

Quantitative Data: Measuring Breast Cancer Impact in Local Communities

Additional Quantitative Data Exploration

Additional data were needed to examine the breast health needs of certain sub-populations. In particular, the Komen Michigan service area has a sizable migrant and Hispanic/Latino population, and larger urban centers have a high density of African American/Blacks.

Community health indicators also include social determinants of health (Raphael, 2004). Employment and earning a living wage are important indicators to review in assessing the needs of populations. Low income individuals are less likely to have health insurance. (American Communities Survey (ACS), 2010). Those people living in poverty and without health insurance are less likely to receive annual screening (ACS, 2010).

Both Hispanic/Latino and Black communities in Michigan disproportionately suffer from poverty and unemployment. In order to better understand the socioeconomic disparities in each county, information from the American Communities Survey conducted by the US Census Bureau was reviewed. This sub-population county level data will enhance the socioeconomic data provided in QDR Table 8 and 9.

Mid-Michigan Additional Data

Table 14: The American Communities Survey conducted by the US Census: Selected Socioeconomic Data by Race/Ethnicity in the Komen Mid-Michigan Service Area.

County	Race/Ethnicity	% Concentration*	% Unemployed	% Families Below Poverty
Clinton	White	93.7%	7.6%	11.1%
	Black	1.5%	9%	NA
	Hispanic/Latino	4.2%	10.1%	9.4%
Shiawassee	White	96.9%	12.5%	15.2%
	Black	0.6%	1.3%	NA
	Hispanic/Latino	2.6%	17.8%	23.5%
Eaton	White	88%	9.9%	10%
	Black	6.4%	13.1%	23.9%
	Hispanic/Latino	5.1%	20.8%	21%
Ingham	White	76.4%	9.2%	20.4%
	Black	11%	20.9%	34.4%
	Hispanic/Latino	7.5%	15.2%	34.9%
Livingston	White	96.6%	8.7%	5.8%
	Black	0.4%	2.5%	NA
	Hispanic/Latino	2.1%	6.3%	11.7%
Jackson	White	87.7%	11.6%	15.9%
	Black	8.5%	25.3%	46.6%
	Hispanic/Latino	3.2%	15.4%	38%
Washtenaw	White	78%	7.9%	12.7%
	Black	14.2%	17.7%	30.5%

	Hispanic/Latino	4.3%	10.1%	29.3%
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Source: American Communities Survey (2010), US Census Bureau.

*Source: QDR Table 4 estimating women in the population in 2011 based on US Census estimates.

Note: Hispanic includes mixed race individuals so percentages will not total 100 percent.

The largest concentration of Hispanic/Latinos in the Mid-Michigan service area live in Ingham County (7.5 percent) (Table 14). Jackson County has a smaller Hispanic/Latino population, but socioeconomic factors make it a community of interest. The American Communities Survey performed by the US Census reveals 34.9 percent of Hispanic/Latinos in Ingham County and 38.0 percent in Jackson County live on incomes below 100 percent of the Federal Poverty Level (Table 14). Hispanic/Latinos in Ingham and Jackson Counties had unemployment rates of 15.2 percent and 15.4 percent respectively (Table 14).

The largest concentration of African American/Blacks in the Mid-Michigan service area is in Ingham (11 percent), Jackson (8.5 percent), and Washtenaw (14.2 percent) Counties (Table 14). The ACS data reveals that 34.4 percent of African American/Blacks in Ingham County, 46.6 percent of African American/Blacks in Jackson County, and 30.5 percent of African American/Blacks in Washtenaw County live on incomes below 100 percent of the Federal Poverty Level (Table 14). African American/Blacks in Ingham, Jackson, and Washtenaw Counties had unemployment rates of 20.9 percent, 25.3 percent, and 17.7 percent respectively (Table 14).

A review of the Mid-Michigan Affiliate’s demographics, socioeconomic data, and geography suggested that there could be specific cities and townships that may have different breast cancer data than the county as a whole, and perhaps, due to the diversity of the area, county level data did not reveal significant trends within areas deemed otherwise low-priority. Examining zip code level data should be considered in future studies.

Southwest Michigan Additional Data

Table 15: The American Communities Survey conducted by the US Census: Selected Socioeconomic Data by Race/Ethnicity in the Komen Southwest Michigan Service Area.

