Dignity Health
Mercy Hospital of Folsom

Mercy Hospital of Folsom

2016 Community Health Needs Assessment

Acknowledgements

This report was prepared by Valley Vision on behalf of Mercy Hospital of Folsom 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:** Giovanna Forno, BS, Sarah Underwood, MPH
- **Secondary Authors:** Heather Diaz, DrPH, Amelia Lawless, CHES, ASW, MPH, Mathew C. Schmidtlein, PhD, Katie Strautman, MSW, Anna Rosenbaum, MSW, MPH, and Jenny Wagner, MPH(c)

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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 Hospital of Folsom (MHF). 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 Mercy Hospital of Folsom, located at 1650 Creekside Drive, Folsom, 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 MHF 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 MHF 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 MHF included 29 key informant interviews with 46 participants and eight focus groups conducted with 57 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 then verifying and expanding these resources to include those referenced through community input. Additional information regarding resources is found below 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 MHF 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 not include food security, which is a component of the Basic Needs category.

3. 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.

4. 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).

5. 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 not include access to mental health providers, which is a component of the Access to Behavioral Health Services category.

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 not 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, 150 resources were identified pertaining to the significant health needs for Mercy Hospital of Folsom, located at 1650 Creekside Drive, Folsom, 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 Hospital of Folsom 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 & Outreach Department, 3400 Data Drive, Ranch 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 Hospital of Folsom (MHF). 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 on behalf of Mercy Hospital of Folsom (MHF), located at 1650 Creekside Drive, Folsom, 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 Hospital of Folsom 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 Mercy Hospital of Folsom Community Board and Community Benefit Advisory Committee).

Mercy Hospital of Folsom'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 MHF 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 MHF 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, a conclusions, and corresponding appendices. The report then closes with a summary of available resources, impact report of actions taken since the 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 the hospital receives its top 80% of discharges. Figure 1 shows the MHF HSA.

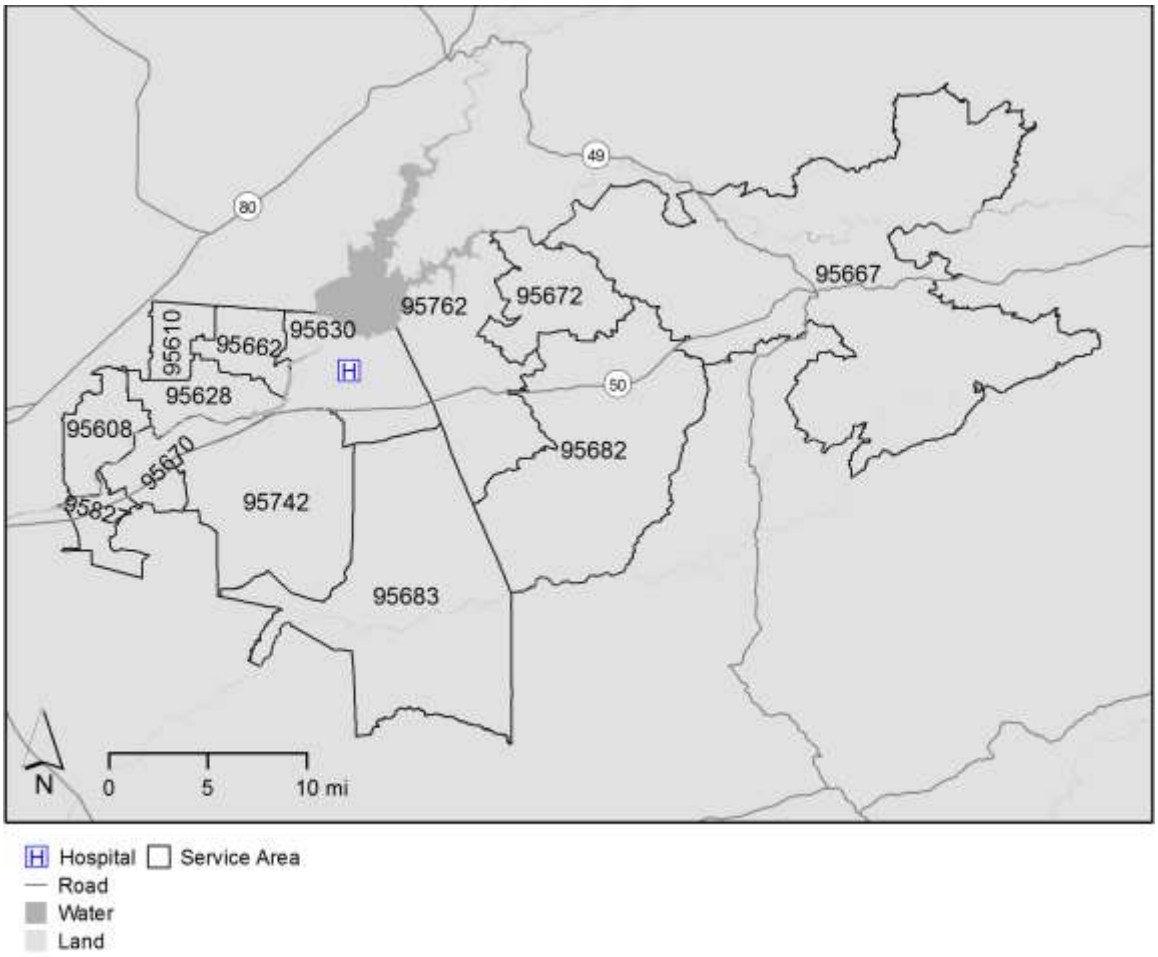

Figure 1: Mercy Hospital of Folsom Hospital Service Area

Demographics of the Hospital Service Area (HSA)

The Mercy Hospital of Folsom HSA is located in Northern California and has nearly 450,000 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 for the MHF HSA, the median age of the MHF HSA, and the median income compared to state benchmarks. Table 2 provides information on the presence of medically underserved, low income, and minority residents in the MHF HSA.

Population Characteristics

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

ZIP Code	Population	Median Age	Median Income
95608	60255	43.4	$54,322
95610	43333	36.4	$50,928
95628	40921	44.2	$73,720
95630	72462	37.7	$98,547
95662	31411	41.9	$64,991
95667	35924	48.9	$57,468
95670	53259	36.1	$54,915
95672	5273	49.0	$93,209
95682	29590	43.7	$77,718
95683	6354	51.5	$96,165
95742	8873	31.5	$96,278
95762	40829	40.7	$119,382
95827	20120	36.2	$51,981
MHF HSA	448,604	Range: 31.5 yrs. (95742) to 51.5 yrs. (95683)	Range: $51,981 (95827) to $119,382 (95762)
Sacramento County	*1,435,207*	*35.1 years*	*$55,064*
El Dorado County	*180,982*	*44.1*	*$69,297*
CA State	*37,659,181*	*35.4 years*	*$61, 094*

Source: Census, 2013

The population of the MHF HSA makes up 1% of all residents in the State of California. The majority of the population count for the MHF HSA comes from residents living in Sacramento County. Nine of the 13 ZIP codes that make up the MHF HSA are located within Sacramento County. Population counts at the ZIP code level varied from 8,873 residents in ZIP code 95742 (Rancho Cordova/Folsom) to 72,462 residents in ZIP code 95630 (Folsom). Four of the 13 ZIP codes that make up the MHF HSA are in El Dorado County. Population counts at the ZIP code level varied from 5,273 residents in ZIP code 95672 (El Dorado Hills/Cameron Park) to 40,829 residents in ZIP code 95762 (El Dorado Hills).

The median age of Sacramento County is similar to the median age of the state, which makes up the majority of the MHF HSA area. The median age at the ZIP code level ranged from 31.5 years in 95742 (Rancho Cordova/Folsom) to 51.5 years in 95683 (Rancho Murieta).The median age of El Dorado County is 44.1, which is higher than the median age of the state. The median income by ZIP code for the HSA ranged significantly from approximately $50,928 in 95610 (Citrus Heights/Orangevale) to well over $119,000 in 95762 (El Dorado Hills), a range of almost $70,000 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 HSA, specific indicators were examined. Table 2 below describes these indicators for the HSA.

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

ZIP Code	Percent Below Federal Poverty Level (equal to or below 100% FPL)	Percent Uninsured	Percent Minority (Hispanic or non-White)
95608	12.5	12.5	26.3
95610	14.9	18.4	28.3
95628	10.2	9.7	21.2
95630	4.6	6.5	36.3
95662	7.6	12.2	16.9
95667	12.6	10.0	17.0
95670	16.7	15.3	44.4
95672	2.2	6.4	19.4
95682	7.6	7.1	17.6
95683	4.4	5.2	24.8
95742	6.8	8.0	57.0
95762	3.7	5.1	22.9
95827	16.6	14.3	45.4
MHF HSA	10.2%	10.8%	28.9%
Sacramento County	*17.6%*	*14.6%*	*52.1%*
El Dorado County	*9.0%*	*10.2%*	*20.3%*
CA State	*15.9%*	*17.8%*	*60.3%*

Source: Census, 2013

The percent of population living in poverty for the MHF HSA was greater than the El Dorado County benchmark, but lower than both the Sacramento County and state benchmarks. The MHF HSA ZIP code with the highest percent of population in poverty was 95670 (Rancho Cordova) at 16.7%, compared to the lowest percent poverty in ZIP code 95672 (El Dorado Hills/Cameron Park) at 2.2%. The percent of uninsured residents was lower in the MHF HSA and Sacramento County in comparison to the state percent, but was higher than that of El Dorado County. The ZIP code with the highest percent uninsured was 95610 (Citrus Heights/Orangevale) at 18.4%, and the lowest percent was 5.1% in ZIP code 95762 (El Dorado Hills). The MHF HSA percent of minority residents was 28.9%, lower than Sacramento County at 52.1% and the state at 60.3%, but higher than El Dorado County at 20.3%. An examination of areas throughout Sacramento and El Dorado County revealed a large variation in the degree of diversity, or percent minority. Within Sacramento County, ZIP code 95742 (Rancho Cordova/Folsom) showed a percent of minority populations at 57.0%. This percent is drastically different from the Orangevale ZIP code of 95662 which only had 16.9% minority residents. Within El Dorado County, ZIP code 95762 (El Dorado Hills) showed a percent of minority population at 22.9%, which exceeds that of the county. The ZIP with the lowest percent was Placerville/Coloma (95667) at 12.6%.

