Quantitative Data: Measuring Breast Cancer Impact in Local Communities

Quantitative Data Report

(This section will be inserted in the final version of report.)

Quantitative Data Report Findings

Susan G. Komen® Sacramento Valley includes 19 counties in Northern California that are diverse in their population density, racial and ethnic composition, and socio-demographic characteristics. Because a number of the counties are very rural, including Colusa, Glenn, Plumas, and Sierra Counties, not all counties have an adequate population base to monitor trends in breast cancer mortality and late-stage breast cancer incidence.

There are three counties within the Sacramento Valley Affiliate region that are regarded as "highest priority" due to their late-stage breast cancer incidence and breast cancer mortality rates. These include Amador, Colusa, and Yuba Counties. Amador and Yuba Counties will likely not meet the HP2020 late-stage breast cancer incidence and breast cancer mortality targets by 2020. Although Amador County has a base late-stage breast cancer incidence rate of 40.6 cases per 100,000 women – which is *lower* than the target of 41.0 cases per 100,000 women – it shows an *increasing* trend for the period 2006-2010. Conversely, Yuba County has a base late-stage breast cancer incidence rate of 45.3 cases per 100,000 women – which is *higher* than the target of 41.0 cases per 100,000 women – and shows an *increasing* percent change trend for the period 2006-2010 (Table 8). For breast cancer mortality, Amador County has a base rate of 22.8 deaths per 100,000 breast cancer cases – which is *higher* than the target of 20.6 deaths per 100,000 women – and shows a slightly *increasing* trend for the period 2006-2010. Yuba County has a base breast cancer mortality rate of 22.5 deaths per 100,000 women – which is *higher* than the target of 20.6 deaths per 100,000 breast cancer cases – and shows a slightly *decreasing* trend for the period 2006-2010 (Table 8). Breast cancer screening rates in Amador and Yuba counties are not significantly different from the rate for the Sacramento Valley region. Colusa County will likely not meet the HP2020 late-stage breast cancer incidence target by 2020. Due to small numbers of breast cancer deaths in Colusa County, it is not possible to evaluate the time needed to reach the HP2020 death rate target. Because of the uncertainty of progress toward the breast cancer mortality goal in this sparsely populated county, the Affiliate is choosing to focus on Amador and Yuba as priorities for the Komen Sacramento Valley Affiliate service area.

Additionally, the Affiliate has selected Solano County as the third priority county. Solano was ranked a "high priority" because it is not likely to meet the HP2020 target rate for late-stage breast cancer incidence by 2020 and not likely to meet the HP2020 target for breast cancer mortality until 2016. Solano County has a base late-stage breast cancer incidence rate of 48.3 – which is *higher* than the target of 41.0 cases per 100,000 women – and shows a slightly *decreasing* trend for the period 2006-2010. Additionally, Solano County has a base breast cancer mortality rate of 23.9 per 100,000 women – which is *higher* than the target of 20.6 deaths per 100,000 women – and shows a *decreasing* trend for the period 2006-2010. Breast cancer screening rates in Solano County were not significantly different from the rate for the Sacramento Valley region.

Table 8. Breast Cancer Screening Rates and Trends in Late-Stage Breast Cancer Incidence and Breast Cancer Mortality in Target Counties and Sacramento Valley Service Area

County	*% Breast Cancer Screening with 95% Confidence Intervals*	*% Late-Stage Breast Cancer Incidence Trend*	*% Breast Cancer Mortality Trend*
Amador	69.7 (32.9-91.5)	8.9	0.5
Yuba	83.4 (47.7-96.5)	0.3	-0.4
Solano	86.8 (70.3-94.9)	-0.9	-2.1
Sacramento Valley Region	82.2 (78.4-85.4)	-1.9	N/A

*Source: Late-stage incidence data: NAACCR – CINA Deluxe Analytic File
Breast cancer mortality: CDC-NCHS mortality data in SEER*Stat
Breast cancer screening: CDC-Behavioral Risk Factor Surveillance System (BRFSS), 2012.

Amador, Yuba, and Solano Counties have different socio-demographic characteristics that could influence the rates of late-stage breast cancer incidence and breast cancer mortality (Table 9). Amador and Yuba Counties, which are predominately rural, have rates of unemployment that are higher than those of the Sacramento Valley region. Additionally, Amador County has a higher proportion of women age 65 and older, and Yuba County has higher proportions of people living in poverty and having less than a high school education compared to the Sacramento Valley region. If women are unemployed or living in poverty, there may be a greater need for safety net programs that ensure women have access to breast cancer screening and diagnostic services. Because Solano County has the largest proportion of Black/African-American and Asian women in the Sacramento Valley Affiliate service area, the Affiliate feels it is important to explore potential disparities in breast cancer screening, diagnosis, and treatment within these racial groups. In fact, the Sacramento Valley Affiliate identified African American women in Solano County as a priority in its 2011 Community Profile Report. The Affiliate intends to pursue analysis of safety net programs and health disparities based on race (i.e. Black/African American in Solano County) in the health systems analysis.