	Race/ Ethnicity	% Concentration*	% Unemployed	% Families Below Poverty
Allegan	White	90.0%	8.1%	8.0%
	Black	1.8%	4.0%	27.7%
	Hispanic/Latino	6.5%	16.7%	21.9%
Berrien	White	76.1%	8.4%	6.7%
	Black	17.0%	22.3%	38.3%
	Hispanic/Latino	4.3%	11.0%	36.6%
Branch	White	94.7%	11.1%	12.0%
	Black	0.9%	11.3%	27.6%
	Hispanic/Latino	4.0%	21.8%	34.1%
Calhoun	White	80.7%	12.7%	9.9%
	Black	12.2%	22.8%	30.9%
	Hispanic/Latino	4.4%	19.7%	24.7%
Cass	White	88.6%	9.1%	9.6%

	Black	6.4%	13.4%	24.1%
	Hispanic/Latino	2.8%	11.8%	26.4%
Kalamazoo	White	80.3%	9.5%	8.2%
	Black	12.4%	21.1%	31.8%
	Hispanic/Latino	4.0%	19.3%	28.0%
St. Joseph	White	88.7%	13.8%	10.3%
	Black	3.4%	8.9%	14.6%
	Hispanic/Latino	6.3%	38.6%	40.7%
Van Buren	White	82.7%	10.0%	11.1%
	Black	5.2%	14.3%	20.2%
	Hispanic/Latino	9.9%	16.6%	23.5%

Source: American Communities Survey (2010), US Census Bureau.

*Source: QDR Table 4 estimating women in the population in 2011 based on US Census estimates.

Note: Hispanic includes mixed race individuals so percentages will not total 100 percent.

Within Southwest Michigan, the counties with the largest proportion of Hispanic/Latinos are Van Buren (9.9 percent), Allegan (6.5 percent) and St. Joseph (6.3 percent. (Table 15). St. Joseph County stands out as having the highest percentage of both unemployment and poverty among Hispanic/Latinos in the region, 38.6 percent and 40.7 percent, respectively (Table 15). Following St. Joseph County are Branch (21.8 percent unemployment and 34.1 percent poverty), Kalamazoo (19.3 percent unemployment and 28.0 percent poverty), and Calhoun County (19.7 percent unemployment and 24.7 percent poverty) (Table 15).

Within Southwest Michigan, the counties with the largest proportion of African American/Blacks are Berrien (17 percent), Kalamazoo (12.4 percent) and Calhoun (12.2 percent) (Table 15). The counties with the highest unemployment among African American/Blacks are Calhoun (22.8 percent), Berrien (22.3 percent), and Kalamazoo (21.1 percent) (Table 15). The counties with the highest poverty among African American/Blacks are Berrien (38.3 percent), Kalamazoo (31.8 percent), and Calhoun (30.9 percent) (Table 15). Within the counties of Southwest Michigan, Berrien, Calhoun and Kalamazoo Counties stand out as having the highest percentage of both unemployment and poverty among African American/Blacks in the region.

West Michigan Additional Data

Table 16: The American Communities Survey conducted by the US Census: Selected Socioeconomic Data by Race/Ethnicity in the Komen West Michigan Service Area.

County	Race/Ethnicity	% Concentration*	% Unemployed	% Families Below Poverty
Kent	White	84.9%	8.2%	7.3%
	Black	11.4%	19.9%	34.5%
	Hispanic/Latino	9.5%	13.7%	31.5%
Montcalm	White	97.9%	14.8%	15.3%
	Black	0.8%	31.2%	9.1%
	Hispanic/Latino	3.0%	12.1%	21.7%
Muskegon	White	82.6%	13.3%	10.1%
	Black	15.4%	31.1%	37.4%
	Hispanic/Latino	4.8%	15.7%	22.4%
Newaygo	White	96.8%	13.1%	12.8%

	Black	1.5%	13.2%	16.1%
	Hispanic/Latino	5.3%	9.4%	41.3%
Ottawa	White	94.2%	7.1%	4.4%
	Black	2.1%	15.4%	14.5%
	Hispanic/Latino	8.4%	13.3%	18.9%

Source: American Communities Survey (2010), US Census Bureau.

*Source: QDR Table 4 estimating women in the population in 2011 based on US Census estimates.

Note Hispanic includes mixed race individuals so percentages will not total 100 percent.