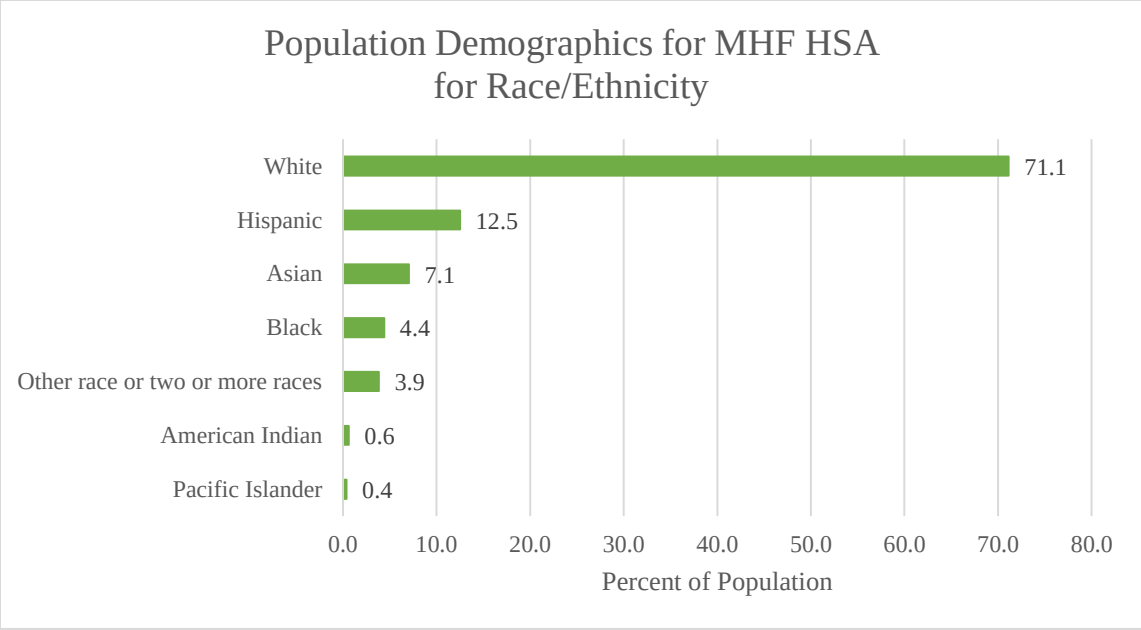

Figure 2: Population Demographics for MHF HSA for Race/Ethnicity

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

Community Health Vulnerability Index and Focus Communities

To further examine medically underserved, low income and diverse populations in the MHF HSA, two tools were developed. This assessment used a Community Health Vulnerability Index (CHVI) to help identify census tracts within ZIP codes in the MHF 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 MHF 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 MHF 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 SHN Categorization. The CHVI results for the MHF 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	

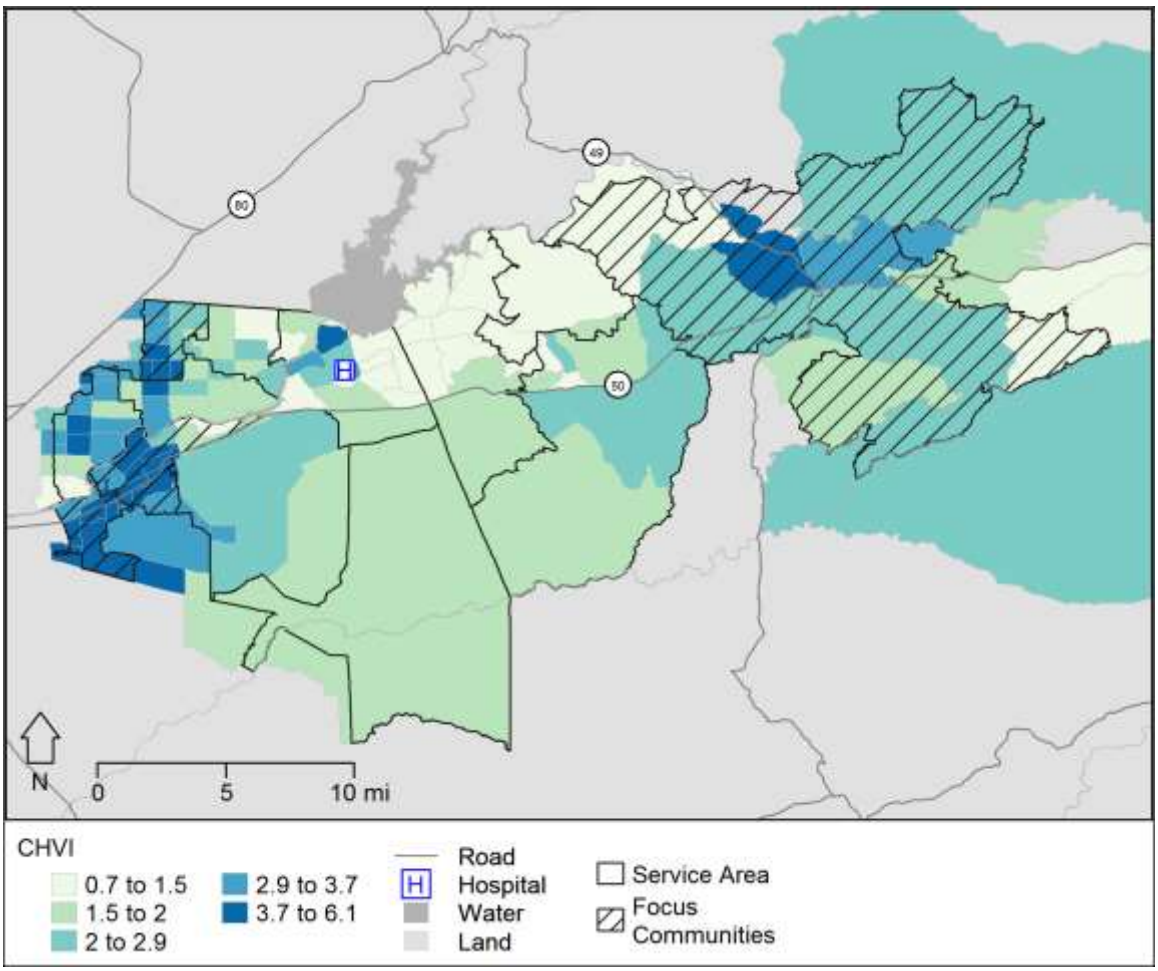

Figure 3: Community Health Vulnerability Index for MHF HSA

Focus Communities – Overview

Focus Communities were used to provide a place-based lens with which to consider health disparities in the MHF 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 (previously referred to as Communities of Concern) in the MHF 2013 CHNA. These inputs provided a unique perspective on social determinants within the 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 MHF 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 MHF 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 MHF are found in Figure 4 and listed in Table 5. Figure 4 displays four ZIP code Focus Communities denoted in red. The specific ZIP codes and area names are provided in Table 5, with the census population for each.

