Dignity Health
Mercy General Hospital

Mercy General Hospital

2016 Community Health Needs Assessment

Acknowledgements

This report was prepared by Valley Vision on behalf of Mercy General Hospital and the Sacramento Region Community Health Needs Assessment (CHNA) Collaborative. Through the course of the CHNA project, many organizations and individuals contributed input on the health issues and conditions impacting their communities or the communities they serve. We gratefully acknowledge the contributions of these participants, many of whom shared deeply personal challenges and experiences with us. We hope that the contents of this report serve to accurately represent their voices.

- **Primary Author:** Amelia Lawless, CHES, ASW, MPH
- **Secondary Authors:** Heather Diaz, DrPH, Giovanna Forno, BS, Anna Rosenbaum, MSW, MPH, Mathew C. Schmidtlein, PhD, Katie Strautman, MSW, Sarah Underwood, MPH and Jenny Wagner, MPH (c)

Table of Contents

List of Tables

List of Figures

EXECUTIVE SUMMARY

Community Health Needs Assessment (CHNA) Background/Purpose Statement

The purpose of this community health needs assessment (CHNA) is to identify and prioritize significant health needs of the community served by Mercy General Hospital (MGH). The priorities identified in this report help to guide the hospital's community health improvement programs and community benefit activities, as well as its collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets requirements of the Patient Protection and Affordable Care Act and California Senate Bill 697 that not-for-profit hospitals conduct a community health needs assessment at least once every three years.

This report documents the processes, methods, and findings of the CHNA conducted in partnership with MGH, located at 4001 J Street in Sacramento, California. Building on federal and state requirements, the objective of the 2016 CHNA was:

> *To identify and prioritize community health needs and identify resources available to address those health needs, with the goal of improving the health status of the community at large and for specific locations and/or populations experiencing health disparities.*

Community Definition

The community or hospital service area (HSA), is defined as the geographic area (by ZIP code) in which the hospital receives its top 80% of discharges.

Assessment Process and Methods

The CHNA was completed as a collaboration of the four major health systems in the Greater Sacramento region: Dignity Health, Kaiser Permanente, Sutter Health and UC Davis Health System. Together, the CHNA Collaborative represented 15 hospitals in the Sacramento Region. The CHNA Collaborative project was conducted over a period of eighteen months, beginning in January 2015 and concluding in June 2016.

The following research questions were used to guide the 2016 CHNA:
1. What is the community or hospital service area (HSA) served by each hospital in the CHNA Collaborative?
2. What specific geographic locations within the community are experiencing social inequities that may result in health disparities?
3. What is the health status of the community at large as well as of particular locations or populations experiencing health disparities?
4. What factors are driving the health of the community?
5. What are the significant and prioritized health needs of the community and requisites for the improvement or maintenance of health status?
6. What are the potential resources available in the community to address the significant health needs?

To meet the project objectives, a defined set of data collection and analytic stages were developed. Data collected and analyzed included both primary or qualitative data, and secondary or quantitative data. To determine geographic locations affected by social inequities, data were compiled and analyzed at the census tract and ZIP code levels as well as mapped by GIS systems. From this analysis as well as an initial preview of the primary data, Focus Communities were identified within the HSA. These were defined as geographic areas (ZIP codes) within the MGH HSA that had the greatest concentration of social inequities that may result in poor health outcomes. Focus Communities were important to the

overall CHNA methodology because they allowed for a place-based lens with which to consider health disparities in the MGH HSA.

To assess overall health status and disparities in health outcomes, indicators were developed from a variety of secondary data sources (see Appendix B). These "downstream" health outcome indicators included measures of both mortality and morbidity such as mortality rates, emergency department visit and hospitalization rates. They also included risk behaviors such as smoking, poor nutrition and physical activity. Health drivers/conditions or "upstream" health indicators included measures of living conditions spanning the physical environment, social environment, economic and work environment, and service environment. This also included the indicators on social inequities that were used for the determination of Focus Communities. Overall, more than 170 indicators were included in the CHNA.

Community input and primary data on health needs were obtained via interviews with service providers and community key informants and through focus groups with medically underserved, low-income, and minority populations. Transcripts and notes from interviews and focus groups were analyzed to look for themes and to determine if a health need was identified as significant and/or a priority to address. Primary data for MGH included 35 key informant interviews with 55 participants and 20 focus groups conducted with 228 participants including community members and service providers. A complete list of key informant interview data sources is available in Appendix F and a complete list of focus group data is available in Appendix G.

Process and Criteria to Identify and Prioritize Significant Health Needs

In order to identify and prioritize the significant health needs, the quantitative and qualitative data were synthesized and analyzed according to established criteria outlined later in this report. This included identifying eight potential health need categories based upon the needs identified in the 2013 CHNA, the grouping of indicators in the Kaiser Permanente Community Commons Data Platform (CCDP), and a preliminary review of primary data. Indicators within these categories were flagged if they compared unfavorably to state benchmarks or demonstrated racial/ethnic disparities according to a set of established criteria. Eight potential health needs were validated as significant health needs for the service area. The data supporting the identified significant health needs can be found in the Prioritized Description of Significant Health Needs section of this report. The resources available to address the significant health needs span several counties and were compiled by using the resources listed in the 2013 CHNA reports as a foundation, and then verifying and expanding these resources to include those referenced through community input. Additional information regarding resources is found in the Resources section and a comprehensive list of potential resources to address health needs is located in Appendix H.

List of Prioritized Significant Health Needs

The following is a list of eight significant health needs for the MGH HSA in prioritized order:

1. Access to Behavioral Health Services
This category encompasses access to mental health and substance abuse prevention and treatment services including tobacco education, prevention and cessation services, mental health services, social engagement opportunities for youth and seniors and suicide prevention. This category also includes health behaviors (e.g. substance abuse), associated health outcomes (e.g. COPD) and aspects of the social and physical environment (e.g. social support and access to liquor stores).

2. Active Living and Healthy Eating
This category includes all components of healthy eating and active living including health behaviors (e.g. fruit and vegetable consumption), associated health outcomes (e.g. diabetes) and aspects of the physical

environment/living conditions (e.g. food deserts). The category does <u>not</u> include food security, which is a component of the Basic Needs category.

3. Disease Prevention, Management and Treatment
This category encompasses health outcomes that require disease prevention and/or management and treatment including: cancer (breast, cervical, colorectal, lung and prostate), Cardiovascular disease/stroke (heart disease, hypertension and renal disease) and HIV/AIDS/STDs (chlamydia and gonorrhea) and asthma. This category also includes health behaviors that are associated with chronic and communicable disease (e.g., fruit/vegetable consumption, screening), health outcomes that are associated with these diseases or conditions (e.g. overweight/obesity), and associated aspects of the physical environment (e.g. food deserts).

4. Access to High Quality Health Care and Services
This category encompasses access to primary and specialty care, dental care and maternal and infant care. Additionally, this category includes health education and literacy, continuity of care, care coordination and patient navigation including linguistically and culturally competent services.   This category also includes health behaviors that are associated with access to care (e.g. cancer screening), health outcomes that are associated with access to care/lack of access to care (e.g. low birth weight) and aspects of the service environment (e.g. health professional shortage area). The category does <u>not</u> include access to mental health providers, which is a component of the Access to Behavioral Health Services category.

5. Safe, Crime and Violence Free Communities
This category includes safety from violence and crime including violent crime, property crimes and domestic violence. This category includes health behaviors (e.g. assault), associated health outcomes (e.g. mortality - homicide) and aspects of the physical environment (e.g. access to liquor stores). In addition, this category includes factors associated with unsafe communities such as substance abuse and lack of physical activity opportunities, and unintentional injury such as motor vehicle accidents.

6. Basic Needs (Food Security, Housing, Economic Security, Education)
This category encompasses economic security (income, employment and benefits), food security/insecurity, housing (affordable housing, substandard housing), education (reading proficiency, high school graduation rates) and homelessness.

7. Affordable and Accessible Transportation
This category includes the need for public or personal transportation options, transportation to health services and options for persons with disabilities.

8. Pollution-Free Living and Work Environments
This category includes measures of pollution such as air and water pollution levels. This category includes health behaviors associated with pollution in communities (e.g. physical inactivity), associated health outcomes (e.g. COPD) and aspects of the physical environment (e.g. road network density). In addition, this category includes tobacco usage as a pollutant. The category does <u>not</u> include climate related factors such as drought and heat stress.

Resources Available

An extensive process was used to identify the resources available to address the significant health needs and catalog them for inclusion in the final CHNA report. First, all resources identified in the 2013 CHNA report were included for consideration in a working comprehensive list of resources. Secondly, qualitative data from key informant interviews and focus groups were analyzed to include the resources identified by community input. Resources from community input were added to the list and all resources were then verified to assure that they were current and actively available. Once all resources on the list had been confirmed, each resource was considered in relation to the significant health needs for the HSA. As accurately as possible, each resource was assessed to determine which of the health needs it most closely addressed.

Through this process, 182 resources were identified pertaining to the significant health needs for Mercy General Hospital, located at 4001 J Street in Sacramento, California. The final list of health resources is available in Appendix H.

Report Adoption, Availability, and Comments

The Sacramento Service Area Hospital Community Board voted, approved and adopted the Community Health Needs Assessment for Mercy General Hospital, June 23, 2016.

This report is widely available to the public on the hospital's web site, and a paper copy is available for inspection upon request at Dignity Health, Community Health and Outreach Department, 3400 Data Drive, Rancho Cordova, CA 95670.

Written comments on this report can be submitted by email to:
DignityHealthGSSA_CHNA@dignityhealth.org

ASSESSMENT PURPOSE AND ORGANIZATIONAL COMMITMENT

Purpose for the Community Health Needs Assessment (CHNA)

The purpose of this Community Health Needs Assessment (CHNA) is to identify and prioritize significant health needs of the community served by Mercy General Hospital (MGH). The priorities identified in this report help to guide the hospital's community health improvement programs and community benefit activities, as well as its collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets requirements of the Patient Protection and Affordable Care Act and California Senate Bill 697 that not-for-profit hospitals conduct a community health needs assessment at least once every three years.

This report documents the processes, methods, and findings of the CHNA in partnership with Mercy General Hospital (MGH), located at 4001 J Street in Sacramento, California. Building on federal and state requirements, the objective of the 2016 CHNA was:

> *To identify and prioritize community health needs and identify resources available to address those health needs, with the goal of improving the health status of the community at large and for specific locations and/or populations experiencing health disparities.*

Organizational Commitment

Rooted in Dignity Health's mission, vision and values, Mercy General Hospital is dedicated to delivering community benefit with the engagement of its management team, Community Board and Community Benefit Advisory Committee. The board and committee are composed of community members who provide stewardship and direction for the hospital as a community resource.

The development of community health improvement strategies to address priority health issues is a collaborative effort engaging members of a dedicated Community Health and Outreach Department who work directly with the hospital president, management and clinical staff, the hospital's Community Board and Community Benefit Advisory Committee (a standing committee of the board), as well as community partners. The department is responsible for implementing, managing and evaluating initiatives, and oversees community benefit reporting and the development of the hospital's Community Health Needs Assessment. Meetings are held bimonthly with the Community Benefit Advisory Committee, which provides strategic direction, guidance and oversight for the hospital's community benefit practices. Committee reports are provided bimonthly to the Community Board. Primary committee roles are to ensure hospital initiatives and services are aligned with priority health issues identified in the CHNA, represent the needs of the community and monitor the progress of initiatives. Both the Community Board and the Community Benefit Advisory Committee review and approve the CHNA and the Community Benefit plan (see Appendix A for rosters of the MGH Community Board and Community Benefit Advisory Committee).

Mercy General Hospital's community benefit program includes financial assistance provided to those who are unable to pay the cost of their care, unreimbursed costs of Medicaid, subsidized health services that meet a community need, community health improvement services and health professions education. Our community benefit also includes monetary grants provided to not-for-profit organizations that are working together to address significant health needs identified in the CHNA. Many of these programs and initiatives are described in this report.

In addition, the hospital is investing in community capacity to improve health – including addressing the social determinants of health – through Dignity Health's Community Investment Program. Dignity Health

investments support nonprofit organizations that deliver an array of services to low-income communities in the Sacramento region.

Dignity Health Mission Statement:
We are committed to furthering the healing ministry of Jesus. We dedicate our resources to:
- Delivering compassionate, high-quality, affordable health services;
- Serving and advocating for our sisters and brothers who are poor and disenfranchised; and
- Partnering with others in the community to improve the quality of life.

Dignity Health Values:
Dignity Health is committed to providing high-quality, affordable healthcare to the communities we serve. Above all else we value:

Dignity - Respecting the inherent value and worth of each person.
Collaboration - Working together with people who support common values and vision to achieve shared goals.
Justice - Advocating for social change and acting in ways that promote respect for all persons.
Stewardship - Cultivating the resources entrusted to us to promote healing and wholeness.
Excellence - Exceeding expectations through teamwork and innovation.

Organization of the Report

The remainder of this report is organized in accordance with recommended/required components detailed from the other collaborative health system partners. The report continues with the description of the hospital service area (HSA), including a description of geographical areas of the HSA where low income, underserved, and diverse populations reside. The report then details the CHNA process and methods, including both the process model used for the CHNA and the theoretical model used in the assessment for determination of quantitative indicators to be included. Primary data collection methods, participant demographics and methods are also detailed. Assessment findings are provided in accordance with the theoretical model used for the MGH CHNA in the following categories: morbidity and mortality, risk behaviors, and living conditions. A detailed description of the prioritized significant health needs is provided with the corresponding secondary indicators and qualitative findings, followed by a summary of available resources, impact report of actions taken since 2013 CHNA, a conclusion, and corresponding appendices.

DEFINITION OF COMMUNITY SERVED

Community Definition

The community or hospital service area (HSA) is defined as the geographic area (by ZIP code) in which Mercy General Hospital receives its top 80% of discharges. Figure 1 shows the MGH HSA.
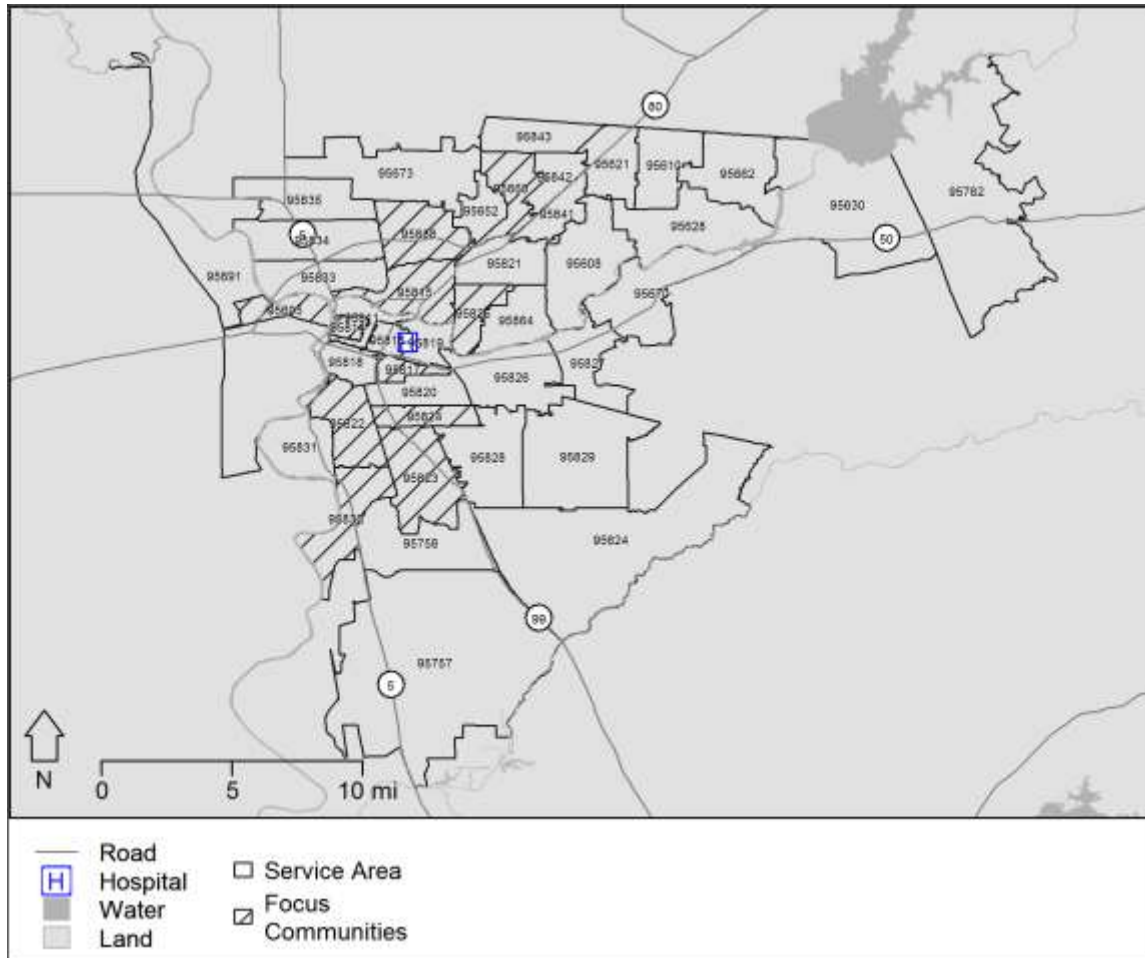
Figure 1: MGH Hospital Service Area

Demographics of the MGH Hospital Service Area (HSA)

The MGH HSA is located in Northern California and has approximately 1.5 million residents. As Tables 1 and 2 show, the area is considerably diverse in population, economic stability (income and poverty), and insurance status. Table 1 shows the total population count, the median age, and the median income for the MGH HSA compared to the state benchmarks. Table 2 provides information on the presence of medically underserved, low income, and minority residents in the MGH HSA.

Population Characteristics

Table 1: Census Population Counts, Range of Median Age and Median Income for ZIP Codes in the MGH HSA, Compared to the County and State

ZIP Code	Population	Median Age	Median Income
95605	14160	30.4	$38,791
95608	60255	43.4	$54,322
95610	43333	36.4	$50,928
95621	41573	37.4	$53,134
95624	62335	34.6	$77,652
95628	40921	44.2	$73,720
95630	72462	37.7	$98,547
95652	836	24.4	$29,583
95660	32835	31.3	$41,036
95662	31411	41.9	$64,991
95670	53259	36.1	$54,915
95673	15430	36.4	$53,429
95691	35485	33.9	$63,559
95757	42752	32.8	$84,297
95758	61155	33.7	$70,616
95762	40829	40.7	$119,382
95811	7370	32.5	$36,421
95814	9802	35.5	$34,085
95815	25627	31.7	$31,274
95816	16624	35.3	$49,953
95817	14377	31.4	$34,990
95818	19960	39.4	$57,500
95819	17705	38.6	$81,076
95820	33967	34.1	$39,295
95821	33190	39.6	$38,750
95822	43024	37.8	$43,624
95823	74154	30.1	$37,931
95824	29344	30.7	$29,771
95825	31505	31.8	$37,605
95826	37215	33.9	$53,432
95827	20120	36.2	$51,981
95828	60993	31.9	$46,820
95829	25565	34.0	$74,550
95831	41224	45.3	$68,461
95832	12051	26.2	$39,735
95833	38264	31.1	$56,280
95834	24201	29.8	$55,177
95835	38606	33.6	$79,528

95838	35584	28.9	$38,271
95841	18612	33.3	$36,967
95842	31689	31.2	$45,537
95843	46775	32.5	$65,779
95864	21554	46.8	$79,778
MGH HSA	1,458,133	Range: 24.4 years (95652) to 46.8 (95864)	Range: $29,583 (95652) to $119,382 (95762)
El Dorado County	180,982	44.1 years	$69,297
Yolo County	202,288	30.7 years	$55,918
Sacramento County	1,435,207	35.1 years	$55,064
CA State	37,659,181	35.4 years	$61,094

Source: Census, 2013

The population of the MGH HSA makes up approximately 3.87% of all residents in the State of California. The majority of the population count for the HSA comes from residents living in Sacramento County. Population counts at the ZIP code level varied from 836 residents in ZIP code 95652 (McClellan Park) to 74,154 residents in ZIP code 95823 (Fruitridge). The median age in Sacramento County, which makes up the majority of the MGH HSA area, is similar to the median age in the state. The median age at the ZIP code level ranged from 24.4 years in 95652 (McClellan Park) to 46.8 years in 95864 (Arden). The median income by ZIP code for the HSA ranged significantly from approximately $29,583 in 95652 (McClellan Park) to $119,382 in 95762 (El Dorado Hills), a range of almost $90,000 dollars a year.

In an attempt to understand the extent of and location of the medically underserved, low income and minority populations living in the MGH HSA, specific indicators were examined. Table 2 below describes these indicators for the MGH HSA.

Table 2: Percent Living Below 100% Federal Poverty Level, Percent Uninsured and Percent Minority for ZIP Codes in the MGH HSA Compared to the County and State

ZIP Code	Percent Below Federal Poverty Level (less than or equal to 100% FPL)	Percent Uninsured	Percent Minority (Hispanic or non-White)
95605	29.2	18.3	56.2
95608	12.5	12.5	26.3
95610	14.9	18.4	28.3
95621	14.9	13.3	27.3
95624	9.1	10.1	55.5
95628	10.2	9.7	21.2
95630	4.6	6.5	36.3
95652	45.5	10.2	37.9
95660	22.9	19.6	46.0
95662	7.6	12.2	16.9
95670	16.7	15.3	44.4
95673	14.7	15.6	34.1
95691	15.9	15.9	52.0
95757	9.8	7.4	72.8
95758	11.1	10.3	65.6
95762	3.7	5.1	22.9
95811	31.1	20.8	46.7
95814	28.5	14.4	49.6
95815	34.1	20.4	66.1
95816	13.2	15.7	32.0
95817	36.2	16.8	58.9
95818	18.9	10.5	40.5
95819	6.9	6.2	24.7
95820	26.4	18.2	69.0
95821	25.0	16.0	38.1
95822	25.3	15.4	71.5
95823	30.1	18.9	84.2
95824	36.7	24.7	81.7
95825	25.7	22.6	50.2
95826	20.9	14.7	48.4
95827	16.6	14.3	45.4
95828	21.6	19.6	80.2
95829	13.6	13.0	65.3
95831	7.1	8.6	60.5
95832	30.7	23.6	85.6
95833	18.6	15.8	68.6

95834	19.1	15.0	72.2
95835	9.2	12.0	63.7
95838	30.1	20.2	73.0
95841	27.9	21.3	35.5
95842	25.7	17.7	44.8
95843	12.1	15.7	43.4
95864	7.5	7.4	21.8
MGH HSA	17.5%	14.4%	51.7%
El Dorado County	9.0%	10.2%	20.3%
Yolo County	19.1%	13.2%	50.6%
Sacramento County	17.6%	14.6%	52.1%
CA State	*15.9%*	*17.8%*	*60.3%*

Source: Census, 2013

The percent of population living in poverty in the MGH HSA was greater than in El Dorado County and state percentages, but lower than the Sacramento and Yolo County percentages. The MGH HSA ZIP code with the highest percent of population in poverty was 95652 (McClellan Park) at 45.5%, compared to the lowest percent poverty in ZIP code 95762 (El Dorado Hills) at 3.7%. The percent of uninsured residents was lowest in El Dorado County as compared to the MGH HSA, Sacramento and Yolo counties and the state percent benchmarks. The ZIP code with the highest percent uninsured was 95824 (Parkway) at 24.7% and the lowest percent was 5.1% in ZIP code 95762 (El Dorado Hills). The MGH HSA percent of minority residents was 51.7%, lower than Sacramento County at 52.1% and the state at 60.3%. An examination of areas throughout the county revealed a large variation in the degree of diversity, or percent minority. ZIP code 95832 (Meadowview) showed a percent of minority populations at 85.6%. This percent is drastically different from the Orangevale ZIP code of 95662 which only had 16.8% minority residents.
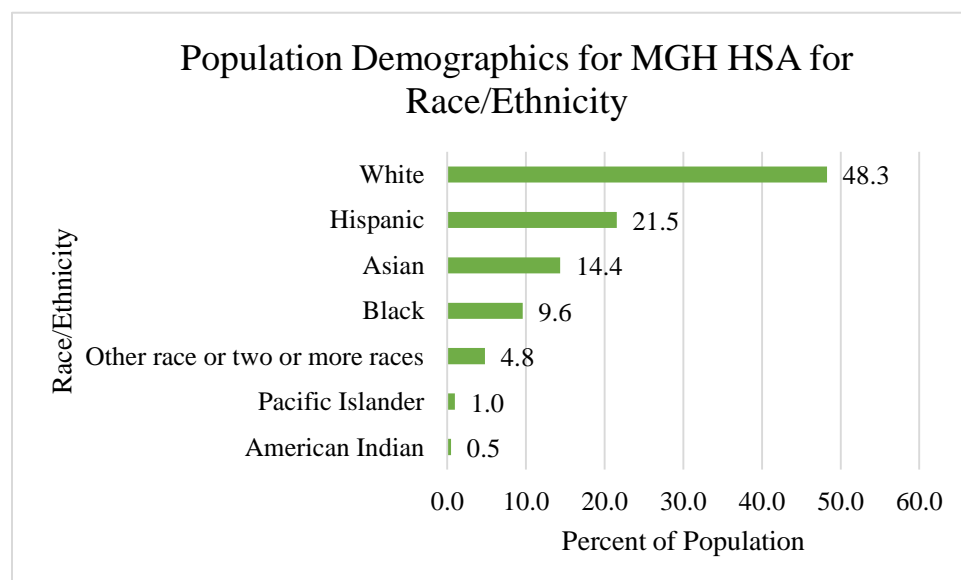
Figure 2: Population Demographics for MGH HSA for Race/Ethnicity

Figure 2 shows the population demographics for the MGH HSA. Census data showed that Whites make up the highest percent of residents in the HSA, followed by Hispanics and Black.

Community Health Vulnerability Index and Focus Communities

To further examine medically underserved, low income and diverse populations in the MGH HSA, two tools were developed. This assessment used a Community Health Vulnerability Index (CHVI) to help identify census tracts within ZIP codes in the MGH HSA where such populations may reside geographically. Also, Focus Communities at the ZIP code level were determined to provide a place-based lens with which to consider health disparities in the MGH HSA. Both the CHVI and the Focus Communities are described in the following passages.

Community Health Vulnerability Index—Overview

The CHVI assisted in the identification of geographical areas in the MGH HSA ZIP codes that may experience health disparities using socio-economic drivers of poor health outcomes. The CHVI is based on the Community Need Index (CNI), created and made publically available by Dignity Health and Truven Health Analytics (for further description of the CNI see Appendix B). The CHVI was also used to help focus primary data collection and in the further determination of Focus Communities, which is discussed next. The indicators used to create the CHVI were collected at the census tract level and are presented in Table 3 and detailed in Appendix C, Detailed Analytic Methodology including Significany Health Need Categorization. The CHVI results for the MGH HSA are presented in Figure 3.

Table 3: Indicators Included in the CHVI

Percent Minority (Hispanic or non-White)	Percent Families with Children in Poverty
Population 5 Years or Older who speak Limited English	Percent Households 65 years or Older in Poverty
Percent 25 or Older Without a High School Diploma	Percent Single Female-Headed Households in Poverty
Percent Unemployed	Percent Renter-Occupied Housing Units
Percent Uninsured	
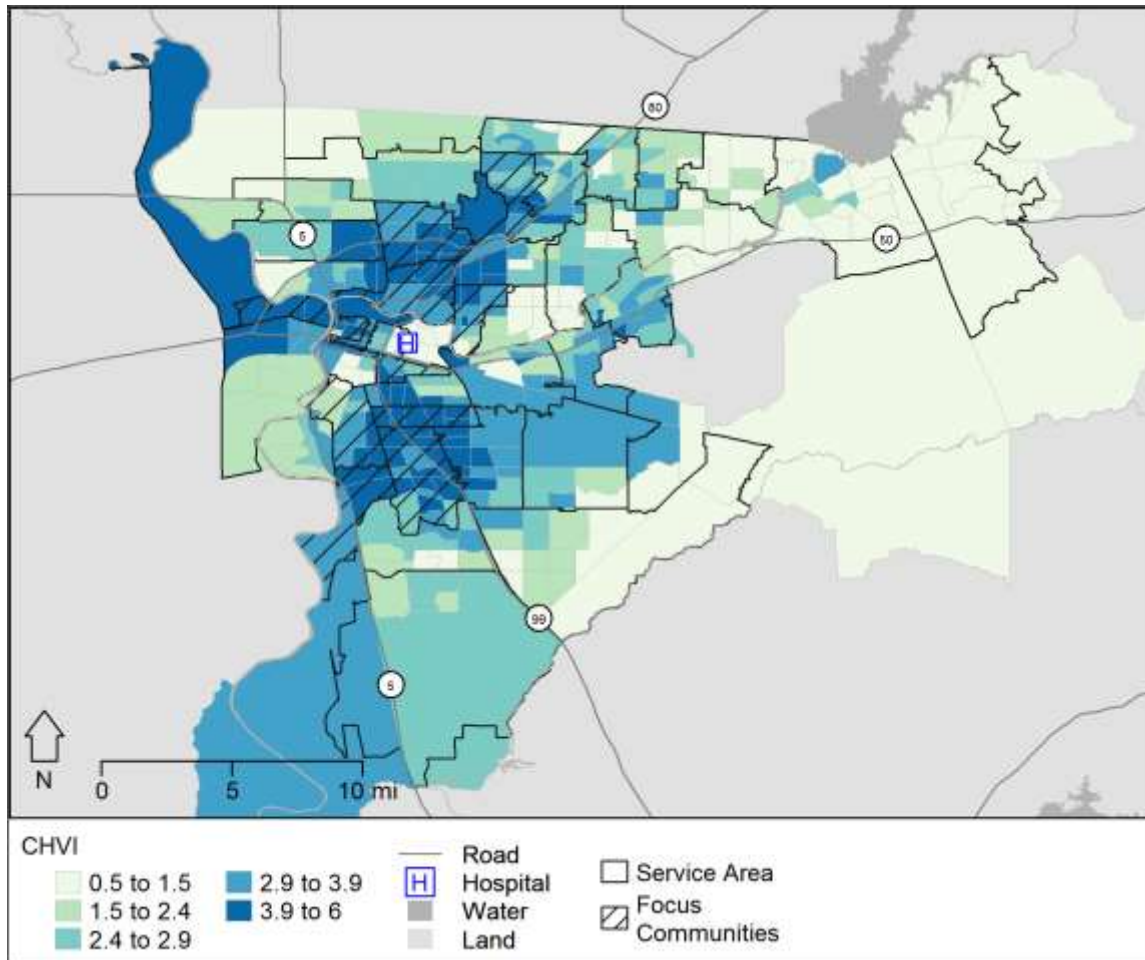
Figure 3: Community Health Vulnerability Index for MGH HSA

Focus Communities—Overview

Focus Communities were used to provide a place-based lens with which to consider health disparities in the MGH HSA. The Focus Communities were defined using four components: 1) preliminary analysis of indicators of social determinants of health and inequities (e.g., poverty and educational attainment) at the ZIP code level, 2) census tract values from the CHVI, 3) initial input from area wide service providers and 4) consideration of ZIP codes that were identified as Focus Communities in the MGH 2013 CHNA (previously referred to as Communities of Concern). These inputs provided a unique perspective on social determinants within the MGH HSA and were considered both separately and collectively when selecting Focus Communities.

The social inequities dataset included 22 indicators (presented in Table 4) that were analyzed at the ZIP code level to identify and flag the top 20% of ZIP codes with the highest rates of social inequities compared to county and state benchmarks. For the CHVI, ZIP codes were flagged if they intersected a census tract in which the CHVI value fell within the top 20% of the MGH HSA, values 3.9 to 6.0. In addition to quantitative measures, Focus Communities were further verified through analysis of input from initial service area wide key informant interviews. Input on vulnerable locations within the MGH HSA was considered from interviews with public health experts and area service providers. Locations identified as vulnerable were then cross-referenced with the ZIP codes that were flagged in the CHVI and social inequities data, as well as with ZIP codes that were identified as Focus Communities in 2013. This was included to allow greater continuity between CHNA round and to reflect the work of the hospitals oriented to serve these disadvantaged communities.

Table 4: Social Inequities Indicators to Determine Focus Communities

Median income	Percent Non-White or Hispanic population
GINNI coefficient (measure of income inequality)	Foreign born population
Population in poverty (under 100 Federal Poverty Level)	Citizenship status
Percent with public assistance	Population 5 years or older who speak limited English
Percent households 65 years or older in poverty	Single female headed households
Percent families with children in poverty	Percent homeowners with housing expenses greater than 30% of income (homes with mortgages)
Percent single female headed households in poverty	Percent homeowners with housing expenses greater than 30% of income (homes without mortgages)
Percent unemployed	Percent renters with housing expenses greater than 30% of income
Uninsured population	Population over 18 that are civilian veterans
Population with public insurance	Percent renter occupied housing units
Population with any disability	Percent population 25 or older without a high school diploma

The Focus Communities for MGH are found in Figure 4 and listed in Table 5. Figure 4 displays the eleven ZIP codes, denoted by diagonal hash marks. The specific ZIP codes and area names are provided in Table 5, with the census population for each.
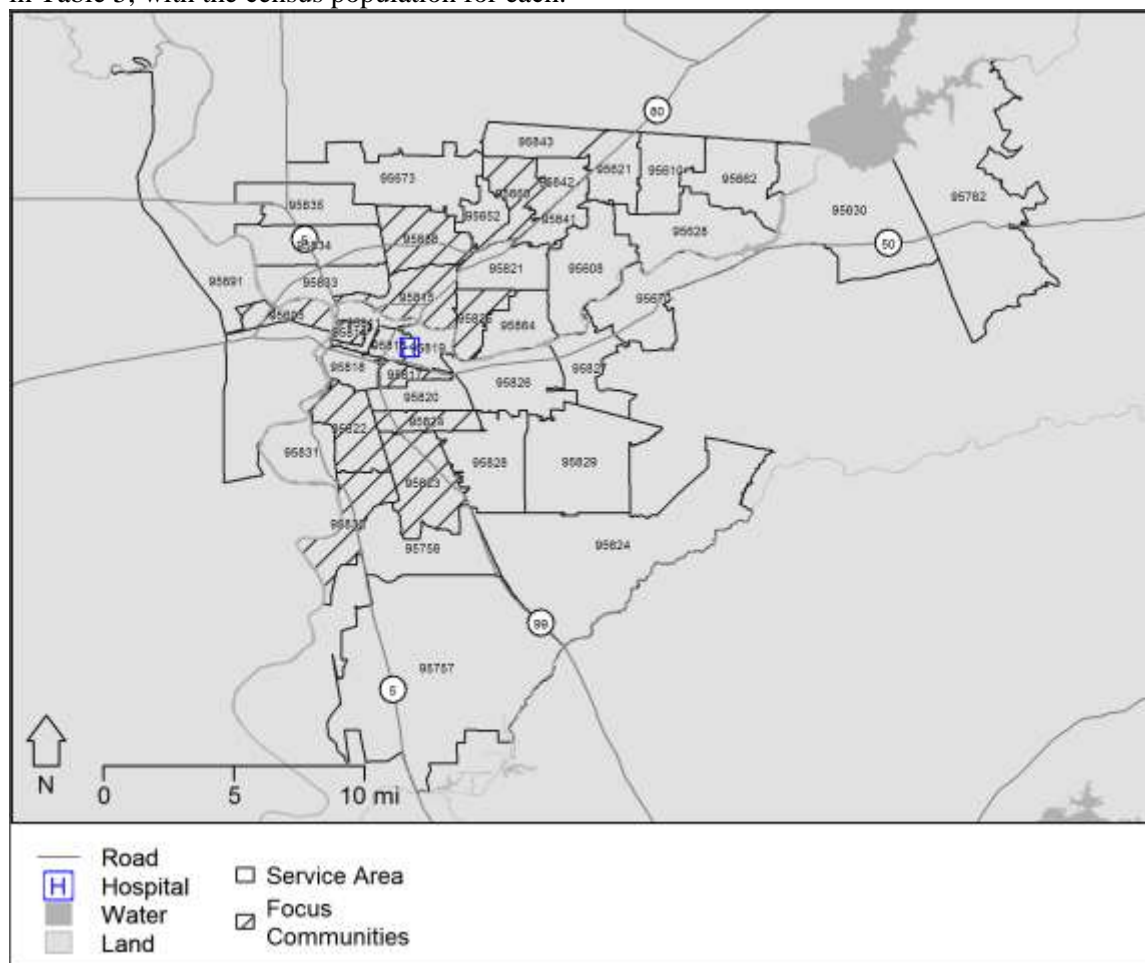
Figure 4: Focus Communities for the MGH HSA

Table 5: Eleven Identified Focus Communities for the MGH HSA

ZIP Code	Community/Area*	Population
95605	West Sacramento -- Broderick	14,160
95660	North Highlands	32,835
95814	Downtown/Mansion Flats	9,802
95815	North Sacramento	25,627
95817	North Oak Park	14,377
95822	South Sacramento/Executive Airport	43,024
95823	Fruitridge	74,154
95824	Parkway	29,344
95825	Arden	31,505
95832	Meadowview	12,051
95838	Del Paso Heights	35,584
Total Population in the Focus Communities		*322,463*
Total Population in the HSA		*1,458,133*
Percent of the HSA in the Focus Communities		*22%*

Source: Census, 2013
* ZIP code and community area name is approximate here and throughout the report.

Primary data collected in this assessment confirmed the location of vulnerable populations in the MGH HSA that were identified in the previously mentioned Focus Communities. During primary data collection, key informants and community members were asked to identify geographical areas and populations in the MGH HSA that were experiencing health inequities. Their response indicated that specific geographic areas like Rancho Cordova, Folsom, Oak Park, North Auburn, Lincoln, Old Roseville, Foresthill, South Sacramento (Meadowview), North Sacramento, Citrus Heights, Rio Linda and the American River Parkway were areas of concern. In terms of population groups, data indicated that Latinos, Blacks, Asians (Hmong, Filipino, Chinese) and Middle Eastern and Syrian Refugees, were among the most mentioned as populations in need of improved health. A major determination for the above mentioned groups was directly related to the absence or presence of poverty in these populations. Poverty appeared to the biggest influence of determining vulnerability to poor health, a finding detailed later in this report.

ASSESSMENT PROCESSES AND METHODS

Process Overview
Sacramento Region Collaborative Process Model
The CHNA collaborative project was conducted over a period of 18 months, beginning in January 2015, and concluding in June 2016. The project was conducted using a series of data collection and analytical phases. The CHNA process began with the collection and analysis of secondary data indicators of social inequities and proceeded with collection of both "upstream" and "downstream" health indicators. Primary data collection began with interviews of area health experts such as public health and social service representatives. The first stage of data analysis resulted in the identification of vulnerable communities (e.g., low-income, medically underserved and minority populations), which then guided further primary data collection including community member focus groups. These data were considered together with the data in Community Commons Data Platform (CCDP) to develop potential health need categories that provided an organizational structure to integrate these numerous inputs analyze the data and identify the significant health needs for the HSA. The significant health needs were then prioritized using established

criteria and resources available to address the identified needs and were compiled for the final report. The overall process to conduct the CHNA is depicted in the CHNA Process Model (Figure 5).
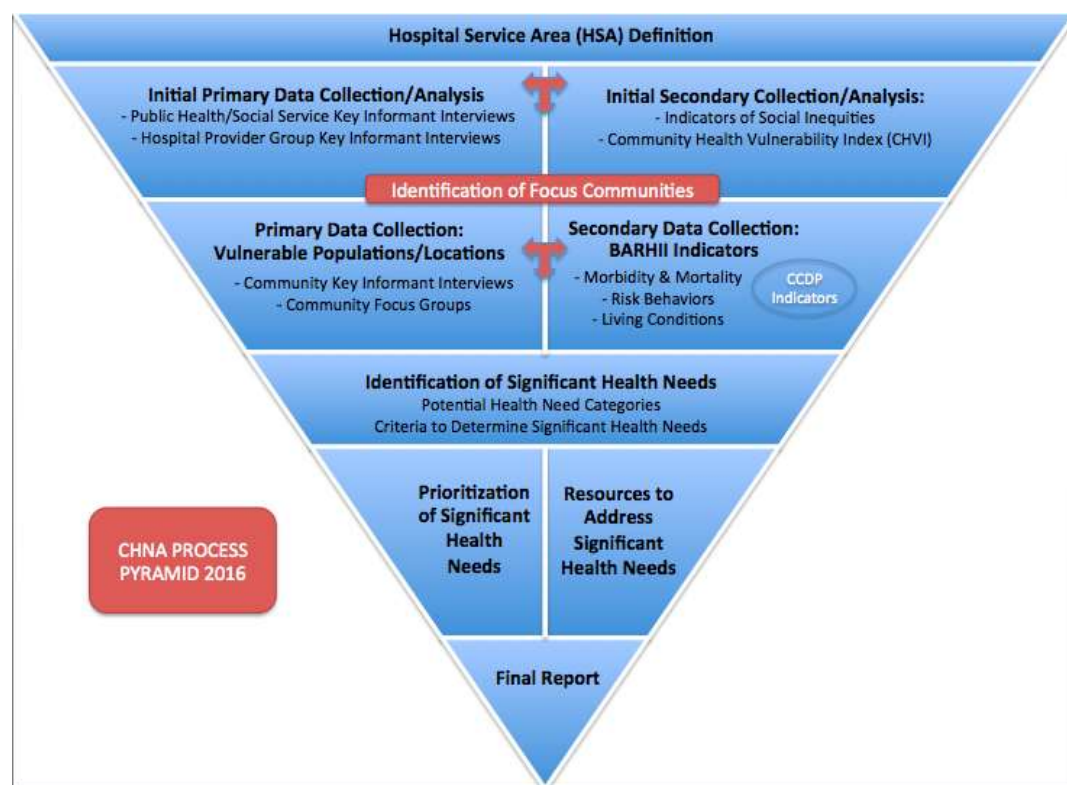
Figure 5: Sacramento Region Collaborative Process Model

BARHII Model

Quantitative indicators used in this assessment were guided by a conceptual framework developed by the Bay Area Regional Health Inequities Initiative (BARHII) (Figure 6). The BARHII Framework demonstrates the connection between social inequalities and health and focuses attention on measures that had not characteristically been within the scope of public health departments. Valley Vision used the BARHII framework to organize quantitative indicators, as well as frame the primary data collection tool, to capture both "upstream" and "downstream" factors influencing health in the HSA. The BARHII framework was also used in the organization of this report beginning in the "Findings" section of the report. The findings are presented in the report starting with "downstream factors" like mortality and morbidity, followed by risk behaviors and living conditions. Social inequities data is spread throughout the body of the report.
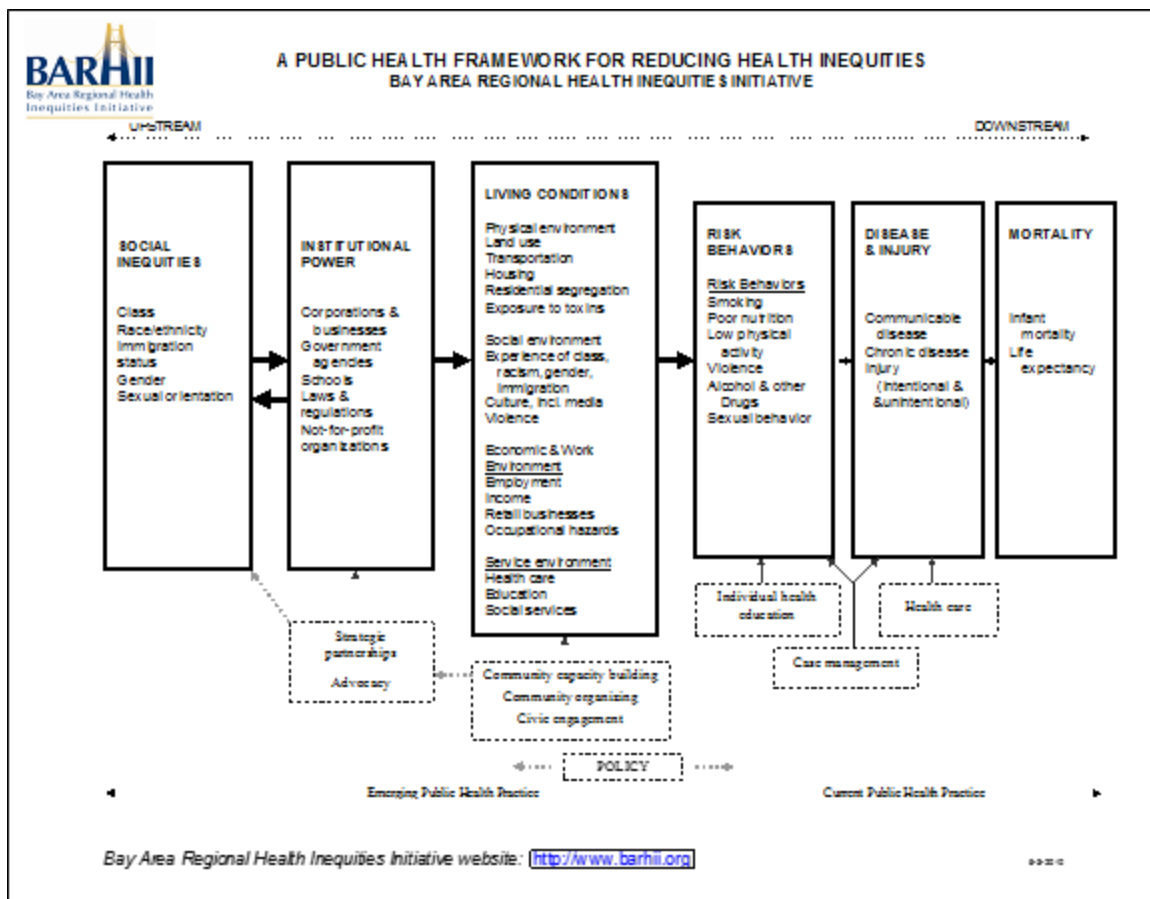
Figure 6: Bay Area Regional Health Inequities Initiative (BARHII) Model[1]

Secondary Data Collection – Processing and Analyzing
Data Collection: Overview

This section serves to provide a brief overview of the secondary data collection, processing and analysis approaches used to support the CHNA. For additional detail, including detailed project methodology, please refer to Appendices B and C.

