were not enough data available within the Affiliate service area to report on Hispanics/Latinas so comparisons cannot be made for this group.

Significantly more favorable trends in breast cancer late-stage incidence rates were observed in the following county:

- Wise County, VA

The rest of the counties had late-stage incidence rates and trends that were not significantly different than the Affiliate service area as a whole or did not have enough data available.

Mammography Screening

Getting regular screening mammograms (and treatment if diagnosed) lowers the risk of dying from breast cancer. Screening mammography can find breast cancer early, when the chances of survival are highest. Table 2.2 shows some screening recommendations among major organizations for women at average risk.

Table 2.2. Breast cancer screening recommendations for women at average risk*

American Cancer Society	National Comprehensive Cancer Network	US Preventive Services Task Force
Informed decision-making with a health care provider at age 40 Mammography every year starting at age 45 Mammography every other year beginning at age 55	Mammography every year starting at age 40	Informed decision-making with a health care provider ages 40-49 Mammography every 2 years ages 50-74

*As of October 2015

Because having regular mammograms lowers the chances of dying from breast cancer, it's important to know whether women are having mammograms when they should. This information can be used to identify groups of women who should be screened who need help in meeting the current recommendations for screening mammography. The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factors Surveillance System (BRFSS) collected the data on mammograms that are used in this report. The data come from interviews with women age 50 to 74 from across the United States. During the interviews, each woman was asked how long it has been since she has had a mammogram. The proportions in Table 2.3 are based on the number of women age 50 to 74 who reported in 2012 having had a mammogram in the last two years.

The data have been weighted to account for differences between the women who were interviewed and all the women in the area. For example, if 20.0 percent of the women interviewed are Hispanic/Latina, but only 10.0 percent of the total women in the area are Hispanic/Latina, weighting is used to account for this difference.

The report uses the mammography screening proportion to show whether the women in an area are getting screening mammograms when they should. Mammography screening proportion is calculated from two pieces of information:

- The number of women living in an area whom the BRFSS determines should have mammograms (i.e. women age 50 to 74).
- The number of these women who actually had a mammogram during the past two years.

The number of women who had a mammogram is divided by the number who should have had one. For example, if there are 500 women in an area who should have had mammograms and 250 of those women actually had a mammogram in the past two years, the mammography screening proportion is 50.0 percent.

Because the screening proportions come from samples of women in an area and are not exact, Table 2.3 includes confidence intervals. A confidence interval is a range of values that gives an idea of how uncertain a value may be. It's shown as two numbers—a lower value and a higher one. It is very unlikely that the true rate is less than the lower value or more than the higher value.

For example, if screening proportion was reported as 50.0 percent, with a confidence interval of 35.0 to 65.0 percent, the real rate might not be exactly 50.0 percent, but it's very unlikely that it's less than 35.0 or more than 65.0 percent.

In general, screening proportions at the county level have fairly wide confidence intervals. The confidence interval should always be considered before concluding that the screening proportion in one county is higher or lower than that in another county.

Table 2.3. Proportion of women ages 50-74 with screening mammography in the last two years, self-report

Population Group	# of Women Interviewed (Sample Size)	# w/ Self-Reported Mammogram	Proportion Screened (Weighted Average)	Confidence Interval of Proportion Screened
US	174,796	133,399	77.5%	77.2%-77.7%
North Carolina	4,324	3,445	79.4%	77.9%-80.9%
Tennessee	2,882	2,209	76.6%	74.5%-78.5%
Virginia	2,644	2,156	79.8%	77.8%-81.7%
Komen Tri-Cities Service Area	577	455	77.0%	72.4%-81.1%
White	557	440	77.0%	72.3%-81.1%
Black/African-American	13	9	69.7%	38.7%-89.3%
AIAN	SN	SN	SN	SN
API	SN	SN	SN	SN
Hispanic/ Latina	SN	SN	SN	SN
Non-Hispanic/ Latina	569	448	76.9%	72.3%-81.0%
Ashe County - NC	18	15	80.8%	55.5%-93.4%
Avery County - NC	10	6	53.2%	19.1%-84.6%
Madison County - NC	13	11	88.1%	51.5%-98.1%
Mitchell County - NC	SN	SN	SN	SN
Watauga County - NC	23	20	90.8%	67.2%-97.9%
Yancey County - NC	10	8	83.2%	46.1%-96.6%
Carter County - TN	36	30	88.7%	69.3%-96.5%
Greene County - TN	37	33	79.7%	59.7%-91.3%
Hancock County - TN	SN	SN	SN	SN
Hawkins County - TN	32	21	65.7%	44.2%-82.2%
Johnson County - TN	16	9	55.7%	31.5%-77.5%
Sullivan County - TN	163	134	83.2%	74.5%-89.4%
Unicoi County - TN	12	10	82.0%	44.6%-96.2%
Washington County - TN	52	38	72.7%	56.4%-84.6%
Buchanan County - VA	SN	SN	SN	SN
Dickenson County - VA	SN	SN	SN	SN
Lee County - VA	20	17	87.8%	61.0%-97.1%
Russell County - VA	10	7	67.2%	28.6%-91.3%
Scott County - VA	25	19	80.9%	58.8%-92.7%
Smyth County - VA	11	8	70.3%	33.8%-91.6%
Tazewell County - VA	19	16	84.2%	51.1%-96.4%
Washington County - VA	20	12	57.6%	33.2%-78.8%
Wise County - VA	25	22	85.1%	60.8%-95.4%
Bristol City - VA	SN	SN	SN	SN
Norton City - VA	SN	SN	SN	SN

SN – data suppressed due to small numbers (fewer than 10 samples).
Data are for 2012.
Source: CDC – Behavioral Risk Factor Surveillance System (BRFSS).

Breast cancer screening proportions summary

The breast cancer screening proportion in the Komen Tri-Cities service area was not significantly different than that observed in the US as a whole. The screening proportion of the Affiliate service area was not significantly different than the State of North Carolina, was not significantly different than the State of Tennessee and was not significantly different than the State of Virginia.

For the United States, breast cancer screening proportions among Blacks/African-Americans are similar to those among Whites overall. APIs have somewhat lower screening proportions than Whites and Blacks/African-Americans. Although data are limited, screening proportions among AIANs are similar to those among Whites. Screening proportions among Hispanics/Latinas are similar to those among Non-Hispanic Whites and Blacks/African-Americans. For the Affiliate service area as a whole, the screening proportion was not significantly different among Blacks/African-Americans than Whites. There were not enough data available within the Affiliate service area to report on APIs and AIANs so comparisons cannot be made for these racial groups. Also, there were not enough data available within the Affiliate service area to report on Hispanics/Latinas so comparisons cannot be made for this group.

None of the counties in the Affiliate service area had substantially different screening proportions than the Affiliate service area as a whole or did not have enough data available.

Population Characteristics

The report includes basic information about the women in each area (demographic measures) and about factors like education, income, and unemployment (socioeconomic measures) in the areas where they live (Tables 2.4 and 2.5). Demographic and socioeconomic data can be used to identify which groups of women are most in need of help and to figure out the best ways to help them.

It is important to note that the report uses the race and ethnicity categories used by the US Census Bureau, and that race and ethnicity are separate and independent categories. This means that everyone is classified as both a member of one of the four race groups as well as either Hispanic/Latina or Non-Hispanic/Latina.

The demographic and socioeconomic data in this report are the most recent data available for US counties. All the data are shown as percentages. However, the percentages weren't all calculated in the same way.

- The race, ethnicity, and age data are based on the total female population in the area (e.g. the percent of females over the age of 40).
- The socioeconomic data are based on all the people in the area, not just women.
- Income, education and unemployment data don't include children. They're based on people age 15 and older for income and unemployment and age 25 and older for education.
- The data on the use of English, called "linguistic isolation", are based on the total number of households in the area. The Census Bureau defines a linguistically isolated household as one in which all the adults have difficulty with English.

Table 2.4. Population characteristics – demographics

Population Group	White	Black /African-American	AIAN	API	Non-Hispanic /Latina	Hispanic /Latina	Female Age 40 Plus	Female Age 50 Plus	Female Age 65 Plus
US	78.8 %	14.1 %	1.4 %	5.8 %	83.8 %	16.2 %	48.3 %	34.5 %	14.8 %
North Carolina	72.3 %	23.4 %	1.6 %	2.6 %	92.2 %	7.8 %	48.6 %	34.5 %	14.8 %
Tennessee	79.9 %	17.9 %	0.4 %	1.8 %	95.8 %	4.2 %	49.3 %	35.5 %	15.2 %
Virginia	71.9 %	21.1 %	0.6 %	6.5 %	92.3 %	7.7 %	48.5 %	33.9 %	13.9 %
Komen Tri-Cities Service Area	96.8 %	2.2 %	0.3 %	0.7 %	98.2 %	1.8 %	55.1 %	41.5 %	19.4 %
Ashe County - NC	98.2 %	1.0 %	0.3 %	0.5 %	96.9 %	3.1 %	60.0 %	46.7 %	23.0 %
Avery County - NC	98.0 %	1.2 %	0.4 %	0.4 %	96.4 %	3.6 %	56.4 %	43.6 %	21.0 %
Madison County - NC	97.7 %	1.3 %	0.4 %	0.7 %	97.9 %	2.1 %	56.6 %	43.2 %	19.7 %
Mitchell County - NC	97.8 %	0.9 %	0.7 %	0.6 %	96.3 %	3.7 %	60.3 %	47.0 %	23.5 %
Watauga County - NC	96.4 %	2.1 %	0.3 %	1.2 %	96.8 %	3.2 %	41.9 %	31.6 %	14.0 %
Yancey County - NC	97.7 %	1.2 %	0.6 %	0.5 %	96.2 %	3.8 %	59.9 %	46.7 %	23.1 %
Carter County - TN	97.7 %	1.7 %	0.2 %	0.4 %	98.5 %	1.5 %	54.8 %	41.1 %	19.0 %
Greene County - TN	96.9 %	2.3 %	0.3 %	0.5 %	97.7 %	2.3 %	55.9 %	41.8 %	19.6 %
Hancock County - TN	98.8 %	0.6 %	0.4 %	0.2 %	99.7 %	0.3 %	55.8 %	43.1 %	19.8 %
Hawkins County - TN	97.4 %	1.7 %	0.2 %	0.7 %	98.8 %	1.2 %	55.2 %	40.6 %	18.3 %
Johnson County - TN	98.8 %	0.6 %	0.2 %	0.4 %	98.5 %	1.5 %	58.7 %	44.9 %	21.3 %
Sullivan County - TN	96.5 %	2.4 %	0.3 %	0.8 %	98.6 %	1.4 %	57.5 %	43.3 %	20.9 %
Unicoi County - TN	98.9 %	0.5 %	0.3 %	0.2 %	96.6 %	3.4 %	58.1 %	44.6 %	21.9 %
Washington County - TN	93.9 %	4.4 %	0.3 %	1.4 %	97.2 %	2.8 %	50.8 %	37.5 %	17.1 %
Buchanan County - VA	98.9 %	0.7 %	0.2 %	0.3 %	99.6 %	0.4 %	58.5 %	43.4 %	18.6 %
Dickenson County - VA	98.9 %	0.7 %	0.2 %	0.2 %	99.3 %	0.7 %	55.3 %	41.9 %	18.8 %
Lee County - VA	98.7 %	0.9 %	0.2 %	0.2 %	99.4 %	0.6 %	54.9 %	40.8 %	17.9 %
Russell County - VA	98.6 %	1.0 %	0.2 %	0.2 %	99.1 %	0.9 %	56.1 %	42.1 %	18.5 %
Scott County - VA	98.6 %	0.9 %	0.2 %	0.3 %	99.1 %	0.9 %	58.7 %	44.9 %	22.5 %
Smyth County - VA	97.0 %	2.4 %	0.2 %	0.4 %	98.5 %	1.5 %	56.5 %	42.8 %	20.5 %
Tazewell County - VA	96.7 %	2.4 %	0.1 %	0.8 %	99.4 %	0.6 %	56.8 %	43.7 %	19.9 %
Washington County - VA	97.7 %	1.6 %	0.2 %	0.5 %	98.9 %	1.1 %	57.3 %	43.5 %	20.0 %
Wise County - VA	97.4 %	2.0 %	0.1 %	0.4 %	99.0 %	1.0 %	51.8 %	38.9 %	16.9 %
Bristol City - VA	92.7 %	6.0 %	0.4 %	0.9 %	98.6 %	1.4 %	55.0 %	42.4 %	21.8 %
Norton City - VA	90.3 %	8.1 %	0.2 %	1.4 %	98.7 %	1.3 %	51.1 %	37.8 %	16.0 %

Data are for 2011.
Data are in the percentage of women in the population.
Source: US Census Bureau – Population Estimates

Table 2.5. Population characteristics – socioeconomics

Population Group	Less than HS Education	Income Below 100% Poverty	Income Below 250% Poverty (Age: 40-64)	Un-employed	Foreign Born	Linguistic-ally Isolated	In Rural Areas	In Medically Under-served Areas	No Health Insurance (Age: 40-64)
US	14.6 %	14.3 %	33.3 %	8.7 %	12.8 %	4.7 %	19.3 %	23.3 %	16.6 %
North Carolina	15.9 %	16.1 %	37.2 %	9.7 %	7.4 %	2.7 %	33.9 %	45.9 %	18.3 %
Tennessee	16.8 %	16.9 %	38.9 %	9.2 %	4.5 %	1.5 %	33.6 %	47.7 %	17.6 %
Virginia	13.4 %	10.7 %	26.9 %	6.5 %	11.0 %	2.7 %	24.5 %	27.2 %	13.3 %
Komen Tri-Cities Service Area	20.9 %	19.2 %	44.9 %	8.4 %	1.9 %	0.5 %	55.9 %	65.4 %	17.0 %
Ashe County - NC	21.4 %	17.9 %	45.7 %	10.2 %	3.9 %	2.0 %	84.9 %	100.0 %	20.5 %
Avery County - NC	18.5 %	18.1 %	47.4 %	6.4 %	3.6 %	2.1 %	88.8 %	100.0 %	24.2 %
Madison County - NC	20.8 %	18.1 %	45.8 %	8.2 %	1.9 %	0.7 %	90.6 %	100.0 %	17.7 %
Mitchell County - NC	20.9 %	17.4 %	46.1 %	11.5 %	1.4 %	0.4 %	82.6 %	100.0 %	20.4 %
Watauga County - NC	11.7 %	26.3 %	35.9 %	8.7 %	3.5 %	1.3 %	55.4 %	31.0 %	17.6 %
Yancey County - NC	19.3 %	17.9 %	47.4 %	8.9 %	2.8 %	0.9 %	100.0 %	100.0 %	21.9 %
Carter County - TN	21.4 %	22.0 %	51.3 %	9.6 %	0.9 %	0.1 %	41.0 %	100.0 %	18.4 %
Greene County - TN	20.8 %	21.6 %	47.9 %	9.7 %	2.1 %	0.7 %	65.2 %	74.3 %	19.9 %
Hancock County - TN	30.5 %	31.9 %	62.2 %	11.5 %	0.4 %	0.2 %	100.0 %	100.0 %	19.9 %
Hawkins County - TN	21.0 %	16.9 %	45.1 %	9.8 %	1.1 %	0.5 %	57.9 %	100.0 %	16.7 %
Johnson County - TN	29.9 %	23.4 %	51.5 %	13.2 %	0.7 %	0.3 %	85.2 %	100.0 %	18.4 %
Sullivan County - TN	17.3 %	16.5 %	39.6 %	8.1 %	1.6 %	0.4 %	25.6 %	0.0 %	16.6 %
Unicoi County - TN	24.7 %	20.7 %	42.4 %	6.4 %	3.0 %	0.5 %	44.7 %	100.0 %	17.2 %
Washington County - TN	14.9 %	17.3 %	38.6 %	6.8 %	3.4 %	0.8 %	26.4 %	27.4 %	16.2 %
Buchanan County - VA	33.1 %	24.0 %	51.0 %	9.5 %	1.4 %	0.1 %	100.0 %	100.0 %	14.2 %
Dickenson County - VA	33.4 %	21.3 %	52.9 %	9.8 %	0.7 %	0.1 %	100.0 %	100.0 %	14.4 %
Lee County - VA	27.5 %	22.7 %	57.1 %	7.9 %	1.3 %	0.0 %	99.6 %	100.0 %	15.4 %
Russell County - VA	27.3 %	20.1 %	50.4 %	7.6 %	0.9 %	0.2 %	88.2 %	100.0 %	16.0 %
Scott County - VA	26.7 %	18.3 %	48.0 %	6.9 %	0.8 %	0.3 %	82.1 %	100.0 %	15.1 %
Smyth County - VA	24.0 %	20.3 %	48.5 %	7.0 %	1.1 %	0.4 %	75.3 %	69.2 %	16.2 %
Tazewell County - VA	23.5 %	17.3 %	45.6 %	8.1 %	1.2 %	0.1 %	51.9 %	100.0 %	15.9 %
Washington County - VA	18.1 %	13.6 %	40.3 %	6.1 %	1.0 %	0.1 %	71.7 %	100.0 %	15.0 %
Wise County - VA	29.1 %	21.6 %	49.6 %	8.5 %	1.7 %	0.3 %	56.7 %	44.2 %	14.1 %
Bristol City - VA	20.5 %	22.4 %	50.4 %	11.5 %	1.2 %	0.1 %	0.0 %	100.0 %	15.8 %
Norton City - VA	19.4 %	21.2 %	43.0 %	5.5 %	0.4 %	0.0 %	2.6 %	0.0 %	11.2 %

Data are in the percentage of people (men and women) in the population.
Source of health insurance data: US Census Bureau – Small Area Health Insurance Estimates (SAHIE) for 2011.
Source of rural population data: US Census Bureau – Census 2010.
Source of medically underserved data: Health Resources and Services Administration (HRSA) for 2013.
Source of other data: US Census Bureau – American Community Survey (ACS) for 2007-2011.

Population characteristics summary

Proportionately, the Komen Tri-Cities service area has a substantially larger White female population than the US as a whole, a substantially smaller Black/African-American female population, a substantially smaller Asian and Pacific Islander (API) female population, a slightly smaller American Indian and Alaska Native (AIAN) female population, and a substantially smaller Hispanic/Latina female population. The Affiliate's female population is slightly older than that of the US as a whole. The Affiliate's education level is substantially lower than and income level is slightly lower than those of the US as a whole. There are a slightly smaller percentage of people who are unemployed in the Affiliate service area. The Affiliate service area has a substantially smaller percentage of people who are foreign born and a substantially smaller percentage of people who are linguistically isolated. There are a substantially larger percentage of people living in rural areas, a slightly larger percentage of people without health insurance, and a substantially larger percentage of people living in medically underserved areas.

The following county has a substantially larger Black/African-American female population percentage than that of the Affiliate service area as a whole:

- Norton City, VA

The following counties have substantially lower education levels than that of the Affiliate service area as a whole:

- Hancock County, TN
- Johnson County, TN
- Buchanan County, VA
- Dickenson County, VA
- Lee County, VA
- Russell County, VA
- Scott County, VA
- Wise County, VA

The following county has a substantially lower income level than that of the Affiliate service area as a whole:

- Hancock County, TN

The following counties have substantially lower employment levels than that of the Affiliate service area as a whole:

- Mitchell County, NC
- Hancock County, TN
- Johnson County, TN
- Bristol City, VA

The following county has a substantially larger percentage of adults without health insurance than does the Affiliate service area as a whole:

- Avery County, NC

Priority Areas

Healthy People 2020 forecasts

Healthy People 2020 (HP2020) is a major federal government initiative that provides specific health objectives for communities and for the country as a whole. Many national health organizations use HP2020 targets to monitor progress in reducing the burden of disease and improve the health of the nation. Likewise, Komen believes it is important to refer to HP2020 to see how areas across the country are progressing towards reducing the burden of breast cancer.

HP2020 has several cancer-related objectives, including:

- Reducing women's death rate from breast cancer (Target as of the writing of this report: 20.6 cases per 100,000 women).
- Reducing the number of breast cancers that are found at a late-stage (Target as of the writing of this report: 41.0 cases per 100,000 women).

To see how well counties in the Komen Tri-Cities service area are progressing toward these targets, the report uses the following information:

- County breast cancer death rate and late-stage diagnosis data for years 2006 to 2010.
- Estimates for the trend (annual percent change) in county breast cancer death rates and late-stage diagnoses for years 2006 to 2010.
- Both the data and the HP2020 target are age-adjusted.

These data are used to estimate how many years it will take for each county to meet the HP2020 objectives. Because the target date for meeting the objective is 2020, and 2008 (the middle of the 2006-2010 period) was used as a starting point, a county has 12 years to meet the target.

Death rate and late-stage diagnosis data and trends are used to calculate whether an area will meet the HP2020 target, assuming that the trend seen in years 2006 to 2010 continues for 2011 and beyond.

Identification of priority areas

The purpose of this report is to combine evidence from many credible sources and use the data to identify the highest priority areas for breast cancer programs (i.e. the areas of greatest need). Classification of priority areas are based on the time needed to achieve HP2020 targets in each area. These time projections depend on both the starting point and the trends in death rates and late-stage incidence.

Late-stage incidence reflects both the overall breast cancer incidence rate in the population and the mammography screening coverage. The breast cancer death rate reflects the access to care and the quality of care in the health care delivery area, as well as cancer stage at diagnosis.

There has not been any indication that either one of the two HP2020 targets is more important than the other. Therefore, the report considers them equally important.

Counties are classified as follows (Table 2.6):

- Counties that are not likely to achieve either of the HP2020 targets are considered to have the highest needs.
- Counties that have already achieved both targets are considered to have the lowest needs.
- Other counties are classified based on the number of years needed to achieve the two targets.

Table 2.6. Needs/priority classification based on the projected time to achieve HP2020 breast cancer targets

		Time to Achieve Late-stage Incidence Reduction Target				
Time to Achieve Death Rate Reduction Target		13 years or longer	7-12 yrs.	0 – 6 yrs.	Currently meets target	Unknown
	13 years or longer	**Highest**	**High**	**Medium High**	**Medium**	**Highest**
	7-12 yrs.	**High**	**Medium High**	**Medium**	**Medium Low**	**Medium High**
	0 – 6 yrs.	**Medium High**	**Medium**	**Medium Low**	**Low**	**Medium Low**
	Currently meets target	**Medium**	**Medium Low**	**Low**	**Lowest**	**Lowest**
	Unknown	**Highest**	**Medium High**	**Medium Low**	**Lowest**	**Unknown**

If the time to achieve a target cannot be calculated for one of the HP2020 indicators, then the county is classified based on the other indicator. If both indicators are missing, then the county is not classified. This doesn't mean that the county may not have high needs; it only means that sufficient data are not available to classify the county.

Affiliate Service Area Healthy People 2020 Forecasts and Priority Areas

The results presented in Table 2.7 help identify which counties have the greatest needs when it comes to meeting the HP2020 breast cancer targets.

- For counties in the "13 years or longer" category, current trends would need to change to achieve the target.
- Some counties may currently meet the target but their rates are increasing and they could fail to meet the target if the trend is not reversed.

Trends can change for a number of reasons, including:

- Improved screening programs could lead to breast cancers being diagnosed earlier, resulting in a decrease in both late-stage incidence rates and death rates.
- Improved socioeconomic conditions, such as reductions in poverty and linguistic isolation could lead to more timely treatment of breast cancer, causing a decrease in death rates.

The data in this table should be considered together with other information on factors that affect breast cancer death rates such as screening percentages and key breast cancer death determinants such as poverty and linguistic isolation.

Table 2.7. Intervention priorities for Komen Tri-Cities service area with predicted time to achieve the HP2020 breast cancer targets and key population characteristics

County	Priority	Predicted Time to Achieve Death Rate Target	Predicted Time to Achieve Late-stage Incidence Target	Key Population Characteristics
Ashe County - NC	Highest	NA	13 years or longer	Rural, medically underserved
Avery County - NC	Highest	NA	13 years or longer	Rural, insurance, medically underserved
Mitchell County - NC	Highest	NA	13 years or longer	Employment, rural, medically underserved
Washington County - VA	Highest	13 years or longer	13 years or longer	Rural, medically underserved
Yancey County - NC	High	8 years	13 years or longer	Rural, medically underserved
Greene County - TN	High	13 years or longer	8 years	Rural, medically underserved
Washington County - TN	Medium High	2 years	13 years or longer	
Scott County - VA	Medium High	13 years or longer	2 years	Education, rural, medically underserved
Bristol City - VA	Medium High	13 years or longer	1 year	Employment, medically underserved
Hawkins County - TN	Medium	13 years or longer	Currently meets target	Medically underserved
Buchanan County - VA	Medium	13 years or longer	Currently meets target	Education, rural, medically underserved
Lee County - VA	Medium	13 years or longer	Currently meets target	Education, rural, medically underserved
Smyth County - VA	Medium	Currently meets target	13 years or longer	Rural
Tazewell County - VA	Medium	13 years or longer	Currently meets target	Medically underserved
Wise County - VA	Medium	7 years	1 year	Education
Sullivan County - TN	Medium Low	6 years	1 year	
Unicoi County - TN	Medium Low	NA	1 year	Medically underserved
Watauga County - NC	Low	Currently meets target	2 years	
Russell County - VA	Low	3 years	Currently meets target	Education, rural, medically underserved
Madison County - NC	Lowest	SN	Currently meets target	Rural, medically underserved
Carter County - TN	Lowest	Currently meets target	Currently meets target	Medically underserved
Johnson County - TN	Lowest	SN	Currently meets target	Education, employment, rural, medically underserved

County	Priority	Predicted Time to Achieve Death Rate Target	Predicted Time to Achieve Late-stage Incidence Target	Key Population Characteristics
Hancock County - TN	Undetermined	SN	SN	Education, poverty, employment, rural, medically underserved
Dickenson County - VA	Undetermined	SN	SN	Education, rural, medically underserved
Norton City - VA	Undetermined	SN	SN	%Black/African-American

NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).

Map of Intervention Priority Areas

Figure 2.1 shows a map of the intervention priorities for the counties in the Affiliate service area. When both of the indicators used to establish a priority for a county are not available, the priority is shown as "undetermined" on the map.