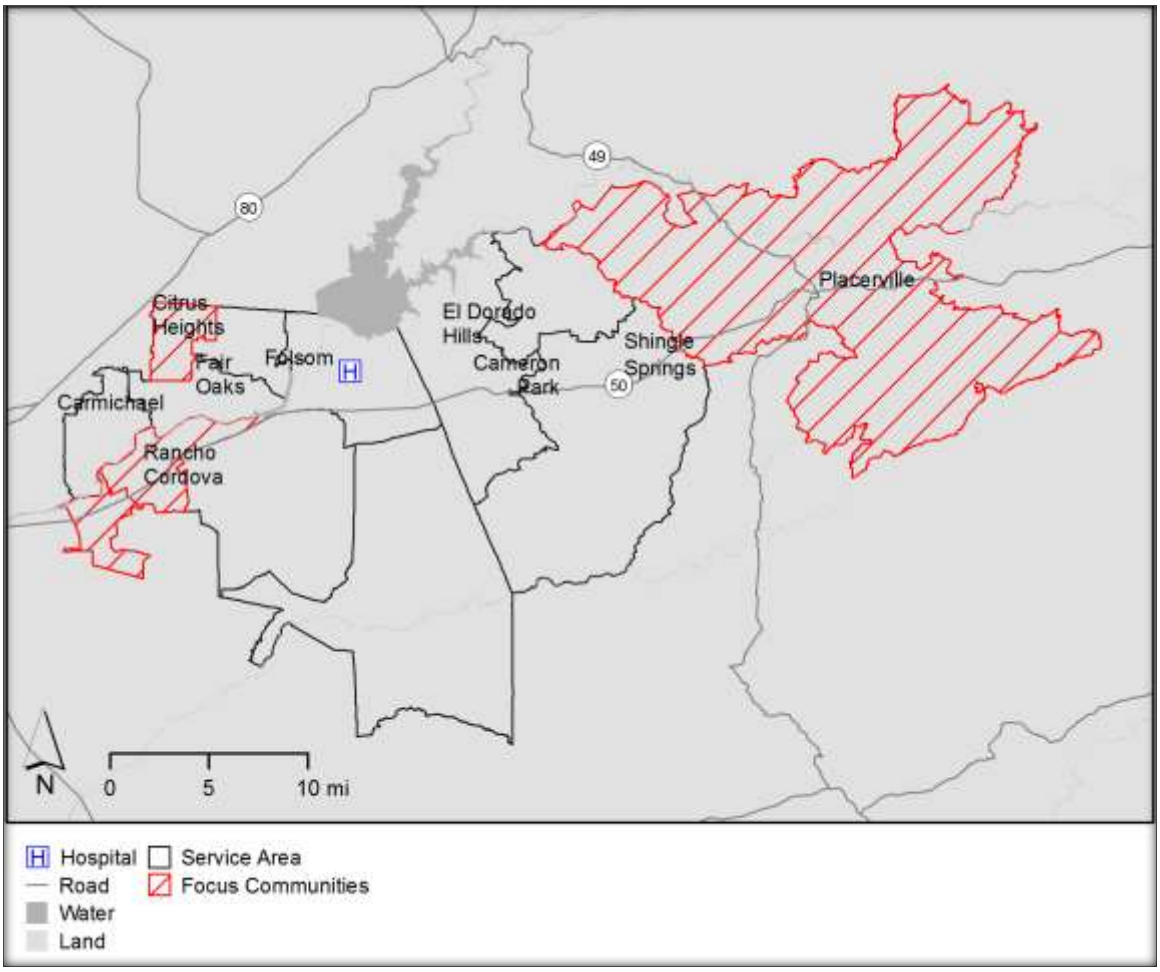

Figure 4: Focus Communities for the MHF HSA

Table 5: Four Identified Focus Communities for the MHF HSA

ZIP Code	Community/Area*	Population
95670	Rancho Cordova	53,259
95827	Rancho Cordova/La Riviera/Rosemont	20,120
95610	Citrus Heights/Orangevale	43,333
95667	Placerville/Coloma	35,924
Total Population in the Focus Communities		*152,636*
Total Population in the HSA		*448,604*
Percent of the HSA in the Focus Communities		*34%*

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 MHF 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 MHF HSA that were experiencing health inequities. Their response indicated that specific geographic areas like Arden-Arcade area, the American River Parkway, Citrus Heights, La Riviera, Rosemont, Rancho Cordova, Orangevale, areas of Folsom and Carmichael, Placerville and Coloma were areas of concern. In terms of population groups, data indicated that Middle Eastern Refugees, Russians, Ukrainians, Blacks, Hispanics, Asians and Whites 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 be the biggest influence in 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 the 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 MHF 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 CHNAs is depicted in the CHNA Process Model (Figure 5).

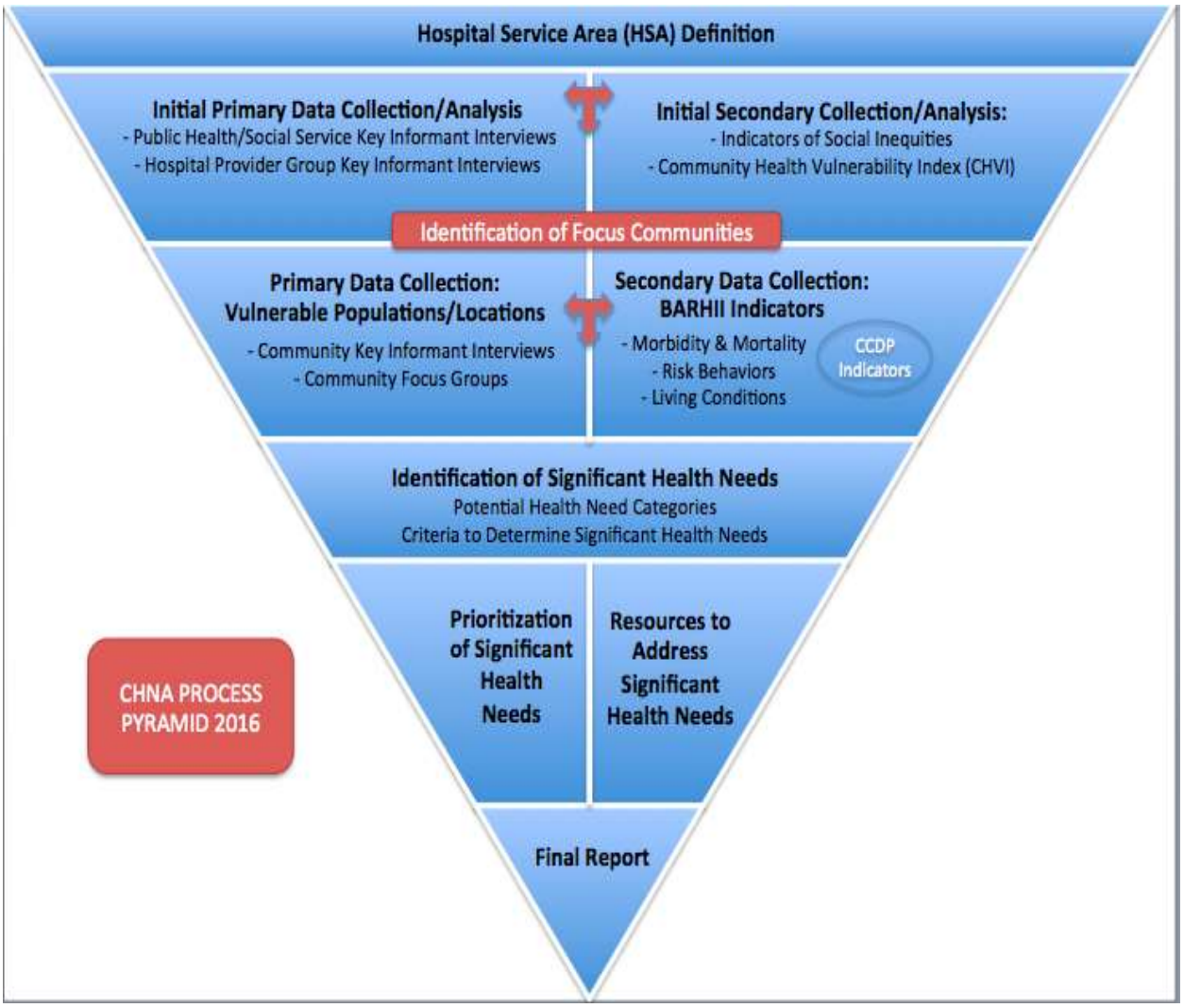

Figure 5: CHNA Process Model

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 MHF HSA. The BARHII framework was also used in the organization of this report, beginning in the "Findings" section. The most "downstream factors" like mortality and morbidity are outlined, followed by risk behaviors and living conditions. Social inequities data is spread throughout the body of the report.

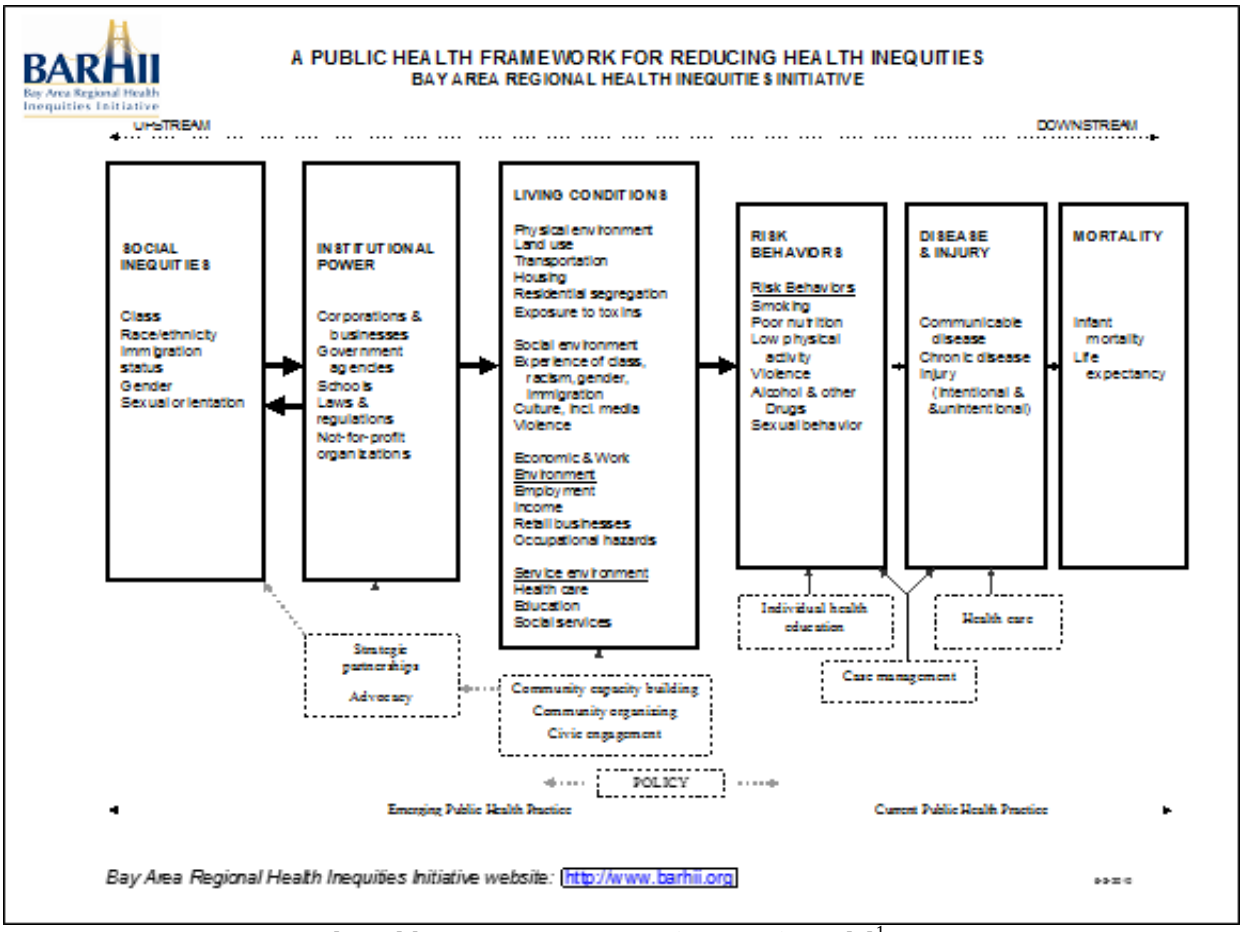

Figure 6: Bay Area Regional Health Inequities Initiative (BARHII) Model[1]

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 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 MHF HSA. Input OSHPD data were used to develop hospitalization (H) and emergency department (ED) discharge rates for each ZIP code in the 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 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 platform 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, Secondary Data Dictionary and Processing.