The secondary data supporting the CHNA was collected from a variety of sources, and was processed in multiple stages before it was used for analysis. The selection of secondary data indicators was guided by the BARHII Framework previously illustrated in Figure 6. Specific secondary data indicators were selected to represent the concepts organized in the six categories in the BARHII model that reflect both "upstream" and "downstream" factors influencing health. A number of general principles guided the selection of secondary data indicators to represent these concepts. First, only indicators associated with concepts in the BARHII framework were included in the analysis. Second, indicators available at a sub-county level (such as at a ZIP code or smaller level) were preferred for their utility in revealing variations within the MGH HSA. Finally, indicators were only collected from data sources deemed reliable and reputable, with a preference for indicators that were more current than those used in the 2013 CHNA report.

---

[1] Bay Area Health Inequities Initiative (BARHII). BARHII Framework. Available at: http://barhii.org/framework/. Accessed Jan 20, 2016.

Mortality data were primarily obtained from CDPH and morbidity data were primarily obtained from OSHPD. These input data were processed using methods described in detail in Appendix B to result in a set of indicators for risk behaviors, disease/injury, and mortality. Input CDPH data were used to develop mortality rates and broader measures of health status for each ZIP code in the HSA. Input OSHPD data were used to develop hospitalization (H) and emergency department (ED) discharge rates for each ZIP code in the MGH HSA. The majority of indicators pertaining to living conditions and other "upstream" factors in the report were obtained from the US Census Bureau. These indicators primarily focus on the socio-demographic characteristics of the population within the MGH HSA, and are also listed in Appendix B. Health outcome and health behaviors were also collected from the Community Commons Data Platform (CCDP) to compliment the indicators already collected from additional sources. Indicators in the CCDP were only selected for final analysis and inclusion if they did not duplicate indicators that were pulled from other sources. A detailed list of indicators collected for the 2016 CHNA is in Appendix B, Secondary Data Dictionary and Processing.

The secondary data was processed in multiple stages before it was analyzed. The three basic processing steps include rate smoothing, age-adjustment, and obtaining benchmark rates. A detailed description of this process is outlined in Appendix B.

Primary Data Collection
Overview of Primary Data Collection
Community input was provided by a broad range of community members through the use of key informant interviews and focus groups. Individuals with the knowledge, information, and expertise relevant to the health needs of the community were consulted. These individuals included representatives from the local public health department as well as leaders, representatives, and members of medically underserved, low-income, and minority populations. When applicable, other individuals with expertise on local health needs were consulted. For a complete list of individuals who provided input, see Appendices F and G.

Methodology for Collection and Interpretation
Primary data were collected from May 2015-November 2015. Instruments used in primary data collection included a participant informed consent, a demographic questionnaire, the interview question guide and a project summary sheet. All participants were given an informed consent form prior to their participation that provided information about the project, asked for permission to record the interview, and listed the potential benefits and risks for involvement in the interview (Appendix D). Participants were also asked to complete a voluntary questionnaire that was used to compile the demographics on all key informant and focus group participants (Appendix E). The same interview guide was used for key informant interviews and community focus groups with slight modifications for focus groups conducted in Spanish and focus groups with youth or low-literacy populations. In brief, the guide prompted participants to share: (1) the quality of life in their communities; (2) the health issues they see and experience in their communities; (3) the most urgent or priority health needs of their communities; and (4) the resources available to help address health needs (see Appendix E for full interview guide). A project summary sheet (Appendix E) was also given to all participants to provide them with information about the project as well as contact information for the CHNA staff leading the interviews.

Key Informant Interviews

Key informant interviews were conducted with area health experts and service providers familiar with health issues and places and populations experiencing health disparities within the MGH HSA. Primary data collection began with group key informant interviews of hospital service providers including nursing managers, medical directors, social workers, case managers, patient coordinators/navigators, Emergency Department providers, and administrative leadership. Early interviews were also conducted with county Public Health Officers and other public health and social service experts of the corresponding counties within the MGH HSA. Input from the initial set of group key informant and service provider interviews solicited expert opinion on vulnerable locations and populations within the MGH HSA. This information was used to conduct additional key informant interviews with service providers in low-income, medically underserved and minority communities.

A total of 35 key informant interviews were completed for the MGH HSA with 55 service providers, which are listed in Appendix F. Key informant interviewees represented the following sectors: academic research (2%), community based organizations (45%), health care (43%), health care department (2%), public health (4%), and social services (14%), with some interviewees representing multiple sectors. These 55key informants reported working with the following populations: low-income (91%), medically underserved (91%), and racial or ethnic minorities (84%). The racial and ethnic minority groups specified by interviewees included: Latino/Hispanic, Black, Asian/Pacific Islander, Southeast Asian, Native American, East Indian, Middle Eastern, Slavic and refugees from the former Soviet Union. In addition, key informants specified working with the following vulnerable sub-populations: individuals experiencing homelessness, seasonal and farm workers, individuals diagnosed with a developmental disability, serious mental illness and/or substance abuse disorders, pregnant women, teen parents, single parents, undocumented individuals, those with language barriers, individuals identifying as lesbian, gay, bisexual or transgender (LGBT), individuals who are HIV positive, children and seniors who have experienced abuse and/or neglect, and those utilizing public assistance programs.

Community Focus Groups

Focus group interviews were conducted with community members representing vulnerable populations and locations identified through the initial analysis of key informant input. Recruitment consisted of referrals from designated service providers as well as direct outreach from the Valley Vision CHNA Team to acquire input from medically underserved, minority and low-income populations and/or community members living in vulnerable locations.

Within the Mercy General HSA, 20 focus groups were conducted with 228 participants who were medically underserved, impoverished, socially and/or linguistically isolated and/or those who had chronic conditions. Of the 228 participants who completed demographic data cards, the median age was 37; 71% identified as female, 23% as male, and 3% as other. In addition, 28% indicated they were not high school graduates; 14% indicated they were not covered by health insurance, and 60% received some form of public assistance. The self-reported racial breakdown of focus group participants is listed in Figure 7, with some participants identifying with multiple racial groups.

Mercy General Hospital
Focus Group Participants Race/Ethnicity (N = 229*)
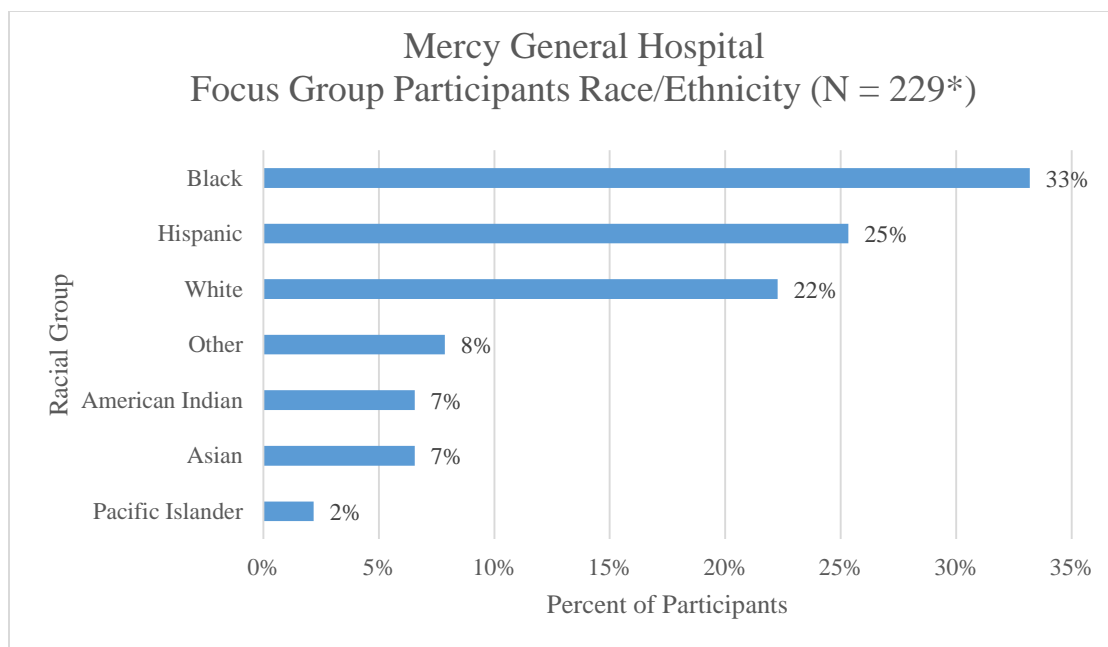
Figure 7: Focus Group Participant Demographics

Processing Primary Data

After each interview or focus group was completed, the recording and any notes were uploaded to a secure server for future analysis. A significant portion of key informant interviews and focus group recordings were sent to a transcription service, with a smaller portion transcribed by Valley Vision staff or converted into notes corresponding to the order of questions in the interview guides.

Content analysis was done on the key informant and focus group transcripts utilizing NVivo 10/11 Qualitative Analytical Software. This analysis was completed in a two-phase approach. In the first phase of analysis, the qualitative data were coded based on the Bay Area Regional Health Inequities Initiative (BARHII) Framework categories and other organically arising thematic areas. Further analysis was then conducted with thematic coding to the eight potential health need categories detailed later in this report and in Appendix C, with additional codes for vulnerable populations and locations and resource identification.

Information Gaps/Limitations

Information gaps that limit the ability of this CHNA to assess the community's health needs included limited data on specific populations and access to key informant and focus group participants.

Some data were only available at a county level, making an assessment of health needs at a neighborhood level challenging. Furthermore, disaggregated data around age, ethnicity, race, and gender are not available for all data indicators, which limited the ability to examine disparities of health within the community. Lastly, data are not always collected on a yearly basis, meaning that some data are several years old.

For primary data collection, it was a challenge to gain access to participants in communities that disproportionately experience health disparities. Measures were taken to reach out to vulnerable populations and locations through the process of Focus Community identification and following recommendations of early key informants. However, recruitment was variable and several key contacts expressed the issue of research fatigue from repeated needs assessments. Community members also

frequently mentioned distrust of the research process or concerns that their input would not lead to changes in their communities. As best as possible, the research team attempted to address these concerns and to be open and transparent about the full CHNA process. All participants were given contact information of the staff that conducted their interviews and were encouraged to reach out with any additional questions; key informants were also assured that they would receive notification once the CHNA reports become available.

Another challenge was reconciling the secondary and primary data. The quantitative data used for the identification of significant health needs was examined at the Hospital Service Area (HSA) level. Alternately, a large share of the qualitative data was deliberately sourced from low-income, minority and medically underserved populations or their representatives. Owing to this discrepancy, certain health need categories were validated by either the quantitative or the qualitative data, rather than by both of these data sources.

CHNA Collaborative

The 2016 CHNA for Mercy General Hospital was completed as part of a collaboration of the four major health systems in the Greater Sacramento region: Dignity Health, Kaiser Permanente, Sutter Health and UC Davis Health System. The CHNA Collaborative served to collectively conduct the 2016 CHNA and to support a coordinated approach to community benefit planning for 15 hospitals in the Sacramento Region including:

- **Dignity Health**: Mercy General Hospital, Mercy Hospital of Folsom, Mercy San Juan Medical Center, Methodist Hospital of Sacramento, Sierra Nevada Memorial Hospital, Woodland Memorial Hospital
- **Kaiser Permanente of Greater Sacramento**: Kaiser Permanente Roseville, Kaiser Permanente Sacramento, Kaiser Permanente South Sacramento
- **Sutter Health Valley Area**: Sutter Auburn Faith Hospital, Sutter Center for Psychiatry, Sutter Davis Hospital, Sutter Medical Center Sacramento, Sutter Roseville Medical Center
- **UC Davis Health System**: UC Davis Medical Center

Consultants Used to Help Conduct the CHNA

The 2016 CHNA was completed by Valley Vision, a regional leadership organization committed to making the Sacramento region a great place to live, work and recreate. The CHNA Collaborative contracted with Valley Vision in 2016 and 2013 to conduct their CHNA and in 2010 and 2007 for the statewide CNA. The collaborative process has built and strengthened partnerships between hospitals and other stakeholders, providing a coordinated approach to identifying priority health needs as well as developing plans to improve the health of the Sacramento region.

Valley Vision was selected to conduct the 2016 CHNAs in the Sacramento Region given its history of working with the CHNA Collaborative, mixed methods research skills and strong commitment to drawing attention to critical unmet health needs. Valley Vision has been a leading social enterprise and nonprofit consultancy for the Sacramento region since 1994 with the ability to deliver trusted research, design and drive multi-stakeholder initiatives and access a set of powerful leadership networks across the region. The Valley Vision team consisted of Giovanna Forno, BS, Alan Lange, MPA, Amelia Lawless, CHES, ASW, MPH, Anna Rosenbaum, MSW, MPH, Katie Strautman, MSW and Sarah Underwood, MPH. The CHNA team brought a rich

skill-set from years of experience working in public health, health care, social service and other public sectors.

The Valley Vision team conducted primary qualitative data collection, analyzed primary and secondary data, synthesized these data to determine the significant and prioritized health needs, documented findings and wrote the draft and final CHNA reports. Valley Vision also contracted with Dr. Heather Diaz, Dr. Mathew C. Schmidtlein and Dr. Dale Ainsworth of Community Health Insights who assisted with project design, research methodology, data processing and GIS mapping for the CHNA. Community Health Insights is a Sacramento based research-oriented consulting firm dedicated to improving the health and wellbeing of communities across Northern California.

ASSESSMENT DATA AND FINDINGS

The main findings of this assessment are organized in accordance to the BARHII model beginning with the most downstream factors (mortality and morbidity) and moving backwards to the upstream factors (risk behaviors and living conditions).

Mortality and Morbidity in the MGH HSA

Examination of health outcomes for the assessment included measures of illness (morbidity) and death (mortality) including communicable and non- communicable diseases, and injuries. The conditions examined included: chronic disease, cancer, respiratory health, mental health, substance abuse, sexually transmitted infections (including HIV/AIDS), tuberculosis, and dental health, along with unintentional and self-inflicted injuries. This section begins with an examination of overall health indicators including age-adjusted all-cause mortality, infant mortality, and life expectancy at birth.

Overall Health Status – Rates of Age-adjusted All-Cause Mortality, Infant Mortality and Life Expectancy at Birth

These overall health status indicators provide information about what it is like to live in a MGH community on an everyday basis. Though specific measures of mortality show how communities suffer from specific conditions, overall health status indicators communicate length of life, quality of life, socioeconomic factors and the intersection of the environment and personal behaviors. Table 6 examines three common overall health status indicators: age-adjusted all-cause mortality, infant mortality, and life expectancy at birth for each of the MGH Focus Communities. Values in blue are those that fall above or below the desired direction in comparison to Sacramento County or Yolo County benchmarks. Values and cells marked with a dash indicate that data was not provided due to small cell counts (less than 5) or that it was missing or unavailable for that ZIP code. When county rates were unavailable, state and national benchmarks were used as comparison.

Table 6: Overall Health Status Indicators: Age-Adjusted All-Cause Mortality, Infant Mortality, and Life Expectancy at Birth

	ZIP Code	Age-Adjusted All-Cause Mortality (per 10,000 pop)	Infant Mortality Rate (per 1,000 live births)	Life Expectancy at Birth (years)
Overall Health Status Indicators--	95605*	75.12	4.48	76.07
	95660	77.98	4.88	76.70
	95814	86.03	4.71	74.35
	95815	88.98	4.46	74.37
	95817	66.82	4.80	77.17
	95822	69.29	4.80	78.68
	95823	80.93	6.11	78.11
	95824	71.53	5.62	77.95
	95825	84.73	5.03	76.80
	95832	70.76	4.56	78.40
	95838	90.05	5.46	74.57
	Yolo County*	*68.94*	*3.00*	*80.38*
	Sacramento County	*72.75*	*5.40*	*78.74*
	MGH HSA	*71.99*	*5.16*	*78.91*
	CA State	*64.59*	*4.90*	*80.53*
	National 2013	*--*	*--*	*78.80[2]*
	Healthy People 2020 Target	*--*	*6.00[3]*	*--*

Source: CDPH, 2010-2012 *ZIP code 95605 is the only Focus Community located in Yolo County

Seven of eleven Focus Communities had age-adjusted all-cause mortality rates that were above the respective county benchmarks. Age-adjusted overall mortality was highest in ZIP codes 95838 (Del Paso Heights) and 95815 (North Sacramento). Four of the eleven Focus Communities had rates for infant mortality above the respective county benchmarks. All Focus Community ZIP codes had lower life expectancy than their respective county rates. The Focus Community with the lowest life expectancy was seen in ZIP code 95814 (Downtown/Mansion Flats) at 74.35 years of age, approximately four years less than the Sacramento County average life expectancy at birth.

Chronic Diseases – Diabetes, Heart Disease, Stroke, Hypertension and Kidney Disease

Both primary and secondary data indicated that most chronic illnesses we common in the MGH HSA. Key informant interviews and community members specifically stated challenges with diabetes, hypertension, heart disease and stroke, and in many instances living with co-morbidities. Primary data showed that participants recognized these chronic conditions to be an outcome of poor behavioral and environmental factors.

---

[2] Centers for Disease Control and Prevention. (2015). *Deaths: Final data for 2013*. Retrieved from: http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf

[3] Office of Disease Prevention and Health Promotion. (2014). *Maternal, Infant and Child Health*. Retrieved from: https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Maternal-Infant-and-Child-Health/data

Diabetes

Diabetes was the seventh leading cause of death nationally in 2013[4]. Diabetes is listed first in this CHNA as it was a commonly mentioned health issue for community residents and quantitative findings showed clear geographic health disparities across the MGH HSA. Table 7 displays rates of mortality, ED visits, and hospitalizations due to diabetes for each Focus Community.

Rates – Mortality, ED Visits and Hospitalizations Due to Diabetes

Table 7: Mortality, ED Visit, and Hospitalization Rates for Diabetes Compared to County, State, and Healthy People 2020 Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
Diabetes	95605*	2.27	390.82	249.69
	95660	2.63	429.43	305.55
	95814	2.77	808.94	474.15
	95815	2.06	494.00	307.55
	95817	2.11	372.65	296.29
	95822	2.87	381.08	251.17
	95823	2.06	560.83	330.68
	95824	2.16	420.62	307.13
	95825	1.90	350.61	196.47
	95832	2.32	531.29	361.96
	95838	2.96	500.40	349.71
	*Yolo County**	*1.94*	*261.33*	*146.66*
	Sacramento County	*2.26*	*281.27*	*200.65*
	MGH HSA	*2.22*	*280.57*	*199.39*
	CA State	*2.10*	*210.90*	*194.00*
	Healthy People 2020 Target	*6.60*	*--*	*--*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Six of the eleven Focus Communities had mortality rates due to diabetes that were clearly above the county and state benchmarks, but below the Health People 2020 benchmark. The highest mortality rate due to diabetes was found in 95838 (Del Paso Heights) and 95822(South Sacramento/Executive Airport). All eleven Focus Communities had ED visit rates due to diabetes that were clearly above the county and state benchmarks. ZIP code 95814 (Downtown/Mansion Flats) had the highest rate for both ED visits and hospitalizations due to diabetes. Ten of eleven Focus Communities had hospitalization rates due to diabetes that were above the county and state benchmarks; 95814 (Downtown/Mansion Flats) again had the highest rate among all eleven Focus Communities.

Percent – Adults Over 20 Years with Diabetes

Reported by the National Center for Chronic Disease Prevention and Health Promotion, the percent of adults over the age of 20 that have ever been told by a doctor that they have diabetes for 2012 was 8% for Sacramento County, the exact same percent as the state. The percentage for Yolo County was 7% and El Dorado County was 6.4%. Please note that the Sacramento, El Dorado or Yolo County rates were used when data was not available at the ZIP code or MGH HSA levels.

---

[4] Centers for Disease Control and Prevention. (2015). *Leading Causes of Death*. Retrieved from: http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

Percent – Medicare Patients with Diabetes Who Received an hA1c exam

Preventive screening for diabetes is important. Lack of screening and follow-up care for diabetes was mentioned in the primary data as a big concern for MGH HSA residents. According to the Dartmouth College Institute for Health Policy & Clinical Practice in 2012, the percent of Medicare patients with diabetes which reported having had a hA1c exam to monitor their diabetes diagnosis was 80% in Sacramento County, 82% in El Dorado County, and 81% in Yolo County. The state percent fell slightly above Sacramento and Yolo County at 82% but was equal to El Dorado County.

Heart Disease

Heart disease is the leading cause of death in the nation for individuals under the age of 85; it includes a number of different types of heart-related conditions, with coronary heart disease the most common and a major cause of heart attacks. More than 600,000 people die of heart disease each year. [5] Table 8 examines rates for mortality, ED visits, and hospitalizations due to heart disease.

Rates – Mortality, ED Visits and Hospitalizations due to Heart Disease

Table 8: Mortality, ED Visit and Hospitalization Rates for Heart Disease Compared to County, State, and Healthy People 2020 Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
Heart Disease	95605*	14.81	192.49	273.10
	95660	16.74	252.35	331.49
	95814	29.50	423.22	557.72
	95815	15.74	257.23	348.22
	95817	11.70	164.89	306.32
	95822	22.66	204.59	278.75
	95823	13.90	307.36	349.19
	95824	15.51	182.82	298.46
	95825	30.14	235.44	257.77
	95832	12.78	279.47	360.96
	95838	14.61	260.84	370.51
	*Yolo County**	*11.90*	*156.41*	*167.63*
	Sacramento County	*16.75*	*185.73*	*245.05*
	MGH HSA	*16.47*	*183.89*	*243.50*
	CA State	*15.82*	*112.64*	*222.00*
	Healthy People 2020 Target	*10.10*	*--*	*--*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013
*ZIP code 95605 is the only Focus Community located in Yolo County

Examination of mortality due to heart disease revealed that four of eleven Focus Communities had rates higher than the respective county benchmarks. All eleven Focus Communities had mortality rates higher than the Healthy People 2020 benchmark. The highest rates were found in ZIP codes 95825 (Arden) and 95814 (Downtown/Mansion Flats). These ZIP codes have dramatically higher rates of mortality due to heart disease as compared to the county rates and the Health People 2020 target. ED visits and hospitalizations due to heart disease showed a similar result. Nine of the eleven Focus Communities had rates above the county and state benchmarks for ED visits related to heart disease, and all eleven Focus Communities had rates above the county and state benchmarks for hospitalization related to heart disease.

---

[5] Centers for Disease Control and Prevention. (2015). *Heart Disease Facts*. Retrieved from: http://www.cdc.gov/heartdisease/facts.htm

Most notably was the ZIP code Focus Community of 95814 (Downtown/Mansion Flats) with ED and hospitalization rates more than twice the Sacramento County and state benchmark rates.

Percent – Adults over 18 Years with Heart Disease

The California Health Interview Survey indicates that for 2011-2012, the percent of adults over the age of 18 that have ever been told by a doctor they have heart disease was 5.2% for Sacramento County, 5% for Yolo County and 7.3% for El Dorado County. Sacramento and Yolo counties maintained lower percentages than the state percent of 6%.

Stroke, Hypertension and Kidney Disease

The fifth leading cause of death nationally is stroke.[6] Approximately 800,000 people have a stroke each year, with the most common type being that which restricts blood flow to the brain.[7] Tobacco smoking and hypertension drastically increase the risk for stroke. Hypertension is common in approximately one out of every three adults.[8] Stroke, hypertension, and kidney disease are discussed together here. Hypertension also increases the risk for kidney diseases, along with heart disease and diabetes. Tables 9, 10, and 11 examine mortality, ED visits, and hospitalizations related to stroke, hypertension, and kidney disease.

Rates – Mortality, ED Visits and Hospitalizations due to Stroke

Table 9: Mortality, ED Visit and Hospitalization Rates for Stroke Compared to County, State, and Healthy People 2020 Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
	95605*	4.27	23.79	67.12
	95660	4.98	33.76	76.39
	95814	5.40	43.13	125.72
	95815	5.22	35.27	88.04
	95817	4.23	25.53	67.20
	95822	5.26	32.99	71.62
	95823	3.09	50.03	86.71
Stroke	95824	3.56	31.36	79.49
	95825	8.25	42.98	61.95
	95832	3.76	36.67	82.80
	95838	3.23	34.87	92.83
	*Yolo County**	*3.68*	*25.13*	*40.63*
	Sacramento County	*4.14*	*30.85*	*61.32*
	CA State	*3.60*	*18.55*	*52.23*
	MGH HSA	*4.08*	*30.32*	*60.84*
	Healthy People 2020 Target	*3.40*	*--*	*--*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013
*ZIP code 95605 is the only Focus Community located in Yolo County

---

[6] Centers for Disease Control and Prevention. (2015). *Leading Causes of Death*. Retrieved from: http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

[7] Centers for Disease Control and Prevention. (2015). *Stroke Facts*. Retrieved from: http://www.cdc.gov/stroke/facts.htm

[8] Centers for Disease Control and Prevention. (2015). *Blood Pressure Facts*. Retrieved from: http://www.cdc.gov/bloodpressure/facts.htm

Mortality rates due to stroke were high in seven of the eleven Focus Communities with the highest rates seen in ZIP codes 95825 (Arden) and 95814 (Downtown/Mansion Flats). ED visits due to stroke were also clearly above the county benchmarks in nine of eleven Focus Communities, with the highest rate in 95823 (Fruitridge) at 50.03 ED visits per 10,000 population—almost twice the Sacramento county benchmark of 30.85 per 10,000. Hospitalization rates due to stroke were also high in all eleven Focus Communities.

Rates – Mortality, ED Visits and Hospitalizations due to Hypertension

Table 10: Mortality, ED Visit and Hospitalization Rates for Hypertension Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
Hypertension	95605*	1.10	650.31	445.12
	95660	1.10	780.79	540.72
	95814	1.35	1377.72	873.34
	95815	1.19	810.93	545.20
	95817	1.09	648.76	509.74
	95822	1.52	680.55	451.58
	95823	1.37	990.81	555.50
	95824	1.48	659.74	500.08
	95825	2.32	706.87	397.02
	95832	1.12	897.74	571.32
	95838	1.86	811.14	578.49
	Yolo County*	--	517.22	293.57
	Sacramento County	--	555.90	398.66
	MGH HSA	1.36	552.58	395.87
	CA State	1.21	408.99	383.74

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013
*ZIP code 95605 is the only Focus Community located in Yolo County

Mortality rates due to hypertension were above the state benchmark in six of the eleven Focus Communities. Examination of ED visits due to hypertension showed all eleven Focus Communities with rates clearly higher than the county and state benchmarks. Specifically, ZIP code 95814 (Downtown/Mansion Flats) had rates of ED visits three times the state benchmark rate and more than two times the Sacramento County benchmark rate. The rate for hospitalizations due to hypertension was also highest in ZIP code 95814 (Downtown/Mansion Flats) at more than double the state and Sacramento County benchmark rates.

Primary data showed that participants specifically mentioned high blood pressure as a challenging issue for MGH HSA residents. Accessing medication refills for blood pressure management was noted as a challenge for many residents, especially low income residents, using the emergency room as an avenue to get their medication refills. As one community member stated:

> *A lot of high blood pressure, cholesterol, is something that we see people come in to the ER…. come in to the ER for a refill on their high blood pressure medication because they are not able to get in to see their doctor to get that refill soon enough. (FG_10)*

Percent – Adults with Hypertension Not Taking Medication

The Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey results for 2006-2010 indicated that the percentage of adults who self-reported having unmanaged

hypertension was 26% for Sacramento County, 29% for El Dorado County and 54% for Yolo County. Sacramento and El Dorado Counties ranked below the state benchmark of 30%, while Yolo County exceeded this percent dramatically.

Rates – Mortality, ED visits and Hospitalizations due to Kidney Disease

Table 11: Mortality, ED Visit and Hospitalization Rates for Kidney Disease Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits**	Hospitalizations**
Kidney Disease	95605*	0.72	102.97	210.18
	95660	0.59	139.53	234.65
	95814	0.77	164.00	396.81
	95815	0.63	137.19	264.38
	95817	0.00	95.71	249.59
	95822	1.00	140.04	231.39
	95823	0.84	201.42	284.41
	95824	0.80	124.48	251.81
	95825	1.00	141.07	198.17
	95832	0.00	200.74	311.51
	95838	0.86	169.69	307.89
	*Yolo County**	*--*	*77.06*	*126.19*
	Sacramento County	*--*	*110.76*	*180.68*
	MGH HSA	*0.63*	*109.41*	*179.33*
	CA State	*0.73*	*57.09*	*160.01*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County **OSHPD data includes data for nephritis, nephrotic syndrome, and nephrosis

Mortality rates due to kidney disease were elevated in six of the eleven Focus Communities with the highest rates in 95822 (South Sacramento/Executive Airport) and 95825 (Arden). ED visits due to kidney disease were above the county and state benchmarks in ten of eleven Focus Communities, with the highest rates in 95823 (Fruitridge) and 95832 (South Meadowview). Hospitalizations due to kidney disease were high in all eleven Focus Communities. The highest rate of hospitalizations was found in 95814 (Downtown/Mansion Flats) at 396.81 hospitalizations per 10,000, clearly higher than the state and county benchmarks.

Cancer – Incidence, ED Visit, Hospitalization, Mortality and Screening Rates by Specific Type of Cancer

Cancer is one of the leading causes of death in the nation, with more than 8% of the population receiving a cancer diagnosis at least once in their lifetime[9]. In an attempt to gain a better understanding of how the Focus Communities are affected by cancer, the assessment included the examination of cancer incidence for female breast, colorectal, lung and prostate cancers at the ZIP code level. All-cause cancer mortality and ED visits and hospitalizations for specific causes of cancer are also examined by ZIP code and included lung cancer, colorectal cancer, prostate cancer, and female breast cancer. These specific cancers were chosen for this assessment because they are among the leading causes of new cases and/or of deaths

---

[9] Centers for Disease Control and Prevention. (2015). *Cancer.* Retrieved from: http://www.cdc.gov/nchs/fastats/cancer.htm

of cancer among Americans today. Screening rates for breast cancer, cervical cancer and colorectal cancer were also examined at the HSA level.

Rates – Breast (female), Colorectal, Lung, and Prostate Cancer Incidence

Cancer incidence communicates risk for cancer within the Focus Communities. Table 12 shows incidence rates for female breast, colorectal, lung and prostate cancer for each of the ZIP code Focus Communities. Rates for each ZIP code are compared to a MGH HSA rate, as well as the state rate.

Table 12: Cancer Incidence (New Cases) for Female Breast Cancer, Colorectal Cancer, Lung Cancer and Prostate Cancer (Rates per 10,000 Population)

	ZIP Code	Breast-Female	Colorectal	Lung	Prostate
Cancer Incidence	95605*	14.17	4.91	5.48	6.92
	95660	13.73	4.11	7.28	11.60
	95814	21.28	---	7.05	12.21
	95815	12.02	3.49	6.05	7.52
	95817	13.96	3.25	4.91	11.37
	95822	21.59	4.99	7.19	14.37
	95823	11.84	4.10	4.88	8.93
	95824	13.12	3.44	4.29	5.64
	95825	16.28	4.50	4.99	8.50
	95832	10.23	3.31	4.06	8.76
	95838	12.63	2.82	5.30	9.40
	MGH HSA	*18.30*	*4.21*	*5.35*	*12.22*
	CA State	*13.16*	*3.88*	*4.54*	*11.61*

Source: California Cancer Registry, 2010-2012 *ZIP code 95605 is the only Focus Community located in Yolo County

The breast cancer incidence rate for the MGH HSA was clearly above the state benchmark. Six of the Focus Communities had rates clearly above the state with the highest rates in ZIP code areas of 95822 (South Sacramento/Executive Airport) and 95814 (Downtown/Mansion Flats). Five of the eleven Focus Communities had incidence rates above the state benchmark for colorectal cancer, with 95822 (South Sacramento/Executive Airport) having the highest rate at 4.99 cases per 10,000. Nine of the eleven Focus Communities had rates of lung cancer incidence that were above the state benchmark. Two Focus Communities had an incidence rate for prostate cancer above the state benchmark which were ZIP code 95822 (South Sacramento/Executive Airport) and 95814 (Downtown/Mansion Flats). Most notably ZIP code Focus Community 95822 (South Sacramento/Executive Airport) had elevated rates for all four cancer incidence types.

Rates – All-Cause Cancer Mortality and Lung Cancer ED Visits and Hospitalizations

An all-cause cancer mortality rate shows the overall effect of cancer as an illness in the Focus Communities. Unfortunately, mortality data due to specific cancers is not available at the sub county level, and therefore is not included in this assessment. However, ED visits and hospitalization rates due to lung cancer are reported in Table 13, followed by rates for colorectal, prostate and female breast cancer in Table 14.

Table 13: Mortality Rates for All-Cause Cancer, and ED Visits and Hospitalization Rates for Lung Cancer Compared to County, State, and Healthy People 2020 Benchmarks (Rates per 10,000 Population)

ZIP Code	Mortality All-Cause Cancer	ED Visits Lung Cancer	Hospitalizations Lung Cancer
95605*	21.15	4.86	6.75
95660	16.63	4.49	11.03
95814	17.98	5.00	13.52
95815	18.94	3.10	6.18
95817	14.04	2.24	7.05
95822	24.48	5.41	9.26
95823	15.56	4.18	9.00
95824	15.47	2.30	6.96
95825	18.60	4.43	8.44
95832	15.22	2.88	5.48
95838	14.36	5.44	9.22
*Yolo County**	*15.08*	*3.42*	*4.85*
Sacramento County	*17.24*	*3.63*	*8.35*
MGH HSA	*17.04*	*3.55*	*8.21*
CA State	*15.41*	*2.68*	*7.95*
Healthy People 2020	*16.10*	*--*	*--*

Source: Mortality: CDPH, 2012; ED visits: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Five of the eleven ZIP code communities exceeded their respective county benchmarks for mortality due to all-cause cancer. The highest rate was found in ZIP code 95822 (South Sacramento/Executive Airport). Nine of the eleven ZIP codes had a rate for ED visits due to lung cancer that was higher than the state benchmark at 2.68 visits per 10,000 and seven ZIP codes were above their respective county benchmarks. Seven of the eleven ZIP codes had lung cancer related hospitalization rates above their respective county benchmarks, with the highest rate being in ZIP code 95814 (Downtown/Mansion Flats). The hospitalization rate due to lung cancer in this ZIP code was 13.52 per 10,000 population, nearly double the county and state rate.

Rates – Female Breast, Colorectal, Prostate Cancer ED Visits and Hospitalizations
A lack of access to primary health care greatly affects the risk for late diagnosis of cancer, especially those cancers for which early diagnosis and prevention are important in order to reduce further related morbidity and mortality. Table 14 examines ED visit and hospitalizations related to female breast cancer, colorectal cancer (male and female) and prostate cancer.

Table 14: Rates of ED Visits and Hospitalizations for Female Breast Cancer, Colorectal Cancer, and Prostate Cancer (Rates per 10,000 Population)

ZIP Code	ED visits Female Breast Cancer	Hospitalization Female Breast Cancer	ED visits Colorectal Cancer	Hospitalization Colorectal Cancer	ED visits Prostate Cancer	Hospitalization Prostate Cancer
95605*	4.01	8.63	2.98	7.30	5.48	11.07
95660	9.68	12.72	3.08	6.84	7.47	7.89
95814	17.43	16.11	4.60	12.40	10.18	18.05
95815	8.39	11.01	3.04	7.23	10.87	7.75
95817	5.82	7.07	3.28	3.99	---	8.57
95822	9.79	12.39	2.17	6.48	10.61	17.24
95823	7.04	7.81	2.86	6.88	6.80	10.40
95824	4.69	9.08	2.20	6.65	2.89	5.83
95825	15.78	8.65	2.60	4.98	9.37	11.32
95832	3.80	7.91	1.67	4.96	6.12	9.02
95838	9.30	12.54	2.02	3.72	9.71	7.12
*Yolo County**	*6.09*	*7.62*	*2.22*	*4.63*	*5.68*	*7.96*
Sacramento County	*8.67*	*10.88*	*2.36*	*6.25*	*7.84*	*10.80*
MGH HSA	*8.65*	*10.74*	*2.32*	*6.22*	*7.74*	*10.72*
CA State	*6.59*	*11.07*	*1.85*	*6.43*	*5.79*	*12.37*

Source: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Examination of ED visits related to breast cancer in females revealed that five of eleven Focus Community ZIP codes had rates above the Sacramento County benchmark. Six ZIP codes had rates for hospitalizations due to breast cancer that exceeded their respective county benchmark. Rates for ED visits related to colorectal cancer showed that seven ZIP codes were above the respective county benchmark. Hospitalization data for colorectal cancer showed seven ZIP codes of the eleven Focus Communities had higher rates than both the county and state benchmark rates. ED visit rates for prostate cancer were higher than the Sacramento County benchmark in five of the ZIP codes. Four of the eleven Focus Community ZIP codes had hospitalization rates due to prostate cancer that were higher than their respective county benchmark. The highest hospitalization rate due to prostate cancer was seen in ZIP code 95814 (Downtown/Mansion Flats).

Screening Rates – Breast (Mammogram), Cervical (Pap) and Colorectal (Sigmoid/Colonoscopy) Cancer
Data on the percent of Medicare enrollees aged 67-69 or older shown in Figure 8 reports the percent receiving a mammogram within the last two years was the same for Sacramento County and the state benchmark both at 59%. Yolo County and El Dorado County had higher rates of mammogram screenings at 62% and 67% respectively. The percent of female adults over the age of 18 that reported having had a pap test in the last three years for Sacramento County was lower than the state and El Dorado County percentages 78%. Yolo County exceeded the Sacramento County, El Dorado County and state percentages at 80%. Yolo County had the greatest percentage of 50 year olds having had a sigmoidoscopy or colonoscopy at least once as compared to the El Dorado County, Sacramento County and state benchmark percentages of 68%, 65% and 58%.

Cancer Screening Percentages for Adults
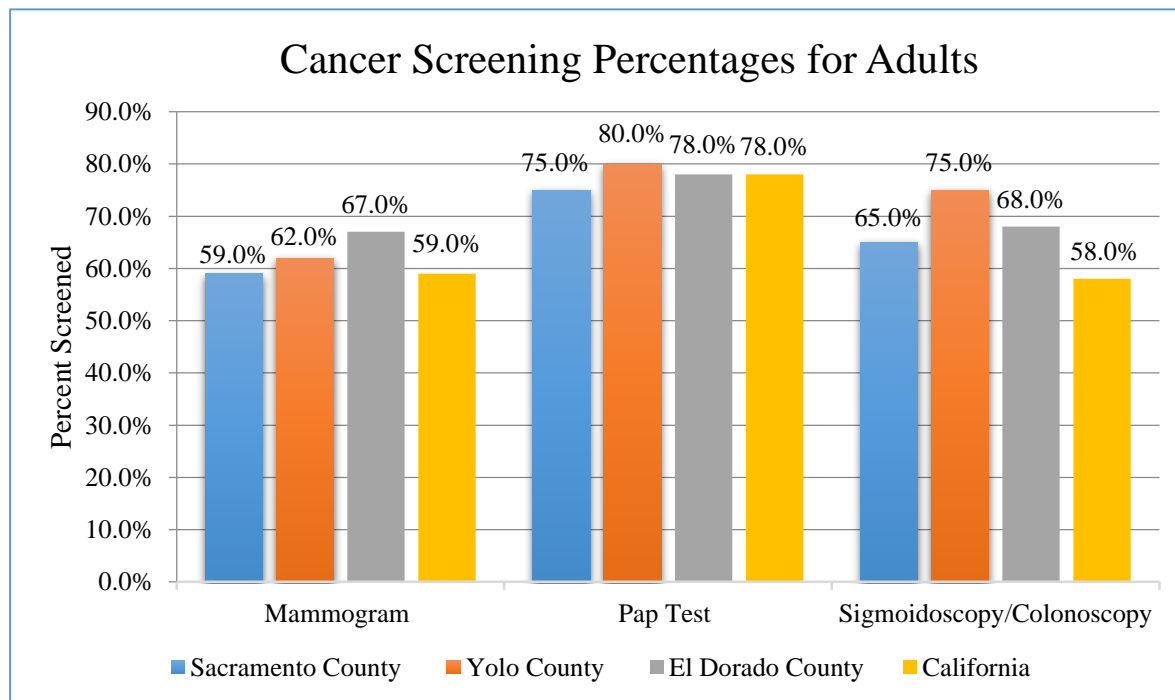
Figure 8: Screening Rates in Adults for Mammograms, Pap Test and Sigmoidoscopy/Colonoscopy

Respiratory Health – Chronic Obstructive Pulmonary Disease (COPD), Asthma, and Tuberculosis

COPD is a progressive lung disease that makes it very hard to breathe and refers to the two main conditions of emphysema and chronic bronchitis.[10] Tobacco smoking is the biggest risk factor for COPD. As many as 6.8 million people have COPD at the national level. Tuberculosis is a respiratory condition caused by a bacterium called Mycobacterium tuberculosis. In 2014 there were a total of 2.96 cases of TB per 100,000 population in the United States.[11] In an effort to understand the impact of respiratory illness in the Focus Communities, mortality rates for chronic lower respiratory disease (CLRD) are presented here along with rates of ED visits and hospitalizations related to COPD. Rates of ED visits and hospitalization due specifically to asthma are examined independently in Table 16.

---

[10] National Heart, Lung and Blood Institute. (2013). *What is COPD?* Retrieved from: http://www.nhlbi.nih.gov/health/health-topics/topics/copd

[11] Centers for Disease Control and Prevention. (2014). Tuberculosis. Retrieved from: http://www.cdc.gov/tb/statistics/default.htm

Rates – Mortality, ED Visits and Hospitalizations due to Chronic Obstructive Pulmonary Disease (COPD)

Table 15: Mortality Rates due to Chronic Lower Respiratory Disease (CLRD), ED Visits and Hospitalization Rates due to COPD Compared to County, State, and Healthy People Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality CLRD	ED Visits COPD	Hospitalizations COPD
Chronic Lower Respiratory Disease (CLRD) & Chronic Obstructive Pulmonary Disease (COPD)	95605*	3.56	327.04	224.93
	95660	5.96	566.20	311.39
	95814	6.62	847.82	534.02
	95815	5.84	556.70	280.54
	95817	4.39	374.44	259.18
	95822	4.90	408.50	254.99
	95823	3.87	542.59	251.66
	95824	3.52	387.54	227.49
	95825	6.87	492.19	214.85
	95832	---	438.54	201.11
	95838	4.70	463.90	240.49
	*Yolo County**	*4.43*	*235.04*	*128.61*
	Sacramento County	*3.88*	*340.36*	*195.19*
	MGH HSA	*3.83*	*337.91*	*193.84*
	CA State	*3.46*	*218.30*	*154.44*
	Healthy People 2020	*--*	*56.80*	*50.10*

Source: Mortality: CDPH, 2012; ED visits: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Seven of the eleven ZIP code Focus Communities had mortality rates due to chronic lower respiratory disease (CLDR) above the Sacramento County benchmark. The Sacramento and Yolo county benchmark rates are higher than the state rate. All eleven ZIP codes had rates above the county benchmarks for ED visits and hospitalizations due to COPD. The highest rate of ED visits due to COPD was found in 95814 (Downtown/Mansion Flats) at a rate more than two times the Sacramento County benchmark, four times the state benchmark and more than 16 times the Healthy People 2020 benchmark. This same ZIP code, 95814 (Downtown/Mansion Flats), had the highest rate of hospitalizations due to COPD at 534.02 per 10,000 population, compared to the Sacramento County rate of 195.19 per 10,000 and the Healthy People benchmark of 50.10 per 10,000.

Rates – ED Visits and Hospitalizations due to Asthma

Asthma is one of the leading health issues in the US. National data indicates that one in 12 adults and one in 11 children have asthma.[12] Table 16 examines ED visits and hospitalizations due to asthma (all ages).

Table 16: ED Visit and Hospitalization Rates due to Asthma Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED Visits	Hospitalizations
Asthma	95605*	201.42	111.77
	95660	381.80	142.17
	95814	486.50	222.67
	95815	362.61	135.35
	95817	243.61	135.59
	95822	273.72	124.18
	95823	390.32	140.64
	95824	265.52	124.36
	95825	337.43	109.69
	95832	328.69	116.00
	95838	317.39	119.57
	Yolo County*	*153.89*	*65.31*
	Sacramento County	*235.95*	*101.20*
	MGH HSA	*328.69*	*116.00*
	CA State	*148.86*	*70.55*

Source: OSHPD, 2011-2013, *ZIP code 95605 is the only Focus Community located in Yolo County

All eleven of the Focus Communities had ED visit and hospitalization rates due to asthma that fell above both county and state benchmarks. The highest rates of ED visits were found in ZIP codes 95814 (Downtown/Mansion Flats) and 95823 (Meadowview). These two ZIP codes were significantly higher than the Sacramento County rate of 235.95 ED visits per 10,000. ZIP code 95814 (Downtown/Mansion Flats) also had the highest rate of hospitalizations due to asthma in the Focus Communities at 222.67 per 10,000, more than two times the Sacramento County rate of 101.20 per 10,000.

Key informants and community members mentioned asthma as a major issue for area residents. Managing asthma in both the school and home built environment were mentioned as big areas of need. As one key informant expert stated

> *Asthma awareness, how do you mitigate some of those things for families within their own environments, keeping things clean and diet and behavior, what smoking does for folks? I think that's also a huge part of the reason why there's such a huge problems with asthma and advocacy around kind of built spaces and all that. (KI_17)*

Percent – Adults Over Age 18 with Asthma

As reported by the Centers for Disease Control and Prevention from the Behavioral Risk Factor Surveillance System survey, the percent of adults over the age of 18 that were ever told by a doctor that they have asthma was 18.4% for Sacramento County, 16.9% for El Dorado County and 16.1% for Yolo County. All county rates within the MGH HSA had asthma rates exceeding the state percent of 14.2% in 2011-2012.

---

[12] Centers for Disease Control and Prevention. (n.d.) *Asthma Fact Sheet*. Retrieved from: http://www.cdc.gov/asthma/impacts_nation/asthmafactsheet.pdf

Rates – ED Visits and Hospitalizations due to Tuberculosis

Table 17: ED Visit and Hospitalization Rates due to Tuberculosis Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED Visits	Hospitalizations
Tuberculosis	95605*	---	0.39
	95660	0.13	0.57
	95814	0.28	1.48
	95815	0.14	1.24
	95817	---	0.56
	95822	0.20	0.72
	95823	0.20	0.77
	95824	0.24	1.70
	95825	0.23	0.65
	95832	0.18	1.78
	95838	0.17	0.42
	*Yolo County**	*0.13*	*0.20*
	Sacramento County	*0.15*	*0.52*
	MGH HSA	*0.18*	*1.78*
	CA State	*0.15*	*0.82*

Source: OSHPD, 2011-2013, *ZIP code 95605 is the only Focus Community located in Yolo County

Seven of the eleven Focus Communities had ED visits due to TB above the county and state benchmark, which are the same. The highest ED visit rate due to TB was in ZIP code 95814 (Downtown/Mansion Flats). Ten of the eleven Focus Communities had elevated hospitalization rates due to TB compared to the respective county benchmarks. The highest rate was in ZIP code 95832 (Meadowview) at 1.78 per 10,000, almost four times higher than the Sacramento County benchmark of .52 per 10,000.

