



COMMUNITY PROFILE REPORT

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ACKNOWLEDGEMENTS

The Central Valley Affiliate of Susan G. Komen for the Cure® sincerely appreciates all of the time and effort that our community partners, agencies, members, and key individuals have offered to help provide the vast array of data and service information that is included in this document.

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*We dedicate this Community Profile Report to the memory of
Carolyn Montez Jorgensen.*

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PROLOGUE

Susan G. Komen for the Cure® recommends a 4-step approach to Breast Self-Awareness that includes, depending upon a woman's age, a combination of mammography, clinical breast exams and breast self-exams and learning about your family history.

- **Know your risk by learning about your family health history and talking to your health care provider about your own personal risk.**
- **Ask your doctor which screening tests are right for you if you are at a higher risk. Have a mammogram every year starting at age 40 if you are at average risk. Have a clinical breast exam at least every 3 years starting at age 20, and every year starting at age 40.**
- **Know how your breasts look and feel and report any changes to your health care provider right away.**
- **Make healthy lifestyle choices that may reduce your risk of breast cancer.**

Women with a family history of breast cancer or other concerns about their personal risk should consult with a health care provider. Screening tests may need to be done more often and/or started earlier than usual.

A woman's risk of developing breast cancer depends on several factors, some of which are related to her natural hormones. Hormonal factors that increase the risk of breast cancer include conditions that may allow high levels of hormones to persist for long periods of time, such as beginning menstruation at an early age (before age 12), experiencing menopause at a late age (after age 55), having a first child after age 30, and not having children at all.

As part of a total approach to breast health, it is also important that women become familiar with their own bodies, play an active role in their own health, and develop a close partnership with their health care providers.

For more information, please visit www.komencentralvalley.org.

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EXECUTIVE SUMMARY

Introduction

The Central Valley Affiliate of Susan G. Komen for the Cure was incorporated in 1999. The same year, a local breast cancer survivor named Carolyn Jorgensen brought the Susan G. Komen Race for the Cure to the City of Fresno. She recognized the importance of educating local women and raising funds for education, screening and treatment. The Affiliate serves Fresno County, California. Since 1999, the Central Valley Affiliate has seen a presence of dedicated women and men in pursuit of the Komen 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. Jorgensen remained a dedicated and selfless volunteer for the Central Valley Affiliate until she lost her battle to a breast cancer recurrence in August 2007.

Through events like the Susan G. Komen Central Valley Race for the Cure®, the Central Valley Affiliate has invested over \$2.3 million dollars in local breast health and breast cancer awareness projects in Fresno County. Up to 75% of all funds generated by the Komen Central Valley Affiliate stay in the Fresno County while the remaining income goes to the Susan G. Komen for the Cure Award and Research Grant Programs supporting research, awards, and educational and scientific programs around the world. In 2010, Komen Central Valley partnered with Jason Bush, Ph.D, Department of Biology California State University, Fresno, Paul Mills, Ph.D, M.P.H of University of California, San Francisco, to conduct a community needs assessment of Fresno County. Obtained was current data on breast cancer incidence, mortality and screening rates by region and the State of California.

Demographic and Breast Cancer Statistics Overview

Methodology – Community Profile data was collected from a variety of federal, state and local resources and includes key informant interviews and organizational profiles representing the wealth of racial and socio-economic diversity of the greater Fresno area. Availability of current statistics varies depending on source but all sources contain the latest data to show maximal changes with respect to the 2009 Profile Report. Local expert partners, a cancer researcher, and an epidemiologist, were contracted to assist the Community Profile Team with evaluation and interpretation of the available data. The following sources of demographic data and indicators were used:

- US Census Bureau (updated to 2010)
- Bureau of Labor Statistics
- State of California Department of Finance
- Fresno County Chamber of Commerce
- California Department of Public Health, Cancer Surveillance & Research Branch (CSRB)
- California Health Interview Survey (CHIS)
- USDA Economic Research Service (ERS)
- National Cancer Institute Surveillance, Epidemiology, and End Results (SEER) Program
- CDC Prevention, Behavioral Risk Factor Surveillance System (BRFSS)
- American Cancer Society (ACS) statistics
- SGK Thomson-Reuters datapacks

Key Findings

Fresno County's population was estimated at 953,761 in 2010 Census (U.S. Census Bureau), with expected growth to reach 1,015,000 by 2014. Fresno County continues to grow (the Central Valley is one of the fastest growing regions in California) with a 15-25% change from 2000-2010 (the current state average is 7.9% but projected to be 11.5% by 2010 and 17.8% by 2030). Within the population, an estimated 16.5% (down from 16.89% in 1998) live in rural Fresno County settings. The average County resident is between the ages of 25-44 years (27%), compared to 24% between the ages of 45-64 years and 9.9% age 65 and over. At present, 49.6% (446,077) of the total population is female (down from 50.4% in 1990). In California, the largest population change will be in the 65+ years with a staggering projection +130.5% from 2000-2030. Overall factors contributing to the uniqueness of Fresno County with respect to breast cancer are identified (*Table 1*).

Table 1. Fundamental factors contributing to breast cancer incidence & mortality in Fresno County.

Issues facing our Community	Ramifications for Breast Cancer
Positive	
Relative youthful population	Breast cancer is age-dependent; a younger population base indicates overall less cancer
Large Hispanic/Latino population	Hispanic communities typically have lower breast cancer incidence indicating that a larger population base with reduce overall incidence
Negative	
High % of population with low education	Less education correlates with lower-paying, less-consistent employment
High unemployment (17.2%)	Agriculture sector are subject to seasonal fluctuations and less-consistent employment
Concentrated poverty (21.5%)	Impoverished communities have fewer opportunities for health insurance and less resource for health-related expenses

The better news for Fresno County is that overall the death rate is falling across all demographics and that rate is below the average U.S. rate (Table 5; California State Cancer Profiles, 2008). The average 5-year survival is similar across all groups as shown in Figure 4 when compared by stage at diagnosis (except Non-Hispanic Black women). With an overall prevalence of 2540 women in Fresno County with breast cancer in 2011, there will be an estimated 500 new cases of breast cancer diagnosed (including *in situ*) and nearly 100 deaths. Our mission is to reduce these numbers.

The findings suggest that women of all races with household incomes below the Federal Poverty Level (FPL) are less likely to get screened (see *Figure 6*). As income increases, so does the likelihood of recent mammograms, a trend also seen with age. However, we find that a significant percentage of women exceeding >200% FPL in Fresno County have never had a mammogram. This could be due to state the eligibility requirements for free screening by the California Cancer Detection Programs - an annual household income < 200% FPL is required. **For those women just above this value, options for mammography screening are limited.** Furthermore, there seems

to be a disproportionately higher number of women in Fresno County without insurance that have never received a mammogram (compare white bars, Figure 6).

Programs and Services Overview

Methodology – The Central Valley program and services assessment included the collection and mapping of provider and key organizational inventory data. Mapping via GoogleMaps™ was used to assess spatial distribution and spatial relationships of statistical data, providers and partners. The Fresno County asset map includes information for the service area hospitals and clinics, cancer centers, Komen grantees and organizations such as hospices, academic institutions, libraries, and various non-profit organizations as these entities represent potential partners and entry into the communities. The mapping process also informed decisions related to selection of providers for further data collection.

Key Findings

Analyses of the program and services revealed an inequitable geographic distribution of breast cancer services in the County. Apart from the City of Fresno, the entire County is federally designated a primary care health professional shortage area. In fact, the entire West County region is designated as medically underserved. However, the presence of various non-profit and for profit organizations offers partnership opportunities.

With only one Breast and Cervical Cancer Early Detection Program (BCCEDP) mammography program for the County located directly in Fresno and serving nine counties of the Central Valley, additional steps are being taken by the California Health Collaborative to meet unfulfilled screening needs. Through their collaborations and partnerships they provide transportation to individuals living in outlying areas, or who otherwise lack the ability to get themselves to a medical facility. Fortunately, other clinics are available, such as the Women's Imaging Specialists in Healthcare, Tower Family Health Center, and Advanced Medical Imaging. There are untapped opportunities to provide BSE education in alternate settings besides physician offices and health care institutions (e.g. fitness clubs, churches, etc.), and it will continue to be a priority to identify and act upon those opportunities. Increasing access to diagnostic and treatment services within the county will positively impact the survival rates of the population. Encouraging the use of second opinions and developing strategies to improve access to care in general will also facilitate the desired outcome. Education also can play a part to encourage women to see their health care provider early to help reduce the number of late stage diagnoses.

Exploratory Data Overview

Methodology – This 2011 Community Profile includes quantitative and qualitative data collected using the following methods:

- Key informant surveys: We conducted interviews with key informants in the affiliate service area of Fresno County following 3 methods:
 - Self-administered online surveys (n = 377 survey respondents)
 - Interviewer-administered surveys (n = 55 survey respondents)
 - Telephone provider surveys (n = 16 survey respondents)
- Review of programs and services via internet research and interviews
- Review of secondary data
 - U.S. Census data
 - Cancer morbidity and mortality statistics
 - Behavioral risk factor data
 - National Cancer Institute (NCI) cluster profiles (N/A)
 - Review of published guides
- Data analysis: For the purposes of the demographic data or breast cancer statistics from public and governmental sources, results are reported as is and those that are not statistically significant are indicated. For the purposes of the survey data, basic statistical analyses (including χ^2 *goodness-of-fit*, and relevance at $p < 0.05$ or 95% Confidence interval (CI)) were applied and where statistically unstable, labeled as such. In most instances, county and group data were compared with each other or with overall data for the affiliate service area.

Key Findings

The synthesized information from key informant and provider surveys can help identify populations in greatest need of breast health services, focus resources to be responsive to unmet breast health needs, and identify strategic partners in the local fight against breast cancer.

Regarding Insurance Coverage:

- While a moderate number of organizations reported serving underinsured/uninsured populations, only 40% of respondents reporting serving low-income or ‘working-poor’ populations. This population was identified by several key informants as a group that may be falling through the cracks as many do not qualify for state or federal programs because they exceed the 200% FPL criterion and can’t otherwise afford the medical expense.

Regarding Screening and Reporting:

- Having medical insurance does not guarantee coverage of mammograms (~10% of insurance programs do not cover mammograms). Screening mammography remains the best tool for early detection. As appears from this data, there is still a need for increased screening services and education given the fact that non-English speakers are not getting annual exams.

- Disappointingly, and despite many resources, the available population data for women receiving screening services of any sort are underreported and irregular. Having access to a more centralized and current database would be beneficial.

Regarding Perceptions and Knowledge:

- For the many minority groups, lack of services for monolingual residents was identified as a major barrier to access and this could be compounding the predominant fear associated with anticipated pain of procedure or positive diagnosis for breast cancer.
- Non-English speakers are less likely to have heard of Susan G. Komen for the Cure®, solidifying our commitment to better engage these demographics with multilingual tools.
- There are also misperceptions concerning terms associated with screening. For instance, there is often confusion regarding family history of breast cancer versus susceptibility, and the phrase 'clinical breast exam' versus mammogram, which may be contributing to the lack of routine annual mammography and/or follow-up.

Regarding Education and Accessible Information:

- We found it very informative that respondents viewed health events, presentations, and particularly television as critical marketing tools for breast health education.
- Based on the key informants, when women have heard of Susan G. Komen for the Cure®, they are twice as likely to have had mammograms and screening procedures further emphasizing our need to market the brand.
- Increased marketing and support for local and regional emotional support groups is critical for recently diagnosed women to navigate the health care system.
- From our provider surveys, there is a dismal lack of knowledge concerning available clinical trials. Currently, there are 17 clinical trials within a 100-mile radius of Fresno and women are not getting this information from the Affiliate or the educational materials at the numerous clinics and hospitals.

Regarding Research and Collaborations:

- Since the 2009 Community Profile Report, there have been crucial developments and movements within the breast cancer research field in our region - specifically with California State University, Fresno, and UCSF-Fresno. A number of new researchers and research teams have coalesced with projects and proposals that are particular to Central Valley and worth investing in the form of grant support.

Narrative of Affiliate Priorities and Action Plan

The Community Profile Team derived strong input from its expert partners who are experienced breast cancer researchers with vested interests in their community as it relates to breast health and breast cancer. The Board of Directors shares their passion and agrees with their rankings of priorities for Fresno County. In further considering the statistical data, the asset map, information from the surveys, and building on the 2009 Profile Report, our goals over the next few years will be to better distribute resources beyond the centralized region of the County into rural/remote communities.

Priority 1: Increase access and availability of breast health and breast cancer screening services within the county by funding health system partnerships.

Priority 2: Partner with community organizations to effectively promote awareness of breast health education and services with an emphasis on bridging the cultural and linguistic divide by providing culturally sensitive education and outreach to specific communities, and education and outreach in native languages.

Priority populations include (in no particular order): African American/Black, Hispanic/Latina, Native American, and Asian/Hmong women.

Priority 3: Streamline and codify the grants submission and auditing processes.

Priority 4: Increase Komen visibility and awareness to be recognized in the community as *the* leader in the breast cancer movement.