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 of 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 form, 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 MHF 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 HSA. Input from the initial set of group key informant and service provider interviews solicited expert opinion on vulnerable locations and populations within the 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 27 key informant interviews with 45 key informants were completed for the MHF HSA including 46 service providers, which are listed in Appendix F. Key informant interviewees represented the following sectors: academic research (4%), community based organizations (42%), health care (40%), public health (13%), and social services (13%), with some interviewees representing multiple sectors. These 45 key informants reported working with the following populations: low-income (89%), medically underserved (91%), and racial or ethnic minorities (82%). The racial and ethnic minority groups specified by interviewees included: Latino/Hispanic, Black, Asian Pacific Islander, Southeast Asian, East Indian, Middle Eastern, Native American, Slavic and refugees from the former Soviet Union. In addition, key informants specified working with the following vulnerable sub-populations: individuals experiencing homelessness, 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), 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 Hospital of Folsom HSA, eight focus groups were conducted with 57 participants who were medically underserved, impoverished, socially and/or linguistically isolated and/or those who had chronic conditions. Of the 57 participants, approximately 44 people completed a demographic data card. Of the approximately 44 people who completed demographic data cards, the median age was 37; 75% identified as female, 18% as male, and 11% as other, with some participants identifying as multiple gender categories. In addition, 7% indicated they were not high school graduates, 7% indicated they were not covered by health insurance, and 55% received some form of public assistance. The racial breakdown of focus group participants is listed in Figure 7, with some participants identifying with multiple racial groups.

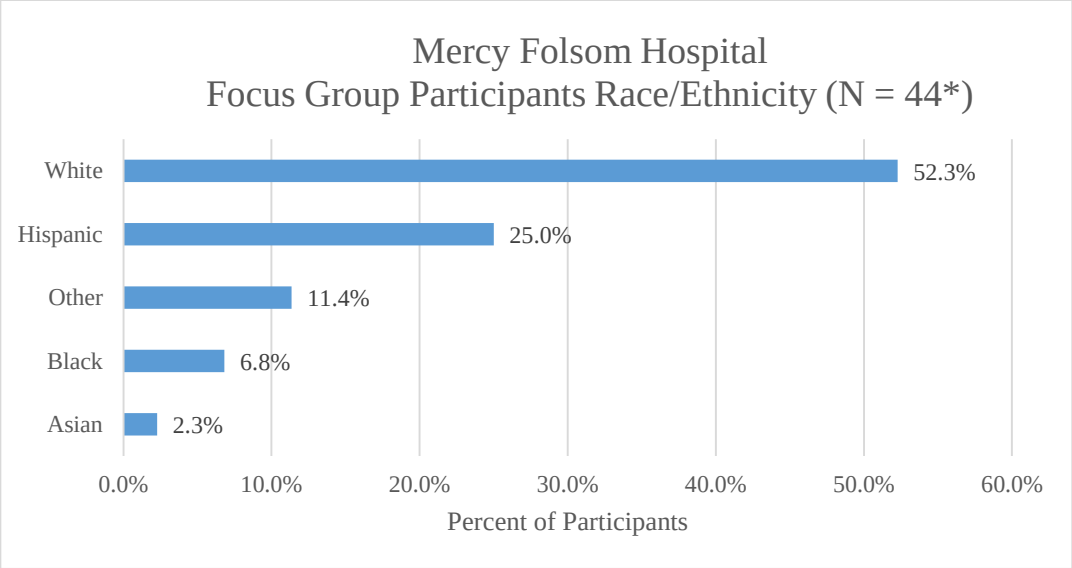

Figure 7: Focus Group Participant Demographics
*Please note: demographic surveys were not completed by all participants

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 informants and focus groups 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 Hospital of Folsom 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, Sarah Underwood, MPH, and Jenny Wagner, MPH(c). 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 MHF 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 MHF 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 ZIP codes within the MHF HSA. Values in blue are those that fall above or below the desired direction in comparison to Sacramento County or El Dorado 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	95608	72.96	5.11	79.61
	95610*	78.04	4.84	77.86
	95628	71.57	4.03	79.58
	95630	63.24	5.32	81.63
	95662	77.27	4.44	79.09
	95670*	62.44	4.13	79.62
	95683	56.71	0.00	83.35
	95742	71.50	5.27	80.43
	95827*	75.71	4.35	77.88
	Sacramento County	72.75	*5.40*	*78.74*
	95667*	68.40	5.08	79.50
	95672	57.85	0.00	81.17
	95682	62.87	4.54	81.65
	95762	52.03	4.12	84.48
	El Dorado County	64.97	*3.40*	*80.81*
	MHF HSA	68.49	*4.98*	*80.14*
	CA State	64.59	*4.90*	*80.53*
	National 2013	--	--	*78.80*[2]
	Healthy People 2020 Target	--	*6.00*[3]	--

Source: CDPH, 2010-2012
*Indicates Focus Community

Four of the nine ZIP codes in Sacramento County had age-adjusted all-cause mortality rates that were above both county and state benchmarks. Age-adjusted overall mortality was highest in ZIP code 95610 (Citrus Heights/Orangevale). One of the four ZIP codes in El Dorado County had age-adjusted all-cause mortality rates that were above the county benchmark. Age-adjusted overall mortality was highest in ZIP code 95667 (Placerville/Coloma). None of the ZIP codes in Sacramento County showed infant mortality rates that exceeded the county benchmark rate of 5.40 infant deaths per 1,000 live births; however ZIP codes 95630 (Folsom) and 95742 (Rancho Cordova/Folsom) exceeded the state benchmark of 5.11 deaths per 1,000 live births. Three of the four ZIP codes in El Dorado County had Infant Mortality rates that exceeded the county benchmark rate of 3.40 deaths per 1,000. The ZIP code with the highest infant mortality rate was 95667 (Placerville/Coloma), with a rate of 5.08 deaths per 1,000. The Focus Communities 95827 (Rancho Cordova/La Riviera/Rosemont) and 95610 (Citrus Heights/Orangevale) in Sacramento County were the only ZIP codes that had a lower life expectancy than the county level of 78.74 years. In El Dorado County, the Focus Community 95667 (Placerville/Coloma) had a lower life expectancy than the county level of 80.81 years.

[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

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

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

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 show clear geographic health disparities across the MHF HSA. Table 7 displays rates of mortality, ED visits, and hospitalizations due to diabetes for each ZIP Code in the MHF HSA.

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	95608	2.67	217.01	167.22
	95610*	2.08	237.18	181.36
	95628	2.50	138.55	119.28
	95630	1.44	131.61	123.41
	95662	2.38	200.30	159.80
	95670*	2.17	259.59	198.96
	95683	2.03	95.51	85.39
	95742	1.98	215.78	199.01
	95827*	2.07	297.83	239.94
	Sacramento County	*2.26*	*281.27*	*200.65*
	95667*	2.03	189.97	143.89
	95672	2.08	116.56	102.46
	95682	1.58	144.14	125.27
	95762	1.62	96.80	85.34
	El Dorado County	*1.05*	*146.93*	*116.72*
	MHF HSA	*1.97*	*180.30*	*145.77*
	CA State	*2.11*	*217.01*	*194.00*
	Healthy People 2020 Target	*6.60*	--	--

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013
*Indicates Focus Community

Three of the nine ZIP codes in Sacramento County had mortality rates due to diabetes that were clearly above the county and state benchmarks, yet below the Healthy People 2020 benchmark. The highest mortality rates due to diabetes were found in 95608 (Carmichael/Arden-Arcade), 95628 (Fair Oaks/Carmichael), and 95662 (Orangevale). All of the ZIP codes in El Dorado County had mortality rates due to diabetes that were clearly above the county benchmark of 1.05 deaths per 10,000 population, but below the state and Healthy People 2020 benchmarks. The ZIP codes with the highest mortality rates due

[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

to diabetes were 95672 (El Do Hills, Cameron Park) and 95667 (Placerville/Coloma). ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) exceeded the county benchmark for ED visits due to diabetes, at 297.83 ED visits per 10,000 population.

One of the four ZIP codes in El Dorado County that had an ED visit rate due to diabetes that exceeded the county rate of 146.93 visits per 10,000, was that of 95667 (Placerville/Coloma) with a rate of 189.97 visits per 10,000. Only one of the nine ZIP codes in Sacramento County had a hospitalization rate due to diabetes that exceeded the county benchmark of 200.65 hospitalizations per 10,000 populati04on. ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) had a hospitalization rate due to diabetes of 239.94 hospitalizations per 10,000 population. Two of the four ZIP codes in El Dorado County had hospitalization rates due to diabetes that exceeded the county benchmark of 116.72 hospitalizations per 10,000 population. The ZIP codes with the highest rates were found in 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs).

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 in Sacramento County that has ever been told by a doctor that they have diabetes for 2012 was 8%, the same percent as the state. El Dorado County showed that 6.4% of adults over the age of 20 have been told by a doctor that they have diabetes. Please note that either the Sacramento or El Dorado County rates were used when data was not available at the ZIP code or HSA levels.