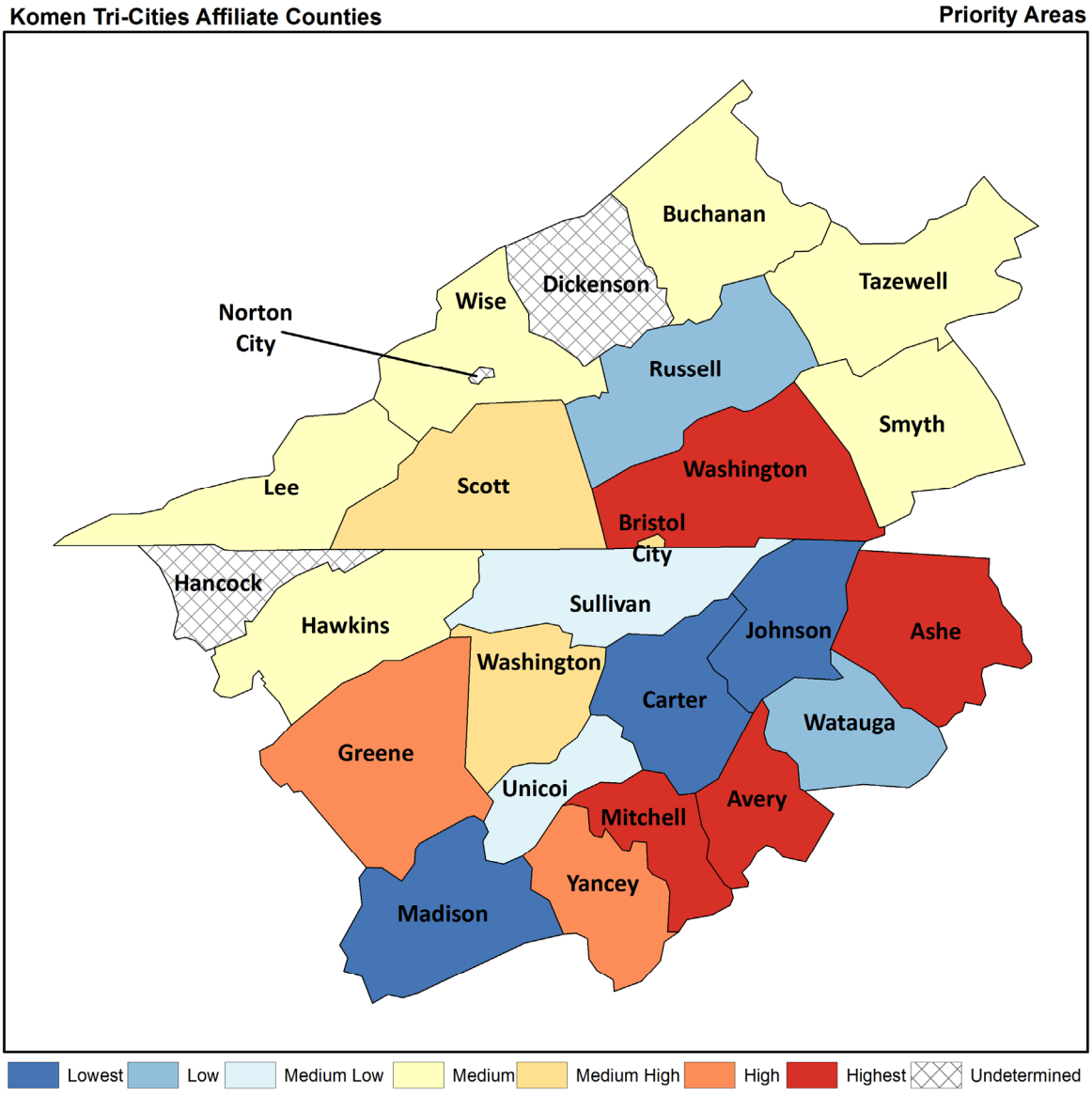

Figure 2.1. Intervention priorities

Data Limitations

The following data limitations need to be considered when utilizing the data of the Quantitative Data Report:

- The most recent data available were used but, for cancer incidence and deaths, these data are still several years behind.
- For some areas, data might not be available or might be of varying quality.
- Areas with small populations might not have enough breast cancer cases or breast cancer deaths each year to support the generation of reliable statistics.
- There are often several sources of cancer statistics for a given population and geographic area; therefore, other sources of cancer data may result in minor differences in the values even in the same time period.
- Data on cancer rates for specific racial and ethnic subgroups such as Somali, Hmong, or Ethiopian are not generally available.
- The various types of breast cancer data in this report are inter-dependent.
- There are many factors that impact breast cancer risk and survival for which quantitative data are not available. Some examples include family history, genetic markers like HER2 and BRCA, other medical conditions that can complicate treatment, and the level of family and community support available to the patient.
- The calculation of the years needed to meet the HP2020 objectives assume that the current trends will continue until 2020. However, the trends can change for a number of reasons.
- Not all breast cancer cases have a stage indication.

Quantitative Data Report Conclusions

Highest priority areas

Four counties in the Komen Tri-Cities service area are in the highest priority category. One of the four, Washington County, VA is not likely to meet either the death rate or late-stage incidence rate HP2020 targets. Three of the four, Ashe County, NC, Avery County, NC and Mitchell County, NC, are not likely to meet the late-stage incidence rate HP2020 target. Mitchell County, NC has high unemployment.

High priority areas

Two counties in the Komen Tri-Cities service area are in the high priority category. One of the two, Greene County, TN is not likely to meet the death rate HP2020 target. The other, Yancey County, NC is not likely to meet the late-stage incidence rate HP2020 target.

The death rates in Greene County, TN (23.5 per 100,000) are similar to those of the Affiliate service area but are above the HP2020 target and the death rate trend (0.0 percent per year) is not decreasing. The incidence rates in Yancey County, NC (122.9 per 100,000) appear to be higher than the Affiliate service area as a whole (111.3 per 100,000) although not significantly. The late-stage incidence trends in Yancey County, NC (6.2 percent per year) indicate that late-stage incidence rates may be increasing.

Selection of Target Communities

In order to be effective stewards of resources, Komen Tri-Cities has chosen four target communities within the service area. The Affiliate will focus strategic efforts on these target communities over the course of the next four years. Target communities are those communities which have cumulative key indicators showing an increased chance of vulnerable populations likely at risk for experiencing gaps in breast health services and/or barriers in access to care.

When selecting target communities, Komen Tri-Cities reviewed Healthy People 2020 (HP 2020), a major federal government initiative that provides the specific health objectives for communities and the country as a whole. Specific to Komen Tri-Cities' work, goals around reducing women's death rate from breast cancer and reducing the number of breast cancers found at a late-stage were analyzed. Through this review, areas of priority were identified based on the time needed to meet Healthy People 2020 targets for breast cancer.

Additional key indicators the Affiliate reviewed when selecting target counties included, but were not limited to:

- Incidence rates and trends
- Death rates and trends
- Late-stage rates and trends
- Below average screening percentages
- Residents living below poverty level
- Residents living without health insurance
- Unemployment percentages

The selected target communities are:

- Ashe County, North Carolina
- Avery, Mitchell, and Yancey Counties, North Carolina
- Greene County, Tennessee
- Washington County, Virginia and Bristol City, Virginia

Ashe County, North Carolina

Ashe County was identified as one of the highest priority counties in the Komen Tri-Cities Region due to the amount of intervention time needed to achieve the HP 2020 targets, as will be discussed below. Furthermore, the county is incredibly rural, medically underserved, and has many families who are underinsured. The incidence, death, and late-stage rate trends are of concern as well. All of these factors contribute to its selection as a focus for the Komen Tri-Cities 2015 Community Profile.

Ashe County, rests high in the Blue Ridge Mountains in North Carolina. It is a rural county bordering the Northeast corner of Tennessee and the Southwest edge of Virginia. In 2013, the county's population was determined to be 27,151 (US Census Bureau, 2014). Of this population, 13,548 are women with 98.2 percent being White, a rate much higher than the national average, 78.8 percent, and slightly greater than the Affiliate service area average, 96.8 percent (Table 2.1 and Table 2.4). The county has a very small minority population: 1.0 percent Black/African-American, 0.3 percent American Indian and Alaska Native (AIAN), 0.5 percent Asian and Pacific Islander (API), and 3.1 percent of Hispanic/Latina decent (Table 2.4).

HP 2020 identifies Ashe County as one of the highest priority counties in the Komen Tri-Cities Region due to the amount of intervention time needed to achieve the HP 2020 targets (Table 7). Currently, 100 percent of the area is deemed as medically underserved with 20.5 percent of persons aged 40 to 64 with no health insurance (Table 2.5). At this time, the county's incidence rate is 100.3 breast cancer diagnoses per 100,000 women (Table 2.1). This rate is less than the US rate of 122.1 and the Komen Tri-Cities service area rate of 111.3 (Table 2.1). Because the incidence rate is lower than the national average, women may not be accessing mammograms as recommended.

The age-adjusted death rate for Ashe County is 16.9 breast cancer related deaths per 100,000 women (Table 2.1). The US rate is 22.6, while the Komen Tri-Cities rate rests at 23.3 (Table 2.1). There is not enough data to determine the trend of annual percent change surrounding the death rate in Ashe County. As a result, it is unknown whether the death rate is increasing or decreasing.

Furthermore, the late-stage diagnosis rate for Ashe County is 42.9 late-stage diagnoses per 100,000 women (Table 2.1). This is lower than the United States rate of 43.7 cases per 100,000 women (Table 2.1). According to HP 2020, the predicted number of years for Ashe County to reach the HP 2020 target of 41.0 late-stage diagnoses per 100,000 women is 13 years or longer (Table 2.1 and Table 2.7). These rates may be impacted by improving screening programs for early detection and providing access to care for the medically underserved community.

Screening percentages in Ashe County for women between the ages of 50 and 74 are reported as 80.8 percent with a confidence interval of 55.5 percent to 93.4 percent (Table 2.3). In comparison this percentage is greater than national percentage, 77.5 percent, and the Affiliate percentage, 77.0 percent (Table 2.3). Although the screening percentages of Ashe County appear satisfactory in comparison to local and national rates, the statistics may not be entirely accurate as evidenced by the large confidence interval. Furthermore, reported sample sizes were small in determining this statistic for Ashe County. Further research should be conducted to determine the accuracy of these numbers.

The socioeconomic statistics reveal a strong working class community. The US Census Bureau reports the median household family income was $35,670 between 2008 and 2012. (US Census Bureau, 2014). Currently, the main sources of employment arise from manufacturing, construction, local government, and service & retail opportunities. While the county's history is deeply seeded in farming and agriculture, this industry accounts for only 2.4 percent of the active workforce (About Ashe, 2014). The county is currently growing to anticipate the demands of a more stable economic structure to provide a better source of employment for its citizens. A closer look at the socioeconomic data unveils more detail about Ashe County. Data reveal that 21.4 percent of persons have less than a high school education (Table 2.5). Additionally, 17.9 percent of families have an income 100 percent below the poverty level with 45.7 percent having an income 250 percent below the poverty line (Table 2.5). The unemployment percentage is at 10.2 percent, which is also greater than the national rate of 8.7 percent (Table 2.5). As previously revealed, 100 percent of Ashe County is medically underserved with lack of insurance being a problem (Table 2.5). These statistics alone display the dire importance of an intervention by Komen Tri-Cities in this community.

Ashe County is a rural community with little access to health care. To determine the extent of its needs, a health system analysis will provide a deeper look into the primary priorities. Based on currently available data regarding trends in Ashe County, it appears that many residents would benefit from services in their area that are no-cost, reduced-cost, and those that would facilitate their accessibility to health care. The investigation of these issues will be reviewed in the health system analysis.

Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina

Due to small population sizes, suppressed data information, and proximity of county location, Avery, Mitchell, and Yancey Counties have been grouped together as one community. These counties have been combined into one region for the purpose of this Community Profile and the Affiliate's targeted efforts. Avery, Mitchell, and Yancey Counties are located in western North Carolina. All counties in the region are considered rural and medically underserved. Other issues of concern include poverty, lack of insurance, and job stability. These factors contribute to the selection of Avery, Mitchell, and Yancey Counties for focus in the Komen Tri-Cities 2015 Community Profile. The stated counties are broken down into their individual entities below to provide a deeper look into this community. After each individual section, a synopsis is provided in relation to a health system analysis for the community of Avery, Mitchell, and Yancey Counties.

Avery County

Avery County is located in western North Carolina, bordering Mitchell County, in the North Carolina combined region. Avery County is incredibly mountainous and rural with its terrain located in the Appalachian Mountains (Avery County, 2014). As of 2013, the population was estimated to be 17,713 with 8,181 reported to be women (US Census Bureau, 2014 and Table 2.1). Demographically, the population is 98.0 percent White (Table 2.4). There is an incredibly small minority population in this county: 1.2 percent Black/African-American, 0.4 percent AIAN, 0.4 percent API, and 3.6 Hispanic/Latina (Table 2.4). Characteristically, the demographics of this county are disproportionate to the United States as whole in regards to race distribution.

HP 2020 identifies Avery County, NC as one of the highest priority counties for focus by the Affiliate with 100 percent of this county deemed as medically underserved (Table 2.7 and Table 2.5). Currently, the age-adjusted incidence rate for Avery County is 98.9 new diagnoses per 100,000 women (Table 2.1). Although this rate has increased by 7.9 percent in the last year, the rate is still below the national rate of 122.1 (Table 2.1). Avery County's late-stage diagnosis rate is 46.7 late-stage diagnoses per 100,000 women. In comparison the national rate is 43.7 (Table 2.1). HP 2020 estimates it will take 13 years or longer for this county to reach HP's late-stage diagnosis goal rate of 41.0 (Table 2.7). Together the low incidence rate and high late-stage diagnosis show that breast cancer in Avery County may not be diagnosed until the late stages of the disease.

As for death rates in Avery County, the current age-adjusted rate falls at 29.4 deaths per 100,000 people (Table 2.1). The national rate is found to be 22.6 (Table 1). Because breast cancer is not being diagnosed earlier, the death rate for Avery County is higher than the national average. HP 2020 set a goal of having 20.6 breast cancer related deaths per 100,000 people by the year 2020 (Table 2.1). Unfortunately there is not enough data available to predict the amount of time it will take for Avery County to reach this standard.

According to the Behavioral Risk Factor Surveillance System (BRFSS) 53.2 percent of Avery County women aged 50 to 74 received mammograms in the past two years (Table 3). This percentage should not be taken as concrete with the confidence interval concerning its accuracy set from 19.1 percent to 84.6 percent (Table 2.3). Other data, such as incidence rates, death rates, and late-stage rates from Avery County indicate that screening percentages are not satisfactory. Unfortunately, the Affiliate is unable to determine an accurate percentage from the given information.

Socioeconomically, Avery County is highly dependent on mining and travel related real estate (i.e. second homes, rental properties, hotel-motel lodging, etc.) industries. The ability to engage in outdoor activities, such as hiking or skiing, draw people to Avery County. Additionally, mining continues to play a vital role in the economy's stability with several active mica mines in the southern part of the county. The State of North Carolina is the largest employer in the county operating its forestry center, DOT (Department of Transportation) office, State Highway Patrol office, agriculture office, and more (Avery County, 2014).

The median household income from 2008 to 2012 was $38,051 with 6.4 percent of the population unemployed (US Census Bureau, 2014 and Table 5). Approximately 18.5 percent of persons have less than a high school education (Table 2.5). Additionally, 18.1 percent of the population has an income 100 percent below the poverty level with 47.4 percent having an income 250 percent below the national poverty line (Table 2.5). Both of these poverty identifying rates are much greater than the national rates of 14.3 percent and 33.3 percent respectively (Table 2.5). As previously revealed, 100 percent of Avery County's population is found to be medically underserved with 24.2 percent having no health insurance (Table 2.5).

A synopsis encompassing Avery, Mitchell, and Yancey Counties, VA will be provided below in relation to a health system analysis.

Mitchell County

Mitchell County is located in western North Carolina between Avery and Yancey Counties, two other target counties for the North Carolina region. Mitchell County is known as the "Mineral City of the World" and includes the largest stretch of grassy balds in the entire Appalachian Mountain range (Mitchell County, 2014). In 2013, the population was found to be 15,328 with 8,022 of these individuals being women (US Census Bureau, 2014 and Table 2.1). Demographically, the population is 97.8 percent White (Table 2.5). The minority population is incredibly small with 0.9 percent Black/African-American, 0.7 percent AIAN, 0.6 percent API, and 3.7 percent Hispanic/Latina (Table 2.5). In comparison to the United States, the race demographics of this county are disproportionate to the country as a whole.

HP 2020 names Mitchell County as one of the highest priority counties for intervention by the Affiliate with 100 percent of this county identified as medically underserved (Table 2.7 and Table 2.5). At this time, the age-adjusted incidence rate for Mitchell County is 99.5 new diagnoses per 100,000 women, with a 5.3 percent increase from last year (Table 2.1). The late-stage diagnosis rate in Mitchell County is 45.3 late-stage diagnoses per 100,000 women. This rate is slightly above the United States rate of 43.7 (Table 2.1). HP 2020 predicts it will take Mitchell County 13 years or longer to achieve the target rate of 41.0 (Table 2.7 and Table 2.1). Together, the low incidence rate and high late-stage rate in comparison to national rates show

that women may not be accessing mammograms as recommended and may be diagnosed at a later stage of the disease.

Mitchell County's breast cancer related death rate is 28.0 breast cancer related deaths per 100,000 women. In comparison, it is greater than the national rate of 22.6 (Table 2.1). The HP goal for 2020 is set at 20.6 (Table 2.1). Unfortunately, the estimated time to achieve this goal as predicted by HP 2020 is not available due to a lack of available data (Table 2.7).

As for the proportion of women receiving screening mammograms for breast cancer in Mitchell County, BRFSS reports that data were suppressed due to small numbers (fewer than 10 samples) (Table 2.3). As a result, there is no accurate data as to the screening habits of women in this county. The only available information is in regards to incidence, death, and late-stage rates. The low incidence rate and high death rate from breast cancer suggests that screening percentages are low in Mitchell County.

According to the US Census Bureau, the median household income for Mitchell County from the years 2008 to 2012 was $36,276 (US Census Bureau, 2014). At this time, a specific industry that Mitchell County relies on for its economic development and labor market cannot be pinpointed. In recent years, small business development and entrepreneurship opportunities have been encouraged by the Mitchell County Economic Development Commission. The area is home to the North Carolina Rhododendron Festival and North Carolina Mineral and Gem Festival which bring in visitors from neighboring areas (Mitchell County, 2014).

Socioeconomic statistics reveal much about the rural area and its population. Approximately 20.9 percent of persons in Mitchell County have less than a high school education (Table 2.5). Furthermore, 17.4 percent have an income 100 percent below the national poverty line while 46.1 percent have an income 250 percent lower than the national poverty level (Table 2.5). As for employment, 11.5 percent of the population is unemployed (Table 2.5). As a whole, 100 percent of the population is considered to be medically underserved with 20.4 percent of individuals having no health insurance (Table 2.5).

A synopsis encompassing Avery, Mitchell, and Yancey Counties, VA will be provided below in relation to a health system analysis.

Yancey County

Yancey County is a rural county located in the Appalachian Mountains of western North Carolina. The county is highly mountainous with the Black Mountain Range in the south being intersected by the Blue Ridge and Unaka Ranges. Additionally, Yancey County is home to Mt. Mitchell, the highest point in the United States east of the Mississippi River (Yancey County, 2014). The county has as an estimated population of 17,566 people with approximately 9,116 of these persons being female (US Census Bureau, 2014 and Table 2.1). Demographically, the population is 97.7 percent White, a rate much higher than the national average and slightly higher than the Affiliate percentage (Table 2.4). The county has a small minority population with 1.2 percent Black/African-American, 0.6 percent AIAN, 0.5 percent API, and 3.8 percent Hispanic/Latina (Table 2.4).

HP 2020 identifies Yancey County as a high priority for intervention by Komen Tri-Cities with 100 percent of the population deemed as medically underserved (Table 2.7 and Table 2.5).

Currently, the incidence rate is 122.9 new breast cancer diagnoses per 100,000 women (Table 2.1). The national rate is 122.1 (Table 2.1). Additionally, the death rate is 24.3 breast cancer related deaths per 100,000 women (Table 2.1). In comparison, the national rate is 22.6 (Table 2.1). HP 2020 estimates that it will take approximately eight years to reach the HP 2020's death rate goal of 20.6 (Table 2.7 and Table 2.1). Because the Yancey County incidence rate and the US incidence rate are similar, breast cancer screenings may be occurring in Yancey County at a rate close to that of the rest of the country. Furthermore, Yancey County's death rates are elevated in comparison to national rates. As a result, a conjecture can be drawn that there may be a point of disconnection within the health care system in regards to treatment or access to care after diagnosis.

As for the late-stage diagnosis rate Yancey County has a rate of 39.5 late-stage diagnoses per 100,000 women, in comparison to the national rate of 43.7 (Table 1). HP 2020 estimates that it will take 13 years or longer for Yancey County to meet the HP 2020 goal rate of 41.0 (Table 2.7 and Table 2.1). When investigating the trends between incidence, death rate, and late-stage rate it suggests that there may be a missing link in the continuum of care. These issues will be further investigated in the health analysis section.

Reportedly, 83.2 percent, with a confidence interval of 46.1 percent to 96.6 percent, of Yancey County women between the ages of 50 and 74 have received their screening mammograms within the last two years (Table 2.3). This percentage is higher than the national percentage, 77.5 percent, and the Komen Tri-Cities Region percentage, 77.0 percent (Table 2.3). The Yancey County percentage has a wide spanning confidence interval. As a result, the value may not be entirely accurate.

The US Census Bureau reports that the median family household income was $38,766 between the years 2008-2012 (US Census Bureau, 2014). Currently, textiles remain the main source of industry in Yancey County with seven operational industries conducting business within the county. Other industries include mining, a bedspring manufacturer, an asphalt company, and agriculture (i.e. tobacco, Christmas trees, shrubs, and beef cattle) (Yancey County, 2014).

The socioeconomic information reveals much about the rural area and its population. An estimated 19.3 percent of Yancey County's population has less than a high school education (Table 2.5). As for statistics surrounding income, 17.9 percent have an income 100 percent below the poverty level with 47.4 percent with an income 250 percent below the level (Table 2.5). Both of these percentages are much greater than the national percentages of 14.3 percent and 33.3 percent respectively (Table 2.5). Approximately 8.9 percent of the population remains unemployed (Table 2.5). As a whole, 100 percent of the population is considered to be medically underserved with 21.9 percent of persons aged 40 to 64 having no health insurance (Table 2.5).

A synopsis encompassing Avery, Mitchell, and Yancey Counties (Toe River Health District), VA will be provided below in relation to a health system analysis.

Avery, Mitchell, and Yancey Counties (Toe River Health District) Synopsis

Avery, Mitchell, and Yancey Counties (Toe River Health District) are characterized as being a rural, medically underserved community with much of its population having no insurance. To determine its current resources and necessities, a health system analysis will be conducted for the community. This analysis will allow Komen Tri-Cities to investigate and determine the primary priorities of this community's health system. Current data and information reveal the community would benefit from improved access to medical care with transportation options, reduced-cost and/or no-cost breast health services, breast health education, and patient navigation assistance. The investigation of current barriers will be reviewed in the health system analysis.

Greene County, Tennessee

Greene County has been identified as a high priority county in the Komen Tri-Cities Region due to the amount of intervention time needed to achieve the HP 2020 targets, as will be discussed below. Additionally, the county is found to be located in a rural area, is medically underserved, and with approximately half of the community having an income 250 percent below the national poverty level (Table 2.5). These factors contribute to its selection as a focus for the Komen Tri-Cities 2015 Community Profile.

Greene County is located in the southwest corner of Northeast Tennessee. The town of Greeneville, home to Tusculum College, is the county seat. Other towns and cities in Greene County include Baileyton, Tusculum, and Mosheim (Tennessee History, 2014). In 2013, the county's population was estimated to be 68,267 (US Census Bureau, 2014). Of this population, approximately 34,768 were female (Table 2.1). As for population demographics, 96.9 percent are White, a rate much greater than the United States percentage of 78.8 percent (Table 2.4). There is a small minority population in Greene County with 2.3 percent Black/African-American, 0.3 percent AIAN, 0.5 percent API, and 2.3 percent Hispanic/Latina decent (Table 2.4).

The current breast cancer incidence and late-stage rates/trends draw attention to Greene County. Greene County's age-adjusted incidence rate is 116.7 new breast cancer diagnoses per 100,000 women with an increasing annual trend of 7.1 percent (Table 2.1). The incidence rate for the county is higher than that of the Affiliate service area, but lower than the state of Tennessee's incidence rate of 118.8 and the US rate of 122.1 (Table 2.1). The late-stage diagnosis rate of 43.0 shows a -0.6 percent annual decrease (Table 2.1). This number is slightly below the national rate of 43.7 (Table 2.1). The proportion of women between the ages of 50 and 74 who were screened in Greene County within the last two years has been reported as 79.9 percent (Table 2.3). Although the screening percentages appear to be satisfactory, the confidence interval of 59.7 percent to 91.3 percent indicates these numbers may not be entirely accurate (Table 2.3). The trend increase in incidence coupled with the decrease in late-stage diagnosis and higher proportion of women being screened may be an indicator that more women in Greene County are receiving recommended screenings. The trends of increase in incidence and decrease in late-stage diagnosis along with the higher proportion of women being screened suggest that, while more women in Greene County are receiving recommended screenings, more breast cancers are being diagnosed. Although more women are being diagnosed, statistics suggest they may be diagnosed with breast cancer at an earlier stage when the prognosis is favorable.

HP 2020 identifies Greene County as a high priority target area for breast health intervention (Table 2.7). Currently, Greene County has a breast cancer death rate of 23.5 breast cancer related deaths per 100,000 women (Table 2.1). According to HP 2020, it will take Greene County 13 years or longer to reach the target goal of 20.6 breast cancer related deaths per 100,000 women (Table 2.7 and Table 2.1). Additionally, Greene County has a rate of 43.0 late-stage female diagnoses per 100,000 women (Table 2.1). HP 2020 estimates it will take eight years to achieve the HP goal of 41.0 cases per 100,000 women (Table 2.7 and Table 2.1). These rates may be impacted by changing current trends in the county such as improving screening programs to decrease late-stage diagnosis, as well as working to improve socioeconomic conditions (i.e. poverty, educational opportunities, and employment opportunities).

Socioeconomic information is consistent with data commonly found in rural areas. In the past, the main sources of employment were found in manufacturing and agriculture. Recently, other industries have been introduced to the area including chemicals, fabricated metals, machinery, transportation, and distribution. There has also been an increase in the service sector of the economy as Greene County is working to diversify employment opportunities as to not be reliant upon one industry (Tennessee History, 2014).

Despite gains in economic diversity, socioeconomic statistics remain grim. Approximately 20.8 percent of the county has less than a high school education with 9.7 percent of the population remaining unemployed (Table 2.5). The median family household income is $35,613 with 47.9 percent of the population having an income 250 percent below the national poverty level (US Census Bureau, 2014 and Table 2.5). As for health care, 74.3 percent of the population resides in a medically underserved area with 19.9 percent of individuals having no health insurance (Table 2.5).

As aforementioned, Greene County is a rural area designated as medically underserved. To determine its current resources and future needs, a health system analysis will be conducted. This analysis will deliver a deeper look into the primary priorities of Greene County's health system. Based on current data, it appears that many residents would benefit from services in the area that are no-cost and/or reduced-cost. Providing breast health education and facilitating accessibility to health care services would also benefit the citizens of Greene County. The investigation of these issues will be reviewed in the health system analysis.

Washington County, Virginia and Bristol City, Virginia

Washington County & Bristol City, Virginia have been identified as highest priority and medium high priority respectively for focus by Komen Tri-Cities due to the amount of time needed to achieve the HP 2020 targets, as will be discussed below. They were grouped together as one community because Bristol City is located within Washington County, VA. Additionally, both areas utilize many of the same resources. The Bureau of Economic Analysis combines the city of Bristol, VA with Washington County for statistical purposes. Both areas are classified as medically underserved. Furthermore, much of both populations have an income 250 percent below the poverty level while many persons have less than a high school education. These factors contribute to the selection of Washington County & Bristol City, VA for focus in the Komen Tri-Cities 2015 Community Profile. Washington County and Bristol City, VA are broken down into their individual entities below to provide a deeper look into this community. After each

entity is discussed, a synopsis will be provided of the community in its entirety in reference to a health system analysis.

Washington County, Virginia

Washington County is located in southwest Virginia on the Virginia/Tennessee state line. The town of Abingdon is the county seat with Damascus, Glade Spring, and Saltville being other important towns. Washington County is home to the world renowned Barter Theatre and the NASCAR Bristol Motor Speedway (Community Profile, 2014). In 2013, the population was estimated to be 54,907 with 27,569 being women (US Census Bureau, 2014 and Table 2.1). Characteristically, 97.7 percent of the population is White, a percent much larger than the United States percentage of 78.8 (Table 2.4). There is a small minority population in Washington County, VA with 1.6 percent Black/African-American, 0.2 percent AIAN, 0.5 percent API, and 1.1 percent Hispanic/Latina (Table 2.4).

HP 2020 identifies Washington County, VA as one of the highest priority counties for intervention by Komen Tri-Cities with 100 percent of the area designated as medically underserved (Table 2.7 and Table 2.5). At this time, the age-adjusted incidence rate for Washington County is at 113.7 diagnoses per 100,000 women (Table 2.1). Although the rate is up four percent from last year, it is below the national rate of 122.1, indicating that breast cancer may not be detected in the early stages (Table 2.1).

Additionally, the breast cancer death rate for Washington County, VA resides at 28 deaths per 100,000 women, down 0.7 percent from the previous year, with the national rate being 22.6 (Table 2.1). As breast cancers are not being detected in early stages, the death rates in this county are higher. HP 2020 estimates that it will take Washington County, VA 13 years or longer to achieve the goal set by HP 2020 of 20.6 (Table 2.7 and Table 2.1).

As for the late-stage diagnosis rate, Washington County has a rate of 44.7 diagnoses per 100,000 women (Table 2.1). The national rate is 43.7 (Table 2.1). HP 2020 estimates that it will take 13 years or longer to reach the HP 2020 goal of 41.0 late-stage deaths per 100,000 women (Table 2.7 and Table 2.1). Although there have been small positive changes in the incidence and death-rates, these values are still below national rates and goals set forth by HP 2020.