INTRODUCTION

Affiliate History

Since its incorporation in 1999, the Central Valley has seen a presence of dedicated women and men in pursuit of Komen's promise to save lives and end breast cancer forever. Carolyn Montez Jorgensen, a breast cancer survivor, brought the first Susan G. Komen Race for the Cure® to the greater Fresno community in 1999. Carolyn continued to serve as a dedicated and selfless volunteer for the Central Valley Affiliate until she lost her battle to a breast cancer in 2007.

Through events like the Race for the Cure®, the Central Valley Affiliate has invested over \$2.3 million dollars in local breast health and breast cancer awareness projects in Fresno County. Up to 75% of all funds generated by the Komen Central Valley Affiliate stay in Fresno County while the remaining income goes to the Susan G. Komen for the Cure Award and Research Grant Programs supporting research, awards and educational and scientific programs around the world.

Organizational Structure

The Affiliate Board of Directors is committed to enhancing the public standing of the Affiliate by:

- Serving as ambassadors and advocates in the community;
- Ensuring a healthy and accurate public image;
- Designating spokespersons and sending them to Affiliate Media Training; and,
- Taking every opportunity to inform the public about the Komen organization.

The Affiliate Board of Directors consists of volunteer board members with delegated and specific job descriptions outlining general responsibilities of the position, as well as duties as an officer or committee member (See *Figure 1*).

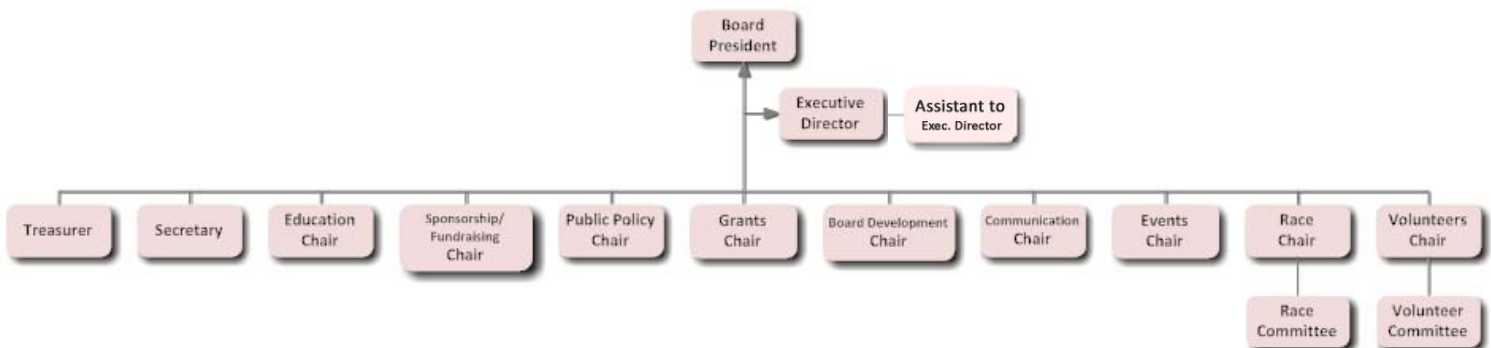


Figure 1. Organizational structure of the Board of Directors for the Central Valley Affiliate.

When the Central Valley Affiliate's activities became more complex and diverse, hiring an Executive Director was necessary to complete the organizational structure. The Central Valley Affiliate hired an Executive Director in 2006 and a part-time Administrative Assistant was hired in 2010.

Description of Service Area

Komen Affiliates are charged with furthering the promise of Susan G. Komen for the Cure® in a specific service area. A service area is the specific geographic region, as defined in the Affiliation Agreement, where the Affiliate conducts its programs, activities, fundraising, grants and operations. Affiliates are required to conduct these activities exclusively within the boundaries of the service area, taking care to cover the entire service area.

Fresno County is in the center of the expansive San Joaquin Valley in the Central Valley of California. The city is the cultural and economic center of the Fresno-Clovis metropolitan area. The county seat is Fresno. As of 2010, it is the tenth most populous county in California with an estimated population of 953,761^[1], and the sixth largest in size with an area of 6,017.4 square miles. Fresno is the second largest inland city in the state, after San Jose. Fresno city has an estimated population of 505,479 as of January 2010, making it the fifth-largest city in California (See *Figure 2*).

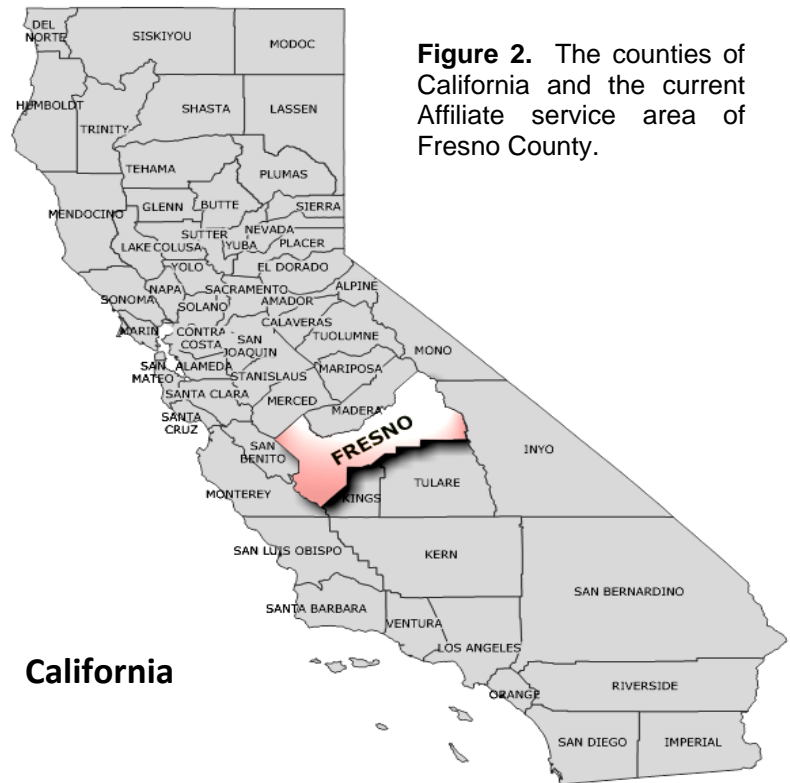


Figure 2. The counties of California and the current Affiliate service area of Fresno County.

Purpose of the Report

The purpose of the Community Profile is to provide a thorough needs assessment of breast health services in the Affiliate service area so we can understand the populations to be served, the access, the location and the barriers to services and any other gaps that might be evident. This report identifies the gaps that will then be prioritized in the order the Central Valley Affiliate determines most important based on its mission.

How the Profile is used within the Affiliate – The identified gaps and program priorities derived from the Community Profile will be used as part of the Central Valley Affiliate’s Strategic Plan to determine funding priorities of Komen programs through education and outreach strategies, the grants selection process, and many other events and projects during the next few years. These programs will inject close to \$1 million in the coming years to address many of the key breast health needs in the service area. While this is a significant investment, we recognize that needs continue to exceed the available resources. For this reason, our funding priorities are directed toward people who are most underserved and vulnerable, and for whom without assistance, appropriate breast health services would be difficult to achieve.

BREAST CANCER IMPACT IN AFFILIATE SERVICE AREA

Methodology

Community Profile data was collected from a variety of federal, state and local resources and includes key informant interviews and organizational profiles representing the wealth of racial and socio-economic diversity of the greater Fresno area. Demographic data was based upon U.S. Census Bureau (2010), Bureau of Labor Statistics (2010), State of California Department of Finance (2010), Fresno County Chamber of Commerce (2009), California Department of Public Health (2010), California Health Interview Survey (2008-2010, data-dependent), National Cancer Institute Surveillance, Epidemiology, and End Results (SEER, 2010) Program and the Centers for Disease Control (CDC), Behavioral Risk Factor Surveillance System (BRFSS, 2010), American Cancer Society (ACS, 2010) statistics, and SGK Thomson-Reuters (2010 datapack) which are in various stages of update but all contain data no earlier than 2008 in order to show changes with respect to the previous 2009 Profile Report. An expert cancer researcher and epidemiologist with the California Cancer Registry were contracted for assistance and evaluation of the available data.

This section details our process and the limitations of the data. In short, we often had statistically sound data with acceptable sample sizes and confidence intervals. In some other cases where noted, the data was either statistically unstable or not available (No Data hereinafter referred to as “ND”) due to small sample size and only general trends could be statistically inferred. Despite these constraints, we are confident the data, subsequent analyses by our experts, and the overall team knowledge support the findings and accurately identify gaps/needs in our service area.

Overview of the Affiliate Service Area

Breast cancer is the most common cancer among women in California, regardless of race/ethnicity, with an estimated 23,640 new cases for 2011. The 5-year survival rate is exceptionally high, over 98%, when breast cancer is diagnosed early and if confined to the breast when discovered (defined as local or *in situ*). Fortunately, breast cancer incidence in California has essentially stabilized since 1988 and breast cancer mortality has declined by more than 29% due to the combined effects of better treatment and earlier diagnosis.

While this is very good news for California women, breast cancer incidence rates may begin to rise in the next decade as the population over 65 years dramatically increases. This group of women may be at higher risk of breast cancer than their mothers due to earlier menarche, smaller family size, delayed childbearing, and other factors. This effect may already be seen in women of Asian/Pacific Islander ancestry as the breast cancer incidence rate among this group of women has increased by 18% since 1988.

The better news for Fresno County is that overall the death rate is falling across all demographics and that rate is below the average U.S. rate (See *Table 2*; California State Cancer Profiles, 2008). In fact, Fresno was one of only a handful of counties that actually met the National Health Promotion and Disease Prevention Healthy People 2010 objectives. The average 5-year survival is similar across all groups as shown in

Figure 3 when compared by stage at diagnosis except notably for Non-Hispanic Black women with regional disease (involving lymph nodes near the breast) where survival was 78.9% versus an average 85.4 ± 1.5% for other races/ethnicities combined. This is consistent with national trends indicating that Non-Hispanic Black women with early-stage breast cancer have lower survival rates [1].

Table 2. Breast Cancer Incidence and Mortality Rates for Fresno County compared to State and National levels.

	Average Age	Breast Cancer Prevalence	Annual Incidence Rate (<i>In Situ</i>)	Annual Incidence Rate (Invasive)	Annual Death Rate	Rate period
Fresno	57.9	2,528	25.8	110.6	22.0*	2003-07
California	58.2	83,836	27.5	121.0	22.8	2003-07
US	59.1	691,507	29.5	120.6	24.0	2003-07

Source: State Cancer Profiles (NCI, 2008); Age-Adjusted Rates/100,000 for All ages.

*Note – This value met the Healthy People 2010 objective of < 22.3.

5-Yr Breast Cancer Survival in Fresno County

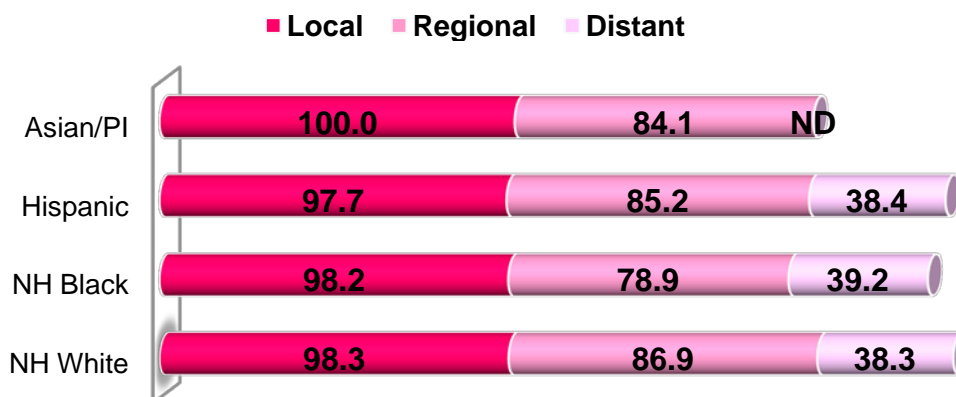


Figure 3. The percent 5-Yr survival from time of diagnosis in Fresno County females segregated by race/ethnicity and stage of breast cancer diagnosis. Data is based on the 2000-2005 rate. Source: California Cancer Registry, 2009; ND = No Data

The differences in stage at diagnosis contribute in large part to the racial difference in breast cancer survival. African American women tend to be diagnosed with more advanced cases when breast cancer is not as easily treated, and thus, chances for survival are lower [1]. In Figure 4, breast cancer incidence by stage is depicted for our community. When comparing Stage I versus Stages II-IV for Non-Hispanic Black women to other demographics, it becomes clear that more Black women are diagnosed with later stage disease. Barriers to accessing quality care and health insurance make it more likely that women of some ethnic groups and those with low income will be diagnosed at more advanced stages [1]. Efforts to improve breast cancer screening rates among African American women by addressing the barriers to screening will help improve breast cancer survival.