Mental Health

Mental illness is defined as "health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning."[13] Depression is the most common type of mental illness in the United States and by 2020 will be the second leading cause of disability worldwide. Mental illness is strongly correlated with many risks for chronic diseases such as, physical inactivity, smoking, excessive drinking, and insufficient sleep.[14] Mental health data at the sub county level is difficult to obtain. ED visits and hospitalizations due to mental health conditions are provided in Table 18 for the Focus Communities as a way of examining mental health in the HSA.

---

[13]Centers for Disease Control and Prevention. (2013). Mental Health Basics. Retrieved from: http://www.cdc.gov/mentalhealth/basics.htm

[14] Ibid.

Rates – ED Visits and Hospitalizations due to Mental Health

Table 18: ED Visit and Hospitalization Rates due to Mental Health Issues Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED Visits	Hospitalizations
Mental Health	95605*	193.72	198.14
	95660	364.34	296.22
	95814	1323.63	827.70
	95815	329.73	304.00
	95817	276.31	384.89
	95822	313.09	283.16
	95823	426.88	296.63
	95824	263.11	236.20
	95825	402.93	299.05
	95832	275.23	189.74
	95838	266.93	242.46
	*Yolo County**	*195.58*	*143.92*
	Sacramento County	*271.38*	*227.04*
	MGH HSA	*267.73*	*225.43*
	CA State	*149.93*	*186.92*

Source: OSHPD, 2011-2013, *ZIP code 95605 is the only Focus Community located in Yolo County

ED visits due to mental health conditions were high in eight of eleven ZIP code Focus Communities. The highest rates of ED visits due to mental health issues were found in ZIP codes 95814 (Downtown/Mansion Flats), 95823 (Meadowview) and 95825 (Arden). The rate in 95814 (Downtown/Mansion Flats) was almost five times the Sacramento County benchmark. Hospitalizations due to mental health conditions were elevated in ten of the eleven ZIP codes when compared to their respective county benchmarks. ZIP code 95814 (Downtown/Mansion Flats) also had the highest rate of hospitalizations in comparison to the county benchmark.

One of the major findings of the primary data was the high frequency of mental illness in the MGH HSA and the need for mental health services and psychiatric emergency services. Changes in the mental health provider network in the last few years have resulted in many residents going untreated for mental illness. Participants discussed patients needing care for mental illness having a difficult time getting adequate care in the HSA. One community member spoke about the challenges with seeking psychiatric care in the emergency department that it is, "n*ot uncommon to have those with SMI experiencing poor ER care, waiting in the hallways for 3 days during psychotic episodes" (FG_5)*. A service provider stated, "*...we have a massive mental health population in patient and the emergency room" (FG_17)*.

The need for access to mental health/behavioral services was mentioned by all 55 primary data sources. Mental illness ranged from anxiety and depression to schizophrenia. Participants also spoke about mental illness in the homeless populations of the county, stating the majority of the homeless population suffers from mental illness. As one provider stated:

> *So I definitely see that there are a lot of challenges and again we do see a very high number of these patients we have 29 beds in the ER that I work in and the majority of the time more than half of them are filled with either homeless or mental health patients (FG_10).*

Percent – Adults Reporting Insufficient Social and Emotional Support at the HSA Level

Aggregated data from the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey for 2006-2012 showed that 21% of respondents in Sacramento County, 24% in Yolo County and 16.2% in El Dorado County, over the age of 18, indicated that they receive insufficient social and emotional support most of the time. These county percentages were lower than the state percentage of 25% of respondents.

Participants also spoke about the importance of residents feeling a sense of social and community connectedness with one another. As one service provider stated:

> *I could tell you that diabetes is a big issue because it is but it's really getting down to the root of what causes diabetes and we start to lose track of the bigger picture of neighborhood and neighborhoods good neighborhoods create healthy people and isolation is one of the biggest problems in low income struggling, poor health neighborhoods. Isolation to me is one of the key components to creating healthy people. (KI_18)*

Dental Health

Oral health is important to overall quality of life. The data used in this assessment to examine the status of oral health in the MGH HSA was ED visits and hospitalization due to dental conditions. This data is dated from 2011 – 2013 before the reinstatement of dental coverage under the state Medicaid (Medi-Cal) program. Additional examination of data on dental health is included in later sections of the report in the "Access to Care" section.

Rates – ED Visits and Hospitalizations due to Dental Health

Table 19: ED Visit and Hospitalization Rates due to Dental Issues Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED Visits	Hospitalizations
Dental Health	95605*	91.72	11.38
	95660	141.24	12.39
	95814	216.57	29.18
	95815	164.45	15.38
	95817	136.27	14.35
	95822	81.35	9.67
	95823	132.13	11.80
	95824	104.78	12.76
	95825	122.58	10.71
	95832	89.34	8.39
	95838	119.21	11.42
	*Yolo County**	*47.18*	*6.89*
	Sacramento County	*72.66*	*9.77*
	MGH HSA	*72.64*	*9.71*
	CA State	*41.34*	*7.81*

Source: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Rates of ED visits due to dental health issues are elevated in all eleven Focus Communities. Hospitalizations due to dental health issues were above the respective county benchmarks in nine of the eleven ZIP codes. ZIP code 95814 (Downtown/Mansion Flats) had the highest rates for both ED visits and hospitalizations. In 95814 (Downtown/Mansion Flats), the rate for ED visits was nearly three times the Sacramento County rate and more than five times the state rate. The hospitalization rate for dental

health issues in 95814 (Downtown/Mansion Flats) was three times the Sacramento County rate and more than four times the state rate.

Injury – Intentional (Suicide and Self- Inflicted Injury) and Unintentional

In 2013, suicide was the 10th leading cause of death nationally, and the second leading cause of death for Americans 15-34 years of age.[15] Unintentional injury was the third leading cause of death overall but the first leading cause of death for Americans 1-44 years of age.

Rates – Mortality, ED Visits and Hospitalizations due to Suicide and Self-Inflicted Injury

Table 20: Mortality Rates due to Suicide and ED Visits and Hospitalization Rates due to Self-Inflicted Injury Compared to County, State, and Healthy People 2020 Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
Suicide/Self-Inflicted Injury	95605*	1.38	12.77	5.61
	95660	1.47	15.85	7.59
	95814	1.28	48.99	26.75
	95815	1.09	20.60	6.96
	95817	1.15	16.09	6.73
	95822	0.57	13.84	3.83
	95823	1.64	22.37	4.60
	95824	0.99	14.00	4.41
	95825	1.30	13.12	5.36
	95832	1.19	12.67	3.40
	95838	0.92	11.16	5.50
	*Yolo County**	*0.95*	*8.99*	*4.05*
	Sacramento County	*1.28*	*12.72*	*4.75*
	CA State	*1.04*	*8.18*	*4.40*
	MGH HSA	*1.25*	*12.61*	*4.75*
	Healthy People 2020	*1.00*	*--*	*--*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Mortality rates due to suicide varied in the Focus Communities. Four of the eleven Focus Communities had rates for mortality due to suicide that exceeded their respective county benchmarks. ZIP codes 95823 (Arden) and 95660 (North Highlands) had the highest rates for suicide, clearly above the county, state, and Healthy People 2020 benchmarks. Rates of ED visits due to self-inflicted injury are elevated in nine of eleven Focus Communities, with ZIP code 95814 (Downtown/Mansion Flats) showing a rate four times the Sacramento County benchmark. Seven of the eleven ZIP codes had elevated rates for hospitalization due to self-inflicted injury as compared to their respective county benchmarks.

---

[15] Centers of Disease Control and Prevention. (2015). Ten leading causes of death by age group – 2013. Retrieved from: http://www.cdc.gov/injury/wisqars/leadingcauses.html

Rates – Mortality, ED Visits and Hospitalizations due to Unintentional Injury

Table 21: Mortality, Ed Visit and Hospitalization Rates due to Unintentional Injury Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	Mortality	ED Visits	Hospitalizations
Unintentional Injury	95605*	3.25	832.74	185.16
	95660	3.08	1045.87	238.89
	95814	5.65	2080.61	528.95
	95815	3.81	1135.11	220.47
	95817	4.31	953.80	214.32
	95822	2.27	861.74	218.37
	95823	2.63	1053.90	178.91
	95824	2.77	871.47	176.26
	95825	2.06	946.84	195.46
	95832	2.11	840.06	149.85
	95838	2.87	971.06	189.32
	*Yolo County**	*2.84*	*645.28*	*121.09*
	Sacramento County	*3.38*	*761.56*	*176.4*
	CA State	*2.88*	*666.38*	*154.85*
	MGH HSA	*2.06*	*758.70*	*175.34*
	Healthy People 2020	*3.40*	*--*	*--*

Sources: Mortality: CDPH, 2012; ED visits and hospitalizations: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County

Mortality rates due to unintentional injuries exceeded county benchmarks in four of the eleven Focus Communities, with the highest rate in ZIP code 95814 (Downtown/Mansion Flats). Rates of ED visits due to unintentional injury were elevated in all eleven Focus Communities as compared to county benchmarks. ZIP code 95814 (Downtown/Mansion Flats) had a rate of for ED visits at more than two times the Sacramento County benchmark. For hospitalizations, ZIP code 95814 (Downtown/Mansion Flats) had a rate more than two times the Sacramento County benchmark.

Risk Behaviors and Living Conditions

Risk behaviors contribute to increased risk for morbidity and mortality of most health conditions in a community, and are often the focus of community based health promotion efforts. These risk behaviors include smoking, poor nutrition, physical inactivity, violent behavior, alcohol and drug usage, and risky sexual behaviors. In order to gain a clear understanding of reasons behind why individuals engage in risky behavior it is equally important to consider the conditions in which they live. These living conditions include the physical, social, economic/work, and service environment.

Risk Behaviors – Substance Abuse, Poor Nutrition, Physical Inactivity, and Risky Sexual Behavior

This section of the report will detail all indicators used in the assessment to examine the various risk behaviors in the Focus Communities.

Substance Abuse

Substance abuse, specifically the use of alcohol and drugs, is a leading preventable cause of death in the United States, costing states millions of dollars each year in treatment costs.[16] Alcohol impaired driving is the cause of 33% of all fatal car accidents.[17] This assessment included examination of multiple indicators addressing substance abuse. The indicators presented here include: ED visits and hospitalizations due to substance abuse by ZIP code, alcohol and tobacco smoking prevalence, liquor store access and percent of household expenditures for alcohol and tobacco. Prescription drug abuse has also become a major problem for adults nationally.[18]

Rates – ED Visits and Hospitalizations due to Substance Abuse

Table 22: ED Visit and Hospitalization Rates due to Substance Abuse Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED Visits	Hospitalizations
Substance Abuse**	95605*	526.03	238.90
	95660	697.69	348.50
	95814	2504.54	922.96
	95815	958.20	389.88
	95817	599.43	346.59
	95822	529.72	247.57
	95823	739.11	266.14
	95824	550.25	273.11
	95825	661.69	210.21
	95832	581.99	212.09
	95838	643.76	272.23
	*Yolo County**	*360.54*	*121.75*
	Sacramento County	*438.58*	*196.40*
	MGH HSA	*437.49*	*195.65*
	CA State	*253.80*	*145.00*

Source: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County
coded under **Mental Health codes

Examination of ED visits and hospitalizations due to substance abuse are elevated in all eleven Focus Communities. The ZIP code 95814 (Downtown/Mansion Flats) had the highest rates of ED visits and hospitalization due to substance abuse compared to all other Focus Communities. The rate of ED visits in ZIP code 95814 (Downtown/Mansion Flats) was more than five times the Sacramento County rate and more than nine times the state rate. This ZIP code also had the highest rate of hospitalizations for substance abuse, more than four times the Sacramento County benchmark.

Primary data participants also spoke about the need for more inpatient substance abuse treatment facilities in the county, saying that the current infrastructure for care is broken. Many residents seek episodic care in the emergency departments and community clinics in their neighborhoods. However, such lack of consistent intensive care results in a revolving door for many residents struggling with substance abuse. As one provider stated "*You know, all these things that we don't manage well and so they keep going through a system that's not set up to help them escape that, so it's the wrong system" KI_1.*

---

[16] Centers for Disease Control and Prevention. (2015.) *Alcohol and Drug Use*. Retrieved from: http://www.cdc.gov/stltpublichealth/didyouknow/topic/alcohol.html
[17] Ibid.
[18] Ibid.

Percent – Adults Reporting Excessive Alcohol Consumption

Results of the national Center for Disease Control and Prevention, Behavioral Risk Factor Surveillance System survey indicated that approximately 18% of respondents in Sacramento County, 21% in El Dorado County and 19% in Yolo County reported engaging in excessive alcohol consumption (more than 2 drinks per day for males and more than 1 per day for females). All counties within this HSA have higher percent of excessive alcohol consumption as compared to the state rate at 17%.

Rate – Liquor Store Access per 100,000 Population

Data on liquor stores from the US Census Bureau for 2012 revealed that Sacramento County has 8.11, Yolo County has 6.77 and El Dorado County had 9.94 liquor stores per 100,000 people, compared the state rate of 10.02 per 100,000.

Percent – Home Expenditures Spent on Alcohol

Alcohol expenditure data showed the percent of at home expenditures spent on alcohol at the census tract level from Nielsen. Data for 2014 aggregated to the HSA level showed that the percent of expenditures for the MGH HSA was 14.26%, above the state percent at 12.93%.

Rate – Prevalence of Tobacco Usage per 10,000 Population

Data taken from the California Health Interview Survey for 2014 showed that the percent of smoking for adults and teens was 14.3% for Sacramento County, 7.5% for Yolo County, and 15.1% for El Dorado County, compared to the state at 10.8%.

Percent – Home Expenditures Spent on Tobacco

Tobacco expenditure data from Nielsen indicates the percent of at home expenditures spent on tobacco at the census tract level. This indicator aggregated to the HSA level revealed that the percent of expenditures for the HSA was 1.3% compared to the state percent at 1.0% for 2014.

Poor Nutrition and Physical Inactivity

Consideration of diet and exercise data for this health assessment also includes an examination of obesity data. Though obesity is a clear outcome of poor dietary choices and a lack of adequate exercise, it is also a contributor to most of the morbidity and mortality health conditions mentioned in the previous sections of the report. Many factors contribute to high rates of obesity, poor nutrition, lack of physical activity and chronic disease in the Focus Communities. These factors include conditions of poverty, access to health care and healthy foods, pollution in a community and education to name a few. One key informant described the challenge that area service providers have in addressing the multitude of needs in the Focus Communities. The key informant stated *"It is just trying to bail the ocean with a teacup" (KI_7).*

Percent – Overweight and Obesity in Youth

Table 23: Percent Overweight and Obese in Youth Grades 5th, 7th and 9th as Measured by the FitnessGram by County in the MGH HSA

Indicator	Percent Overweight	Percent Obese
Sacramento County	19.4%	17.5%
Yolo County	19.8%	17.7%
El Dorado County	15.2%	9.9%
CA State	*19.3%*	*19.0%*

Source: California Department of Education, 2013-2014

As the data presented in Table 23 indicates, the percent overweight in youth is slightly higher in Sacramento and Yolo counties in comparison to the state benchmark, yet lower for percent obese. The percent of overweight and obese youth was lower in El Dorado County at 15.2% overweight youth and

9.9% obese youth. Additionally, data by race and ethnicity indicated that in Sacramento County the percent of overweight for White students was 17.6% compared to Black students at 21.7% and for Hispanic students at 21.4%. In El Dorado County, the percent of overweight for White students was 14.2% compared to Black students at 17.1% and for Hispanic students at 19.7%. Finally, data by race and ethnicity indicated that in Yolo County 17.3% of White students are overweight, compared to 22.5% for Hispanic students. Unfortunately, overweight and obesity data is seldom available at the sub-county level in order to examine how rates compare within the counties.

Percent – Mothers Reporting Breastfeeding

Research indicates that when a child is breastfed the risk for negative health conditions decreases; specifically, there is a reduction in the risk for infant mortality. According to data from the California Department of Public Health for 2012, the percent of mothers who breastfed their infants at birth was slightly lower for Sacramento County at 91.7% compared to the state percent at 93%. The El Dorado County percent was 96.9% and the Yolo County 96.2%-both percentages exceeded the Sacramento County and state percentages. Data by race and ethnicity for Sacramento County revealed that while 95.3% of Whites report breastfeeding, only 87.3% of Blacks, 93.5% of Hispanic/Latinos, 87.7% of Asians, and 92.3% of Native American/Alaskan Natives report breastfeeding. Data by race and ethnicity in Yolo County revealed that while 97.2% of Whites reported breastfeeding, only 88.1% of Blacks, 95.6% of Hispanic/Latinos, and 95.9% of Asians reported breastfeeding. Data by race and ethnicity for El Dorado County revealed that while 96.75% of Whites reported breastfeeding, 100% of African-Americans reported breastfeeding. Moreover, 97.58% of Hispanic/Latinos, 95.3% of Asians, and 92.3% of Native American/Alaskan Natives reported breastfeeding.

Area – USDA Defined Food Desert

The USDA defines a food desert as: "urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food. Instead of supermarkets and grocery stores, these communities may have no food access or are served only by fast food restaurants and convenience stores that offer few healthy, affordable food options."[19] The lack of access to healthy food results in a poor diet and can lead to higher levels of obesity and other diet-related diseases, such as diabetes and heart disease. The USDA further describes a food desert as "a census tract with a substantial share of residents who live in low-income areas that have low levels of access to a grocery store or healthy, affordable food retail outlet."[20] Figure 9 identifies the food deserts for the MGH HSA Focus Communities.

---

[19] US Department of Agriculture. (n.d.) *Food Deserts*. Retrieved from:
https://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx
[20] Ibid.
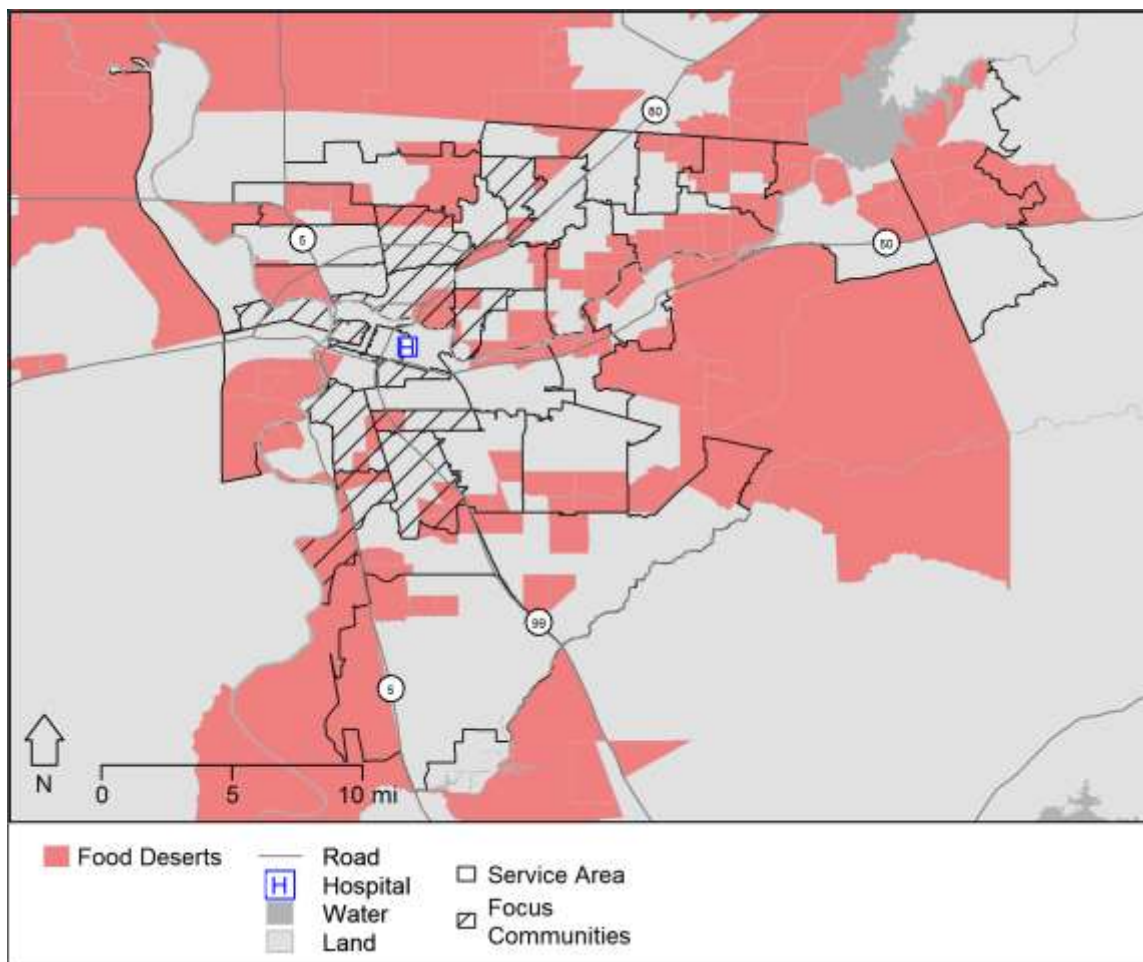
Figure 9: USDA Defined Food Deserts

As shown in Figure 9, portions of eight of the eleven Focus Communities were designated USDA defined food deserts. The ZIP codes in the MGH HSA which do not contain a food desert area were the Yolo County ZIP code of 95605 (West Sacramento/Broderick) and the Sacramento County ZIP codes of 95814 (Downtown/Mansion Flats) and 95817 (North Oak Park).

Primary data indicated that a lack of retail in low income areas in the MGH HSA means a lack of access to *"fresh produce, quality food, meat" (KI_18) for residents.* Participants spoke about the absence of high quality grocery stores and healthy foods in low income areas of the county, yet an overabundance of unhealthy options. As one community member mentioned:

> *You know, I just want to share an observation. I was thinking of some time ago and it popped in my head right now. In that, so our neighborhoods are Food Source, Food Co, Winco, you walk in these stores and the first thing you see are packaged foods, like processed foods. You see cakes, you see cookies, crackers, but if you walk into a Safeway in a good community, if you walk into Trader Joe's, the first thing you see if produce. You see fresh apples, you see, it's very interesting but if you walk into these other stores that are much cheaper that is the first thing you see is all the processed foods. (FG_10)*

Many participants talked about the saturation of fast food and unhealthy options in lower income communities of the county. Data that follows supports this conclusion. As one community member stated:

> *You're probably working long hours and to come home and cook a healthy meal it takes more energy, more time, you know there's that and these communities there is a fast food restaurant on every corner. I have like 5 that are surrounding my house so it's so easy, very cheap, so easy to just get off of work and stop at McDonalds or stop, and not to pick something up that doesn't break the bank so for sure I think that income goes into the lifestyle. (FG_10).*

Percent – Population with Food Insecurity and Receiving Supplementary Nutrition Assistance Program

According to Feeding America, the percentage of population with food insecurity in 2013 for Sacramento and Yolo counties was higher than the state percent. However, the food insecurity percentage in El Dorado County (13.6%) was lower than both the previously mentioned counties and the state benchmark. The percentage of population receiving SNAP (Supplementary Nutrition Assistance Program) in 2011 was lower for Yolo County and El Dorado County as compared to the state percent. The percentage of residents receiving SNAP in 2011 was highest in Sacramento County at 14.8%.
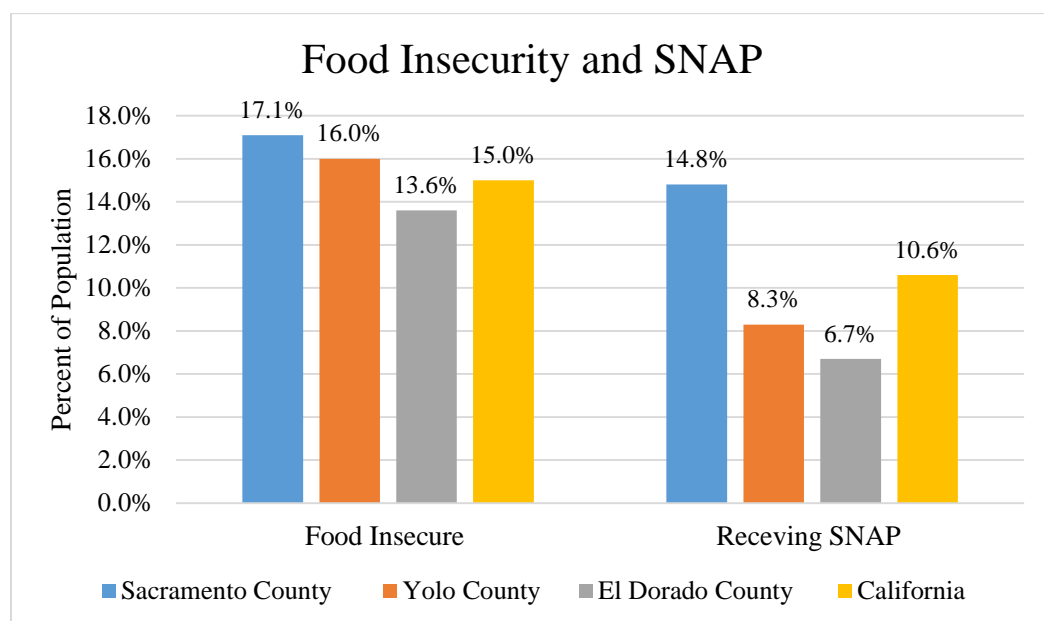

Figure 10: Percent Food Insecure and Percent Receiving SNAP

Index – Modified Retail Food Environment Index (mRFEI)

The Modified Retail Food Environment Index (mRFEI) consists of two aspects of food availability: both the presence of food outlets within a ZIP, as well as the relative abundance of healthier food outlets. Negative mRFEI values occur in areas with no food outlets. All other values report the percentage of healthier food outlets, from among all food outlets, in the ZIP code. Figure 11 shows the mRFEI for the MGH HSA. Lighter areas indicate poor or no access to healthy food outlets and darker areas indicate greater access to healthy food outlets.
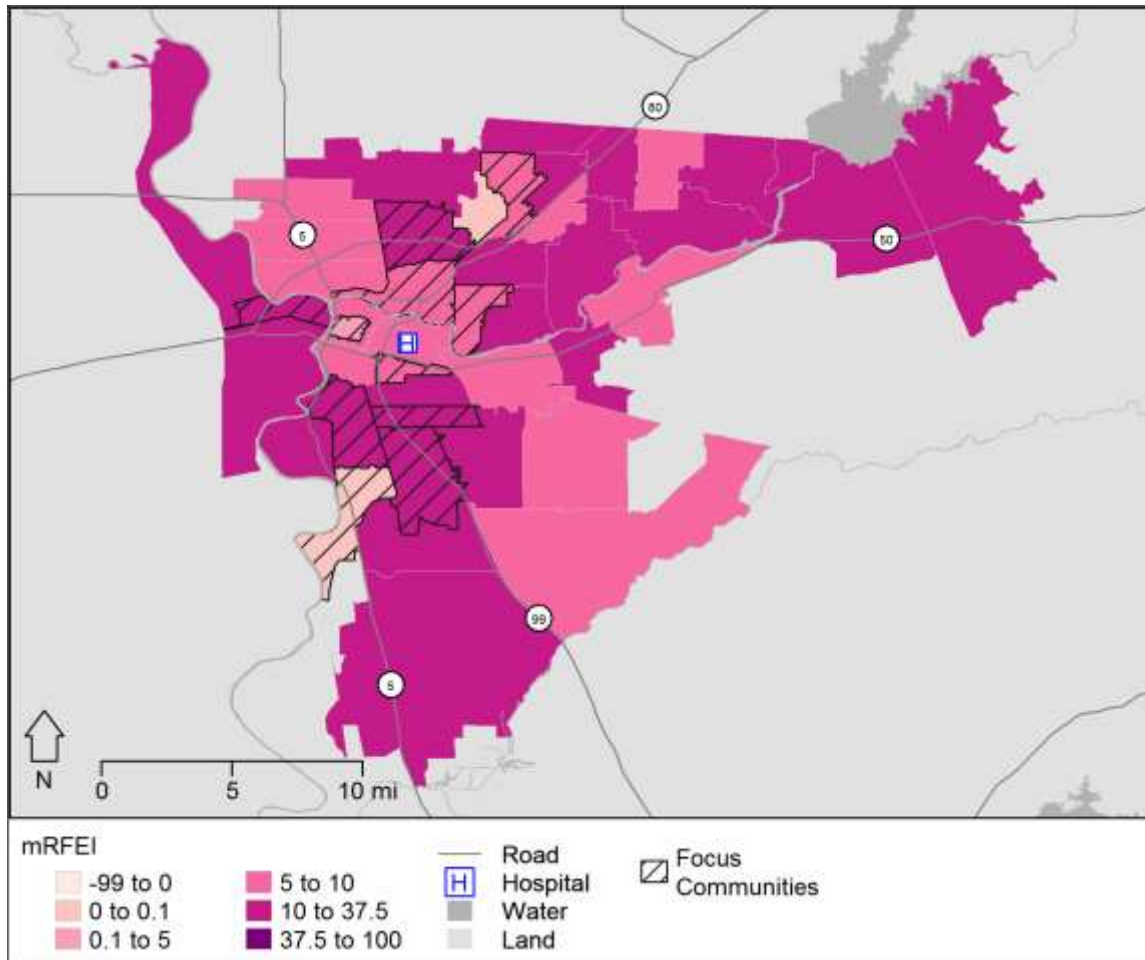
Figure 11: Modified Retail Food Environment Index (mRFEI)

As shown in Figure 11, many Focus Communities ZIP codes have lower mRFEI scores, indicating poor or no access to healthy foods. Specific mention are the ZIP code areas of 95832 (Meadowview), 95814 (Downtown/Mansion Flats), 95660 (North Highlands), 95817 (North Oak Park) and 95825 (Arden). These ZIP codes had the lowest index values of the eleven Focus Communities. The Focus Community with the greatest index value, greater access to healthy food outlets, was ZIP code 95838 (Del Paso Heights).

Rate – Fast Food Restaurants and Grocery Stores per 100,000 Population

According to business data reported by the US Census Bureau, the rate of fast food restaurants for the MGH HSA was lower (71.24) than the state rate of 74.51 per 100,000. Additionally, the rate of grocery stores for the HSA was lower (19.18) than the state rate (21.51) for the HSA. The MGH HSA has fewer fast food restaurants but also fewer grocery stores per 100,000 compared to the state. Figure 12 shows the exact data for each indicator.
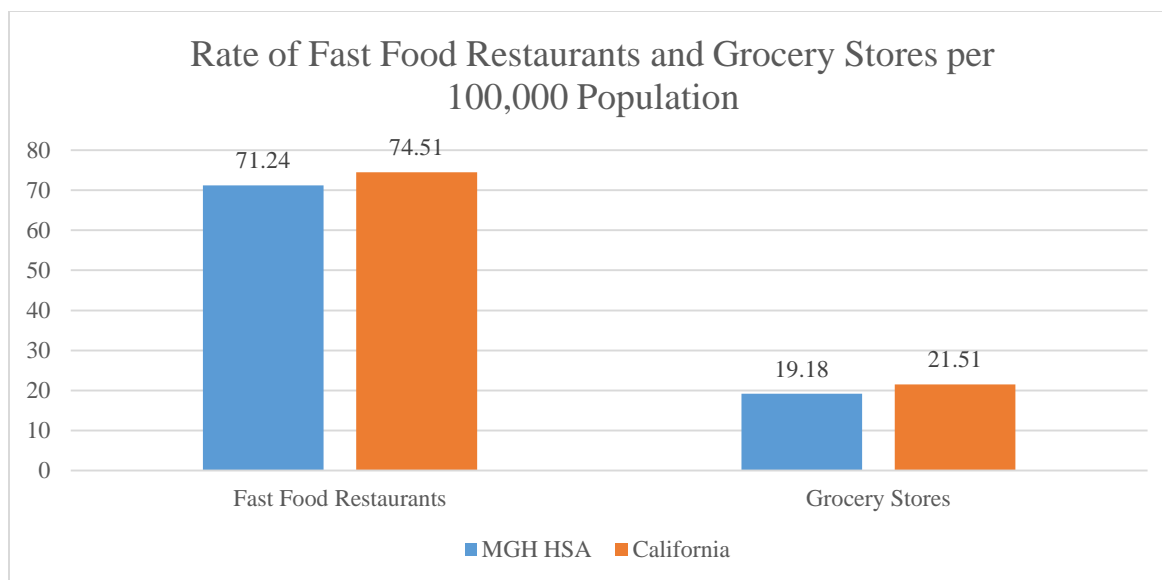
Figure 12: Fast Food Restaurants and Grocery Stores per 100,000 Population

Percent – Youth Eating Less Than Five Servings of Fruits and Vegetables a Day

Data from the 2011-2012 California Health Interview Survey indicated that 48% of youth in Sacramento County report eating less than five servings of fruits and vegetables daily, only slightly above the state rate at 47.40%. In Yolo County, 44.2% of youth are eating less than five servings of fruits and vegetables daily. Examination by race and ethnicity showed that in Sacramento County, 43.5% of Whites report eating less than five servings a day, compared to Blacks at 36.2% and Hispanic/Latino at 43%. El Dorado County showed that 58.3% of White youth report eating less than five servings a day, compared to Hispanic/Latino at 43%. No data was shown by race and ethnicity for the Black population. Finally, examination by race and ethnicity showed that in Yolo County, 30.8% of youth who are White report eating less than five servings a day, compared to Hispanic/Latino youth at 34.2%.

Percent – Home Expenditures Spent on Fruits and Vegetables and Soda

Results for the percent of food-at-home expenditures spent on fruits and vegetables, as well as soda were notable for the MGH HSA. Data from Nielsen for 2014 showed the percent spent for fruits and vegetables in the HSA was 13.4%, lower than the state benchmark of 14.1%. However, the inverse is true for soda expenditures. The soda expenditure in the MGH HSA is 3.9%, above the state benchmark of 3.6%.

Percent – Physical Inactivity for Adults and Youth

Indicators that examine physical activity in the HSA are very hard to find. In 2012, the Centers for Disease Control (CDC) reported that the percent of adults over the age of 20 indicating they perform no regular physical activity for Sacramento County was 16.8%, slightly higher than the state rate. Physical inactivity for youth in Sacramento County, as reported using the FitnessGram Physical Fitness Test, was slightly lower than the state. There were 35.3% of youth in grades 5, 7, and 9 classified as physically inactive, compared to the state percent at 35.9%. Examination by race and ethnicity for Sacramento County revealed that while 30.5% of Whites were classified as physically inactive, 42.3% of Blacks, 31.4% of Asian, 44.6% of Hispanic/Latino and 36.6% of non- Hispanic multiple race were classified as physically inactive. El Dorado County had 13.6% physical inactivity for youth, as reported using the FitnessGram Physical Fitness Test, showing that both counties had lower rates than the state. Examination of youth physical inactivity by race and ethnicity in Yolo County revealed that while 28.7% of Whites were classified as physically inactive, 33.8% of Blacks, 25.0% of Asians, 47.8% of Hispanic/Latinos and 35.5% of non-Hispanic multiple race were classified as physically inactive.

Percent of Population Living Within One-Half Mile of a Park

Access to recreational areas contributes to whether or not people will be physically active. Figure 13 shows the percent of the population by ZIP code in the MGH HSA service area that lives within one-half mile of a recreational park. The lighter colors denote fewer residents with nearby park access and darker colors show more residents living within one-half mile of a park.
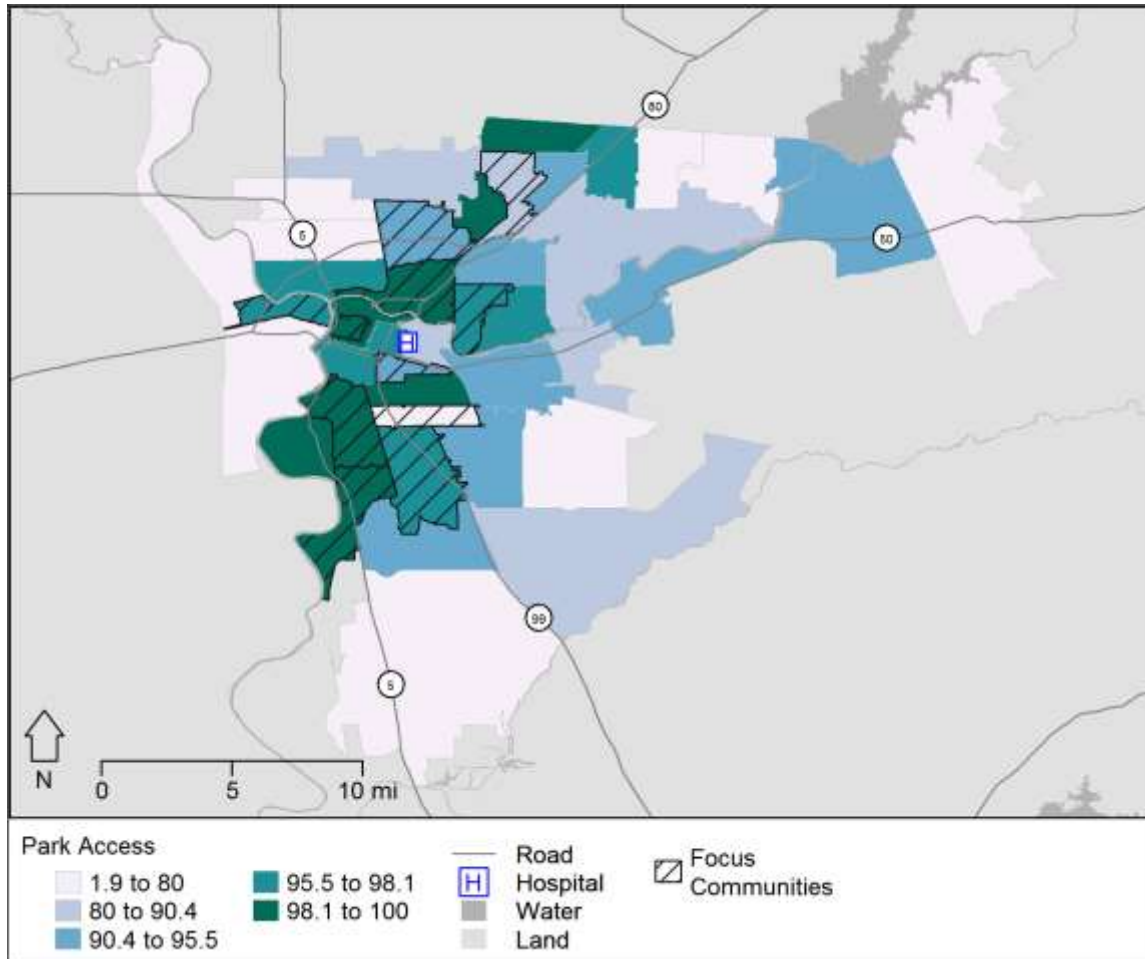

Figure 13: Percent of Population by ZIP Code that Live within One-Half Mile of a Park

As displayed in Figure 13, access to a park varied among the Focus Communities. Four of eleven Focus Community ZIP codes have limited park access. ZIP codes 95660 (North Highlands), 95817 (North Oak Park), 95824 (Parkway) and 95838 (Del Paso Heights) had the lowest percent of population with access to a park in their community. ZIP code 95824 (Parkway) had the lowest access to parks amongst all eleven Focus Communities. Having access to a park or physical space where people of all ages can engage in play and be physically active is important for overall health and wellbeing.

Key informants and community members stated that community parks are lacking in Focus Communities of the HSA. Additionally, where parks do exist there are concerns of safety and many residents are hesitant to play in the parks or engage in physical activity in the neighborhoods.

> *The geographic location, or closeness also are barriers. I say this and I'll provide a little bit of explanation about the way that the person feels in their community. Their safety. If a family doesn't feel safe that they can go to the park and let their kids play, it's difficult for them to make*

sure that their children are getting enough exercise that they're outdoors and that even in small ways contributes to health benefits. (KI_11)

Risky Sexual Behavior – Teen Birth Rate and Sexually Transmitted Infections (Chlamydia, Gonorrhea, and HIV/AIDS)

Rate – Teen Births to Women Under the Age of 20

The teen birth rate (births to women under the age of 20) is an indicator used in this assessment to examine sexual behavior throughout the MGH HSA. Data from 2013 indicated that the national rate for teen births (age 15-19) fell at 26.5 per 1,000 live births. [21] Figure 14 shows the teen birth rate for the MGH HSA.
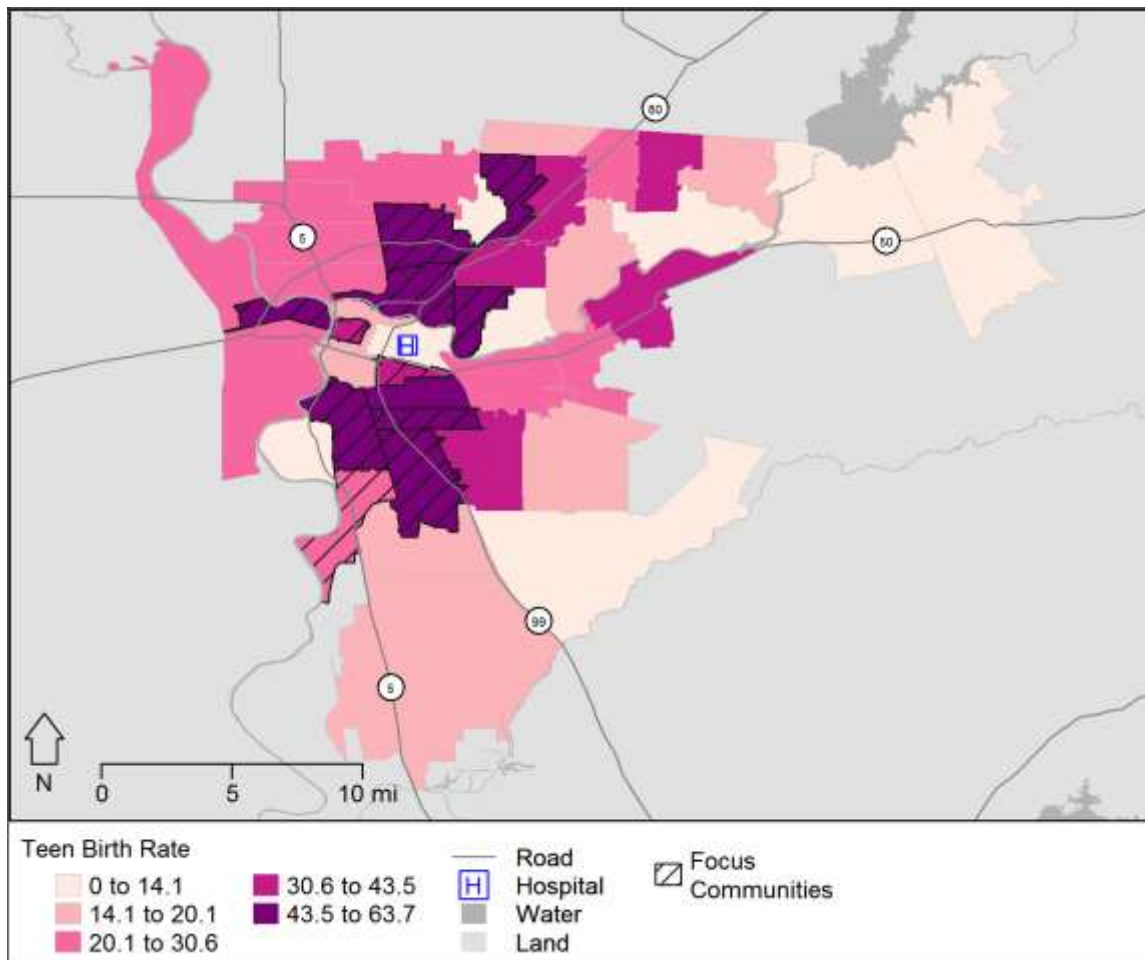
Figure 14: Teen Birth Rate for 15-19 Year Olds per 1,000 Live Births

All eleven Focus Communities had teen birth rates higher than the state rate of 28.3 teen births per 1,000 live births. The highest teen birth rates were seen in ZIP codes 95815 (North Sacramento), 95838 (Del Paso Heights) and 95823 (Fruitridge).

---

[21] Centers for Disease Control and Prevention. (2015). *Teen Births*. Retrieved from: http://www.cdc.gov/nchs/fastats/teen-births.htm

Sexually Transmitted Infections (STI) – Chlamydia, Gonorrhea, and HIV/AIDS

Rates of STIs, including chlamydia, gonorrhea, and HIV, illustrate the presence of risky sexual behavior in the HSA. Since STIs are largely preventable, knowing where community members are infected by STIs helps with targeting interventions for treatment and prevention. Table 24 displays incidence rates for chlamydia and gonorrhea by ZIP code for 2014 compared to the county and state benchmarks. Incidence rates are a measure of risk for a condition. Table 25 shows ED visits and hospitalizations related to STIs, as well as those specific to HIV/AIDS.

Rates – Chlamydia and Gonorrhea Incidence

Table 24: Chlamydia and Gonorrhea (New Cases) Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	Chlamydia Incidence	Gonorrhea Incidence
STI Incidence	95605*	49.44	15.54
	95660	59.69	18.27
	95814	93.86	45.91
	95815	82.34	24.97
	95817	76.51	25.04
	95822	57.64	19.52
	95823	85.09	26.16
	95824	65.77	20.79
	95825	81.89	18.73
	95832	107.87	28.21
	95838	70.26	17.14
	*Yolo County**	*35.89*	*9.54*
	Sacramento County	*47.07*	*12.51*
	CA State	*45.34*	*11.68*

Source: Sacramento County Public Health, 2014 *ZIP code 95605 is the only Focus Community located in Yolo County

Incidence rates for chlamydia and gonorrhea were above both the county and state benchmarks for all eleven of the Focus Communities. The Sacramento County incidence rate for chlamydia and gonorrhea were higher than both the state and the Yolo County rate. ZIP codes 95832 (Meadowview) and 95814 (Downtown/Mansion Flats) had incidence rates for chlamydia more than twice as high as the Sacramento County benchmark. The highest incidence rates for gonorrhea was in 95814 (Downtown/Mansion Flats) at nearly four times the county and state benchmarks.