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 area residents. According to the Dartmouth College Institute for Health Policy & Clinical Practice in 2012, the percent of Medicare patients with diabetes which report having had an hA1c exam to monitor their diabetes diagnosis was 80% in Sacramento County, 81.9% in El Dorado County, and 82% at the state level.

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.

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

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	95608	30.82	169.40	213.03
	95610*	17.44	185.86	243.62
	95628	22.49	144.23	191.29
	95630	12.43	146.10	194.13
	95662	19.76	193.52	247.12
	95670*	16.70	174.86	234.59
	95683	17.24	137.87	194.66
	95742	11.56	186.01	243.53
	95827*	18.44	209.68	287.73
	Sacramento County	*16.75*	*185.73*	*245.05*
	95667*	28.63	134.13	220.87
	95672	12.89	143.54	177.38
	95682	17.85	134.17	197.46
	95762	11.20	116.16	160.47
	El Dorado County	*18.84*	*124.61*	*193.92*
	MHF HSA	*19.28*	*156.33*	*210.06*
	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
*Indicates Focus Community

Examination of mortality due to heart disease revealed that six of the nine ZIP codes in Sacramento County had rates higher than the county, state and Healthy People 2020 benchmarks. The two highest rates were found in ZIP codes 95608 (Carmichael/Arden-Arcade) and 95628 (Fair Oaks/Carmichael). One of the four ZIP codes in El Dorado County had a mortality rate due to heart disease that exceeded the county, state and Healthy People 2020 benchmarks. ZIP Code 95667 (Placerville/Coloma) had a mortality rate due to heart disease of 28.63 deaths per 10,000 population, exceeding the El Dorado County benchmark of 18.84 deaths per 10,000, along with the state benchmark and Healthy People 2020 target. Four of the nine ZIP codes in Sacramento County had ED visit rates due to heart disease that exceeded the county benchmark of 185.73 ED visits per 10,000 population. The highest rate of ED visits due to heart disease was in ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont), with a rate of 209.68 ED visits per 10,000 population. Three of the four ZIP codes in El Dorado County exceeded the county rate of 124.61 visits per 10,000. The ZIP code with the highest rate of ED visits due to heart disease was 95672 (El Dorado Hills/Cameron Park). For hospitalizations rated due to heart disease, only two of the nine ZIP codes in Sacramento County exceeded the county benchmark of 245.05 per 10,000 population. The highest rate appeared in ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont), with a rate of 287.73 hospitalizations per 10,000 population. Two of the four ZIP codes in El Dorado County had rates of hospitalization due to heart disease that exceeded the county rate of 193.92 hospitalizations per 10,000 population. The highest rate appeared in ZIP code 95667 (Placerville/Coloma) with a rate of 220.87 per 10,000 population.

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, lower

than the state rate at 6%. Alternatively, El Dorado County showed a heart disease prevalence of 7.3%, which exceeded the state rate.

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 restricting blood flow to the brain.[7] Tobacco smoking and hypertension drastically increase risk for stroke. Hypertension is common in approximately one out of every 3 adults.[8] Hypertension also increases risk for kidney diseases, along with heart disease and diabetes. Stroke, hypertension, and kidney disease are discussed together in this section. 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
Stroke	95608	6.37	28.12	53.85
	95610*	4.13	28.74	58.31
	95628	5.30	29.71	48.85
	95630	2.82	24.71	45.66
	95662	4.54	38.21	60.38
	95670*	4.40	26.38	54.60
	95683	2.98	25.97	52.27
	95742	2.80	23.64	53.32
	95827*	4.34	28.98	71.40
	Sacramento County	*4.14*	*30.85*	*61.32*
	95667*	4.16	20.98	49.16
	95672	0.00	23.84	42.66
	95682	3.25	25.14	40.92
	95762	1.40	23.95	36.67
	El Dorado County	*2.77*	*21.75*	*41.94*
	MHF HSA	*4.12*	*27.48*	*50.37*
	CA State	*3.60*	*18.55*	*52.23*
	Healthy People 2020 Target	*3.40*	--	--

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013*Indicates Focus Community

Mortality rates due to stroke were high in five of the nine ZIP codes in Sacramento County, relative to county, state and Healthy People 2020 benchmarks. The highest rates were found in 95608 (Carmichael/Arden-Arcade) and 95628 (Fair Oaks/Carmichael), with 95608 at a rate of 6.37 deaths per 10,000 population and 95628 with a rate of 5.30 deaths per 10,000. In El Dorado County, two of the four ZIP codes had elevated rates of mortality due to stroke, with the two ZIP codes being 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs). When examining ED visits due to

[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

stroke, only one of the nine ZIP codes in Sacramento County had a rate that exceeded the county benchmark. ZIP code 95662 (Orangevale) had a rate of 38.21 ED visits per 10,000 population, compared to the county rate of 30.85 visits per 10,000. Three of the four ZIP codes in El Dorado County showed high rates of ED visits related to stroke, exceeding the county benchmark of 21.75 ED visits per 10,000 population. The ZIP codes with the highest rates of ED visits were 95682 (Cameron Park/Shingle Springs), 95762 (El Dorado Hills) and 95672 (El Dorado Hills/Cameron Park). Only one of the nine ZIP codes in Sacramento County exceeded the county benchmark for hospitalization rates due to stroke. The ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) had a rate of 71.40 hospitalizations per 10,000 population, which exceeded that of the county at 61.32 per 10,000. Two of the four ZIP codes in El Dorado County had hospitalization rates due to stroke that were higher than the county rate of 41.94 hospitalizations per 10,000 population. Both 95667 (Placerville/Coloma) and 95672 (El Dorado Hills/Cameron Park) had high rates of hospitalization due to stroke.

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	95608	2.17	493.52	213.03
	95610*	1.28	530.45	243.62
	95628	1.22	380.73	191.29
	95630	0.99	362.99	194.13
	95662	1.59	497.37	247.12
	95670*	1.83	489.78	234.59
	95683	1.23	313.33	194.66
	95742	0.00	459.90	243.53
	95827*	1.57	608.87	287.73
	Sacramento County	--	*555.90*	*245.05*
	95667*	1.27	489.14	220.87
	95672	0.00	373.95	177.38
	95682	0.88	399.87	197.46
	95762	1.00	296.10	160.47
	El Dorado County	--	*409.94*	*193.92*
	MHF HSA	*1.44*	*433.78*	*210.06*
	CA State	*1.21*	*408.99*	*383.74*

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013
*Indicates Focus Community

Mortality rates due to hypertension were above the state benchmark in seven of the nine ZIP codes in Sacramento County. The highest rate appeared in 95608 (Carmichael/Arden-Arcade), with a rate of 2.17 deaths per 10,000 population, compared to the state rate of 1.21 deaths per 10,000. Mortality rates due to hypertension were also above the state benchmark in one of the four ZIP codes in El Dorado County. Examination of ED visits and hospitalizations due to hypertension in Sacramento and El Dorado County showed few ZIP codes with elevated rates relative to the respective counties. For ED visits related to hypertension, ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) alone had a rate that exceeded the Sacramento County benchmark, and 95667 (Placerville/Coloma) was the only ZIP code that exceeded the El Dorado County benchmark. In both Sacramento and El Dorado County, two ZIP codes showed elevated rates of hospitalizations due to hypertension compared to respective county benchmarks. ZIP codes within Sacramento County that exceeded the county rate of hospitalizations due to hypertension included 95827 (Rancho Cordova/La Riviera/Rosemont) and 95662 (Orangevale). ZIP Codes within El

Dorado County that exceeded the county rate of hospitalizations due to hypertension included 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs).

Primary data showed the participants specifically mentioned high blood pressure as a challenging issue for area residents. Accessing medication refills for blood pressure management was noted as an area challenge with many residents, especially low income, 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_5)*

Percent – Adults with Hypertension Not Taking Medication

The Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey results for 2006-2010 indicate that the percentage of adults who do not take medication for their hypertension is 29% in El Dorado County and 26% in Sacramento County, both below the state percent of 30%.

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	95608	1.17	86.73	146.64
	95610*	0.89	100.79	169.16
	95628	0.83	73.04	124.67
	95630	0.64	69.81	116.04
	95662	0.00	102.87	167.62
	95670*	0.56	93.92	161.15
	95683	0.00	78.71	124.65
	95742	0.00	91.01	147.22
	95827*	0.79	123.19	210.31
	Sacramento County	---	*110.76*	*180.68*
	95667*	0.56	48.24	125.19
	95672	0.00	55.35	114.22
	95682	0.60	57.18	112.13
	95762	0.54	63.48	92.60
	El Dorado County	--	*49.04*	*112.03*
	MHF HSA	*0.67*	*78.38*	*135.44*
	CA State	*0.73*	*57.09*	*160.01*

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013 **OSHPD Data Includes Data for Nephritis, Nephrotic Syndrome, and Nephrosis.
*Indicates Focus Community

Mortality rates due to kidney disease were elevated in four of the 13 MHF HSA ZIP codes in comparison to the state rate of 0.73 deaths per 10,000 population. All elevated rates of mortality due to kidney disease were found in Sacramento County. The ZIP code with the highest mortality rate was 95608 (Carmichael/Arden-Arcade) with a rate of 1.17 deaths per 10,000 population. ED visits due to kidney disease were elevated in both Sacramento County and El Dorado County. In Sacramento County, ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) exceeded the county benchmark, with a rate of 123.19 ED visits per 10,000 population. Three of the four ZIP codes in El Dorado County had elevated

rates of ED visits due to kidney disease when compared to the county benchmark of 49.04 ED visits per 10,000 population. The ZIP codes with the highest ED visit rates due to kidney disease were 95762 (El Dorado Hills), 95682 (Cameron Park/Shingle Springs) and 95672 (El Dorado Hills/Cameron Park). Only one of the nine ZIP codes in Sacramento County had a hospitalization rate due to kidney disease that exceeded the county benchmark. ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) showed a hospitalization rate of 210.31 hospitalizations per 10,000 population, compared to a rate of 180.68 per 10,000 for Sacramento County. Three of the four zip codes in El Dorado County had elevated rates of hospitalization due to kidney disease, with the highest rate in 95667 (Placerville/Coloma) with a rate of 125.19 hospitalizations per 10,000 population.