Breast Cancer Incidence by Ethnicity/Race and Stage

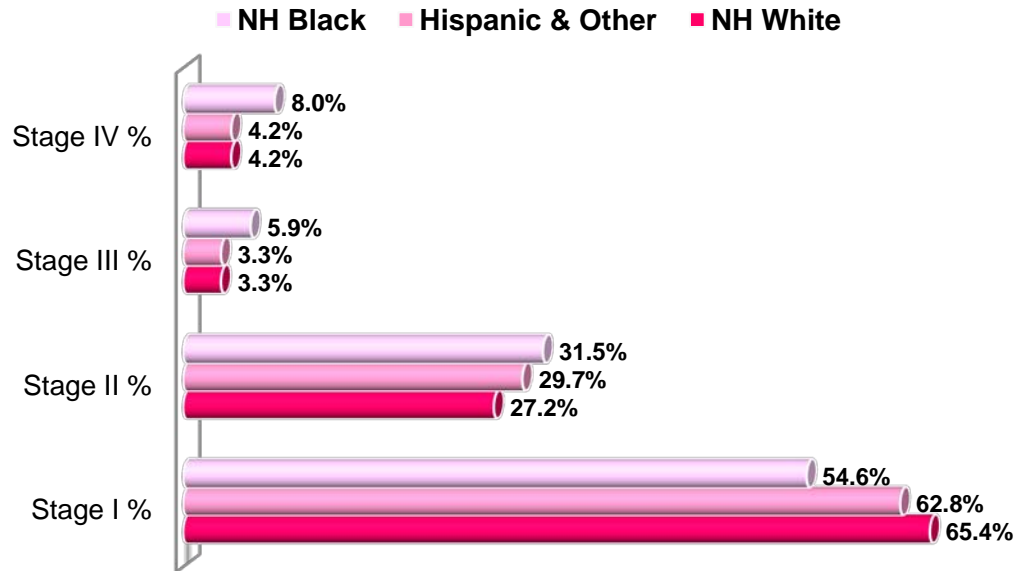


Figure 4. Breast Cancer incidence rate by Ethnicity/Race and Stage in Fresno County.
Source: SGK Thomson-Reuters Datapack, 2009. *Note – Hispanic, Asian/PI, American Indian combined

In 2011, an estimated 500 new cases of breast cancer (*in situ* and invasive) will occur in within Fresno County and nearly 100 deaths. Fortunately, the Fresno County mortality rate is lower than the state and national average across ethnicity/race. However, the mortality rate is alarmingly high for Hispanic females below age 50, where we see a significantly higher and uncharacteristic death rate (See Figure 5).

Age-Adjusted Death Rates for California, 2003 - 2007

Breast Hispanic (any race), Female, Ages <50

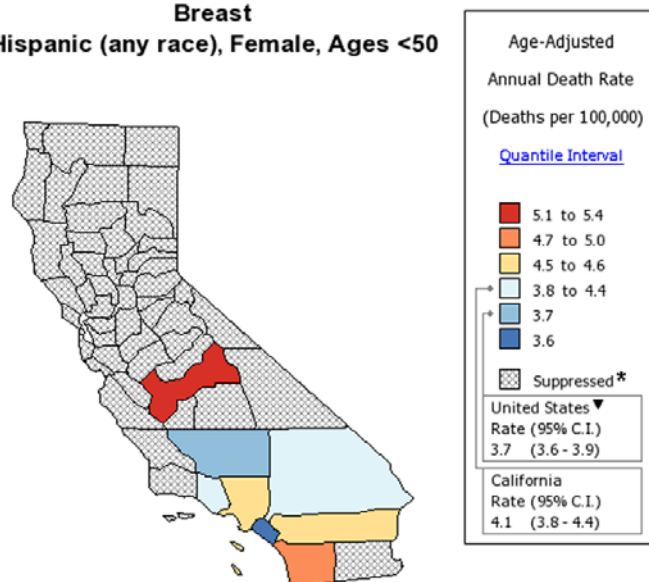


Figure 5. Age-adjusted breast cancer mortality for Hispanic females below 50 yrs in California.
Source: State Cancer Profiles, 2003-2007.

Concentrated poverty is an issue that plagues our region. This leads to reduced healthcare opportunities for the predominant ethnic groups, thus increasing risk of breast cancer. In other words, poor women are less likely to have accessible resources for screening (mammography), diagnosis, and treatment. Therefore, we wanted to numerically evaluate the screening history and correlate the data with income level and insurance in Fresno County (See *Figure 6*).

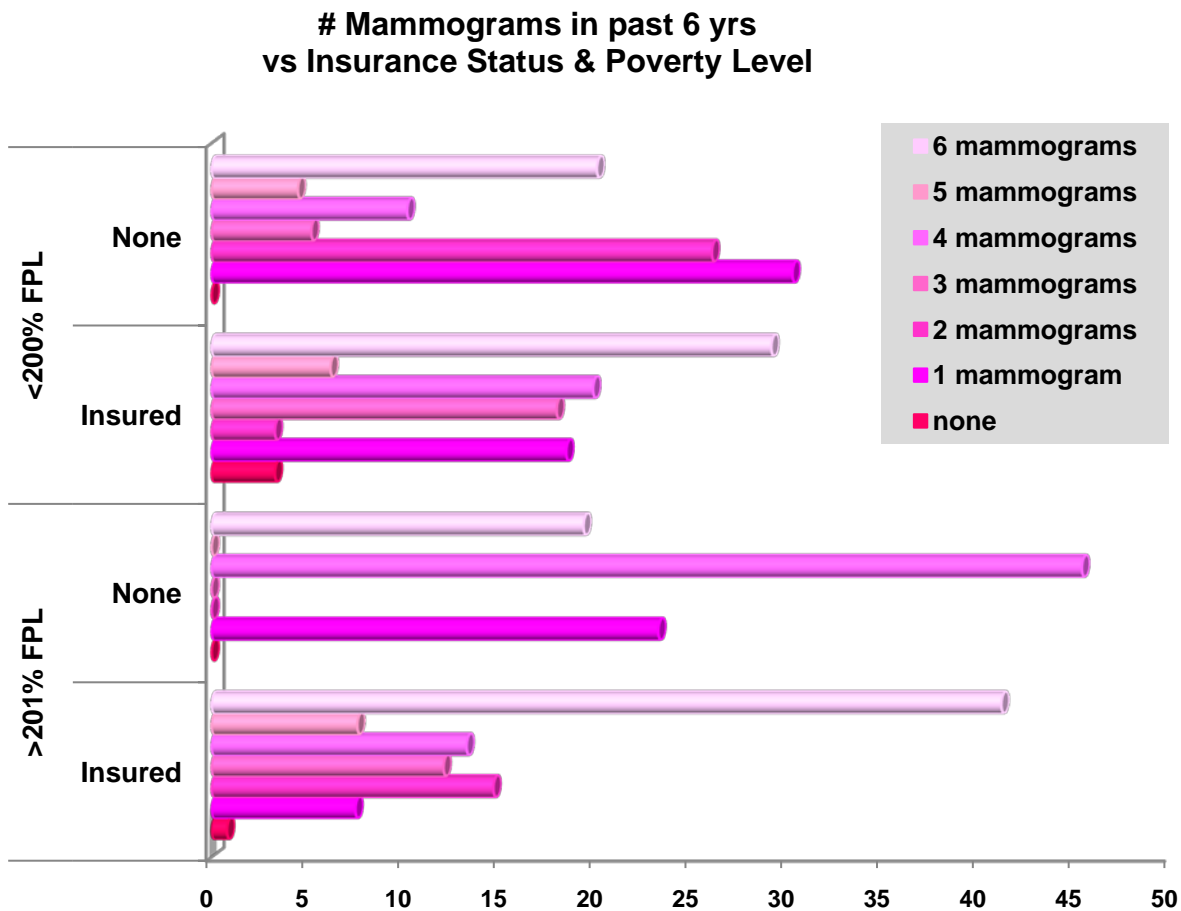


Figure 6. The percent mammogram screening history in Fresno County with respect to Federal Poverty Line (FPL; <200% or >201%) and insurance coverage, age 40+ yrs.
Source: California Health Interview Survey, 2009.

Our findings suggest that women of all races with household incomes below the FPL are less likely to get screened (data not shown). By contrast, as income increases (i.e. beyond 350% FPL), so does the likelihood of recent mammograms. In *Figure 6*, we have identified two alarming issues: 1) there are more insured than uninsured women who have never had a mammogram in the past 6 yrs; and, 2) the uninsured are more sporadic with prescribed annual mammogram screening particularly those women exceeding >201% FPL in Fresno County. This latter finding could be due to state eligibility requirements for free screening by the California Cancer Detection Programs (compare >201% FPL vs <200% FPL uninsured, *Figure 6*).

Communities of Interest

Fresno County is known internationally for its agricultural industry as the heartland of California and the food basket for the world; yet it is also home to some of California's poorest residents. The rural areas of Fresno County are sparsely populated areas where residents are isolated because of geographic proximity to services, language barriers and socioeconomic conditions. These demographic and economic variables contribute in large part towards the health disparities facing our region. Here we describe several key compelling factors.

Population – Fresno County's population was estimated at 953,761 in 2010 (U.S. Census Bureau), with expected growth to surpass 1 million by 2012. The Central Valley is the fastest growing region in California with a 15-25% change from 2000-2010 (the current state average is 11.5% and projected to be 17.8% by 2030). Within the population, an estimated 16.5% live in rural Fresno County settings. The average County resident is between the ages of 25-44 years (27%), compared to 24% between the ages of 45-64 years and 9.9% age 65 and over. At present, 49.6% (462,444) of the total population is female. In California, the largest population change will be in the 65+ years with a staggering projection +130.5% from 2000-2030.

Fresno County is an area of cultural diversity. As shown below on *Table 3*, the largest ethnic population identified by the census is Hispanic with over half of the population identifying as either Hispanic or Latino. The second largest population group identified in Fresno County is the White Non-Hispanics at 32.7%. Other ethnic populations identified within the County include Non-Hispanic Black and Asian.

Table 3. Percent population by Race / Ethnicity in Fresno County.

Race/Ethnicity	Fresno County	California	US
Hispanic or Latino (any race)	50.3	37.6	15.5
White, non-Hispanic/Latino	32.7	40.1	65.0
Asian & Pacific Islander	9.4	13.1	4.5
Black/African American	4.8	5.8	12.2
All Others	2.8	3.4	2.8

Source: US Census Bureau and SGK Thomson-Reuters, 2010

Economic Base – Known as the number one agricultural county in the world, the city of Fresno serves as the economic hub of Fresno County and California's Central Valley. The unincorporated area and rural cities surrounding Fresno remain predominantly tied to large scale agricultural production with one in every five jobs in the Central Valley related to agriculture, from farm workers to salespersons. (Source: Great Valley Center annual report, 2009.) Fresno County produces more than 350 commercial crops, worth more than \$4.8 billion in 2006.

It is important to note that the agricultural industry that defines Fresno County brings with it a transient aspect to a portion of the population, so that the figures provided above may not completely reflect Fresno’s population base. Migrant, undocumented farm workers comprise a significant number of the laborers in the County, who may not live in the County year-round, or who may move to the area for temporary work. This creates challenges not only in accurately defining the population base as represented by the more than double percent of non-U.S. citizens compared to the U.S. overall (*Table 4*), but also in keeping up with the breast cancer and health needs of migrant families.

Table 4. US Citizenship Status of Fresno County Residents.

Citizenship Status	Fresno County	California	US
Native born	78.4%	73.1%	87.6%
Foreign-born	21.5%	26.9%	12.4%
Naturalized U.S. citizen	6.9%	12.3%	5.3%
Not a U.S. citizen	14.6%	14.6%	7.1%

Source: US Census Bureau, 2009 (Based on 2005-2009 5-yr estimates, American Community Survey)

Education and Income – From 2005-2007, 72% of people age 25 years and over had at least graduated from high school and 19% had a bachelor’s degree or higher. Conversely, 28% were “dropouts,” not enrolled in school and had not graduated from high school. The total school enrollment in Fresno County was 274,000 from 2005-2007 while college or graduate school enrollment was 64,000 (CA Dept. of Education, 2009, Fresno County Office of Education, 2008). There is a significantly high rate of women over the age of 25 years with less than a high school education, at 27.4%. (See *Figure 7*).

Educational Attainment of Population in Fresno County

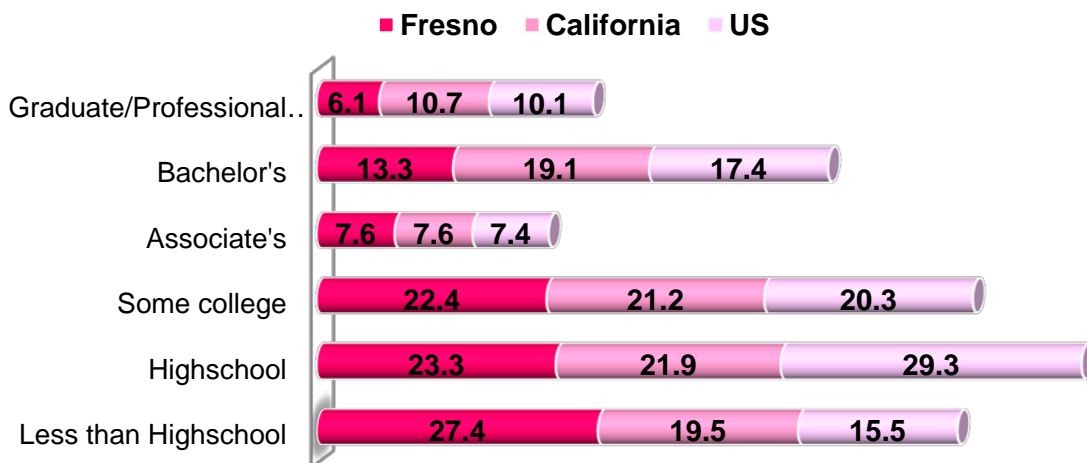


Figure 7. Percent Female 25 yrs+ with highest educational achievement.