Rates – ED Visits and Hospitalization due to STIs and HIV/AIDS

Table 25: ED Visit and Hospitalization Rates due to STIs and HIV/AIDS Compared to County and State Benchmarks (Rates per 10,000 Population)

	ZIP Code	ED visits STIs	Hospitalizations STIs	ED visits HIV/AIDS**	Hospitalizations HIV/AIDS**
Sexually Transmitted Infections	95605*	3.64	3.19	1.23	1.97
	95660	6.74	4.35	2.54	2.97
	95814	23.03	25.24	10.84	21.82
	95815	11.56	5.76	3.00	3.93
	95817	11.47	11.76	3.77	9.42
	95822	8.25	5.05	3.70	4.10
	95823	12.60	6.40	5.58	4.24
	95824	9.50	6.54	3.53	4.72
	95825	6.86	5.12	2.71	3.55
	95832	9.93	6.09	3.42	4.77
	95838	8.22	6.86	1.58	4.92
	*Yolo County**	*1.51*	*1.68*	*0.53*	*0.60*
	Sacramento County	*5.53*	*3.95*	*2.23*	*2.78*
	MGH HSA	*5.43*	*3.89*	*2.20*	*2.72*
	CA State	*3.20*	*4.58*	*1.95*	*3.36*

Source: OSHPD, 2011-2013 *ZIP code 95605 is the only Focus Community located in Yolo County
**HIV/AIDS is considered a subcategory of STIs in the ICD 9 diagnostic codes.

Table 25 indicates that rates of ED visits and hospitalizations due to STIs were elevated above the county benchmarks in all eleven Focus Communities. The highest rate of ED visits due to STIs was seen in the Downtown Sacramento ZIP code of 95814 (Downtown/Mansion Flats). The rate of ED visits in 95814 was more than quadruple the Sacramento County benchmark. Hospitalizations due to STIs were highest in ZIP code Focus Community 95814 (Downtown/Mansion Flats). ED visits and hospitalization rates for the STI subcategory of HIV/AIDS were also elevated in almost all of the Focus Communities. ZIP code 95814 (Downtown/Mansion Flats) had the highest rate of ED visits and hospitalization due to HIV/AIDS among all eleven Focus Communities.

Rate – Prevalence of HIV/AIDS per 100,000 Population

The CDC reported that for 2010, the prevalence rate of HIV/AIDS in the MGH HSA was 272.4 cases per 100,000 population, lower than the state rate of 363 cases per 100,000. Data by race and ethnicity showed that in Sacramento County (the greatest number of ZIP codes within the MGH HSA are in Sacramento County) Whites have a rate of 289.12 cases per 100.000, compared to Blacks with 670.03 cases per 100,000 and Hispanic/Latino with 229.7 cases per 100,000. El Dorado County showed that Whites had a rate of 90.38 cases and Hispanic/Latino with a higher rate of 122.96. No data was shown for the prevalence of HIV/AIDS for Blacks. Data by race and ethnicity for the prevalence of HIV/AIDS in Yolo County showed that Whites have a rate of 111.92 cases per 100,000 population, compared to Blacks with 520.34 cases per 100,000 and Hispanic/Latino with 113.47 cases per 100,000.

Percent – Adults Never Screened for HIV

Data from the national Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey for 2011-2012 indicated that as many as 61% of respondents between 18-70 years of age in Sacramento County reported never being screened for HIV, equal to the state percent. Data indicated that as many as 61.8% of respondents between 18-70 years of age in Yolo County report never being screened for HIV, slightly higher than the state percent of 60.8%. In El Dorado County, 59.23% of respondents between the ages of 18-70 years of age had never been screened for HIV.

Living Conditions – Physical Environment, Social Environment, Economic/Work Environment and Service Environment

This section of the report will examine various indicators which help to illuminate the daily living conditions of the MGH HSA residents. The indicators are organized in accordance to the BARHII model discussed previously in this report: physical environment, social environment, economic/work environment, and service environment.

Physical Environment

Examination of the physical environment of the MGH HSA included analyzing indicators of transportation, traffic accidents, housing, and pollution.

Area – Population Living One-Half Mile Near a Transit Stop

There are limits to the distances community members will travel to access public transportation services. These distances are documented in research and vary due to a number of factors including climate, attractiveness of the area, and the amount of traffic on streets.[22] Most research states that individuals will travel no more than one-fourth to one-third of a mile to access public transportation. Identifying areas in the HSA that are at least one-half mile from a transit station helps to highlight transportation availability in the area. Figure 15 shows areas of the MGH HSA that are within one-half mile from a transit stop.

---

[22]*Building Transit-Friendly Communities: A design and development strategy for the Tri-State Metropolitan Region* (1997). Regional Plan Association. Retrieved from: http://ntl.bts.gov/DOCS/GL.html
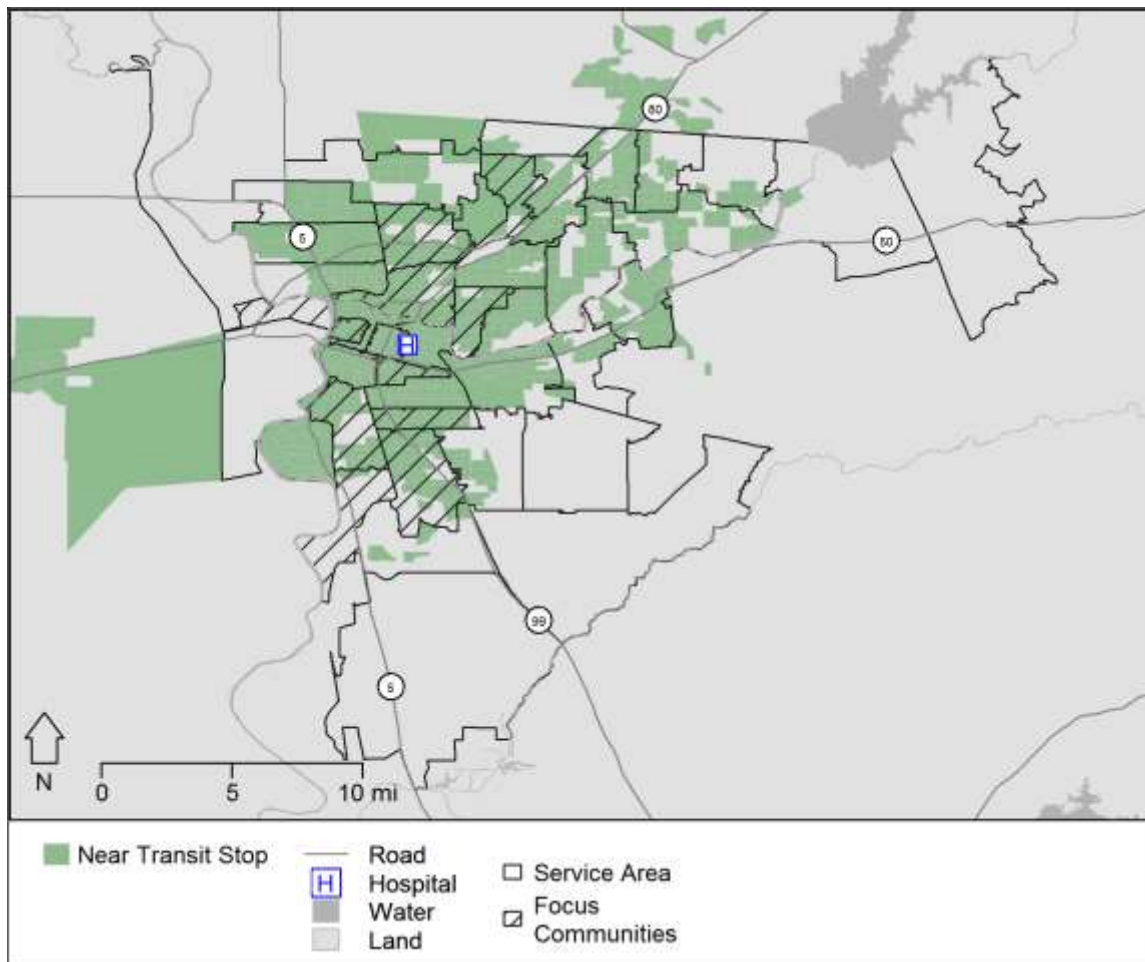
Figure 15: Locations in the HSA within One-Half Mile of a Transit Stop

In Figure 15, grey shaded portions of the map are more than a half-mile from a transit stop. As the figure displays, nine of eleven Focus Communities have areas that don't have transit stops within one-half mile.

Having access to a vehicle is an important factor in the determination of a person's ability to access the things they need to stay healthy. A working vehicle means the ability to get to work, to the grocery store, to school, and to access health care. Figure 16 shows the percent of households with no vehicle in the MGH HSA.
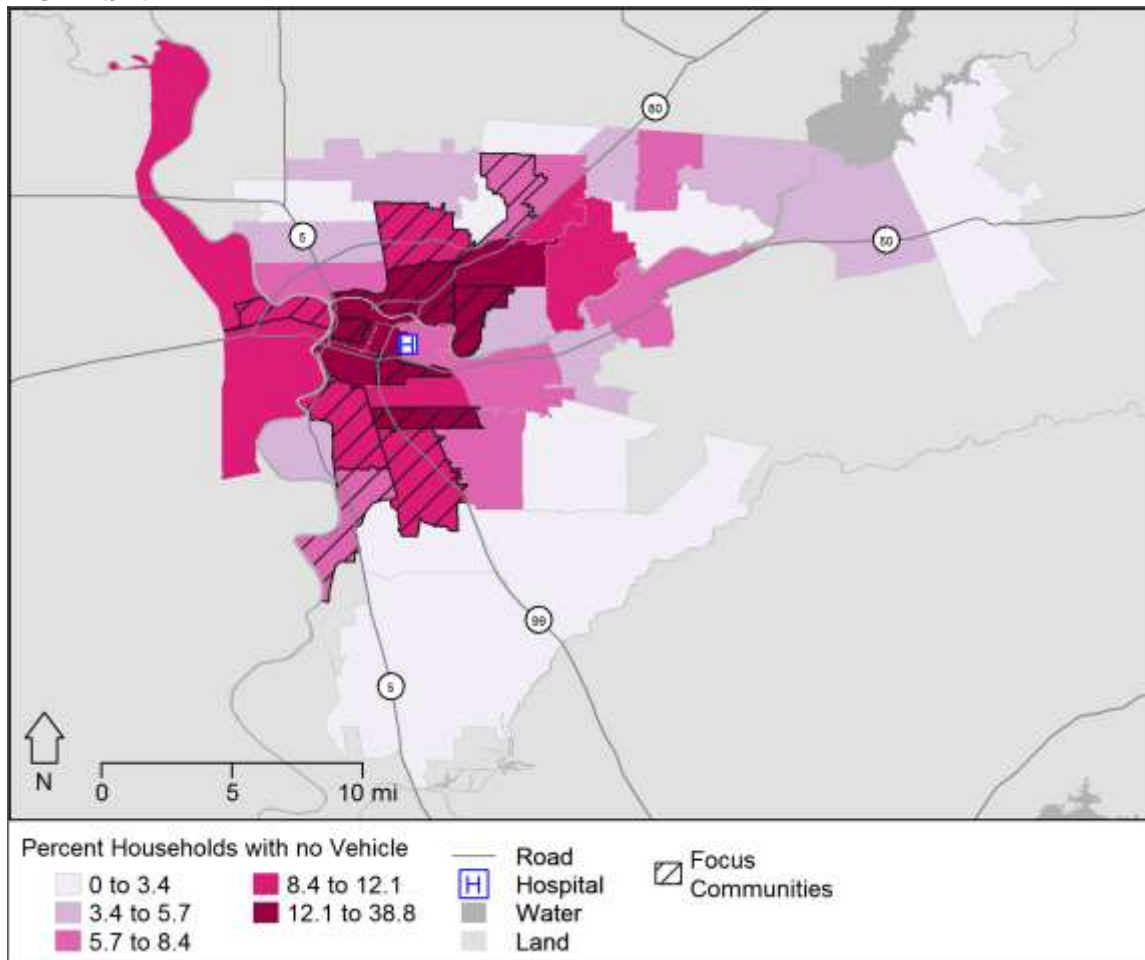
Figure 16: Percent Households with No Vehicle

The percent of households with no vehicle for the state was 7.8%, 7.6% for Sacramento County and 8.6% for Yolo County. As Figure 16 shows, nine of eleven Focus Communities have a high percent of households with no vehicle. The Focus Communities with the highest percent of households with no vehicle was seen in ZIP code 95814 (Downtown/Mansion Flats) at 38.8%, more than five times the state benchmark.

Lack of safe and affordable transportation was mentioned as a significant barrier for MGH HSA residents, and is the sixth prioritized health need for the MGH HSA. Transportation was mentioned as a barrier to accessing health care, healthy foods, employment, and education. Participants stated that the current public transportation system in the MGH HSA can be very expensive, sometimes unreliable, and unsafe. Participants said that the public transportation system is far from where they live. One service provider said:

Yeah, it is so often that I hear from clients that they can't get there, they either…they are not directly on a bus route or they need or they can't walk to the bus station, the bus doesn't come frequently enough, they can't afford a taxi. (KI_9)

Many community members said that they desired purchasing healthier foods, but that transportation barriers made it challenging to travel to areas with grocery stores. As one community member stated, "Transportation is an issue. Trader Joe's or Sprouts we can't get too…it would take your whole day on the bus" (FG_9).

Many other participants spoke about transportation as a major barrier to accessing health care services. As one provider stated "*I am going to go back to the two that I think are having such a huge impact…it is the transportation thing again; it seems so unrelated to healthcare, but it is enormous" (KI_9)*. Participants spoke about many transportation options associated with various health providers, but that the ability to access these services was complicated. The lack of transportation and the time that it takes to get to resources can be very challenging and add unnecessary stress to resident's daily lives. One key informant spoke about barriers to access in care related to transportation for the elderly and stated:

I know where I live and there's a lot of elderly that I know a lot of elderly have to choose sometimes between whether to eat or take the prescriptions, that's an issue. A lot of them are homebound too, transportation to get to the doctors and stuff is very hard for them (FG_20).

Another key informant discussed challenges of accessing medical care while being disabled in a rural area:

Yeah, I have to drive 15 miles to get here too but when you got an old vehicle, that is not running well, and you have to travel there's no way I can get to Sacramento and I don't know if I really qualify for being disabled because I'm over weight and have no cartilage left in my knees. Now I'm trying to get the transportation to a health bus because I can't climb the steps to get in to a regular bus and I just don't know if that's going to work out either (FG_20)

Percent – Workers That Commute More Than 60 Minutes to Work

Long commute times are associated with increased likelihood of being overweight, higher blood pressure, increased stress and neck pain, exposure to more pollution, and negative affect.[23] Figure 17 displays the percent of workers in each ZIP code which commute more than 60 minutes to work.
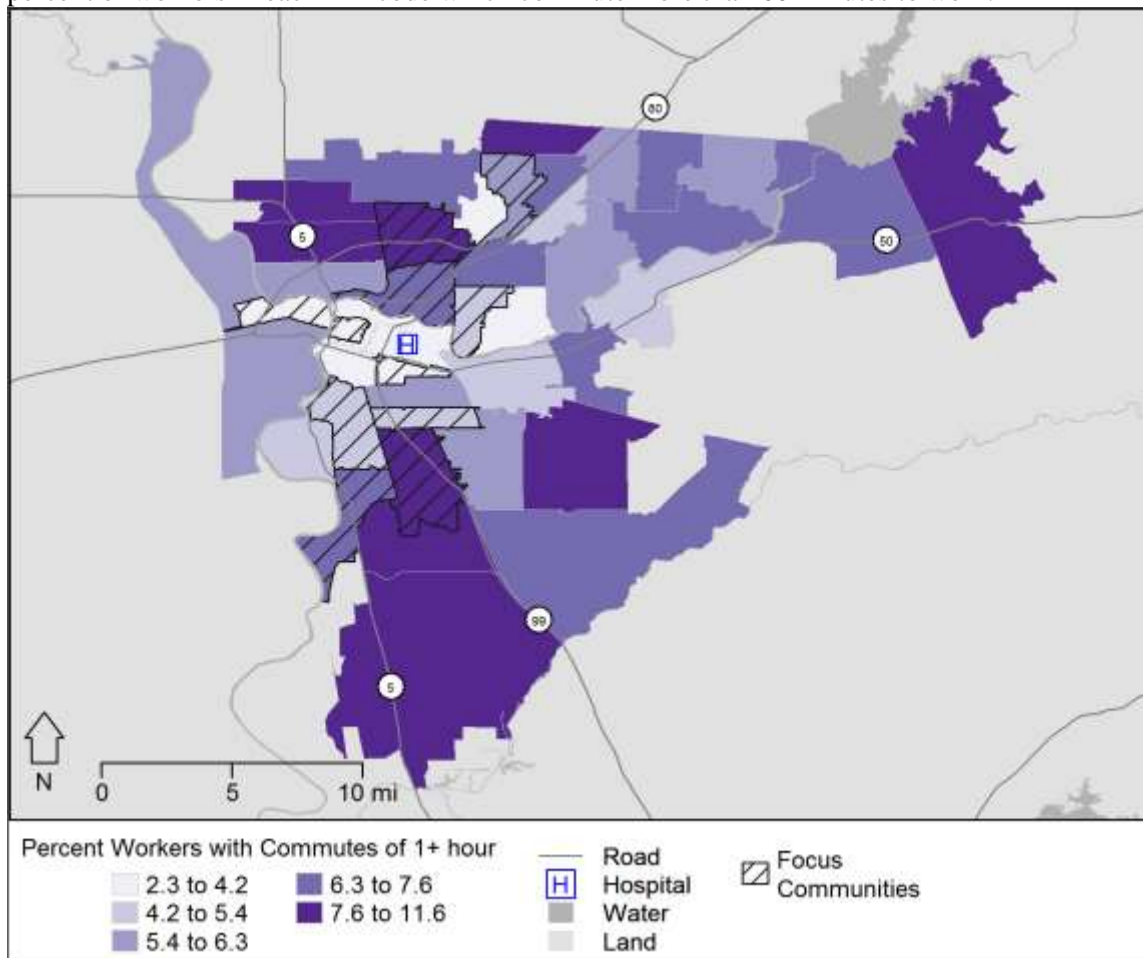

Figure 17: Percent Workers with Commutes of 1+ Hour

Four of eleven Focus Communities had a high percentage of residents commuting more than 60 minutes to work. ZIP code 95838 (Del Paso Heights) had the highest percent of residents commuting more than 60 minutes, with 11.6% followed by ZIP codes 95823 (Fruitridge), 95832 (Meadowview) and 95815 (North Sacramento).

Percent – Workers Reporting Commuting Alone and Walking/Biking to Work

As displayed in Figure 18, data from the US Census Bureau indicted that 75.4% of respondents in the MGH HSA over the age of 16 years old reported commuting to work alone, which is slightly higher than the state benchmark of 73.2%. The Census data also indicated that 3.2% of MGH HSA respondents stated that they walk or bike to work, just below the state percent of 3.8%.

---

[23] MacMillan, A. (2015). Five ways your commute is hurting your health. Retrieved from: http://news.health.com/2015/03/31/5-ways-your-commute-is-hurting-your-health/
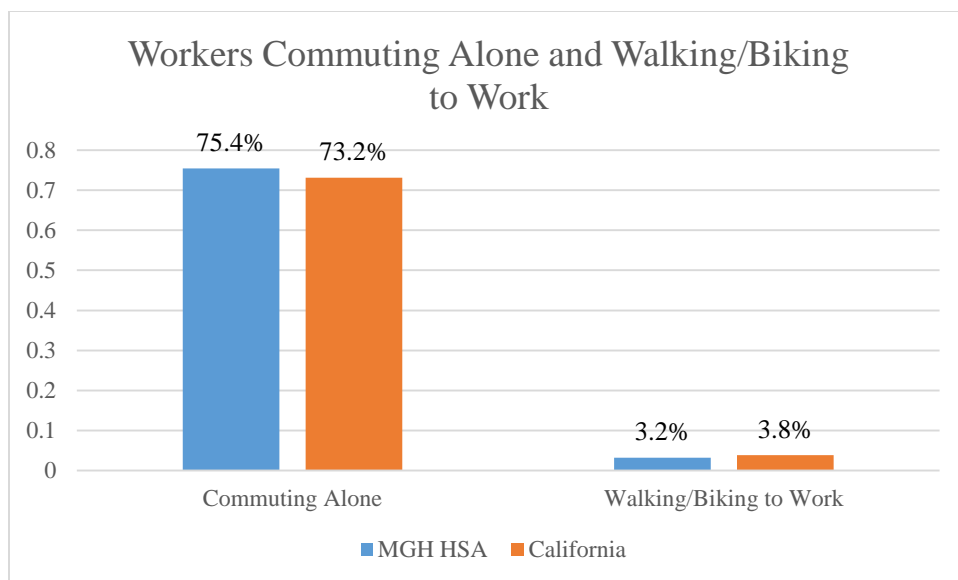
Figure 18: Percent of Workers Commuting to Work Alone and Walking or Biking to Work

Rate – Road Density Network per Square Mile

Examination of road network density revealed that Sacramento County has more roads per square mile than the state. The number of roads per square mile for Sacramento County was 6.04 compared to the state rate of 2.02 roads per square mile. Examination of road network density revealed that Yolo County has less roads per square mile than the state. The number of roads per square mile for Yolo County is 1.69, lower than the state rate of 2.02 roads per square mile. Increased road density is related to increased exposure to vehicle emissions and other environmental pollutants which negatively impact health.

Area – Fatal Traffic Accidents

ZIP codes 95815 and 95823 had the most number of fatal accidents of any other ZIP code in the MGH HSA. The North Sacramento ZIP code of 95815 had the most at seven accidents in 2013, followed by 95823 (Fruitridge) at six fatal accidents. Though it can be expected that fatal traffic accidents are more likely to occur on major highways, fatal traffic accidents in residential communities help to illuminate safety issues in the area. ZIP code Focus Community 95815 is a heavily residential area.

Rate – Fatal Accidents per 100,000 Population Involving a Motor Vehicle and/or Pedestrian

The rate of fatal motor vehicle accidents for 2010-2012, as reported by the California Department of Public Health, in Figure 19 showed that the MGH HSA rate of fatal accidents was below the state rate. Fatal accidents involving a pedestrian (motor vehicle killed a pedestrian) was above the state rate.
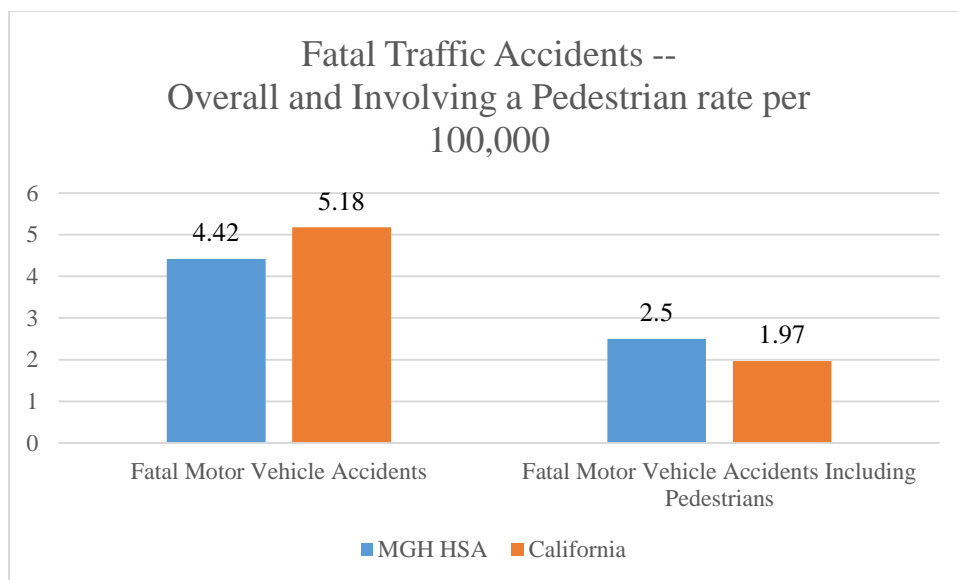
Figure 19: Rate of Fatal Accidents Overall and Involving a Pedestrian

Key informants spoke about a concern over the built environment in many of the Focus Communities in the HSA. One big issue of concern was the speed at which people drive down very large streets with multiple lanes and little to no sidewalks. As one key informant stated, *"There's a lot of isolation, the roads are big like designed for driving through neighborhoods, multi lanes go very fast not for walking"* *(KI_18).*

Housing Stability – Percent Housing Vacancy, People per Housing Unit and Percent Renting
Stable, clean and affordable housing is an essential public health need. The lack of a stable place to live can have negative health effects on individuals and families, making it hard to manage daily life responsibilities.[24] Table 26 shows rates for various housing indicators by ZIP code for the MGH HSA as an indicator of housing stability.

---

[24] John Hopkins University. (2016). Stable Housing. Retrieved from: http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-to-eliminate-cardiovascular-health-disparities/about/influences_on_health/stable_housing.html

Table 26: HSA Percent Housing Vacancy, People per Housing Unit and Percent Renting

ZIP Code	Percent Housing Vacancy	People per Housing Unit	Percent Renting
95605*	7.6	2.97	59.0
95660	7.1	3.10	44.4
95814	19.1	1.52	91.3
95815	10.8	2.81	64.5
95817	9.6	2.35	63.7
95822	7.7	2.74	42.4
95823	7.0	3.20	52.4
95824	7.1	3.18	57.6
95825	10.8	2.03	75.2
95832	8.8	4.02	49.6
95838	9.7	3.37	49.3
Yolo County*	6.6	2.76	59.0
Sacramento County	7.2	2.72	47.1
CA State	8.6	2.94	44.7

Source: Census, 2013, *ZIP code 95605 is the only Focus Community located in Yolo County

The largest percent of vacancies were in ZIP code 95814 (Downtown/Mansion Flats), 95815 (North Sacramento) and 95825 (Arden), higher than both the state rate and Sacramento County benchmarks. High vacancy rates are indicators of housing market conditions[25], specifically the affordability of housing in the area. The number of people per housing unit is an indicator of multiple people living together, which can be an indicator of poverty. The highest people-per-housing unit rates were seen in ZIP codes 95832 (Meadowview) and 95838 (Del Paso Heights). Also, a large number of renters in a given geographical area can be an indicator of the area's economic stability as well as housing costs. The ZIP codes of 95814 (Downtown/Mansion Flats) and 95825 (Arden) had the highest percentage of people renting than any other Focus Communities in the MGH HSA.

Primary data participants spoke about the housing insecurity and the high cost of housing in areas throughout the HSA, especially in lower income communities where job related skills and employment is also lacking. As one key informant stated

> We need a liaison to go into the community and support homeless. We need pre-preventative screening. Affordable housing and transportation. We would love to have education on completing the FAFSA and financial aid documents to go to school. We would love other education classes" (FG_2).

Another informant stated *"A lot of our communities just have this really overwhelmingly difficult conditions for living" (KI_34).* Challenges in accessing housing created many challenges for community members in maintaining their health and transitioning to more stability. One service provider stated:

> We are confronted daily with huge housing crisis in our region and it feels we feel powerless to be able to help people with all the things that we may be able to help them with. We may be able to get them enrolled in Medi-Cal and we may be able to try to help them navigate those systems or see if we can help with medications but you can't make it over to the pharmacy or get to an appointment with a psychiatrist if you slept in the bushes last night or if you're looking at a

---

[25] Belsky, E.S. (n.d.) *Vacancy rates: A policy primer*. Housing Policy Debate, vol 3(I3), 793-814. Retrieved from: http://content.knowledgeplex.org/kp2/img/cache/kp/2627.pdf

housing situation that's dangerous to your health so housing is a huge problem in our region that has to be looked at through a health lens and we need to have sustainable solutions that are innovative and creative and also consider the intersections of where folks come from (FG_3).

Rate – Households that are HUD Households per 10,000 Housing Units

The United States Department of Housing and Urban Development (HUD) reports in 2013 that the total number of HUD funded housing units in Sacramento County was 357.08 units per 10,000 housing units, below the state rate of 368.32 units per 10,000. Yolo County had 445.41 units per 10,000 housing units and El Dorado County had a much lower rate of 99.14. This is an important indicator as access to affordable housing impacts a person's economic stability and ability to access other basic needs such as health care, affordable healthy foods, and places to be physically active.

Percent – Households with at least One Substandard Housing Condition

HUD also reports that in 2013 the percent of households defined as substandard was 44.8% in Sacramento and Yolo counties, lower than the El Dorado County and state percent of 48.4% of households.

Housing Costs – Households with Mortgage Costs Greater than 30% and Households with Rental Costs Greater than 30% of Household Income

The high cost of housing can be a barrier for community members to maintain stable housing and optimal health. Data on the cost of housing for the MGH HSA included the examination of two indicators: housing costs with a mortgage payment greater than 30% of the household's income and rental housing payments greater than 30 % of the household income. Figures 20 and 21 show these two indicators across the MGH HSA.
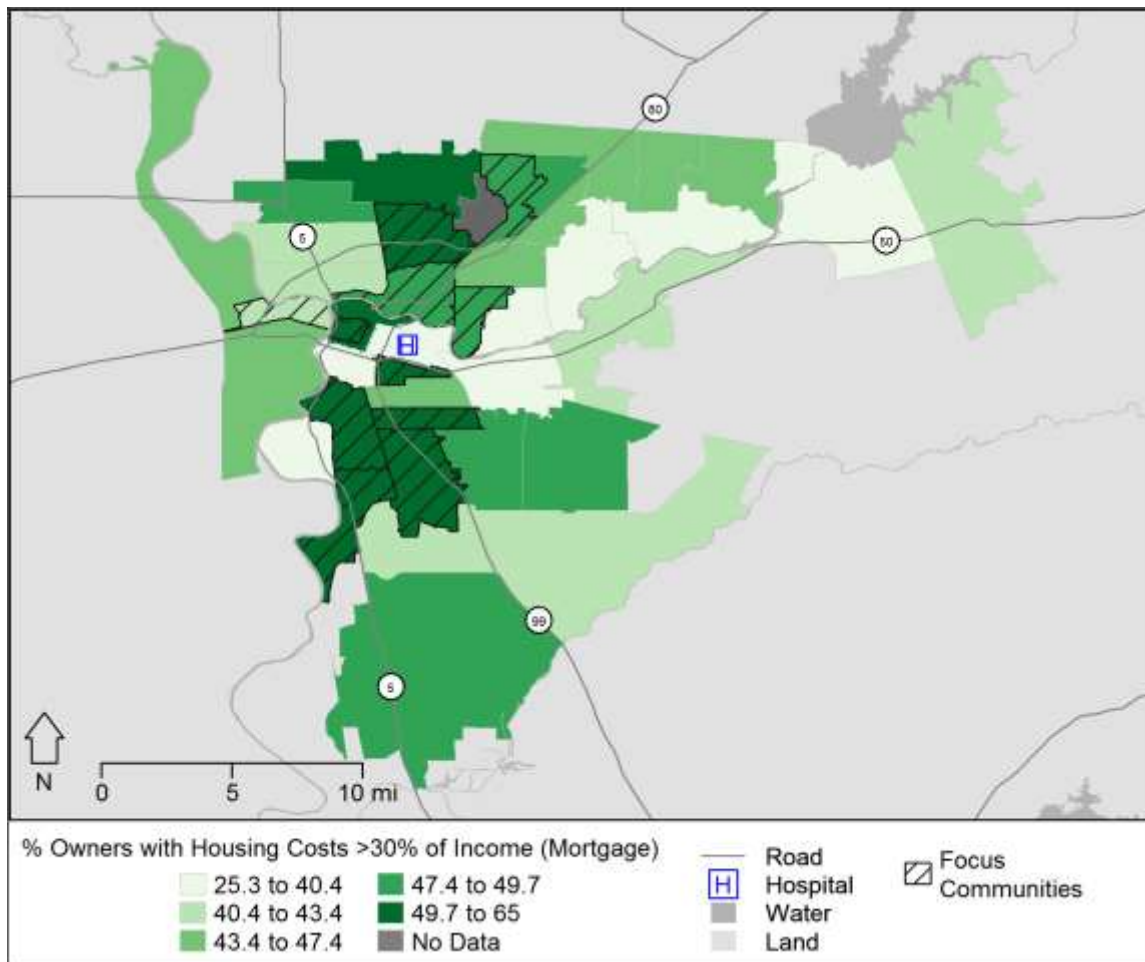
Figure 20: Percent of Residents by ZIP Code with Housing Costs above 30% of their Household Income with a Mortgage Payment

Eight of the eleven Focus Communities had a higher percent of residents with a mortgage cost greater than 30% percent of their household income than the state of California with a benchmark of 48%. Sacramento County had 43.9% of its residents with a mortgage cost greater than 30% percent of their household income while Yolo County had 40%. The Focus Communities with the highest percentages included the ZIP codes 95838 (Del Paso Heights) with 54.3%, ZIP code 95817 (North Oak Park) with 51.7% and 95824 (Parkway) with 51.3%.
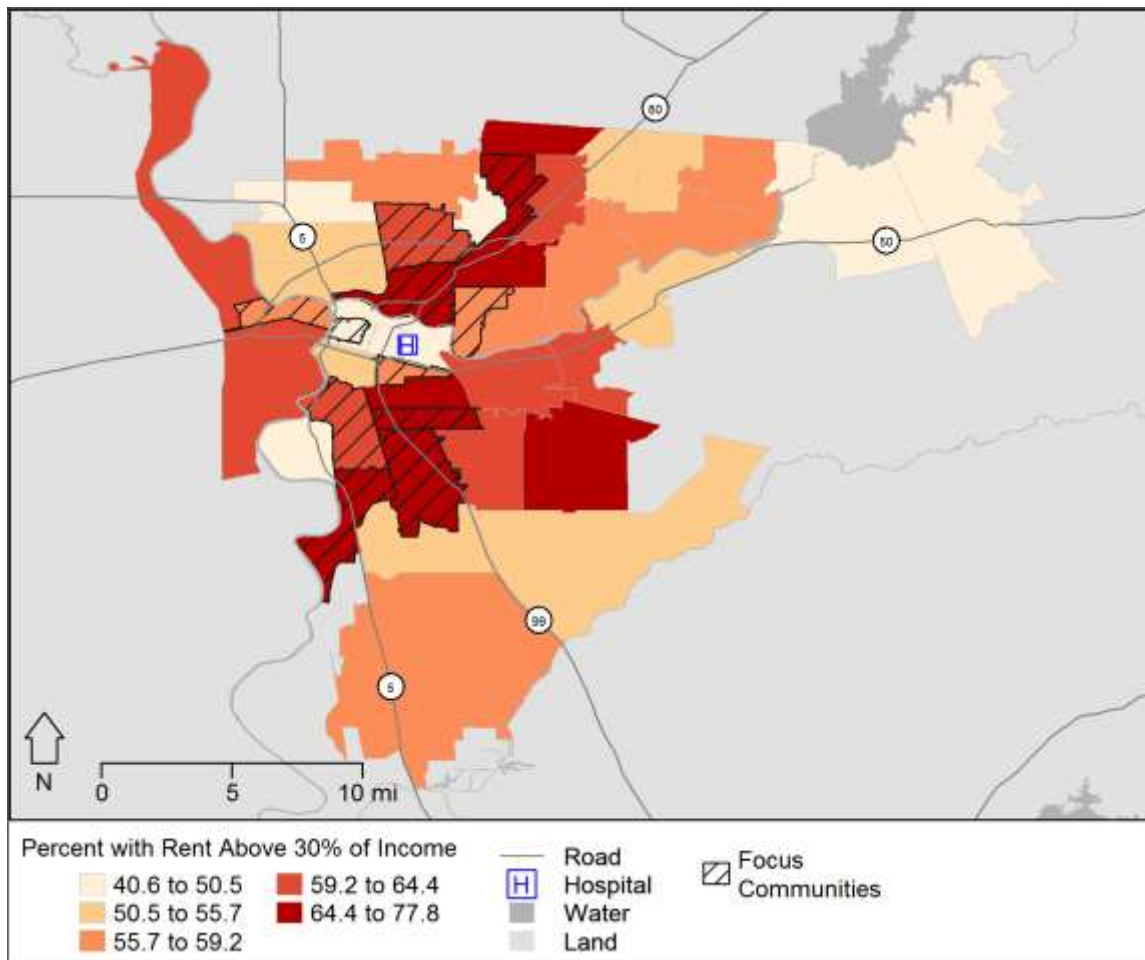
Figure 21: Percent of Residents by ZIP Code with Housing Rental Costs above 30% of their Household Income

Many of the Focus Communities had high rental housings costs in the MGH HSA. The percent of residents with rent above 30% of their income was 57.5% for Sacramento County, 59.9% for Yolo County and 56.9% for the state of California. Eight of the eleven Focus Communities had a higher percent of residents with rental costs above 30% when compared to the state percent. The highest percent was seen in ZIP code 95832 (Meadowview).

Index – Pollution Burden Score

The California Environmental Protection Agency and the Office of Environmental Health Hazard Assessment developed the *California Communities Environmental Health Screening Tool, Version 2.0*.[26] This tool was designed to identify California communities that are disproportionately burdened by multiple sources of pollution. The tool combines 13 types of pollution, environmental factors to produce a "pollution burden" score for each census tract in the state ranging between a minimum of 0 and a maximum of 100, with higher scores indicating a greater pollution burden. The pollution factors included ozone and PM 2.5 concentrations, diesel PM emissions, pesticide use, toxic releases from facilities, traffic density, drinking water contaminants, cleanup sites, impaired water bodies, groundwater threats, hazardous wastes facilities and generators, and solid waste sites and facilities.

---

[26] *California Communities Environmental Health Screening Tool, Version 2.0 (CalEnviroScreen 2.0). Guidance and Screen Tool*. October 2014. Retrieved from: http://oehha.ca.gov/ej/pdf/CES20FinalReportUpdateOct2014.pdf

A pollution burden score was identified for each census tract in the MGH HSA and is displayed in Figure 22. Each census tract's pollution burden score ranged from 0 to 100 and was assigned to a quintile, displayed in the figure using color gradation. In the figure census tracts with darker colors have higher pollution burden scores.
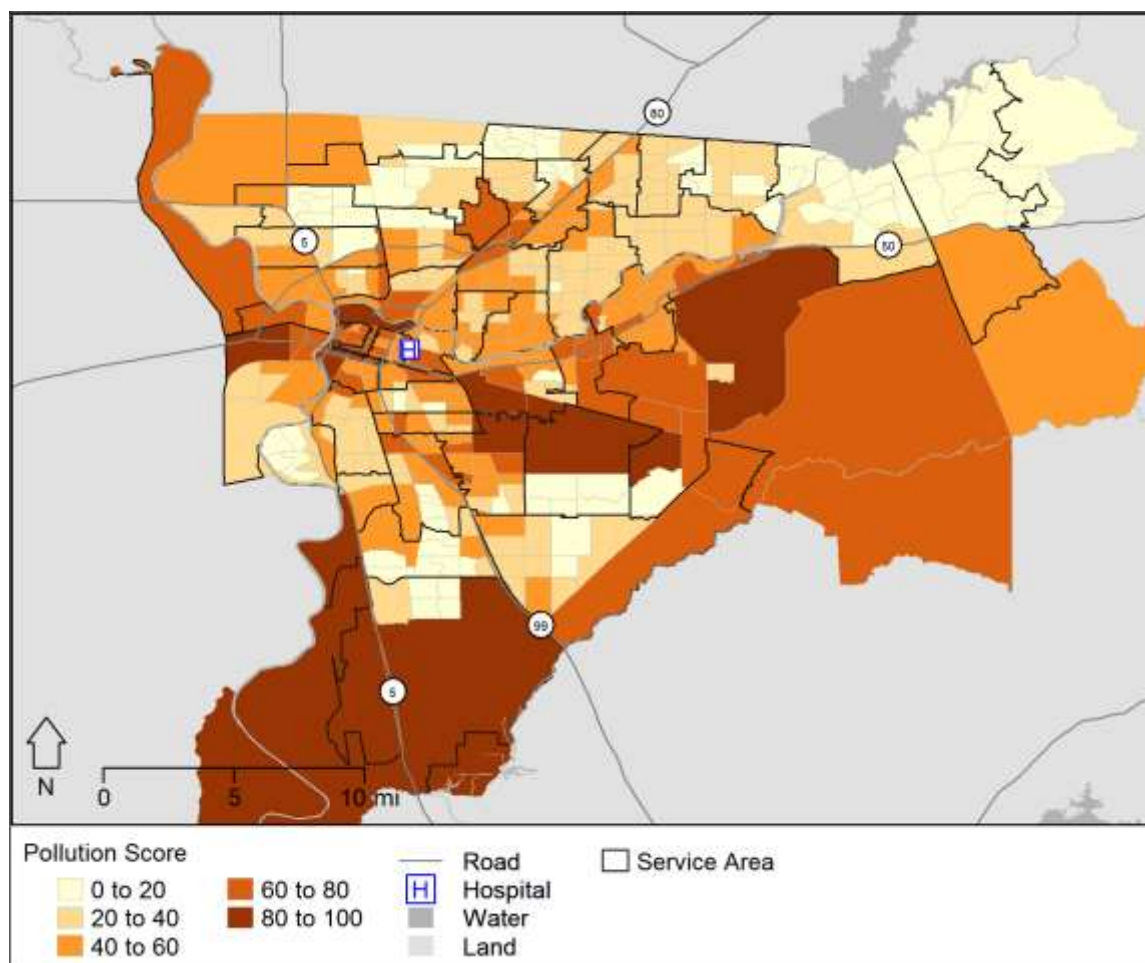

Figure 22: Pollution Burden Score by Census Tracts in the HSA

Figure 22 shows that of the eleven Focus Communities, portions of ZIP codes 95815 (North Sacramento) and 95605 (West Sacramento/Broderick) had a pollution burden score in the highest quintile, 80-100. The effect of exposure to pollution contributes to the high rates of respiratory illness mentioned previously in this report.

Primary data participants spoke about issues of smoking in low income housing units as a big concern for the health of many residents. Trash removal from community streets and weed abatement were also mentioned as important parts of helping to remove the pollution from many Focus Communities. Participants were also concerned with pesticide use surrounding residential areas.

Social Environment

This assessment included indicators for crime, assault and homicide in the MGH HSA. Crime data included major crimes, violent crime, property crime, arson and domestic violence.

Criminal activity in a community has a strong effect on a community's actual and perceived safety. Data on major crimes reported to the California Department of Justice are provided for the law enforcement jurisdictions in the MGH HSA and compared to estimated county benchmarks.

Table 27: Major Crime, Violent Crime, Property Crime, Arson and Domestic Violence per 10,000 Population by Police Jurisdiction

Police Municipality	Major Crimes*	Violent Crime	Property Crime	Arson	Domestic Violence
Citrus Heights	354.67	38.00	315.02	1.66	127.17
Elk Grove	221.63	30.19	190.73	0.71	19.05
Folsom	199.38	13.53	184.47	1.38	45.84
Galt	243.36	26.25	215.44	1.67	22.50
Isleton	789.10	129.12	659.97	0.00	57.39
Rancho Cordova	387.11	53.31	333.50	0.30	37.11
Sacramento	460.40	66.66	390.24	3.50	32.98
Sacramento County Sherriff	344.68	54.56	288.94	1.18	35.44
West Sacramento**	345.90	41.78	302.28	1.83	83.57
Yolo County**	353.06	31.74	318.06	3.26	52.94
Sacramento County	363.10	52.36	308.85	1.90	38.64

Source: California Department of Justice, 2013 *combination of violent crimes, property crimes, and arson, ** indicates a police jurisdiction that falls in Yolo County

Table 27 indicates that major crime rates reported for Isleton, Rancho Cordova and Sacramento jurisdictions are noticeably higher than the Sacramento County estimated major crime rate. These jurisdictions, along with Sacramento County Sherriff and West Sacramento jurisdictions, also had the highest rates of violent crime. Rates of property crime were highest in the Citrus Heights, Isleton, Rancho Cordova and Sacramento jurisdictions. The highest rate of arson was found in the Sacramento City jurisdiction. Rates for domestic violence crimes in the Citrus Heights jurisdiction were more than three times the county benchmark. Folsom, Isleton and West Sacramento jurisdictions also had elevated rates of domestic violence.