Cancer – Incidence, ED Visit, Hospitalization, Mortality and Screening Rates by Specific Cause 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 ZIP codes within the MHF HSA 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 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 MHF HSA. Table 12 shows incidence rates for female breast, colorectal, lung and prostate cancers for each of the ZIP codes within the MHF HSA. Rates for each ZIP code are compared to the MHF HSA rate as well as the state rate.

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

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	95608	24.69	5.40	7.18	15.00
	95610*	16.60	3.87	7.48	12.28
	95628	25.65	5.16	7.58	22.40
	95630	25.77	3.86	3.50	11.29
	95662	22.73	4.71	6.06	15.60
	95670*	18.46	4.62	5.52	12.99
	95683	29.42	-	-	31.34
	95742	17.71	-	-	10.19
	95827*	18.76	4.42	5.37	14.20
	95667*	27.27	6.24	7.43	17.01
	95672	21.10		6.71	13.42
	95682	25.97	4.71	6.57	20.28
	95762	21.84	3.87	2.79	16.52
	MHF HSA	*23.27*	*4.52*	*5.79*	*15.52*
	CA State	*13.16*	*3.88*	*4.54*	*11.61*

Source: California Cancer Registry, 2010-2012
*Indicates Focus Community

The breast cancer incidence rate for the MHF HSA was clearly above the state benchmark of 13.16 new cases per 10,000 population. All 13 ZIP codes within the MHF HSA had elevated rates of breast cancer compared to the state rate. The ZIP code with the highest rate of breast cancer incidences was 95683 (Rancho Murieta) with a rate of 29.42 new cases per 10,000 population. When looking at colorectal cancer incidence rates, seven of the 13 ZIP codes within the MHF HSA had elevated rates compared to the state benchmark. The ZIP code with the highest rate of colorectal cancer incidence was 95667 (Placerville/Coloma) at 6.24 new cases per 10,000 population—almost twice as high as the state rate. When examining lung cancer incidence rates, nine of the 13 ZIP codes within the HSA showed elevated rates when compared to the state benchmark of 4.54 new cases per 10,000 population. The highest rate of lung cancer incidence appeared in 95628 (Fair Oaks/Carmichael) with a rate of 7.58 per 10,000 population. Eleven of the 13 ZIP codes within the HSA had high rates of prostate cancer incidence compared to the state benchmark of 11.61 new cases per 10,000 population. The ZIP code with the highest rate of prostate cancer incidences was 95683 (Rancho Murieta) with a rate of 31.34 new cases per 10,000—almost three times the state benchmark.

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 MHF HSA. 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
Lung Cancer	95608	25.04	3.92	11.81
	95610*	18.56	3.66	10.75
	95628	23.97	4.62	12.71
	95630	12.09	2.61	6.33
	95662	19.79	3.79	9.97
	95670*	14.43	4.14	9.02
	95683	18.53	4.28	8.38
	95742	14.19	1.92	3.59
	95827*	12.62	4.96	10.21
	Sacramento County	*17.24*	*3.63*	*8.35*
	95667*	22.23	3.52	11.67
	95672	14.10	2.94	8.90
	95682	21.75	3.55	7.23
	95762	13.11	1.98	6.13
	El Dorado County	*18.01*	*3.16*	*9.31*
	MHF HSA	*18.31*	*3.63*	*9.33*
	CA State	*15.41*	*2.68*	*7.95*
	Healthy People 2020	*16.10*	--	--

Source: Mortality: CDPH, 2012; ED visits: OSHPD, 2011-2013
*Indicates Focus Community

When examining mortality rates due to all-cause cancer, Sacramento and El Dorado County both had rates above the state and Healthy People 2020 benchmarks. Five of the nine ZIP codes in Sacramento County showed elevated rates of mortality due to all-cause cancer when compared to the county, state and Healthy People 2020 benchmarks. The ZIP code with the highest rate of mortality due to all-cause cancer was 95608 (Carmichael/Arden-Arcade), with a rate of 25.04 deaths per 10,000 population. Two of the four ZIP codes in El Dorado County exceeded the county, state benchmark and Healthy People 2020 benchmarks for mortality due to all-cause cancer: 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs). When examining ED visits due to lung cancer, seven of the nine ZIP codes in Sacramento County had elevated rates compared to the county and state rates. The ZIP code with the highest rate of ED visits due to lung cancer was 95827 (Rancho Cordova/La Riviera/Rosemont) with a rate of 4.96 ED visits per 10,000 population. Two out of the four ZIP codes in El Dorado County had high rates of ED visits due to lung cancer compared to the county and state benchmarks. The ZIP code with the highest rate was 95682 (Cameron Park/Shingle Springs) with a rate of 3.55 ED visits per 10,000 population. Seven of the nine ZIP codes in Sacramento County had elevated rates of hospitalization due to lung cancer when compared to county and state rates. The ZIP code with the highest rate for hospitalizations due to lung cancer was 95628 (Fair Oaks/Carmichael), showing a rate of 12.71 hospitalizations per 10,000 population. Only one of the four ZIP codes in El Dorado County showed an

elevated rate of hospitalization due to lung cancer when compared to the county rate. The ZIP code with the highest rate of hospitalization due to lung cancer was 95667 (Placerville/Coloma) with a rate of 11.67 hospitalizations per 10,000 population.

Rates – Female Breast, Colorectal and 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 visits 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
95608	11.36	14.56	3.05	8.86	14.45	16.55
95610*	11.63	11.92	2.58	6.47	11.72	14.86
95628	10.56	13.08	2.58	7.89	10.24	16.30
95630	9.49	16.39	2.38	5.76	6.61	9.51
95662	11.23	13.08	2.70	7.83	7.88	12.85
95670*	8.66	11.15	2.26	5.76	9.08	11.25
95683	5.34	14.38	3.06	6.81	9.44	23.11
95742	6.09	8.98	0.97	3.14	5.64	6.34
95827*	6.92	10.84	2.23	6.88	5.28	5.62
Sacramento County	*8.67*	*10.88*	*2.36*	*6.25*	*7.84*	*10.80*
95667*	8.52	14.22	1.92	7.79	8.46	11.83
95672	13.99	11.22	3.11	5.92	5.98	12.17
95682	7.63	17.45	2.89	7.19	10.43	15.03
95762	8.17	10.93	1.18	5.61	5.39	12.05
El Dorado County	*7.96*	*13.15*	*1.77*	*6.59*	*6.67*	*12.31*
MHF HSA	*9.82*	*13.52*	*2.45*	*6.75*	*9.18*	*12.66*
CA State	*6.59*	*11.07*	*1.85*	*6.43*	*5.79*	*12.37*

Source: OSHPD, 2011-2013
*Indicates Focus Community

Examination of ED visits related to breast cancer in females revealed that five of the nine ZIP codes in Sacramento County had rates above the county benchmark. The ZIP codes with the highest rates were 95610 (Citrus Heights/Orangevale), 95608 (Carmichael/Arden-Arcade) and 95662 (Orangevale). Three of the four ZIP codes in El Dorado County had rates of ED visits due to breast cancer higher than the county and state rates, with 95672 (El Dorado Hills/Cameron Park) having the highest rate. Seven of the nine ZIP codes in Sacramento County had hospitalization rates due to breast cancer in females that were greater than the county and state benchmarks. The ZIP code in Sacramento with the highest rate of hospitalization rates due to breast cancer in females was 95630 (Folsom). Two of the four ZIP codes in El Dorado County had rates for hospitalizations due to breast cancer that exceeded the county and state benchmarks. The El Dorado County ZIP code that showed the highest rate for hospitalizations due to breast cancer in females was 95682 (Cameron Park/Shingle Springs) with a rate of 17.45 hospitalizations per 10,000 population—the highest rate within the MHF HSA. Rates of ED visits related to colorectal

cancer showed that six of the nine ZIP codes in Sacramento County had rates above the county and state benchmarks. The Sacramento ZIP code with the highest rate of ED visits related to colorectal cancer was 95683 (Rancho Murieta). In El Dorado County, three of the four ZIP codes had rates of ED visits related to colorectal cancer that were above the county benchmark, with the highest rate found was 95672 (El Dorado Hills/Cameron Park). Hospitalization data for colorectal cancer showed six of the nine ZIP codes in Sacramento County had elevated rates compared to the county benchmark. The Sacramento County ZIP code with the highest rate was 95608 (Carmichael/Arden-Arcade). In El Dorado County, two of the four ZIP codes had higher rates of hospitalizations due to colorectal cancer than both the county and state benchmarks. The El Dorado County ZIP code with the highest ED rate was 95667 (Placerville/Coloma). Rates for ED visits due to prostate cancer in Sacramento County were higher than the county and state rates in six of the nine ZIP codes. The Sacramento County ZIP code with the highest rate was 95608 (Carmichael/Arden-Arcade) with a rate of 14.45 ED visits per 10,000 population— nearly double the county rate. Two of the four ZIP codes in El Dorado County had elevated rates of ED visits due to prostate cancer when compared to the county and state rates, with 95682 (Cameron Park/Shingle Springs) having the highest rate. Six of the nine ZIP codes in Sacramento County had hospitalization rates due to prostate cancer that exceeded the county benchmark. The ZIP code with the highest rate of hospitalizations due to prostate cancer was 95683 (Rancho Murieta), with an alarming rate of 23.11 hospitalizations per 10,000 population—more than twice the county rate. Within El Dorado County, ZIP code 95682 (Cameron Park/Shingle Springs) had an elevated rate of hospitalizations due to prostate cancer compared to county and state benchmarks.