Source: US Census Bureau, 2009 (Based on 2005-2009 5-yr estimates, American Community Survey)

Rising income inequality that exists more profoundly in California than in the rest of the nation has been exhaustively studied by the Public Policy Institute of California. Their studies have found that immigration and rising returns to skills have a profound effect on income inequality in California. Fresno County has seen a huge rise in the numbers of immigrants. County education records show that 105 different languages are spoken by students in Fresno schools indicating a *wealth* of diversity while at the same time experiencing a rate of high school dropouts that is nearly twice that of the nation (CA Dept. of Education, 2009). Disappointingly, Fresno has not been able to translate the wealth of diversity into a wealth of educational outcomes for the majority of local students.

Furthermore, Fresno County has a more dismal socioeconomic picture than the national average. High rates of *concentrated* poverty are a serious problem. According to the USDA Economic Research Service and U.S Census Bureau, nearly 200,000 people in Fresno County (21.5% of the total population) were living below the FPL in 2009 (See *Table 5*). By race it is 17.3% for White residents, 33.1% for Black residents, 27.8% for Hispanic/Latino residents; by age, 11.3% are 65 years and older.

The State Department of Finance also reports that the percentage of the population that receives some type of public assistance has risen steadily each year of the past decade. The economic status of Fresno County residents, based upon updated 2005-2009 economic data compiled by the U.S. Census Bureau (U.S. Census Bureau, 2010) shows a median household income of \$45,219, in contrast to \$58,925 statewide (See *Table 5*). Throughout the last decade, Fresno County has had unemployment rates higher than the national average. The Bureau of Labor Statistics claims a 17.2% average unemployment rate in 2010 for Fresno County, which is significantly higher than the state average at 12.4% and almost double the national average of 9.1% (See *Table 5*).

Table 5. Income and Poverty Estimates for Fresno County.

	Fresno County	California	US
Median household income	\$45,219	\$58,925	\$50,221
Population below poverty	21.5%	14.2%	14.3%
Unemployment	17.2%	12.4%	9.1%

Source: USDA ERS and US Census Bureau, 2010.

Conclusions

Based on productive conversations with experts, community collaborators, and provider information in the greater Fresno region, we specifically looked at trends and target communities who could be at increased risk. Given the abovementioned data, underserved and low income women are less likely to have access to breast cancer screening, diagnosis and treatment. Our findings suggest that women of all races with household incomes below the FPL are less likely to get screened (data not shown). We attribute this to two primary factors:

- 1) The inequitable distribution of resources centralized in the City of Fresno compared to the rural communities of Fresno County; and,
- 2) The high unemployment rate and concentrated level of poverty that plagues the Central Valley leading to reduced opportunities for prevalent ethnic groups.

At Risk Priority Target Communities in the Affiliate Service Area

- 1) **Low-Income Farmworkers:** Hmong and migrant Latina farmworkers comprise a significant percentage of the impoverished population. Our motivation to evaluate and target the concentrated poverty in Fresno County is based on the assumption that medically related expenses may be deemed a luxury that are not committed or factored into the overall life expenses of larger families. These are also notoriously difficult communities to reach and engage about breast health and education.
- 2) **Women Exceeding >201% FPL but < 350% FPL:** As income increases, so does the likelihood of recent mammograms. However, we find that a significant percentage of women exceeding >201% FPL in Fresno County have never had a mammogram. This could be due to state the eligibility requirements for free screening by the California Cancer Detection Programs.
- 3) **African American Women:** African American women tend to be diagnosed with more advanced cases when breast cancer is not as easily treated, and thus, chances for survival are lower. The differences in stage at diagnosis contribute in large part to the racial difference in breast cancer survival.
- 4) **Young Women:** Educating young women about the issues of breast health and cancer from the elementary school level through college, if handled in a factual and age-appropriate manner, will provide a foundation for young girls and women to engage in breast health awareness and practices for their lifetimes. Considering that Fresno County has a younger average age and more people under 19 (32.9%) compared to state (26.5%) and national (25.3%) demographics (U.S. Census Bureau, 2010; Thomson-Reuters, 2010), also with less overall education, we must commit to educating young women, and especially those from low-income Latino families, about breast self awareness and practices.

HEALTH SYSTEMS ANALYSIS

Overview of Continuum of Care

The Central Valley Affiliate uses the breast cancer continuum of care (CoC) framework (See *Figure 8*) as an important guide to identify the gaps, barriers and issues present when assessing why some women do not receive regular screening and why others who are screened may not receive timely diagnostic tests, treatment, or follow-up care. The framework described below represents how a woman typically moves through the health care system to be screened for breast cancer, and if necessary, receives follow-up diagnostic tests and treatment for breast cancer. It should be recognized that the CoC process begins with education on breast self-awareness.

Phase 1 – Screening

Breast cancer screening is the first step in the continuum. Komen's screening recommendations are:

- Ask your doctor which screening tests are right for you if you are at a higher risk
- Have a mammogram every year starting at age 40 if you are at average risk
- Have a clinical breast exam at least every 3 years starting at age 20 and every year starting at age 40
- Know what is normal for you and report and changes to your healthcare provider right away

Phase 2 – Diagnosis

For most women who have a mammogram or clinical breast exam, the results will be normal. For some women, the results may be abnormal. An abnormal test may indicate the need for more tests. It is important that women receive timely follow-up tests after an abnormal mammogram or clinical breast exam. Usually, the health care provider will begin with less invasive tests like a diagnostic mammogram or ultrasound. If these tests cannot rule out cancer, the health care provider may recommend a biopsy. If further testing reveals that the abnormality is not cancer, the woman will need to continue to follow screening recommendations. For those that have a diagnosis of breast cancer, they will then need to enter the treatment stage of the continuum.

Phase 3 – Treatment A diagnosis will lead to the treatment stage of the continuum and health care providers will work with the patient to determine a course of treatment. The best treatment plans are typically determined when the patient and provider work together. Treatment may involve one of the following or a combination:

- Surgery
- Radiation therapy
- Chemotherapy
- Hormonal therapy
- Targeted therapy

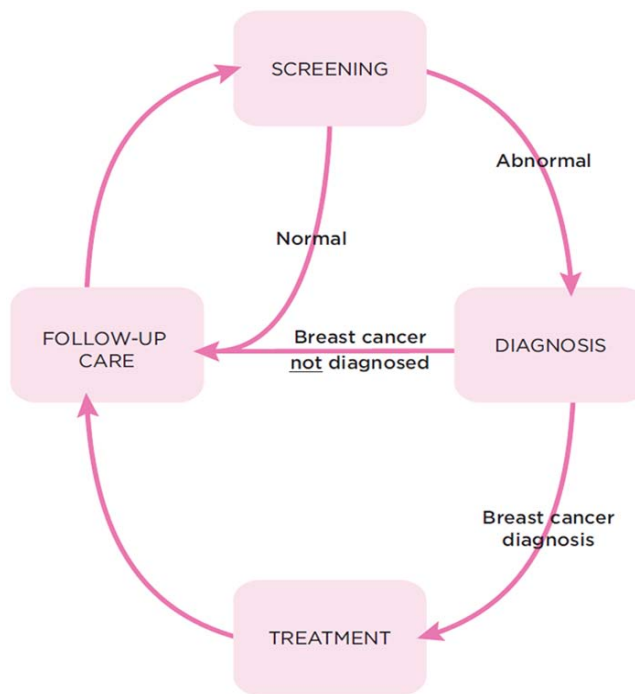
Phase 4 – Follow-up Care

Follow-up care includes regular screening as recommended by a health care provider following normal or abnormal results. Women with normal screenings need support to continue and maintain proper screening practices. For those diagnosed with cancer,

follow up care ensures their needs are met post-treatment in order to address quality of life issues. Some survivors receive care related to side-effect managements, long-term treatment, reconstruction and end-of-life care.

Figure 8. Breast cancer continuum of care.

Source: Susan G. Komen for the Cure® Community Profile Guidebook, 2010.



Methodology

The Community Profile assessment included the collection and mapping of health care providers and key organizational inventory data. Mapping via GoogleMaps™ was used to assess spatial distribution and spatial relationships of statistical data, providers and partners. The Fresno County asset map (*Figure 9*) includes information for the service area hospitals and clinics, cancer centers, Komen grantees and organizations such as hospices, academic institutions, libraries, transportation and various non-profit organizations as these entities represent potential partners and entry into the communities. The mapping process also informed decisions related to selection of providers for further data collection.

Beyond the successes of many of the grantees whom we have continually supported for a number of years (see *below*), several important community organizations and initiatives have unfortunately ended due to loss of their respective primary funding including *HealthyFresno*, *San Joaquin Valley Health Consortium*, and the *Fresno Breast Cancer Navigator Pilot Program*. These organizations provided comprehensive preventive primary care services and advocate on behalf of low-income and medically underserved families throughout the Central Valley.

Overview of Community Assets

Clearly, visual inspection of the asset map (see *Figure 9*) illustrates the inequitable distribution of assets. The majority of the Fresno County populace resides in the Fresno/Clovis metropolitan area, and thus we should seek to better distribute resources to new assets. The entire West County has a single hospital (Coalinga Regional Medical Center) which is a short-term hospital and District Authority facility with 22 beds for Adult and Pediatric care.

Asset Map of Fresno County

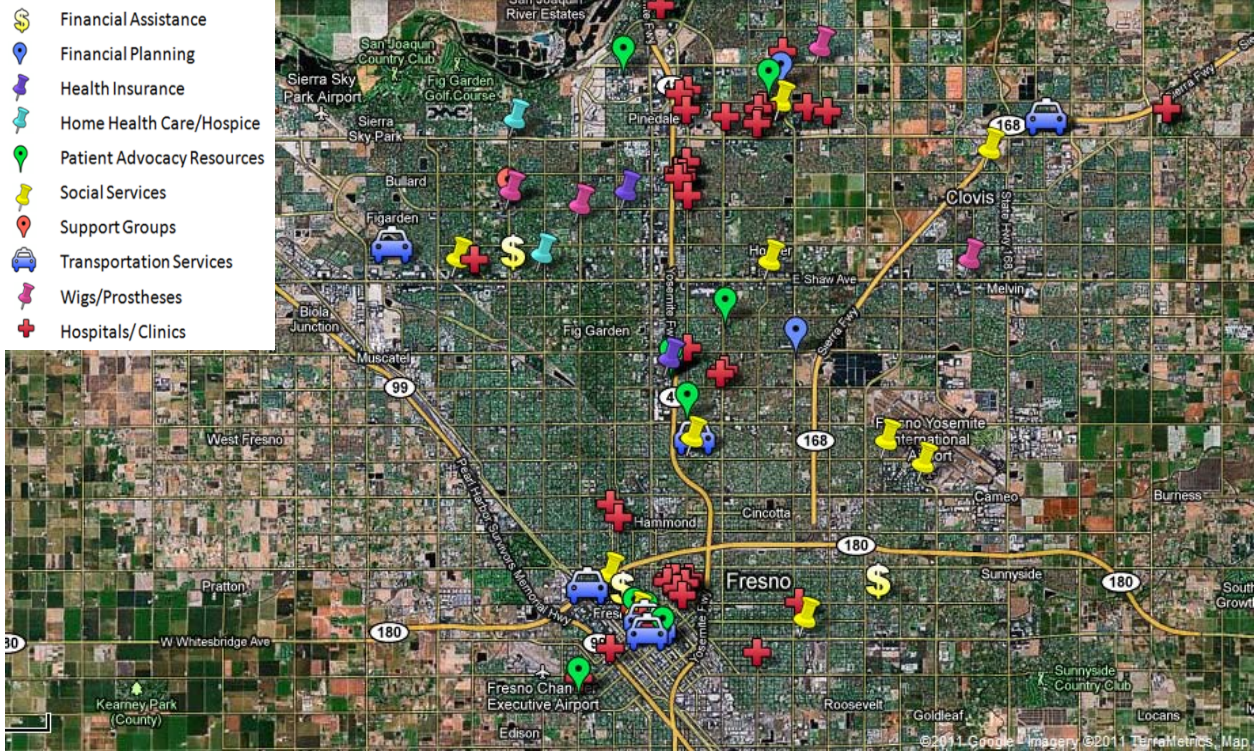
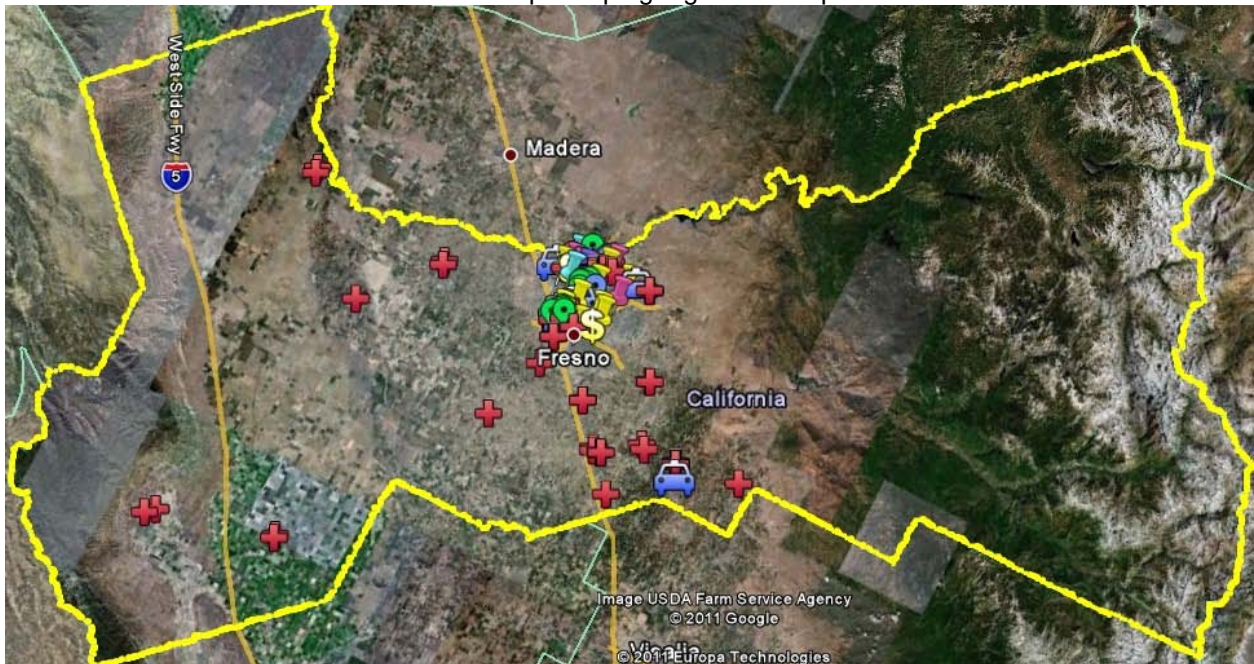