Reportedly 57.6 percent of women between the ages of 50 and 74 are receiving screening mammograms in Washington County (Table 2.3). The confidence interval of this statistic is reported as 56.4 percent to 84.6 percent (Table 2.3). This percentage is below both the national average of 77.5 percent and the Komen Tri-Cities average of 77.0 percent indicating that Washington County, VA women are not receiving screening mammograms (Table 2.3).

Socioeconomic information is consistent with data commonly found in rural communities. Main sources of employment are similar to those found in Bristol, VA. Originally the area was widely recognized for its tobacco production and dairy farms. In recent years, farmland has been replaced with industry development. Currently, manufacturing, retail trade, health care/social assistance, accommodation/food services, and local government embody the majority of the area's labor market opportunities (Community Profile, 2014). Presently, there has been a large influx of industry into the area – specifically with shopping centers along Interstate 81. The influx of these shopping centers are projected to positively impact the labor force and economy for the county and region.

While the economy in Washington County is currently experiencing great gains, the socioeconomic statistics remain depressed. As determined by the US Census Bureau, the 2008 to 2012 median family household income was determined to be $42,844 (US Census Bureau, 2014). Approximately 18.1 percent of the population has less than a high school education, while the national percentage rests at 14.6 percent (Table 2.5). Furthermore, 13.6 percent of inhabitants have an income 100 percent below the national poverty line while 40.3 percent live with an income 250 percent below the national poverty determinant (Table 2.5).

A synopsis encompassing Bristol City, VA and Washington County, VA will be provided below in relation to a health system analysis.

Bristol City, Virginia

Bristol City is an independent city bound by Washington County, VA, Bristol, TN, and Sullivan County, TN. It is the twin city to Bristol, TN which is located across the state line running down the middle of the area's main street, State Street. In 2012, the population of Bristol, TN was estimated to be 17,662 with 9,425 people being women (US Census Bureau, 2014 and Table 2.1). Demographically, the area is 92.7 percent White, 6.0 percent Black/African-American, 0.4 percent AIAN, 0.9 percent API, and 1.4 percent Hispanic/Latina (Table 2.4).

HP 2020 identifies Bristol City, VA as a medium high priority target area for breast health intervention for Komen Tri-Cities (Table 2.7). At this time, Bristol City, VA has a breast cancer death rate of 33.5 deaths per 100,000 women (Table 2.1). HP 2020 predicts it will take Bristol City, VA 13 years or longer to achieve the HP 2020 goal of 20.6 breast cancer related deaths per 100,000 women (Table 2.7 and Table 2.1). Currently, the US rate is 22.6 (Table 2.1). As for the late-stage rate, HP 2020 has a goal of 41.0 late-stage diagnoses per 100,000 women (Table 2.1). The rate in Bristol currently resides at 41.2 (Table 2.1). HP estimates it will take one year for the City of Bristol, VA to meet this goal (Table 2.7). Death rates may be improved by changing current trends in the city such as improving screening percentages and providing breast health education.

The current breast cancer incidence, death rates, and late-stage rates/trends in Bristol City, VA draw attention to the need for breast health intervention by Komen Tri-Cities. The current breast cancer incidence rate is 92.1 new diagnoses per 100,000 women (Table 2.1). The current national rate is 122.1 (Table 2.1). The death rate in Bristol City, VA is 33.5 deaths per 100,000 women (Table 2.1). In comparison, the national rate is 22.6 (Table 2.1). As for the late-stage rates, the current rate for Bristol City, VA is 41.2 while the US rate is 43.7 (Table 2.1).

Analysis of the breast cancer incidence, death, and late-stage rates results in the City of Bristol, VA being a priority for Komen Tri-Cities. Bristol City's incidence rate of 92.1 new diagnoses per 100,000 women is lower than the US rate of 122.1 and is decreasing annually by 16.1 percent (Table 2.1). However, Bristol City's death rate of 33.5 per 100,000 women is higher than the national rate of 22.6 and is increasing annually by 1.0 percent (Table 2.1). The City of Bristol's death rate indicates that the breast cancer death rates among women in Bristol are less favorable than the Affiliate area as a whole. Decreasing incidence may indicate that women are not receiving recommended regular screening mammograms. Increasing death rates may suggest that women diagnosed with breast cancer may be experiencing barriers to receiving or completing recommended treatment for the disease.

The proportion of women screened in Bristol City, VA for breast cancer is unknown. According to the CDC's Behavioral Risk Factor Surveillance System (BRFSS) data in this area was suppressed due to small reported numbers (Table 2.3). As previously stated, the Bureau of Economic Analysis combines Washington County, VA and Bristol City, VA for statistical purposes. Consequently, the Washington County rates may be viewed as a general representation for Bristol City, VA although these rates should not be taken as concrete evidence.

Socioeconomic information reveals a city with employment issues and characteristics accompanying a medically underserved population. The major sources of employment by sector include manufacturing, retail trade, local government, and health care and social assistance (Community Profile, 2014). Despite the community's small size, Bristol, VA has one of the most advanced broadband networks in the United States that in turn provides employment in the telecommunications industry (Bristol, 2014). Although employment options are becoming more plentiful, 11.5 percent of Bristol, VA's population remains unemployed (Table 2.5).

A closer look into the socioeconomic data unveil more detail about Bristol, VA's inhabitants. Approximately 20.5 percent of the population has less than a high school education, which is greater than the national percentage of 14.6 percent (Table 2.5). As reported by the US Census Bureau, the median family household income was $30,636 between 2008 and 2012 (US Census Bureau, 2014). As for the population, 50.4 percent have an income 250 percent below the national poverty line, with 22.4 percent having an income 100 percent below the line (Table 2.5). Both of these percentages are also much greater than the national percentages of 33.3 percent and 14.3 percent respectively (Table 2.5). Additionally, 100 percent of the population is characterized as living in a medically underserved area with 15.8 percent having no health insurance (Table 2.5).

A synopsis encompassing Bristol City, VA and Washington County, VA will be provided below in relation to a health system analysis.

Washington County, Virginia and Bristol City, Virginia Synopsis

Washington County, VA and Bristol City, VA make up a rural, intensely medically underserved community with employment being a main issue for the area. The current resources and needs of Washington County, VA and Bristol City, VA will be determined by a health system analysis. By conducting this analysis, Komen Tri-Cities will be able to take a deeper look into the primary priorities of the area's health system. According to current information, the community would benefit from improved access to medical care accompanied by reduced-cost and/or no-cost breast health services. Breast health education and patient navigation would also be of benefit to the community. The investigation of current barriers will be reviewed in the health system analysis.

Health Systems Analysis Data Sources

Susan G. Komen® Tri-Cities conducted the Health System Analysis utilizing several methods. First, the Affiliate gathered every zip code for each county and city under analysis (Ashe, Avery, Mitchell Counties, North Carolina; Greene County, Tennessee; Washington County, Virginia; Bristol City, Virginia). Once zip codes were obtained national, state, and local websites, listed in Appendix A, were searched utilizing this data to locate health care facilities. After health care organizations were made, a detailed spreadsheet was assembled containing vital information about each institute. Phone calls were made to each facility to obtain a primary contact and answer necessary breast health service questions.

Aside from utilizing online data, the Affiliate contacted current partners and grantees to gather information concerning their organizations. Additional information was also requested concerning partner and sister organizations these facilities may work with. If an additional breast health service site was determined, phone calls were made to gather any pertinent information for the "Health System Analysis Template."

Once all known resources were gathered the Affiliate reviewed the breast health services and facilities in the target counties and city. The strengths and weaknesses of each community were analyzed and a four-year strategic plan was developed. For the next four years, the Affiliate hopes to impact the target counties and city through partnership formation, public policy, breast health education, and through the expansion of the Komen Tri-Cities' Community Health Grant Program.

Health Systems Overview

The Breast Cancer Continuum of Care (CoC) is a model that shows how a woman typically moves through the health care system for breast care (Figure 3.1). A woman would ideally move through the CoC quickly and seamlessly, receiving timely, quality care in order to have the best outcomes. Education can play an important role throughout the entire CoC.

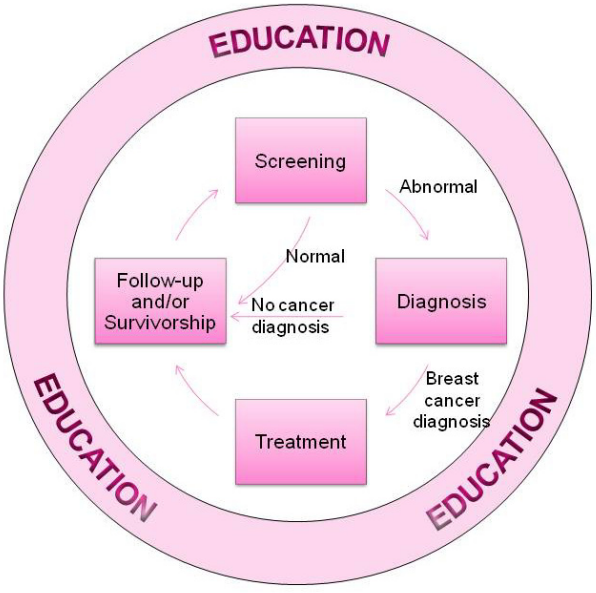

Figure 3.1. Breast Cancer Continuum of Care (CoC)

While a woman may enter the continuum at any point, ideally, she would enter the CoC by getting screened for breast cancer – with a clinical breast exam or a screening mammogram. If the screening test results are normal, she would loop back into follow-up care, where she would get another screening exam at the recommended interval. Education plays a role in

both providing education to encourage women to get screened and reinforcing the need to continue to get screened routinely thereafter.

If a screening exam resulted in abnormal results, diagnostic tests would be needed, possibly several, to determine if the abnormal finding is in fact breast cancer. These tests might include a diagnostic mammogram, breast ultrasound, or a biopsy. If the tests were negative (or benign) and breast cancer was not found, she would go into the follow-up loop, and return for screening at the recommended interval. The recommended intervals may range from three to six months for some women to 12 months for most women. Education plays a role in communicating the importance of proactively getting test results, keeping follow-up appointments and understanding what it all means. Education can empower a woman and help manage anxiety and fear.

If breast cancer is diagnosed, she would proceed to treatment. Education can cover such topics as treatment options, how a pathology report determines the best options for treatment, understanding side effects and how to manage them, and helping to formulate questions a woman may have for her providers.

For some breast cancer patients, treatment may last a few months and for others, it may last years. While the CoC model shows that follow up and survivorship come after treatment ends, they actually may occur at the same time. Follow up and survivorship may include things like navigating insurance issues, locating financial assistance, symptom management, such as pain, fatigue, sexual issues, bone health, etc. Education may address topics such as making healthy lifestyle choices, long term effects of treatment, managing side effects, the importance of follow-up appointments, and communication with their providers. Most women will return to screening at a recommended interval after treatment ends, or for some, during treatment (such as those taking long term hormone therapy).

There are often delays in moving from one point of the continuum to another – at the point of follow-up of abnormal screening exam results, starting treatment, and completing treatment – that can all contribute to poorer outcomes. There are also many reasons why a woman does not enter or continue in the breast cancer CoC. These barriers can include things such as lack of transportation, system issues including long waits for appointments and inconvenient clinic hours, language barriers, fear, and lack of information - or the wrong information (myths and misconceptions). Education can address some of these barriers and help a woman progress through the CoC more quickly.

Health Systems Strengths and Weaknesses

Ashe County, North Carolina

The breast health resources located in Ashe County are incredibly sparse (Figure 3.2). Currently there are three outlets, listed below, for breast health services in Ashe County:

1. Ashe Memorial Hospital
2. Appalachian District Health Department
3. Ashe County Free Medical Clinic

Ashe Memorial Hospital, located in Jefferson, NC in Ashe County, provides some breast health services through the Ashe Memorial Hospital (AMH) Mammography Suite. The following services are provided: clinical breast exams (CBEs), screening mammograms, diagnostic

mammograms, ultrasounds, and biopsies. Currently, the hospital does not have a breast surgeon on staff. Consequently, patients must travel to Charlotte or Winston Salem to see a breast surgeon. Treatment options, such as chemotherapy or radiation, are not available at Ashe Memorial. Persons in need of chemotherapy and/or radiation must visit Watauga Medical Center or another facility for treatments. As for survivorship and support, financial assistance and end of life care are provided via Ashe Memorial.

The Appalachian District Health Department is a North Carolina Breast and Cervical Cancer Control Program (NC BCCCP) site. As a result, this health department provides funding for CBEs, screening mammograms, diagnostic mammograms, ultrasounds, and breast biopsies. On site, the health department provides CBEs and refers the patient, while paying for the procedure, to a certified NC BCCCP approved provider for breast health services. Currently, the health department does offer patient navigation assistance to guide an individual through the entire breast care process.

As for the Ashe County Free Clinic, only referrals are provided for breast health services. As previously stated, there are few breast health resources in this county. While locals are able to receive mammograms in Ashe County, they must travel elsewhere for surgical procedures and treatment. Not only is the area incredibly rural, but is located in the Blue Ridge Mountains. As a result, travel is difficult for many patients.

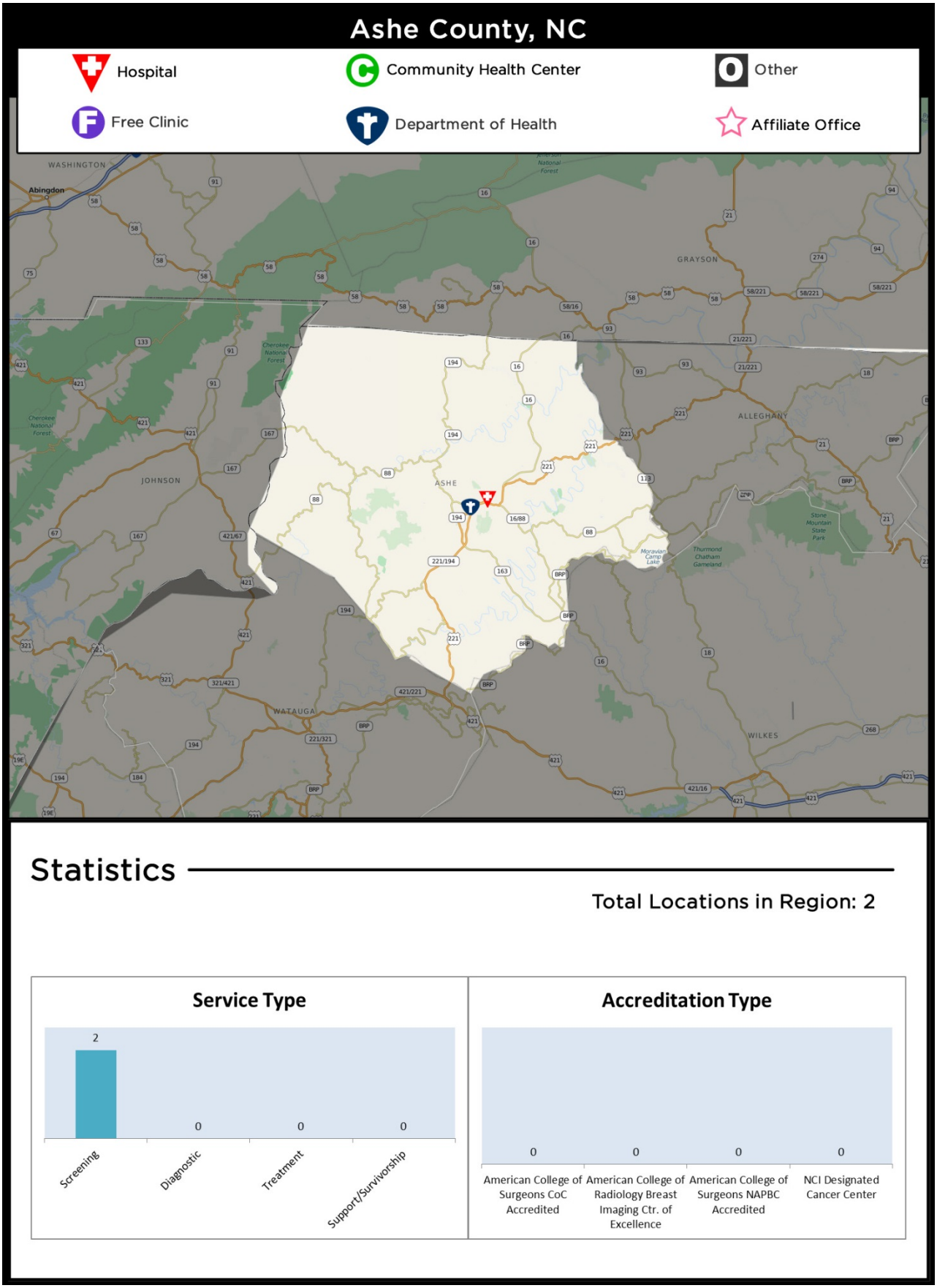

Figure 3.2. Breast cancer services available in Ashe County

Avery, Mitchell, and Yancey Counties, North Carolina

Avery, Mitchell, and Yancey Counties are incredibly rural with small populations (Figure 3.3). Surprisingly, there are several breast health resources in the area. Currently, there are seven organizations providing health services for this community:

1. Blue Ridge Regional Hospital
2. Charles A. Cannon Jr. Memorial Hospital
3. Avery County Health Department
4. Mitchell County Health Department
5. Yancey County Health Department
6. Bakersville Community Medical Clinic
7. High Country Community Health Clinic

The Blue Ridge Regional Hospital, located in Spruce Pine, NC in Mitchell County, provides comprehensive women's services. The facility has both a Women's Imaging Center and a Comprehensive Cancer Center. Services provided include: CBEs, screening mammograms, patient navigation, diagnostic mammograms, ultrasounds, biopsies, patient navigation, outpatient chemotherapy, radiation, oncologic surgery, breast health resources, and support groups. Although outpatient chemotherapy is offered at the hospital, specialized cancer management is referred to private oncology practices in Asheville, NC. Resources are plentiful at this facility as patient navigation is made widely available from diagnosis through survivorship.

The Charles A. Cannon Jr. Memorial Hospital, located in Linville, NC in Avery County, is part of the Appalachian Regional Healthcare System. This facility is a 25-bed acute care hospital with a 10-inpatient behavioral health unit. Because this facility is small, its resources for breast health care are limited. Recently, the facility gained access to digital mammography. For other breast health services, this hospital refers patients to its counterpart, Watauga Memorial Hospital in Boone, NC. The Seby B. Jones Cancer Center is located at this site.

The Avery, Mitchell, and Yancey County Health Departments make up the Toe River Health District in North Carolina. These facilities are all North Carolina Breast and Cervical Cancer Control Program (NC BCCCP) sites. As a result, these facilities will provide free or low-cost breast services to eligible women. These health departments only offer CBEs. Referrals are provided for women in need of mammography services.

The Bakersville Community Medical Clinic and the High Country Community Medical Clinic are focused on primary care services. These facilities provide CBEs and referrals for mammography.

Although Avery, Mitchell, and Yancey Counties are incredibly rural, there are breast health care resources available. Mitchell County, located between Avery and Yancey Counties, offers the most resources including: screening, diagnosis, and outpatient chemotherapy. Unfortunately, patients in need of specialized treatment must travel to Asheville, NC. While Avery County has a facility offering screening mammograms, Yancey County does not. As a result, residents in these counties must travel to Mitchell County for treatment, or to Asheville, NC.

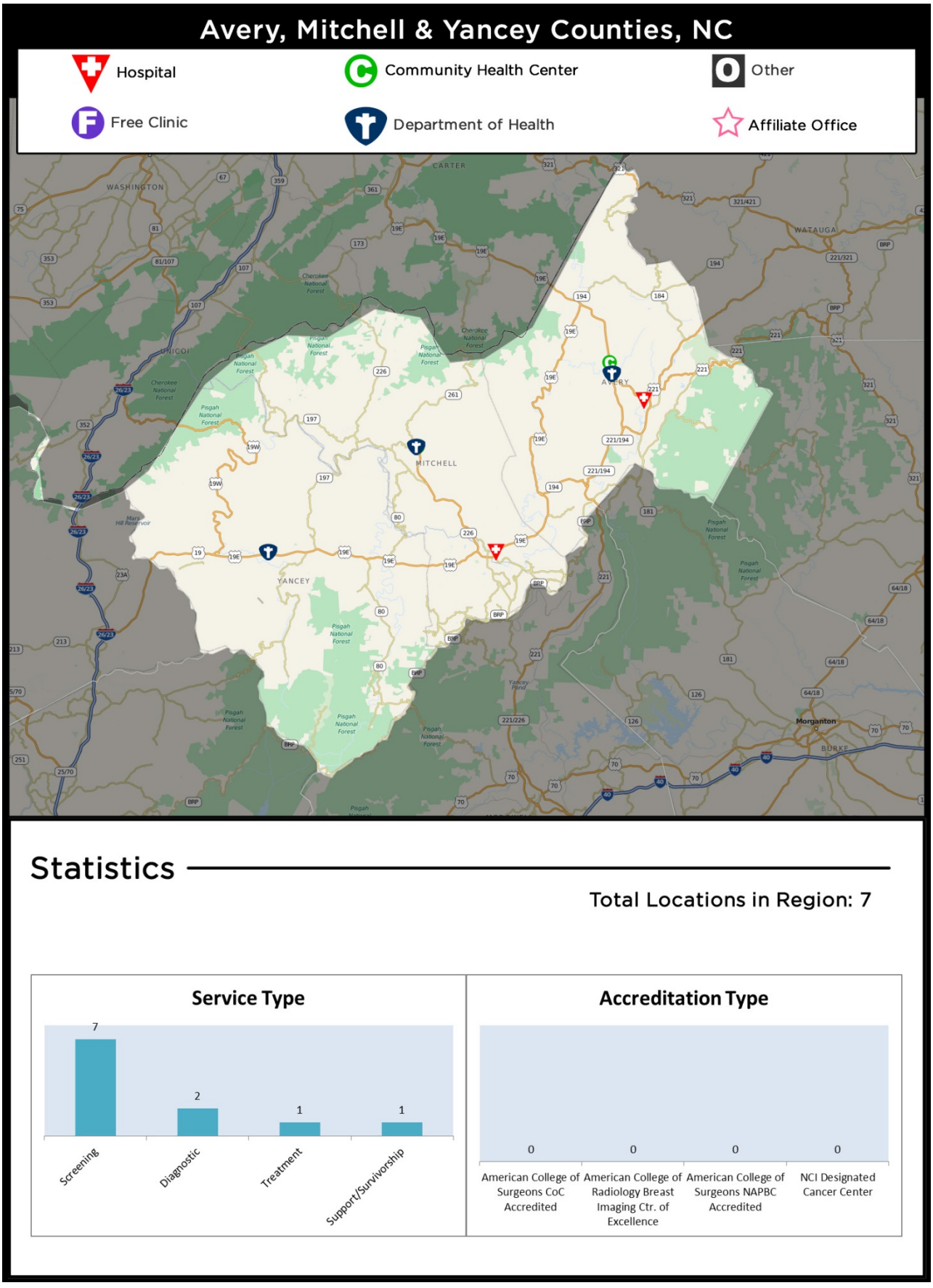

Figure 3.3. Breast cancer services available in Avery, Mitchell and Yancey Counties

Greene County, Tennessee

Greene County is home to several facilities offering breast care resources (Figure 3.4). Currently there are four organizations providing health services in Greene County:

1. Laughlin Memorial Hospital Center
2. Takoma Regional Hospital
3. Greene County Health Department
4. Baileyton Medical Center

The Laughlin Memorial Hospital, located in Greeneville, NC in Greene County, is a general medical and surgical hospital with 224 beds. This facility has a comprehensive Center for Women's Health and has an accredited American Radiology Breast Imaging Center of Excellence. Services provided include: CBEs, screening mammograms, diagnostic mammograms, ultrasounds, biopsies, patient navigation, chemotherapy, radiation, support groups, exercise/nutrition programs, financial assistance, and end of life care. Additionally, this facility is American College of Surgeons accredited.

The Takoma Regional Hospital, also located in Greeneville, NC in Greene County, is operated by Adventist Health System, a faith-based health care organization. As of 2014, this facility has a new Diagnostic Center for Women's Health and has been designated a Breast Imaging Center of Excellence (2014). This facility is the only one in Greene County with breast MRI and MRI-breast biopsy capabilities. Other breast health services include: mammography, stereotactic breast biopsy, breast ultrasound/biopsy, and general ultrasound. Although screening and diagnostic services are provided, this facility is not equipped to perform treatments such as chemotherapy.

The Greene County Health Department is a Tennessee Breast and Cervical Cancer Early Detection Program (TBCCEDP) site. As a result, this facility provides free or low-cost breast services to eligible women. The Greene County Health Department only offers CBEs. Referrals are provided for women in need of mammography services.

Baileyton Medical Center, located in Greeneville, TN in Greene County, is part of the Rural Health Service Consortium Health Center Network serving the rural population of Greene County and its surrounding cities. This facility focuses on primary care as its means of service. Although CBEs may be conducted, referrals will be given to patients in need of a mammogram. In summary, Greene County is well equipped to handle breast health services. Laughlin Memorial Hospital offers resources along the entire spectrum from screening and diagnosis to treatment and survivorship. Additionally, Takoma Regional Hospital offers diagnostics and breast MRIs. If more complex treatment and surgeries are warranted, residents can travel to the following: the University of Tennessee in Knoxville, TN; Johnson City Medical Center in Johnson City, TN; Holston Valley Hospital in Kingsport, TN; and/or Bristol Regional Hospital in Bristol, TN.

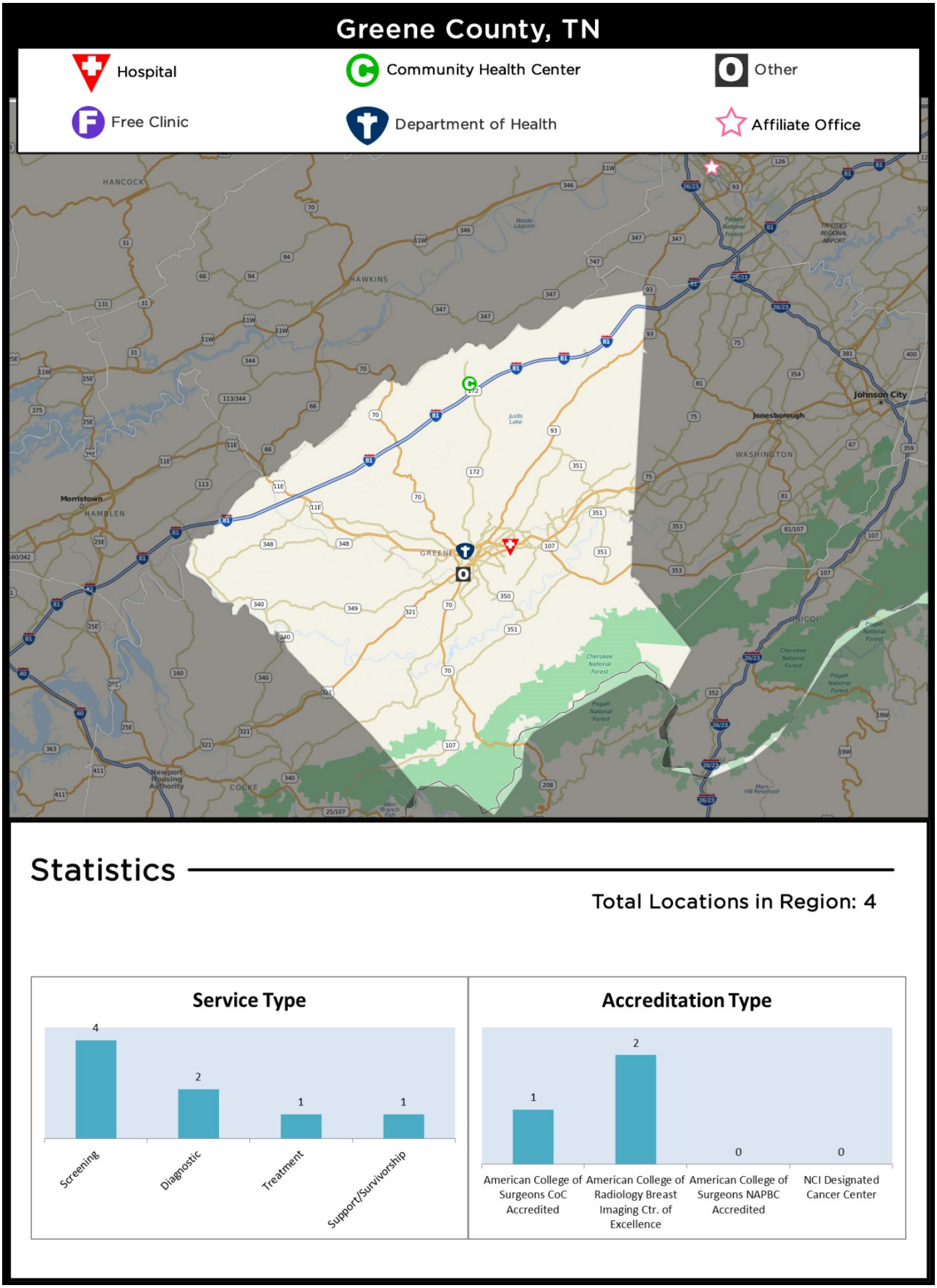

Figure 3.4. Breast cancer services available in Greene County

Washington County, Virginia and Bristol City, Virginia

Washington County, VA and Bristol City, VA have an array of health care services bordering not only Virginia, but Tennessee as well (Figure 3.5). Currently there are 12 health care organizations servicing this area. They are as follows:

1. Bristol Regional Medical Center
2. Johnston Memorial Hospital
3. Mount Rogers Health District, Washington County Health Department
4. Mount Rogers Health District, Bristol City Health Department
5. Volunteer Parkway Imaging Center
6. Outpatient Diagnostic Center at Sapling Grove
7. Twin City Medical Center
8. Crossroads Medical Mission
9. Healing Hands Health Center, Inc.
10. Konnarock Family Health Center
11. Holston Family Health Center
12. Meadowview Health Clinic

The Bristol Regional Medical Center (BRMC) is home to the Leonard Family Comprehensive Breast Center and the J.D. and Lorraine Nicewonder Cancer Center. This facility is American College of Surgeons Accredited, is a Breast Imaging Center of Excellence as deemed by the American College of Radiology, and is NAPBC accredited by the American College of Surgeons. The following services are offered at this facility: mobile mammography, screening mammograms, patient navigation, diagnostic mammograms, diagnostic ultrasounds, diagnostic biopsies, diagnostic MRIs, chemotherapy, radiation, surgery, reconstruction, support groups, side effect management, individual counseling, exercise/nutrition programs, complementary therapies, financial assistance, and end of life care.