Though many participants spoke about crime and violence in the HSA, crime and its impact on youth was a specific finding in the primary data. Many key informants and community members' spoke about the impact witnessing violence has on young area residents, resulting in a feeling of trauma. One service provider said "*But, violence is really big for our kids. Our kids are really suffering from a lot of trauma*" *(KI_21).* Another provider stated *"It is a scary, scary world for little children in this community and that can be within the house, and certainly it can be just outside the door" (KI_36).* The stress of living in an environment where residents most worry daily about safety issues can have potentially negative effects on health. As one key informant stated:

> *I think one of the things we underestimate is how stress plays a big havoc on our health. If I'm worried about opening my door and they're prostitutes on the corner, or I'm worried about at the top lot drug exchange is going on that does something to me physically, because stress affects us all physically and mentally. (KI_20)*

Rates – ED visits and Hospitalizations due to Assault

Understanding safety in the MGH HSA requires the examination of both crime rates as shown above, as well as incidents of intentional harm, such as rates of assault. Rates of assault (intentionally harming another person) are included in this assessment to gain an understanding of violence in the MGH HSA. Figure 23 and 24 show ED visits and hospitalizations related to assaults in the area.
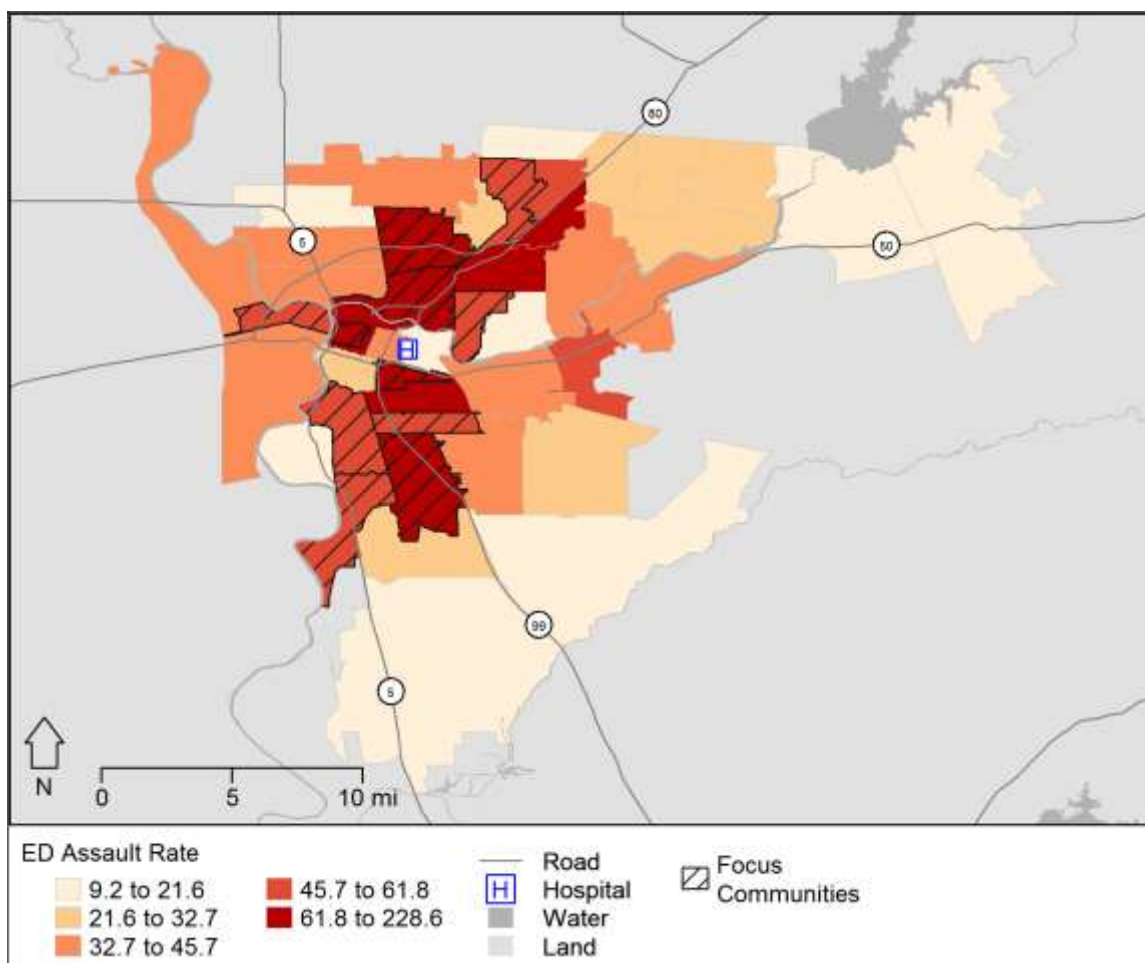

Figure 23: ED Visits Related to Assault

Elevated rates of ED visits due to assault were seen in each of the Focus Communities across the MGH HSA. ZIP codes 95814 (Downtown/Mansion Flats), 95815 (North Sacramento) and 95823 (Fruitridge) had the highest rates of ED visits in the MGH HSA, ranging from 228.56 visits to 72.24 visits per 10,000. These rates were considerably higher than the Sacramento County benchmark of 39.08 and the state benchmark of 30.36 ED visits per 10,000.
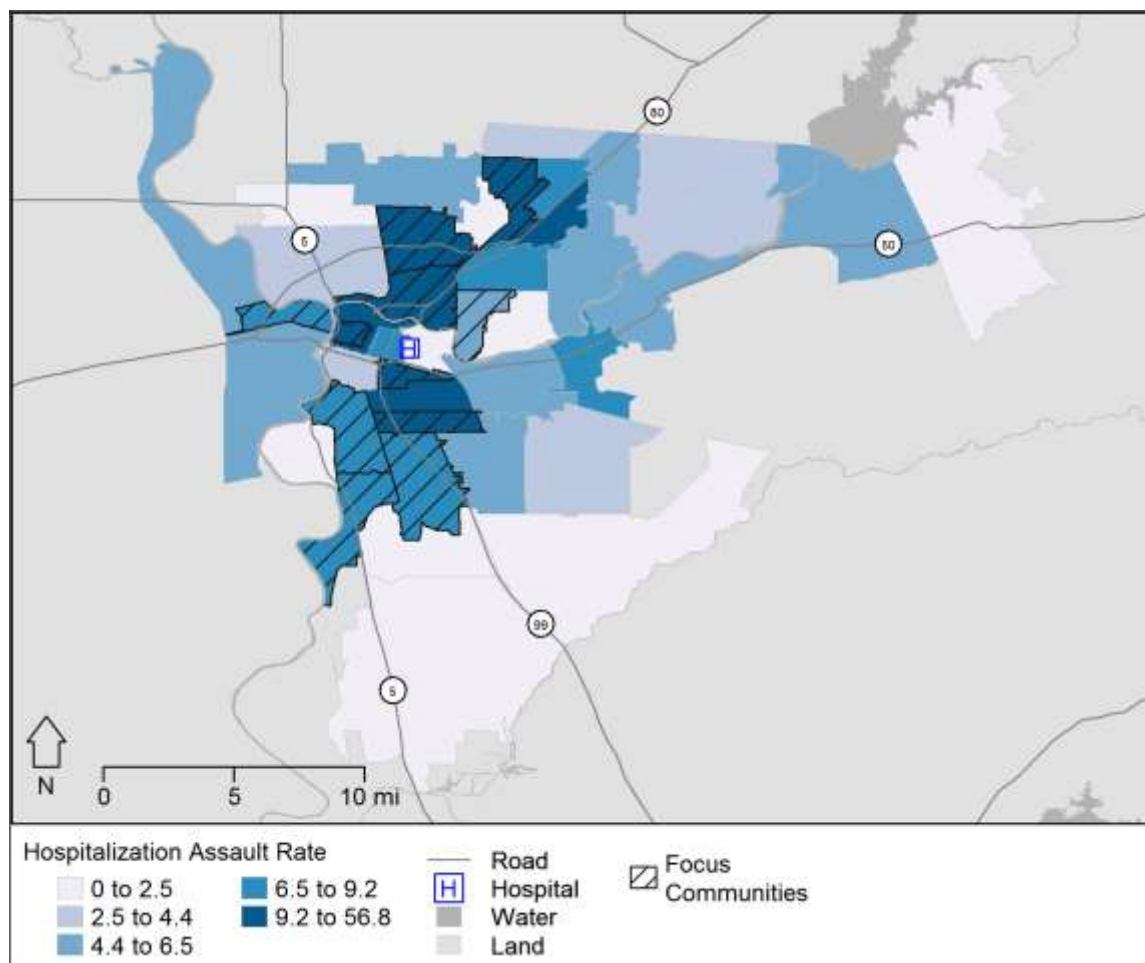

Figure 24: Hospitalization Related to Assault

As Figure 24 shows the geographic pattern seen for ED visits due to assault is also true for hospitalizations. The Focus Communities also had the high rates of hospitalizations due to assault. ZIP code 95814 (Downtown/Mansion Flats) had the highest rate of hospitalizations at more than eighteen times the state rate at 3.88 per 10,000.

Rate – Mortality due to Homicide

Data from the California Department of Public Health on the mortality rate due to homicide collected for 2010-2012 revealed that the MGH HSA had a higher rate than the state benchmark. Mortality due to homicide in the MGH HSA was 5.92 deaths per 100,000 population compared to the state rate of 5.15 deaths per 100,000.

Economic and Work Environment

Economic stability is crucial to overall health and well-being. Community members that struggle to pay for basic needs like stable housing, adequate food, and health care are at greater risk of negative health outcomes. This assessment examined indicators related to lack of employment, income, poverty and insurance status.

Percent Unemployed and Median Income by ZIP Code

Table 28: Percent Unemployed and Median Income by ZIP Code

	ZIP Code	Percent Unemployed	Median Income
Economic Stability	95605*	16.2	$38,791
	95660	12.0	$41,036
	95814	9.4	$34,085
	95815	24.1	$31,274
	95817	17.3	$34,990
	95822	15.9	$43,624
	95823	19.0	$37,931
	95824	19.5	$29,771
	95825	15.3	$37,605
	95832	20.8	$39,735
	95838	16.7	$38,271
	*Yolo County**	*10.4*	*$55,918*
	Sacramento County	*13.7*	*$55,064*
	CA State	*11.5*	*$61,094*

Source: Census, 2013, *ZIP code 95605 is the only Focus Community located in Yolo County

As Table 28 shows, the percent of residents unemployed in the MGH HSA was highest in ZIP codes 95815 (North Sacramento) at 24.1% and 95832 (Meadowview) at 20.8%, both clearly over the Sacramento County percent of 13.7% and state percent of 11.5%. All Focus Communities had median incomes drastically below the county and state median income. The lowest median income was seen in ZIP codes 95824 (Parkway) at more than $15,000 less than the Sacramento County median income.

Table 29: Percent Populations Living in Poverty, Percent Families with Children in Poverty, Percent Single FHH in Poverty, and Percent Elderly Households in Poverty

	ZIP Code	Percent Under 100% Federal Poverty Level	Percent Families with Children in Poverty	Percent Single Female Headed Households (FHH) in Poverty	Percent Elderly Households in Poverty
Poverty	95605*	29.2	32.6	14.4	6
	95660	22.9	26.5	16.7	3.0
	95814	28.5	58.6	4.6	5.7
	95815	34.1	46.4	19.9	2.5
	95817	36.2	39.7	13.9	5.3
	95822	25.3	31.7	19.5	2.7
	95823	30.1	37.2	24.3	2.7
	95824	36.7	40.1	24.6	3.8
	95825	25.7	37.3	12.2	2.1
	95832	30.7	34.8	30.2	2.0
	95838	30.1	34.5	21.3	3.1
	*Yolo County**	*19.1*	*14.7*	*10.4*	*2.1*
	Sacramento County	*17.6*	*20.1*	*15.0*	*1.9*
	CA State	*15.9*	*17.8*	*13.5*	*2.3*

Source: Census, 2013, *ZIP code 95605 is the only Focus Community located in Yolo County

All eleven Focus Communities had a percent of the population living under the 100% Federal Poverty Level that was drastically higher than the county and state benchmarks. ZIP codes 95824 (Parkway), 95817 (North Oak Park) and 95815 (North Sacramento) had substantially higher percent of population in poverty at 36.7%, 36.2% and 34.1%, respectively. The percentages in these three ZIP codes are nearly twice the Sacramento County percentage. ZIP codes with the highest percentage of children living in poverty were seen in 95814 (Downtown/Mansion Flats) and 95815 (North Sacramento). The ZIP code 95832 (Meadowview) had the highest rate of female headed households living in poverty in the entire MGH HSA. ZIP code 95605 (West Sacramento/Broderick) had the highest percent of elderly living in poverty of all Focus Communities at 6.0 per 10,000, nearly three times the Yolo County benchmark.

Many key informants and community members spoke about poverty and its influence in many areas of healthy living, effecting access to quality health care, healthy foods, transportation, stable housing etc. As one key informant so clearly stated, *"Poverty does not discriminate" (KI_22)*. This key informant elaborated:

> *Poverty in itself would indicate a less than satisfactory quality of life. It's not always true, but when you can't put food on the table to feed your family, or you're staying with relatives and moving around from one relative to another, because you don't have a stable place to live, I mean that makes for a really challenging quality of life. (KI_22)*
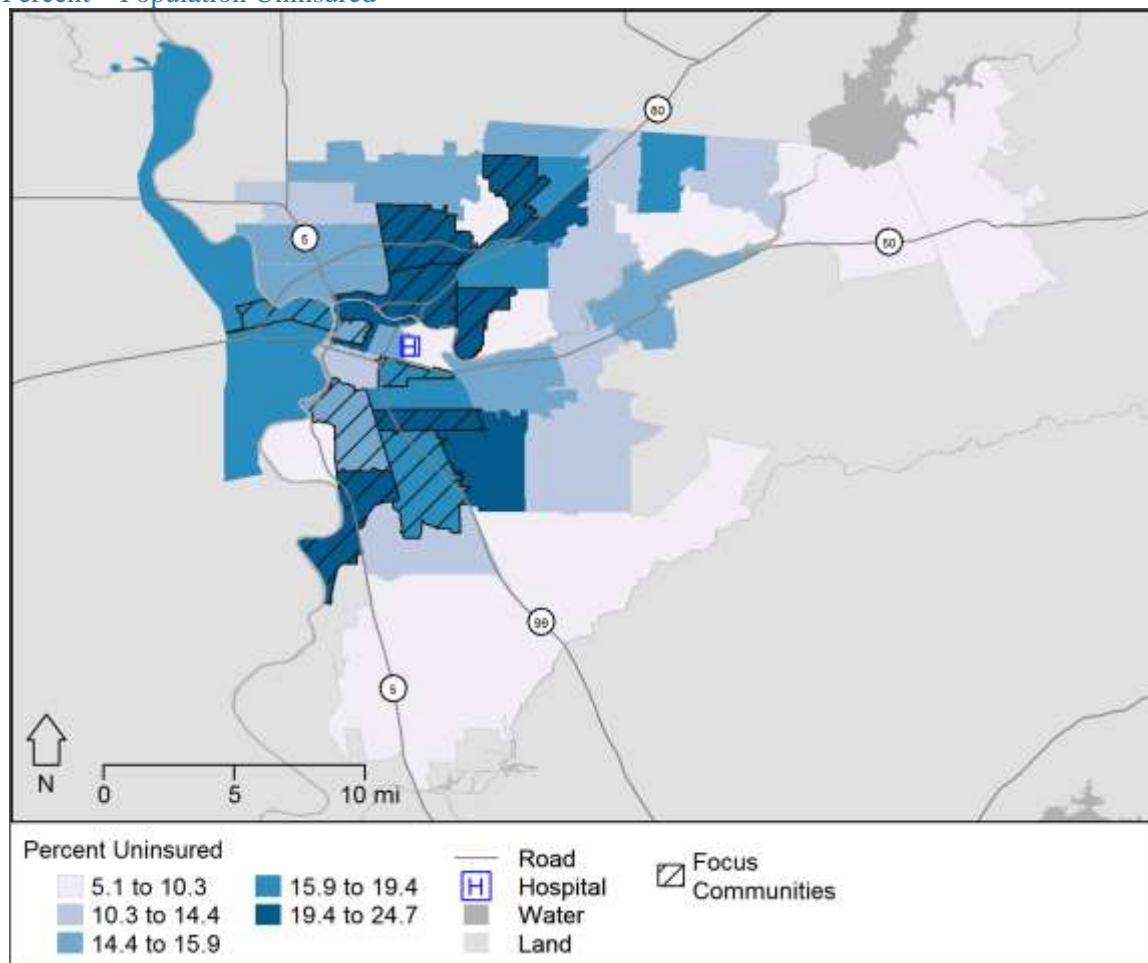
Figure 25: Percent Uninsured by ZIP Code in the HSA

The percent of population without insurance for Sacramento County was 17.8%, 13.2% for Yolo County, and 10.2% for El Dorado County, while the percent of population without insurance for the state was 14.6%. The highest percentages were seen in ZIP codes 95824 (Parkway) and 95832 (Meadowview) at 24.7% and 23.6% respectively. Primary data findings related to health insurance are discussed in the "Access to care" section of this report.

Service Environment

This assessment examined access to care measures and education in order to best understand the service environment for the MGH HSA. Information in this section of the report examines access to care for primary care, mental health care and dental health.

Access to Care (Primary Care, Mental Health, and Dental)

Rate – Primary Care Physicians per 100,000 Population

Data from the US Department of Health and Human Services reveals that the rate of primary care physicians per 100,000 population was 79.2 for Sacramento County in 2012, 69.2 for El Dorado County and 112.2 in Yolo County, compared to the state rate of 77.2 physicians per 100,000 population.

Health Professional Shortage Areas (HPSAs) are designated by the US Government Health Resources and Services Administration (HRSA) as having shortages of primary medical, dental, or mental health providers; these shortages may be geographic (e.g., a county or service area), demographic (e.g., a low income population) or institutional (e.g., comprehensive health center, federally qualified health center, or other public facility).[27]
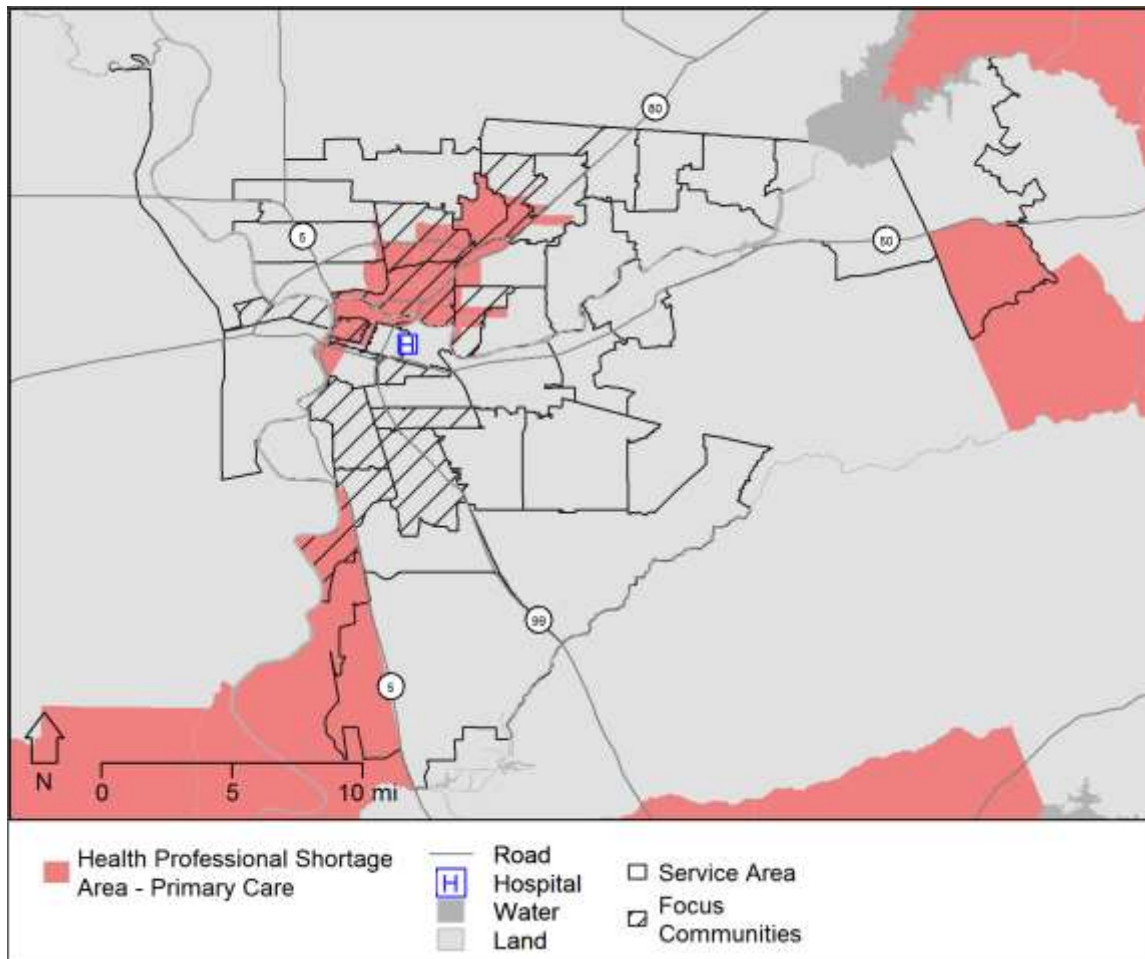

Figure 26: Primary Care HPSA in the HSA

Seven of the eleven Focus Communities had portions of their ZIP codes that were designated HPSA for primary care. These ZIP codes included parts of 95660 (North Highlands), 95815 (North Sacramento), 95814 (Downtown/Mansion Flats), 95825 (Arden), 95838 (Del Paso Heights), 95832 (Meadowview) and 95825 (Arden).

One of the biggest findings of the primary data was the need for increased access to primary care for residents of Focus Communities, and is the fourth highest prioritized health need for the MGH HSA. Additionally, though insurance coverage for residents in the HSA has increased as a result of the Affordable Care Act, key informant and community members consistently mentioned a lack of providers in the Focus Communities, especially Medi-Cal providers, and the need for residents to have a medical home. One community member stated "*I feel that with the patients being assigned doctors that are not*

---

[27] Health Resources and Services Administration. (n.d.). *Primary Medical Care HPSA: Designation Overview*. Retrieved from: http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/primarycarehpsaoverview.html

accepting new patients, it's extremely common" (FG_10). A key informant spoke about healthcare in Sacramento County *"We are at the end of the line in terms of 58 counties in the state in terms of service delivery for healthcare" (KI_34).* As one provider stated about Affordable Care coverage:

> *...I think that's because people don't know where to go for primary care. That also brings another point of clinic expansion not keeping up with the insured population and now there's a lot of people who have access to care or should be able to have access to care but they don't because of appointments are too far out there are too many people trying to fit into that appointment slot. And I think that's a big impact of the Affordable Care act. Not enough doctors, not enough clinics (FG_10).*

Primary data indicated that many community residents are experiencing long wait times till they are able to see a provider. As one key informant stated *"The wait time is shorter in the ED than scheduling an appointment with a PCP (Primary Care Provider)" (KI_24).*

Percent – Prenatal Care in the First Trimester and Low Birth Weight
Table 30: Percent of Live Births with the Mother Receiving Prenatal Care in the First Trimester and Percent of Births with Low Birth Weight

	ZIP Code	Percent of Live Births with Prenatal Care in First Trimester	Percent of Births with Low Birth Weight
Prenatal Health	95605*	76.1	6.5
	95660	70.3	6.6
	95814	80.3	6.8
	95815	72.6	7.2
	95817	75.8	6.8
	95822	75.8	7.4
	95823	74.0	7.1
	95824	71.7	7.0
	95825	77.3	7.4
	95832	75.5	7.2
	95838	70.1	7.7
	*Yolo County**	*82.7*	*5.6*
	Sacramento County	*81.4*	*6.9*
	MGH HSA	*78.8*	*6.8*
	CA State	*83.6*	*6.8*

Source: CDPH, 2010-2012, *ZIP code 95605 is the only Focus Community located in Yolo County

Data revealed that fewer mothers received prenatal care in the first trimester in all of the eleven Focus Communities when compared to the county and state benchmarks. The ZIP code with the lowest percent of mothers who received prenatal care in the first trimester was 95838 (Del Paso Heights). Eight of the eleven Focus Communities had a higher percent of low birth weight babies in comparison to the two county percentages. The ZIP code with the highest percent of low birth weight infants was again 95838 (Del Paso Heights).

Rate – Federally Qualified Health Centers per 100,000 Population
Data from the US Department of Health and Human Services for 2015 indicated that the rate of Federally Qualified Health Centers (FQHC) in the MGH HSA was less than the state rate. The MGH HSA rate was 1.18 FQHCs per 100,000, compared to the state rate of 1.97 FQHCs per 100,000.

Rate – Preventable Hospital Events per 10,000 Population
The rate of preventable hospitalizations reported by the Office of Statewide Health Planning and Development for 2011 for Sacramento County was 80.23 events per 10,000 population, 62.69 for El Dorado County and 42.54 for Yolo County, compared to the state rate of 83.17 per 10,000 population. Clearly, Sacramento County had the greatest number of preventable hospital events per 10,000 population. Preventable hospital events are ambulatory care sensitive conditions which could have been prevented if adequate access to primary care was available and utilized by the community.

Rate – Mental Health Providers per 100,000 Population
Data from the US Department of Health and Human Services for 2015 reveals that the rate of mental health providers per 100,000 population was 161.2 for Sacramento County and 208.6 for Yolo County, higher than the state rate of 157.0 per 100,000 population. Alternatively, El Dorado County proved to have fewer mental health providers per 100,000 population, with a rate of 120.7.

Area – Health Professional Shortage Area – Mental Health
Figure 27 displays areas in the MGH HSA that are HPSAs for mental health providers. As the Figure shows, small portions of the Focus Communities are HPSA for mental health providers. ZIP codes 95691 and 95605 have areas with HPSA designation for mental health providers.

Rate – Dental Health Providers per 100,000 Population
Data from the US Department of Health and Human Services for 2015 revealed that the rate of dental health providers per 100,000 population was 71.9 for Sacramento County, 79.2 for El Dorado County and 51.8 for Yolo County compared to the state rate of 77.5 per 100,000 population.

Area – Health Professional Shortage Area – Dental Health
There were no federally designated HPSAs for dental care in the MGH HSA. However, key informants and community members mentioned dental issues as a health concern. Many participants mentioned the need for access to dental, and vision care, for many adults in need of restoration services. Many community members live without a full mouth of teeth, providing a barrier to eating adequate crunchy fruits and vegetables, effecting employability and overall quality of life.
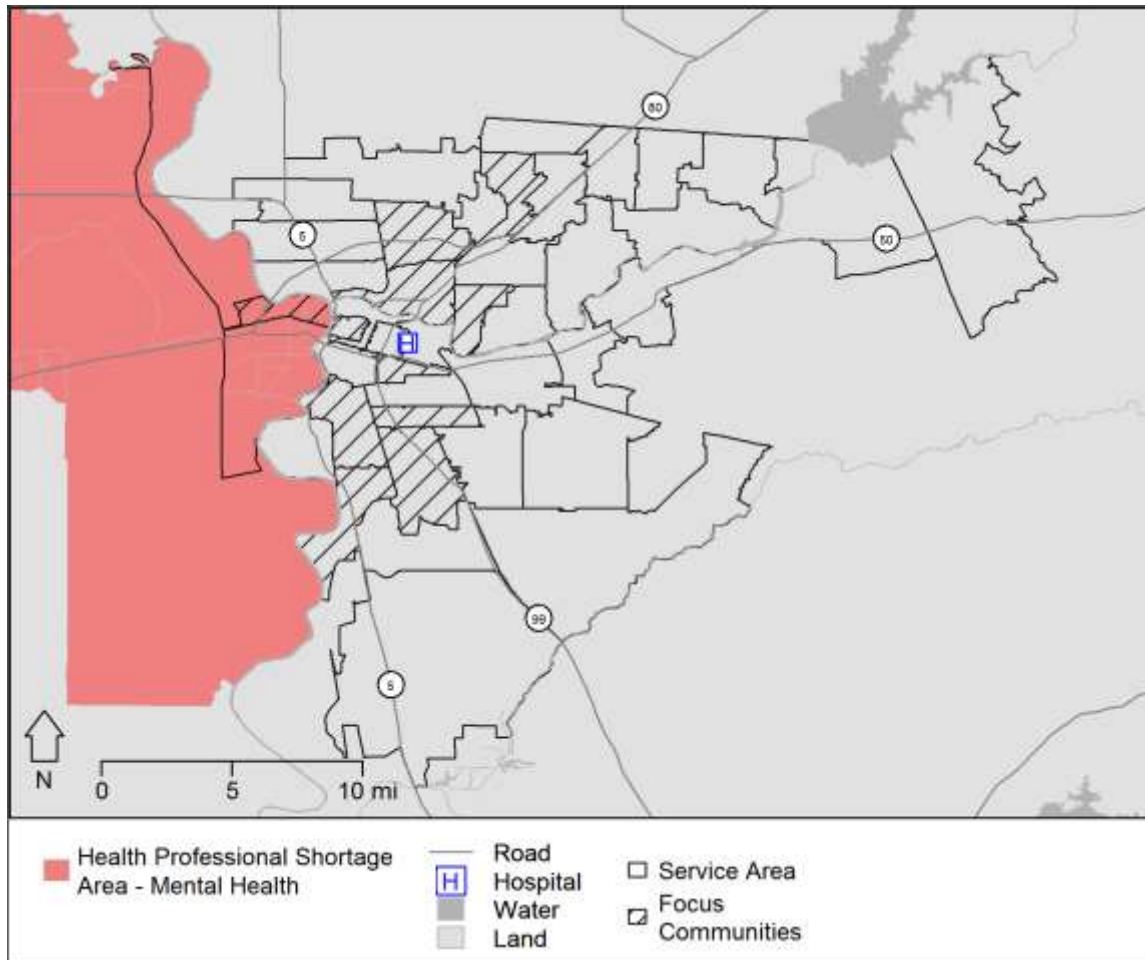
Figure 27: Mental Health HPSA in the HSA

Education

Educational attainment is important for overall health and wellbeing. Education is positively associated with health status.

Percent – High School Students Graduating in Four Years

The California Department of Education reports the graduation rate as the percent of high school students receiving their high school diploma in four years. The high school graduation rate in 2013 for Sacramento County was 79.44%, for El Dorado County was 89.5% and for Yolo County was 87.5%. The state percent was 80.44%. Rates by race and ethnicity in Sacramento County showed that 84.1% of Whites graduate in four years, compared to 68.3 % of Blacks, 72.9% of Hispanic/Latinos, 89.7% of Asians and 80.7% of non- Hispanic others. In El Dorado County, 91.5% of Whites and 93.8% of Asians graduate in four years compared to 79.6 % of Blacks, 79.2% of Hispanic/Latinos and 80.7% of non- Hispanic others. High School graduation rates in Yolo County by race and ethnicity showed that 93.2% of Whites graduate in four years, compared to 86.8 % of Blacks, 81.1% of Hispanic/Latinos, 93.4% of Asians and 84.9% of non- Hispanic others. Both key informants and community members stressed the importance of access to quality education for residents of Focus Communities.
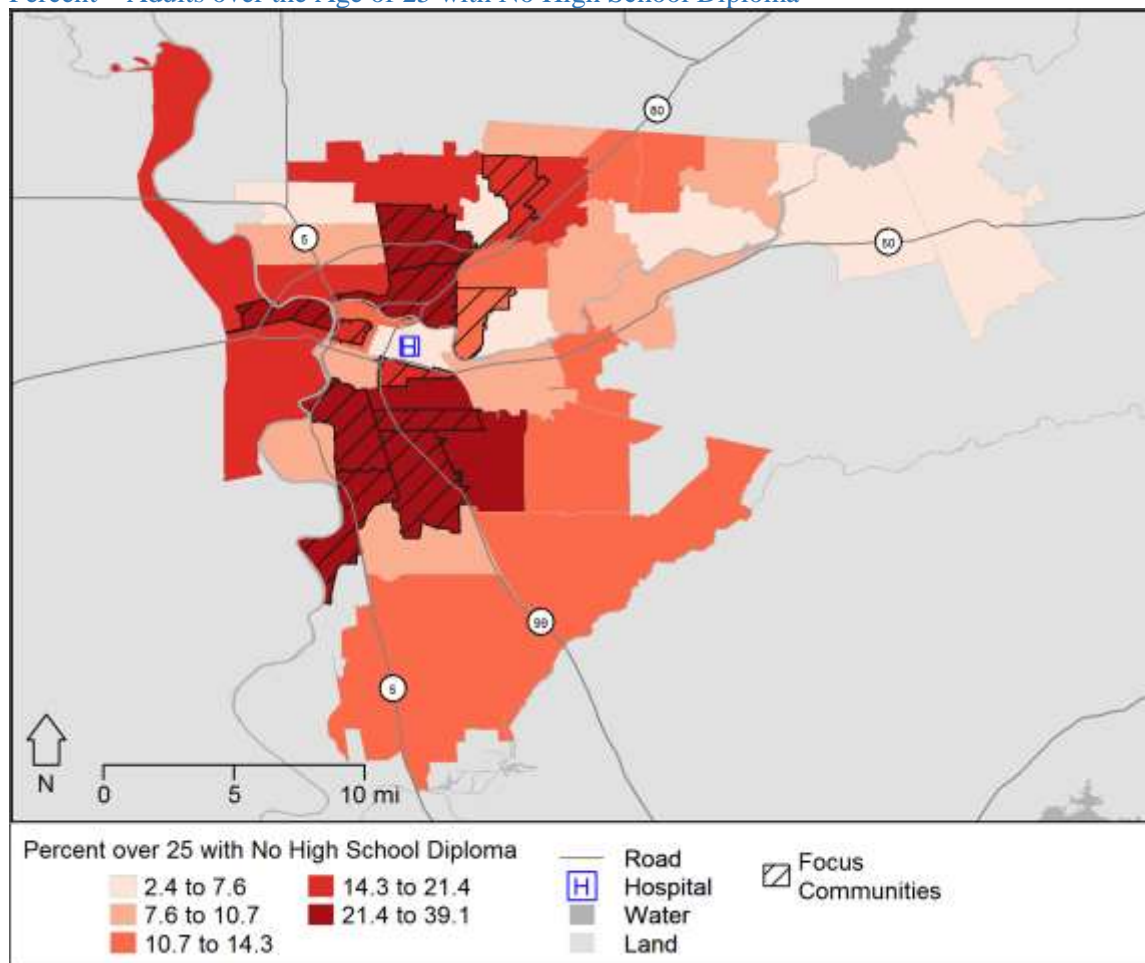
Figure 28: Percent over 25 Years Old with No High School Diploma

The percent of residents with no high school diploma for Sacramento County was 14.1%, for Yolo County was 15.7% and for El Dorado County was 6.8%. The state percentage was 18.8%. Eight of the eleven Focus Communities had a higher percentage of residents without a diploma than both the county and state benchmarks. The highest percent was in 95824 (Parkway) at 39.1%, more than two times the Sacramento County and state percentages.

Percent – Non-Proficient Reading Level in Fourth Grade

Data from the California Department of Education for 2012-2014 indicated that 38% of 4th graders in Sacramento County, 27% of 4th graders in El Dorado County and 34% of 4th graders in Yolo County are not proficient in reading at the 4th grade level, compared to the state benchmark of 36%. Percent of reading proficiency differs significantly by race and ethnicity. In El Dorado County, 20% of Whites, 18% of Blacks, and 11.11% of Asian students were not proficient in the 4th grade reading level. On the other hand, the percent of Hispanic/Latino students in El Dorado County who were not proficient readers increased significantly at 46%-- almost one and a half times the county percent. Unfortunately, no data was given for Native American/Alaskan Native and Native Hawaiian/Pacific Islander students in El Dorado County. An examination of reading proficiency in Yolo County by race and ethnicity revealed that 18.0% of White students were not proficient, 44.1% of Black students, 47.0% of Hispanic/Latino students, 41.2% of Native American/Alaskan Native students, 36.8% of Native Hawaiian/Pacific Islander students, and 25.1% of Asian students were not proficient. In Sacramento County, 27% of White and 30%

of Asian students were not proficient in the 4th grade reading level. However, an astounding 53% of Black students, 49% of Hispanic/Latino students, 50% of Native American/Alaska Native students and 47% of Native Hawaiian/Pacific Islander students were not proficient in the 4th grade reading level. Reading proficiency in fourth grade is important because it is linked to poverty, unemployment and barriers to healthcare access.

Percent – 3 and 4 Year-Olds Enrolled in Preschool
Data from the US Census Bureau for 2009-2013 indicated that 45.2% of 3 and 4 year olds in the MGH HSA are in preschool, below the state benchmark of 49%. This data is important as access to early education is a social determinant of health.

Rate – Suspensions per 100 Students
The rate of suspensions as reported by the California Department of Education for Sacramento County was 6.72 per 100 students and 5.60 per 100 students for Yolo County, both above the state rate of 4.04 per 100 students. The rate in El Dorado County was much lower at 3.96 per 100 students. This is an important health indicator because it is related to educational attainment and crime in the community as an adult.

Social Services
Indicators used in this assessment to examine social services included data on the percent of population receiving services, including public insurance, Medicaid, public assistance, and percent of families eligible for free and reduced lunch.

Percent – Population on Public Health Insurance
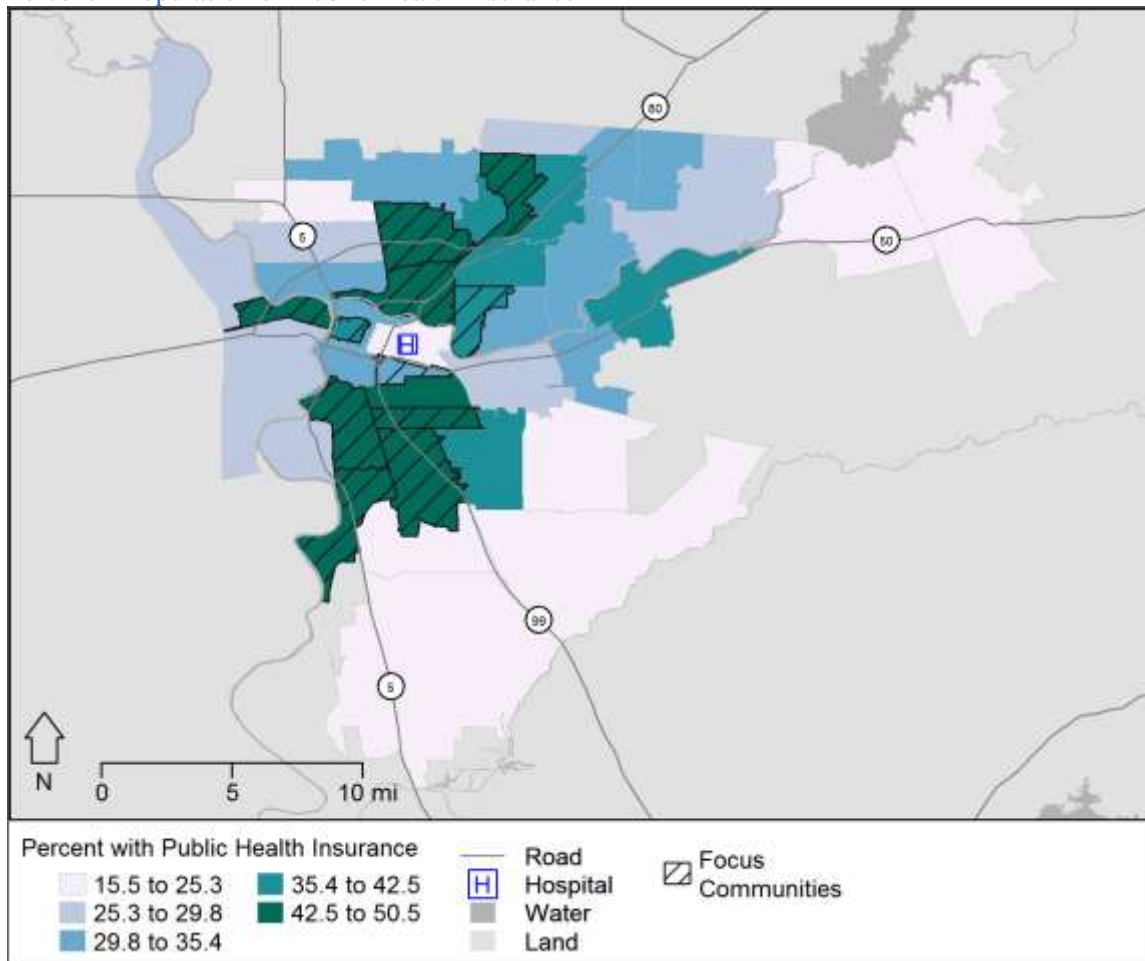
Figure 29: Percent of Population on Public Health Insurance

Data on the percent of residents with public insurance showed clear economic and access disparities. All eleven Focus Communities had a high percentage of residents with public insurance in the range of 33.3% to 50.5% of residents. ZIP code 95824 (Parkway) had the highest percentage of the Focus Communities at 50.5% drastically higher than the Sacramento County percent of 32.5% and state at 29.5%.

Percent – Population Receiving Medicaid (Medi-Cal)

Though the above data provides information on the percent of population on all sources of public health insurance, the US Census Bureau reports the percent of population receiving Medicaid specifically. For the MGH HSA 32.2% of residents receive Medicaid, above the state percent at 23.4%.
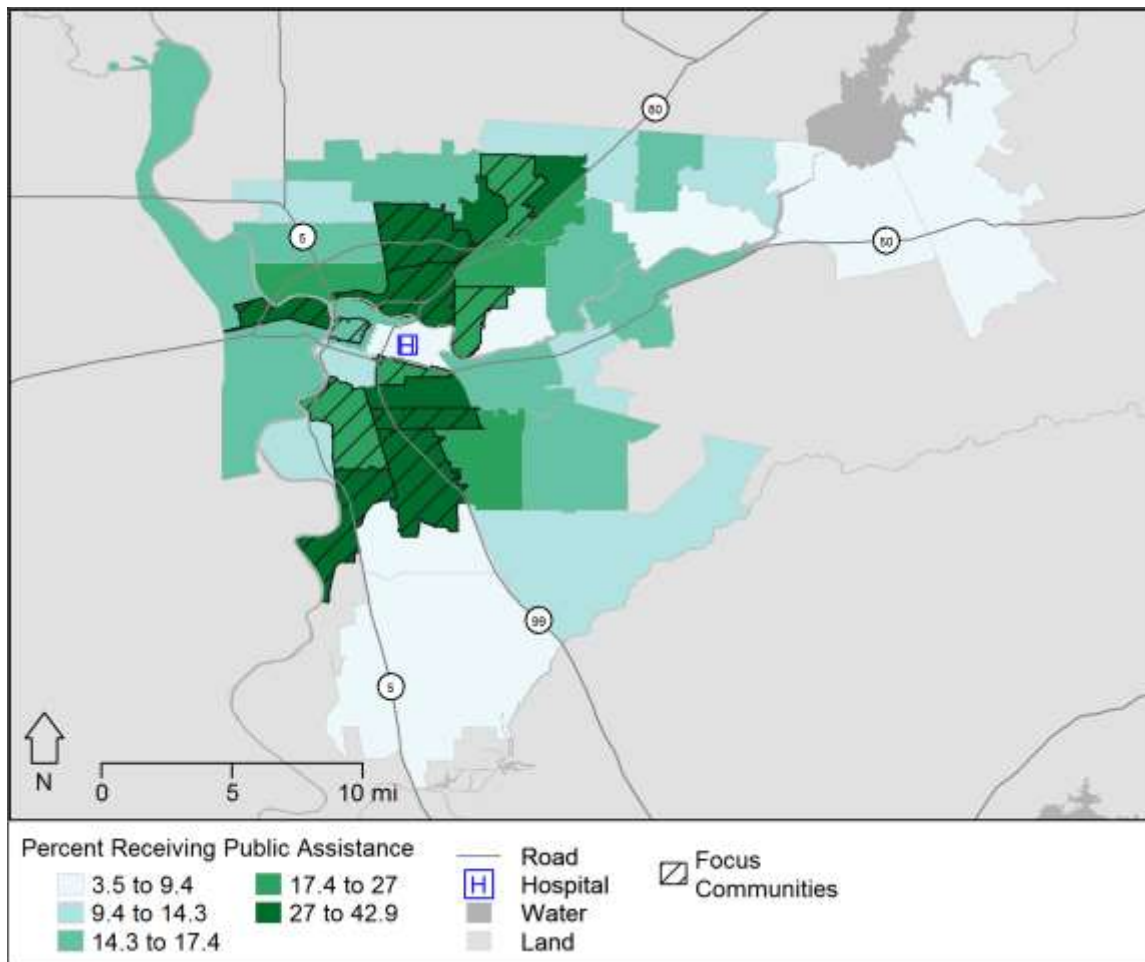
Figure 30: Percent of Population Receiving Public Assistance

The percent of population receiving public assistance varied greatly across the MGH HSA, with ten of the eleven ZIP codes showing higher percentages than the county and state percent. ZIP codes 95832 (Meadowview) and 95815 (North Sacramento) had a percent of 42.9% and 38%, both drastically above the state benchmark of 12.1%.

Percent – Students Eligible for Free and Reduced Priced Lunch in Schools
Data from the National Center for Education Statistics in 2013-2014 indicated that 57.5% of school age children in the MGH HSA are eligible for Free and Reduced Priced Lunch, which is below the state percent of 58%. This indicator is important because it identifies service needs associated with poverty which is a social indicator of health status in a community.

PRIORITIZED DESCRIPTION OF SIGNFICANT COMMUNITY HEALTH NEEDS

The following is a list of eight significant health needs for the MGH in prioritized order. The process and method for the determination of significant health needs and the prioritization criteria follows. Each prioritized significant health needs is then detailed further with the quantitative and qualitative data that supports its inclusion.

1. Access to Behavioral Health Services
2. Active Living and Healthy Eating
3. Disease Prevention, Management and Treatment
4. Access to High Quality Health Care and Services
5. Safe, Crime and Violence Free Communities
6. Basic Needs (Food Security, Housing, Economic Security, Education)
7. Affordable and Accessible Transportation
8. Pollution-Free Living and Work Environments

Process and Methods for Prioritizing Significant Health Needs

Potential Health Need (PHN) Categories

Significant health needs were identified through an integration of both qualitative and quantitative data. The process began by generating a list of eight broad potential health needs (PHN categories) that could exist within the HSA as well as subcategories of these broad needs as applicable. The PHN categories and subcategories were identified through consideration of the following inputs: the health needs identified in the 2013 CHNA process; the categories in the Kaiser Community Commons Data Platform (CCDP) - preliminary health needs identification tool; and a preliminary review of primary data. This resulted in a list of eight PHNs for the HSA.

Quantitative/Qualitative Analysis on PHN Categories

Once the PHN categories were created, quantitative and qualitative indicators associated with each category and subcategories were identified in a crosswalk table. The potential health need categories, subcategories and associated indicators were then vetted and finalized by members of the CHNA Collaborative prior to identification of the significant health needs. A full list of the secondary indicators and primary data concepts associated with each PHN category is displayed in Appendix C

Thresholds for Significant Health Needs (SHN)

While all potential health needs exist within the HSA to a greater or lesser extent, the purpose was to identify those that were most significant. A health need was determined to be significant through extensive analysis of the secondary and primary data for the HSA.

For the secondary (quantitative) data, indicators were flagged that compared unfavorably in size and scope of the problem to state benchmarks, or had evident disparities among racial/ethnic groups. Indicators from the CCDP were flagged if: (a) the HSA value performed poorly (>2% or 2 percentage point difference) or moderately (between 1-2% or 1-2 percentage point difference) compared to the state benchmark. Indicators sourced by Valley Vision were flagged if they compared unfavorably to benchmark by any amount as presented in Appendix C.

Prioritized Significant Health Need Identification Process

Once significant health needs were identified, they were prioritized through the following process. First, health needs were given a score based upon the degree to which they met the criteria outlined above. Health needs that met or exceeded the thresholds for both the primary (75%) and secondary (50%) data categories were given a score of two (2 points); health needs that met or exceeded the thresholds for only one of the categories were given a score of one (1 point). The health needs were then ranked so that those with two points were put into a higher tier for prioritization than those with one point.