Figure 9. The Central Valley Affiliate asset map of Fresno (*Top*) and Fresno County (*Bottom*).

*Note - Fresno County border is indicated by yellow outline.

Source: <http://maps.google.com/maps/>



This region is designated as a medically underserved area by the California Office of Statewide Health Planning and Development (OSHPD), a primary care shortage area, and a registered nursing shortage area by the Medical Services Study Area (MSSA)

boundaries. The East County region does not appear to have any available assets currently. Furthermore, it is designated as a rural MSSA.

Fresno County has 11 major/regional hospitals, 13 screening services, 19 treatment services, 78 education/outreach services, and 64 survivor support services. The Central Valley Affiliate currently has ten grantees, five of which directly engage the target communities of low-income Latino, Southeast Asian, migrant farmworkers, and African-American women. Two broadcast stations (KVPT-TV and Radio Bilingue) receive funds to subsidize public service messages pertaining to breast health and awareness as well as defined programs specific to breast cancer health, education, and prevention. Furthermore, two grantees provide services for women with disabilities by supplying guidance for navigating the breast cancer CoC in Fresno County.

Despite these strong assets, the extreme limitations of medical care facilities in the rural parts of the County punctuate the need for the Central Valley Affiliate to develop outreach into those areas with unconventional partnerships such as churches, schools, private-practice providers, and federally-qualified health centers.

Partnerships

Komen's granting distribution unfortunately reflects the inequality currently part of the infrastructure of care. The majority of Komen grantees are all physically located in the central region of the County. Despite the fact that half of the grantees offer services to women from the targeted communities, we are unable to answer exactly how many of these women are actually benefit. We strive to address these shortcomings by tightening the accountability and auditing of our grantees progress.

Several notable partnerships have been established but synergies need to continue including:

- Sisterhood of Survivors: A local non-profit corporation committed to assisting newly diagnosed breast cancer patients and survivors.
 - Affiliate Support Mechanism: Provide exposure and marketing for program, subsidize newsletter.
- California State University, Fresno: Research laboratories performing cutting-edge breast cancer biomarker discovery by molecular screening of underserved and health-disparity populations including Hispanic/Latina farmworkers.
 - Affiliate Support Mechanism: Provide subsidy through small grants funding for travel, student stipends, and symposia to support continuing biomarker discovery and translational research in regional breast cancer health disparities projects.
- Stone Soup: Stone Soup's primary mission is to support the health, education, culture, and civic engagement of Southeast Asian refugee families in Fresno. While support for the program was ended in 2006, review of their status as an active community organization suggests that

we make contact to reaffirm synergies.

- Affiliate Support Mechanism: Partner and share education resources for breast cancer awareness in Southeast Asian population.
- California Health Collaborative: A nonprofit organization committed to empowering Californians to achieve optimal health and thereby improving their quality of life accomplished by serving the needs of individuals with limited access to healthcare resources and who most often confront barriers related to culture, language, immigration status, income, gender, geography, and/or education.
 - Affiliate Support Mechanism: Co-sponsor health fairs or develop a weekend-screening program event such as BSE, CBE, or mobile mammography unit.
- Gay Central Valley: Along with informing and promoting cultural events in the Central Valley, the organization has as one of its purposes educating the public about the history, contributions and diversity of the LGBT community, especially in Fresno County.
 - Affiliate Support Mechanism: Co-sponsor a health fair or develop a weekend-screening program event such as BSE, CBE, or mobile mammography unit to share education resources for breast cancer awareness in LGBT community.

The faith-based community is an untapped resource in Fresno County given the sheer number of churches. Developing relationships with represented faith leaders who could serve as liaisons or health ministers in their respective communities would be advantageous. The rural regions of the County have limited clinical settings for women to access, and currently many of the clinics don't have a focus on breast health. Grassroots efforts may be the key. The regions could benefit from a faith based breast health initiative that is sustainable over time and supported by members of the faith community.

- Fresno Interdenominational Refugee Ministries: FIRM has worked with refugees and immigrants to help them build a better life and communities of hope in the Central Valley. They partner with various churches and organizations to accomplish this work.
 - Affiliate Support Mechanism: Partner and share education resources for breast health education and cancer awareness in Southeast Asian population.

Federally Qualified Health Centers (FQHCs) provide comprehensive preventive primary care services and advocate on behalf of low-income and medically underserved families throughout the Central Valley. They provide members with a wide range of services including advocacy, training, technical assistance, resource development, and program administration. Last year, approximately 27% of all Fresno County lower income persons and 38% of the uninsured population went to an FQHC.

- Central Valley Health Network: A consortium of 13 FQHCs with a mission to facilitate community health centers' strength in the marketplace and to support member's effective delivery of high quality and accessible health care comprise the Central Valley Health Network.
 - Affiliate Support Mechanism: Partner and share education resources for breast health education and cancer awareness in the migrant Hispanic population.

The Breast and Cervical Cancer Treatment Program (BCCTP) in California is operated through the California Department of Public Health as the *Cancer Detection Programs: Every Woman Counts (EWC)*. *EWC* provides clinical breast exams, mammograms, pelvic exams and Pap tests to California's underserved women. These women are age 40 and older (cervical cancer screening is provided to women 25 and older), and have an income at or below 200% of the federal poverty. *EWC* is funded by a federal grant and state tobacco tax revenue.

Over 1.2 million uninsured and underinsured women in California are eligible for the *EWC* program. However, due to fiscal constraints, only 300,000 women have access to this program. The Central Valley Affiliate will remain in contact with the Director of the California Department of Public Health and the local BCCTP Program Directors in order to provide information about statewide access and funding issues for *EWC*. Recent 2010 data provided by local BCCTP program officials indicates that that enrollment is predominantly Hispanic (48%) and servicing women in the 45-54 age range. The Central Valley Affiliate will remain an advocate of the *EWC* program in the interest of all underserved women in the service area.

Legislative Advocacy and Public Policy Perspectives

The single largest legislative issue facing our region is access to breast cancer screening and treatment for underinsured and uninsured women, including undocumented farmworkers. The fear of deportation that permeates these communities keeps them isolated and insulated from outside organizations like Komen.

The Central Valley Affiliate holds a leadership position among the statewide California Public Policy Collaborative of the seven Komen Affiliates in the state. The Central Valley Affiliate has strived to develop a statewide public policy agenda to educate leaders on issues that affect breast health, including sustaining the *EWC* Program, implementation of health care reform and developing policy to bring about the Komen Promise of a world without breast cancer. The Central Valley Affiliate has spearheaded the planning and execution of statewide lobby day for the past few years and has participated in National Lobby Day to support the work of Komen Advocacy Alliance. In addition, the Central Valley Affiliate has developed and fostered relationships with local, state and federal elected officials and agency directors. These officials attend our events, clearly as representatives of the offices they hold, as supporters of Komen and our issues and to speak on behalf of their support for the Komen Promise. The Central Valley Affiliate remains bipartisan and has the support of the following:

- U.S. Senators and House of Representatives

- State Senators and Assemblymembers
- Fresno County Board of Supervisors
- Fresno City Council
- Fresno County Sheriff's Office

The Central Valley Affiliate will continue to serve in a leadership capacity with state and national advocacy efforts and will participate in state and national lobby day to further educate elected officials about breast cancer statistics, trends and disparities throughout the Central Valley and the state. The Central Valley Affiliate will continue to collaborate with Sister Affiliates to ensure that breast health policies remain a priority during the implementation of health care reform. While the Central Valley Affiliate is hopeful that health care reform will ensure greater access to care for the general population, it will undoubtedly increase the demand for services, especially in rural Fresno County already experiencing provider shortages. California continues to be a leader in the implementation of health care reform, but the pressing concern of providing breast cancer screening and treatment for undocumented persons may persist. The Central Valley Affiliate is committed to serving as a voice for the underserved during the implementation of health care reform.

- Central Valley Health Policy Institute: The CVHPI is committed to facilitating the development of health and healthcare policies and programs in the San Joaquin Valley. Current policy research and technical assistance priorities for the CVHPI include uninsured and inadequately insured adults, health professional shortages, and environmental influences on health.
 - Affiliate Support Mechanism: Provide exposure and marketing for program, subsidize through small grants funding for travel, student stipends, and symposia to support continuing projects in regional breast cancer health disparities.

Findings from Key Informant Interviews

Not surprisingly, the general findings from our interviews support the statement that women of higher socioeconomic status in Fresno have a far easier time navigating the continuum of care. The uninsured generally took advantage of social health care plans (including Medi-Cal/Medicaid) while the undocumented (and underreported) represent a significant health disparity in the rural areas of the County where limited resources for even basic screening are available. Optimistically, the BCCPT program does well for those women that meet the criteria, but those that do not are falling through the cracks at each phase of the continuum, primarily during the screening phase. The common themes of obstacles and barriers to routine breast health care that emerged from the key informant surveys/interviews include problems of access, cost, fear, misinformation or inaccurate beliefs, and/or cultural and behavioral characteristics. These major issues were self-reported at higher levels (i.e. more contentious) among Hispanic and African-American women.

Conclusions

Preliminary analyses of the breast cancer statistics and continuum of care services revealed an unbalanced geographic distribution of breast cancer services in the County. Apart from the cities of Fresno and Clovis, the entire County is federally designated as a primary care health professional shortage area, which presents an opportunity to develop appropriate health care reform implementation policy to address the unique struggles of the Central Valley. In fact, the entire West County region is designated as medically underserved. The presence of non-profit and for profit organizations offers partnership opportunities, especially focusing on the FQHC networks that serve a large proportion of the uninsured. Efforts should be made to adapt and replicate effective evidence-based programs in the rural and low-income target communities. Programs offering financial assistance for screening and treatment and increased accessibility in the East and West county regions should be regarded as a high priority for Komen Central Valley funding.

Advocacy efforts to support the BCCTP screening program in Fresno County will continue at the Affiliate level and through a statewide collaborative effort. It is in the Affiliate's interest to make all healthcare providers more aware of the BCCPT program so they can direct women through the system more effectively. Increasing access to diagnostic and treatment services within the county will positively impact the overall survival rates of the population.

Education plays a pivotal part by empowering and encouraging women to see their health care provider early to help reduce the number of late stage diagnoses. There are untapped education and outreach opportunities to provide breast health learning in alternate settings besides physician offices, such as faith-based organizations, health care facilities (e.g. fitness clubs, churches, etc). Furthermore, formalizing collaborations with the Central Valley Health Policy Institute can facilitate the development of health awareness and health care policies and programs in the San Joaquin Valley to educate teenagers and young women about the issues of breast health and breast cancer.