The West Michigan service area has a sizable migrant farmworker and Hispanic/Latino population and its urban centers have a high density of Black individuals.

The largest concentration of Hispanic/Latinos in the West Michigan service area live in Kent and Ottawa Counties (Table 16). The American Communities Survey performed by the US Census reveals 31.5 percent of Hispanic/Latinos in Kent County and 18.9 percent in Ottawa County live on incomes below 100 percent of the Federal Poverty Level (Table 16). Poverty levels for Hispanic/Latinos in the other three counties were also disproportionately high. Hispanic/Latinos in Kent and Ottawa Counties had unemployment rates of 13.7 percent and 13.3 percent respectively (Table 16).

The largest concentration of African American/Blacks in the West Michigan service area is in Kent and Muskegon Counties (Table 16). The ACS data reveals that 34.4 percent of African American/Blacks in Kent County and 37.4 percent in Muskegon County live on incomes below 100 percent of the Federal Poverty Level (Table 16). African American/Blacks in Kent and Muskegon Counties had unemployment rates of 19.6 percent and 31.2 percent respectively (Table 16).

Selection of Target Communities

The Susan G. Komen Michigan Affiliate has identified eight communities of interest within the service area. Communities of interest include:

Hispanic/Latinos

- Kent County
- Ottawa County
- Van Buren County

African Americans/Blacks

- Berrien County
- Jackson County
- Muskegon County

Rural Populations

- Cass County
- Livingston County
- Montcalm County

The communities selected have been chosen based on the escalated need that special populations face in accessing crucial breast screening services. Special populations identified for the purpose of this study include: Hispanic/Latino, African American/Black, and Rural

populations. To further inform the assessment, locations where these populations are concentrated have been identified. Hispanic/Latino communities of interest lie within Ottawa and Van Buren Counties. African American/Black communities of interest are in Muskegon, Berrien, and Jackson Counties. Rural communities of interest are located within the counties of Montcalm, Cass, and Livingston.

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

- Incidence rates and trends
- Death rates and trends
- Late-stage rates and trends
- Below average screening proportions
- Population demographics by race and gender
- Residents living below poverty level
- Residents living without health insurance
- Unemployment percentages
- Residents who are linguistically isolated and/or foreign born

When selecting target communities, the Affiliate reviewed the above referenced data as well as Healthy People 2020 (HP2020), a federal initiative that provides specific health objectives for communities and the US as a whole. Additionally, the Affiliate considered information presented in an assessment provided and produced by the Michigan Public Health Institute in August 2013 specific to zip code level data for the Mid-Michigan service area. Specific to the goals of the Komen Michigan Affiliate, the Affiliate considered the time needed to meet the HP2020 objectives for reducing women's death rate from breast cancer and late-stage diagnosis rates.

Hispanic/Latinos and Migrant Farmworkers in Ottawa and Van Buren Counties:

The Komen Southwest and West Michigan service areas have a higher percentage of Hispanic/Latinos (5.0 percent and 8.0 percent respectively) than Michigan (4.4 percent) (Tables 2 and 3). Van Buren (9.9 percent), Kent (9.5 percent), Ottawa (8.4 percent), Allegan (6.5 percent), and St. Joseph (6.3 percent) Counties in particular, have high Hispanic/Latino populations (Tables 15 and 16). Hispanic/Latinos in the Michigan service area disproportionately suffer from poverty and low employment rates (Tables 14, 15 and 16). These social determinants of health create barriers to accessing breast health care (Raphael, 2004). Within the Hispanic/Latino population, those who work as migrant farmworkers have also been identified as a population in need.

A review of health indicators demonstrates that Hispanic/Latinos are a population in need. Hispanic/Latinos and migrant farmworkers were chosen as a target population because of high poverty rates, high unemployment percentages, high levels of isolation and transience of migrant farmworkers and because other breast health indicators were suppressed or limited due to sample size.

The largest concentration of Hispanic/Latinos in the West Michigan service area live in Kent and Ottawa Counties (Tables 8 and 16). The American Communities Survey performed by the US Census reveals 18.9 percent of Hispanics/Latinos in Ottawa County live on incomes below 100 percent of the Federal Poverty Level (ACS, 2010). Hispanic/Latinos in Ottawa Counties had unemployment rates 13.3 percent. (ACS, 2010). Ottawa County also has one of the highest

incidence rates (125.9 per 100,000) (Table 3). 31.5 percent of Hispanics/Latinos in Kent County live on incomes below 100 percent of the Federal Poverty Level (ACS, 2010). Hispanic/Latinos in Kent County had unemployment rates of 13.7 percent. (ACS, 2010).