Secondly, health needs were further ranked within their tiers based upon additional analysis of the primary data. As previously mentioned, the interview guide for primary data collection prompted participants to identify the health issues in their communities that were salient to them and most urgent/important to address. Thematic analysis was conducted on the responses to this question and matched with the significant health need categories. The percentage of sources referring to each health need as a priority was calculated from this analysis, and then used for further prioritization of the health needs within tiers. Health needs with a higher percentage of sources were ranked above those with a lower percentage of sources identifying that health need as a priority.

Prioritized Significant Health Needs for Mercy General Hospital

Table 31 displays the full results of data synthesis to identify and prioritize the significant health needs for MGH. Each prioritized health need is listed with the corresponding secondary and primary data which led to its determination as a need.

Table 31: Prioritization of Significant Health Needs with Data Scoring and Ranked by Importance

Mercy General Hospital (N=55)					
	RANK	**Significant Health Needs**	**QUANT**	**QUAL**	**IMPORTANCE**
			50%	75%	
Tier 2	1	Behavioral Health	79%	96%	56%
	2	Active Living and Healthy Eating	79%	96%	47%
	3	Disease Prevention/Management	77%	82%	36%
	4	Access to Care	71%	95%	35%
	5	Safe Communities	88%	96%	22%
	6	Basic Needs	52%	98%	22%
Tier 1	7	Transport	67%	71%	7%
	8	Pollution Free Communities	89%	55%	2%

Tier 2 signifies that a health need met both the quantitative and qualitative thresholds. The health needs in tier 2 were then sorted by percent importance.

Tier 1 signifies that a health need met one of the quantitative or qualitative thresholds. The health needs in tier 1 were then sorted by percent importance.

1. Access to Behavioral Health Services

This category encompasses the following needs related to behavioral health:

- Access to mental health and substance abuse prevention and treatment services
- Tobacco education, prevention and cessation services
- Social engagement opportunities (especially for youth and seniors)
- Suicide prevention

This category includes health behaviors (e.g. substance abuse), associated health outcomes (e.g. COPD) and aspects of the social and physical environment (e.g. social support and access to liquor stores). In addition, this category includes life expectancy since persons with severe mental health issues may have a lower life expectancy.

Quantitative Indicators	Qualitative Themes
- Alcohol consumption - Alcohol expenditures - Tobacco expenditures - Smoking prevalence - Lung Cancer -- ED visits - Lung Cancer incidence - Substance abuse -- ED visits - Substance abuse- Hospitalizations - CRLD -- Mortality - COPD – ED visits - COPD – Hospitalizations - Life expectancy at birth - Poor mental health days - HPSA – Mental Health - Mental health -- ED visits - Mental health -- hospitalizations - Self-Inflicted Injury – ED visits - Self-Inflicted Injury – hospitalizations - Suicide – Mortality	- Substance Use Including: -Tobacco and e-cigarette use -High rates of opiate prescription drug use (used by individuals other than who the drugs were prescribed for and/or used at higher doses than prescribed) - Those with mental health issues may use substances to cope with mental health symptoms-discussion that there may be a connection between mental health and substance use issues - Concerns that area parks and other public places are not safe to utilize due to safety concerns related to individuals using illicit drugs - There is a need for social engagement and support for those with mental health and substance use issues - There are limited resources for trauma informed pediatric mental health care that considers adverse childhood experiences. - Daily stress creates significant challenges - Serious mental illness and chronic mental health issues such as depression, anxiety and schizophrenia were discussed as being significant in this HSA - There is a need for culturally sensitive mental health and substance use care - There are limited services and/or a lack of capacity of providers - Homelessness was discussed as a significant issue in this HSA. It was suggested that mental health and substance use issues may be connected to homelessness - Elderly mental health was discussed related to Alzheimer's and dementia - Those struggling with mental health and substance use issues have challenges meeting basic needs such as housing, gainful employment, food and safety. - Emergency department care was challenges for consumers and service providers, especially related to 5150 holds

2. Active Living and Healthy Eating

This category includes all components of healthy eating and active living including health behaviors (e.g. fruit and vegetable consumption), associated health outcomes (e.g. diabetes) and aspects of the physical environment/living conditions (e.g. food deserts). The category does <u>not</u> include food security, which is a component of the Basic Needs category.

Quantitative Indicators	Qualitative Themes
- Physical Inactivity -- Adults - Heart disease – ED visits - Heart disease – hospitalizations - Diabetes Management - Diabetes Prevalence - Fruit and vegetable expenditures - Percent youth overweight - Colorectal cancer – ED visits - Colorectal cancer – incidence - Diabetes – ED visits - USDA defined food desert - Hypertension – ED visits - Hypertension – hospitalizations - Commuting to work – walking - Percent breastfeeding - Soda expenditures - Osteoporosis – ED visits - Osteoporosis – hospitalizations - Low fruit and vegetable consumption youth - Fast food restaurants per population - Grocery stores per population	- Lack of access to healthy affordable foods in the community - Food deserts in low SES communities - lack of grocery stores with quality fruits and vegetables - abundance of unhealthy food options - Need for health education related to physical exercise and healthy eating - Healthy eating is perceived to be cost prohibitive, especially when feeding a family - Community members desire to be more physically active and to have access to safe public parks - Need for more walkable communities including safer sidewalks, bike lands and improved urban design/built environment when planning new communities - Barriers related to healthy eating include: - Lack of time for buying and preparing nutritionally dense food - Differences in cultural food practices - Lack of motivation related to competing priorities - Barriers related to active living include: - Lack of trees and heat - Use of technology/screen time - Lack of transportation to gyms and recreation facilities - Lack of time - Lack of motivation to exercise considering daily stressors - Cultural barriers related to exercise

3. *Disease Prevention, Management and Treatment*

This category encompasses the following health outcomes that require disease prevention and/or management measures as a requisite to improve health status:

- Cancer: Breast, Cervical, Colorectal, Lung, Prostate
- CVD/Stroke: Heart Disease, Hypertension, Renal Disease, Stroke
- HIV/AIDS/STDS: Chlamydia, Gonorrhea; HIV/AIDS
- Asthma

This category includes health behaviors that are associated with chronic and communicable disease (e.g., fruit/vegetable consumption, screening), health outcomes that are associated with these diseases or conditions (e.g. overweight/obesity), and associated aspects of the physical environment (e.g. food deserts).

Quantitative Indicators	Qualitative Themes
- Adult physical inactivity - Alcohol consumption - Alcohol expenditures - Cancer screening – Mammogram - Cancer screening – Pap - Tobacco expenditures - Smoking prevalence - Heart disease – ED visits - Heart disease – hospitalizations - Asthma prevalence - Asthma – ED visits - Asthma – hospitalizations - All cause cancer – mortality - Lung cancer – ED visits - Lung cancer – incidence - Diabetes Management - Diabetes Prevalence - Fruit and vegetable expenditures - Overweight – Youth - Colorectal cancer – ED visits - Colorectal cancer – incidence	- Cardiovascular disease and stroke were the most commonly mentioned conditions in the community - There were high rates of asthma and respiratory issues in the HSA - There were significant concerns with smoking and the use of other tobacco products, especially related to asthma. - Breast, stomach, lung, skin, prostate, leukemia and cervical cancers were discussed. Residents were concerned about environmental toxins being related to the development of cancer. Certain residents had been previously exposed to toxins through Chernobyl. - Sexually transmitted infections (STI) were discussed including HIV/AIDS, Hepatitis C and syphilis. There is concern about the stigma associated with contracting and/or living with an STI. - Transportation was discussed as a significant barrier related to all conditions presented above.

- Diabetes – ED visits
- USDA defined food desert
- Hypertension – ED visits
- Cervical cancer incidence
- Breast cancer – ED visits
- Breast cancer – hospitalizations
- Breast cancer – incidence
- Stroke – mortality
- Hypertension – mortality
- Heart disease – mortality
- Chlamydia – incidence
- Gonorrhea – incidence
- Lung cancer – hospitalizations
- Prostate cancer – ED visits
- Prostate cancer – incidence
- Sexually transmitted infections – ED visits
- Stroke – ED visits
- Stroke -- hospitalizations

4. Access to High Quality Health Care and Services

This category encompasses the following needs related to access to care:

- Access to Primary and Specialty Care
- Access to Dental Care
- Access to Maternal and Infant Care
- Health Education & Literacy
- Continuity of Care, Care Coordination & Patient Navigation
- Linguistically & Culturally Competent Services

This category includes health behaviors that are associated with access to care (e.g. cancer screening), health outcomes that are associated with access to care/lack of access to care (e.g. low birth weight) and aspects of the service environment (e.g. health professional shortage area). The category does not include access to mental health providers, which is a component of the Access to Behavioral Health Services category.

Quantitative Indicators	Qualitative Themes
- Cancer screening – Mammogram - Cancer screening – Pap 3 and 4 year olds in school - Percent of population on public insurance - Percent breastfeeding - Soda expenditures - Access to dentists - Federally Qualified Health Centers - Dental Issues – ED visits - Dental Issues – hospitalizations - HPSA – Primary Care - Infant mortality rate - Percent receiving prenatal care - Teen pregnancy rate	- Access to a provider is hard for low SES communities especially - related to primary, specialty care, maternal and child health care and oral health care - The Affordable Care Act insured low income communities but coverage provided doesn't equal access to care. Long waits to see providers and substandard care persists. - Medi-Cal providers are hard to find and retain. - There are limited providers and long wait times to see a primary care provider, especially in low income communities. It is not uncommon for those waiting to utilize the ED multiple times while waiting weeks/months to see primary care providers. - Language barriers between provider and patient create significant access issues - Prescription drugs and certain prescribed treatments are cost prohibitive. - Undocumented residents experience severe barriers in accessing care - Coordinated care is important especially related to transportation to health care services, the ability to access multiple services in one location and the ability to access culturally sensitive care - Emergency departments are overwhelmed and over utilized - Transportation to health care is challenging for many individuals - Dental and vision care are difficult to access for low SES communities

5. *Safe, Crime and Violence Free Communities*

This category includes safety from violence and crime including violent crime, property crimes and domestic violence. This category includes health behaviors (e.g. assault), associated health outcomes (e.g. mortality - homicide) and aspects of the physical environment (e.g. access to liquor stores). In addition, this category includes factors associated with unsafe communities such as substance abuse and lack of physical activity opportunities, and unintentional injury such as motor vehicle accidents.

Quantitative Indicators	Qualitative Themes
- Adult physical inactivity - Alcohol consumption - Alcohol expenditures - Substance Abuse – ED visits - Substance Abuse – hospitalizations - Homicide mortality - Fatal pedestrian accidents - Assault – ED visits - Assault – hospitalizations - Domestic violence rates - Major crime rates - Unintentional injuries – ED visits - Unintentional injuries – hospitalizations	- Gang violence including shootings, high speed chases, drug sales and robberies were discussed, especially in Del Paso Heights, Citrus Heights, North Sacramento and Arden. - Domestic violence and sexual assault were discussed. There are limited resources and shelter beds for victims of domestic violence. Domestic violence is thought to be connected to child abuse/neglect and other family violence issues. - Communities are struggling with frequent gun and knife violence which created specific safety concerns for children and elderly residents. - Alcohol and other substance abuse affect the community and contribute to crime, violence and mental health issues. - Child abuse and trauma - Tension with the police have created challenges for residents in feeling comfortable accessing law enforcement services, especially in low socioeconomic communities.

6. *Basic Needs* (Food Security, Housing, Economic Security, Education)
This category encompasses the following basic needs:
- Economic security (income, employment, benefits)
- Food security/insecurity
- Housing (affordable housing, substandard housing)
- Education (reading proficiency, high school graduation rates)
- Homelessness

Quantitative Indicators	Qualitative Themes
3 and 4 year olds in school - Percent of population on public insurance - Life expectancy at birth - High school graduation rate - Reading Proficiency - Food Insecurity - Population with SNAP - School suspensions - Percent unemployed	- There are challenges in accessing affordable housing. Homelessness is of significant concern, especially related homeless individuals accessing health services for substance use and mental health issues. - The need for coordinated service delivery of basic needs for impoverished residents was discussed. - There is a great desire for smoke-free rental housing. - Gentrification is presenting concerns, especially in Oak Park. - Many residents struggle with accessing food, especially homeless individuals. Residents struggle with the affordability of healthy food, especially in food deserts. - Community members worry about the shame and stigma associated with accessing food closets and banks. - Residents desire additional grocery stores, especially in lower socioeconomic areas. - Quality education is challenging to find in lower socioeconomic areas. - Adults without a GED/high school diploma struggle with economic security. Those with higher education degrees also struggle with job placement. - Vocational training is desired in this HSA.

7. *Affordable and Accessible Transportation*
This category includes the need for public or personal transportation options, transportation to health services and options for persons with disabilities.

Quantitative Indicators	Qualitative Themes
- Population living near a transit stop - Commuting to work by walking - Commuting to work alone - Population with a disability	- Public transportation is expensive, difficult to access and not always reliable. - Residents do not always feel safe on public transportation. - Rural areas struggle significantly with access to public transportation. - Many residents live far from their jobs and may not have access to cars. - Residents struggle with transportation to medical appointments and procedures. - Social services and grocery stores are not always located near public transportation.

8. Pollution-Free Living and Work Environments
This category includes measures of pollution such as air and water pollution levels. This category includes health behaviors associated with pollution in communities (e.g. physical inactivity), associated health outcomes (e.g. COPD) and aspects of the physical environment (e.g. road network density). In addition, this category includes tobacco usage as a pollutant. The category does <u>not</u> include climate related factors such as drought and heat stress.

Quantitative Indicators	Qualitative Themes
- Adult physical inactivity - Tobacco expenditures - Smoking rate - Heart disease – ED visits - Heart disease – hospitalizations - Asthma – prevalence - Asthma – ED visits - Asthma – hospitalizations - Cancer – mortality - Road Density - Population living near a transit stop - CRLD – Mortality - COPD – ED visits - COPD – hospitalizations	- Asthma, COPD and respiratory allergies are major issues for area residents. - There is concern for tobacco and marijuana creating pollutants in the environment. - Pests, including cockroaches, mice, rats, fleas, bedbugs, and ringworm, create health issues and allergic reactions. - Residents are concerned about the consumption of tobacco and marijuana in communal living environments. - Residents are concerned about the health impacts of pesticide spraying in their neighborhoods.

RESOURCES POTENTIALLY AVAILABLE TO MEET SIGNIFICANT HEALTH NEEDS

One hundred and eighty-two resources were identified in the Focus Communities. The method included starting with the list of resources from the 2013 MGH CHNA, verification that the resource still existed, and adding newly identified resources in the primary data for the 2016 CHNA report. Examination of the resources revealed the following numbers of resources for each significant health need:

Table 32: Number of Resources for Each Significant Health Need in Prioritized Order

Significant Health Need (in priority order)	Number of resources
1. Access to Behavioral Health Services	80
2. Active Living and Healthy Eating	51
3. Disease Prevention, Management and Treatment	32
4. Access to High Quality Health Care and Services	77
5. Safe, Crime and Violence Free Communities	40
6. Basic Needs (Food Security, Housing, Economic Security, Education)	81
7. Affordable and Accessible Transportation	3
8. Pollution-Free Living and Work Environments	4

For more specific examination of resources by significant health need and by geographic locations, see the full list in Appendix H.

IMPACT OF ACTIONS TAKEN SINCE 2013 CHNA

Mercy General Hospital is experiencing positive outcomes for programs and initiatives addressing priority health issues identified in the preceding 2013 Community Health Needs Assessment (CHNA). These programs and initiatives continue to align with many of the priority health needs identified in the new 2016 CHNA and will continue to be supported by the hospital. They are highlighted below, within the newly defined 2016 priority health need categories. FY 2015 Dignity Health Community Grant collaborations are denoted by *. All outcomes are reflective from FY2013 through FY2015 unless otherwise noted.

Access to Behavioral Health Services

ReferNet Intensive Outpatient Mental Health Partnership - The hospital works in collaboration with community-based nonprofit mental health provider, El Hogar, to provide a seamless process for patients admitting to the emergency department with mental illness to receive immediate and ongoing treatment and other social services they need for a continuum of care when they leave the hospital.
Outcomes:
- Over 900 patients were referred to program through hospital social workers; 372 successfully received intensive outpatient treatment and were referred to other social service resources as needed.
- Of the patients who successfully received services, there was a nearly 58% decrease in ED visits when comparting ED utilization three months pre versus three months post intervention
Expenses: $286,285 shared by Dignity Health hospitals in Sacramento County

Navigation to Wellness* - This initiative engages nonprofit mental health provider, Turning Point, to improve the quality of care for patients in mental health crisis. Clinical social workers from Turning Point work side by side hospital social workers to ensure patients are linked to appropriate public and community behavioral health services needed for wellness when they are discharged. The collaboration includes the following community partners: Crime Victims Assistance Network (I-CAN) Foundation; Consumers Self Help Center; and My Sister's House.
FY 2015 Outcomes:
- Services for this collaboration started in March of 2015. Within the first four months, over 140 patients were linked to community resources at the time of emergency department discharge and received follow-up care over 30 days to ensure they connected to the resources.
FY 2015 Expenses: $300,000 shared expense by Dignity Health hospitals in Sacramento County

Mental Health Improvement Coalition - Mercy General and other Dignity Health hospitals in Sacramento County, joined with Sutter Health, Kaiser Permanente, and UC Davis Health Center in FY 2015 to develop strategies for improving the delivery of mental health services and access to care in Sacramento County. Significant improvements to date have included County approval for expanded crisis residential services and crisis stabilization services.
FY 2015 Outcomes:
- Total County budget increase of $28.4M to support:
  o Expanding County Crisis Stabilization Unit with some open access anticipated
  o 3 new 15-bed crisis residential treatment centers
  o Mental health urgent care center
  o Increased funding for community outpatient services
FY 2015 Expenses: $75,000 shared expense by Dignity Health hospitals in Sacramento County

Mental Health Consultations and Conservatorship Services - The hospital provides psychiatric consultations at no cost for all patients who require evaluations while hospitalized, as well as patient conservatorship services to those who lack capacity or family help to make decisions.
Outcomes:
- 18,717 persons served
Expenses: $6,114,297 shared by Dignity Health hospitals in Sacramento

Active Living and Healthy Eating

Food Literacy Center - The hospital supports this organization's efforts to teach literacy and nutrition through cooking classes at underserved elementary schools. The center offers strategies to create behavior change and prevent childhood obesity through two core programs, which together provide a complete, scalable and replicable solution to the problem: 1) teaching food literacy to low-income pre-K through 6th graders, and 2) training community members as food literacy instructors.
FY 2014-2015 Outcomes:
- 840 children across 7 schools attended a food literacy class
FY 2014-2015 Expenses: $5,000 shared by Dignity Health hospitals in Sacramento County

WayUp Station* - Through the Community Grants Program, the WayUp Station in partnership with WayUp Sacramento, Sacramento Covered and WellSpace Health places a community-based educational resource center in an underserved community. The primary purpose of the collaborative is to expand access to health-related resources and other social services including nutrition and exercise.
FY 2015 Outcomes:
- 180 community residents received services through the collaborative partners
FY 2015 Expenses: $150,000 shared by Dignity Health hospitals in Sacramento County

Disease Prevention, Management and Treatment

Healthier Living - Based on the Stanford University evidence-based model, these Chronic Disease Self-Management (CDSMP) and Diabetes Self-Management Programs are offered at the community level in partnership with clinics, food banks, low-income housing developments and others to ensure the underserved have access.
Outcomes:
- 62 CDSMP and Diabetes workshops were conducted in both English and Spanish with a total of 508 participants completing the program.
    - On average, less than 10% of the completers readmitted to the hospital within three months of completing the workshop.
- As of the end of FY2015, there were 27 active lay leaders; six of which are Spanish speaking and seven are certified master trainers in the region

Expenses: $54,939 shared by Dignity Health hospitals in Sacramento County

CHAMP® (Congestive Heart Active Management Program) - This unique program keeps individuals with heart disease connected to the medical world through symptom and medication monitoring and education. CHAMP® establishes a relationship with patients who have heart disease after discharge from the hospital through: 1) Regular phone interaction to help support and educate patients in managing their disease; 2) Monitoring of symptoms or complications and recommendations for diet changes medicine modifications or physician visits.
Outcomes:
- 13,392 patients served across the four Sacramento hospitals and less than 2% of the patients served admitted to the emergency department three months post intervention.

Expenses: $1,041,102 shared by Dignity Health hospitals in Sacramento County

Access to High Quality Health Care and Services

Patient Navigator Program- Patient navigators in the hospital's emergency department connect patients seen and treated at the hospital to medical homes at community health centers and provider offices throughout the region. The Patient Navigator Program represents a unique collaboration between Health Net, a Medi-Cal Managed Care insurance plan, Sacramento Covered, a community-based nonprofit organization, and community clinics in the region.
FY 2014-2015 Outcomes:
- 8,932 patients were assisted
- 76% of the patients had a follow up appointment scheduled with a Primary Care or other type of provider
- Outcomes show a decrease in emergency department primary care visits by over 50% and urgent care visits by 44% when comparing pre and post ED utilization

Expenses: $824,369 shared by Dignity Health hospitals in Sacramento County

Cancer Nurse Navigator - This hospital program is designed to help patients navigate the maze of options related to cancer and to complement and enhance services provided by physicians. Nurses work to improve continuity of care, enhance patient/doctor communication whenever an abnormality shows up on mammogram, breast ultrasound, or breast MRI, as well as information to the community about financial assistance for breast cancer screening. Patients receive information, resources, and support for assisting with biopsies. Education about pathology results and assistance obtaining referrals to specialists is provided in a timely manner. The navigators also coordinate a group of peer support volunteers who are matched up with patients newly diagnosed with breast cancer.

FY 2014-2015 Outcomes:
- 5,221 persons received support or education through outreach and engagement events-- shared by Dignity Health hospitals in Sacramento and Yolo counties.

Expenses: $128,890 shared by Sacramento County and Yolo County Dignity Health hospitals

SPIRIT - The Sacramento Physicians' Initiative to Reach Out, Innovate and Teach (SPIRIT) operated under the Sierra Sacramento Valley Medical Society exists as a vehicle to involve physicians in the community. SPIRIT recruits and places physician volunteers in local clinics to provide free specialty medical care to the uninsured and coordinates and case manages surgical procedures donated at local hospitals and ambulatory surgery centers.
Outcomes:
- 81 patients received free surgical services provided at a Dignity Health surgical center, and performed by Dignity Health affiliated physicians.

Expenses: $45,000 shared by Dignity Health hospitals in Sacramento County.

Mercy Clinic Norwood **-** Mercy Clinic Norwood provides medical care to the underserved populations living in Del Paso Heights, which is an economically depressed part of the region. Those who do not have insurance are treated free of charge. Services include primary and preventative care, including adult and child physicals, immunizations, chronic disease management, and lab services. Federally Qualified Health Center, Peach Tree Health, came on as a partner of Mercy General Hospital in FY2015 and assumed full operations of Mercy Clinic Norwood. The clinic has continued to respond to the health care needs of vulnerable residents who cannot afford or access care.
Outcomes:
- 30,254 persons served

Expenses: $7,657,834

Mercy Clinic Loaves & Fishes – Mercy Clinic Loaves & Fishes is the only clinic in the region that is designed specifically to provide health care to homeless individuals, families and children. The hospital and its partner, Sacramento County, operate the clinic and have continued to work collaboratively to increase efficiency and enhance services by adding case management and enrollment assistance for government funded programs.
Outcomes:
- 7,845 persons served

Expenses: $839,139

Other Access to Care Services:
- School Nurse Program - Nearly 2,000 students and family members received health services annually within the Catholic Diocese of Sacramento through the hospital's School Nurse program. Services include health care and mandated health screenings.
- Mercy Faith and Health Partnership - This interfaith community outreach program supports the development of health ministry programs focused on promoting good health and disease prevention in local faith communities
- Financial assistance for uninsured/underinsured and low income residents - The hospital provides discounted and free health care to qualified individuals, following Dignity Health's Financial Assistance Policy.

Safe, Crime and Violence Free Communities

Human Trafficking - The initial phase of this initiative launched in FY 2015 with a core emergency response team established and the roll out of the first phase of education and training to hospital clinical

staff to increase awareness and improve quality of care for human trafficking victims. The development of a strategic plan that engages community resources is underway in partnership with several nonprofit organizations, law enforcement and the Sacramento County Justice Department.

Initiative to Reduce African American Child Deaths - Mercy General and Dignity Health hospitals in Sacramento County are taking a leading role in the region to ensure children have a safe sleeping environment by providing appropriate cribs, assessments and education in partnership with the Sacramento County Child Abuse Center. The hospital is also represented on the Sacramento County Steering Committee on Reduction of African American Child Deaths, which is chartered to develop strategy and oversight for all county-wide efforts to reduce child deaths among this target population between 10 and 20 percent by 2020. African American children die at a rate that is twice that of all other children in Sacramento County.

Basic Needs (Food & Economic Security, Housing and Education)

Homeless Outreach Project* - Through the Community Grants Program, the hospital is collaborating with Sacramento Steps Forward, Sacramento Loaves & Fishes, TLCS, and the Downtown Sacramento Foundation on an outreach program for chronically homeless individuals. Using a central intake method, the collaborative partners work with social work to connect with patients experiencing homelessness while they are in the hospital and then develop a care plan that links them with community resources based on their needs. This collaborative also addresses access to behavioral health services.
Outcomes:
- 639 individuals experiencing homelessness were served by one or more of the partners
  - 339 clients where engaged in Mental Health services 66 clients were placed in safe shelter, 22 clients where placed in Substance abuse treatment, 25 clients enrolled in Health Care benefits, 60 clients engaged with Primary Care, 60 clients secured an income, 74 clients secured ID and SS cards, 23 clients secured Birth Certificates, 5 clients secured the needed DD214 verification of duty in the Armed Forces.
FY 2015 Expenses: $230,204 shared by Dignity Health hospitals in Sacramento County

Interim Care Program - The hospital is an active partner in the Interim Care Program (ICP). This collaborative engages other Dignity Health hospitals and health systems in the region, the Salvation Army, Sacramento County and Federally Qualified Health Center, WellSpace Health, and provides a respite care shelter for homeless patients with available physical and mental health, and substance abuse treatment.
Outcomes:
- 280 patients referred by Dignity Health hospitals in Sacramento County were enrolled into the program
- Average length of stay = 26.3 days
Expenses: $432,960 shared by Dignity Health hospitals in Sacramento County

Housing First Homeless Program - In partnership with Lutheran Social Services, Mercy General established a Housing First Homeless Program in FY 2015 that aims to assist homeless individuals with severe chronic health and mental health issues obtain and retain housing, care and services designed to achieve stability in their lives. Hospital case managers work directly with Lutheran Social Services staff to identify participants who will be housed in supportive living apartments and receive intensive case management and supportive services. Ongoing health care for these participants is provided by the Mercy Family Health Center or their established medical home and Mercy Home Care, with the goal of transitioning participants into permanent housing.
Outcomes:

- 15 patients were enrolled into the Housing with Dignity program
  - Of the patients served, there was a 58% reduction in inpatient admissions to the hospital, a 45% decrease in emergency department utilization, and a 76% reduction in total days spent in the hospital.

Expenses: $150,000 shared by Dignity Health hospitals in Sacramento County

CONCLUSION

Nonprofit hospitals play an important role in the lives of the communities they serve. CHNAs help nonprofit hospitals, as well as other community organizations, in determining where to focus community benefit and improvement efforts, including geographic locations and specific populations living in their service areas. The intention of the CHNA is to assist in improving the lives of hospital service area residents, and the larger geographical area served. Results provided in this assessment will help inform efforts with work towards improving the health of a community and better addressing specific target populations with significant health and health-related disparities.

APPENDICES

Appendix A: Community Board and Committee Rosters

Dignity Health Sacramento Service Area Community Board

Sister Brenda O'Keeffe, Chair Vice President, Mission Integration Mercy Medical Center Redding	Sister Patricia Simpson, O.P.
Glennah Trochet, MD, Vice Chair Retired Sacramento County Public Health Officer Community Representative	Thiru Rajagopal, MD Vice Chief of Staff Mercy General Hospital
Brian King, Secretary Los Rios College District Chancellor	Steven Polansky, MD Vice Chief of Staff Mercy San Juan Medical Center
Gil Albiani Real Estate Community Representative	Laurie Harting Sr. Vice President, Operations Dignity Health Sacramento Service Area
Julius Cherry Attorney Community Representative	Dwight (Brad) Stalker, MD Vice Chief of Staff Mercy Hospital of Folsom
Patrice Coyle Retired HR & Education Community Representative	Timothy Takagi, MD Vice Chief of Staff Methodist
Sister Patricia Manoli, RSM Director, Mission Integration St. Elizabeth Community Hospital	Roger Neillo Former Sacramento Chamber of Commerce President; Former California State Assemblyman

Dignity Health Sacramento Service Area Community Health Committee Roster

Sister Bridget McCarthy
Vice President, Mission Integration
Dignity Health Sacramento Service Area

Sister Clare Marie Dalton
Vice President, Mission Integration
Mercy General Hospital

Sister Cornelius O'Conner
Vice President, Mission Integration
Mercy Hospital of Folsom

Sister Gabrielle Marie Jones, Chair
Vice President, Mission Integration
Mercy San Juan Medical Center

Michael Cox
Vice President, Mission Integration
Methodist Hospital of Sacramento

Ashley Brand
Manager, Community Health and Outreach
Dignity Health Sacramento Service Area

Jennifer Zachariou
Sr. Community Health Specialist
Dignity Health Sacramento Service Area

Becky Furtado
Vice President, Communications
Dignity Health Sacramento Service Area

Patrice Coyle
Retired HR & Education
Community Representative

Kevin Duggan
President, Mercy Foundation

Marge Ginsburg
Executive Director
Center for Healthcare Decisions
Community Representative

Sister Patricia Simpson, O.P.

Rosemary Younts
Director, Community Health and Outreach
Dignity Health Sacramento Service Area

Appendix B: Secondary Data Dictionary and Processing

Introduction

The secondary data supporting the 2016 Community Health Needs Assessment was collected from a variety of sources, and was processed in multiple stages before it was used for analysis. This document details those various stages. Approaches used to define ZIP code boundaries, and the approaches that were used to integrate records reported for PO boxes into the analysis are described. General data sources are listed, followed by a description of the basic processing steps applied to most variables and concluding with detail on additional specific processing steps used to generate a subset of more complicated indicators.

ZIP Code Definitions

All morbidity and mortality variables collected in this analysis are reported by patient mailing ZIP codes. ZIP codes are defined by the US Postal Service as a single location (such as a PO Box), or a set of roads along which addresses are located. The roads that comprise such a ZIP code may not form contiguous areas, and do not match the approach of the US Census Bureau, which is the main source of population and demographic information in the US. Instead of measuring the population along a collection of roads, the Census reports population figures for distinct, contiguous areas. In an attempt to support the analysis of ZIP code data, the Census Bureau created ZIP Code Tabulation Areas (ZCTAs). ZCTAs are created by identifying the dominant ZIP code for addresses in a given Census block (the smallest unit of Census data available), and then grouping blocks with the same dominant ZIP code into a corresponding ZCTA. The creation of ZCTAs allows us to identify population figures that, in combination with the morbidity and mortality data reported at the ZIP code level, allow for the calculation of rates for each ZCTA. The difference in the definition between mailing ZIP codes and ZCTAs has two important implications for analyses of ZIP code level data.

First, it should be understood that ZCTAs are approximate representations of ZIP codes, rather than exact matches. While this is not ideal, it is nevertheless the nature of the data being analyzed. Secondly, not all ZIP codes have corresponding ZCTAs. Some PO Box ZIP codes or other unique ZIP codes (such as a ZIP code assigned to a single facility) may not have enough addressees residing in a given census block to ever result in the creation of a ZCTA. However, residents whose mailing addresses correspond to these ZIP codes will still show up in reported morbidity and mortality data. This means that rates cannot be calculated for these ZIP codes individually because there are no matching ZCTA population figures.

In order to incorporate these patients into the analysis, the point location (latitude and longitude) of all ZIP codes in California[28] were compared to ZCTA boundaries[29]. Because various morbidity and mortality data sources were available in different years, this comparison was made between the ZCTA boundaries and the point locations of ZIP codes in April of the year (or the final year in the case of variables aggregated over multiple years) for which the morbidity and mortality variables were reported. All ZIP codes (whether PO Box or unique ZIP code) that were not included in the ZCTA dataset were identified. These ZIP codes were then assigned to either ZCTA that they fell inside of, or in the case of rural areas that are not completely covered by ZCTAs, the ZCTA to which they were closest. Morbidity and mortality information associated with these PO Box or unique ZIP codes were then added to the ZCTAs to which they were assigned.

---

[28] Datasheer, L.L.C. (2015, April 15). *ZIP Code Database DELUXE BUSINESS.* Retrieved from Zip-Codes.com: http://www.Zip-Codes.com

[29] U.S. Census Bureau. (2015). *TIGER/Line® Shapefiles and TIGER/Line® Files.* Retrieved August 31, 2011, from http://www.census.gov/geo/maps-data/data/tiger-line.html

Data Sources

The majority of mortality, morbidity, and socio-economic variables were collected from three main data sources: the US Census Bureau (Census), the California Office of Statewide Health Planning and Development (OSHPD), and the California Department of Public Health (CDPH). Census data was collected to provide both descriptions of population characteristics for the study area, and to calculate rates for morbidity and mortality variables. Table 33 below lists the 2013 population characteristic variables and sources. Table 34 lists sources for variables used to calculate morbidity and mortality rates, which were collected for 2012, 2013, and 2014. These demographic variables were collected variously at the Census blocks and tracts, ZCTA, county, and state levels. In urban areas, Census blocks are roughly equivalent to a city block, and tracts to a neighborhood. Health outcome and health behavior indicators were also collected from the Kaiser Permanente Community Commons Data Platform (CCDP) to compliment the indicators already collected from other sources.

Kaiser Permanente Community Commons Data Platform (CCDP)

The CCDP is a web-based platform designed to assist hospitals, non-profit organizations, state and local health departments, financial institutions and other organizations seeking to better understand the needs and assets of their communities. The CCDP was used to collect additional indicators, including indicators by race and ethnicity, in order to better understand the drivers of health in the community and prioritize issues that require the most urgent attention. The list of CCDP indicators used is detailed below in Table 37, Remaining Secondary Indicators.

Table 33: Demographic Variables Collected from the US Census Bureau[30]

Derived Variable Name	Source Variable Names	Source
Percent Minority (Hispanic or non-White)	Total Population - Not Hispanic or Latino: - White alone	2013 American Community Survey 5-year Estimate Table B03002
Population 5 Years or Older who speak Limited English	For age groups 5 to 17; 18 to 64; and 65 years and over: Speak Spanish: - Speak English "not well"; Speak Spanish: - Speak English "not at all"; Speak other Indo-European languages: - Speak English "not well"; Speak other Indo-European languages: - Speak English "not at all"; Speak Asian and Pacific Island languages: - Speak English "not well"; Speak Asian and Pacific Island languages: - Speak English "not at all"; Speak other languages: - Speak English "not well"; Speak other languages: - Speak English "not at all"	2013 American Community Survey 5-year Estimate Table B16004
Percent Households 65 years or Older in Poverty	Income in the past 12 months below poverty level: - Family households: - Married-couple family: - Householder 65 years and over; Income in the past 12 months below poverty level: - Family households: - Other family: - Male householder, no wife present: - Householder 65 years and over; Income in the past 12 months below poverty level: - Family households: - Other family: - Female householder, no husband present: - Householder 65 years and over; Income in the past 12 months below poverty level: - Nonfamily households: - Male householder: - Householder 65 years and over; Income in the past 12 months below poverty level: - Nonfamily households: - Female householder: - Householder 65 years and over; Total Households	2013 American Community Survey 5-year Estimate Table B17017
Median income	Estimate; Median household income in the past 12 months (in 2013 inflation-adjusted dollars)	2013 American Community Survey 5-year Estimate Table B19013
GINI Coefficient	Gini Index	2013 American Community Survey 5-year Estimate Table B19083

[30] U.S. Census Bureau. (2015). *2013 American Community Survey 5-year estimates; 2012 American Community Survey 5-year estimates; 2011 American Community Survey 5-year estimates.* Retrieved February 14, 2015, from American Fact Finder: http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

Average Population per Housing Unit	Total population in occupied housing units	2013 American Community Survey 5-year Estimate Table B25008
Percent with Income Less Then Federal Poverty Level	Total: - Under .50; Total: - .50 to .99	2013 American Community Survey 5-year Estimate Table C17002
Percent Foreign Born	Total population - Foreign born	2013 American Community Survey 5-year Estimate Table DP02
Percent Non-Citizen	Foreign-born population - Not a U.S. citizen	2013 American Community Survey 5-year Estimate Table DP02
Percent Over 18 that are Civilian Veterans	VETERAN STATUS - Civilian population 18 years and over - Civilian veterans	2013 American Community Survey 5-year Estimate Table DP02
Percent Civilian Noninstitutionalized Population with a Disability	DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION - Total Civilian Noninstitutionalized Population	2013 American Community Survey 5-year Estimate Table DP02
Percent with Public Assistance	INCOME AND BENEFITS (IN 2013 INFLATION-ADJUSTED DOLLARS) - With cash public assistance income	2013 American Community Survey 5-year Estimate Table DP03
Percent with Public Insurance	HEALTH INSURANCE COVERAGE - Civilian noninstitutionalized population - With health insurance coverage - With public coverage	2013 American Community Survey 5-year Estimate Table DP03
Percent Renter Occupied Households	Occupied housing units - Renter-occupied	2013 American Community Survey 5-year Estimate Table DP04
Percent Vacant Housing Units	Total housing units - Vacant housing units	2013 American Community Survey 5-year Estimate Table DP04
Percent Households with No Vehicle	Occupied housing units - No vehicles available	2013 American Community Survey 5-year Estimate Table DP04
Percent Households with Commute Times to work 60 minutes or more	Workers with travel times 60 to 89 minutes; workers with travel times 90 minutes or more; Total workers 16 years and over who did not work at home;	2013 American Community Survey 5-Year Estimate Table B08012
Total Population	Total population	2013 American Community Survey 5-year Estimate Table DP05
Percent Asian (not Hispanic)	Total population - Not Hispanic or Latino - Asian alone	2013 American Community Survey 5-year Estimate Table DP05
Percent Black (not Hispanic)	Total population - Not Hispanic or Latino - Black or African American alone	2013 American Community Survey 5-year Estimate Table DP05

Percent Hispanic (any race)	Total population - Hispanic or Latino (of any race)	2013 American Community Survey 5-year Estimate Table DP05
Percent American Indian (not Hispanic)	Total population - Not Hispanic or Latino - American Indian and Alaska Native alone	2013 American Community Survey 5-year Estimate Table DP05
Percent Pacific Islander (not Hispanic)	Total population - Not Hispanic or Latino - Native Hawaiian and Other Pacific Islander alone	2013 American Community Survey 5-year Estimate Table DP05
Percent White (not Hispanic)	Total population - Not Hispanic or Latino - White alone	2013 American Community Survey 5-year Estimate Table DP05
Percent Other or Two or More Races (not Hispanic)	Total population - Not Hispanic or Latino - Some other race alone; Total population - Not Hispanic or Latino - Two or more races	2013 American Community Survey 5-year Estimate Table DP05
Percent Female	Total population - Female	2013 American Community Survey 5-year Estimate Table DP05
Percent Male	Total population - Male	2013 American Community Survey 5-year Estimate Table DP05
Median Age	Median age (years)	2013 American Community Survey 5-year Estimate Table DP05
Population by Age Group	Under 5 years; 5 to 9 years; 10 to 14 years; 10 to 14 years; 20 to 24 years; 25 to 34 years; 35 to 44 years; 5 to 54 years; 55 to 59 years; 60 to 64 years; 65 to 74 years; 75 to 84 years; 85 years and over	2013 American Community Survey 5-year Estimate Table DP05
Percent Single Female Headed Households	Female householder, no husband present, family household	2013 American Community Survey 5-year Estimate Table S1101
Percent 25 or Older Without a High School Diploma	100 - Percent high school graduate or higher	2013 American Community Survey 5-year Estimate Table S1501
Percent Families with Children in Poverty	All families - Percent below poverty level; Estimate; With related children under 18 years	2013 American Community Survey 5-year Estimate Table S1702

Percent Single Female Headed Households in Poverty	Female householder, no husband present - Percent below poverty level; Estimate; With related children under 18 years	2013 American Community Survey 5-year Estimate Table S1702
Percent Unemployed	Unemployment rate; Estimate; Population 16 years and over	2013 American Community Survey 5-year Estimate Table S2301
Percent Uninsured	Percent Uninsured; Estimate; Total civilian noninstitutionalized population	2013 American Community Survey 5-year Estimate Table S2701
Percent of Homeowners with Mortgage with Housing Costs above 30% of Income	Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing units with a mortgage (excluding units where SMOCAPI cannot be computed) - 30.0 to 34.9 percent; Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing units with a mortgage (excluding units where SMOCAPI cannot be computed) - 35.0 percent or more	2013 American Community Survey 5-year Estimate Table DP04
Percent of Homeowners with no Mortgage with Housing Costs above 30% of Income	Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed) - 30.0 to 34.9 percent; Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed) - 35.0 percent or more	2013 American Community Survey 5-year Estimate Table DP04
Percent of Renters with Rent above 30% of Income	Percent; GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 30.0 to 34.9 percent; Percent; GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 35.0 percent or more	2013 American Community Survey 5-year Estimate Table DP04
Percent of All Housing Units with Housing Costs above 30% of Income	Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing units with a mortgage (excluding units where SMOCAPI cannot be computed) - 30.0 to 34.9 percent; Percent; SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME (SMOCAPI) - Housing units with a mortgage (excluding units where SMOCAPI cannot be computed) - 35.0 percent or more; Percent; GROSS	2013 American Community Survey 5-year Estimate Table DP04

RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 30.0 to 34.9 percent; Percent; GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 35.0 percent or more; Percent; GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 30.0 to 34.9 percent; Percent; GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME (GRAPI) - Occupied units paying rent (excluding units where GRAPI cannot be computed) - 35.0 percent or more; Housing units with a mortgage (excluding units where SMOCAPI cannot be computed); Housing unit without a mortgage (excluding units where SMOCAPI cannot be computed);Occupied units paying rent (excluding units where GRAPI cannot be computed)

Table 34: Census Variables used for Mortality and Morbidity Rate Calculations[3,31]

Derived Variable Name	Source Variable Names	Source
Total Population	Total Population	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014) 2010 Decennial Census Summary File 1
Female	Female	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Male	Male	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age Under 1	DP05: Under 5 years PCT12: Male and Female, ages under 1, 1, 2, 3, and 4	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014); 2010 Decennial Census Summary File 1 Table PCT12
Age 1 to 4	DP05: Under 5 years PCT12: Male and Female, ages under 1, 1, 2, 3, and 4	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014); 2010 Decennial Census Summary File 1 Table PCT12

[31] U.S. Census Bureau. (2013). *2010 Census Summary File 1*. Retrieved February 14, 2013, from American Fact Finder: http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

Age 5 to 14	5 to 9 years; 10 to 14 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 15 to 24	15 to 19 years; 20 to 24 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 25 to 34	25 to 34 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 35 to 44	35 to 44 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 45 to 54	45 to 54 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 55 to 64	55 to 59 years; 60 to 64 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 65 to 74	65 to 74 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 75 to 84	75 to 84 years	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Age 85 and over	85 years and over	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
White	HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - White alone	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Black	HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - Black or African American alone	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Hispanic	HISPANIC OR LATINO AND RACE - Total population - Hispanic or Latino (of any race)	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Native American	HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - American Indian and Alaska Native alone	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Asian/Pacific Islander	HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - Asian alone; HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - Native Hawaiian and Other Pacific Islander alone	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)

Collected morbidity and mortality data included the number of emergency department (ED) discharges, hospital (H) discharges, and mortalities associated with a number of conditions, as well as various cancer and STI incidence rates. Aggregated 2011 – 2013 ED and H discharge data were obtained from the Office of Statewide Health Planning and Development (OSHPD). Table 35 lists the specific variables collected by ZIP code and county. These values report the total number of ED or H discharges that listed the corresponding ICD9 code as either a primary or any secondary diagnosis, or a principle or other E-code, as the case may be. In addition to reporting the total number of discharges associated with the specified codes per ZIP code/county, this data was also broken down by sex (male and female), age (less than 1 year, 1 to 4 years, 5 to 14 years, 15 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 to 74, 75 to 84 years, and 85 years or older), and normalized race and ethnicity (Hispanic of any race, non-Hispanic White, non-Hispanic Black, non-Hispanic Asian or Pacific Islander, non-Hispanic Native American.

Table 35: 2011 – 2013 OSHPD Hospitalization and Emergency Department Discharge Data

Category	Variable Name	ICD9/E-Codes
Cancer	Breast Cancer	174, 175
	Colorectal Cancer	153, 154
	Lung Cancer	162, 163
	Prostate Cancer	185
Chronic Disease	Diabetes	250
	Hypertension	401-405
	Heart Disease	410-417, 428, 440, 443, 444, 445, 452
	Chronic Kidney Disease	580-589
	Stroke	430-436, 438
Infectious Disease	HIV/AIDS	042-044
	STIs	042-044, 090-099, 054.1, 079.4
	Tuberculosis	010-018, 137
Injuries[32]	Assault	E960-E969, E999.1
	Self-Inflicted Injury	E950-E959
	Unintentional Injury	E800-E869, E880-E929
Mental Health	Mental Health	290, 293-298, 301,311
	Mental Health: Substance Abuse	291-292, 303-305
Respiratory	Asthma	493-494
	Chronic Obstructive Pulmonary Disease (COPD)	490-496
Other	Hip Fractures	820
	Oral cavity/Dental	520-529
	Osteoporosis	733

---

[32] E-code definitions for injury variables derived from CDC. (2011). *Matrix of E-code Groupings.* Retrieved March 4, 2013, from Injury Prevention & Control: Data & Statistics(WISQARS): http://www.cdc.gov/injury/wisqars/ecode_matrix.html

Mortality data, along with some birth data, for each ZIP code in 2010, 2011, and 2012 were collected from the California Department of Public Health (CDPH). The specific variables collected are defined in Table 36. The majority of these variables were used to calculate specific rates of mortality for 2012. A smaller number of them were used to calculate more complex derived indicators. To increase the stability of these derived indicators, rates were calculated using data from 2010 to 2012. These variables include the total number of live births, total number of infant deaths (ages less than 1 year), all-cause mortality by age, births with low infant birth weight, and births with mother's age at delivery under 20. Table 36 consequently also lists the years for which each variable was collected.