BREAST CANCER PERSPECTIVES IN TARGET COMMUNITIES

Methodology

Data Collection – This Community Profile includes quantitative and qualitative data collected using the following methods:

- Representatives from grantee and non-grantee organizations were specifically contacted and requested to disseminate the survey links to their constituents/clientele so that we could ensure a diversity of responses from our target populations.
- Key Informant surveys were conducted based on a convenience sampling procedure via a secure online survey tracker and solicitation of 3 cohorts of targeted populations:
 - English-speaking, Spanish-speaking, and Hmong
 - English, Spanish, and Hmong versions of the same survey questionnaire were created and interviewer-administered written surveys were manually entered onto the online survey tracker for ease of comparison (**438 total surveys** with 85% completion rate).
 - Self-administered online surveys (n = 383 survey respondents)
 - Interviewer-administered surveys (n = 55 survey respondents)
- Healthcare provider surveys were conducted based on a small, random sampling procedure of clinics and grantees distributed around Fresno County but included health care professionals (**16 total telephone interview respondents**)
- Providers were informed verbally at the beginning of the session and insured confidentiality would be upheld and that no comments would be specifically attributed to them.
 - Census data
 - Cancer morbidity and mortality statistics
 - Behavioral risk factor data
 - National Cancer Institute (NCI) cluster profiles
 - Review of published guides
- Review of programs and services via internet research and interviews
- Review of secondary data
- The focus of the interviews was to learn more about available community resources for breast cancer education, screening, treatment, and support services; barriers impacting utilization of existing services; populations in need of outreach and gaps in services; and ideas for improvements to community programs and services related to breast health.

Key Informant Demographics – Because we feel that the quality of information received in our surveys is dependent on the population and demographic that it comes from, a brief summary of the key informants is necessary.

- The vast majority of women respondents (2/3) were in the age group of 40+ years (see *Figure 10*) and lived in Fresno County according to their zip code
- The majority of women have had at least one clinical breast exam (84.8%) but surprisingly, fewer had mammograms (67.3%). A higher percentage of non-insured, poor (<200% FPL) have had screening procedures.

- Hispanic respondents were less likely to have medical insurance and surprisingly, of the non-English speakers with insurance, mammograms were not covered for over 1/3 of these women (Table 6).
- Self-identified respondents segregated into these ethnicities: 25% Hispanic/Latino, 10% Asian, 5% Black indicating that the majority were non-Hispanic whites (NH White).
- Importantly, the survey sought to include and identify input from as many non-traditional underserved populations as possible including LGBT (3%), those with disabilities (4.8%), the very poor with annual household income <\$25K (14.8%), and males (1% of breast cancer is male breast cancer).
- Breast cancer survivors represented 29% of respondents.

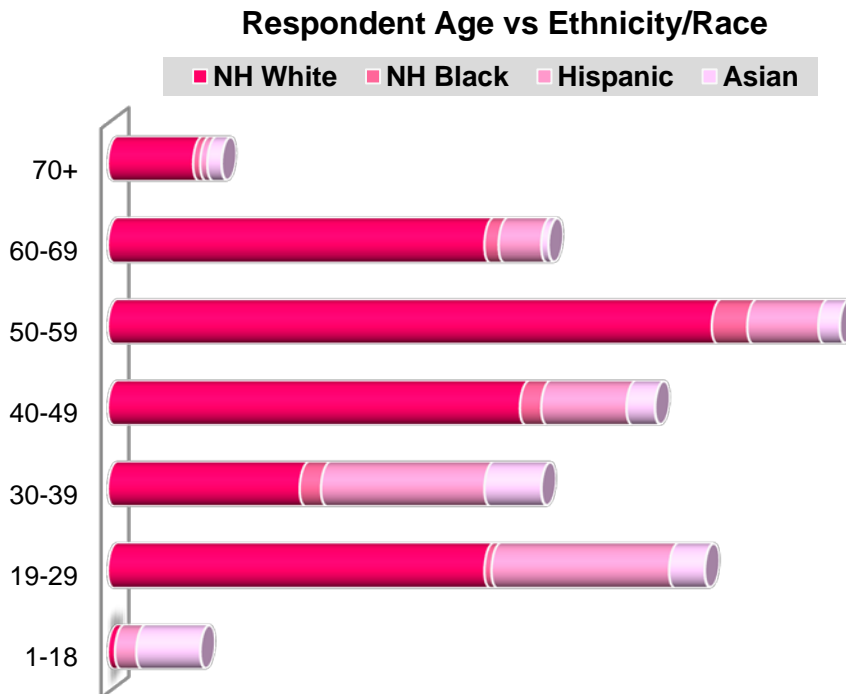


Figure 10. Survey respondents by Age and Ethnicity/Race.

Table 6. Percentage of respondents addressing questions related to insurance coverage and mammograms by Ethnicity/Race.

Question	Response	NH White	NH Black	Hispanic	Asian
Do you have medical insurance?	Yes	92.7%	100%*	80.8%	84.4%
Have you ever had a clinical breast exam (CBE)?	Yes	86.6%	93.3%	76.9%	65.6%
Have you ever had a mammogram?	Yes	92.4%	91.7%	84.8%	78.6%

Source: Komen CV online survey, 2011 (* = Statistically unstable)

Analysis and Reporting – After final collection and compilation of data, we prepared an Executive Summary for the affiliate service area to highlight the most important quantitative and qualitative data. Data for the affiliate service area were used as a

standard for comparison with county-level data. We combined suggestions from key informants with our own insights to generate a list of recommendations for Fresno County. Jason A. Bush, Ph.D., Assistant Professor and Breast Cancer Researcher, California State University, Fresno, was the lead in the data collection process for the Central Valley Affiliate. Minority student research assistants fluent in Spanish, Hmong, Punjabi, and Mandarin assisted in the phone interviews and disseminating survey links to minority groups. The key findings and recommendations from the Community Profile were presented to the Affiliate Board of Directors for feedback and discussion about the most effective next steps for the Affiliate related to the grants program, outreach, advocacy, and future community assessment efforts.

Importantly, we consciously chose not to pursue Photo Documentation methods. It can be difficult to represent the entire community experience and those target communities that are of greatest interest to the Affiliate (Southeast Asian and undocumented Hispanics) are notoriously cautious about being documented. Therefore, we chose to use an anonymous survey instrument with numerous open-ended response sections so that we could better quantitatively interpret opinions [2].

Review of Qualitative Findings

The information from the survey respondents/key informant surveys and interviews are a reflection of views captured through a systematic process of a convenience population.

Key Informants Survey

Breast Cancer Education – Survey respondents were asked about their general knowledge of breast health information and were asked about the community's preferences for sources of information for general health and breast health information.

The following are prominent themes that emerged about this subject:

- General knowledge about breast cancer, mammograms, and clinical breast exams was better in NH White and Black informants. The majority of Hispanic and Asian respondents knew 'something' but were more likely to report knowing 'nothing' about the subject rather than knowing 'a lot'.
- Annual mammograms were not common, particularly in Asians/Hmong, which is an under-reported ethnic group that is not a disaggregated demographic from Asians (See *Table 6*).
- Reasons for never having a mammogram ranged, but 'no one in my family has had breast cancer', 'I am worried that a mammogram will hurt', and 'I am worried that a mammogram will find something wrong' were most prevalent.
- Hispanic women would most likely go to friends and family for breast health information followed by medical doctors.
- Television and health events were mentioned most often as the most effective ways to disseminate breast health information, followed by presentations by organizations, newspaper, and radio.
- Except for Asians, the majority of respondents knew about Susan G. Komen for the Cure® before taking the survey (See *Table 7*).

- Surprisingly, only ¾ of NH Whites know where to turn for emotional support after a positive diagnosis for breast cancer and close to half for each of the other ethnic groups do not know where to turn (See *Table 7*).

Table 7. Percentage of respondents addressing questions related to breast cancer education and awareness.

Question	Response	NH White	NH Black	Hispanic	Asian
Do you know where to get information on breast health?	Yes	90.9%	100%	91%	71.9%
Have you heard of Susan G. Komen for the Cure before today?	Yes	93%	100%	92.4%	62.5%
Do you have experience with breast cancer (family, friend, etc)?	Yes	84.3%	80%	71.8%	48.4%
If you were diagnosed with breast cancer, would you know where to go for emotional support? (i.e. support groups)	Yes	75.4%	58.3%*	55.2%	54.2%

Source: Komen CV online survey, 2011

Screening Services – Key informants were asked about access related to routine breast healthcare, breast cancer screening, and treatment; where to go for these services and how women in their community pay, and groups in greatest need/priority populations.

Prominent themes that emerged about this subject:

- Lack of financial resources was the primary reason limiting access, followed by childcare services, then information on where to get treatment/exams.
- Community or public clinics were mentioned most often for women within rural communities, while hospitals and primary care physicians were most often mentioned within the city. Specific references to the utility of low-income clinics or the BCCTP were made for those that meet eligibility criteria.
- If not covered by private insurance carriers, most women utilized Medicare/Medicaid/MediCal or simply could not pay.
- Nearly unanimously, uninsured and the working poor (those who work, but wages keep them below poverty level) were mentioned most often as groups in greatest need of breast health and breast cancer services. This was followed by Hispanic, NH Black, and elderly women.
- Due to the centralized population base of Fresno County, most medical centers and clinics require urban access thus leading to a poor distribution and limited access in the rural communities.
- Physicians were mentioned most often as the most credible/trustworthy people for health information, followed by other health care providers like nurses, health educators and allied health professionals for English and Asian/Hmong.

Screening Policies – While the majority of women have received breast health information, a significant percentage (~25%) of Hispanic and Asian respondents did not know or had not received any education.

Prominent themes that emerged about this subject:

- Nearly half or more of all groups were not aware of the confusing USPSTF recommendations while being more familiar with standard Komen policies.
- The BCCTP program is still not as well known or women are not taking advantage of the services, particularly the concentrated, impoverished communities of Asians and Hispanics that the programs are trying to target.

Obstacles and Barriers for Diagnosis and Treatment – The reasons women do not get breast health care can be complicated. They include problems of access, cost, fear, misinformation or inaccurate beliefs, and/or cultural and behavioral characteristics. These factors are not mutually exclusive and their cumulative effect contributes to the delay in detection, diagnosis and treatment. (See *Table 8*.)

Prominent themes that emerged from the four ethnic/racial groups included:

- Lack of insurance, lack of services for undocumented immigrants, childcare barriers, a general lack of knowledge about breast health, fiscal inability to take time off from work for screening and wellness care were common themes.
- Information and education barriers related to low perception of risk, myths and false information, and fear associated with perceived costs of services and treatment were common themes.
- For Asian and Hispanic women, cultural and language barriers were reported to impede their understanding and acceptance of breast health care services.

Table 8. Percentage and Rating of respondents on key survey questions according to perception of cultural barriers within respective communities.

Question	Response	NH White	NH Black	Hispanic	Asian
Do you think there are any cultural barriers (dealing with beliefs, language, customs, etc.) between your community and the breast health information/ organizations provided to you (if any is provided)?	Yes	46.2%	57.1%	67.1%	46.2%
Lack of financial resources or insurance	Average* Rating of 5-pt Scale	3.89	4.09	4.19	3.95
Lack of knowledge about breast health		3.57	4.18	4.21	3.80
Fear		3.97	4.55	4.39	3.85
<i>Other high-rating comments</i>		<i>Cannot afford time off work</i>	<i>Lack of knowledge of location for services</i>	<i>No services for undocumented</i>	<i>Lack of knowledge of location for services</i>

Source: Komen CV online survey, 2011. *NOTE – Average rating calculated based on point value from 1-5; 1 = not a problem, 2 = fairly rare problem, 3 = growing problem, 4 = serious problem, 5 = very severe.

Survivor and Follow-up Care Survey

Respondents include 108 breast cancer survivors with varied backgrounds, but were primarily Caucasian (88.6%), Hispanic (9.4%), and African American (5.7%). The majority were in the age range of 50-69 and annual household income levels ranged from less than \$25,000 to excess of \$200,000, with the largest number of women coming from the \$50,000-75,000 (22.3%) category. Almost all respondents to this survey were insured.

Prominent themes that emerged about this subject:

- The need for more financial assistance programs and knowledge of the current programs for those in need of screening and treatment, particularly, the lack of facts/resources about available clinical trials in the region.
- The need for education through health events or employer-sponsored programs particularly targeting young women in high school to be better informed.
- More availability for resources on the recurrence of breast cancer as well as individual and family counseling were both seen as important.
- This group reported fear, financial assistance, and lack of breast health knowledge as options to break down those screening barriers.

Health Care Provider Interview (Non-Physicians)

Breast health care providers included several Komen grantees, clinic managers/coordinators, and non-physicians verbally completed a questionnaire. The largest responders were from cancer care clinics (47%), non-profits (32%), and grantees (21%). Most had some relationship with the Affiliate (70%) or other organizations like American Cancer Society and the BCCTP.