Johnston Memorial Hospital, located in Abingdon, VA in Washington County, is a not-for-profit, 116-bed modern “green” hospital. This hospital has both a Breast Care Center and a Women’s Diagnostic Imaging Center. Services provided include: screening mammograms, diagnostic mammograms, diagnostic ultrasounds, diagnostic biopsies, diagnostic MRIs, radiation for treatment, and support for survivorship. This facility is accredited by the American College of Surgeons. Although this hospital offers radiation treatment, those in need of chemotherapy must visit another hospital. Additionally, there is not a breast health surgeon on staff, so a person must travel to have procedures by this specialist.

The Washington County and Bristol City Health Departments are both sites for Every Woman’s Life (EWL). As a result, they are able to provide low-cost or free services to eligible women in need of breast care. CBEs are conducted at this facility. If a women is in need of a mammogram, she will receive a referral to a EWL certified provider.

The Volunteer Parkway Imaging Center, an American College of Radiology Breast Imaging Center of Excellence, carries out diagnostic exams with a physician’s orders. Services provided include: mobile mammograms, screening mammograms, diagnostic mammograms, diagnostic ultrasounds, and diagnostic MRIs.

The Outpatient Diagnostic Center at Sapling Grove, an American College of Radiology Breast Imaging Center of Excellence, also performs diagnostic procedures with a physician’s orders.

Services provided include: screening mammograms, diagnostic mammograms, diagnostic ultrasounds, and diagnostic MRIs.

The remainder of the clinics above (i.e. Twin City Medical Center, Crossroads Medical Mission, Healing Hands Health Center, Inc., Konnarock Family Health Center, Holston Family Health Center, and Meadowview Health Clinic) are focused on providing primary care services. CBEs may be given, but a referral will be provided for a person in need of follow-up or a mammogram. Washington County, VA and Bristol City, VA have many breast health resources. Although screening and diagnostic mammograms are plentiful in the area, there is only one facility offering chemotherapy: Bristol Regional Medical Center. This Medical Center is home to both the Leonard Family Comprehensive Breast Center and the J.C. & Lorraine Nicewonder Cancer Center. With Bristol Regional Medical Center, this community has resource along the entire breast health CoC.

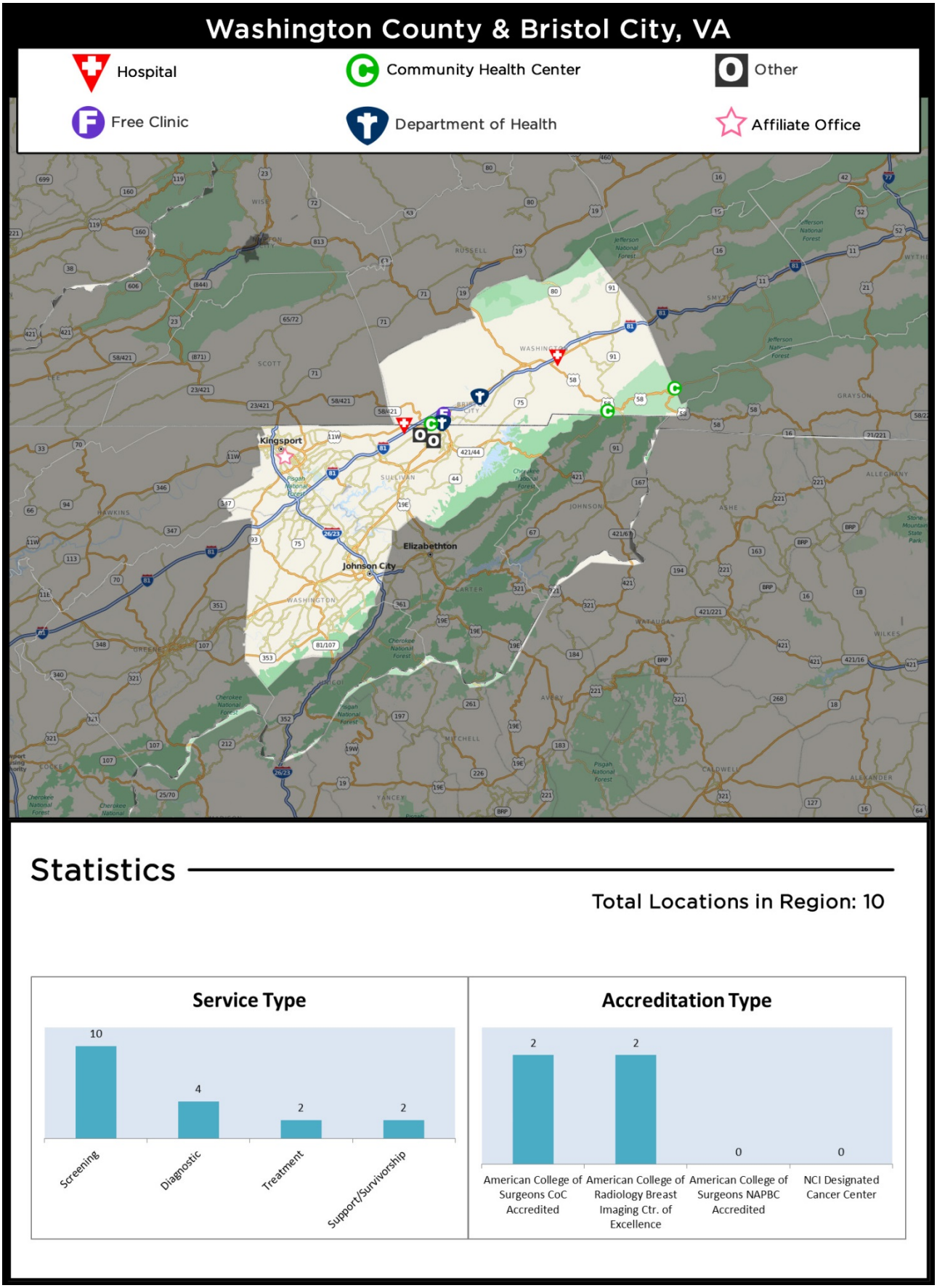

Figure 3.5. Breast cancer services available in Washington County and Bristol City

Mission Related Partners

Komen Tri-Cities has an array of Mission related partners throughout the region. The Affiliate works and will continue to work collaboratively with hospital systems and health departments in each target community. Breast health education resources will be provided while Komen's key messages are spread. Other outlets for collaboration include churches, community centers, health clinics, high schools, community colleges, and businesses. By working through the local health departments, Komen Tri-Cities hopes to build new relationships with area community members while receiving buy in and trust from the communities at hand.

Public Policy Overview

National Breast and Cervical Cancer Early Detection Program (NBCCEDP)

The National Breast and Cervical Cancer Early Detection Program (NBCCEDP), as overseen by the Center of Disease Control and Prevention (CDC), was established in 1990 to provide free or reduced cost mammograms and Pap tests to low-income, uninsured, and underinsured women (NBCCEDP Saves Lives, 2014). Currently, the NBCCEDP provides funding in relation to breast health for clinical breast exams (CBEs), mammograms, diagnostic testing if needed, and treatment referrals to all 50 states, the District of Columbia, five US territories, and 11 American Indian/Alaska Native tribes ("National Breast & Cervical," 2014). In addition to clinical services, NBCCEDP programs utilize population-based methods such as public education, community outreach, care coordination, patient navigation, and quality reassurance (NBCCEDP Fact Sheet, 2013). These proven approaches are applied to increase screening compliance while reaching underserved populations (NBCCEDP Fact Sheet, 2013).

Federal guidelines establish a baseline for breast health program eligibility nationwide while states customize the program according to these decrees (NBCCEDP Fact Sheet, 2013). Nationally, women who are at or below 250 percent of the federal poverty level and fall between the ages of 40-64 meet the federal guidelines for breast health services ("National Breast & Cervical," 2014). Approximately nine percent of US women are eligible for NBCCEDP breast cancer screening ("National Breast & Cervical," 2014). Unfortunately, only 11.7 percent of women eligible for breast health screening are being served ("National Breast & Cervical," 2014). In 2000, Congress passed the Breast and Cervical Cancer Prevention Treatment Act of 2000 (Public Law 106-354) that allows states to offer women diagnosed with breast cancer the ability enroll in Medicaid for treatment coverage ("National Breast & Cervical," 2014). The NBCCEDP programs as established by North Carolina, Tennessee, and Virginia are described below.

North Carolina

North Carolina's Breast and Cervical Cancer Screening Program (NC BCCCP) provides free or low-cost breast and cervical cancer screening and follow-up services to eligible women, as defined below, throughout the state. Each year, the NC BCCCP provides services to over 12,000 NC women ("North Carolina Breast," 2014). The program is federally funded by the US Centers of Disease Control and Prevention and is managed by the NC Department of Health and Human Services. Due to insufficient funding, NC BCCCP is only able to screen a fraction of eligible NC women ("Services for North Carolina," 2014). As a result, NC BCCCP sites across the state apply for annual grant monies from Susan G. Komen Affiliates through their annual Community Grant Programs.

NC BCCCP works through 102 local health agencies including: local health departments, physicians' offices, community health centers, hospitals, etc. ("North Carolina Breast," 2014 and "Services for North Carolina," 2014). These agencies, located statewide, provide clinical breast exams (CBEs), mammograms, pap tests, diagnostic testing if applicable, and treatment referrals (NC BCCCP, 2014). To be eligible for NC BCCCP services a woman must be between 40 and 64 years old, have a household income at or below 250 percent of the Federal Poverty Level (FPL), be uninsured or underinsured, and not have either Medicare Part B or Medicaid ("BCCM," 2014). One must note that a patient must be referred to a local NC BCCCP *prior* to diagnosis in order to be eligible for treatment coverage through Breast and Cervical Cancer Medicaid ("BCCM," 2014).

Once eligibility is determined, a woman may enroll in NC BCCCP. There are several ways to enroll an eligible patient into the program:

1. Preferred Method: Refer a patient to a local NC BCCCP for screening as soon as symptoms present with or without complaints ("BCCM," 2014).
2. Refer a patient to a local NC BCCCP when there is an abnormal screening or diagnostic test, but *before* cancer is diagnosed ("BCCM," 2014).
3. Provide preliminary screening tests (CBE, screening and/or diagnostic mammogram, Pap test, colonoscopy, etc.) with a referral ("BCCM," 2014).

Final diagnostic testing will be completed through NC BCCCP with provided funding dollars ("BCCM," 2014). If a diagnosis of breast and/or cervical cancer is received through the NC BCCCP, a patient may be enrolled into Breast and Cervical Cancer Medicaid if found eligible.

To locate an NC BCCCP location, a NC BCCCP provider, and/or to receive more information an individual can call NC BCCCP at 919-707-5300 (NC BCCCP, 2014).

Currently the Affiliate works with the NC BCCCP through the Affiliate's Community Grant Program and with breast health initiatives. NC BCCCP entities are eligible to apply for funding each year. If funds are granted, additional monies may be received for breast health services and educational programs. Upon request, Komen Tri-Cities provides grantees breast health educational materials for patients and programming purposes.

Over the next four-years Komen Tri-Cities will place much emphasis on strengthening the relationship with the NC BCCCP. Strong rapport between the program directors and staff working with the NC BCCCP in the Avery, Mitchell, and Yancey County health departments will be established. Through these connections, the Affiliate will stay up-to-date on NC BCCCP happenings, gain buy in support from the communities, and be able to disseminate Komen breast health education materials in the designated areas. As a result, the Affiliate hopes to become the area's most trusted name in regards to breast cancer information and resources. Additionally, Komen Tri-Cities will continue to distribute and publicize its annual Request for Applications for the Community Grant Program throughout the Affiliate's service area. An annual grant writing workshop will be provided to the public. All questions regarding the Community Grant Program should be directed to Affiliate staff.

Tennessee

The Tennessee Breast and Cervical Cancer Early Detection Program (TBCCEDP) has a mission to reach and serve lower income uninsured, or underinsured, women in Tennessee

while reducing the incidence of these diseases. TBCCEDP partners with local health departments and providers to provide breast and cervical screening services, such as clinical breast examinations (CBEs), mammograms, cervical cancer screenings, and office visits, to eligible Tennessee women, as defined below. Women who receive suspicious results are provided with diagnostic testing. If a diagnosis of breast cancer, cervical cancer, or pre-cancerous cells is determined, these individuals are enrolled in TennCare, Tennessee's Medicaid managed care program, for treatment coverage.

TBCCEDP receives both federal and state dollars as funding sources. Since 2007, the CDC has allocated approximately $1.2 million annually to TBCCEDP while the state has remained steady with its giving at $1 million (K. Luskin, personal communication, June 24, 2014). Every year Affiliates release a Request for Applications for Affiliate Community Grant Programs. TBCCEDP entities are eligible to apply. If an application is submitted and funding is granted, additional monies will become available for breast health care.

To be eligible for services, Tennessee women must meet certain criteria. An individual must be between 40 and 64, have an income below 250 percent the Federal Poverty Line (FPL), and be uninsured or underinsured (TBCCEDP, 2013). Mammograms are only available to women between the ages of 50 and 64 unless a family history of breast cancer is evident ("Breast and Cervical," 2014). If a family history can be determined, a patient may start receiving mammograms at age 40 ("Breast and Cervical," 2014). As in many cases, there are women who have suspicious symptoms apparent before the stated ages ("Breast and Cervical," 2014). In this case, women younger than the age of 40 who meet the general eligibility requirements will be enrolled in TBCCEDP for screening ("Breast and Cervical," 2014). Diagnostic testing will be received if suspicious results return from the original tests ("Breast and Cervical," 2014).

In order to receive services, contact must be made with the county health department where residency is established. Upon determination of eligibility, an appointment will be made for breast and/or cervical screening ("Breast and Cervical," 2014). Some community health centers throughout the state such as those in Nashville, Chattanooga, Memphis, and some in other rural areas may also provide these services ("Breast and Cervical," 2014). Additionally, each public health region has an approved network of providers who perform screenings, diagnostic tests, and follow-up appointments ("Breast and Cervical," 2014). To determine additional center locations and/or to find a network of providers, the TBCCEDP Central Office should be contacted at 1-877-969-6636 ("Breast and Cervical," 2014).

Susan G. Komen Tri-Cities has a strong relationship with the TBCCEDP. Staff working with TBCCEDP have been very active with the Affiliate. They have been involved in education events, volunteer events, and in the development of Community Profiles. Additionally, TBCCEDP facilities have received grant monies from the Affiliate over the years to supplement breast health programs. These funds have been used for breast health services and educational purposes in the designated counties. Komen breast health educational materials have also been provided to these sites at the request of the grantee.

Over the next four-years Komen Tri-Cities will continue to build and strengthen the relationship with the TBCCEDP. Because strong relationships between the TBCCEDP and the Affiliate are existing, emphasis will be placed on establishing Komen as the most trusted source of up-to-date breast health information available. Affiliate employees will continue to work with

TBCCEDP staff on educational events, health fairs, and advocacy initiatives. Working with TBCCEDP workers will allow the Affiliate to disseminate breast health information to a broad range of local sub-populations, such as Blacks/African-Americans and Hispanics/Latinos, that otherwise would not be reached. Additionally, Komen Tri-Cities will continue to distribute the annual Request for Applications for the Community Grant Program throughout the Affiliate service area. As previously stated, TBCCEDP entities are eligible to apply.

Virginia

The Every Woman's Life program (EWL) works to provide access for qualifying Virginia women to opportune, high-quality screening and diagnostic services to detect breast and cervical cancer at its earliest stages (Every Woman's Life, 2012). The program began in 1998 after receiving funding from the Centers of Disease Control and Prevention (CDC) (Every Woman's Life, 2012). Annually, the program receives approximately $2.4 million from state and federal funds with $2.1 million passed directly to providers to conduct screening and diagnostic services. Due to funding constraints, the program is only able to serve approximately one in 10 eligible Virginia women (Every Woman's Life, 2012). An opportunity for additional breast health funding is available each year through Affiliate Community Grant Programs. All EWL entities are eligible to apply.

EWL operates by working with local health departments and through a network of approximately 250 health care providers who perform clinical breast exams (CBEs), mammograms, pap tests, pelvic exams, and diagnostic tests (Every Woman's Life, 2012.). If a woman is diagnosed with breast or cervical cancer and meets all eligibility guidelines she will be enrolled into Medicaid under the Breast and Cervical Cancer Prevention and Treatment Act (BCCPTA) (BCCPTA, 2012). Typically women diagnosed with breast and/or cervical cancer in Virginia do not have a problem with enrollment for treatment. Issues arise when a female has received a screening and diagnosis from a health care professional other than an EWL provider. In this case, treatment coverage will be denied (BCCPTA, 2012).

Virginia women are eligible for services if they meet certain criteria. To be eligible for the EWL program a women must be between the ages of 18-64 years of age, live in Virginia, have an income equal to or less than 200 percent of the Federal Poverty Level, and be uninsured or underinsured (Every Woman's Life, 2012). Although the program is focused on women ages 40 and older, women aged 18-39 may be enrolled if they are symptomatic for breast and/or cervical cancer (Every Woman's Life, 2012).

With statewide oversight by EWL staff at the Virginia Department of Health, the program is operated through 32 enrollment sites statewide (Every Woman's Life, 2012). Local EWL sites include health departments, free clinics, federally qualified health centers, and large health systems. The 32 approved sites have extensive networks with providers who provide screening and diagnostic services in almost every locality statewide. To locate an EWL site and provider, individuals should call the EWL toll free line, 1-866-395-4968 (1-866-EWL-4YOU) (www.vdh.virginia.gov/ofhs/prevention/ewl/client.htm).

Since 1998, EWL has provided services to 50,595 low-income, uninsured women (Every Woman's Life, 2012). The program has performed 82,440 CBEs, 86,306 mammograms, and 35,829 diagnostic breast procedures performed as a result of abnormal screenings (Every Woman's Life, 2012). More than 1,520 women have been diagnosed with breast cancer (Every

Woman's Life, 2012). Women requiring treatment for breast cancer were referred to Medicaid and enrolled if eligible. Women who did not meet the eligibility criteria for the BCCPTA (e.g., non US citizens) were provided pro-bono or sliding scale treatment through charity cases or other means (P. Hall, personal communication, July 10, 2014).

An estimated 58,297 women between the ages of 40 and 64 in Virginia are eligible for the EWL program. Unfortunately, current funding will only allow for 6,767 women, or 12 percent of those eligible, to be served in 2014 (Every Woman's Life, 2012). Each fall, the Susan G. Komen Affiliates throughout Virginia release the annual Request for Applications where entities can apply for funding through Affiliate Grant Programs. If funds are awarded, additional funding for breast health services will be available, thus partially filling the gap of persons in need of breast health care in Virginia.

The Affiliate works with EWL by providing necessary breast health education for patients and educational programming purposes. Over the next four years, Komen Tri-Cities will place much emphasis on strengthening their relationship with Virginia's EWL program. Affiliate staff will continue to develop a strong rapport with EWL staff and personnel. With these connections, Komen Tri-Cities will stay informed on changes due to the ACA and current advocacy initiatives in the state. Newly developed relationships with EWL entities will provide additional avenues to distribute Komen breast health information, as-well-as a way to gain trust and community buy in. The Affiliate will also continue to distribute its annual Request for Applications where eligible entities can apply for additional breast health funding.

State Comprehensive Cancer Control Coalition

In 1998 the CDC established the National Comprehensive Cancer Control Program (NCCCP) to assess the burden of cancer, determine priorities, and develop and implement cancer plans across the nation (NCCCP, 2013). Currently the NCCCP supports all 50 states, the District of Columbia, seven tribal groups, and seven US Associated Pacific Islands/territories to establish cancer coalitions (NCCCP, 2013). Each of these entities works in local communities throughout their state, group, and/or territory to advocate healthy lifestyles, promote cancer screenings, educate people concerning cancer symptoms, increase access to quality cancer care, and to improve the quality of life for cancer survivors (NCCCP, 2013).

North Carolina

The Comprehensive Cancer Control Collaboration of North Carolina's (4CNC) mission is to support the collaboration of researchers and communities across NC to reduce the burden of cancer ("4CNC," 2014). 4CNC provides support to organizations who apply evidence-based strategies for cancer risk reduction, promotion of early detection, and directing people to quality health care ("4CNC," 2014). Through this collaboration 4CNC hopes to improve services for cancer risk reduction, early stage detection, and the results of treatment outcomes in communities throughout NC ("4CNC," 2014). Currently, the 4CNC has three components to execute any business for the coalition: (1) The Advisory Committee on Cancer Coordination and Control; (2) North Carolina Partnerships; (3) The North Carolina Comprehensive Cancer Program. Each entity has its own specific functions to ensure 4CNC executes its mission and goals.

The North Carolina Comprehensive Cancer Program, the third component of 4CNC, determines the state's cancer related needs by formulating partnerships, coalitions, and utilizing data

collection. Then, the information is used to develop the North Carolina Comprehensive Cancer Plan. As of September 21, 2014, the plan was still in draft form. This draft was obtained by Komen representatives in mid-August 2014. The final plan should be approved in September 2014. According to the draft, the objectives and measurable aims in relation to breast health and breast cancer are as follows:

- *Objective 1 & Measurable Aim 1:* Reduce the death rate in women due to breast cancer from the current 21.4 deaths per 100,000 women to 16.8 deaths per 100,000 women by 2020.
- *Objective 2 & Measurable Aim 2:* Reduce the rate of Stage III and Stage IV breast cancer in women from the current 46.3 incidents per 100,000 women to 40.9 incidents per 100,000 women by 2020.
- *Objective 3 & Measurable Aim 3:* Increase the percentage of women over the age of 50 who have had mammograms within the past two years from 79.4 percent to a higher percentage yet to be determined.

The current draft also has breast health and breast cancer intervention strategies listed. They are as follows:

- *Strategy 1:* Conduct targeted outreach using evidence-based strategies to decrease disparities in breast cancer deaths among women who experience high death rates from breast cancer.
- *Strategy 2:* Partner with NCBCCCP and WISEWOMAN providers and other agencies to improve data sharing and patient tracking to assure that eligible patients get appropriate screening and treatment services for breast cancer.
- *Strategy 3:* Promote the use of the guidelines and recommendations of the N.C. Advocacy Committee on Cancer Coordination and Control.

Komen Tri-Cities is not a current member of the North Carolina Comprehensive Cancer Coalition. The Affiliate has kept up with proceedings through other Affiliates. Komen Tri-Cities has stayed well informed on all public policy occurrences thanks to communication through a Komen Charlotte and Komen International Volunteer.

Currently, Komen Tri-Cities is in the process of becoming a partner of the Coalition. Once a partner, the Affiliate will receive emails direct from the Coalition on events and happenings. An Affiliate staff member will check the Coalition website for updates and keep in close contact with other NC Komen Affiliates. The Coalition has several roles it would like Komen Tri-Cities, and other Komen Affiliates, to play. Over the next few years, the Affiliate will provide education resources, expertise to the advisory committee on breast health concerns in NC areas, and provide data on cancer in its NC counties. Additionally, the Affiliate will be involved with community engagement and advocacy while promoting the NC Cancer Plan.

Tennessee

The Tennessee Cancer Coalition (TC2) works with organizations statewide to fight a unified battle against cancer (“Tennessee Cancer Coalition,”2014). TC2’s mission is to “reduce the burden of cancer on the citizens of Tennessee by implementing a collaborative statewide plan driven by data, science, capacity, and outcomes (“Tennessee Cancer Coalition,” 2014).” Through the Coalition’s mission and work, TC2 has developed and sustained an organized approach to decrease cancer incidence, deaths and morbidity while improving life for those

impacted by cancer statewide ("Tennessee Cancer Coalition," 2014). TC2 develops and implements a collaborative statewide plan, The Tennessee Comprehensive Cancer Control Plan, to measure the impact of interventions on the cancer burden in Tennessee ("Tennessee Cancer Coalition," 2014). This Plan is developed and driven by data, science, capacity, and outcomes in order to have the most positive impact on Tennessee residents ("Tennessee Cancer Coalition," 2014).

The Tennessee Comprehensive Cancer Control Plan provides the framework for the Tennessee Cancer Coalition's activities for the years of 2013 to 2017 (TN Cancer Plan, 2013). The Plan's goals and objectives will be carried out by the TC2 regional coalitions across the state (TN Cancer Plan, 2013). TC2 will orchestrate their work according to the Plan's direction in order to prioritize and make annual measurable outcomes for evaluation purposes (TN Cancer Plan, 2013). TC2 has several goals and objectives they hope to accomplish by 2017 in regards to women's health issues (TN Cancer Plan, 2013). The goals and objectives below include only those related to breast health and breast cancer.

Goal 1: Reduce female breast cancer deaths through increased awareness, early detection, diagnosis, and treatment. Death rate reduction goal by June 2017: Breast rate of 24.0, reduce to 22.0 (TN Cancer Plan, 2013)

- *Objective 1.1:* Increase awareness of breast cancer, current incidence rates, current death rates and screening guidelines and to promote access to services and increase screenings by conducting annual updates on the rates to each of the TC2 regions (TN Cancer Plan, 2013).

  Strategies:
  - Develop and promote public information campaigns with state partners (American Cancer Society (ACS), the six Susan G. Komen Affiliates, family practice physicians, OB/GYN physicians, mammography facilities, etc.) (TN Cancer Plan, 2013).
  - Identify counties with the highest rate of breast cancer for special community-based campaigns through the work of the regional Tennessee Cancer Coalition (TC2) coalitions (TN Cancer Plan, 2013).
  - Continue to emphasize targeted outreach to underserved groups through the University of TN Extension statewide, county-based educational delivery systems, The Witness Project of Davidson County, Komen grantees and other local initiatives for breast cancer awareness and screening (TN Cancer Plan, 2013).
  - Promote awareness in October (Breast Cancer Awareness Month) through TC2 regional coalitions (TN Cancer Plan, 2013).
  - Work with medical and health care practitioner societies to encourage members to promote regular, periodic screening for breast cancer (TN Cancer Plan, 2013).