Table 36: CDPH Birth and Mortality Data by ZIP Code

Variable Name	ICD10 Code	Years Collected
Total Deaths		2012
Male Deaths		2012
Female Deaths		2012
Deaths by Age Group: Under 1, 1-4, 5-14, 15-24, 25-34, 45-54, 55-64, 65-74, 75-84, and 85 and over		2010 - 2012
Diseases of the Heart	I00-I09, I11, I13, I20-I51	2012
Malignant Neoplasms (Cancer)	C00-C97	2012
Cerebrovascular Disease (Stroke)	I60-I69	2012
Chronic Lower Respiratory Disease	J40-J47	2012
Alzheimer's Disease	G30	2012
Unintentional Injuries (Accidents)	V01-X59, Y85-Y86	2012
Diabetes Mellitus	E10-E14	2012
Influenza and Pneumonia	J09-J18	2012
Chronic Liver Disease and Cirrhosis	K70, K73-K74	2012
Intentional Self Harm (Suicide)	U03, X60-X84, Y87.0	2012
Essential Hypertension & Hypertensive Renal Disease	I10, I12, I15	2012
Nephritis, Nephrotic Syndrome and Nephrosis	N00-N07, N17-N19, N25-N27	2012
All Other Causes	Residual Codes	2012
Total Births		2010 - 2012
Births with Infant Birth weight Under 1500 Grams, 1500-2499 Grams		2010 - 2012
Births with Mother's Age at Delivery Under 20		2010 - 2012

Cancer incidence data were obtained from the California Cancer Registry for each ZIP code. The data reported the total aggregated incidence of cancers from 2010 – 2012 for breast, colorectal, lung, and prostate cancers. ZIP codes with more than zero but fewer than three cases were masked. For processing purposes, these masked values were treated as zeroes.

Chlamydia and gonorrhea incidence data for 2014 were obtained from the County Public Health offices in El Dorado, Placer, Sacramento, and Yolo counties. The incidence data were reported by 2014 ZCTA per 10,000 population. A number of steps were taken to process these variables due to differences in reporting geography and data provided. First, some counties provided pre-calculated rates, while others provided

raw counts by ZIP code. Second, some counties provided data for all ZIP codes, while others provided only data for those with reported cases exceeding a certain masking standard. Finally, because ZIP codes can cross county boundaries, each county health office provided only information on the cases that occurred in ZIP codes within their respective counties.

The following approaches were applied to address these irregularities. First, pre-calculated rates were only used for those counties for which raw counts were not reported. Second, a consistent standard to mask rates for ZIP codes with 5 or fewer cases was applied across all counties reporting raw counts, and for counties only reporting rates for a subset of ZIP codes (i.e. Sacramento County), it was assumed that counties for which data was not reported had 0 incidence rates. For ZIP codes that fell within multiple counties providing data, these cases were simply totaled for the given ZIP code. For ZIP codes that fall partially outside of the counties reporting data, the calculated rates are based only on cases occurring within the reporting counties.

The remaining secondary variables were collected from a variety of sources, and at various geographic levels. Table 37 lists the sources of these variables, and lists the geographic level at which they were reported.

Table 37: Remaining Secondary Variables

Variable	Year	Definition	Reporting Unit	Data Source
Current Smokers	2014	Current Smoking Status - Adults and Teens	County	2014 California Health Interview Survey http://ask.chis.ucla.edu/AskCHIS/tools/_layouts/AskChisTool/home.aspx#/geography (last accessed 9 Oct 2015)
Food Deserts	2010	USDA Defined Food Desert; Low Access 1 mile Urban 10 Mile rural	Tract	USDA http://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data.aspx (Last Accessed 9 Oct 2015)
Modified Retail Food Environment Index (mRFEI)	2013	Table 00CZ2 for the following NAICS codes: 445120, 722513, 445230, 452910, 445110	ZCTA	US Census Bureau 2013 County Business Patterns
Park Access	2010	Percent of 2010 ZCTA Population in blocks located within 1/2 mile of a park	ZCTA	2010 Decennial Census SF1; ESRI U.S. Parks 2014, park_dtl.gdb Series Name Data and Maps for ArcGIS® Issue 2014 - World, Europe, and United States
Health Professional Shortage Areas (Primary Care, Dental, Mental Health)	2015	Current Primary Care, Dental Health, and Mental Health Provider Shortage Areas	Shortage Areas (non-point locations)	US Department of Health & Human Services Health Resources and Services Administration; http://datawarehouse.hrsa.gov/data/datadownload/hpsadownload.aspx (last accessed 29 Aug 2015)
Major Crime Rate	2013	Major Crimes (combination of violent crimes, property crimes, and arson)	Law enforcement jurisdiction	California Attorney General - Criminal Justice Statistics Center: Crimes and Clearances http://oag.ca.gov/crime/cjsc/stats/crimes-clearances (last accessed 3 Sep 2015)
Domestic Violence Rate	2013	Domestic Violence-Related Calls for Assistance	Law enforcement jurisdiction	California Attorney General – Criminal Justice Statistics Center: Domestic Violence-Related Calls for Assistance http://oag.ca.gov/crime/cjsc/stats/domestic-violence (last access 30 Oct 2015)
Traffic Accidents Resulting in Fatalities	2013	Traffic Accidents Resulting in Fatalities	Point locations	National Highway Traffic Safety Administration Fatality Analysis Reporting System (FARS)

Variable	Year	Definition	Reporting Unit	Data Source
				ftp://ftp.nhtsa.dot.gov/fars/2013/DBF/ (lass accessed 8 Sep 2015)
Pollution Burden	2014	Cal EnviroScreen Pollution Burden Scores indicator (based on ozone and PM2.5 concentrations, diesel PM emissions, drinking water contaminants, pesticide use, toxic releases from facilities, traffic density, cleanup sites, impaired water bodies, groundwater threats, hazardous waste facilities and generators, and solid waste sites and facilities)	Tract	California Office of Environmental Health Hazard Assessment CalEnviroScreen Version 2.0 http://oehha.ca.gov/ej/ces2.html
Population Living Near a Transit Stop	2012	Population weighted centroid distance to the closest fixed public transit stop	Census Block Group	US EPA Smart Location Database https://edg.epa.gov/data/Public/OP/SLD/SmartLocationDb.zip (last accessed 29 Aug 2015)
Access to Dentists	2013	Dentists, Rate per 100,000 Population	County	US Department of Health and Human Services, Health Resources and Services Administration, Areas Health Resource File http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Access to Mental Health Providers	2014	Mental Health Care Provider, Rate per 100,000 Population	County	University of Wisconsin Population Health Institute, County Health Ranking http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Access to Primary Care	2012	Primary Care Physicians, Rate per 100,000 Population	County	US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Alcohol – Excessive Consumption	2006 – 2012	Estimated Adults Drinking Excessively (Age-Adjusted Percentage)	County	Center for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. U.S. Department of Health and

Variable	Year	Definition	Reporting Unit	Data Source
				Human Services, Health Indicators Warehouse http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Alcohol – Expenditures	2014	Alcoholic Beverage Expenditures, Percentage of Total Food-At-Home Expenditures	Tract	Nielsen, Nielsen SiteReports http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Asthma – Prevalence	2011 – 2012	Percent Adults with Asthma	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Breastfeeding (Any)	2012	Percentage of Mothers Breastfeeding (Any)	County	California Department of Public Health (CDPH) – Breastfeeding Statistics http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Cancer Incidence (Cervical)	2010 – 2012	Annual Cervical Cancer Incidence, Rate per 100,000 Population	County	National Institute of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Provides, 2008-2012 http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Cancer Screening - Mammogram	2008 - 2012	Annual Cervical Cancer Incidence, Rate per 100,00 Population	County	National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Cancer Screening – Pap Test	2012	Percent Adults Females Age 18+ with Regular Pap Test (Age Adjusted)	County	Dartmouth College Institute for Health Policy & Practice, Dartmouth Atlas of Health Care http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Cancer Screening – Sigmoid/Colo	2006 – 2012	Percent Adults Screened for Colon Cancer (Age Adjusted)	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Variable	Year	Definition	Reporting Unit	Data Source
noscopy				Accessed via the Health Indicators Warehouse. US Department of Health & Human Services, Health Indicators Warehouse http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Children Eligible for Free/Reduced Price Lunch	2013 - 2014	Percent Students Eligible for Free or Reduced Price Lunch	Address	National Center for Education Statistics, NCES – Common Core of Data http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Commute to Work – Alone in Car	2009 – 2013	Percentage of Workers Commuting by Car, Alone	Tract	US Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Commute to Work – Walking/Biking	2009 - 2013	Percentage Walking or Biking/Work	Tract	US Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Diabetes Management (Hemoglobin A1c Test)	2012	Percent Medicare Enrollees with Diabetes with Annual Exam	County	Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Diabetes Prevalence	2012	Percent Adults with Diagnosed Diabetes (Age Adjusted)	County	Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Economic Security – Commute Over 60 Minutes	2009 - 2013	Percent of Workers Communities More than 60 Minutes	Tract	US Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Education – High School Graduation Rate	2013	Cohort Graduation Rate	County	California, Department of Education http://www.communitycommons.org/groups/community-health-needs-assessment-chna

Variable	Year	Definition	Reporting Unit	Data Source
Education – Reading Below Proficiency	2012 – 2013	Percentage of Grade 4 ELA Test Score Not Proficient	County	California, Department of Education http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Education – School Enrollment Age 3-4	2009 - 2013	Percentage Population Age 3-4 Enrolled in School	Tract	US Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Federally Qualified Health Centers	2015	Federally Qualitied Health Centers, Rate per 100,000 Population	Address	U.S. Department of Health & Human Services, Center for Medicare & Medicaid Services, Provider of Services File - Sept. 2015. http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Food Environment – Fast Food Restaurants	2011	Fast Food Restaurants, Rate per 100,000 Population	Tract	U.S. Census Bureau, County of Business Patterns. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Food Environment – Grocery Stores	2011	Grocery Stores, Rate per 100,000 Population	Tract	U.S. Census Bureau, County of Business Patterns. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Food Security – Food Insecurity Rate	2013	Percentage of the Population with Food Insecurity	County	Feeding America http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Food Security – Population Receiving SNAP	2011	Percent Population Receiving SNAP Benefits	County	U.S. Census Bureau, Small Area Income & Poverty Estimates. http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Fruit/Vegetable Expenditures	2014	Fruit / Vegetable Expenditures, Percentage of Total Food-At-Home Expenditures	Tract	Nielsen, Nielsen SiteReports http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Heart Disease Prevalence	2011 – 2012	Percent Adults with Heart Disease	County (Grouping)	University of California Center for Health Policy Research, California Health Interview Survey http://www.communitycommon

Variable	Year	Definition	Reporting Unit	Data Source
				s.org/groups/community-health-needs-assessment-chna
High Blood Pressure - Unmanaged	2006 - 2010	Percent Adults with High Blood Pressure	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Housing – Assisted Housing	2013	HUD – Assisted Units, Rate per 10,000 Housing Units (2010)	County	U.S. Department of Housing and Urban Development http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Housing – Substandard Housing	2009 – 2013	Percent Occupied Housing Units with One or More Substandard Conditions	County	U.S. Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Insurance – Population Receiving Medicaid	2009 – 2013	Percent of Insured Population Receiving Medicaid	Tract	U.S. Census Bureau, American Community Survey http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Lack of Social or Emotional Support	2006 – 2012	Percent Adult Without Adequate Social / Emotional Support (Age-Adjusted)	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US Department of Health & Human Services, Health Indicators Warehouse http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Liquor Store Access	2012	Liquor Stores, Rate per 100,000 Population	County	U.S. Census Bureau, County Business Patterns. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Low Fruit/Vegetable Consumption (Youth)	2011 - 2012	Percent Population Age 2-13 with Inadequate Fruit/Vegetable Consumption	County (Grouping)	University of California Center for Health Policy Research, California Health Interview Survey http://www.communitycommons.org/groups/community-health-

Variable	Year	Definition	Reporting Unit	Data Source
				needs-assessment-chna
Mental Health – Poor Mental Health Days	2006 - 2012	Average Number of Mentally Unhealthy Days per Month	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Mortality – Homicide	2010 - 2012	Homicide, Age-Adjusted Mortality, Rate per 100,000 Population	ZIP Code	University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Mortality – Motor Vehicle Accident	2010 - 2012	Motor Vehicle Accident, Age Adjusted Mortality, Rate per 100,000 Population	ZIP Code	University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Mortality – Pedestrian Accident	2010 - 2012	Pedestrian Accident – Age Adjusted Mortality, Rate per 100,000 Population	ZIP Code	University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Obesity (Youth)	2013 - 2014	Percent Obese	County	California Department of Education, FITNESSGRAM® Physical Fitness Testing http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Overweight (Youth)	2013 - 2014	Percent Overweight	County	California Department of Education, FITNESSGRAM® Physical Fitness Testing http://www.communitycommons.org/groups/community-health-

Variable	Year	Definition	Reporting Unit	Data Source
				needs-assessment-chna
Physical Inactivity (Adult)	2012	Percent Population with no Leisure Time Physical Activity	County	Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Physical Inactivity (Youth)	2013 - 2014	Percent Physically Inactive	County	California Department of Education, FITNESSGRAM® Physical Fitness Testing http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Preventable Hospital Service Days	2011	Age-Adjusted Discharge, Rate per 10,000 Population	County	California Office of Statewide Health Planning and Development, OSHPD Patient Discharge Data. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Soft Drink Expenditures	2014	Soda Expenditures, Percentage of Total Food-At-Home Expenditures	Tract	Nielsen, Nielsen Site Reports http://www.communitycommons.org/groups/community-health-needs-assessment-chna
STD – HIV Hospitalizations	2011	Age-Adjusted Discharge, Rate per 10,000 Population	County	California Office of Statewide Health Planning and Development, OSHPD Patient Discharge Data. Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
STD – HIV Prevalence	2010	Population with HIV/AIDS, Rate by 100,000 Population	County	US Department of Health & Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention http://www.communitycommons.org/groups/community-health-needs-assessment-chna
STD – No HIV Screening	2011 - 2012	Percent Adults Never Screened for HIV/AIDS	County	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Variable	Year	Definition	Reporting Unit	Data Source
				Additional data analysis by CARES http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Tobacco Expenditures	2014	Cigarette Expenditures, Percentage of Total Household Expenditures	Tract	Nielsen, Nielsen SiteReports http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Transit – Road Network Density	2011	Total Road Network Density (Road Miles per Acre)	County	Environmental Protection Agency, EPA Smart Location Database http://www.communitycommons.org/groups/community-health-needs-assessment-chna
Violence – School Suspensions	2013 - 2014	Suspension Rate	County	California Department of Education. 2013-2014 school year http://www.communitycommons.org/groups/community-health-needs-assessment-chna

General Processing Steps

Rate Smoothing

All OSHPD, as well as all single-year CDPH, variables were collected for all ZIP codes in California. The CDPH datasets included separate categories that included either patients who did not report any ZIP code, or patients from ZIP codes whose number of cases fell below a minimum level. These patients were removed from the analysis. As described above, patient records in ZIP codes not represented by ZCTAs were added to those ZIP codes corresponding to the ZCTAs that they fell inside or were closest to. When consolidating ZIP codes into ZCTAs, any ZIP code with no value reported was treated as having a value of 0. If two or more ZIP codes were combined into a single ZCTA, and at least one of those ZIP codes had a value reported, all other ZIP codes with a masked value were treated as having values of 0. Thus ZCTA values were recorded as NA only if all ZIP codes contributing values to them had masked values reported for all associated ZIP codes.

The next step in the analysis process was to calculate rates for each of these variables. However, rather than calculating raw rates, empirical Bayes smoothed rates (EBR) were created for all variables possible[33]. Smoothed rates are considered preferable to raw rates for two main reasons. First, the small population of many ZCTAs, particularly those in rural areas, meant that the rates calculated for these areas would be unstable. This problem is sometimes referred to as the small number problem. Empirical Bayes smoothing seeks to address this issue by adjusting the calculated rate for areas with small populations so that they more closely resemble the mean rate for the entire study area. The amount of this adjustment is greater in areas with smaller populations, and less in areas with larger populations.

Because the EBR were created for all ZCTAs in the state, ZCTAs with small populations that may have unstable high rates had their rates "shrunk" to more closely match the overall variable rate for ZCTAs in the entire state. This adjustment can be substantial for ZCTAs with very small populations. The difference between raw rates and EBR in ZCTAs with very large populations, on the other hand, is negligible. In this way, the stable rates in large population ZIP codes are preserved, and the unstable rates in smaller population ZIP codes are shrunk to more closely match the state norm. While this may not entirely resolve the small number problem in all cases, it does make the comparison of the resulting rates more appropriate. Because the rate for each ZCTA is adjusted to some degree by the EBR process, it also has a secondary benefit of better preserving the privacy of patients within the ZCTAs.

EBR were calculated for each variable using the appropriate base population figure reported for ZCTAs in the American Community Survey 5-year estimate tables: overall EBR for ZCTAs were calculated using total population; and sex, age, and normalized race/ethnicity EBR were calculated using the appropriate corresponding population stratification. In cases where multiple years of data were aggregated, populations for the central year were used and multiplied by the number of years of data to calculate rates. For OSHPD data, 2012 population data was used. For multi-year CDPH variables (2010 – 2012), 2011 data was used. Population data from 2012 was used to calculate single-year CDPH variables.

ZCTAs with NA values recorded were treated as having a value of 0 when calculating the overall expected rates for a state as a whole, but were kept as NA when smoothing the value for the individual ZCTA. This meant that smoothed rates could be calculated for each variable in each area, but if a given ZCTA had a value of NA for a given variable, it retained that NA value after smoothing.

EBR were attempted for every overall variable, but could not be calculated for certain variables. In these cases, raw rates were used instead. The final rates in either case for H, ED, and the basic mortality variables were then multiplied by 10,000, so that the final rates represent H or ED discharges, or deaths, per 10,000 people.

---

[33] Anselin, L. (2003). *Rate Maps and Smoothing.* Retrieved February 16, 2013, from http://www.dpi.inpe.br/gi

Age Adjustment

The additional step of age adjustment[34] was performed on the all-cause mortality variables. Because the occurrence of these conditions varies as a function of the age of the population, differences in the age structure between ZCTAs could obscure the true nature of the variation in their patterns. For example, it would not be unusual for a ZCTA with an older population to have a higher rate of ED visits for stroke than a ZCTA with a younger population. In order to accurately compare the experience of ED visits for stroke between these two populations, the age profile of the ZCTA needs to be accounted for. Age adjusting the rates allows this to occur.

To age adjust these variables, we first calculated age stratified rates by dividing the number of occurrences for each age category by the population for that category in each ZCTA. Because estimates of age less than 1 and from 1 to 4 were not available in the American Community Survey datasets used in this analysis, the proportion of the population under age 5 that was also under age 1 was calculated using 2010 decennial Census data for each geographic area. These proportions were then compared to the age under 5 variables from the American Community Survey datasets for each geographic area to estimate the values for the population less than age 1 and from 1 to 4 years. These estimated values were then used to calculate age stratified rates. Age stratified EBR were used whenever possible. Each age stratified rate was then multiplied by a coefficient that gives the proportion of California's total population that was made up by that age group as reported in the 2010 Census. The resulting values are then summed and multiplied by 10,000 to create age adjusted rates per 10,000 people.

Benchmark Rates

A final step was to obtain or generate benchmark rates to compare the ZCTA level rates to. Benchmarks for all OSHPD variables were calculated at the HSA, county, and state levels. HSA rates were calculated by first summing the total number of cases and relevant populations for each variable across all ZCTAs in the HSA. ZCTAs with NA values were treated at this stage as having a value of 0. Smoothed EBR rates were then calculated for each HSA using a broader set of HSAs.

County benchmark rates were calculated as raw rates for each county, or in the case of small counties, group of counties, using the relevant population variables. State rates were calculated as raw rates by first summing all county level values (treating an NA value as a 0), and then dividing these values by the relevant population value.

HSA, county, and state benchmark rates were also provided for CDPH data. HSA benchmarks were calculated in a process similar to that described above for OSHPD HSA benchmarks: the total number of cases and relevant populations were summed for each variable across all ZCTAs in the HSA, and used to calculate smoothed EBR rates using a broader set of HSAs.

County and state benchmark rates were either calculated using CDPH data reported at the county and state level[35,36], or else obtained from the County Health Status Profiles 2014[37]. The resulting benchmark values for CDPH and OSHPD variable were all reported as rates per 10,000 unless the original variable was reported using some other standard as described below.

---

[34] Klein, R. J., & Schoenborn, C. A. (2001). *Age adjustment using the 2000 projected U.S. population. Healthy People Statistical Notes, no. 20.* Hyattsville, Maryland: National Center for Health Statistics.

[35] California Department of Public Health. (2010,2011,2012). *Ten Leading Causes of Death, California Counties and Selected City Health Departments*. Retrieved July 7, 2015, from http://www.cdph.ca.gov/data/statistics/Documents/VSC-2012-0520.pdf; http://www.cdph.ca.gov/data/statistics/Documents/VSC-2011-0520.pdf; http://www.cdph.ca.gov/data/statistics/Documents/VSC-2010-0520.pdf

[36] California Department of Public Health. (2015a, July 17). Retrieved from Center for Health Statistics and Informatics: Vital Statistics Query System.: http://www.apps.cdph.ca.gov/vsq/

[37] California Department of Public Health. (2015b, July 2). Retrieved from County Health Status Profiles 2014: http://www.cdph.ca.gov/programs/ohir/Documents/OHIRProfiles2014.pd

Processing for Specific Variables

Additional processing was needed to create the Community Health Vulnerability Index (CHVI), the CDPH related variables, and as well as some of the other variables. The process used to calculate these variables are described in this section below.

Community Health Vulnerability Index (CHVI)

The CHVI is a health care disparity index largely based on the Community Need Index (CNI) developed by Dignity Health[38]. The CHVI uses the same basic set of demographic variables to address health care disparity as outlined in the CNI, but these variables are aggregated in a different manner to create the CHVI. For this report, the following nine variables were obtained from the 2013 American Community Survey 5-year Estimate dataset at the census tract level:

- Percent Minority
- Population 5 Years or Older who speak Limited English
- Percent 25 or Older Without a High School Diploma
- Percent Unemployed
- Percent Families with Children in Poverty
- Percent Households 65 years or Older in Poverty
- Percent Single Female Headed Households in Poverty
- Percent Renter Occupied Households
- Percent Uninsured

All census tracts that crossed ZCTAs within the HSA were included in the analysis. Each variable was scaled using a min-max stretch, so that the tract with the maximum value for a given variable within the study area received a value of 1, and the tract with the minimum value for that same variable within the study area received a 0. All scaled variables were then summed to form the final CHVI. Areas with higher CHVI values therefore represent locations with higher concentrations of the target index populations, and are likely experiencing poorer health care disparities.

Infant Mortality Rate

Infant mortality rate reports the number of infant deaths per 1,000 live births. It was calculated by dividing the number of deaths for those less than 1 year of age from 2010 - 2012 by the total number of live births for the same time period (using smoothed EBR), and multiplying the result by 1,000.

Teen Pregnancy Rate

Teen Pregnancy Rate reports the number of live births to mothers under the age of 20 per 1,000 females between the ages of 15 and 19. It was calculated by dividing the number of live births to mothers whose age at delivery was under 20 reported in 2010 – 2012 by three times the total population of females from ages 15 to 19 in 2011 (using smoothed EBR), and multiplying the result by 1,000.

---

[38] Barsi, E. L., & Roth, R. (2005). The "Community Need Index". *Health Progress, 86*(4), 32-38. Retrieved from https://www.chausa.org/docs/default-source/health-progress/the-community-need-index-pdf.pdf?sfvrsn=2

Life Expectancy at Birth

Life expectancy at birth values are reported in years, and were derived from period life tables created in the statistical software program R[39] using the Human Ecology, Evolution, and Health Lab's[40] example period life table function. This function was modified to calculate life tables for each ZCTA, and to allow the life table to be calculated from submitted age stratified mortality rates. The age stratified mortality rates were calculated for each ZIP code by dividing the total number of deaths in a given age category from 2010 - 2012 by three times the ZCTA population for that age group in 2010 (smoothed to EBR). The age group population was multiplied by three to match the three years of mortality data that were used to derive the rates. Multiple years were used to increase the stability of the estimates.

Years Potential Life Lost (75)

Years Potential Life Lost (75) is a metric that can be used to compare health status across populations that better accounts for premature loss of life than many other metrics[41]. It was calculated here following the method described by Dranger and Remington[9]. In brief, this involved calculating EBR smoothed age stratified death rates using CDPH data from 2010 – 2011. For each age stratification group under 75 years of age, the midpoint age of the group was subtracted from 75, and the resulting value was multiplied by the smoothed age stratified rate. The resulting values for each age stratification were then age adjusted using a 2010 California base population. These values were then individually multiplied by 10,000 and summed across all age groups to estimate the years of potential life lost before 75 out of 10,000 people.

Diversity Index

The diversity index was calculated to measure the racial and ethnic diversity of geographic regions within the HSA. It was calculated using concepts from Iceland[42], but using the Shannon's evenness index (Beals, Gross, & Harrell, 2000) rather than the specific methodology described therein. The diversity index represents how evenly population within a given geographic unit is divided between the following seven racial/ethnic groups (described previously): Asian, Black, Hispanic, American Indian, Pacific Islander, White, Other or Two or More Races. Diversity index values range between 0 and 1, with a value of 0 in areas where the entire population belongs to just one racial/ethnic group and a value of 1 in areas with population evenly divided between the seven groups. Readers interested in the specifics of index calculation are referred to the previously listed sources.

Major Crime and Domestic Violence Rates

Major crimes and domestic violence related calls for assistance reported in the State of California Department of Justices' Crime Data reports are listed by reporting police agency. In order to estimate major crime and domestic violence rates, these values need to be associated with particular geographic areas, and then divided by those area populations. This was done for this report by comparing the names of police agencies to populations reported for "places" (including both incorporated and unincorporated areas) by the US Census. Both crime and population data were obtained for 2013.

---

[39] R Development Core Team. (2015). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL http://www.R-project.org.

[40] Human Ecology, Evolution, and Health Lab. (2009, March 2). *Life tables and R programming: Period Life Table Construction*. Retrieved February 16, 2013, from Formal Demography Workshops, 2006 Workshop Labs: http://www.stanford.edu/group/heeh/cgi-bin/web/node/75

[41] Dranger, E., & Remington, P. (2004). YPPL: A Summary Measure of Premature Mortality Used in Measuring the Health of Communities. *Wisconsin Public Health & Health Policy Institute Issue Brief, 5*(7), 1-2. Retrieved May 27, 2015, from http://uwphi.pophealth.wisc.edu/publications/issue-briefs/issueBriefv05n07.pdf

[42] Iceland, J. (2004). *The Multigroup Entropy Index (Also Known as Theil's H or the Information Theory Index).* US Census Bureau. Retrieved June 20, 2015, from http://www.census.gov/housing/patterns/about/multigroup_entropy.pdf

Many reporting agencies, such as those associated with hospitals, transit and freight rail lines, university campuses, and state and federal agencies, did not correspond to a specific census place. Internet searches were used to identify the Census places they were associated with, and their cases were added to those places. For example, the crimes or calls for assistance reported by a University police department were added to the city or county that the university campus was located in. For areas where this was unclear based on the name alone, internet searches were conducted to determine the place an agency fell inside of. Because reported crimes or calls for agencies were organized by county, if the crimes for an agency could not be associated with any specific place, its reported crimes were grouped together with those for the county sheriff's department.

To calculate rates, the total number of crimes or calls for assistance for each Census place resulting from the process described above were divided by the population of that place and multiplied by 10,000 to report the number of crimes per 10,000 in that place. For crimes reported for (or grouped with) the county sheriff's department, the county population was modified by subtracting the total population of all Census places with reported crimes. This meant that the major crime rate reported for the county was reporting not the total county's crime rate, but the rate of crimes occurring in those portions of the county that were not otherwise covered by another reporting agency.

Overall county major crime rates and domestic violence related calls for assistance were, however, calculated for benchmarking purposes by summing the total number of major crimes reported by any agency within the county, dividing that by the total population of the county, and multiplying the result by 10,000. For further detail as to which specific crimes are covered within the "major crime" category, interested readers are referred to the State of California Department of Justices' Crime Data reports, available online at: http://oag.ca.gov/crime.

Park Access
The park access variable reports the percent of the 2010 population residing within each ZCTA that lives in a Census block that intersects a ½ mile buffer around the closest park. ESRI's U.S. Parks data set[43], which includes the location of local, county, regional, state, and national parks and forests, was used to determine park locations.

Modified Retail Food Environment Index (mRFEI)
The Modified Retail Food Environment Index (mRFEI) variable reports the percentage of the total food outlets in a ZCTA that are considered healthy food outlets. Values below 0 are given for ZCTAs with no food outlets. The mRFEI variable was calculated using a modification of the methods described by the National Center for Chronic Disease Prevention and Health Promotion[44] using ZIP code level data obtained from the US Census Bureau's 2013 County Business Pattern datasets. Healthy food retailers were defined based on North American Industrial Classification Codes (NAICS), and included:
- Large grocery stores: NAICS code 445110, with 50 or more employees
- Fruit and vegetable markets: NAICS 445230
- Warehouse clubs: NAICS 452910

Food retailers that were considered less healthy included:
- Small grocery stores: NAICS code 445110, with 1 – 4 employees
- Limited-service restaurants: 722513
- Convenience stores: 445120

To calculate the mRFEI, ZIP code values were converted to ZCTAs using previously described processes. The total number of health food retailers was then divided by the total number of healthy and less healthy

---

[43] ESRI. (2010). U.S. and Canada Detailed Streets. *ESRI Data & Maps: StreetMap* (10 edition)

[44] National Center for Chronic Disease Prevention and Health Promotion. (2011). *Census Tract Level State Maps of the Modified Retail Food Environment Index (mRFEI).* Centers for Disease Control. Retrieved Jan 11, 2016, from http://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mrfei_TAG508.pdf

food retailers for each ZCTA, and the result was multiplied by 100 to calculate the final mRFEI value for the ZCTA. HSA mRFEI benchmark values were calculated by first summing the total number of each type of food retailer that fell within the HSA, and then by following the same approach.

Appendix C: Detailed Analytic Methodology including SHN Categorization

Significant Health Need Identification Process

The Significant Health Need identification process began with a review of significant health needs identified in the Community Health Need Assessment reports conducted by Valley Vision, Inc. during the 2013 CHNA round. This list of significant health needs was compared to preliminary secondary data, health needs associated with the Kaiser Permanente Community Commons Data Platform (CCDP), and input from health systems participating in the Sacramento Region 2016 collaborative CHNA process. This culminated in the final set of 8 potential health needs for the 2016 CHNA shown in Table 38 below.

Table 38: Potential Health Needs

Table 38: Overview of Potential Health Need (PHN) Categories	
Potential Health Need Category	**Abbreviation**
Access to High Quality Health Care and Services *(i.e., Access to Care, Oral Health, Maternal and Infant Health)*	Access to Care
Access to Behavioral Health Services *(i.e., Mental Health, Substance Abuse)*	Behavioral Health
Affordable and Accessible Transportation	Transportation
Basic Needs *(i.e., Food, Housing, Employment, Education)*	Basic Needs
Disease Prevention, Management and Treatment *(i.e., Cancer, Asthma, CVD/Stroke, HIV/AIDS/STIs)*	Disease Prevention
Active Living and Healthy Eating	ALHE
Pollution Free Living and Work Environments	Pollutant Free
Safe, Crime and Violence-Free Communities	Safe Communities

The next step in the significant health need identification process was to identify those secondary indicators associated with each of these significant health needs. Values for these indicators were then calculated for each hospital service area, and then compared to relevant state benchmarks. The percentage of indicators comparing poorly to state benchmarks for each health need was then calculated. Table 39 below shows the indicator/health need cross walk table, shows which variables were collected directly by Valley Vision and which were obtained through the CCDP. It finally gives a general description of the type of value calculated for the HSA for each variable, as well as the direction of comparison to the state benchmark.

Table 39: Indicators, Health Needs, and Benchmarks

Name	ALHE	MH_SA	ACT	BASIC NEEDS	POLL	VIOL	TRANSIT	DIS PREV	HSA Value	Benchmark Comparison	Source
Breastfeeding (Any)	Yes		Yes						County Rate	Below State Benchmark	CCDP
Soft Drink Expenditures	Yes		Yes						Calculated HSA Rate	Exceeds State Benchmark	CCDP
Economic Security - Commute Over 60 Minutes	Yes			Yes			Yes		Kaiser Rate	Exceeds State Benchmark	CCDP
Physical Inactivity (Adult)	Yes				Yes	Yes		Yes	Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Physical Inactivity (Youth)	Yes				Yes	Yes		Yes	Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Obesity (Youth)	Yes				Yes			Yes	Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Heart Disease (ED)	Yes				Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Heart Disease (H)	Yes				Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Commute to Work - Walking/Biking	Yes						Yes		Calculated HSA Rate	Below State Benchmark	CCDP
Diabetes Management (Hemoglobin A1c Test)	Yes							Yes	Calculated HSA Rate	Below State Benchmark	CCDP
Diabetes Prevalence	Yes							Yes	County Rate	Exceeds State Benchmark	CCDP
Fruit/Vegetable Expenditures	Yes							Yes	Calculated HSA Rate	Below State Benchmark	CCDP
Overweight (Youth)	Yes							Yes	Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Colorectal Cancer (ED)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Colorectal Cancer (H)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Colorectal Cancer (Incidence)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Diabetes (ED)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Diabetes (H)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Food Deserts	Yes							Yes	HSA Intersects Food Desert	Exceeds 25% of ZCTAs	VV

Indicator									Rate	Benchmark	Code
Hypertension (ED)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Hypertension (H)	Yes							Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Park Access	Yes							Yes	Calculated HSA Rate	Below State Benchmark	VV
Food Environment - Fast Food Restaurants	Yes								Calculated HSA Rate	Exceeds State Benchmark	CCDP
Food Environment - Grocery Stores	Yes								Calculated HSA Rate	Below State Benchmark	CCDP
Low Fruit/Vegetable Consumption (Youth)	Yes								Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Diabetes Mellitus – MORT	Yes								Calculated HSA Rate	Exceeds State Benchmark	VV
Modified Retail Food Environment Index (MRFEI)	Yes								Calculated HSA Rate	Below State Benchmark	VV
Osteoporosis (ED)	Yes								Calculated HSA Rate	Exceeds State Benchmark	VV
Osteoporosis (H)	Yes								Calculated HSA Rate	Exceeds State Benchmark	VV
Life Expectancy at Birth		Yes		Yes					Calculated HSA Rate	Below State Benchmark	VV
Tobacco Expenditures		Yes			Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	CCDP
Tobacco Usage (Adults and Teens)		Yes			Yes			Yes	Maximum Rate for Associated County	Exceeds State Benchmark	VV
Chronic Lower Respiratory Disease - MORT		Yes			Yes				Calculated HSA Rate	Exceeds State Benchmark	VV
COPD (ED)		Yes			Yes				Calculated HSA Rate	Exceeds State Benchmark	VV
COPD (H)		Yes			Yes				Calculated HSA Rate	Exceeds State Benchmark	VV
Alcohol - Excessive Consumption		Yes				Yes		Yes	County Rate	Exceeds State Benchmark	CCDP
Alcohol - Expenditures		Yes				Yes		Yes	Calculated HSA Rate	Exceeds State Benchmark	CCDP
Liquor Store Access		Yes				Yes		Yes	Maximum Rate for Associated County	Exceeds State Benchmark	CCDP
Substance Abuse (ED)		Yes				Yes			Calculated HSA Rate	Exceeds State Benchmark	VV
Substance Abuse (H)		Yes				Yes			Calculated HSA Rate	Exceeds State Benchmark	VV

Indicator								Rate	Benchmark	Code
Lung Cancer (ED)	Yes						Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Lung Cancer (Incidence)	Yes						Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Access to Mental Health Providers	Yes							County Rate	Below State Benchmark	CCDP
Lack of Social or Emotional Support	Yes							County Rate	Exceeds State Benchmark	CCDP
Mental Health - Poor Mental Health Days	Yes							County Rate	Exceeds State Benchmark	CCDP
Alzheimer's Disease	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Chronic Liver Disease and Cirrhosis – MORT	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Health Professional Shortage Area - Mental Health	Yes							HSA Intersects Mental Health Shortage Area	Intersects HPSA	VV
Intentional Self Harm (Suicide) - MORT	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Mental Health (ED)	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Mental Health (H)	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Self-Inflicted Injuries (ED)	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Self-Inflicted Injuries (H)	Yes							Calculated HSA Rate	Exceeds State Benchmark	VV
Education - School Enrollment Age 3-4		Yes	Yes					Calculated HSA Rate	Below State Benchmark	CCDP
Insurance - Population Receiving Medicaid		Yes	Yes					Calculated HSA Rate	Exceeds State Benchmark	CCDP
Population with Public Insurance		Yes	Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Uninsured Population		Yes	Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Low Birth Weight		Yes		Yes				Calculated HSA Rate	Exceeds State Benchmark	VV
Cancer Screening - Mammogram		Yes					Yes	County Rate	Below State Benchmark	CCDP
Cancer Screening - Pap Test		Yes					Yes	County Rate	Below State Benchmark	CCDP

Indicator								Rate	Benchmark	Code
Cancer Screening - Sigmoid/Colonoscopy		Yes					Yes	County Rate	Below State Benchmark	CCDP
Access to Dentists		Yes						County Rate	Below State Benchmark	CCDP
Access to Primary Care		Yes						County Rate	Below State Benchmark	CCDP
Federally Qualified Health Centers		Yes						HSA Calculated Rate	Below State Benchmark	CCDP
Preventable Hospital Events		Yes						County Rate	Exceeds State Benchmark	CCDP
Dental/Oral Diseases (ED)		Yes						Calculated HSA Rate	Exceeds State Benchmark	VV
Dental/Oral Diseases (H)		Yes						Calculated HSA Rate	Exceeds State Benchmark	VV
Health Professional Shortage Area - Dental		Yes						HSA Intersects Dental Shortage Area	Intersects HPSA	VV
Health Professional Shortage Area - Primary Care		Yes						HSA Intersects Primary Care Shortage Area	Intersects HPSA	VV
Infant Mortality Rate		Yes						Calculated HSA Rate	Exceeds State Benchmark	VV
Prenatal Care		Yes						Calculated HSA Rate	Below State Benchmark	VV
Teen Births		Yes						Calculated HSA Rate	Exceeds State Benchmark	VV
Households with No Vehicle			Yes			Yes		Calculated HSA Rate	Exceeds State Benchmark	VV
Children Eligible for Free/Reduced Price Lunch			Yes					Calculated HSA Rate	Exceeds State Benchmark	CCDP
Education – High School Graduation Rate			Yes					County Rate	Below State Benchmark	CCDP
Education - Reading Below Proficiency			Yes					County Rate	Exceeds State Benchmark	CCDP
Food Security - Food Insecurity Rate			Yes					County Rate	Exceeds State Benchmark	CCDP
Food Security - Population Receiving SNAP			Yes					County Rate	Exceeds State Benchmark	CCDP
Housing - Assisted Housing--HUD units			Yes					County Rate	Exceeds State Benchmark	CCDP
Housing - Substandard Housing			Yes					County Rate	Exceeds State Benchmark	CCDP

Violence - School Suspensions				Yes					County Rate	Exceeds State Benchmark	CCDP
Households with housing costs greater than 30% of income				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Housing Vacancy Rate				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Percent Population 25 or Older Without a High School Diploma				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Percent Unemployed				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Population 5 Years or Older who speak Limited English				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Population in Poverty (Under 100% Federal Poverty Level)				Yes					Calculated HSA Rate	Exceeds State Benchmark	VV
Population Living Near a Transit Stop					Yes		Yes		Percent of HSA ZCTAs that intersect census blocks with centroids greater than abt. 1/2 mile from public transit stops	Exceeds 25% of ZCTAs	VV
Asthma - Prevalence					Yes			Yes	County Rate	Exceeds State Benchmark	CCDP
Asthma (ED)					Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Asthma (H)					Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Malignant Neoplasms (Cancer) - MORT					Yes			Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Pollution Burden Score					Yes			Yes	Percent of HSA ZCTAs that intersect census tract within the top 20% of pollution burden	Exceeds 25% of ZCTAs	VV

Indicator									Rate	Benchmark	Code
									scores in the state		
Transit - Road Network Density					Yes				County Rate	Exceeds State Benchmark	CCDP
Mortality - Homicide						Yes			Calculated HSA Rate	Exceeds State Benchmark	CCDP
Mortality - Motor Vehicle Accident						Yes			Calculated HSA Rate	Exceeds State Benchmark	CCDP
Mortality - Pedestrian Accident						Yes			Calculated HSA Rate	Exceeds State Benchmark	CCDP
Assault (ED)						Yes			Calculated HSA Rate	Exceeds State Benchmark	VV
Assault (H)						Yes			Calculated HSA Rate	Exceeds State Benchmark	VV
Domestic violence/intimate partner violence						Yes			Maximum Rate for Associated Agencies	Exceeds State Benchmark	VV
Major Crimes (Violent Crimes, Property Crimes, Larceny/Theft, Arson)						Yes			Maximum Rate for Associated Agencies	Exceeds State Benchmark	VV
Unintentional Injury (ED)						Yes			Calculated HSA Rate	Exceeds State Benchmark	VV
Unintentional Injury (H)						Yes			Calculated HSA Rate	Exceeds State Benchmark	VV
Commute to Work - Alone in Car							Yes		Calculated HSA Rate	Exceeds State Benchmark	CCDP
Population with Any Disability							Yes		Calculated HSA Rate	Exceeds State Benchmark	VV
Cancer Incidence - Cervical								Yes	County Rate	Exceeds State Benchmark	CCDP
Heart Disease Prevalence								Yes	County Rate	Exceeds State Benchmark	CCDP
High Blood Pressure - Unmanaged								Yes	County Rate	Exceeds State Benchmark	CCDP
STD - HIV Hospitalizations								Yes	County Rate	Exceeds State Benchmark	CCDP
STD - HIV Prevalence								Yes	County Rate	Exceeds State Benchmark	CCDP
STD - No HIV Screening								Yes	County Rate	Exceeds State Benchmark	CCDP
Breast Cancer (ED)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV

Breast Cancer (H)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Breast Cancer (Incidence)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Cerebrovascular Disease (Stroke) - MORT								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Chlamydia – Incidence								Yes	Maximum Rate for Associated County	Exceeds State Benchmark	VV
Essential Hypertension & Hypertensive Renal Disease – MORT								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Gonorrhea – Incidence								Yes	Maximum Rate for Associated County	Exceeds State Benchmark	VV
Heart Disease - MORT								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
HIV/AIDS (ED)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Lung Cancer (H)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Prostate Cancer (ED)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Prostate Cancer (H)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Prostate Cancer (Incidence)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
STIs (ED)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
STIs (H)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Stroke (ED)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV
Stroke (H)								Yes	Calculated HSA Rate	Exceeds State Benchmark	VV

The qualitative indicators associated with each potential health need category were identified in a crosswalk table. The transcripts from the key informant and community focus group interviews were coded to the qualitative indicators or themes in order to get a better understanding of the specific health issues within the communities that were interviewed. A full list of the qualitative indicators with each potential health need category is displayed below in Table 40.

Table 40: Qualitative Indicators Associated with Potential Health Needs

Potential Health Need Category	Qualitative Indicators
Access to High	• Continuity of care/coordinated care

Potential Health Need Category	Qualitative Indicators
Quality Health Care and Services	- Cost of care/prescription cost/copays - Culturally sensitive care - Delayed care - Dental/oral health - Distance/transport to care - ER overwhelm/ overutilization - Health care for the undocumented - Health education/ health literacy - Insurance restrictions/ coverage gaps - Language barriers - Long wait times/limited providers/impacted system - Maternal infant health - Medi-Cal access - Pain management - Patient navigation/referral - Prevention services/preventative care - Primary care - Senior care services - Specialty care
Access to Behavioral Health Services	Mental Health - Comorbidity - Depression-anxiety - Desire for alternative treatment - Elderly-Alzheimer's-dementia - ER/ Hospital - Homelessness - Limited services-lack of capacity - Mental health/substance abuse - Need for culturally sensitive care - Serious mental Illness - Stigma/discrimination - Stress - Suicide - Trauma and/or ACEs Substance Abuse - Alcohol and other drugs - Barriers to accessing services - Co-morbidity - Criminalization of drugs - Geographic-safety concerns - Homelessness - Limited resources/capacity - Methamphetamines-cocaine - Mental health/substance abuse - Opiates - Outreach and education

Potential Health Need Category	Qualitative Indicators
	• Parental and Pre-Natal Use • Transition aged youth • Tobacco-E cigs
Affordable and Accessible Transportation	• Lack of transport as a barrier to access health care services • Lack of transport as a barrier to access healthy foods • Long distance and difficulty accessing health care services • No active transport infrastructure • Personal transportation barriers • Public transportation barriers
Basic Needs	Housing • Gentrification/displacement • Housing discrimination • Homelessness/shelter crisis • Lack of affordable housing • Role of public housing agencies • Seniors/aging in place • Substandard housing Food Security • Cost of living/poverty • Food banks, pantries, closets • Lack of quantity and quality of school food • Safety net programs (CalFresh, WIC, Meals on Wheels) • Transportation barriers Economic Security • Loss of safety net benefits • Need for job training resources • Safety net benefits (TANF, CalFresh, WIC) • Stigma/shame of poverty • Unemployment/lack of jobs Education • Differences in K-12 opportunity • Educational attainment (dropouts, GED, higher Ed) • Financial education and literacy • Health education and literacy • High cost of education • Need for cultural sensitivity • School discipline issues
Disease Prevention, Management and Treatment	Asthma • Air pollution/contamination • Anti-smoking laws and regulations • Cost of asthma medications • Environmental triggers (dust, mites, cockroaches, mold) • Secondhand smoke (cigarettes/marijuana) • Smoke shops Cancer • Air pollution exposure

Potential Health Need Category	Qualitative Indicators
	• Breast cancer • Cancer screening programs • Cervical cancer • Colorectal cancer • Early detection • Lack of healthy eating and active living opportunities • Lung cancer • Oncology/oncologists • Pesticide exposure • Prevention and education • Prostate cancer • Stomach cancer CVD/Stroke • Congestive heart failure (CHF) • Cost of medication • CVD/Stroke • Diagnosis, management, and treatment • Lack of healthy eating and active living opportunities • Hypertension • Stroke HIV/AIDS/STDs • Diagnosis, management, and treatment of STIs • Incidence/prevalence • Lack of continuity between health systems and public health • Need for reproductive health education • Stigma/discrimination • Vulnerable populations
Active Living and Healthy Eating	• Biking • CalFresh (EBT) and WIC • Community gardens • Cost barriers • Cost of healthy food • Cultural barriers • Need for education and classes • Farmers markets • Food access issues • Food deserts • Food distribution • Gyms • Lack of motivation • Lack of sidewalks or bike lanes • Lack of time • Lack of transportation • Natural environment (trails and rivers) • Perishability of fresh foods • Public parks/pools

Potential Health Need Category	Qualitative Indicators
	- Recreation opportunities - Safety - School physical activity - Technology and screen time - Unhealthy food options - Walking and walkability
Pollution-Free Living and Work Environments	- Air quality - Environmental hazards/toxins (cockroaches, mold, mildew, asbestos) - Respiratory conditions (asthma, COPD, infections, allergies) - Second hand smoke (tobacco and marijuana) - Transportation
Safe, Crime and Violence-Free Communities	- Alcohol abuse - Bullying - Child abuse and trauma - Child Protective Services - Domestic Violence - Drug dealing - Gang violence - Gun and knife violence - Hate crimes - Homicide - Human Trafficking - Motor vehicle accidents - Pedestrian accidents - Prostitution - Rape and sexual assault - Substance Use - Tension with police - Theft

Appendix D: Informed Consent

VALLEY VISION

Informed Consent
Gathering Information for a Community Health Assessment

Purpose:
You have been invited to participate in a community health assessment. This assessment will help to inform area leaders on the specific needs of the communities which they serve. We will focus our questions on two main topics: 1) the health status of the community at large, and 2) the factors that help or prevent community members from living a healthy life. The information we gather from you will be combined with that of other interviews and focus groups. We will summarize these findings and report these to local leaders in your area.