Prominent themes that emerged about this subject:

- Providers also reported that barriers to collaboration or partnership with other breast health organizations was a prohibitive challenge
- The majority agree that the current healthcare system does not adequately screen all eligible women and financial need was the main obstacle and thus, under/uninsured women and those living in poverty were less likely to receive or pursue screening.
- Additionally, there was a theme around women not having stable addresses/phone numbers as organizational barriers to follow-up
- This group reported financial assistance, transportation, traveling mammography programs, patient navigation, weekend/after hour services and reminders of scheduled appointments as options to help break down screening barriers.
- Particularly, if more mobile mammography vehicles were around then less women would be turned down and more "walk-ins" could be seen.
- The majority of providers are interested in Komen offering breast health training to staff and clients.
- More information/resources are needed about breast cancer clinical trials.

Healthcare Provider Interview (Physicians)

Qualitative commentary made by physicians is noteworthy as they represent the other side of the continuum of care and thus offer a unique perspective on strengths and weaknesses in the framework.

Prominent themes that emerged about this subject:

- The leading barriers to accessing screening as the rates for underinsured and uninsured, living in poverty, language barriers, and low education rates in the rural communities.
- They also saw confusion for women around the timing of their first mammogram and the frequency of continuing to get them.
- Financial assistance for screening was seen as the best way to reduce disparity and increase survival rates, but complicated paperwork was seen as an organizational barrier for women attempting to get or recover financial assistance for screenings. Furthermore, severe budget cuts in California are seen as a detrimental to many of the state-sponsored programs, including the *EWC* program.

Conclusions

During the data collection process from key informant surveys and healthcare provider interviews, several key themes emerged that serve to emphasize findings from the previous two sections:

- Of organizations serving underinsured/uninsured populations, only 40% reported serving low-income or 'working-poor' populations. This group may be falling through the cracks as many do not qualify for state or federal programs because they exceed the 200% FPL criterion.
- There is a need for more education and awareness about breast cancer screening recommendations, especially among priority minority populations.
- Further support is necessary for breast cancer awareness and education efforts among young women. It was informative that respondents viewed health events and presentations as a critical marketing tool for breast health education.
- For the Asian/Hmong and Hispanic, lack of native language services was identified as a major barrier to access and could be compounding fears associated with anticipated procedural pain or positive breast cancer diagnosis.
- There are misperceptions concerning family history of breast cancer versus susceptibility and the phrase 'clinical breast exam' versus mammogram which may be contributing to the lack of annual mammography follow-up.
- Increased marketing and support for local and regional emotional support groups is critical for recently diagnosed women to navigate the health care system.
- Financial assistance was the major concern for most of the survey respondents. Including advocacy efforts for access to comprehensive and affordable health insurance during treatment including prosthesis coverage, financial assistance for screening, and financial resources for transportation, childcare, and housing.
- Increased resources to improve access in the rural regions of the County for stronger health network partnerships.

CONCLUSIONS: WHAT WE LEARNED, WHAT WE WILL DO

Review of the Findings

The breast cancer and socioeconomic statistics for Fresno County, as well as the geography, were the drivers to assist us in determining the target areas for the 2011 Community Profile. Therefore, the purpose of the follow-up data collection was to better understand from a program and services, as well as a community perspective, what factors could be contributing to the gaps and unmet needs for Fresno County.

Since we understood that the centralized population of the County had a self-limiting effect on rural services, we wanted to better understand the following: 1) where women went for breast cancer screening and treatment; 2) whether they accessed screening at all; and, 3) what barriers they faced in accessing care. This knowledge guided the questionnaires developed for both the focus group questions and provider group participants.

The provider survey highlighted the need for breast health education, medical insurance and financial support, screening and diagnostic services. The analysis of results quickly brought forth a number of issues that alone, or in combination, might contribute to the lowered screening rates of the target areas. For example, the shortage of breast health services available to women in the peripheral regions of the County may be a determining factor of low screening or rescreening rates as well as apparent underreported statistics associated with rural populations.

The community data findings corroborated the lack of culturally sensitive providers which served as a major barrier to women seeking breast health services in Fresno County. The community conversations also revealed a number of different factors hindering women's access.

Conclusions

Preliminary analyses of the service area based on breast cancer and demographic statistics revealed two prominent target populations for Fresno County. Hispanic and Asian/Hmong groups were chosen differentially either because of the lack of breast cancer services (Hispanic) or the increased breast cancer burden (Asian/Hmong) on these communities. Fresno County has lower mortality and incidence rates than the national rates generally attributed to the high Hispanic population. Consequently, if Hispanic women have generally lower age-adjusted incidence and mortality rates and they represent a significant percentage of the population, then this leads to artifactually lower rates for all groups combined. Alternatively, the high immigrant contingent of this demographic could be forcing notoriously underreported statistics [3,4]. In contrast, the Asian population in Fresno County has a slightly higher mortality rate compared to the rest of California. Despite these breast cancer statistics, Fresno County has a growing Hispanic immigrant population and faces huge socioeconomic challenges which undoubtedly contribute to disparities in access to screening and treatment.

Detailed analyses of program and services revealed an inequitable geographic distribution of breast cancer services in the County - an insufficient distribution of mammography centers within the County and limited access to breast cancer screening centers. More than half of the County's population lives within the centralized municipality limits of Fresno and Clovis. Most centers are in the urban area, not rural locations, and transportation to these facilities is limited. Four major regional health centers service the two cities, but while they do provide low-cost care and in some cases, significantly subsidized resources, those without health insurance are too often unable to receive screening or diagnostic care. The available services in rural areas include Coalinga, Selma and Reedley. Furthermore, there is a dramatically higher unemployment rate and more underinsured and uninsured residents per capita in Fresno County compared with the rest of California.

Findings from the 2009 Community Profile Report confirm community data indicating a need for culturally appropriate campaigns targeting the Hispanic and traditional Asian communities. In addition, providers need to be educated about resources for individuals with low-incomes. . Systemically, there is a need to increase the number of providers in medically underserved areas. The presence of various non-profit and for profit organizations offers partnership opportunities. These existing community assets can be approached to assist with marketing and outreach as well as fundraising activities. Furthermore, the region has a strong faith-based community with over 100 churches providing spiritual and many times social care to their communities. These churches can play a key role in helping the Affiliate address breast cancer in their congregations and neighborhoods.

Since Fresno County has a younger average age, programs targeted at educating young women, teenagers, and the LGBT community about breast cancer in a factual and age-appropriate manner are necessary and beneficial to the community. Falling into this category are young women in low-income Latino families who have little to no overall education. Developing educational breast cancer programs give young adults facts they can use for their lifetime.

There is only one BCCTP mammography program for the County located directly in Fresno and only one current Komen grantee (Fresno Health Consumer Center) that funds screening and diagnostic services pertaining to breast health screening to women in the region. Additional steps are being taken by the California Health Collaborative to meet unfilled screening needs. Through their collaborations and partnerships they provide transportation to individuals living in outlying areas, or who otherwise lack the ability to get themselves to a medical facility. There are untapped opportunities to provide BSE education in alternate settings besides physician offices and health care institutions, and it will continue to be a priority to identify and act upon those opportunities. Increasing access to screening and diagnostic services within the County will positively impact the survival rates of the population. Encouraging the use of second opinions and developing strategies to improve access to care in general will also facilitate the desired outcome. Education also can play a part to encourage women to see their health care provider early to help reduce the number of late stage diagnoses.

A critical change from the 2009 Profile is the increased local research being done with the breast cancer health disparities at large. Several new researchers and programs are emerging that could positively impact the translational research and scientific productivity for the region.

The data collected from survey respondents validated many of the problems and barriers identified by providers. The key informant and focus questions confirmed that providers were not aware of the different resources available to high-risk women. Focus group participants talked about the barriers they have to overcome to access screening and treatment services. Insurance status proved to be a major barrier, along with provider distance and the long waiting period to get services. The findings showed that women who had a strong and reliable informal support network were more likely seek out preventive services and use community-based resources.

Action Plan Priorities

Substantial progress is being made in the breast cancer movement in the Central Valley Affiliate region, but there are persistent disparities tied to the social determinants of breast health of race/ethnicity, education, income, and insurance status.

Priorities

The following priorities will be used to inform the Affiliate's grantmaking and strategic planning for the next two-year period. Other considerations in determining which priorities to focus on include the statistical data and asset map contained herein, health care reform, and information derived from the key informant surveys which may help increase access to screening and treatment programs that serve the uninsured and underserved.

Priority 1: Increase access and availability of breast health and breast cancer screening services within the county by funding health system partnerships.

Objective 1: In FY12-13, hold at least one grant writing workshop in Fresno to include West County and East County hospitals, nonprofit clinics/hospitals, high schools and/or faith-based organizations.

Objective 2: For FY12-13, develop a collaborative RFP grant encouraging providers within Fresno to partner with providers in West or East County zones in submitting proposals that increase access to residents by offering subsidies for mammograms to those women that can't qualify for the EWC Program.

Objective 3: By December FY11, fund screening for those that do not qualify for EWC, specifically women under age 40 and women who earn between 201% and 350% FPL.

Objective 4: For FY12-13, analyze a RFP to fund pilot patient navigator/promotora program aimed specifically at working with the Latina and Asian/Hmong communities.

Priority 2: Partner with community organizations to effectively promote awareness of breast health education and services with an emphasis on bridging the cultural and linguistic divide by providing culturally sensitive education and outreach to specific communities, and education and outreach in native languages.

Priority populations include (in no particular order): African American/Black, Hispanic/Latina, Native American, and Asian/Hmong women.

Objective 1: For FY12-13, reach out to at least six schools with a predominantly minority student population or faith-based organizations distributed across West County, Fresno, and East County zones.

Objective 2: For FY12-13, begin reaching out to Native American organizations for partnerships to promote breast cancer health awareness and education.

Objective 3: For FY12-13, increase partnerships with community-based organizations that predominantly serve Latino women of low-income through implementation of linguistically and culturally appropriate social marketing campaign for Latinos of low-income; build new partnerships with faith-based organizations serving this community.

Objective 4: For FY12-13, Continue active presence within the Asian/Hmong community for breast health outreach by attending a vendor booth at the Hmong Cancer Coalition health fair and develop educational marketing tools for Hmong radio.

Objective 5: For FY12-13, partner with community-based health organizations through sponsorship/participation in at least four cultural health fair events throughout the county, promoting awareness of breast health issues to the underserved.

Objective 6: For FY12-13, increase partnerships with community and faith-based organizations that predominantly serve African American women by reaching out to six predominantly-African American organizations distributed across West County, Fresno, and East County zones.

Objective 7: By Spring 2012, establish partnership with Central Valley Health Policy Institute promoting healthy lifestyle and awareness of breast health issues to the underserved.

Objective 8: Beginning immediately, encourage research-based screening projects for women in the priority populations with regional academic institutions.

Priority 3: Streamline and codify the grants submission and auditing processes.

Objective 1: For FY12-13, develop mandatory networking events for current grantees to encourage collaborative efforts.

Objective 2: For FY11-12, continue working with grantees to increase rigor and accountability of funded projects to ensure that they meet expected milestones.

Priority 4: Increase Komen visibility and awareness to be recognized in the community as *the* leader in the breast cancer movement.

Objective 1: By Spring 2012, develop a marketing strategy for advertising current regional clinical trials to healthcare providers, clinics, hospitals, and hospices.

Objective 2: Beginning immediately, increase knowledge of the importance of early detection for breast cancer by targeting West and East county (specifically 932, 936 zip codes) using evidence-based and culturally-competent educational strategies.

Objective 3: By FY12-13, increase partnerships with two organizations that predominantly service underserved young women and the Lesbian, Gay, and Transgender Community; to increase awareness of breast health and breast cancer and the availability and accessibility of culturally appropriate and relevant breast health materials.

Objective 4: Beginning immediately, support activities that build a comprehensive database of support services and resources.

REFERENCES

1. Amirikia KC, Mills P, Bush J, Newman LA. Higher population-based incidence rates of triple-negative breast cancer among young African-American women: implications for breast cancer screening recommendations. *Cancer*. 2011 Jan 10.
2. Graziano, KJ, Working with English Language Learners: Preservice Teachers and Photovoice. *International Journal of Multicultural Education*. 2011 13(1): 1-19.
3. Martínez ME, Nielson CM, Nagle R, Lopez AM, Kim C, Thompson P. Breast cancer among Hispanic and non-Hispanic White women in Arizona. *J Health Care Poor Underserved*. 2007 Nov;18(4 Suppl):130-45.
4. Altekruse SF, Kosary CL, Krapcho M, Neyman N, Aminou R, Waldron W, Ruhl J, Howlander N, Tatalovich Z, Cho H, Mariotto A, Eisner MP, Lewis DR, Cronin K, Chen HS, Feuer EJ, Stinchcomb DG, Edwards BK (eds). *SEER Cancer Statistics Review, 1975-2007*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2007/, based on November 2009 SEER data submission, posted to the SEER web site, 2010.
5. <http://planning.cancer.gov/disease/Breast-Snapshot.pdf>
6. <http://www.cdc.gov/cancer/breast/statistics/trends.htm> 6
7. Intercultural Cancer Council 2006 Survivorship report
8. http://www.cdc.gov/cancer/survivorship/basic_info/
9. American Cancer Society, Cancer Facts and Figures, 2010.
10. U.S. Census Bureau, 2010
11. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5603a1.htm>
12. <http://www.cdc.gov/cancer/breast/statistics/screening.htm>
13. <http://ww5.komen.org/BreastCancer/BenefitsofSocialSupport.html>

APPENDIX

Table 9. Current clinical trials within a 100-mile radius of Fresno.