- *Objective 1.2:* By June 2017, increase funding for breast cancer screening (TN Cancer Plan, 2013).

Strategies:

- Advocate for expansion of state funding to improve TN's incidence and death rates for breast cancer if it is caught early (TN Cancer Plan, 2013).
- Support local Susan G. Komen Affiliates fundraising activities which in turn support local education and screening services (TN Cancer Plan, 2013).
- Advocate for an increased appropriation from the federal government so that all states have additional resources for their state breast screening programs (TN Cancer Plan, 2013).

Komen Tri-Cities has been very active with the Northeast Tennessee Cancer Coalition, a regional subgroup of TC2. In recent years, an Affiliate staff member has helped to plan the annual Cancer Summit and been co-chair of the Women's Health Committee. Additionally, the Affiliate regularly attends meetings and Coalition education events.

Over the next four-years the Affiliate will continue to stay active with TC2. A staff member will attend meetings and serve on a committee when it is appropriate. Events will also be attended and stocked with Komen breast health materials. When the annual Cancer Summit is held in the northeastern region of Tennessee the Affiliate will be actively involved with its planning and execution. Additionally, Komen staff will continue to build relationships with other members of TC2. These connections will provide Komen avenues to build further connections and spread Komen's mission and educational messages throughout the Komen Tri-Cities region.

Virginia

The Cancer Action Coalition of Virginia (CACV) is committed to working alongside Virginia residents interested in cancer issues including: risk reduction, early detection, treatment, survivorship/palliative care, surveillance, equity, and equality (CACV, 2014). CACV works to increase collaboration between organization and individuals who will perpetuate the activities and the objectives of the Virginia Cancer Plan (CACV, 2014). The Virginia Action Plan is developed every five years by the CACV and the Virginia Comprehensive Cancer Control Program at VDH to measure the impact of interventions across the state (CACV, 2014).

The Virginia Cancer Plan (VCP) for 2013-2017 was developed according to the greatest cancer concerns in the Commonwealth of Virginia (VCP, 2013). The goals and objectives set forth in the VCP are tackled by the Commonwealth through engaging individuals and organizations who work in prevention, detection, treatment, and post-cancer care for Virginia inhabitants (VCP, 2013). The VCP is a framework with key goals, objectives, and strategies within the following five areas: Prevention, Early Detection, Treatment, Survivorship, and Palliative Care (VCP, 2013). The VCP has several goals and objectives they hope to accomplish in relation to breast health and breast cancer (VCP, 2013). The goals and objectives are listed below. They include only those related to breast health and breast cancer.

Prevention Goal 1: Reduce the risk of breast cancer for all Virginians through awareness, education, and behavior change (VCP, 2013, p. 12).

- *Objective 1.1:* Reduce exposure to cancer causing substances such as tobacco and second-hand smoke, ultraviolet radiation, potential carcinogenic additives, and environmental carcinogens such as radon (VCP, 2013, p. 12).

- *Objective 1.2:* Reduce the risk of cancer by all Virginians by encouraging an active lifestyle and healthy eating healthy (VCP, 2013, p. 14).
- *Objective 1.3:* Improve public awareness and knowledge of age-appropriate preventive action as well as screenings and self-examinations (VCP, 2013, p. 14).

Early Detection Goal 1: Virginians are diagnosed with cancer at its earliest (local), most curable stage (VCP, 2013, p. 15)

- *Objective 1:* Increase the dissemination of public information of age-appropriate, evidence based, comprehensive cancer screening guidelines and resources and encourage an increase in educational activities in the Virginia health districts with the highest death rates (VCP, 2013, p. 15).
- *Objective 2:* Increase cancer screening percentages among Virginians by 10 percent (VCP, 2013, p. 16).
- *Objective 3:* Support Virginia health care providers in promoting age-appropriate, evidence-based screening early detection guidelines (VCP, 2013, p. 16).

Treatment Goal: Virginians with cancer will have access to appropriate and effective cancer treatment and care. (VCP, 2013, p. 17).

- *Objective 1:* Increase Virginia health care providers' awareness of national cancer care standards and guidelines (VCP, 2013, p. 17).
- *Objective 2:* Increase Virginians' knowledge and awareness of patient navigation programs and services (VCP, 2013, p. 18).
- *Objective 3:* Connect Virginians with information and access to innovative and evidence based cancer treatments (VCP, 2013, p. 18).

Survivorship & Palliative Care Goal: Optimize the quality of life for every person affected by cancer across the continuum of care (VCP, 2013, p. 19).

- *Objective 1:* Increase the number of cancer patients who are provided with a comprehensive care summary and follow-up plan (VCP, 2013, p. 19).
- *Objective 2:* Increase utilization of survivorship support services by survivors, cancer patients, families, and caregivers in Virginia (VCP, 2013, p. 20).
- *Objective 3:* Increase education among patients, families, and health care providers about palliative care (VCP, 2013, p. 20).

Komen Tri-Cities has not been actively involved with the Virginia Cancer Coalition due to the location of the meetings (Richmond, VA). However, the Affiliate is active with the Mountain Laurel Cancer Coalition, a subgroup of the VCC, located in Big Stone Gap in Southwestern Virginia. This group does attend statewide meetings and updates are given in meetings.

Currently, the Affiliate is in the process of becoming a member of the Virginia Cancer Coalition and plans to increase involvement over the next four-years. Because meetings are at a distance, the Affiliate will check the Coalition website for updates, receive pertinent emails on happenings, and keep in close contact with other Komen Affiliates who attend the assemblies. Additionally, the Affiliate will continue its involvement with the Mountain Laurel Cancer Coalition. Komen staff will build relationships with members of both the VCC and the Mountain Laurel Cancer Coalition. These connections will give Komen a way to build more relationships in the region while spreading Komen's breast health education messages to communities.

Affordable Care Act

On March 23, 2010, President Barack Obama signed into law the Patient Protection and Affordable Care Act (ACA), the largest reform in the United States health care system since the passing of Medicare and Medicaid in 1965 (Focus on Health Reform, 2013 and Patient Protection, 2014). The ACA will provide the American people the ability to make informed choices about their health while impacting several areas of health care ("Health Care," 2014). First and foremost, the ACA provides provisions to keep health care costs low (Fact Sheet, 2014). These provisions ensure Americans get the quality, affordable health care they deserve while being protected from insurance company abuses (Patient Protection, 2014 and Fact Sheet, 2014). Additionally, the ACA will provide a means to lower the amount of uninsured Americans by expanding both public and private health insurance coverage (Patient Protection, 2014). Last, the ACA was specifically designed to provide States resources and flexibility to tailor their health care approach to specific state needs (Fact Sheet, 2014). In turn these goals put individuals, families, and small business owners in control of their own health care and coverage ("Health Care," 2014).

The ACA hopes to shift the US health care paradigm to quality over quantity. There will be increased competition, guidelines, and incentives in health care delivery (Patient Protection, 2014). Some of the highlights of the ACA's impact are bulleted below:

- Tax credits will be provided to qualifying families and small businesses to ensure health care is affordable (Fact Sheet, 2014).
- US citizens and legal residents are required to obtain health care coverage from any plan he/she likes in the insurance marketplace. Persons who choose to remain uninsured are charged a penalty ("Health Care," 2014 and Focus on Health Reform, 2013).
- Out-of-pocket expenses for health care will be capped ("Health Care," 2014).
- Preventative care will be fully paid for without any out-of-pocket expenses from families ("Health Care," 2014).
- Insurance companies are banned from denying coverage because of pre-existing medical conditions ("Health Care," 2014). As a result, they are required to offer the same rates to all persons regardless of health history and/or sex (Patient Protection, 2014).

On June 28, 2012 the US Supreme Court declared that states are not required to participate in the ACA's Medicaid expansion under penalty of losing current Medicaid funding (Patient Protection, 2014). As a result, each state has responded to the Medicaid expansion differently (Patient Protection, 2014). Below the impact of the ACA and Medicaid expansion in North Carolina, Tennessee, and Virginia is explored.

North Carolina

The ACA provides the potential to extend health care coverage to the 1,593,000 uninsured non-elderly North Carolina residents (Uninsured ACA, 2014). Because of the ACA, more than four in ten, or approximately 669,060, of previously uninsured North Carolinians are now eligible for financial assistance for health care coverage (North Carolina Under ACA, 2014). The ACA was set up at the federal level to establish coverage provisions across the income spectrum (North Carolina Under ACA, 2014). State Medicaid expansion, deemed optional by state in June 2012, was envisioned as a vehicle to cover low income adults (North Carolina Under ACA, 2014). In turn, premium tax credits, for persons with an income between 100 percent and 400 percent of

the FLP, would provide individuals with moderate incomes assistance to purchase insurance in the Health Insurance Marketplace (North Carolina Under ACA, 2014).

As of December 2013, Governor Pat McCrory, and the North Carolina General Assembly, chose not to expand Medicaid coverage to North Carolina residents with an income less than 133 percent of the Federal Poverty Level (North Carolina's Medicaid Choice, 2013). As a result, 20.0 percent, or 319,000, North Carolina adults who would have been eligible for Medicaid under the expansion fall into a coverage gap (North Carolina Under ACA, 2014). These individuals, who are below the FPL, have limited resources (North Carolina Under ACA, 2014). They make too much money to qualify for Medicaid, yet not enough to receive premium tax credits for the Health Insurance Marketplace (North Carolina's Medicaid Choice, 2013). As a result, these persons are most likely to remain uninsured (North Carolina's Medicaid Choice, 2013).

The best avenue for uninsured NC residents to obtain coverage is through the state's Health Insurance Marketplace (North Carolina Under ACA, 2014). Currently, one in three, or about 513,000, of uninsured North Carolina residents are eligible for premium tax credits (North Carolina Under ACA, 2014). A previously stated, these credits can be used to purchase a Marketplace plan best suited for individual/family needs (North Carolina Under ACA, 2014). As of March 31, 2014, there were 357,587 North Carolina residents who had selected a plan through the Marketplace (Health Care Law North Carolina, 2014).

At this time, state officials, local providers, and current grantees in North Carolina are unsure of the implications the ACA will have on NC BCCCP and providers (S. Nam, personal communication, July 29, 2014). The impact on the NC BCCCP are yet to be determined. Time will provide a more accurate assessment of its impact as more North Carolinians purchase health insurance through the Marketplace or gain coverage through Medicaid. Currently, concern has been raised in relation to receiving diagnostic mammograms under the ACA. Reports indicate that coverage and expenses in relation to this procedure may be an issue in coming months. Secondly, impact of providers remains unclear as well. Statistics show that more providers will be necessary as uninsured Americans gain coverage. As for the US health care system, many persons believe a shift in care will occur. Some believe midlevel providers will become the primary caregiver with physicians operating from a supervisory role. Others disagree. Medicaid and health insurance reimbursement remain a concern for providers under the ACA. Only time will reveal the implications of the ACA on the NC BCCCP and on providers. Updates will be provided as time progresses.

Additionally, the impact of the ACA on the Affiliate remains unknown. Much of the impact will depend on changes occurring with insurance companies and in the health care system's administration. As changes occur, addendums will be added to the Community Profile.

Tennessee

There will be many changes in Tennessee's health care system as a result of the ACA. With the enactment of the ACA, there is potential to provide health care coverage to the 850,000 non-elderly, uninsured Tennesseans (Uninsured ACA, 2014). Because of the ACA, 52 percent of the uninsured Tennesseans are now eligible for financial assistance for health care coverage (Uninsured in TN ACA, 2014). The ACA was nationally established to provide health care coverage provisions across the income spectrum (Uninsured in TN ACA, 2014). The expansion

of Medicaid was envisioned as a vehicle of providing low-income Americans health care coverage, with premium tax credits offered to persons between 100 percent and 400 percent of the FPL (Uninsured in TN ACA, 2014). In June of 2012, Medicaid expansion was voted to be optional from state-to-state (Uninsured in TN ACA, 2014).

Currently, the state of Tennessee is not expanding Medicaid eligibility to include nonelderly individuals with incomes 138 percent at or below the FPL (Uninsured Under ACA, 2014). Accordingly, 19.0 percent, or 162,000, of the state's uninsured residents who would have been eligible for Medicaid under the expansion fall into the coverage gap (Uninsured in TN ACA, 2014). These individuals make too much money for Medicaid, yet not enough money to qualify for premium tax credits for towards the Health Insurance Marketplace (Uninsured in TN ACA, 2014). With limited resources and incomes below the FPL, these persons are most likely to remain uninsured (Uninsured in TN ACA, 2014).

The best avenue for uninsured Tennessee residents to gain health care coverage is by purchasing a plan in the Health Care Marketplace (Uninsured in TN ACA, 2014). At this time, approximately 292,000 of uninsured Tennessee residents are eligible for premium tax credits (Uninsured in TN ACA, 2014). At the completion of the Marketplace's first enrollment period on March 31, 2014, approximately 151,352 Tennessee residents had enrolled and purchased a plan (Health Care Law TN, 2014).

The implications of the ACA on the TBCCEDP has yet to be determined. Although the ACA provides Tennessee women with access to preventative cancer screenings and treatment, gaps still remain for the uninsured or underinsured since Tennessee is not participating in Medicaid expansion (TBCCEDP, 2014). More than 124,000 Tennessee women will not receive any affordable health care options in 2014 (TBCCEDP, 2014). Consequently, it is of the utmost importance that funding is maintained for TBCCEDP to provide a critical safety net for Tennessee women who fall into the health care coverage gap (TBCCEDP, 2014).

The ACA will have a large impact on health care providers in Tennessee (Impacts of Health, 2012). Additional manpower, especially in the field of primary care, will be needed since more persons are estimated to utilize the health care system (Impact of Health, 2012). The projected shortage of health care providers provide an obstruction to achieving goals of the US health care reform (States' Next Challenge, 2011). Even though more health care providers will be needed, estimating the number proves to be a difficult task (Health Manpower Forecasting, 2011). Many factors impact this figure, including changes in: the supplies and shifting of health care professional groups, disease incidence, the health care delivery and financing model, payment systems, public expectations, and regulatory oversight (Health Manpower Forecasting, 2011).

According to the Health Professional Shortage Area (HPSA) classification, as set forth by the Health Resources and Service Administration and the State Health Access Data Assistance Center (SHADAC), some TN counties have an adequate number of health care providers while others do not (Impact of Health, 2012). Data shows that 26 counties have a shortage of primary care providers and 29 counties have a partial shortage (Impact of Health, 2012). Based upon these numbers, it is estimated that TN will need an additional 194 primary care health care workers to raise the current workforce level of the inadequate counties to an adequate level (Impact of Health, 2012).

Although more primary care workers will be needed in the coming years, statistics show a large decrease of physicians entering primary care because of low pay, lack of perceived respect in the medical community, and a hard lifestyle (Impact of Health, 2012). For example, in 2009, the number of post-graduate, year-one (PGY1), family practice residencies filled in the US had decreased by 50.0 percent, from 2,179 in 1998 to 1,071 in 2009 (Impact of Health, 2012). Additionally, the number of internal medicine slots decreased by 10.0 percent, while those for radiology increased by 45.0 percent (Impact of Health, 2012). The solution to this dilemma has yet to be determined. One option may be to expand the use of non-physician health care providers, such as nurse practitioners and physician assistants (Impact of Health, 2012). As of 2007, these workers represented 37.2 percent of the primary care labor force in TN, a number much lower than other states (Impact of Health, 2012).

The impact of the ACA on Komen Tri-Cities remains unknown. Much of the impact will depend on changes occurring with health care system's functions, the number of available providers, and insurance reimbursement. As changes occur, addendums will be added to the Community Profile.

Virginia

The ACA provides an opportunity to extend health care coverage to the 1.02 million Virginians who have not had health insurance (Uninsured ACA, 2014). As a result of the ACA, four in ten, or 45.0 percent, of currently uninsured, nonelderly Virginians will be able to receive financial assistance for health care coverage (Uninsured VA, 2014). The ACA was set up with the goal of establishing health care coverage provisions across the income spectrum throughout the US (Uninsured VA, 2014). State Medicaid expansion, voted optional by state in June 2012, was foreseen as a way to provide health insurance to low income adults (Uninsured VA, 2014). In turn, premium tax credits would be provided for persons with an income between 100 percent and 400 percent of the FPL (Uninsured VA, 2014). These credits would provide these persons with moderate incomes assistance to purchase insurance in the Health Insurance Marketplace (Uninsured VA, 2014).

In Virginia, Medicaid is run by the Department of Medical Assistance Services to provide health and long-term care coverage for low income, eligible Virginians (DMAS, 2014). The program is funded by the state and the federal government with The Federal Medical Assistance (FMAP) at approximately 50 percent (DMAS, 2014). As a result, for every one dollar Virginia spends on Medicaid, the state will receive one dollar of funds from the federal government (DMAS, 2014). As previously stated, the choice to expand Medicaid has been left up to each state. Currently, the state of Virginia has opted to not participate in Medicaid expansion (Virginia Medicaid, 2014). As a result, 191,000 uninsured adults, 19.0 percent of the state's uninsured, who would have been eligible with Medicaid expansion fall into the coverage gap (Uninsured VA, 2014). These individuals have incomes too high to receive Medicaid coverage, yet too low to qualify for premium tax credits for use in the Marketplace (How Medicaid Health Care, 2014). With limited resources and incomes falling below the FPL, these individuals are predicted to remain uninsured despite the ACA's mandates (Uninsured VA, 2014).

Susan G. Komen Tri-Cities, other state coalitions/organizations, and many Virginia hospital systems have advocated for the expansion of Medicaid at the state level. With this expansion, more individuals will qualify for enrollment into Medicaid resulting in Virginia's insurance gap

being closed. Working through advocacy at the state level, Komen has requested for Medicaid to be included in Virginia's budget. While the current budget was passed, Medicaid expansion continues to be denied. Because Governor Terry McAuliffe (D) considers the health of Virginia residents to be of extreme importance, he has made Medicaid expansion a top priority. As a result, he is investigating ways to expand Medicaid coverage without legislative approval. The best option for uninsured Virginians to obtain health coverage is by purchasing a plan through the Health Insurance Marketplace. Initially, Virginia had plans to set up and run its own health exchange, but opted for the Federally Facilitated Marketplace (Virginia Landscape, 2014). Nevertheless, the state has assumed responsibility for managing and reviewing health plans and rates that will be sold on the market (Virginia Landscape, 2014). Currently there are eight insurance providers offering 106 Qualified Health Plans in the Virginia Marketplace (Virginia Landscape, 2014). There are 823,000 individuals who qualify to enroll in the state's Marketplace for coverage (Virginia Landscape, 2014). Of these persons, 518,000, or 63.0 percent, are eligible to receive premium tax credits (Virginia Landscape, 2014). As of April 19, 2014, approximately 216,356 Virginians had purchased a Marketplace plan (Virginia Landscape, 2014).

The implications of the ACA on EWL are yet to be determined. Even though the ACA provides Virginian women with access to preventative cancer screenings and treatment, a coverage gap remains as a result of Virginia's decision to not expand Medicaid (NBCCEDP in VA, 2014). An estimated 128,000 women will not receive an affordable health care option in 2014 (NBCCEDP in VA, 2014). Women diagnosed through EWL will be eligible for comprehensive treatment through Virginia's state Medicaid program (NBCCEDP in VA, 2014). Maintaining funding for EWL is critical as it preserves a safety net for women who are in the health care coverage gap (NBCCEDP in VA, 2014).

The ACA's impact on health care providers in Virginia has yet to be established. Additional manpower is expected, especially in primary care, as the number of insured increases, the US population ages, and more persons utilize health care services (Projecting US Primary, 2012). The estimated shortage in health care workers provides a barrier to achieving goals set forth in the US health care reform (States' Next Challenge, 2011). Estimating the number of providers needed proves a difficult task as many variables impact this figure (Health Manpower Forecasting, 2011). The changes in supplies, shifting in health care professional groups, disease incidence, health care delivery and finance modeling, payment systems, public expectations, and regulatory oversight are just a few of the factors impacting this estimate (Health Manpower Forecasting, 2011).

Even though primary care providers will be needed in the future, statistics show a large decrease of doctors entering this field because of low pay, lack of perceived respect within the medical community, and a more difficult life style than that of a specialist (Impact of Health, 2012). Statistically, the amount of post-graduate physicians entering into primary care has decreased by 50.0 percent from 1998 to 2009 (Impact of Health, 2012). The solution to the dilemma in primary care has yet to be resolved. The passing of time is proving to be the best indicator of the ACA's impact (Projecting US Primary, 2012). Many analyses of the US health care system perceive a trend toward the utilization of non-physician health care providers, like nurse practitioners and physician assistants (Impact on Health, 2012).

The impact of the ACA on Komen Tri-Cities remains unknown. Much of the impact will depend upon changes within the US health care system's administration and functions, insurance repayment, and health care providers. Addendums will be added to the Community Profile as important changes occur in the coming months.

Susan G. Komen Tri-Cities Public Policy Activities

Susan G. Komen® is aware that sound public policy is of the utmost importance in order to achieve its mission and to accomplish scientific progress (State Campaign, 2014). Sustainable, broad, and systemic change can be made in the fight against breast cancer through government action (State Campaign, 2014). As a result, Komen, as a leader in the fight against breast cancer, must engage policymakers and the government as partners to end breast cancer forever (State Campaign, 2014).

Every year, Komen staff work to identify policy issues that will have the most impact on Komen's mission (State Campaign, 2014). To pinpoint these policy issues, intense research will be conducted by: Komen Headquarters leadership, policy staff, subject matter experts, Komen Affiliates, public policy advisory groups, the Public Policy Advisory Council (PPAC), Advocates in Science (AIS), Komen Scholars, and other stakeholders with a strong interest in breast cancer-related issues (State Campaign, 2014). The following Komen Advocacy Priorities, listed below, provide the framework for Komen's state and federal advocacy work.

Komen Advocacy Priorities include, but not limited to:

- "Protecting federal and state funding for the **National Breast and Cervical Cancer Early Detection Program (NBCCEDP)**, to ensure all women have access to potentially lifesaving breast cancer screening;
- Ensuring continued federal investment in **cancer research** through the National Institutes of Health (NIH), National Cancer Institute (NCI), and Department of Defense (DOD), to discover and deliver the cures;
- Requiring insurance companies provide **coverage for oral anti-cancer drugs** on a basis that is no less favorable than what's already provided for intravenously administered chemotherapy, to protect patients from high out-of pocket costs; and
- **Expanding Medicaid coverage** to ensure the availability of the full-range of breast health services to low-income women, including cancer screening, diagnostics, and treatment (State Campaign, 2014)."

Although Komen advocates for breast-cancer related issues at all levels of government, the vast majority of work is conducted with the federal and state governments (State Campaign, 2014). In 2014, Komen's federal efforts will concentrate on three priorities: federal funding for the NBCCEDP, federal funding for cancer research, and federal funding for oral parity. In turn, state advocacy efforts will be led by individual Affiliates across the country. State efforts will focus on the following priorities: BCCEDP state funding, oral parity, and Medicaid expansion (State Campaign, 2014).

Komen Tri-Cities has been active with policy, but plans to become more involved over the next four years. Members of the Komen Tri-Cities community, including board members, grantees, and race participants, are encouraged to join advocacy efforts regarding Komen Advocacy Priorities, stated above. The Affiliate plans to utilize the State Campaign Issues Toolkit in coming years to better relay advocacy priorities to legislators throughout NC, TN, and VA.

Additionally, Komen Tri-Cities will collaborate with other state Affiliates in order to schedule meetings with Congress to advocate and discuss important policies in relation to breast health.

The Affiliate plans to include advocacy activities for NC, TN, and VA in the annual mission plan. All elected officials will receive a copy of the completed Community Profile to inform them of the work Komen Tri-Cities is doing in the region. Additionally, local city and county mayors will receive monthly updates of policy changes, breast health information, events with the Affiliate, and ways to engage their local communities. Each year, the Affiliate will encourage these entities to promote the Race for the Cure® in their area. Officials will also be invited to the annual Race where they will be given an opportunity to engage with participants and become further involved with Komen activities. Komen Tri-Cities continues to have great support from local political leaders across NC, TN, and VA during Breast Cancer Awareness Month.

A summary of public policy involvement and efforts for each state are listed below.

North Carolina Public Policy Efforts

Komen Tri-Cities stays up-to-date on North Carolina's public policy and advocacy efforts in relation to breast health and breast cancer. The Affiliate is frequently involved in statewide conference calls with other Affiliates concerning current advocacy efforts. Lobby Day, in Raleigh, is also attended to speak with legislative members about important efforts, such as Oral Parity, that will benefit breast cancer patients.

In recent years, Komen Tri-Cities, North Carolina Affiliates, and other organizations have collaborated to support and advocate for the passing of the North Carolina Treatment and Fairness Act (H.B. 609). This bill would require health insurance companies to cover the costs of oral chemotherapy drugs at the same price as IV chemotherapy treatments, including patient out-of-pocket costs (NC Cancer Treatment, 2014). Currently, many insurance companies do not cover oral parity, creating a large cost discrepancy between oral and IV chemotherapy drugs (NC Cancer Treatment, 2014). As a result, a large cost barrier is placed on patients in need of oral chemotherapy medications. H.B. 609 passed the House 112 to five and is pending in the Senate Health Care Committee (NC Cancer Treatment, 2014). Before the bill passes, the Senate must adjust H.B. 609 to include a $100 out-of-pocket cap for medication (NC Cancer Treatment, 2014). This provision is similar to the benefit legislators and state employees have in the State Employees Health Plan (SHP) (NC Cancer Treatment, 2014). Komen Tri-Cities and other collaborators will continue to advocate for this bill. Additionally, Komen Tri-Cities and other North Carolina Affiliates will continue to advocate for other initiatives including: state funding for NC BCCCP, Medicaid expansion, and other Komen Advocacy Priorities.

Tennessee Public Policy Efforts

Komen Tri-Cities remains knowledgeable on Tennessee public policy and advocacy efforts related to breast health and breast cancer. The Affiliate regularly attends statewide conference calls concerning legislative efforts. Lobby Day, held in Nashville, is also attended in order to speak with legislative members concerning Komen Advocacy Priorities. Additionally, Komen Tri-Cities continues to have great support from local and statewide political leaders, such as Governor Bill Haslam, who has endorsed Breast Cancer Awareness Month in Tennessee. Komen Tri-Cities continues to collaborate with other organizations (i.e. the Tennessee Breast Cancer Coalition, the Tennessee Cancer Coalition, and the American Cancer Society's Cancer Action Network) across the state to push essential legislation in Congress.

Currently, the Affiliate is focusing on the Komen Advocacy Priorities. Unfortunately, the Tennessee House Commerce Committee voted to not pass the oral chemotherapy bill in 2012. With a vote of 19 to nine, the Committee elected to send the bill to a study committee after Legislature adjourned for the year. At this time, Komen Affiliates across Tennessee continue to battle for the passing of an oral chemotherapy bill. Focus will also be placed on expansion of Medicaid and funding for the Tennessee Breast and Cervical Cancer Screening Program.

Virginia Public Policy Efforts

Komen Tri-Cities stays informed on public policy and advocacy initiatives related to breast health and breast cancer in Virginia. The Affiliate is frequently involved in statewide conference calls in relation to advocacy efforts. In the future, Lobby Day, in Richmond, will be attended to advocate with legislative members for the Komen Advocacy Priorities. Komen Tri-Cities will join forces with the Virginia Breast Cancer Foundation, the American Cancer Society, the Sisters Network, and other breast cancer stakeholders to make an impact at the Virginia General Assembly. Lobby Day meetings are organized by the Virginia Breast Cancer Foundation and held with selected Senators and Representatives in the Virginia legislature.

In 2012, the state of Virginia enacted oral chemotherapy access laws mandating insurance companies to cover the costs of these drugs at the price of IV chemotherapy medications. As a result, public policy efforts in Virginia have shifted to other Komen Advocacy Priorities including Medicaid expansion efforts and the protecting of funds for EWL. Currently, volunteers, survivors, and organization staff members are collaborating to push these important issues in Congress.