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, but higher in El Dorado County. The percent of female adults over the age of 18 that reported having had a pap test in the last three years was lower for Sacramento County than the El Dorado County and state percent of 78%. However, more 50 year olds in Sacramento and El Dorado County report having had a sigmoidoscopy or colonoscopy at least once, when compared to the state.

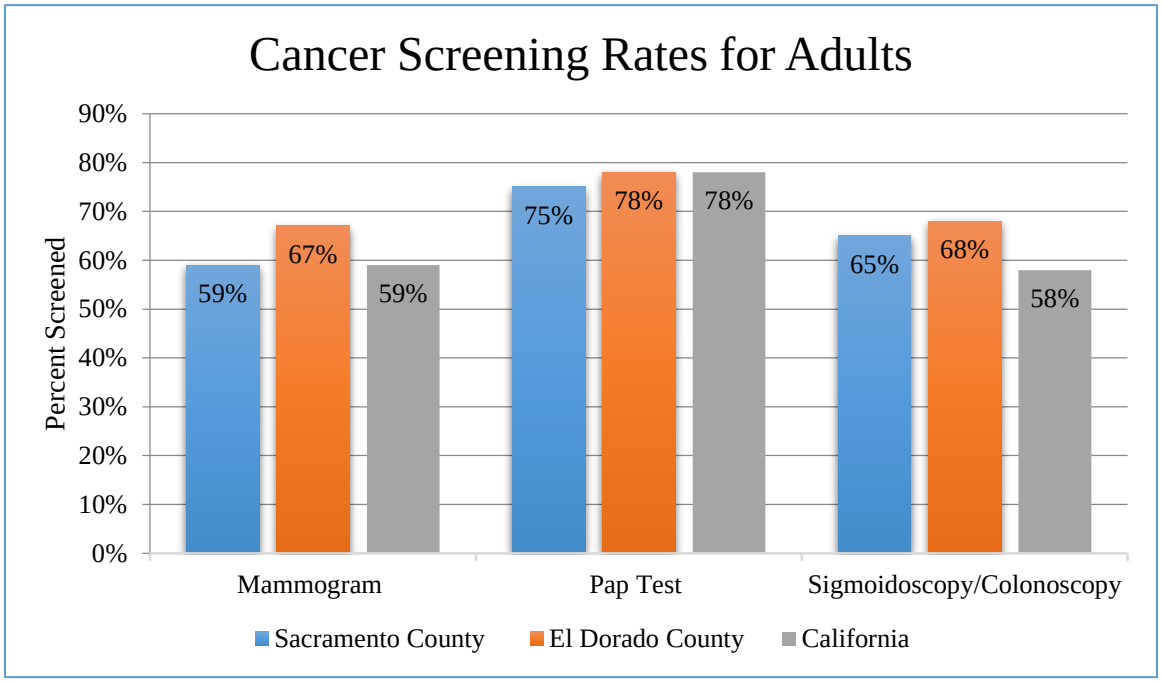

Figure 8: Screening Rates in Adults for Mammograms, Pap Test and Sigmoidoscopy/Colonoscopy

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 MHF HSA, mortality rates for chronic lower respiratory disease (CLRD) are presented in Table 15 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.

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)	95608	5.50	430.24	236.28
	95610*	4.18	384.06	222.95
	95628	4.72	273.38	180.64
	95630	3.11	172.61	120.17
	95662	3.96	328.76	201.29
	95670*	4.16	313.41	192.50
	95683	4.53	129.32	151.89
	95742	2.39	164.45	107.04
	95827*	3.81	337.66	214.02
	Sacramento County	*3.88*	*340.36*	*195.19*
	95667*	6.22	360.13	254.60
	95672	4.23	186.99	133.96
	95682	6.29	254.03	180.87
	95762	1.45	125.13	84.54
	El Dorado County	*5.10*	*258.48*	*180.41*
	MHF HSA	*4.33*	*288.40*	*182.20*
	CA State	*3.46*	*218.30*	*154.44*
	Healthy People 2020	--	*56.80*	*50.10*

Source: Mortality: CDPH, 2012; ED Visits: OSHPD, 2011-2013
*Indicates Focus Community

Six of the nine ZIP codes in Sacramento County had mortality rates due to CLRD above the county benchmark. The Sacramento County ZIP code with the highest rate was 95608 (Carmichael/Arden-Arcade). Two of the four ZIP codes in El Dorado County had mortality rates due to CLRD that were

[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

higher than the county rate. The ZIP code with the highest rate was 95682 (Cameron Park/Shingle Springs). Two of the nine ZIP codes in Sacramento County had elevated rates of ED visits due to COPD compared to the county rate. The ZIP code with the highest rate of ED visits due to COPD was again, 95608 (Carmichael/Arden-Arcade). Only one of the four ZIP codes in El Dorado County had an elevated rate of ED visits due to COPD compared to the county benchmark. The ZIP code with the elevated rate was 95667 (Placerville/Coloma). In Sacramento County four of the nine ZIP codes exceeded the county rate for hospitalizations due to COPD. The ZIP code with the highest rate was once again found in 95608 (Carmichael/Arden-Arcade). In El Dorado County, two of the four ZIP codes had elevated rates of hospitalization due to COPD compared to the county benchmark. The ZIP with the highest rate was 95667 (Placerville/Coloma).

Rates – ED Visits and Hospitalizations due to Asthma

Asthma is one of the leading health issues in the U.S. 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	95608	275.57	107.65
	95610*	259.89	104.04
	95628	187.84	85.85
	95630	116.57	64.02
	95662	218.06	93.89
	95670*	219.08	99.33
	95683	74.24	69.70
	95742	127.07	73.60
	95827*	240.46	109.77
	Sacramento County	*235.95*	*101.20*
	95667*	209.36	90.06
	95672	116.57	66.38
	95682	169.20	80.76
	95762	95.84	50.04
	El Dorado County	*161.90*	*71.69*
	MHF HSA	*192.37*	*86.64*
	CA State	*148.86*	*70.55*

Source: OSHPD, 2011-2013
*Indicates Focus Community

Three of the nine ZIP codes in Sacramento County had ED visit rates due to asthma above the county benchmark. The Sacramento County ZIP code with the highest rate of asthma-related ED visits was 95608 (Carmichael/Arden-Arcade). Two of the four ZIP codes in El Dorado County had ED visit rates due to asthma that were above the county benchmark. The ZIP code with the highest rate was 95667 (Placerville/Coloma), at 209.36 ED visits per 10,000 population. Examination of hospitalization rates due to asthma showed that three of the nine ZIP codes in Sacramento County had elevated rates compared to

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

the county benchmark. The ZIP code with the highest rate of hospitalizations due to asthma was ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont). Two of the four ZIP codes in El Dorado County had elevated rates of ED visits due to asthma compared to the county benchmark. The ZIP code with the elevated rate was 95667 (Placerville/Coloma), at 90.06 hospitalizations per 10,000 population.

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_14)*

Percent – Adults Over 18 years 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 have ever been told by a doctor that they have asthma was 16.9% for El Dorado County and 18.4% for Sacramento County, both above the state percent of 14.2% in 2011-2012.

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	95608	0.09	0.26
	95610*	0.11	0.35
	95628	0.11	0.16
	95630	0.00	0.14
	95662	0.00	0.20
	95670*	0.00	0.18
	95683	0.00	0.00
	95742	0.29	0.00
	95827*	0.22	0.42
	Sacramento County	*0.15*	*0.52*
	95667*	0.00	0.17
	95672	0.00	0.00
	95682	0.00	0.00
	95762	0.00	0.00
	El Dorado County	*0.04*	*0.07*
	MHF HSA	*0.08*	*0.15*
	CA State	*0.15*	*0.82*

Source: OSHPD, 2011-2013
*Indicates Focus Community

Two of the nine ZIP codes in Sacramento County had ED visit rates due to tuberculosis that were above the county and state benchmarks, both at 0.15 per 10,000 population. The Sacramento County ZIP code with the highest rate of ED visits related to tuberculosis was 95742 (Rancho Cordova/Folsom). None of

the ZIP codes in El Dorado County had elevated rates of ED visits related to tuberculosis. Examination of hospitalization rates due to tuberculosis showed that none of the ZIP codes in Sacramento County had elevated rates compared to the county benchmark. In El Dorado County, ZIP code 95667 (Placerville/Coloma) had an elevated hospitalization rate due to tuberculosis compared to the county benchmark.

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 is expected to be the second leading cause of disability worldwide. Mental illness is strongly correlated with many risk factors 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. Rates of ED visits and hospitalizations related to mental health conditions are provided in Table 18 as a way of examining mental health in the MHF HSA.

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	95608	392.75	331.15
	95610*	318.32	255.85
	95628	256.87	239.79
	95630	154.58	147.79
	95662	294.74	256.19
	95670*	240.88	212.21
	95683	148.86	155.76
	95742	115.20	108.49
	95827*	263.39	244.93
	Sacramento County	*271.38*	*227.04*
	95667*	252.38	258.67
	95672	151.50	159.97
	95682	203.34	187.34
	95762	124.39	121.65
	El Dorado County	*196.33*	*184.40*
	MHF HSA	*244.88*	*220.01*
	CA State	*149.93*	*186.92*

Source: OSHPD, 2011-2013
*Indicates Focus Community

Examination of ED visits related to mental health indicated that three of the nine ZIP codes in Sacramento County had elevated rates relative to the county benchmark. The three Sacramento County ZIP codes that exceeded the county rate of ED visits related to mental health were 95608 (Carmichael/Arden-Arcade), 95610 (Citrus Heights/Orangevale) and 95662 (Orangevale). In El Dorado County, two of the four ZIP codes had ED visit rates related to mental health that were above the county benchmark. The ZIP code

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

with the highest rate was 95667 (Placerville/Coloma), at 252.38 ED visits per 10,000 population. Examination of hospitalization rates related to mental health showed that five of the nine ZIP codes in Sacramento County had elevated rates compared to the county. The three ZIP codes with the highest rates of hospitalization related to mental health were again, 95608 (Carmichael/Arden-Arcade), 95662 (Orangevale) and 95610 (Citrus Heights/Orangevale). Two of the four ZIP codes in El Dorado County had elevated rates of ED visits related to mental health when compared to the county benchmark. The ZIP code with highest rate was again, 95667(Placerville/Coloma).