The largest concentration of Hispanic/Latinos in the Southwest Michigan service area live in Van Buren County (Table 15). The American Communities Survey performed by the US Census reveals 23.5 percent of Hispanic/Latinos in Ottawa County live on incomes below 100 percent of the Federal Poverty Level (ACS, 2010). Hispanic/Latinos in Van Buren County suffer unemployment rates of 16.6 percent. (ACS, 2010). Van Buren County also has one of the lowest screening rates in the whole Affiliate area at 59.4 percent. (Table 6).

In addition to Hispanic/Latino residents, a large migrant farmworker population resides in Michigan during the harvest months. The Southwest and West Michigan service areas are home to the “Fruit Ridge” where much of the nation’s fruit is produced. As a result, there is a large migrant population that relocates to the Southwest and West Michigan region during the harvest months. Because of the transient and linguistically isolated nature of this population, migrant farmworkers are an underserved medical population.

To better understand the migrant farmworker population, the 2013 Michigan Update Migrant and Seasonal Farmworker Enumeration Profile Study was reviewed (State of Michigan, 2013). Notably, this study only included registered migrant farmworkers, and while registration with the state is increasing, not all workers are properly registered. 49,135 migrant farmworkers are registered in Michigan at the peak of harvest season with an additional 43,832 non-worker household members joining them (State of Michigan, 2013). Ottawa and Van Buren Counties have some of the highest populations of migrant farmworkers with an estimated 13,345 and 12,527 farmworkers and non-worker household members at the peak of harvest respectively (State of Michigan, 2013). Kent also has a large number of migrant farmworkers with a peak estimate of 4,953 farmworkers and household members (State of Michigan, 2013).

In addition to the registered migrant farmworkers, there are many who go unregistered. As a result, legal status may pose a barrier to accessing care. A 2007-2009 National Agricultural Workers Survey indicated that 48% of farmworkers do not have legal authorization to work in the U.S. (National Center for Farmworker Health, 2013). Changes in the legal landscape of the U.S. has resulted in fewer visas being issued. Prior to the H2 visa program’s implementation from 1942 to 1964, the Bracero Program granted over 4 million visas to guest workers. In 2010, the U.S. Department of State granted 55,921 H2A visas for agricultural workers. (NCFH, 2013). Without legal authorization, accessing breast health resources can be difficult.

Furthermore, many migrant farmworkers are linguistically isolated. 72% of farmworkers are foreign born with 68% coming from Mexico. Of those surveyed, 35% reported they could not speak English at all. (National Center for Farmworker Health, 2013).

Finally, data is often limited or suppressed when examining the breast cancer burden for Hispanic/Latinos, and little data is available specifically regarding migrant farmworkers. Due to small sample sizes, data has been suppressed for Hispanic screening rates (Table 4, 5, 6) and death rates (Table 1, 2, 3). While the incidence rate for Hispanic/Latinos is reported in Southwest and West Michigan as decreasing, that trend is based on a very small number of cases, just larger than the amount that would have resulted in the data being suppressed for small numbers (Tables 2 and 3). Small numbers noted for Hispanic/Latinos, which tend to yield

wide-spread confidence intervals, is a limitation of the data in Tables 1, 2, and 3. Further study into these indicators revealed that, across the board, cancer incidence and death rate data for Hispanic/Latinos is limited and data specific to migrant workers is sparse. Better-designed studies are needed to better understand the breast cancer burden in the Hispanic/Latino and migrant population. The lack of data, data suppression, and data limitation are troubling and may indicate a population isolated from local health officials and health systems, and in need of further assessment.

As a result of the limitation of the data available, further exploration is needed to better understand the breast health gaps in the Hispanic/Latino and migrant farmworker population in Kent, Ottawa, and Van Buren Counties. The Health Systems Analysis will provide an opportunity to review the health systems that are serving the Hispanic/Latino population as well as the service providers who are working with the migrant farmworkers in Kent, Ottawa, and Van Buren Counties. Connecting with service providers for these communities will provide a better understanding of the breast cancer burden, as well as the unique language and cultural issues surrounding the provision of breast health to Hispanic/Latinos and migrant farm workers in Ottawa and Van Buren Counties.