Table 9. Target Counties with Substantial Differences in Population Characteristics Compared to the Sacramento Valley Service Area

County	*% Hispanic*	*% Black/ African American*	*% Asian*	*% Age 65+*	*% Income Below 250% of Poverty*	*% Less than HS Education*	*% Unemployed*
Amador				24.4			15.2
Yuba	25.6		8.7		47.4	21.7	17.0
Solano	23.8	16.6					
Sacramento Valley Region	25.2	7.9	13.3	13.9	34.2	16.0	12.0

*Data reflect proportion of people (men and women) in the population with a specific socio-demographic characteristic.
Source of population data: US Census Bureau – Population Estimates for 2011
Source of socioeconomic data: US Census Bureau – American Community Survey, 2007-2011

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In addition to the three counties described above, the Sacramento Valley Affiliate will explore populations of medically underserved women who are Black/African American, Hispanic, and Asian and Pacific Islander (API), with special emphasis on South Asian and Hmong women.

African-American women younger than age 45 have a higher incidence of breast cancer than the general population. A study published by Amirikia et al. has demonstrated that younger African-American women are more likely to have tumors that are triple negative, meaning negative for estrogen receptor, progesterone receptor, and/or the human epidermal growth factor receptor 2/neu marker (Amirikia KC, 2011). Targeted treatments of triple-negative breast cancers do not kill cancer cells that have spread from the original site, which results in higher breast cancer mortality. In 2009, the US Preventive Services Task Force recommended initiating mammography screening for women age 50 and older. This screening strategy could hurt women who have an increased risk of early-onset breast cancer, advanced-stage disease, and/or biologically aggressive tumors. For this reason, early screening and treatment are important for African-American women under age 50. Because the proportion of African-American women in Solano County is more than twice as high as that for the Sacramento Valley Region (Table 3), this population of underserved women will be an area of focus for the 2015 Community Profile Report.

The literature has also shown that Hispanic women in areas of low socioeconomic status are more likely to have triple-negative breast cancers. Compared to non-Hispanic White women, Hispanic women faced a 23 percent increased risk of a triple-negative breast cancer while African-American women showed a 77 percent increased risk; both associations were statistically significant (Bauer KR, 2003). Using California Cancer Registry data, the researchers show that being African American or Hispanic and under age 40 were the most powerful risk factors for triple-negative breast cancers. Bickell et al. used cancer data from six New York City hospitals to show that minority women have higher levels of comorbidity and underutilize necessary adjuvant treatments (Bickell NA, 2006). Adjuvant therapy or treatment is any treatment given after the primary therapy, which is often surgery. Specifically, evidence of underuse of one or more adjuvant treatment therapies was identified in 16 percent of White women as compared to 34 percent of African-American and 23 percent of Hispanic women. African-American and Hispanic women in this population had more comorbidities and less insurance that White women – two factors that could impact a provider's decision to prescribe and a patient's ability to accept and receive adjuvant treatments.

API women, in aggregate, are more likely to die from breast cancer than any other type of cancer (Fu L, 2003; Tanjasiri S, 2001). Mortality rates have increased in API women by 200 percent since 1990 (Kagawa-Singer M, 2000).

A significant amount of cultural variation exists among API women. In a study of disparities in breast cancer survival among API women by ethnicity and immigrant status, South Asian women (i.e., Asian Indian, Pakistani, Sri Lankan, or Bangladeshi) had an 80 percent higher mortality risk than did US-born Japanese women. Foreign-born Asian women had consistently more advanced breast cancer at diagnosis and lower survival rates than their US-born counterparts (Gomez SL, 2010). API women born outside of the United States tend to have lower socioeconomic status, more linguistic barriers, Asian-specific beliefs and behaviors about health, and are less likely to be screened for breast cancer. Hmong women are among those at the highest risk for health problems due to high rates of poverty, language isolation, and cultural barriers (Depke JL, 2011). Given the association of these demographic characteristics with breast cancer screening, late-stage diagnosis, and mortality, the Sacramento Valley Affiliate

intends to identify the breast health needs of API women, with a special focus on Yuba County.