Trial Name	Phase	Protocol ID	Location/Contact Info
An Observational Study of Treatment Patterns and Safety Outcomes for Metastatic or Locally Recurrent Breast Cancer (VIRGO)	IV	AVF4349N NCT00726661	Fresno, CA. Cancer Care Associates. Christyn Anderson. Ph: 559-326-1222 x183 andersonc@ccaonc.com
Phase III Randomized Study of Two Schedules of Adjuvant Doxorubicin, Cyclophosphamide, and Paclitaxel in Patients With Node-Positive or High Risk Node-Negative Breast Cancer	III	SWOG-S0221 S0221, NCT00070564	Fresno, CA. California Cancer Center- Woodward Park Office. Dina Ibrahim. 559-451-3647 Modesto, CA. Memorial Medical Center. Clinical Trials Office- Memorial Medical Center. 209-572-7116 Turlock, CA. Emanuel Regional Cancer Services at Emanuel Medical Center. Lucio Nobile. 209-664-2434
Phase III Randomized Study of Letrozole With or With Lapatinib Ditosylate in Postmenopausal Women with Stage IV Breast Cancer	III	GSK-EGF30008 UCLA-0311034-01, NCT00073528	Bakersfield, CA. Comprehensive Blood and Cancer Center. Ravindranath Patel, MD. 800-563-6643 Fresno, CA. California Oncology of the Central Valley. Christopher Perkins, MD. 800-563-6643
Breast Cancer Trial of an Investigational Drug versus Capecitabine in Male or Female Patients with Advanced Breast Cancer	III	XRP9881B/3001 NCT00081796	Fresno, CA. (No contact information listed for specific site in Fresno)
Phase III Randomized Study of Adjuvant Whole Breast Versus Partial Irradiation in Women With Ductal Carcinoma In Situ or Stage I or II Breast Cancer	III	NSABP-B-39 RTOG-0413, SWOG-NSABP-B-39, NCT00103181	Fresno, CA. California Cancer Center- Woodward Park Office. Brent Kane. 559-447-4050
Phase III Randomized Study of Stereotactic Radiosurgery With Versus Without Whole-Brain	III	NCCTG-N0574 N0574, ACOSOG-N0574,	Modesto, CA. Memorial Medical Center. Clinical Trials Office-

Radiotherapy in Patients With Cerebral Metastases		NCT00377156	Memorial Medical. 209-572-7116
Phase III Randomized Study of Adjuvant Therapy Comprising Doxorubicin Hydrochloride, Cyclophosphamide, and Paclitaxel With Versus Without Bevacizumab in Patients With Lymph Node-Positive or High-Risk, Lymph Node-Negative Breast Cancer	III	ECOG-E5103 E5103, NCT00433511	Fresno, CA. Caner Care Associates. Steven Hager, DO. 559-326-1222
Phase III Randomized Study of Tamoxifen Citrate or Letrozole With Versus Without Bevacizumab in Women With Hormone Receptor-Positive Stage IIIB-IV Breast Cancer (The placebo-controlled portion of the study was cancelled on 5-15-2010)	III	CALGB-40503 CALGB 40503, NCT00601900	Modesto, CA. Memorial Medical Center. Clinical Trials Office- Memorial Medical Center. 209-572-7116
Phase III Study of Docetaxel + Ramucirumab or Placebo in Breast Cancer	III	13892 2008-001727-65 TRIO-012, TRIO- CIRG-012, CP12- 0606, I4T-IE-JVBC, NCT00703326	Bakersfield, CA. ImClone Investigational Site (No contact information listed for specific site in Bakersfield)
Phase III Randomized Study of Radiotherapy With Versus Without Trastuzumab (Herceptin®) in Women With HER2-Positive Ductal Carcinoma In Situ Who Underwent Lumpectomy	III	NSABP-B-43 NSABP-B-43, NCT00769379	Fresno, CA. California Cancer Center- Woodward Park Office. Brent Kane. 559-447-4050 Modesto, CA. Memorial Medical Center. Clinical Trials Office-Memorial Medical Center. 209-572-7116
An Open-Label Study of Trastuzumab-MCC-DM1 (T-DM1) vs. Capecitabine + Lapatinib in Patients With HER2-Positive Locally Advanced or Metastatic Breast Cancer	III	TDM4370g 2008-005 713-22, BO21977, NCT00829166	Bakersfield, CA. Investigational Site. Julie Leach. 661-862-7178. jleach@cbccusa.com
Phase III Randomized Study of Standard Versus Longer Dosing Interval of Zoledronic Acid in Patients With Metastatic Breast Cancer, Metastatic Prostate Cancer, or Multiple Myeloma With Bone Involvement	III	CALGB-70604 CALGB 70604, NCT00869206	Modesto, CA. Memorial Medical Center. Clinical Trials Office- Memorial Medical Center. 209-572-7116

Everolimus in Combination With Exemestane in the Treatment of Postmenopausal Women With Estrogen Receptor Positive Locally Advanced or Metastatic Breast Cancer Who are Refractory to Letrozole or Anastrozole	III	CRAD001Y2301 EUDRACT Number: 2008-008698-69, NCT00863655	Bakersfield, CA. Comprehensive Blood and Cancer Center. Veronica Marquez. 661-322-2206. vmarquez@cbccusa.com Julie Leach. 661-322-2206. jleach@usa.com Alan Alan, M.D. Principal Investigator Fresno, CA. Cancer Care Associates. Garrett Koslan. 559-326-1222. koslang@ccaonc.com Steven Hager, M. D. Principal Investigator
Everolimus in Combination With Trastuzumab and Paclitaxel in the Treatment of HER2 Positive Locally Advanced or Metastatic Breast Cancer	III	CRAD001J2301 EUDRACT Number: 2008-006556-21, NCT00876395	Bakersfield, CA. Comprehensive Blood and Cancer Center. Gloria Swartz. 661-862-7258. gswartz@cbccusa.com Ravindranath Patel Principal Investigator
A Clinical Trial Comparing the Combination of TC Plus Bevacizumab to TC Alone and to TAC for Women With Node-Positive or High-Risk Node-Negative Breast Cancer	III	NSABP B-46-I USOR 07132, NCT00887536	Bakersfield, CA. Comp Blood and Cancer Center (No contact information listed for specific site in Bakersfield)
Study Of Letrozole With or Without PD 0332991 For The First-Line Treatment of Hormone-Receptor Positive Advanced Breast Cancer	II,I	A5481003 NCT00721409	Bakersfield, CA. Pfizer Investigational Site. (No contact information listed for specific site in Bakersfield)
Docetaxel, Carboplatin, and Trastuzumab and/or Lapatinib in Treating Women With Stage I, Stage II, or Stage III Breast Cancer That Can Be Removed by Surgery	II	CDR0000616008 P30CA016042, TRIO-TORI-B-07, SANOFI-AVENTIS- TRIO-TORI-B-07, WIRB-20080822, NCT00769470	Bakersfield, CA. Comprehensive Blood and Cancer Center. Clinical Trials Office- Comprehensive Blood and Cancer Center. 661-862-7178
A Study of MM-121 in Combination With Paclitaxel in Patients With Advanced Gynecologic and Breast Cancers	I	MM-121-04-01-4 NCT01209195	Bakersfield, CA. Comprehensive Blood and Cancer Center. Bobbie Wyatt. Email: bwyatt@cbccusa.com

Source: National Cancer Institute, 2011 (www.cancer.gov/clinicaltrials/)

Table 10. Facilities offering mammography services in Fresno County (zip codes 937, 936, 932)

Facility	Phone#	City	ZIP
Clovis Community Medical Center	(559) 324-4000	Clovis, CA	93611
Kaiser Permanente Clovis (TPMG)	(559) 324-5025	Clovis, CA	93612
Coalinga Regional Medical Center	(559) 935-6400	Coalinga, CA	93210
Sablan Medical Clinic	(559) 659-3037	Firebaugh, CA	93622
Kaiser Permanente Fresno (KFG)	(559) 448-4055	Fresno, CA	93720
St. Agnes Breast Center at the Plaza	(559) 450-2662	Fresno, CA	93720
Diagnostic Breast Center @ St. Agnes	(559) 450-7545	Fresno, CA	93720
St. Agnes Breast Center	(559) 450-3833	Fresno, CA	93720
Advanced Medical Imaging	(559) 447-4000	Fresno, CA	93710
Fresno Diagnostic Center	(559) 459-6520	Fresno, CA	93701
Internal Medicine Associates of Fresno	(559) 435-2630	Fresno, CA	93720
Fresno Imaging Center	(559) 447-2600	Fresno, CA	93710
Women's Imaging Specialists	(559) 435-4433	Fresno, CA	93710
Sierra Kings District Hospital	(559) 638-8155	Reedley, CA	93654
Selma Community Hospital	(559) 891-1000	Selma, CA	93662

Source: FDA Mammography website.

Table 11. Oncology specialists in Fresno County.

Doctors	Oncologist/Radiation Oncologist	Phone
Dr. Amber Arlington	Radiation Oncologist	(449) 584-6000
Dr. Venkateswara R. Avula	Oncologist	(559) 497-8500
Dr. Thomas J. Barclay	Radiation Oncologist	(559) 325-5000
Dr. Susan Barrows	Radiologist	(559) 324-4000
Dr. Judy Champaign	Radiologist	(559) 324-4000
Dr. Uzair B. Chaudhary	Oncologist	(559) 326-1222
Dr. Robert W D'Acquisto	Oncologist	(559) 447-4949
Dr. Giatry V. Dave	Radiation Oncologist	(559) 437-1000
Dr. Marshall S Flam	Oncologist	(559) 447-4949
Dr. Vassi Gardikas	Breast Surgeon	(559) 450-3901
Dr. Debra C. Garley	Oncologist	(559) 447-4949
Dr. Deborah Gumina	Breast Surgeon	(559) 450-3901
Dr. Leonard T. Hackett	Oncologist	(559) 447-4949
Dr. Steven J. Hager	Oncologist	(559) 326-1222
Dr. Abdul M. Haseeb	Oncologist	(559) 326-1222
Dr. Klaus D Hoffmann	Oncologist	(559) 431-0995
Dr. Dina Ibrahim	Oncologist	(559) 447-4050
Dr. Grace R. Inouye	Oncologist	(559) 448-4500
Dr. William J Jawien	Oncologist	(559) 326-1222
Dr. Madhu Joseph John	Radiation Oncologist	(559) 450-5500
Dr. Brent Kane	Radiation Oncologist	(559) 447-4050
Dr. David J. Koster	Oncologist	(559) 447-4949
Dr. Charles S. Kuzma	Oncologist	(559) 326-1222
Dr. Lisa E. Lamberth	Oncologist	(559) 228-5330
Dr. Tony Tong Lee	Radiation Oncologist	(559) 447-4949
Dr. Li Liu	Radiation Oncologist	(559) 450-5500
Dr. Michael J. Moffett	Oncologist	(559) 326-1222
Dr. Jedidiah Mercer Monson	Radiation Oncologist	(559) 326-1222
Dr. Mohammed Abdelsadek Nawar	Radiation Oncologist	(209) 572-7237
Dr. Anantanarayan Padmanabhan	Oncologist	(559) 326-1222
Dr. Rabia Parveez	Oncologist	(559) 326-1222
Dr. Joseph M. Pascuzzo	Oncologist	(559) 326-1222
D. Michael Stephen Payne, Jr.	Radiation Oncologist	(559) 447-4050
Dr. Christopher R. Perkins	Oncologist	(559) 438-7390
Dr. William C. Pitts	Pathologist	(559) 459-1845
Dr. William Jesse Podolsky	Radiation Oncologist	(559) 447-4949
Dr. Veena H. Ramsinghani	Radiation Oncologist	(559) 450-5500
Dr. Ravi D. Rao	Oncologist	(559) 447-4949
Dr. John A. Reinsch	Oncologist	(559) 448-4500
Dr. Bonna Rogers-Neufeld	Radiologist	(559) 297-0300
Dr. Anwer A. Shaikh	Oncologist	(559) 661-1965
Dr. Rajinder Singh	Radiation Oncologist	(559) 325-5000

Dr. Lawrence M. Stolberg	Oncologist	(559) 448-4500
Dr. Winlove B. Suasin	Radiation Oncologist	(559) 450-5500
Dr. Diane C. Tsai	Radiation Oncologist	(559) 447-4050
Dr. Peter Wittlinger	Oncologist	(559) 447-4949
Dr. Douglas Wong	Radiation Oncologist	(559) 447-4050

Source: Web-based resources including, www.healthgrades.com/oncology-directory/ca-california/fresno;
www.knowcancer.com/oncologists/california/fresno/.