Black Populations in Berrien, Jackson, and Muskegon Counties:

Berrien, Jackson, and Muskegon Counties are home to the largest concentrations of Black populations in the Komen Michigan service area. A review of socioeconomic data and breast cancer burden data demonstrates that African American/Blacks in these counties are a population in need. This target population has been chosen because of high rates of poverty, unemployment, breast cancer deaths, and late-stage diagnoses.

Social disparities lead to health disparities (Raphael, 2004). African American/Blacks across the Komen Michigan service area disproportionately experience high levels of poverty and unemployment. African American/Blacks in Berrien County are almost three times as likely as Whites to be unemployed (22.3 percent vs. 8.4 percent), and nearly six times (38.3 percent vs. 6.7 percent) more likely to live below 100 percent of the Federal Poverty Level than their White counterparts (Table 15). African American/Blacks in Jackson County experience 25.3 percent unemployment and 46.6 percent live on incomes less than 100 percent of the Federal Poverty level (Table 14). African American/Blacks in Muskegon County experience 31.2 percent unemployment and 37.4 percent live on incomes less than 100 percent of the Federal Poverty Level (Table 16).

In addition to social determinants of health, indicators of the cancer burden in the Black population demonstrate a population in need. In the Mid-Michigan service area African American/Blacks have the highest death rate (34.3 per 100,000) and the highest late-stage diagnosis rate (43.3 per 100,000) (Table 1). In the West Michigan service area, African American/Blacks have the highest death rate (32.2 per 100,000) and the highest late-stage diagnosis rate (41.1 per 100,000) (Table 3). In the Southwest service area, African American/Blacks have the highest breast cancer death rate (35.8 per 100,000 women) (Table 2). Additionally, while late-stage rates are trending downward, African American/Blacks still have the highest rate of late-stage diagnosis (52.3 per 100,000 women) in the Southwest Michigan service area (Table 2).

Jackson County is located in the center of the Mid-Michigan service area. Home to a large urban area as well as several rural communities, Jackson is an important target community for

the following years. A small portion of Ingham County, primarily the greater Lansing area, will be included in the target community.

The health system analysis portion of the Community Profile will study the breast health resources available to Black women in Berrien, Jackson, and Muskegon Counties throughout the continuum of care. Further study will provide a better understanding of the cancer burden for Black women across the affiliate service areas.

Rural Populations in Livingston, Montcalm, and Cass Counties

Rural populations in Livingston, Montcalm, and Cass Counties were chosen as communities of interest due to breast health indicators and socioeconomic factors. The health system analysis will explore how transportation and healthcare factors may play a role in the health outcomes of the population in these rural areas.

Livingston County is a rural area that includes two towns of Howell and Brighton. Livingston County is reported as needing 11 years to achieve the HP2020 target for female breast cancer death rates and 13 years to achieve the HP2020 target for female breast cancer late-stage incidence rates (Table 11). Livingston also had higher proportions of late-stage diagnoses compared to the service area as a whole (Table 1).

Similarly, Montcalm was chosen as a county of interest not only for its rural population, but also for its rising incidence of breast cancer related deaths (Table 3). While being identified as only a “medium” priority (Table 13), Montcalm is the only county in the West Michigan service area with an average increase in annual deaths (1.9 percent, Table 3). Examining health care systems and access to care could greatly benefit this population.

In the Southwest Michigan service area, Cass County was selected as a community of interest not only for its rural population but also due to its designation as an area that is medically underserved (Table 12). Identified as an area of “Medium-Low” priority, Cass County is predicted to take 10 years to meet the death rate target set by Healthy People 2020 (Table 12).

Although these services areas have several metropolitan areas where services are likely to be readily available, the qualitative analysis will provide an in-depth look at barriers to accessing such services, including but not limited to cost, transportation, and cultural barriers related to linguistic isolation.

Conclusion

The aforementioned populations and areas were chosen in an effort to examine disparities in health care services, specifically in accessing these services. The Health Systems Analysis will be utilized to address the question of access while also painting a picture of the gaps needing to be filled when it comes to serving the vulnerable African American/Black, Hispanic/Latino, and Rural populations and their specific needs.