Health Systems and Public Policy Analysis Findings

Susan G. Komen Tri-Cities is located in a rural, tri-state region with breast health services varying between Communities. Ashe County, NC has facilities for screening and diagnostic services, but lacks surgical and treatment services. As a result, persons must travel long distances for a breast surgeon and to receive chemotherapy and radiation. Avery, Mitchell, and Yancey Counties in NC also provide screening and diagnostic services. On the other hand, these counties do offer facilities that have chemotherapy and radiation treatment services for cancer patients. Unfortunately, there is no breast surgeon in this community. Individuals seeking a breast health surgeon often travel to Asheville, NC to see this specialist. Greene County, TN has many breast health resources including: screening measures, diagnostics, and treatment abilities. Like the other Communities, Greene County does not have a breast surgeon in the area. Washington County, VA and Bristol City, VA offer the most resources of all the pinpointed Communities. Unlike the previous Communities, Washington County and Bristol City offer every option along the Continuum of Care, from screening and diagnosis to treatment and survivorship/follow-up. Persons living in this area may receive screening mammograms, diagnostics, treatment, and breast surgery without having to leave their Community. While this is great for Washington County and Bristol City, VA, there is much work to be done in the targeted North Carolina and Tennessee communities.

Key partnerships in the targeted Communities include health departments and hospital systems. Over the next four years the Affiliate would like to utilize these relationships to build trust in the

communities. Other potential partnerships could be developed with businesses, churches, community centers, high schools, and community colleges.

Komen Tri-Cities plans to continue its policy work in North Carolina, Tennessee, and Virginia. By focusing on the Komen Advocacy Priorities the Affiliate hopes to make an impact in the areas of oral parity, financing for state breast health programs, Medicaid expansion, and cancer research. Komen Tri-Cities will work collaboratively with other Affiliates and breast health organizations to advocate for women in each state. While Virginia has passed an oral parity law, there is still much work to be done in Virginia and Tennessee. Much emphasis will also be placed on Medicaid expansion as North Carolina, Tennessee, and Virginia opted to not expand the program. As a result, there are many women throughout these states who fall into the health coverage gap.

The effect of the ACA on breast health and breast cancer in North Carolina, Tennessee, and Virginia has yet to be fully understood. Only the passing of time will reveal its impact. Until then, Komen Tri-Cities will continue to work collaboratively with its communities, promote breast health education, support public policy, and push its mission of ending breast cancer forever forward.

Qualitative Data Sources and Methodology Overview

Methodology

Susan G. Komen Tri-Cities is focusing upon the Healthy People 2020 goals of reducing both death rates and late-stage diagnosis of breast cancer throughout the region. In order to address these goals—as exhibited in Figure 4.1—screening practices, attitudes, knowledge, and beliefs must be fully investigated through a qualitative assessment. Using peer-reviewed literature as a guide a document review was created and six precursors to screening were identified: attitudes toward, knowledge of, behavioral factors, access to, awareness of, and value of screening. These constructs were studied to see how they functioned in the priority populations of the following: (1) Ashe County, NC; (2) Toe River Health District, NC; (3) Greene County, TN; (4) Washington County, VA.

Moderating these themes were socioeconomic status (SES), race/ethnicity, genetic predisposition, family history, and education. Overarching these moderating factors and precursors to screening was the Appalachian culture. This construct may have had an overall influence on the precursors. As a result, Appalachian culture was added as a direct influence on screening. Through the qualitative assessment, the idea of community engagement was continually examined to accomplish the assessment's objectives.

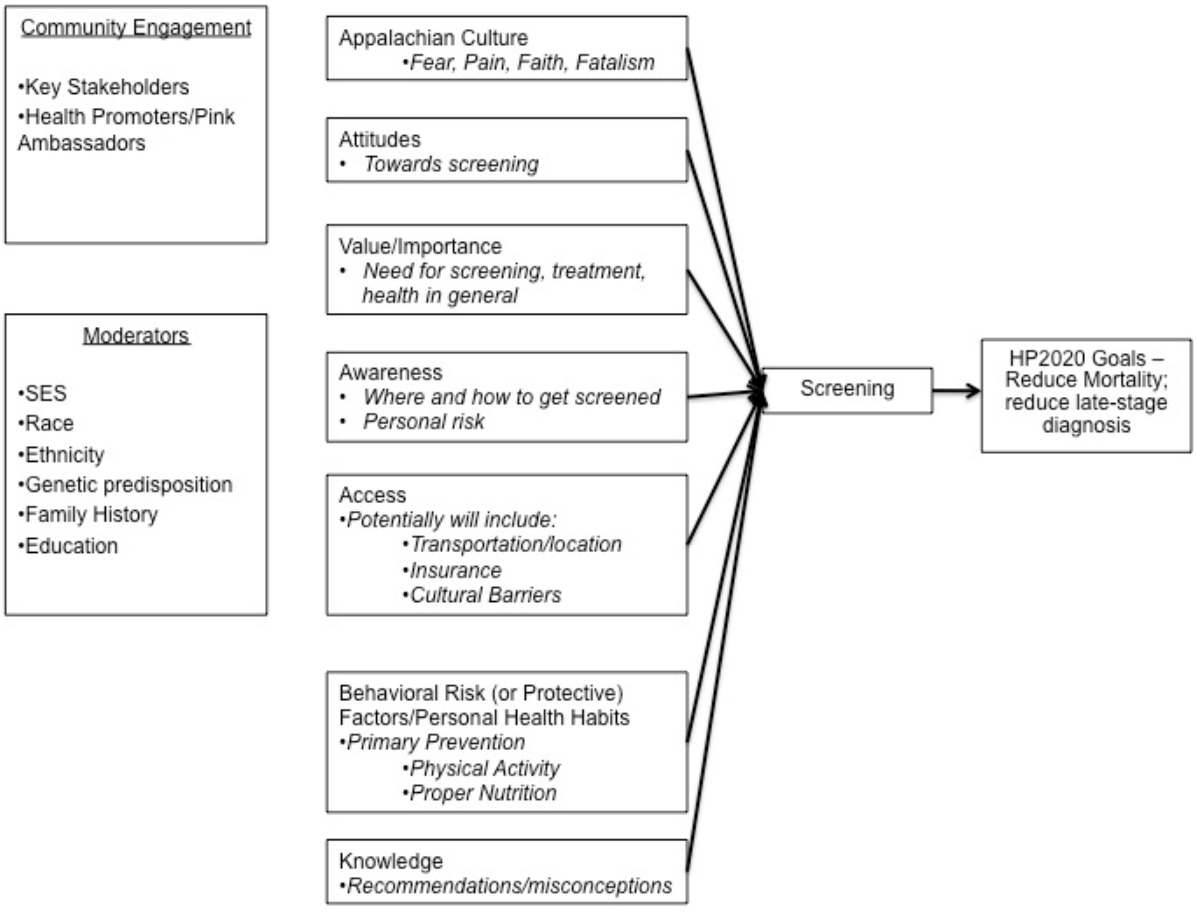

Figure 4.1. Conceptual Model

Key stakeholders were identified through several means: (1) established community relationships; (2) referrals from hospital systems; (3) through the Affiliate's listserv which included: previous grantees, employees of Breast and Cervical Cancer Prevention Programs, volunteers, and other individuals associated with the risk reduction, early detection, diagnosis, and treatment of breast cancer in the Komen Tri-Cities priority communities. The Affiliate's Mission Director made initial contact with individual stakeholders. East Tennessee State University (ETSU) partners developed the stakeholder interview guide, Appendix B, based off of current literature and insights on the priority communities. Once it was completed, the stakeholder interview guide was reviewed and revised by members of the Komen Tri-Cities Community Profile Team. Upon approval, ETSU partners and Komen staff completed 10 stakeholder interviews via the phone from the four priority communities. Verbal consent was obtained prior to the interview. During the interview, the interviewee kept notes that were compiled upon completion. To ensure fidelity, the summary of the interview was sent back to the stakeholder for review.

For stakeholder interview data analysis, field notes were coded using NVivo software. One individual from the Community Profile Assessment Team coded the data using themes from the conceptual model, Figure 4.1, as a guide, while including required additional themes to best represent and analyze the data. Upon completion of the coding, nVivo data reports by priority population were generated and summaries of themes by priority area were developed. Additionally, a table combining all salient themes was developed to display similarities and differences across priority communities. Within tables only themes identified in the priority population were shown.

Three focus groups were conducted in the priority populations of Greene County, TN; Washington County, VA/Bristol City, VA; and the Toe River Health District, NC. Additional focus groups were scheduled throughout December and into early January, including a focus group for Ashe County, NC, but were canceled due to inclement weather and stakeholder constraints. Focus group times and locations were scheduled through interviewed stakeholders. Recruitment of participants was accomplished with the help of the community. While some stakeholders assisted with the recruitment process, others did not. A list of participants from Susan G. Komen Tri-Cities Race for the Cure was utilized to contact people from target communities for participation in the focus groups. Community stakeholders and Komen staff made contact with potential participants. The only requirements to participate were that participants be female and over the age of 18 years old.

A moderator guide, Appendix C, was developed using Komen resources, adapting questions from the stakeholder interviews, and developing additional questions of interest. Verbal and written consent of participants were obtained from each participant from all three focus groups. Each focus group had between eight and 10 participants.

All focus groups were conducted with an ETSU partner serving as a moderator, one ETSU partner as a recorder/note taker, and one Komen Tri-Cities staff person serving as a recorder/note taker.

For data analysis of the focus groups, the field notes were coded using NVivo software. One person from the assessment team coded the data using themes from the conceptual model as a guide. Required additional themes were also added to best represent the data. After coding, the

data were arranging by priority area to identify similarities and differences. Then, summaries of each focus group were made. In conclusion, a depiction of themes identified via the coding was compiled to compare by target community.

Sampling

Susan G. Komen Tri-Cities recommended stakeholders for interview. A list of individuals from each target community was assimilated with contact made based on the ease of access to the stakeholder. All selected individuals were leaders from the target areas who are regarded as experts on breast cancer related issues in their communities.

The only requirements for participating in the focus groups were being female and being 18 years of age or older. Participants for focus groups were obtained through key stakeholders. Stakeholders formulated a list of individuals of known individuals throughout the community for participation. Additionally, names were acquired of individuals interested in future participation during the 2014 Susan G. Komen Tri-Cities Race for the Cure. These persons were contacted as needed.

Ethics

Prior to the stakeholder interviews, participants were read aloud a description of what the interview would consist of and how Komen Tri-Cities would utilize gathered data. Participants were read a consent statement reiterating that participation was entirely voluntary, while stating that partaking in the study would in no way impact a relationship with or services received from the Affiliate. Stakeholders were made aware that the interviewer was taking notes during the interview and that while some of the findings of the interview would be utilized; the discussion itself would remain confidential and anonymous. After the interview's conclusion, interviewers emailed the transcript to the stakeholders to view the notes. The stakeholders were allowed to add any additional information deemed pertinent. This step insured that the interviewer accurately captured the information the stakeholder provided.

Focus group participants were also read a detailed description of what their participation would consist of, why the focus group was occurring, and how Komen Tri-Cities would utilize findings. Additionally, a consent statement was read to the group of participants stating that their involvement was voluntary, that they could decline to answer questions at any time, and that participation in the assessment would have no impact on their relationship with or any services received from the Affiliate. Additionally, participants were reminded that all discussion would remain confidential and anonymous. Both verbal and written consent was obtained from each participant.

Data from both stakeholder interviews and focus groups have been entered into and securely stored in the Komen Tri-Cities computer system. Backups of this data are kept in a cloud network and on an external hard drive. After all the data were entered into the computer system, original notes on paper were organized and filed in a locked filing cabinet within the Komen Tri-Cities office.

Qualitative Data Overview

Ashe County, North Carolina

Stakeholder Interviews

Access - The stakeholder felt that women in her community were different from other areas because of the rurality and thus access to care. There is not only a lack of availability to services (i.e., genetic testing, treatment), but also access to insurance, primary care providers, money, and time. The stakeholder identified all of these access issues as concerns for the population.

Awareness/Knowledge - The stakeholder addressed the fact that community members are not aware of breast cancer or breast health. However, she mentioned that individuals in the community would be open to learning from other women in their community, as seen in the following quote: *"Women here would be receptive to members in their community going to where they are to receive the message (i.e., dropping kids off at school, church groups, etc.)."* She spoke about the need for comprehensive messaging and care for women in her community. The stakeholder expressed that women do not know the recommendations or what breast cancer looks like and the affect it can have on a family. A lack of knowledge was one theme that repeated.

Attitudes/Values - The stakeholder also identified traditional attitudes towards modesty. As a result one thematic node that was identified was attitudes towards breast health. The stakeholder identified this as a cultural barrier.

> *"There are some cultural barriers that make it difficult for women to discuss. Breast health is not easy for some women to discuss. Most of the women here are modest, older population. There is stigma associated with this kind of conversation. You just don't talk about it. It's a rural thing. The women are 'prim and proper, church-going ladies.' They would be mortified if they had to disrobe."*

Moderators - Poverty and rurality were mentioned time and again throughout this interview. The stakeholder felt that the working poor were at a specific disadvantage. Specifically she mentioned how there are multi-generational cases of breast cancer, a cyclical process that could be broken with increased screening and genetic testing, but that families have never accessed these services.

Primary Prevention - The stakeholder spoke at length about the importance of women knowing their breasts and better understanding how to take action if a problem was identified.

Screening Percentages - The stakeholder felt that screening percentages directly related to knowledge and awareness. Additionally, individuals were not taking advantage of screening due to a lack of knowledge and awareness.

> *"There is not as much screening as there could be. We have free screenings, especially during October (breast cancer awareness month), yet we have empty slots. There is poor communication all around. We are not getting the message out."*

Suggestions for Komen - The stakeholder spoke about the need for communication from within the community about breast health, but also bridging into breast care as exemplified in the following quote: *"The biggest thing in terms of primary prevention is there needs to be someone out and about in the community. If diagnosed, there needs to be a bridge between diagnosis and treatment."* A request for partnership and patient navigators for women were also identified.

Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina
Stakeholder Interviews
Access - The stakeholder's primary concern centered on the role poverty plays in the Toe River Health District and how it impacts the ability to get screening and treatment services covered for patients. The interviewee stated that a basic mammogram is often covered, but additional services are not. She stated,

> *"The Affordable Care Act will cover screenings, but when a woman needs a follow up with an additional mammogram, ultrasound, or biopsy this is not covered and is applied to their deductible. I know of women that have gone without the additional screening because they just couldn't afford it."*

Awareness/Knowledge - This interview also revealed concerns about reaching the population with education and awareness campaigns. The stakeholder stated, "*I know there are women that we are not reaching."* Additionally, the interviewee felt there was mixed messaging around recommendations. As a result, locals are not knowledgeable of when to get screened. However, since the community is small, there is only one place to receive a screening. The stakeholder felt community members knew about this location.

Attitudes/Values - The stakeholder discussed cultural traditions that may influence breast health and health in general. Specifically, the interviewee identified a traditional *"southern diet. Eating like they always have."* She also identified that this behavior varies across socioeconomic status. The stakeholder felt that lower economic households were less inclined to eat nutritiously.

Moderators - Additional moderators mentioned in the interview included education and poverty. These underlying constructs appear to impact on all other themes.

Primary Prevention - Around primary prevention, the stakeholder addressed concerns about the make-up of the diet and lack of nutritious options in lower socioeconomic groups. Additionally, she felt there were similar discrepancies in regards to access to exercise.

Screening Percentages - The stakeholder stressed the need for funding to encourage screening. The need of providing education in frequented locations was also mentioned. Specifically, church was referenced as a place to begin.

The interviewee understood that breast cancer incidence was high in the area resulting in great impact on the community. However, the stakeholder believed that screening percentages were low while mentioning the difficulty of reaching and engaging the community for screening. A success story of a partnership with Komen and the local high school for "Pink Out" games was highlighted during the interview. The stakeholder believed these games were well received by the community.

Suggestions for Komen - The stakeholder reiterated the importance for education and the need of financial assistance beyond insurance coverage. She felt that Komen could help by promoting education and offering financial assistance. Involving local community partners with Komen activities, including churches, was suggested.

Focus Group

Access - Participants in the Toe River Health District focus group discussed cost and lack of comprehensive insurance coverage as barriers to access to services. Despite coverage of basic mammograms, when services beyond mammograms are needed, there is often lack of coverage. Even for those with insurance, high deductibles mean that the cost is still burdensome.

Another barrier to access in this community was a language barrier for the Spanish-speaking subpopulation. Focus group attendees said that translators are frequently unavailable and that the translation hotline was not as useful as a face-to-face discussion.

Transportation was said to not be a problem in this community.

Awareness/Knowledge - There were mixed views regarding the level of knowledge in the community. Focus group attendees noted that the Spanish-speaking subpopulation was less knowledgeable and harder to reach with education. Need for education on breast health was mentioned on several occasions. Education topics discussed included: information on screening, education to increase the value of health in the community, education for the next generation, and education specific to the Spanish-speaking subpopulation. Education opportunities through specific avenues were discussed including: the local radio, a local women's magazine, an ad on grocery store receipts, information inserted into bags given by a food charity, at thrift stores (frequently used in this community), hair salons, and churches.

Again, concern about mammogram recommendations was raised. However, in this focus group the concern about recommendations was more that young women at high risk may not be getting mammograms as early as needed. Participants felt that cases in younger women were increasing. Focus group attendees stressed the importance of detecting the disease early in younger women, as cancer can be more aggressive in this group.

Attitudes/Values - Attitudes regarding breast health in this community include fear of pain, a general low value for health care, and an attitude that there is little value in a mammogram if a positive result is found and additional services are not covered or are too costly. One participant, who worked in the local health department, said she only referred persons for screenings at the hospital on days when a certain individual was working. This participant stated that this individual was gentle with the women and reassured them there would be no pain.

Additionally, the participants felt there was little value in the community for health care in general. The focus group mentioned that community members would spend money on other things before health care or insurance. Also noted, was the fact women value caring for their families more than taking care of themselves. Lack of coverage and high cost of necessary services after a positive mammogram result were discussed. Statements continually surrounded the attitude of a mammogram not being helpful if care was inaccessible thereafter.

Environmental Factors - Participants voiced concern about a high number of cases of cancer (including other forms) in their community, noting specific geographical areas. This was linked to environmental exposures including the presence of mines in the area and use of pesticides on the large number of Christmas trees grown in the community.

Moderators - Poverty was raised throughout the focus group discussion as an overall moderator for themes.

Screening Percentages - To increase screening, participants identified a need to boost referrals from physicians.

One participant stated that reaching a physician's nurse is often easier and more effective than contacting the physician. Participants felt that information delivered through the nurses was sometimes better received and that nurses had more time. Additionally, nurses could remind physicians to discuss breast health with patients.

Treatment - Women needing treatment in this community go to facilities in Watauga County. Transportation was said to not be a problem due to resources such as Avery Transportation. Support programs for women receiving treatment were discussed, including wig programs. However, participants felt that services were lacking for non-medical financial needs during treatment, such as utilities, and a support group. Also discussed was navigation of the process necessary for getting treatment services covered. The process was said to be paperwork heavy and very invasive.

Greene County, Tennessee

Stakeholder Interviews

Five individuals were interviewed in Greene County, Tennessee. These included a certified medical dosemetrist, a retired physician, a health program director, a mammography technologist, and an oncology nurse. The findings are listed below.

Access - Greene County stakeholders indicated a lack of insurance as a reason for locals not accessing screening mammograms. Individuals who do not have insurance mainly accessed health care through emergency room services. As a result, these persons would not be receiving information/education about screening and risk reduction, as one would receive from a primary care physician seen on a regular basis. Additionally, individuals must have a primary care physician to obtain mammogram results. Those who do have insurance or access to health care might not be receiving reminders to get an annual mammogram from a primary care provider. There was concern that this problem was a result of the high number of male physicians in Greene County.

Regardless if an individual had health insurance, money was mentioned as a factor. Stakeholders revealed that many locals had difficulties paying co-pays. If they were able to pay co-pays, these persons were frequently forfeiting other life needs (i.e. food, medications) in order to pay for screening examinations. The consensus was that the region has a poor economy, which contributes to the problem.

Attitudes - Many stakeholders believed that attitudes towards mammography were a contributing factor leading to screening. Women *"dread having them because they are uncomfortable"* while others were fearful of the exam itself. Because some women did not want to face the results, they would avoid screening altogether. As a result, delays in screening can occur in which cancers can grow during the years between exams. Age also plays a role, as younger females may not feel that they are at risk because of their young age.

All Greene County stakeholders felt that community members who were educated on mammograms valued them. Those lacking that education might not be aware of the importance of screening. Stakeholders felt that the information in the media and within the community helps to raise awareness of the value of these exams, but again that a subset of the population might not be exposed to these programs.

Awareness/Knowledge - Awareness of breast health was thought to be high in the region. Multiple programs are available to make individuals aware of breast health, including "Tell Your Mom, Save a Life and More" and "Yes Ma'am." During the month of October multiple events are held in regards to breast cancer. Greene County goes pink in sporting events, throughout local businesses, and more. Extra media is also run throughout the community. In addition, some events are targeted at younger women in hopes to provide life-changing education while encouraging them to educate other women in their lives on breast health.

Stakeholder interviews revealed conflicting views regarding the area of knowledge. Some interviewees believed community member were knowledgeable, while others thought local men and women lacked breast health knowledge. Some interviewees believed more knowledge was needed on how to receive a mammogram and/or how to pay for one. In turn, other stakeholders felt that individuals did not know general information regarding screening, breast health, and/or their need to receive a mammogram. Stakeholders expressed that many community members were confused about screening recommendations, who was considered high risk, and how frequently they needed to have a screening mammogram. Again, some stakeholders believed that community members were aware of recommendations and that knowledge was not an issue. All Greene County stakeholders agreed that women knew where to receive a mammogram, but the process may not be easy to navigate.

Environmental Factors - Only one Greene County stakeholder mentioned environmental factors. This individual was very passionate about how these factors may be impacted the community regarding all cancers. Several local factors were mentioned that may be feeding into the community's local drinking and recreational water sources.

Impact of Breast Cancer - All of the Greene County stakeholders felt that breast cancer deeply impacts the community. Many mentioned the impact breast cancer has on women, while others focused on the disease's impact on males and other family members. Additionally, the emotional impact on health care workers was discussed as these persons work one-on-one with cancer patients, sometimes on a daily basis.

Moderators - Additional moderators mentioned were age, education, and poverty level. These factors contributed to the issues surrounding breast health throughout the region.

Primary Prevention - A large number of stakeholders agreed that diet and exercise remain important keys to prevent all cancers in general. Stakeholders believed lifestyle choices should be taught across a spectrum of areas, including in schools, through primary care providers, and in other health care settings. Additionally, education on breast health and the individual's body in general were mentioned as risk reduction measures. Personal motivation seemed to be a barrier to individuals changing lifestyles. As a result, it was very difficult to help an individual to change.

Programs - Stakeholders mentioned multiple programs in the area, including those at Takoma Regional Hospital, Laughlin Memorial Hospital, and education programs within the school systems. One location had a patient navigator to assist patients moving throughout the health care system, from screening and results to treatment and follow-up. Stakeholders expressed a concern for hospital systems without patient navigation programs, stating that these programs greatly benefit patients navigating the health care system. Although educational programs exist, stakeholders suggested more education programs would be of help.

Screening Percentages/Secondary Prevention - When stakeholders were asked about the screening statistics for Greene County, many expressed that they were not knowledgeable on the rates. When provided with the information, many expressed that financial burden and lack of education were the cause of the low rates. One stakeholder mentioned that health in general was lower in Greene County, with attitudes surrounding health as a possible contributor to not getting a screening mammogram. Again, many stakeholders mentioned that fear and/or discomfort may also steer individuals away from receiving a screening.

With free screening, funded by a Komen Tri-Cities Community Grant, stakeholders stated that 200 mammograms were not enough. One stakeholder revealed that funding often ran out before the year's conclusion, leaving many women unable to receive/afford a mammogram. Interviewees felt that an increase in funding dollars would raise Greene County's mammography rates. In addition, stakeholders believed an increase in support or referrals for mammograms from local providers would benefit screening compliance.

All Greene County stakeholders felt that education would lead to more individuals accessing secondary prevention (mammograms). In addition, stakeholders expressed the importance of educating members of the health care team to recommend and/or mention the need for mammograms. In turn, Greene County stakeholders believed these actions could increase screening. Patient navigators were also mentioned as facilitating a patient's follow through from the primary care office to screening—helping those that might normally fall through the cracks.

Treatment - Most Greene County stakeholders thought that treatment options in the community were good, with one stakeholder stating that treatment offered in Greene County was "state of the art." Stakeholders felt that once a patient was in the system for treatment compliance was good; however occasionally patients would drop out of treatment. Many reasons were discussed regarding why an individual would drop out of treatment, including financial restraints and lack of transportation to and from chemotherapy/radiation treatments.

Focus Group

Access - Access revolved around two main concerns in the Greene County focus group discussion: cost and transportation. Focus group participants believed community members

may not be able to afford a mammogram or may not know how to access free services locally. Participants mentioned that Greene County was very large. As a result, transportation could lead to individuals being unable to access programs within the area.

Attitudes - Participants believed that community members may be fearful of mammograms themselves and the possible exam results. Discussion surrounded how persons may be fearful of pain or discomfort that can occur during a mammogram. Additionally, much conversation ensued regarding the fear of exam results. Participants felt that people may avoid screening mammograms because they are fearful of a cancer diagnosis.

Awareness/Knowledge - The focus group thought there was much awareness in the community regarding breast cancer and where to obtain a mammogram. Participants stated that the local hospitals do advertisements on the importance of screening and provided services. Also, local sports events participating in “pink out” games help raise breast health and breast cancer awareness.

Participants felt that more education programs were needed in the community. Currently, the “Tell Your Mom, Save a Life and More” program teaches high school students about breast health while encouraging them to share this important information with other women in their lives. Although this program is currently running, focus group participants believed that increasing the amount of young women who are knowledgeable on breast health would benefit the community. Concern was raised that men in the community did not have enough education about breast cancer. Participants thought that increasing male knowledge would benefit the community. Local men need to be reminded that breast cancer knows no boundaries and that it may impact someone in their lives. Additionally, men should also be educated that men too can have breast cancer. Focus group participants were confused over the recommendations for screening. As a result, they believed education programs were needed.

Environmental Factors - Focus group participants expressed concern over environmental factors that could be influencing cancer rates in the area. Additionally, that bottled water and other drinks advertised as “healthy” actually could be turning the body into a perfect ground for cancer to develop.

Moderators - Moderators brought up during the focus group discussion were age, family history, genetics, and income level. Participants discussed the need to provide education to an increasing number of younger women. Knowledge of family history and personal genetic makeup were also mentioned in the discussion. With genetic testing, women would be able to know if they were at a higher risk of breast cancer than the general population. Income was spoken of in terms of accessing mammograms, as well as, being able to access healthier lifestyles such as healthy eating.

Primary Prevention - Diet and exercise were mentioned as primary risk reduction measures. There was concern that accessing healthy foods in Greene County is difficult. Participants thought that locals would have to travel to Johnson City (30 minutes to an hour) away to get organic foods. Not using certain types of water bottles was also mentioned as a method to reduce risk of cancer.

Treatment - Participants believed that the majority of breast cancer patient had treatment locally. There was a consensus between participants that treatment resources are a must have for the area. In turn, individuals would not have to commute to larger cities, such as Knoxville, TN, for treatment.

Washington County, Virginia and Bristol City, Virginia

Stakeholder Interviews

Three stakeholder interviews were conducted in the Washington County, VA/Bristol City, VA community. One stakeholder was a radiology technician at a local hospital in Bristol, Virginia, as well as a Komen Tri-Cities grantee. Another was a health director for the Virginia Department of Health. The third stakeholder was a mammographic technologist serving Washington Co. and Bristol City, Virginia.

Access - A major theme emerging from the stakeholder interviews was access; every stakeholder mentioned access as a factor impacting screening in their community. A lack of insurance coverage was thought to be the reason that women in the community might not get screened. Additionally, mobile screening units were mentioned as a way to reach those without insurance, but it was indicated that more funding to do so was needed.

One stakeholder mentioned that insurance coverage could encourage women to get their screenings as they are often required or recommended by the insurance companies. Transportation was also brought up as an access issue as managing the rural terrain of Southwest Virginia. Traveling can be difficult and may take much time to travel to the cancer center. Poverty was also seen as an access issue. Women with little income may delay screening mammograms because of cost. As a result, if cancer was present it could spread thus worsening the outcomes. Stakeholders also believed poverty prevented women from seeing their physician for a mammogram referral.