Procedures:
The interview will capture your own experiences and opinions about community health issues. Completion of the questionnaire and the interview will take about 1 hour. We will also record and later transcribe the session. All identifying information will be removed from the transcripts and at the end of the project the recording will be destroyed.

Potential Risks or Benefits:
Some of the interview questions may be emotionally charged; otherwise there are no risks that we are aware of to answering the questions presented. There are no direct benefits to participating in this interview.

Participant's Rights:
Both completion of a short questionnaire and participation in this interview are completely voluntary; you may choose to not participate and terminate your involvement at any time.

Confidentiality and Anonymity:
Should you choose to participate, you will receive a copy of this consent form. The information you provide and anything you share with us will be kept in the strictest confidence. We will list your organization and or job title in the final report and may use quotes from the transcript of your interview; however, these *will not* be associated with your name directly. These forms and any information you provide will be kept in a secure location and there will be no link between the information we collect and this document.

How to obtain Additional Information:
If you have any questions or comments regarding this document, interview or final report please contact:
Anna Rosenbaum, Health Equity Manager at **Valley Vision** (www.valleyvision.org) 916-325-1630.

I hereby agree to participate in this interview, understand that I will be provided a copy of this consent form for my own records, and acknowledge that my responses will be recorded.

_____   _____
Participant Name (Print)   Interviewer Name (Print)

_____   _____
Participant Signature   Date   Interviewer Signature   Date

VALLEY VISION

Informed Consent
Gathering Information for a Community Health Assessment

Purpose:
You have been invited to participate in a focus group for a community health needs assessment. This assessment will help to inform area leaders on the specific needs of the communities which they serve. We will focus our questions on two main topics: 1) the general health of the community, and 2) the factors that help or prevent community members from living a healthy life. The information we gather from you will be combined with that of other interviews and focus groups. We will summarize these findings and report these to local leaders in your area.

Procedures:
The focus group will capture your own experiences and opinions about community health issues. Completion of the questionnaire and the focus group will take about 90 minutes. We will also record and later transcribe the session. All identifying information will be removed from the transcripts and at the end of the project the recording will be destroyed.

Potential Risks or Benefits:
Some of the focus group questions may be emotionally charged otherwise there are no risks that we are aware of to answering the questions presented. Benefits include contributing to an important health assessment, along with compensation outlined below.

Participant's Rights:
Both completion of a short questionnaire and participation in this focus group are completely voluntary; you may choose to not participate and terminate your involvement at any time.

Compensation:
For your participation in the focus group you will be given a $10 gift card to a local retail outlet. Gifts cards will be distributed after completion of the focus group. If you are not able to complete the focus group you will not receive a gift card.

Confidentiality and Anonymity:
Should you choose to participate, you will receive a copy of this consent form. The information you provide and anything you share with us will be kept in the strictest confidence. We may use quotes from the focus group transcript; however they will not be associated with your name directly. These forms and any information you provide will be in a secure location and there will be no link between the information we collect and this document.

How to obtain Additional Information:
If you have any questions or comments regarding this document, the questionnaire, focus group, or final report please contact: **Anna Rosenbaum,** Data Manager at **Valley Vision** (www.valleyvision.org) 916-325-1630 (office).

I hereby agree to participate in this focus group, understand that I will be provided a copy of this consent form for my own records, and acknowledge that my responses will be recorded.

_____   _____
Participant Name Print   Interviewer Name Print

_____ _____   _____ _____
Participant Signature   Date   Interviewer Signature   Date

Consentimiento Informado

Acumulando Información para conducir una Evaluación de las Necesidades de Salud de la Comunidad

Objetivo:

Usted ha sido invitado a participar en un grupo de enfoque para la evaluación de las necesidades de la salud de la comunidad. Esta evaluación le ayudará a informar a los líderes de la zona en las necesidades específicas de las comunidades a las que sirven. Nuestras preguntas se concentraran en dos temas principales: 1) la salud general de la comunidad, y 2) los factores que ayudan o que impiden a los miembros de la comunidad vivir una vida saludable. La información que juntamos de usted será combinada con los resultados de otras entrevistas y grupos de enfoque. Vamos a resumir estas conclusiones y reportar éstos resultados a los líderes de su área.

Procedimientos:

El grupo de enfoque captura tus propias experiencias y opiniones sobre temas de la salud de la comunidad Realización de un cuestionario y el grupo de enfoque tomara aproximada mente un hora y media (1 ½). Nos gustaría grabar la sesión y luego transcribir la. Toda la información de identificación será borrada de las transcripciones y al final del proyecto, la grabación será destruida.

Riesgos Potenciales o Beneficios:

Algunas preguntas pueden ser emocionalmente cargadas, a lo contrario, no hay ningún riesgo que estemos consciente al contestar las preguntas presentadas. Los beneficios por su participación en este grupo de enfoque incluye la oportunidad de participar en una evaluación importante y una tarjeta de regalo de 10 dólares (más detalles abajo).

Los Derechos del Participante:

La participación en este grupo de enfoque y en el cuestionario es completamente voluntaria, usted puede decidir a no participar y puede terminar su participación en cualquier momento que usted desea.

Compensación

Recibirá una tarjeta de regalo de $10 para una tienda local por participar en el grupo de enfoque. Después de completar el grupo de enfoque, le daremos la tarjeta de regalo. Si no eres capaz de completar el grupo de enfoque no recibirá tarjeta de regalo.

Confidencialidad y Anonimato

Si usted decide participar, usted recibirá una copia de esta forma de consentimiento. La información que usted nos dará será mantenida con la confidencialidad más estricta. Usted no será identificado en ninguna manera, su nombre no aparecerá en ningún documento y sólo el investigador tendrá el acceso a estos documentos. Estas formas y cualquier información coleccionada serán guardadas en una ubicación segura y no habrá ningún enlace entre la información que coleccionamos y este documento.

Como obtener más Información:

Si tienes preguntas en par de esta forma, el cuestionario, el grupo de enfoque o el reporte final, póngase en contacto con **Giovanna Forno,** de **Valley Vision** (www.valleyvision.org) 916-325-1630 (oficina).

Por este medio consiento en participar en el grupo de enfoque y reconozco que mis repuestas serán grabadas. También entiendo que me van a dar una copia de esta forma de consentimiento para mis propios archivos.

_____   _____
Nombre del Participante   Nombre del Entrevistador

_____   _____
Firma del Participante   Fecha   Firma del Entrevistador   Fecha

Appendix E: Key Informant and Focus Group Interview Documents

VALLEY VISION

Key Informant Questionnaire

Please complete this short questionnaire, which will give us more information about your professional experience, role and expertise working with special populations. Your answers to these questions will be combined with that of other key informants and cannot be used to identify you individually.

1. **What sector do you work in? (Choose only one)**

   ☐ Academic/Research
   ☐ Community Based Organization
   ☐ Health Care - Department/Division: _____
   ☐ Public Health - Department/Division: _____
   ☐ Social Services - Department/Division: _____
   ☐ Other (define): _____

2. **What is your primary job classification? (Choose all that apply)**

   ☐ Administrative or clerical personnel
   ☐ Community Health Worker/Promotora
   ☐ Community Organizer/Advocate
   ☐ Epidemiologist
   ☐ Environmental health worker
   ☐ Health Educator
   ☐ Medical Assistant
   ☐ Nurse

   ☐ Nutritionist
   ☐ Patient Navigator
   ☐ Physician
   ☐ Program Manager/Coordinator
   ☐ Senior Leadership/Upper Management
   ☐ Social Worker/Case Manager
   ☐ Other (define):
   _____

3. **How would you define the geographic area served by your organization?**

   _____
   _____

4. **Do you work with any of the following vulnerable populations? (Choose all that apply)**

   ☐ Low-Income
   ☐ Medically underserved
   ☐ Racial or ethnic minority (specify): _____
   ☐ Other (specify): _____
   ☐ Other (specify): _____

Thank you for your participation!

144

VALLEY VISION

Self-Report Demographic Data Card
Gathering Information for a Community Health Assessment

Please share...
Tell us a little about you....

This questionnaire helps us to gain more information about our community participants. Your answers to the following questions will be confidential and anonymous and cannot be used to identify you personally. Please note completion of this questionnaire is completely voluntary.

For each of the following, please choose ONE that describes you best:

1. What is your gender identity (example: male, female, transman, transwoman, please specify)?

_____

2. What is your ethnicity?

☐ Hispanic/Latino   ☐ Not Hispanic/Latino

3. Please check ONE or MORE racial group(s) that describe you:

☐ African American/Black   ☐ Native American/Alaska Native
☐ Asian   ☐ White/Caucasian
☐ Hawaiian Native/Pacific Islander   ☐ Other (Specify):_____
☐ Hispanic/Latino only

4. What year were you born? _____

5. Please check the highest level of school you have completed.

☐ High school graduate (diploma or the   ☐ NOT a high school graduate (diploma or the
equivalent, for example, GED)   equivalent, for example, GED)

6. What is your ZIP code of residence (where you live)?   _____

7. Do you currently participate in any of the following programs? Choose ALL that apply.

☐ CalFresh (Food Stamps, SNAP, EBT)   ☐ Reduced Price School Meal
☐ CalWORKS (TANF)   ☐ Section 8 Public Housing
☐ Head Start   ☐ Supplemental Security Income (SSI)
☐ Medi-Cal   ☐ Women, Infants, & Children (WIC Program)

8. Are you CURRENTLY covered by any type of health insurance?

☐ Yes   ☐ No

Thank you for your participation!

VALLEY VISION

Tarjeta de Datos Demográficos
Acumulando Información para conducir una Evaluación de las Necesidades de Salud de la Comunidad

Cuéntanos un poco acerca de usted…

Este cuestionario nos ayudará a obtener más información acerca de nuestros participantes de la comunidad. Tus respuestas serán confidenciales y anónimas y no se pueden utilizar para identificarte. Tu participación en este cuestionario es voluntaria.

Por cada pregunta, por favor elije UNO que te describe mejor:

1. ¿Con cuál genero identificas? (ejemplo: femenino, masculino, transexual, otro)

   _____

2. ¿Cuál es tu raza?

   ☐ Latino/Hispano   ☐ No Latino/ Hispano

3. Por favor marca **UNO o MÁS** grupos raciales que te describe:

   ☐ Afroamericano/Negro   ☐ Nativo Americano/Nativo de Alaska
   ☐ Asiático   ☐ Caucásico/Blanco
   ☐ Nativo de Hawái/Isleño del Pacifico ☐ Otro (especifica):_____
   ☐ Solamente Latino/Hispano

4. ¿En qué año naciste? _____

5. Por favor marca el nivel más alto de la escuela que haya completado:

   ☐ Graduado de la escuela segundaria,   ☐ No un graduado de la escuela secundaria,
   (diploma o el equivalente, por ejemplo, el   (diploma o el equivalente, por ejemplo, el
   GED)   GED)

6. ¿Cuál es tu código postal de residencia (donde usted vive)?_____

7. ¿Participa en alguno de los siguientes programas? Elija **TODOS** que correspondan:

   ☐ CalFresh (Cupones De Alimentos, SNAP, EBT)   ☐ Comidas escolares gratis y reducido de precio
   ☐ CalWORKS (TANF)   ☐ Vivienda interés social
   ☐ Head Start   ☐ Seguridad de ingreso suplementario (SSI)
   ☐ Medi-Cal   ☐ Programa Mujeres, bebes y niños (WIC)

8. ¿Está usted cubierto por algún tipo de seguranza de salud?

   ☐ Si   ☐ No

¡Gracias por participar!

1. **Please, tell me (us) about the community you serve.**
   - *Follow up:* What are the specific geographic areas and/or populations served?

2. **How would you describe the quality of life in the community you serve?**

3. **Please describe the health of the community you serve.**
   - *Follow up:* What are the biggest health issues and/or conditions that your community struggles with?

4. **Of the health issues you've mentioned, which would you say are the most important or urgent to address?**
   - *Follow up:* How would you rank these health issues in terms of importance?

5. **What specific locations struggle with health issues the most?**
   - *Follow up:* What specific groups in the community struggle with these health issues the most?

6. **What are the challenges to being healthy for the community you serve?**

7. **What policies, laws, or regulations prevent the community from living healthy lives?**

8. **What resources exist in the community to help people live healthy lives?**

9. **What would you say has been the impact of the Affordable Care Act** [may also be known as Covered California, Obamacare] **on the community you serve?**

10. **What is [or *who* is] needed to improve the health of your community?**

11. **Can you recommend 1 or 2 additional people, groups or organizations you think would be most important to speak to about the health of the community?**

12. **Is there anything else you would like to share with our team about the health of your community [that hasn't already been addressed]?**

VALLEY VISION

Connect Partner Impact

Focus Group Guide- Questions

1. Please, tell us about the community you live in.
   - Follow Up: What are the specific neighborhoods?
   - Follow Up: What types of people live there (race, age, legal status)?

2. How would you describe the quality of life in your community?

3. How would you describe the health of the community where you live?

4. Of the health issues you've mentioned, which would you say are the most important or urgent to address?
   - Follow up: How would you rank these health issues in terms of importance?

5. What specific neighborhoods or places in your community struggle with health issues the most?
   - Follow up: What specific groups in the community struggle with these health issues the most?

6. What are the challenges to being healthy in your community?

7. What rules or laws prevent your community from being healthy?

8. What resources exist in your community to help people live healthy lives?

9. What would you say has been the impact of universal health care coverage [may also be known as Covered California, Obamacare, ACA] on your community?

10. What is needed to improve the health of your community?

11. Is there anything else you would like to share with our team about the health of your community [that hasn't already been addressed]?

VALLEY VISION

Connect. Partner. Impact.

Focus Group Guide- Youth

1. **Please, tell us generally about the community you live in.**
   - What are the specific neighborhoods? What types of people live there?
   - How would you describe your neighborhood to someone who has never been there?
   - How would you describe the physical environment?

2. **Is life easy or difficult for most people? Why?**
   - What does everyday life look like for most people?

3. **What are the biggest health issues that people in your community struggle with?**
   - What health issues do you see or hear about from friends and family?

4. **What specific groups of people in your community struggle with health issues the most?**
   - Do you see any differences in health by age, race, gender, sexual orientation, legal status?
   - Where do these groups live?

5. **What are the challenges to being healthy in your community?**
   - Do people engage in healthy or unhealthy behavior where you live?
   - Is it easy or hard to make healthy choices in your neighborhood? (e.g. access to healthy foods, places to exercise, access to health care)
   - Is your neighborhood supportive of health? (e.g. sidewalks, safe streets, safe places to exercise, social supports)

6. **Of the health issues we've talked about, which would you say are the most important or urgent to address?**
   - How would you rank these health issues in terms of importance?

7. **What resources exist in your community to help people live healthy lives?**
   - What are the barriers to accessing these resources?
   - What are gaps in these resources? What resources are missing?

8. **What is needed to improve the health of your community?**

VALLEY VISION

Connect. Partner. Impact.

Guía de Grupo de Enfoque
Acumulando Información para conducir una Evaluación de las Necesidades de Salud de la Comunidad

1. Por favor, díganme de la comunidad adonde ustedes viven.
   * **Seguimiento:** ¿Cuáles son los barrios específicamente?
   * **Seguimiento:** ¿Qué tipos de personas viven allí? (edad, raza, genero, estatus legal)

2. ¿Cómo es la vida en la comunidad adonde ustedes viven?

3. Por favor, describen la salud de la comunidad adonde ustedes viven

4. ¿De los problemas de salud que han comentado, cuales son los más importantes de resolver?
   * **Seguimiento:** ¿Estos son los problemas de salud que han dijeron… cuales son los más importantes/urgentes de resolver?

5. ¿Qué grupos específicos (*tipos de gente por edad, raza, genero, estatus legal*) en tu comunidad luchan lo más con estos problemas de salud?
   * **Seguimiento:** ¿Qué áreas o barrios específicos luchan con problemas de salud lo más?

6. ¿Cuáles son las barreras para vivir saludable en la comunidad adonde ustedes viven?

7. ¿Qué tipos de leyes, reglas, o prácticas impiden tu comunidad de vivir saludable?

8. ¿Qué recursos existen en tu comunidad para ayudar las personas vivir saludable?

9. ¿El Affordable Care Act ha impactado la comunidad adonde ustedes viven? [también se conoce como Covered California, Obamacare]

10. ¿Qué es necesario para mejorar la salud de tu comunidad?
    * **Seguimiento:** ¿Hay algún tipo de persona que podría ayudar mejorar la salud de la comunidad?

11. ¿Hay algo más que les gustaría compartir con nosotros la salud de la comunidad?
    * **Seguimiento:** ¿Hay preguntas?

150

2016 Community Health Needs Assessment – Greater Sacramento Region
Project Summary
January 2015 – June 2016

Project Management:

Valley Vision - www.valleyvision.org, (916) 325-1630
2320 Broadway, Sacramento, CA 95818

- **Anna Rosenbaum**, **MSW, MPH** Senior Project Manager, anna.rosenbaum@valleyvision.org
- **Amelia Lawless, MSW, MPH** Project manager, amelia.lawless@valleyvision.org
- **Giovanna Forno**, **BA** Project Fellow, giovanna.forno@valleyvision.org
- **Sarah Underwood**, **MPH** Project Manager, sarah.underwood@valleyvision.org

Organization Information:

Valley Vision is a social enterprise that tackles economic, environmental and social issues. Our vision is a prosperous and sustainable region for all generations. Founded in 1994, Valley Vision provides research, collaboration, and leadership services to make the greater Sacramento Region prosperous and sustainable. We have conducted CHNAs for the four hospital systems the region since 2007.

Project Overview:

The 2016 Community Health Needs Assessment (CHNA) is a collaborative project that assesses the health status of communities in the Sacramento region. Nonprofit hospitals are required to conduct CHNAs every three years and to adopt implementation plans that address the community health needs identified through the assessment. CHNAs collect input from broad interests across the community, including hospitals, public health, residents and other stakeholders. The findings help hospitals to understand the health status and needs of the communities they serve, and to direct their community benefits programs and activities accordingly. The 2013 CHNA reports are available online at www.healthylivingmap.com, and the 2016 reports will be available in the spring of 2016.

Key Deliverables:

Each CHNA report will:
- Describe the health status of the community served by a hospital facility;
- Identify significant health issues that exist within the community and the factors that contribute to those health issues;
- Determine priority areas and actions for health improvement; and
- Identify potential resources that can be leveraged to improve community health.

Strategic Partners:

Lead project consultation:

Dr. Heather Diaz
Associate Professor, Community Health Education
Dept of Kinesiology & Health Sciences
CSU Sacramento

Data collection, analysis and GIS mapping:

Dr. Mathew C. Schmidtlein
Assistant Professor
Dept of Geography
CSU Sacramento

Transcription and translation services:

Cherie Yure
Southern California Transcription Services

Project Orientation:

Health status indicators will be compiled in a database and analyzed to identify geographic areas in each hospital service area (HSA) where socio-economic and demographic factors result in health disparities. Interviews with health service providers and community key informants will be conducted to better understand the health needs of the communities served by each hospital facility. Focus groups will be conducted with medically underserved, low-income, and minority populations to understand their unique and specific health needs and barriers to care. The health needs identified within each HSA will be categorized and organized to identify the significant health needs within each HSA and to prioritize these significant health needs. All findings will be compiled into a comprehensive report that will inform the healthcare systems in creating implementation plans to direct their community benefit programs and activities.

Project Sponsors:

VALLEY VISION
Connect. Partner. Impact.

2016 Community Health Needs Assessment (CHNA)
About the CHNA Project

About the CHNA

The 2016 Community Health Needs Assessment (CHNA) is a collaborative project that looks at the health of the Sacramento region. The four nonprofit hospital systems in the region (Sutter, UC Davis, Kaiser and Dignity) work together to conduct health assessments of the communities they serve. The assessments are then used by the hospital systems to develop plans to improve the health of these communities.

The CHNA Reports

Each CHNA report includes:
- A description of the health of the community served by a hospital facility;
- The health issues within the community and the factors contributing to those health issues;
- The areas and communities that are most affected by these health issues;
- The health needs that are most important to improve overall health for the community;
- Potential resources and services that are available to improve community health.

Previous CHNA reports are available online at http://www.healthylivingmap.com (see 2013 CHNA Reports), and the 2016 reports will be available in the Fall of 2016.

How the Project Works

To get information about the health of the community, we talk to many different groups of people including medical providers, public health workers, community organizations, and residents. We ask people to share information with us about: (1) the health issues they see and experience in their communities; (2) the challenges and opportunities to be healthy in their communities; and (3) the resources that may or may not be available to help people live healthy lives. We then look for patterns or themes in what we hear from the community and identify the priority health needs to be included in the CHNA reports. The reports are then used to help the hospital systems decide which community services and programs to support.

About Us

Valley Vision is an organization that works on economic, environmental and social issues. Our vision is to help create a healthy region for all generations through learning about the community, working with other organizations and helping to lead teams of people. We have worked with the four hospital systems in the Sacramento region on this project since 2007.

The Team

Valley Vision - www.valleyvision.org, (916) 325-1630
2320 Broadway, Sacramento, CA 95818
- **Anna Rosenbaum**, Senior Project Manager, anna.rosenbaum@valleyvision.org
- **Amelia Lawless**, Project Manager: amelia.lawless@valleyvision.org
- **Sarah Underwood**, Project Manager: sarah.underwood@valleyvision.org
- **Giovanna Forno**, Project Fellow: giovanna.forno@valleyvision.org

Project Sponsors

Dignity Health   KAISER PERMANENTE.   Sutter Health We Plus You   UC DAVIS HEALTH SYSTEM

Evaluación de las necesidades de salud de la comunidad- 2016
Acerca de la evaluación

Acerca de la evaluación

La evaluación de las necesidades de salud de la comunidad del año 2016 es un proyecto colaborativo que analiza la salud de la región de Sacramento. Los cuatro sistemas de hospitales sin fin de lucros en la región (Sutter, UC Davis, Kaiser y Dignity) trabajan juntos para conducir evaluaciones de la salud de las comunidades que ellos sirven. Los resultados de las evoluciones son usados por los sistemas de hospitales para desarrollar planes para mejorar la salud de estas comunidades.

Que incluye la evaluación

Cada evaluación incluye:
- Una descripción de la salud de la comunidad atendida por un centro hospitalario
- Los problemas de salud en la comunidad y los factores que contribuyen a esos problemas de salud
- Las zonas y comunidades que son las más afectadas por estos problemas de salud
- Las necesidades de salud que son las más importante de mejorar para la salud general de la comunidad
- Los recursos y servicios potenciales que están disponibles para mejorar la salud de la comunidad

Evaluaciones anteriores están disponibles por la página http://www.healthylivingmap.com (vea 2013 CHNA Reports), y los reportes de 2016 serán disponibles en el otoño de 2016.

Como se conduce la evaluación

Para obtener información de la salud de la comunidad, hablamos con muchos diferentes grupos de gente incluyendo proveedores médicos, trabajadores de salud pública, organizaciones comunitarias y residentes. Pedimos que personas comparten información con nosotros acerca de (1) los problemas de salud que ellos ven y experiencia en sus comunidades, (2) los desafíos y oportunidades para vivir saludable en sus comunidades y (3) los recursos potenciales que son disponibles para ayudar personas vivir saludable. Después, buscamos patrones o temas en lo que escuchamos de la comunidad para identificar las necesidades de salud prioritarios que serán incluidos en el reporte final. Los reportes son usados para ayudar los sistemas de hospitales decidir cuales servicios y programas comunitarias apoyar.

Acerca de Valley Vision

Valley Vision es una organización que trabaja en problemas económicos, ambientes y sociales. Nuestra visión es ayudar creer una región saludable para todas generaciones atreves de aprender de nuestra comunidad, trabajar con otras organizaciones y ayudar a liderar equipos de gente. Hemos trabajado con los cuatro sistemas de hospitales en la región de Sacramento en este proyecto desde el año 2007.

Nuestro Equipo

Valley Vision - www.valleyvision.org, (916) 325-1630
2320 Broadway, Sacramento, CA 95818
- **Anna Rosenbaum**, Senior Project Manager, anna.rosenbaum@valleyvision.org
- **Amelia Lawless**, Project Manager: amelia.lawless@valleyvision.org
- **Sarah Underwood**, Project Manager: sarah.underwood@valleyvision.org
- **Giovanna Forno**, Project Fellow: giovanna.forno@valleyvision.org

Patrocinadores del proyecto

You're invited to a group conversation!

Please join us for a 1 ½ hour discussion about the health and wellness of your community. We would like your thoughts

A...

Date:
Time:
Location:

We will provide food and a $10 gift card to those who come.

Thanks for helping us learn about the health needs of your community!

Questions? Contact (PM) at Valley Vision, 916.325.1630

¡Usted está invitado a un grupo de enfoque!

Por favor acompáñenos a platicar sobre la salud y bienestar de su comunidad. Nos gustaría saber su opinión sobre los problemas de salud donde usted vive.

¿Cuando?
¿A Qué hora?
¿Donde?

¡Vamos a servir almuerzo y regalar una tarjeta de regalo a cada participante!

Agradecemos su participación en la evaluación de las necesidades de salud en la región de Sacramento del año 2016

¿Preguntas? Llame a Giovanna Forno de Valley Vision, 916.325.1630

Appendix F: List of Key Informants

Organization	Number of Participants	Area of Expertise	Populations Served	Date
Sacramento County Public Health Department	1	Public health	All residents of Sacramento County	5/19/15
Kaiser Permanente Roseville; Dignity Mercy Folsom	4	Care coordination; palliative care nursing; continuity of care coordination; social services	All populations living within the designated hospital service area	6/1/15
Kaiser Permanente Sacramento Medical Center; Mercy San Juan Medical Center	4	Social services; service provider; continuity and coordination of care	All populations living within the designated hospital service area	6/2/15
Mercy General Hospital, Sutter General Hospital; Sutter Center for Psychiatry; UC Davis Medical Center	8	Social work; service provider; case management; program management; managed care; clinical management	All populations living within the designated hospital service area	6/3/15
Sutter Roseville Medical Center/Auburn Faith	2	Social Work; Case Management	All populations living within the designated hospital service area	6/10/15
Methodist Hospital of Sacramento; Kaiser Permanente South Sacramento Medical Center	3	Social work; executive director	All populations living within the designated hospital service area	6/11/15
La Familia Counseling Center	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	6/18/15
Center for Community Health and Well-Being; Peach Tree Health	2	Community Based Organization; Health Care	Low-income; medically underserved; racial or ethnic minorities	6/22/15
Sacramento Native American Health Center	1	Federally Qualified Health Center	Low-income; medically underserved; racial or ethnic minorities	6/23/15
Student Support and Health Services- Sacramento City Unified School District	1	Education; school district	Students in the Sacramento City Unified School District; low-income; medically underserved; racial or ethnic minorities	6/25/15
WEAVE	1	Residential and crisis response	Victims of domestic violence; low-income; medically underserved; racial or ethnic minorities	6/26/15
Sacramento County Department of Human Assistance	1	Human assistance; social services	Low-income; medically underserved; racial or ethnic minorities	7/2/15
Health Education Council	1	Community Based Organization; Public Health	Low-income; medically underserved; racial or ethnic minorities	7/7/15
Saint John's Program for	1	Community Based	Low-income; medically	7/8/15

Organization	Number of Participants	Area of Expertise	Populations Served	Date
Real Change		Organization; Social Services	underserved; racial or ethnic minorities	
Communicare	2	Community Based Organization; Social Services	Low-income; medically underserved; racial or ethnic minorities	7/14/15
TLCS Inc.; Sacramento Steps Forward	2	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	7/16/15
Folsom Cordova Community Partnership	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	7/16/15
Slavic Assistance Center	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities; refugees from former Soviet Union	7/20/15
WellSpace Health	1	FQHC; Community Based Organization; Behavioral Services	Low-income; medically underserved; racial or ethnic minorities	7/22/15
Sheriff's Community Impact Program	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	7/22/15
Sacramento Covered	2	Community Based Organization	Low-income; medically underserved; pregnant women and children ages 0-5; racial or ethnic minorities	7/23/15
Sacramento LGBT Community Center	1	Community Based Organization	LGBT; low-income; medically underserved; racial or ethnic minorities	7/23/15
Hmong Women's Heritage	1	Community Based Organization	Hmong; low-income; medically underserved; racial or ethnic minorities	7/23/15
Mutual Assistance Network	1	Community Based Organization	African American; Hmong; Latino; low-income; medically underserved; racial or ethnic minorities;	7/29/15
Mercy Housing	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities;	7/29/15
Life Matters	1	Community Based Organization; Social Services	Low-income; medically underserved; multi-family housing complexes; racial or ethnic minorities;	8/3/15
Wind Youth Services	1	Community Based Organization	Homeless youth; low-income; medically underserved; racial or ethnic minorities	8/4/15
El Hogar	1	Community Based	Individuals with behavioral health	8/6/15

Organization	Number of Participants	Area of Expertise	Populations Served	Date
		Organization	challenges; low-income; medically underserved; racial or ethnic minorities	
Eskaton	1	Community Based Organization	Low-income; medically underserved; older adults; racial or ethnic minorities	8/7/15
Child Abuse Prevention Center	1	Community Based Organization	Low-income; medically underserved; older adults; racial or ethnic minorities; vulnerable children	8/10/15
Roberts Family Development Center	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	8/11/15
Strategies for Change	1	Academic Research; Community Based Organization; Substance Abuse and Mental Health Treatment	African American; Asian Pacific Islander; HIV positive; Latino; LGBT; low-income; medically underserved; racial or ethnic minorities	8/14/15
Turning Point Community Programs	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	8/19/15
Southeast Asian Assistance Center	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities; Southeast Asian	8/19/15
North Franklin District Business Association	1	Community Based Organization	Low-income; medically underserved; racial or ethnic minorities	8/20/15

Appendix G: List of Focus Groups

Location	Date	Number of Participants	Demographic Information
Center for Families-West Sacramento	8/19/15	11	Latino/Undocumented/Uninsured
Gender Health Center	8/21/15	8	Service providers
Sacramento Covered	9/4/15	6	Service providers
La Familia Counseling Center	9/22/15	13	Service providers
Slavic Assistance Center	9/28/15	10	Slavic/ Ukrainian/ Russian community members
Folsom Cordova Community Partnership	9/30/15	10	Mothers; Rancho Cordova/ Folsom community members
Valley Hi Family Resource Center	10/1/15	8	Spanish-speaking families
Sacramento Food Bank and Family Services	10/2/15	6	Sacramento Food Bank clients
City Church of Sacramento	10/10/15	19	Community member
Sierra Health Foundation-Respite Care Partnership	10/12/15	5	Service providers
WellSpace Sacramento Violence Intervention Program (SVIP)	10/14/15	8	Peer advocates and community members
Mercy Housing	10/15/15	6	Alder Grove/ Marina Vista community members
Strategies for Change (North Sacramento)	10/15/15	14	Community in recovery

Oak Park B.E.S.T.; Oak Park Community Center	10/17/15	15	Oak Park youth
Greater Sacramento Urban League	10/20/15	21	Community Member Focus Group
Strategies for Change (South Sacramento)	10/22/15	14	Community in recovery
All Nations Church of God in Christ- Oak Park	10/22/15	8	Members of All Nations Church of God in Christ
Charles E. Mack Elementary	10/27/15	16	Spanish-speaking families
Valley High School	10/29/15	7	Health TECH Academy students
Roberts Family Development Center	11/4/15	23	North Sacramento community members

Appendix H: Resources Potentially Available to Meet Identified Health Needs

Resource/ Organization Name	Service Site Location	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Afford-able and Reliable Transpo rtation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environ-ments	Safe, Crime and Violence-Free Comm-unities
A Community for Peace	Citrus Heights								x
AIDS Project- Rx Staffing & Home Care	Arden-Arcade	x	x	x	x	x	x		x
Agency on Aging- Area 4	Arden-Arcade	x	x			x	x		x
Alchemist Community Development Corporation	Midtown Sacramento			x					
All Nations Church of God in Christ	Oak Park					x			
Alternatives Pregnancy Center	Arden-Arcade	x	x						
Alzheimer's Association	North Sacramento	x							
American Diabetes Association	North Highlands		x	x			x		
American Heart Association-Sacramento	Midtown Sacramento			x			x		
American Red Cross	North Sacramento		x			x			
Another Choice Another Chance	South Sacramento	x							
Antioch Progressive Baptist Church	South Sacramento					x			
Asian Pacific Community Counseling (APCC)	Tahoe Park	x							

Organization	Location								
Asian Resources Inc.	Oak Park, South Sacramento, Citrus Heights					x			
Bayanihan Clinic	North Sacramento		x						
Birth and Beyond Home Visitation Program- WellSpace Health	North Highlands	x	x			x			
Boys and Girls Clubs of Greater Sacramento	South Sacramento	x		x		x			x
Breathe California of Sacramento- Emigrant Trails	Downtown Sacramento		x				x	x	
Brookdale Citrus Heights (Formerly Emeritus at Citrus Heights)	Citrus Heights								x
Bryte and Broderick Community Action Network	West Sacramento			x		x			x
Building Healthy Communities (BHC)	South Sacramento			x					x
C.O.R.E Medical Clinic	Midtown Sacramento	x	x						
Casa Willow	Citrus Heights	x				x			
Center for AIDS Research, Education and Services- CARES Community	Midtown Sacramento	x	x	x					

Health								
Center for Community Health and Well Being Inc. (partnered with Peach Tree Health)	Midtown Sacramento		x					
Central Downtown Food Basket	East Sacramento, Midtown Sacramento			x	x			
Child Abuse Prevention Center	North Highlands							x
Child and Family Institute (CFI)	South Sacramento	x						
Children's Receiving Home of Sacramento	Arden-Arcade	x	x	x	x			
Clara's House	Midtown Sacramento		x					
Clean and Sober Homeless Recovery Communities	Downtown Sacramento	x						
Clinica Tepati (located within Wellspace Clinic)	Midtown Sacramento		x					
Communicare	Davis, Esparto (dental only), West Sacramento, Woodland	x	x	x		x		

Organization	Location							
Community Against Sexual Harm (CASH)	Oak Park	x						x
Cordova Lane Center - Folsom Cordova USD	Rancho Cordova	x			x			
Cordova Recreation & Park District	Rancho Cordova	x		x	x			
Crisis Nursery Program-Sacramento Children's Home	Arden-Arcade, South Sacramento	x	x					x
Del Oro Caregiver Resource Center	Citrus Heights					x		
Drug Diversion (PC-1000) Program	South Sacramento	x						
El Hogar Community Services Inc.	Downtown Sacramento, North Sacramento	x			x			x
Elk Grove Unified School District	Elk Grove	x	x	x	x			x
Elica Health Centers	Arden-Arcade, Midtown Sacramento, West Sacramento	x	x					
Eskaton	Carmichael	x	x		x			x
Firehouse Community Center	North Sacramento			x				
First 5 Sacramento Commission	North Sacramento	x	x	x	x	x		x
Folsom Cordova Community Partnership	Rancho Cordova	x	x		x			

Organization	Location								
Francis House	Downtown Sacramento					x			
Gender Health Center	Oak Park	x	x			x			x
Golden Days Adult Day Health	West Sacramento		x						
Golden Rule Services	South Sacramento		x				x		
Goodwill-Sacramento Valley & Northern Nevada	Rosemont					x			
Greater Sacramento Urban League	North Sacramento					x			
Guest House Homeless Clinic	Downtown Sacramento	x	x						
Harm Reduction Services (HRS)	Oak Park	x	x				x		
Health and Life Organization (HALO Cares)-Sacramento Community Clinic	South Sacramento	x	x						
Health Education Council	West Sacramento			x					x
Health Tech Academy-Valley High School	Elk Grove					x			
Health For All Community Clinics	Downtown Sacramento, North Sacramento, South Sacramento		x		x	x			
Health Tech Academy-Valley High School	Elk Grove					x			

Helping Hearts Foundation Inc.	Rancho Cordova					x			x
Heritage Oaks Hospital	Arden-Arcade	x	x						
Hmong Women's Heritage Association	South Sacramento	x							
Human Services Coordinating Council (HSCC)	South Sacramento					x			
Imani Clinic	Oak Park	x	x						
Interim HealthCare	Arden-Arcade	x	x			x			x
Johnston Community Center	Arden-Arcade			x		x			
Kaiser Permanente Sacramento Medical Center	Arden-Arcade		x						
Kaiser Permanente South Sacramento Medical Center	South Sacramento	x	x	x			x		
La Familia Counseling Center, Inc.	South Sacramento	x	x	x		x			x
Legal Services of Northern California-Health Rights	Downtown Sacramento					x			
Life Matters	Foothill Farms					x			

Name	Location								
Lilliput Children's Services	Auburn, El Dorado Hills, Citrus Heights, North Sacramento, South Lake Tahoe, South Sacramento,					x			
Loaves and Fishes	Downtown Sacramento	x	x			x			
McClellan VA Clinic	McClellan		x						
MAAP (Mexican American Alcoholism Program)	South Sacramento	x							
Mack Road Partnership	South Sacramento			x		x			x
Mack Road Partnership Community Center	South Sacramento		x	x		x			
Meadowview Family Resource Center	South Sacramento	x							
Meals on Wheels Sacramento	South Sacramento					x			
Mercy Clinic - Loaves & Fishes	Downtown Sacramento		x						
Mercy General Hospital	East Sacramento		x	x				x	
Mercy Hospital of Folsom	Folsom		x	x				x	
Mercy Housing	South Sacramento					x			
Mercy San Juan Hospital	Carmichael	x	x	x				x	

167

Organization	Location								
Methodist Hospital of Sacramento-Dignity Health	South Sacramento		x	x			x		
Mexican Consulate General in Sacramento	Natomas					x			x
Molina Healthcare	North Sacramento, South Sacramento, Citrus Heights		x						
Mutual Assistance Network (MAN)	North Sacramento	x		x		x			
My Sister's House	South Sacramento	x	x			x			x
Neil Orchard Senior Activities Center	Rancho Cordova			x					
New Beginnings Health & Wellness Center- Center for Community Health & Well Being	South Sacramento		x						
New Testament Baptist Church	North Highlands	x	x			x			x
Next Move	Oak Park		x			x			x
North Franklin District Business Association	South Sacramento								x
Oak Park Community Center	Oak Park			x					
Oak Park Neighborhood Association	Oak Park								x

Name	Location								
Oak Park Sol Community Garden	Oak Park		x						
PRIDE Industries	North Sacramento, North Highlands, South Sacramento					x			
Paratransit, Inc.	South Sacramento				x				
Paul Hom Asian Clinic	East Sacramento		x				x		
People Reaching Out	North Highlands	x							
Planned Parenthood B Street Health Center	Midtown Sacramento		x				x		
Planned Parenthood Capitol Plaza Health Center	Downtown Sacramento		x				x		
Planned Parenthood Fruitridge Health Center	South Sacramento		x				x		
Planned Parenthood North Highlands Health Center	North Highlands		x				x		
Pioneer Congregational United Church of Christ	Midtown Sacramento					x			
Powerhouse Ministries	Folsom					x			
River City Food Bank	Midtown Sacramento			x					
River Oak Center for Children	North Highlands	x							

Organization	Location								
River Oak Family Resource Center	Oak Park	x		x					
Roberts Family Development Center	North Sacramento			x	x				
SETA Head Start	Carmichael, Citrus Heights, Elk Grove, Fair Oaks, Galt, Mather, North Highlands, North Sacramento, Rancho Cordova, South Sacramento	x		x	x				x
Sacramento Area Congregations Together (Sacramento ACT)	Rosemont	x			x				
Sacramento Children's Home	South Sacramento	x		x	x				x
Sacramento Chinese Community Services Center (SCCS)	Downtown Sacramento	x		x					
Sacramento City College-Dental Health Clinic	South Sacramento		x						
Sacramento County Department of Health and Human Services	South Sacramento	x	x	x			x	x	x

Organization	Location								
Sacramento County Department of Human Assistance	Arden-Arcade, North Sacramento					x			
Sacramento County Public Health Division	South Sacramento		x	x			x	x	
Sacramento Covered	Rosemont		x						
Sacramento Employment and Training Agency (SETA)	North Sacramento					x			
Sacramento Housing and Redevelopment Agency (SHRA)	Downtown Sacramento					x			
Sacramento Junior Giants	South Sacramento			x					
Sacramento LGBT Community Center	Midtown Sacramento					x			x
Sacramento City Church	Upper Land Park					x			
Sacramento City Unified School District	South Sacramento	x	x			x			
Sacramento Food Bank and Family Services	Oak Park			x		x			
Sacramento Life Center (SLC)	Midtown Sacramento		x						
Sacramento Native American Health Center, Inc.	Midtown Sacramento	x	x	x			x		x
Sacramento Steps Forward	North Sacramento					x			
Sacramento Tree Foundation	Arden-Arcade							x	

Sacramento Violence Intervention Program (SVIP)-WellSapce Health	South Sacramento								x
Sacramento Works Job Center	Galt, Rancho Cordova, South Sacramento, North Sacramento					x			
Saint John's Program for Real Change	South Sacramento	x				x			
St. Paul Missionary Baptist Church	South Sacramento			x					
Sam & Bonnie Pannell Community Center	Galt			x					
SeniorCare PACE	South Sacramento, Downtown Sacramento		x	x			x		
Sherriff Community Impact Program	Arden-Arcade	x		x					x
Shiloh Baptist Church	Oak Park					x			
Shingle Springs Tribal TANF Program	Arden-Arcade					x			
Shriner's Hospital for Children-Northern California	Oak Park		x						
Sierra Health Foundation	North Sacramento	x	x	x			x		x

Organization	Location								
Slavic Assistance Center	Arden-Arcade					x			
Smile Keepers - Dental Health Program	Rosemont		x						
Southeast Asian Assistance Center	South Sacramento	x							
St. Vincent de Paul Sacramento Council	Broderick					x			
Strategies for Change	North Sacramento, South Sacramento	x				x			x
Su Familia-The National Hispanic Family Health Helpline	Washington, D.C		x						
South Sacramento Interfaith Partnership (SSIP) Food Closet	South Sacramento					x			
Stanford Settlement	North Sacramento			x		x			
Summer Night Lights Sacramento-Mack Road Partnership	South Sacramento			x					x
Sutter Medical Center of Sacramento	Midtown Sacramento	x	x				x		
Terra Nova Counseling	Citrus Heights, Midtown Sacramento	x							

			x					
The Birthing Project Clinic- Center for Community Health and Wellbeing	Midtown Sacramento		x					
The Gardens- A Family Care Community Center	South Sacramento	x				x	x	
The Keaton Raphael Memorial	Roseville						x	
The Mental Health Association in California	Midtown Sacramento	x						
The SOL Project- Saving Our Legacy, African Americans for Smoke-Free Safe Places	Downtown Sacramento	x						
The Salvation Army- Del Oro Division	Auburn, Colfax, Downtown Sacramento, Grass Valley, Midtown, North Sacramento, Oak Park, Rosemont	x	x			x		
TLCS Inc. (Transitional Living and Community Support)	Arden-Arcade	x	x			x		
Turning Point Community Programs	Rancho Cordova	x				x		
University of California, Davis	Davis					x		

UC Davis Medical Center	Oak Park	x	x				x		
U.S Department of Veterans Affairs- Vet Center	Arden-Arcade, Citrus Heights	x				x			
United iu Mein Community Inc.	South Sacramento	x	x						x
VA Northern California Health Care System	Mather	x	x			x			
Valley Hi Family Resource Center	South Sacramento	x							
Volunteers of America- Northern California & Northern Nevada	Arden-Arcade					x			
Visions Unlimited	South Sacramento	x							
WALK Sacramento	Downtown Sacramento			x					
WEAVE	Midtown Sacramento, South Sacramento	x				x			x
WIC Sacramento	South Sacramento		x	x			x		
WarmLine Family Resource Center	Downtown Sacramento, Rocklin	x	x			x			
Wellness and Recovery Center- Consumer Self Help	Rancho Cordova, South Sacramento	x							

WellSpace Health	Downtown, Folsom, Midtown, North Highlands, Oak Park, Rancho Cordova, South Sacramento	x	x				x		x
Wellspring Women's Center	Oak Park	x		x					
West Sacramento Community Center	West Sacramento			x					
Western Career College Dental Clinic	Rosemont		x						
Wind Youth Services	Midtown Sacramento	x				x			
Women's Empowerme nt	Midtown Sacramento	x				x			
Women's Health Specialists	Arden-Arcade, Rancho Cordova		x						
YMCA of Superior California	Auburn, Downtown Sacramento			x		x			x
YWCA	Midtown Sacramento	x				x	x		