Alternative Screening Techniques - One stakeholder mentioned that there had been an advertisement in their local paper promoting thermal mammography and claiming that it could find cancer eight to ten years earlier than traditional mammography. This claim was false. The stakeholder's organization had been receiving phone calls about the advertisement raising much concern that local women believed this false claim. This stakeholder expressed a desire for both Komen Tri-Cities and Wellmont Health Systems to help correct this misunderstanding.

Attitudes/Values - Women's attitudes towards breast cancer emerged as a theme during the stakeholder interviews. Denial was mentioned as a reason that women might avoid being screened. One stakeholder stated:

"We see lower screening rates in this community because it's out of sight out of mind, people don't want to know if they have a problem. If they don't know there is a problem, they aren't going to go looking for one, if they don't know about it then it's not real. The moment they have to come back for a follow-up it makes it real."

Fear of the screening procedure was another reason women might avoid their screenings, as many local women had heard that mammograms are painful. As a result, many women avoid screenings.

Stakeholders believed that women in the community value screenings on multiple levels. One possible reason being that many insurance companies mandate screening mammograms as part of annual assessments. Additionally, stakeholders believed value was placed on screenings because of their importance as stressed by survivors. Many local survivors encourage their friends and family to receive their screening mammograms since theirs had been discovered in its early stages.

Awareness/Knowledge - All stakeholders believed that most women in their community are knowledgeable when it comes to mammograms. Even though this is so, stakeholders believe there is still a need for more education. Women may put off screenings due to various reasons while not thinking about the long-term costs of doing so. Concerns were also raised about confusion regarding screening recommendations issued by President Obama's taskforce that claimed that mammograms were not needed until age 50, not needed annually, and not necessary after age 74. The stakeholders felt that many women, and even some physicians, were confused as to what the correct recommendations were. Each stakeholder said they do not follow these recommendations because the earlier a breast cancer is found, the better the outcome.

All stakeholders felt that women in their area are knowledgeable about where to get mammograms, but that more funding is needed to provide services to uninsured women.

Impact of Breast Cancer - Only one stakeholder mentioned the impact of breast cancer on the community. This stakeholder believes that rural Southwest Virginia is disproportionally impacted by numerous health problems, including cancer. This participant mentioned that her region has higher cancer rates than the rest of the state. Another stakeholder mentioned that breast cancer is greatly impacting her community as more women are being diagnosed than ever before. As a result, more women have become aware of the importance of annual mammograms, as they have spoken with others diagnosed in their community.

Moderators - Poverty and income level were mentioned repetitively in the Washington County/Bristol City, VA interviews. One stakeholder felt that poverty causes preventative care to be a low ranking priority for people, as exemplified in the following quote: *"If they don't have enough food or enough money for their light bill then it will be prioritized lower because of other competing needs which can be a problem at times."*

Primary Prevention - A major theme that emerged during the Washington County/Bristol City, VA stakeholder interviews was primary prevention. A high rate of smoking, obesity, and a lack of physical activity in the region were indicated as reasons for negative health outcomes, including elevated cancer rates. One stakeholder stated, *"People don't get timely screening or treatment due to their income and their lifestyle choices put them at higher risk."* It was felt by the majority of stakeholders that in order to help decrease cancer rates in their region that lifestyle changes must be made: smoking rates need to decrease, healthier eating habits must ensue (more fruits and vegetables), and daily exercise must increase. However, while one stakeholder conceded that diet and exercise are great, she did not believe they would decrease local cancer rates. This participant discussed that there are many local women who eat healthy and exercise daily, but are still getting cancer. This indicates a perception that primary prevention, or risk reduction, may not always be effective.

Screening Percentages/Secondary Prevention - Secondary prevention was another major theme emerging from the stakeholder interviews. Each stakeholder felt that one of the most important things that would help to decrease breast cancer in her community would be more screenings and more early detection. Insurance companies offering incentives were discussed, something that encouraged women to get their regular screenings, as well as offering things like spa days along with mammograms.

Some stakeholders stated that higher rates of screening are seen at some organizations while not others. For those with higher rates, cancer is being found earlier thus improving outcomes. Project ABC, a Komen Tri-Cities Community Grant Program, has increased their screenings from 30 in the first year to over 600 currently. However, there might be some issue with doctor and nurse practitioner education regarding patient reminders for annual mammograms. One stakeholder mentioned that this could be a reason for low screening percentages in her area:

> *"I hear people say, 'I told my doctor that it's time for my mammogram because he never mentioned it to me.' We need to make doctors, nurse practitioners, and physician assistants more aware. Maybe this is why the screening rates are down. Maybe there is a lack of education? Yes, screening rates may be down in this area because of a lack of education."*

Poverty was also discussed as another reason that screening percentages might be low; women may not get timely screenings or treatment due to their income of lack of insurance coverage.

Treatment - Washington County/Bristol City, VA stakeholders expressed mixed opinions regarding treatment in the region. Some felt that their particular treatment center was wonderful, even saying, "*I don't know of any improvements that could be made*." Other stakeholders expressed the need of an increase of rural cultural knowledge for providers in some treatment facilities. Additionally, stakeholders expressed the need for increased funding for follow-up appointments as many women travel from five to six hours away for treatments. A need for younger doctors was also expressed, some providers are older and it was felt that there is a need to recruit younger oncologists and radiation oncologists.

Programs - Stakeholders mentioned the success of Project ABC increasing their screening numbers, but concern was expressed regarding the decrease in funding for this program. Slight confusion was expressed regarding how women find out about this program. Every Woman's Life, the Virginia Breast and Cervical Cancer Program, and Tennessee's Breast and Cervical Cancer Program were mentioned as additional resources for women who wouldn't otherwise be able to afford their screenings.

Suggestions for Komen - There was much positive feedback for Komen. All stakeholders felt that the Affiliate's Community Grants program was able to benefit many women. Additionally, interviewees expressed that an increase of grants and funding dollars would be beneficial to the community. Most stakeholders believed more funding was needed for gas cards and transportation because women will not receive treatment or screenings if they do not have transportation. There were also concerns about grant funding decreasing, particularly for Project ABC.

Stakeholders expressed the need for Komen to be more visible in the community throughout the year, not only during the month of October. A need for more education was echoed by all of the stakeholders. While the interviewees believed Komen does a good job with education, they still believe there is opportunity for more. Stakeholders suggested having more information, such as pamphlets, in the community and holding women's days to provide education on breast health, nutrition, and physical activity. Schools or churches were mentioned as good places for these types of events to be located. Providing more education to providers, about recommendations and patient reminders, was also suggested as a great need.

Focus Group

Access - A lack of access was mentioned during the interviews as a barrier to local women receiving screenings and treatment in the community. Gas cards and transportation were mentioned as needs for women receiving cancer treatments who live on the community outskirts. Focus group participants mentioned that women in these areas might live over 40 minutes away from the nearest treatment facility, many who only offer outpatient services.

Awareness/Knowledge - As more cancer diagnosis is being seen in the community, many focus group participants felt that awareness has been increasing. Breast cancer is also being discussed in social clubs and at churches if a woman is diagnosed, thus increasing awareness regarding checkups and mammograms.

Participants mentioned that there is much community support in the area from social groups, churches, and the workplace when a woman receives a breast cancer diagnosis. People in the community aren't afraid to talk about breast cancer like some other communities.

Focus group attendees felt local health care providers need more education regarding screenings; some don't know the difference between screenings and diagnostic mammograms. Participants were concerned that if clinicians were not educated on screenings, then it would be very difficult for lay persons to be knowledgeable on the topic. Additionally, group attendees mentioned the lack of bedside manner seen in physicians in their community. As a result, participants advocated for re-educating clinicians on this topic. Most participants felt that additional education is needed regarding the importance of screenings and preventative care. Discussion also ensued surrounding taskforce guidelines associated with the Affordable Care Act. Many stakeholders believe women are being misled on the correct recommendations.

Attitudes/Values - Prioritizing preventative care was discussed in the focus group. Participants stated that individuals who don't believe screening is important, do not make it a priority. However, participants mentioned that even persons who do value the importance of breast cancer frequently have interruptions in their daily life. As a result, a screening may be delayed, thus making it untimely.

Environmental Factors - Washington County, VA and Bristol City, VA focus group attendees discussed environmental exposures as possible causes of cancer in the community. Antibiotics in chicken were mentioned in interviews, accompanied with the lack of options available for hormone and antibiotic free poultry and meats. One participant, currently undergoing breast cancer treatment, was very concerned with soy consumption. Her family is now soy free, as doctors cannot guarantee that it did not contribute to her cancer. Parabens in shampoo were

also mentioned as possible environmental exposures. Participants agreed that growing one's own vegetables would be a way to prevent certain environmental exposures.

Moderators - Income level was discussed as a moderator. This was thought to be a reason women might not receive preventative care and may not be able to afford to live a healthier lifestyle.

Primary Prevention - The importance of preventative care was mentioned in the focus group. Many participants felt that local women may need more education on this subject. Additionally, the group stated that while many women may want to have a healthier lifestyle, they might not be able to afford organic and natural foods. The lack of healthy food options within the area was also a point of concern. Participants also mentioned that there are women who eat healthy and exercise regularly, but still get breast cancer.

Screening Percentages - Low screening percentages in the region may be due to a lack of education. Focus group participants discussed that some women don't think they need screenings until there is already a problem. There were also concerns that patients are not being reminded or educated about screenings by their physician. The medical professionals from the group mentioned that frequently patients remind their providers it is time for an annual mammogram instead of vice versa.

Treatment - Focus group participants believed the treatment cancers in their community were "top-notch." Those individuals who had received treatment, or knew someone who had, felt that all the necessary information needed was provided locally.

Document Review
Document reviews reveal pertinent qualitative data consistent with current themes, Figure 3, identified from all four target communities. These themes have consistently shown as precursors to receiving a screening mammogram.

Breast cancer, the second leading cause of cancer related deaths in women, has seen a decrease in incidence and death rates over the past decade (Susan G. Komen, 2014). Improvements in screening and treatment have contributed to these positive findings. Despite positive developments, there are still at risk populations and those who may fall out of the continuum of care, when it comes to breast health due to race, location, and socioeconomic standing.

Screening – Receiving a screening mammogram is still the best method for early detection of breast cancer (National Cancer Institute [NCI], 2014). Rahman, Dignan, and Shelton found that personal characteristics were associated in an individual's adherence to mammography screening (Rahman et al., 2003). Older age and a family history of breast cancer were factors leading to higher use of mammogram screening. They also discuss that education level and socioeconomic status affect mammogram attainment. Those with less education and lower socioeconomic status were less likely to get scheduled mammograms (Rahman et al., 2003). A qualitative study by Schoenberg et al., found that knowledge of breast cancer, family history, and personal health habits were facilitators leading to mammogram use among individuals in an Appalachian population (Schoenberg et al., 2009).

Treatment - Treatment options vary depending on the stage and location of the cancer. A qualitative study by Ristevski et al. found that women in rural areas were more likely to obtain complete mastectomies due to the psychological fear of the cancer (Ristevski et al., 2014). Additionally, this study determined that women, who had a more supportive relationship with their physician, were more likely to obtain breast-conserving surgery as opposed to complete mastectomies. Another qualitative study found a main theme of "taking control of cancer" as a woman's reasoning for pursuing the type of treatment, such as mastectomy, which was chosen. Many stated that fear was an underlying emotion that led them to more invasive treatment options. Bowen et al., observed similar themes to accessing treatment, with fear mentioned most frequently (Bowen et al., 2013).

Barriers - Though the rate of breast cancer has decreased since the 1990s, some populations have a harder time accessing screening and treatment (Susan G. Komen, 2014). Bowen et al. also found barriers to treatment and screening in lower socioeconomic populations. This included structural barriers, such as transportation, and cultural barriers in relation to medical speak (Bowen et al., 2013). Research has found that individuals with access to screening through state health plans or personal insurance still may not obtain routine mammograms. A dual method study found that quantitatively, the main reasons for not getting a mammogram when the individual had insurance were previous bad experiences, inconvenient appointment times, and an overall avoidance of thinking of breast cancer (Parkington et al., 2009). This same study completed a qualitative piece to determine what "other" barriers there were outside of what was listed on the quantitative piece. They found that the top issues were: individuals not feeling that mammograms were a priority in their personal lives, a lack of knowledge surrounding mammograms, and issues with their physician/local health system. These studies help clarify that the issue is not one solely based on socioeconomic standing.

Screening Recommendations - Currently, differences in screening recommendations may be confusing for women. The US Preventative Services Taskforce recommends biannual mammograms for women age 50-74 (US Preventative Services Task Force [USPSTF], 2014). The American Cancer Society recommends annual mammograms for women age 40 and over (American Cancer Society [ACS], 2014b). Komen recommends annual mammograms starting at age 40 (Susan G. Komen, 2014b). Wang et al. used a retrospective, interrupted time-series analysis to assess the impact of the USPSTF recommendations. They found that there was a slight decrease in mammography rates among women aged 40-49. They also identified a decrease in screening due to economic setbacks, specifically the recession in 2008 (Wang et al., 2014).

Qualitative Data Findings

Each of the outlined interviews and focus groups provided unique insight into four different community populations. Additionally, a comprehensive document review provided triangulation of data confirming outlined breast health themes. Each community will require individual strategies developed and guided by the community to combat breast cancer incidence, late-stage diagnosis, and death rates. In turn, there are some underlying similarities that emerged from the interviews and focus groups. All participants identified poverty and mixed messaging on screening recommendations as direct influences on breast health in their communities.

Furthermore, participants mentioned rurality, education, and community involvement in the form of lay and health care practitioners (i.e. primary care providers or patient/nurse navigators) as being important in promoting breast cancer screening. Interestingly, these characteristics may be indicative of the Appalachian culture. However, no individual identified Appalachian culture nor linked it with these traits. Perhaps this is because the culture and traits are so inherent in the priority population it is not apparent to them.

Additionally, since poverty was mentioned in all stakeholder and focus groups this may be where the concept of Appalachia is best captured. Poverty was identified as a main moderator in every interview and focus group. Study results provide a description of women living in poverty in the Appalachia region as uneducated, uninsured, and having too many economic problems to value health or preventive screenings. One limitation of this study is that it was not able to extract this construct. In the future, directly asking about what Appalachian culture is and what it means to the population will better reveal this construct.

When evaluating the field notes from interviews and focus groups, it was important to use the conceptual model as a starting point, but several additional themes were identified from the data. A newly revised conceptual model can be found in Figure 4.2. Changes to the conceptual model are outlined and include identifying poverty as an overarching moderator. Also, a reorganization of attitudes, values and importance along with awareness and knowledge help to better thematically represent the findings. Additionally, the stakeholder interviews, Table 4.1. Summary of stakeholder interview findings by priority area, identified a wealth of knowledge around treatment and alternative screening methods that were not captured in the original model. The communities assessed help to expand on the continuum of breast health and not just the precursors to screening.

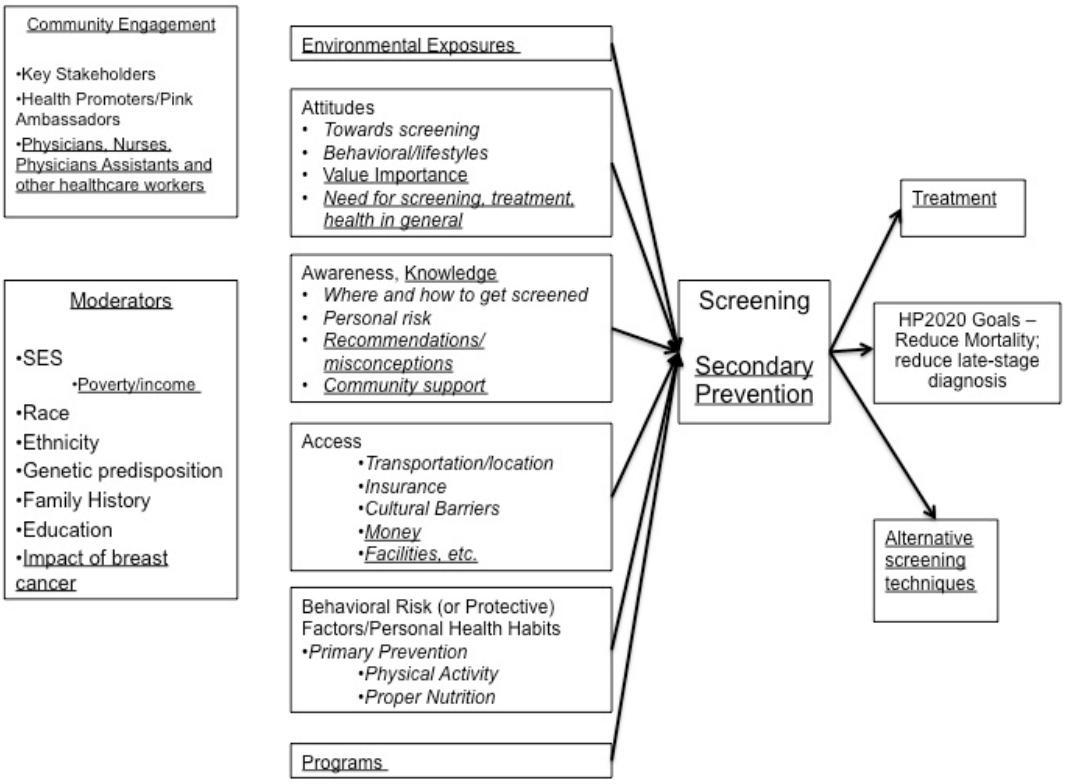

Figure 4.2. Conceptual Model (Updated)

Table 4.1. Summary of stakeholder interview findings by priority area

	Greene Co, TN	Toe River Health District, NC	Ashe Co, NC	Washington Co, VA
Access	• Poverty • Lack of Insurance • Primary Care Providers (PCPs) needed to read results • PCPs may not push (possible gender issue) • Economy	• Poverty • Access to follow-up	• Poverty • Lack of insurance • Time • Rural • Availability of services	• Poverty • Lack of insurance • Mobile screening • Transportation - topography
Alternative Screening Techniques				• Need for counter education
Attitudes	• Mammograms Uncomfortable • Fear of Results • Young women feel they are not a risk		• Cultural barrier/modesty issue: cancer not discussed	
Awareness/ Knowledge	• Mixed messaging on recommendations • Awareness programs in place • Conflicting views • Process not easy to navigate	• Mixed messaging on recommendations	• Mixed messaging on recommendations • Learning from other women	• Mixed messaging on recommendations • Long term cost of putting off screening
Impact of Breast Cancer				• Disproportionately Affected
Environmental Factors	• Concern of factory pollution •			
Moderators	• Poverty • Education • Age	• Poverty • Education	• Poverty • Rurality	• Poverty
Primary Prevention	• Lifestyle education needed broadly • Doesn't always prevent. • Education on breast health • Personal motivation	• SES differences in diet and exercise	• Know your breasts	• High rates of smoking, obesity, and lack of exercise
Programs	• Through hospital and schools • Patient navigators			• Concern about funding decrease
Screening Percentages	• Need for increase in physician referrals • Financial burden • Education • Fear/ discomfort	• Low rates • Difficult to reach some audiences	• Lack of knowledge and awareness	• Providers reminders • Insurance incentives • Poverty • Lack of insurance
Treatment	• Overall good • Finances • Transportation			• Community competence in system navigation • Need for younger providers

Interestingly, attitudes were only mentioned by two communities, and included cultural barriers and fear. However, attitudes are inherently connected with awareness and knowledge of which each community raised concern regarding the mixed messaging on screening recommendations. Additionally, this lack of knowledge and awareness influences actual screening percentages. Some populations identified impact of breast cancer more strongly than others, citing that their population was disproportionately affected. Other communities raised concern regarding environmental factors. Two communities addressed current programs and treatment options thus providing information on how their communities access screening and treatment. A need for these services was also stated. Again, an underlying topic from all the

communities was poverty, but several communities also identified education as a main concern. Overall, the communities identified many similarities, with the interviews providing much needed detail to facilitate targeting campaigns to address breast health and accomplish the Healthy People 2020 goals of decreased death rates and late-stage diagnosis.

The focus groups major themes are summarized in Table 4.2, Summary of focus group findings by priority area. There were several themes that appeared in both the stakeholder interviews and focus groups. These included: poverty, lack of insurance, money, health not being a priority/having other priorities more pressing than health, lack of education, and mixed messaging for recommendations. However, the focus groups highlighted many more concerns regarding environmental factors. The focus groups identified cost and transportation as concerns for access to screening and treatment.

Table 4.2. Summary of focus group findings by priority area

	Greene Co, TN	Washington Co, VA	Toe River Health District, NC
Access	• Cost • Transportation	• Rural • Gas cards	• Cost • Lack of insurance • Language barrier for Spanish-speaking population
Attitudes	• Fear • Pain/ discomfort	• Prioritizing preventative care	• Pain • Lack of value for health care • Screening not helpful if after services not accessible
Awareness/ knowledge	• Mixed messaging on recommendations • Good advertisements • “Pink out” sporting events • Need to educate men	• Mixed messaging on recommendations • Through social clubs and churches • High level of support for those diagnosed • Education needed	• Recommendations may detour young high-risk women from screening • Education needed
Environmental Factors	• Concern that “healthy” things might not be	• Antibiotics in chicken • Soy consumption • Parabens	• Pesticides • Mines
Moderators	• Poverty • Age • Genetics	• Poverty	• Poverty
Primary Prevention	• Healthy food harder to access in area • Avoidance of certain types of water bottles	• Expensive to buy healthier foods • People with healthy lifestyles still get cancer	
Screening Percentages		• Education • Provider reminders	• Provider referrals needed • Nurses that work in physician offices may be good resource
Treatment	• Need for local treatment resources	• “top-notch”	• Need for support services

There were attitudes mentioned in focus groups and the document review, including: fear, pain, and a lack of prioritizing preventative care. Interestingly, focus groups in one county identified positive comments regarding community-focused messaging (i.e. ads and “Pink Out” sporting events). However, they also identified a need to educate certain groups of people, specifically men. In Virginia, participants suggested using community organizations including social clubs

and churches, which had also been mentioned in stakeholder interviews in rural North Carolina as a messaging medium.

A rather profound point identified in both interviews and focus groups regarding primary prevention was that healthy people still get cancer. As such, primary prevention methods may not resonate as well with that individual and potentially with the community. However, multiple communities identified environmental exposures as a concern for possible causes of all forms of cancer. Addressing environmental exposures as a means of risk reduction through education may be a necessity. Treatment in the two focus group areas was a mixed bag. One community felt strongly that their treatment was great. However, the other community, Greene Co., identified a need for local treatment resources and expressed concern that individuals had to travel for treatment. All in all, the focus groups provided some further validation of important themes identified in stakeholder interviews, and provided more depth and context around additional themes.

Strengths of this study are the self-identified themes from the communities. However, some communities may be better represented than others. Three communities completed focus groups while one did not. This was a result of inclement weather and timing of the assessment. Data collection occurred in the fall directly before the holidays. As a result, scheduling conflicts occurred. Additionally, it was difficult to identify key stakeholders in the North Carolina communities because of staffing turnover, specifically in regards to the breast and cervical cancer screening personnel in the Toe River Health District.

Also as identified by one stakeholder, rural communities can be quite difficult for outsiders to access, as well as difficult to travel to. The organizations that were represented through the stakeholders may be understaffed, compounding the difficulties in getting out in the community with a message promoting breast health. It is difficult for individuals to take time out of their busy schedules to discuss a topic they may not be comfortable discussing with perceived outsiders. Furthermore, the physical distance from the Affiliate headquarters is of concern. It takes over an hour each way to travel to these regions through mountainous terrain. It has been difficult for both stakeholders and the Community Profile Team to find mutually agreed upon times to work in the communities.

The Community Profile Team focused on health care providers, staff, and Affiliated individuals for stakeholder interviews while trying to recruit lay individuals for the focus groups. This provided, in theory, a more robust look at breast health in the regions. However, one focus group in particular was health care heavy and had few lay individuals. One suggestion for follow-up to this study is to continue to try to involve and recruit lay individuals in each of the priority populations to provide their insights and feedback. The results show a very different feel between the stakeholder interviews and focus groups. Stakeholders spoke at length about access concerns and underlying moderators including poverty, age, and education. While these were also identified in the focus groups, there was a unique perspective regarding environmental factors (i.e. exposures that were more prolific in the focus groups).

Recommendations - Education should occur throughout the target communities in the following areas: screening recommendations, general breast health, risk reduction of breast cancer, attitudinal barriers including fear of screening and pain associated with screening, and primary care provider education to increase reminders and referrals for screening. Additional

recommendations include support of health care system navigation in the form of patient or nurse navigators and community liaisons.

Additionally, a consistent educational message should be developed for pilot within the communities. A clearer communication of one screening message could benefit these populations. Building relationships and capacity in these communities will continue to be important. Fortunately, the communities have provided entry points in terms of their suggestions for the Affiliate. General breast health education will need to include targeting messages to younger audiences. Increasing awareness of general health will increase the value of breast health practices. One specific message that may resonate with these priority populations is that taking care of themselves (via mammography) is taking care of their families. This message may help to address concerns the working poor face and help to change the value placed on health by women in this region.

Hearing from women in their community about how a mammography screening works may help to alleviate attitudinal barriers. Community members addressed the importance of messages delivered from within the community. Health leaders should be utilized in each community to help deliver educational messages. An additional task for lay health leaders could also be to address concerns communities have regarding accessing and navigating the health care system. Participants identified barriers throughout the process from the time a women accesses her primary care physician to follow-up treatment. Therefore, patients may not have high health literacy and could benefit from patient navigators or nurse navigators, basically an individual responsible for helping to guide a new patient through the system for treatment. Increasing a primary care provider's knowledge and ability to promote breast health screenings among their patient populations is a necessity. Additionally, the Affiliate should continually advocate for incorporation of breast health education into standard health care through efforts such as continuing education for primary care providers.

An additional area for education is environmental exposures leading to cancer. Community members raised environmental exposure concerns in several interviews and focus groups. Providing education focused on environmental exposures and cancer risk may prove to be beneficial. Additionally, education could address some misconceptions about environmental exposures (i.e. BPA free water bottles). Another appropriate message may be that while community environments play a role in health, lifestyle and health care choices are important and more within an individual's control. Acknowledging concerns about environmental exposures remains important.

Overall, the Affiliate should focus on increasing breast health education in the targeted communities while easing the process of breast health navigation (i.e. screening and treatment processes) through community liaisons and navigators. Komen Tri-Cities can act as a support for accomplishing these areas through the Community Grants Program. The Qualitative Analysis has provided insight into the targeted communities. The Affiliate should work with these communities to facilitate grant application development with the target areas of education and breast health navigation in mind.

Additionally, the results of the qualitative assessment have provided Komen Tri-Cities a wealth of information and community suggestions for future programming and breast health initiatives. These findings are summarized in Table 4.3. Summary of suggestions for Komen. Most of the

communities call for better engagement of their own community members in breast health. Another suggestion would be disseminating the completed Community Profile to community partners, specifically in light of the community recommendations. In conclusion, the objectives of the qualitative assessment have been met. The next step will include a Mission Action Plan for the Affiliate. Relationships between the Affiliate, lay individuals, and health care professionals will be essential.

Table 4.3. Summary of suggestions for Komen

Greene Co, TN	Toe River Health District, NC	Ash Co, NC	Washington Co, VA
• Patient navigator • Increased Funding • More awareness of grants • Education • Education to PCPs to promote screening • Transportation/Gas cards	• Increased Funding • Education • Programs through churches	• Community liaison • Patient Navigator	• Increase grants • Education • Educating providers • Gas cards • Programs through schools and churches • Visibility year-round

Breast Health and Breast Cancer Findings of the Target Communities

In order to be effective stewards of resources, Susan G. Komen® Tri-Cities chose four communities for the application of mission-focused strategic efforts for the next four years. These target communities have vulnerable populations that are most likely at increased risk for experiencing gaps in breast health services and/or experiencing barriers in access to health care.

To select the communities, the Affiliate began by examining Healthy People 2020, a major Federal Government initiative providing health objectives for communities and the United States in its entirety. From this document, the Affiliate referenced two important, overarching goals regarding breast health for the United States: (1) to reduce women's death rate from breast cancer; (2) to reduce the number of breast cancers that are found at a late-stage. By reviewing these aims, priority communities were established based on the number of years needed to achieve the HP 2020 goals in relation to breast cancer.

Additional key quantitative indicators used to by the Affiliate when selecting target communities included, but were not limited to:

- Incidence rates and trends
- Death rates and trends
- Below average screening percentages
- Residents living below poverty level
- Residents living without health insurance
- Unemployment percentages
- Medically underserved percentages
- Access to services
- Under/uninsured percentages

As determined from HP 2020 and other quantitative data, the following communities were selected for targeted strategic efforts:

- Ashe County, North Carolina
- Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina
- Greene County, Tennessee
- Washington County and Bristol City, Virginia

The Health Systems and Public Policy Analysis provided insight into current legislature, as well as information regarding the availability of community breast health resources.

Ashe County, North Carolina, was determined to have three outlets for breast health services. While residents are able to access free/low-cost services, receive clinical breast exams (CBEs), breast health screenings, and diagnostics in Ashe County, treatment and surgical procedures are not offered. As a result, patients must travel to another community to receive these services.

Avery, Mitchell, and Yancey Counties—the Toe River Health District—have more breast health services available than Ashe County. Currently, there are seven organizations providing breast

health services in the District. Residents are offered patient navigation, screening, diagnosis, and outpatient chemotherapy options. Unfortunately, patients in need of specialized treatment must travel outside of the county to areas such as Asheville, NC.

Greene County, Tennessee, is well adept to handle breast health care with four facilities offering breast health resources. The county houses a comprehensive Center for Women's Health, an American Radiology Breast Imaging Center of Excellence, and a Breast Imaging Center of Excellence. Services offered encompass the entire continuum of care, including: clinical breast exams (CBEs), screening mammograms, diagnostic mammograms, ultrasounds, financial assistance, and more. If more complex treatments and surgeries are needed, residents can travel to neighboring communities, such as Knoxville, Kingsport, and/or Johnson City, TN, for additional services.

Washington County and Bristol City, Virginia have an array of breast health resources available for residents. Currently there are 12 health care organizations servicing the community. The area is home to a comprehensive women's breast center and a cancer center that is American College of Surgeons accredited and deemed a Breast Imaging Center of Excellence. The community offers services along the entire continuum of care from screening and/or diagnosis to survivorship or end of life care. Additionally, one facility has extended evening and weekend hours to better serve patients. Although there are many resources in the area, only one of the 12 facilities offers chemotherapy options.

Investigation of breast cancer public policy topics provided valuable information. In March of 2010 President Barack Obama signed into law the Patient Protection and Affordable Care Act, also known as the Affordable Care Act (ACA). This law, in conjunction with the Health Care and Education Reconciliation Act of 2010, represents the greatest overhaul of the United States health care system since 1965 (Focus on Health Reform, 2013 and Patient Protection, 2014). The ACA works to keep health care costs low, to lower the number of uninsured Americans, and to provide states the resources and flexibility to tailor health care for state needs (Fact Sheet, 2014).

Initially, the ACA was established at the federal level to institute coverage provisions across income ranges. State Medicaid expansion, declared optional for states in June 2012, was foreseen as the medium to cover low-income, working adults. As of April 2015, North Carolina, Tennessee, and Virginia had voted not to expand Medicaid. As a result, many individuals in all three states fall into an insurance coverage gap. These individuals make too much money to qualify for Medicaid, yet not enough to receive tax credits for the Health Insurance Marketplace.

At this time, the implications of the Affordable Care Act on breast health, providers, and state breast and cervical programs remains unknown. In recent months, state Breast and Cervical Cancer Screen Program employees have expressed concern regarding coverage of diagnostic mammograms under the ACA. Only time will provide an accurate assessment of the ACA's impact. A better evaluation will be provided as residents from each state enroll in the Health Insurance Marketplace and/or gain coverage through Medicaid.

Komen Tri-Cities is focusing on the Healthy People 2020 goals of reducing death rates and late-stage diagnosis of breast cancer throughout its territory. To address these goals in the four target communities, screening practices, attitudes, knowledge, and beliefs were investigated

through a qualitative assessment. Together with six identified precursors, including: attitudes toward, knowledge of, behavioral factors, access to, awareness of, and value of screening, these constructs were studied to see how they functioned in the priority communities. Moderating these themes included socioeconomic status (SES), race/ethnicity, genetic predisposition, family history, and education. Additionally, the Appalachian culture served as an overarching moderating factor and precursor to screening.

Through stakeholder interviews and focus groups unique insight was provided into the four different community populations. To improve breast cancer incidence, late-stage diagnosis, and death rates, each community will require tailored strategies developed and guided by the community. Although unique strategies must ensue, some underlying similarities emerged as direct influences on breast health, including: poverty, mixed messaging on screening recommendations, rurality, education, and community involvement of lay and health care practitioners.

In regards to the qualitative assessment, additional insight occurred. Access to health care was frequently mentioned as a barrier to local women receiving screenings and treatment in the communities. Another concern centered on education. Many persons believed health care providers need more education regarding screening recommendations, guidelines, and the differences between screening and diagnostic mammograms. In addition, data revealed that more education should be provided to community members regarding correct screening recommendations. Cultural barriers and the fear of cancer were also discussed. Several themes consistently occurred in the stakeholder interviews and focus groups. These include: poverty, lack of insurance, money, health not being a priority/having other priorities more pressing than health, lack of education, and mixed messaging. Summaries of stakeholder interview findings by priority area and focus group findings by priority area may be found in Tables 4.1 and 4.2, of the Qualitative Analysis section, respectively.

Mission Action Plan

After completing Quantitative, Health Policy/Health System, and Qualitative analyses, the Affiliate assessed the main problems and barriers to breast health for the following priority communities: (1) Ashe County, North Carolina; (2) Avery, Mitchell, and Yancey Counties (Toe River Health District), North Carolina; (3) Greene County, Tennessee; and (4) Washington County & Bristol City, Virginia. As a result of revealed problems and barriers, the Affiliate has assimilated a four-year Mission Action Plan, as outlined below, to address identified issues in each individual community.

Ashe County

Problem: Ashe County is unlikely to meet the HP 2020 goal for late-stage incidence of breast cancer. The health system analysis showed the county is 100 percent medically underserved with no breast surgery or treatment options. Additionally, the state did not expand Medicaid coverage under the ACA. The qualitative analysis indicated that poverty related issues and lack of breast health education/knowledge impact screening percentages.

> ***Priority 1:*** Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments in Ashe County.

Objective 1: By November of each year (2015-2018) conduct an annual grant-writing workshop in Ashe County discussing the current Community Profile and released Community Grant Request for Application (RFA) that also includes information on how to incorporate best practices and evidence-based programs into their projects.

Objective 2: By November of each year (2015-2018), disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP provider, and/or nonprofit servicing breast health care in Ashe County.

Objective 3: By August of 2016, develop a Small Grants program with an objective focused on providing necessary funds for Ashe County residents with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in neighboring communities.

Priority 2: Partner with community-based organizations and health departments through the "I am Carolina PINK" program to spread consistent breast health education messages and promote available services for Ashe County residents.

Objective 1: By August 2015, provide the Ashe County Health Department with one "Susan G. Komen Breast Health On-the-Go Kit" containing Komen educational materials and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2*:* Collaborate with the Ashe County Health Department's NCBCCP employees to develop a six-month running public service announcement in FY2016 and FY2017, delivered by a local physician or survivor via the radio, with consistent breast health education messaging to educate Ashe County residents.

Objective 3*:* By December of 2016, Komen Tri-Cities will have performed a minimum of six breast health education events to increase breast health knowledge and move residents towards sharing information and/or receiving breast health services in Ashe County.

Objective 4: By December of 2016, Komen Tri-Cities will have organized two Community Komen Event(s) to increase breast health awareness and perpetuate education and community events in Ashe County.

Objective 5*:* By FY2019, Komen Tri-Cities will have recruited two "Pink Ambassadors" from Ashe County who are trained volunteers willing to represent Komen professionally and maintain community breast health awareness and perpetuate education and community events.

Priority 3: Increase local provider understanding of breast cancer screening recommendations and Susan G. Komen education messages and knowledge of various referral processes to better navigate their patients through the continuum of care in Ashe County.

> ***Objective 1:*** Using evidence-based programming, hold at least one program in Ashe County in FY2016 and FY2018 with continuing medical education credits to educate providers about the most current breast health recommendations, resources available in the community, and other evidence-based programs that would increase the community's screening percentages.

Priority 4*:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

> ***Objective 1:*** In FY2016, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the North Carolina Breast and Cervical Cancer Control Program's agenda for the state.
>
> ***Objective 2:*** By December 2016, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

> ***Objective 1:*** In FY2016, develop a strong relationship with state Affiliates and hold an initial conference call to determine Affiliate roles to develop a five-year plan to advocate Susan G. Komen policy efforts forward at the state level.
>
> ***Objective 2:*** From FY2016 through FY2019, annually participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCCP funding.
>
> ***Objective 3:*** From FY2016 through FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Avery, Mitchell, and Yancey Counties (Toe River Health District)

Problem: Avery, Mitchell, and Yancey Counties—known as the Toe River Health District—are unlikely to meet the HP 2020 target for late-stage incidence of breast cancer. There is not enough data available to predict the likelihood of the community reaching the HP 2020 target breast cancer death rate. The health system analysis revealed the community is 100 percent underserved with only one facility having a Women's Imaging Center and a Comprehensive Cancer Center. Patients seeking specialized care treatment must travel to neighboring areas

such as Asheville, NC. The qualitative analysis revealed that poverty related issues and lack of breast health education/knowledge impact screening percentages.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments for residents in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Objective 1: By August of each year (2015-2018), revise the Community Grant RFA by evaluating the ACA's effect on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer screening, diagnostic, treatment, and/or supportive services for residents of Avery, Mitchell, and Yancey Counties (Toe River Health District).

Objective 2*:* By November of each year (2015-2018), disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP providers, and/or nonprofit servicing breast health care in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Objective 3: By November of each year (2015-2018), conduct an annual grant-writing workshop discussing the current Community Profile and released RFA that also includes information on how to incorporate Best Practices and Evidence-Based Programs into their projects.

Objective 4*:* By August of 2016, develop a Small Grants program with the objective of providing necessary funds for Avery, Mitchell, and Yancey County (Toe River Health District) residents with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in neighboring communities.

Priority 2: Partner with local churches, community-based organizations, and health departments through the "I am Carolina PINK" program to spread consistent breast health education messages and promote available services for Avery, Mitchell, and Yancey County (Toe River Health District) residents.

Objective 1: By August 2015, provide the Avery, Mitchell, and Yancey County (Toe River Health District) health departments with one "Susan G. Komen Breast Health On-the-Go Kits" containing Komen educational materials (English and Spanish) and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2*:* By August of 2015 and 2016 collaborate with Avery, Mitchell, and Yancey County (Toe River Health District) NCBCCP employees to develop a six-month running Public Service Announcement, delivered by a local physician, survivor, or health educator via the radio, with consistent breast health education messaging and information about available local resources to educate area residents.

Objective 3*:* By FY2019, Komen Tri-Cities will have gained 12 (two per county) "Pink Ambassadors" from Avery, Mitchell, and Yancey Counties (Toe River Health District) who are trained volunteers willing to represent Komen professionally and maintain community breast health awareness and perpetuate education and community events.

Objective 4*:* By December 2016, Komen Tri-Cities will have performed a minimum of nine breast health education events in Avery, Mitchell, and Yancey Counties (Toe River Health District) to increase breast health knowledge and move residents towards sharing information and/or receiving breast health services.

Objective 5: By December 2016, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in Avery, Mitchell, and Yancey Counties (Toe River Health District) by contacting local outlets for use by both the Affiliate and medical outlets to better assist patients who are in financial need.

Priority 3: Increase local provider understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and Susan G. Komen education messages supported by Susan G. Komen accompanied with knowledge of various referral processes to better navigate patients through the continuum of care.

Objective 1: In FY2016 and FY2018, using evidence-based programming, hold at least one program in Avery, Mitchell, and Yancey Counties (Toe River Health District) with continuing medical education credits to educate providers about the most current breast health recommendations, cultural sensitivity, resources available in the community, and other evidence-based programs that would increase their patients' screening percentages.

Objective 2*:* In FY2015 and FY2016, Komen Tri-Cities will work through the "I am Carolina PINK" program to provide culturally appropriate English and Spanish Susan G. Komen breast health educational materials to at least three local providers and breast health service outlets in Avery, Mitchell, and Yancey Counties (Toe River Health District).

Priority 4*:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

Objective 1: In FY2016, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the North Carolina Breast and Cervical Cancer Control Program's agenda for the state.

Objective 2: By FY2016, identify and train at least two key volunteers and/or Board Members from Avery, Mitchell, and Yancey Counties (Toe River Health District) to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

Objective 1: In FY2016, develop a strong relationship with state Affiliates and an initial conference call to determine Affiliate roles and develop a five-year plan to push Susan G. Komen policy efforts forward at the state level.

Objective 2: In FY2016 through FY2019, annually participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCP funding.

Objective 3: In FY2016 through FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Greene County

Problem: Greene County is unlikely to meet the HP 2020 targets for both late-stage incidence of breast cancer and the female breast cancer death rate. The quantitative analysis showed that 74.3 percent of the population is medically underserved with a need to improve screening programs and provide socioeconomic relief. The health system analysis revealed the community is well equipped to handle breast health services with services encompassing the entire continuum of care. If more complex treatments are warranted residents must travel to neighboring communities (i.e. Johnson City, TN; Knoxville, TN; etc.). The qualitative analysis showed that socioeconomic issues, lack of breast health education/knowledge, and the large service area of Greene County impact screening percentages.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments for Greene County residents.

Objective 1: By August of each year (2015-2018), revise the RFA by evaluating the ACA's impacted on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer screening, diagnostic, treatment, and/or supportive services among the priority population groups and target geographic areas identified in the Community Profile for residents of Greene County.

Objective 2*:* By November of each year (2015-2018), annually disseminate the released RFA calling for Community Health Grant applicants to every health department, NCBCCP provider, and/or nonprofit servicing breast health care in Greene County.

Objective 3: By November of each year (2015-2018), conduct an annual grant-writing workshop in Greene County discussing the current Community Profile and released RFA that also includes information on how to incorporate best practices and evidence-based programs into their projects.

Objective 4*:* By August 2016, develop a Small Grants program with the objective of providing necessary funds for Greene County individuals with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in the community or neighboring communities.

Priority 2: Partner with local community-based organizations, health departments, long-standing breast health programs, and local providers to provide Susan G. Komen approved breast health education messages and draw awareness to available services for Greene County residents.

Objective 1: By May of 2016, stock the Greene County Health Department with one "Susan G. Komen Breast Health On-the-Go Kit" containing Komen education materials and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2: In FY2017, set up one meeting with local breast health personnel to develop a plan, method, and means to establish consistent breast health messages targeting men and women that will be focused on screening recommendations and breast health information to be permeated throughout the community.

Objective 3*:* By FY2019, Komen Tri-Cities will have recruited two "Pink Ambassadors" from the Greene County community who are trained volunteers willing to represent Komen professionally, maintain community breast health awareness, perpetuate education and community events, and combat negative attitudes towards mammography/breast health.

Objective 4*:* In FY2015 through FY2018, Komen Tri-Cities will annually collaborate with local Komen volunteers, Greene County "Pink Ambassadors," and/or Komen staff to attend two high school events where young women are targeted to receive vital breast health education messaging and appropriate materials.

Objective 5: By FY2017, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in Greene County by contacting local outlets for use by both the Affiliate and medical personnel to better assist patients who are in financial need.

Priority 3: Increase local provider and health care team understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and Susan G. Komen education messages and information about various referral processes to better navigate patients through the continuum of care.

> ***Objective 1:*** In FY2016 and FY2018, using evidence-based programming, hold one program in Greene County with continuing medical education credits to educate providers about the most current breast health recommendations, local attitudes towards breast health, resources available in the community, and other evidence-based programs that would increase their patients' screening percentages.
>
> ***Objective 2****:* In FY2016 through FY2019, Komen Tri-Cities will collaborate with local breast health workers to provide culturally appropriate, targeted breast health education materials to local providers and breast health service outlets in Greene County.

Priority 4*: D*evelop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

> ***Objective 1:*** In FY2017, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with the Tennessee Breast and Cervical Cancer Early Detection Program's agenda for the state.
>
> ***Objective 2:*** By FY2017, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

> ***Objective 1:*** In FY2017, develop a strong relationship with state Affiliates and an plan an initial conference call with Affiliates to determine roles and develop a five-year plan to push Susan G. Komen policy efforts forward at the state level.
>
> ***Objective 2:*** In FY2017 through FY2019, participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state BCCP funding.
>
> ***Objective 3:*** In FY2017 through FY2019, work in collaboration with other Affiliates to contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

Washington County and Bristol City, Virginia

Problem: The Washington County and Bristol City, Virginia community is unlikely to meet the HP 2020 targets for both late-stage incidence of breast cancer and the female breast cancer death rate. The quantitative analysis revealed the area is 100 percent medically underserved with incidence rates, late-stage rates, and death rates revealing breast cancer may not be diagnosed in its early stages and/or residents may be experiencing barriers to screening mammograms and/or treatment. The health system analysis illustrated that the community has a plethora of breast health resources encompassing the entire continuum of care. The qualitative analysis illustrated the impact of poverty on breast health and the need for education of both providers and laypersons.

Priority 1: Increase grantmaking opportunities in the community to cover costs associated with breast health care and transportation to and from associated appointments.

Objective 1: By August of each year (2015-2018) revise the RFA by evaluating the ACA's impact on breast care, emerging health care changes, and by giving priority to grant programs that use innovative or evidence-based approaches that result in documented linkages to breast cancer screening, diagnostic, treatment, and/or supportive services among the priority population groups and target geographic areas identified in the Community Profile.

Objective 2*:* By November of each year (2015-2018) disseminate the released RFA calling for Community Health Grant applicants to every health department, EWL provider, and/or nonprofit servicing breast health care in the community.

Objective 3: By November of each year (2015-2018) conduct an annual grant-writing workshop discussing the current Community Profile and released RFA that also includes information on how to incorporate Best Practices and Evidence-Based Programs into their projects.

Objective 4*:* By August of 2016, develop a Small Grants program with one objective providing necessary funds for individuals with predetermined financial and/or transportation constraints that are receiving and/or seeking breast health services in the community or neighboring communities.

Priority 2: Partner with local community-based organizations, health departments, long-standing breast health programs, and local providers to provide Susan G. Komen approved breast health education messages and draw awareness to available services for Washington County and Bristol City, Virginia residents.

Objective 1: By May of 2016, stock the Washington County and Bristol City health departments with one "Susan G. Komen Breast Health On-the-Go Kit" containing culturally relevant Komen education materials to be disseminated and a Komen breast health information display to better educate country residents on breast health issues.

Objective 2: In FY2017 set up one meeting with local breast health personnel to develop a plan, method, and means to establish consistent breast health messaging clarifying current screening recommendations and health education messages that will be permeated throughout the community.

Objective 3*:* By FY2019, Komen Tri-Cities will have recruited three "Pink Ambassadors" from the Washington County/Bristol City, VA community who are trained volunteers willing to represent Komen professionally, maintain community breast health awareness, perpetuate education and community events.

Objective 4: By FY2017, Komen Tri-Cities will have developed a comprehensive listing of non-medical financial resources available in the community by contacting local outlets for use by both the Affiliate and medical personnel to better assist patients who are in financial need.

Priority 3: Increase local provider understanding of the importance of culturally appropriate/tailored breast health messaging and Susan G. Komen breast cancer screening recommendations and education messages accompanied with knowledge of various referral processes to better navigate patients through the continuum of care.

Objective 1: In FY2016 and FY2018 us with evidence-based programming, hold one program with continuing medical education credits to educate providers about the most current breast health recommendations, local barriers towards breast health, resources available in the community, and other evidence-based programs that would increase their patients' screening percentages.

Objective 2*:* In FY2016 through FY2018 Komen Tri-Cities will collaborate with local breast health workers to provide culturally appropriate, targeted breast health education materials to local providers and breast health service outlets in the community to disseminate for education purposes.

Priority 4*:* Develop and utilize partnerships to enhance Affiliate public policy efforts in order to improve breast health outcomes of women in the Affiliate service area.

Objective 1: In FY2018, partner with at least one other Komen Affiliate within the state, one Cancer Alliance, and stay current with Every Woman's Life's (EWL) agenda for the state.

Objective 2: In FY2018, identify and train at least two key volunteers and/or Board Members to serve on the public policy committee to carry out the majority of the public policy efforts of the Affiliate as outlined by Susan G. Komen Headquarters.

Priority 5: Increase state legislators' education and understanding of breast health issues.

Objective 1*:* In FY2018, develop a strong relationship with state Affiliates and an initial conference call to determine Affiliate roles and develop a five-year plan to push Susan G. Komen® policy efforts forward at the state level.

Objective 2*:* In FY2018 and FY2019, participate in quarterly conference calls to discuss joint public policy efforts and any pending breast cancer legislation, including advocating for maintaining state EWL funding.

Objective 3*:* In FY2018 and FY2019, in collaboration with other Affiliates, contact state legislatures bi-annually via a scheduled meeting, mailing, and/or phone call to increase Komen's visibility as a trusted local resource on breast cancer.

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Appendices

Appendix A. National, State and Local Websites

1. American College of Radiology Centers of Excellence: http://www.acr.org/Quality-Safety/Accreditation/Accredited-Facility-Search
2. American College of Surgeons Commission on Cancer: http://datalinks.facs.org/cpm/CPMApprovedHospitals_Search.htm
3. American College of Surgeons National Accreditation Program for Breast Centers (NAPBC): http://napbc-breast.org/resources/find.html
4. Area Health Education Centers (AHEC): http:www.nationalahec.org/AHECDirectory.taf
5. Cancer Control P.L.A.N.E.T.: http://cancercontrolplanet.cancer.gov/
6. Community Health Centers: http://findahealthceter.hrsa.gov/Search_HCC.aspx
7. Hospitals: https://data.medicare.gov/Hospital-Compare/Hospital-General-Information/v287-28n3
8. Local Health Departments: http://naccho.org/about/lhd/
9. Mammography Centers: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfMQSA/mqsa.cfm
10. National Association Schools of Public Health: http://asph.org
11. National Cancer Institute – Clinical Trials: http://www.cancer.gov/clinicaltrials/
12. North Carolina Cancer Control Plan: http://cancercontrolplanet.cancer.gov/state_plans/North_Carolina_Cancer_Control_Plan.pdf
13. North Carolina Public Health Association: https://ncpa.org
14. Rural Policy Research Institute (RUPRI): http://rupri.org
15. Tennessee Public Health Association: https://tnpublichealth.org
16. Tennessee State Comprehensive Cancer Control Plans: https://health.state.tn.us/CCCP/TN_Cancer_Coalition_State_Plan_2013-2017.pdf
17. The Links, Inc.: http://www.linksinc.org/
18. Virginia Public Health Association: https://vapha.org
19. Virginia State Comprehensive Cancer Control Plans: http://www.kidscancerfight.org/state-cancer-plans/Virginia_Cancer_Control_Plan.pdf

Appendix B. Stakeholder Interview Guide

Guide for Stakeholder Interviews
Introduction:

Hello, my name is _____. I am assisting the Tri-Cities Affiliate of Susan G. Komen in assessing where there may be barriers to or gaps in breast health services in your area. The findings that emerge from this interview will be used to set priorities and inform the efforts of the Tri-Cities Affiliate, such as where to target their granting efforts, as well as help us build community relationships, learn about programs taking place in your community, and address outreach and policy needs.

We need to state a few things to let you know that this interview is voluntary:

Your knowledge is valuable and the Affiliate appreciates you making yourself available for an interview. The interview will take about 20-30 minutes. Your participation in the interview is voluntary and you may choose not to participate in the interview at any time. Whether or not you choose to participate will in no way impact your relationship with the Affiliate and the services they provide. If you do not want to answer some of the questions, you do not have to. I will be taking notes during our conversation and while we use the findings from the interviews, the interviews themselves are confidential. Do you have any questions?

- **Ask for verbal consent:** Do you agree to participate in this study knowing that you can withdraw at any point with no consequences to you? (Document date and time)

If you have any questions during the interview, please feel free to ask them at any time.

Questions:

1. How do you feel breast cancer is affecting the community that you serve?
2. Why do you think this community has lower screening rates than other areas?
    a. Probe: Can you tell me more about why you think your screening rates are lower?
    b. Additional Probe: Are there any other reasons you can think of for why your screening rates are lower?
3. Are the women in your community knowledgeable about mammograms?
    a. Do they know the recommendations….
    b. Do they know where to get mammograms?
        i. Probe: Is the process easy to navigate?
4. Do you feel that women in your community think screening is important?
    a. Probe: Can you explain why you believe the community thinks it is important?
5. What do you think would be the biggest benefit to this community in regards to breast cancer?

a. What about in regards to primary prevention?

    i. Probe: What about as diet or exercise. .

b. What about in regards to being screened?

    i. Probe: What is needed to encourage screening?

c. What about in regards to treatment?

    i. Probe: What would benefit your community most in regards to treating breast cancer?

d. What suggestions do you have for Komen in serving your community and improving breast health – /or reducing breast cancer?

6. Is there anything you would like to add that we did not discuss?
7. Focus group? Help, date, time, place… in November --- next three weeks or earlier.

Closing:

Thank you very much for your time. Your knowledge and insights will be very helpful in assisting the Tri Cities Affiliate of Susan G. Komen identify gaps and unmet needs in the breast health services community. I'd like to send you a copy of my notes for you to review and approve that way if there is anything else you think of or would like to expand more on you can.

Thank you again for your assistance.

Moderator Guide for Focus Groups
Introduction:

Hello, my name is _____ and this is _____. We are assisting the Tri-Cities Affiliate of Susan G. Komen in assessing where there may be barriers to or gaps in breast health services in your area. The findings that emerge from this discussion will be used to set priorities and inform the efforts of the Tri-Cties Affiliate, such as where to target their granting efforts, as well as help us build community relationships, learn about programs taking place in your community, and address outreach and policy needs.

We need to state a few things to let you know that this interview is voluntary:

Your knowledge is valuable and the Affiliate appreciates you taking the time to be here. The discussion will take about an hour. Your participation in the discussion is voluntary and you may choose not to participate at any time. Whether or not you choose to participate will in no way impact your relationship with the Affiliate and the services they provide. If you do not want to answer some of the questions, you do not have to. My colleague will be taking notes during our conversation and while we use the findings, the discussion themselves are confidential. Do you have any questions?

- **Ask for verbal consent:** Do you agree to participate in this study knowing that you can withdraw at any point with no consequences to you? (Document date and time)

If you have any questions during the discussion, please feel free to ask them at any time.

Questions:

1. I'd like us to take a few minutes to introduce ourselves, maybe tell us how long you've lived here and a bit about yourself.
    a. Why did you come today?
2. How would you say breast cancer is affecting your community?
    a. What parts of the community does it affect? (i.e., schools, families, churches, etc…)
    b. Do you have any stories you could share?
    c. Do you know people who have breast cancer? What was it like for them?
3. Do the women in your community know where to get mammograms? Can you tell me more about this?
    a. Probe: Is the process easy to navigate? What about it makes it easy or difficult?
4. Do you feel breast cancer screening is important for women in your community?
    a. Probe: Can you explain why you think women in your community do or don't believe it is important?

Pay attention for barriers, beliefs, attitudes, educational issues.

5. What do you think would decrease breast cancer the most in your community?
    a. What about diet and exercise?
    b. What things do you think would breast cancer in the first place?
    c. What about environmental exposures?
    d. What is needed to encourage screening in your community?
        i. What do you mean by that (education)?
    e. What about treatment in your community?
        i. Probe: What would benefit your community most in regards to treating breast cancer?
6. What suggestions do you have for Komen in serving your community and reducing breast cancer?
    a. Listen and probe for
        i. Education – what kind, how, where, when….
        ii. Increasing Screening, what, how, when, where
        iii. Programs, same what, how, when, where
        iv. Methods ….Approaches – things they have heard in maybe other counties that have help increase screening, or reduce barriers.
7. Is there anything you would like to add that we did not discuss?

Closing:

Thank you very much for your time. Your knowledge and insights will be very helpful in assisting the Tri Cities Affiliate of Susan G. Komen identify gaps and unmet needs in the breast health services community. If you are interested in continuing to work with us, we are planning on continuing the conversation around breast health next year. We'd love to have your input. Please leave us a way to contact you. Thanks again for all your help. It will really change the way we are able to work with you all.