One of the major findings of the primary data was the high frequency of mental illness in the MHF 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 included in the primary data collection process discussed patients needing care for mental illness, but having a difficult time getting adequate care in the MHF HSA. One community member spoke about the challenges with seeking psychiatric care in the emergency department, that it is "*not uncommon to have those with SMI experiencing poor ER care, waiting in the hallways for 3 days during psychotic episodes" (FG_4).* A service provider stated, "*…we have a massive mental health population in patient and the emergency room" (KI_3).*

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_5).*

Percent – Adults Reporting Insufficient Social and Emotional Support

Aggregated data from the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System survey for 2006-2012 showed that 16.2 % of respondents in El Dorado County and 21.0% of respondents in Sacramento County, over the age of 18, indicated that they receive insufficient social and emotional support most of the time. These percentages were lower than the state percentage of 25.0%.

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 MHF HSA was ED visits and hospitalizations 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	95608	73.36	10.54
	95610*	74.40	10.33
	95628	41.31	8.87
	95630	22.03	6.56
	95662	47.44	10.68
	95670*	62.79	9.47
	95683	10.60	8.30
	95742	17.96	8.39
	95827*	65.87	9.10
	Sacramento County	*72.66*	*9.77*
	95667*	66.90	8.60
	95672	27.53	6.76
	95682	37.71	8.47
	95762	16.85	4.68
	El Dorado County	*60.46*	*7.65*
	MHF HSA	*48.60*	*8.73*
	CA State	*41.34*	*7.81*

Source: OSHPD, 2011-2013
*Indicates Focus Community

In Sacramento County, two of the nine ZIP codes had elevated rates of ED visits related to dental health issues when compared to the county benchmark. The two ZIP codes were 95610 (Citrus Heights/Orangevale) and 95608 (Carmichael/Arden-Arcade). In El Dorado County, only one of the ZIP codes, 95667 (Placerville/Coloma), had a high rate of ED visits related to dental health. Examination of hospitalization rates related to dental health indicated that three of the nine ZIP codes in Sacramento County had elevated rates compared to the county benchmark. The ZIP codes with elevated rates were 95662 (Orangevale), 95608 (Carmichael/Arden-Arcade) and 95610 (Citrus Heights/Orangevale). In El Dorado County, two of the four ZIP codes had elevated hospitalization rates related to dental health compared to the county benchmark. The ZIP codes with high rates were 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs).

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.

[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 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	95608	1.44	12.85	5.64
	95610*	1.90	12.75	5.64
	95628	2.15	10.07	4.35
	95630	1.09	10.48	5.00
	95662	1.14	12.89	7.15
	95670*	1.08	12.40	5.36
	95683	1.10	7.18	3.39
	95742	1.06	5.66	2.60
	95827*	0.81	13.48	4.77
	Sacramento County	*1.28*	*12.72*	*4.75*
	95667*	1.66	12.05	5.11
	95672	1.70	9.09	2.67
	95682	1.69	11.27	4.12
	95762	1.30	7.73	2.63
	El Dorado County	*2.11*	*10.35*	*3.97*
	MHF HSA	*1.55*	*11.41*	*4.89*
	CA State	*1.04*	*8.18*	*4.40*
	Healthy People 2020	*1.00*	--	--

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013
*Indicates Focus Community

In Sacramento County, ZIP codes 95628 (Fair Oaks/Carmichael), 95610 (Citrus Heights/Orangevale) and 95608 (Carmichael/Arden-Arcade) had the highest rates of mortality due to suicide when compared to the county benchmark. In El Dorado County, none of the ZIP codes showed high rates of mortality due suicide when compared to the county benchmark. However, all ZIP codes in El Dorado County exceeded the state rate of 1.04 deaths per 10,000 population. Four of the nine ZIP codes in Sacramento County showed high rates of ED visits due to self-inflicted injury. The ZIP code with the highest rate was 95827 (Rancho Cordova/La Riviera/Rosemont), at 13.48 ED visits per 10,000 population. In El Dorado County, ZIP codes 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs) showed elevated rates of ED visits due to self-inflicted injury when compared to the county benchmark. Six of the nine ZIP codes in Sacramento County showed elevated rates of hospitalization due to self-inflicted injury when compared to the county benchmark. The ZIP code with the highest rate was 95662 (Orangevale), at 7.15 hospitalizations per 10,000 population. In El Dorado County, two of the ZIP codes had elevated rates of hospitalizations due to self-inflicted injury when compared to the county, with 95667 (Placerville/Coloma) having the highest rate at 5.11 hospitalizations per 10,000 population.

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	95608	4.45	799.30	240.75
	95610*	4.33	818.34	204.26
	95628	3.34	644.06	208.39
	95630	2.56	520.57	139.93
	95662	2.62	774.26	200.86
	95670*	2.36	704.92	180.99
	95683	2.40	480.20	196.33
	95742	2.70	475.86	112.72
	95827*	3.82	846.96	192.57
	Sacramento County	*3.38*	*761.56*	*176.40*
	95667*	5.40	951.64	228.70
	95672	2.56	595.43	136.07
	95682	3.24	713.55	188.84
	95762	1.47	485.05	120.91
	El Dorado County	*4.49*	*806.32*	*179.30*
	MHF HSA	*3.37*	*697.34*	*186.69*
	CA State	*2.88*	*666.38*	*154.85*
	Healthy People 2020	*3.40*	--	--

Sources: Mortality: CDPH, 2012; ED Visits and Hospitalizations: OSHPD, 2011-2013
*Indicates Focus Community

Mortality rates due to unintentional injuries exceeded the county, state and Healthy People 2020 benchmarks in three of the nine ZIP codes in Sacramento County, with the highest rates found in 95608 (Carmichael/Arden-Arcade) and 95610 (Citrus Heights/Orangevale). In El Dorado County, only one of the four ZIP codes, 95667 (Placerville/Coloma), exceeded the county rate for mortality due to unintentional injury. Relative to the county benchmark, rates of ED visits due to unintentional injury were elevated in four of the nine ZIP codes in Sacramento County, with 95827 (Rancho Cordova/La Riviera/Rosemont) having the highest rate. In El Dorado County, only one of the four ZIP codes, 95667 (Placerville/Coloma), exceeded the county benchmark for ED visits due to unintentional injury. For hospitalization rates due to unintentional injury, seven of the nine ZIP codes in Sacramento County had higher rates than the county and state benchmarks. The ZIP code 95608 (Carmichael/Arden-Arcade), had the highest rate, at 240.75 hospitalizations per 10,000 population. In El Dorado County, two of the four ZIP codes had hospitalization rates that exceeded the county and state benchmarks. These two ZIP codes were 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs).

Risk Behaviors and Living Conditions in the MHF HSA

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 MHF HSA.

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 rates of ED visits and hospitalizations related 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**	95608	486.72	239.64
	95610*	471.65	217.68
	95628	298.51	174.55
	95630	183.01	109.09
	95662	408.71	212.15
	95670*	388.33	182.78
	95683	119.55	109.08
	95742	120.19	68.53
	95827*	442.77	215.43
	Sacramento County	*438.58*	*196.37*
	95667*	588.22	221.76
	95672	233.20	109.85
	95682	332.85	146.80
	95762	123.65	63.86
	El Dorado County	*473.71*	*165.17*
	MHF HSA	*351.04*	*171.07*
	CA State	*253.80*	*145.00*

Source: OSHPD, 2011-2013
coded under **Mental Health codes
*Indicates Focus Community

Examination of rates for ED visits related to substance abuse indicated that three of the nine ZIP codes in Sacramento County had elevated rates compared to the county benchmark. The three Sacramento County ZIP codes that exceeded the county rate for ED visits related to substance abuse were 95608 (Carmichael/Arden-Arcade), 95610 (Citrus Heights/Orangevale) and 95827(Rancho Cordova/La Riviera/Rosemont). Hospitalization rates due to substance abuse in Sacramento County exceeded the

[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.

county benchmark in four of the nine ZIP codes. The ZIP code with the highest rate in Sacramento County was 95608 (Carmichael/Arden-Arcade), at 239.64 hospitalizations per 10,000 population. In El Dorado County, 95667 (Placerville/Coloma), exceeded the county rate for ED visits and hospitalizations due to substance abuse.

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_2*. Key Informants from El Dorado County communities mentioned substance abuse and mental health issues as major concerns in the county, especially in the rural areas. One of the participants stated, "*substance abuse, mental health issues, suicide; those are our poor indicators of health, alcohol consumption is a big one here and I think that's because of the rural nature and the lack of public transportation, alcohol mixed with driving is something that we see a lot of" KI_9.*

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 and 21% of respondents in El Dorado County reported engaging in excessive alcohol consumption (more than 2 drinks per day for males and more than 1 per day for females), both percentages higher than the state percent of 17%.

Rate – Liquor Store Access per 100,000 Population

Data on liquor stores from the US Census Bureau for 2012 revealed that Sacramento County had 8.11 and El Dorado County had 9.94 liquor stores per 100,000 people, both of which are less than the state rate of 10.02 liquor stores per 100,000 population.

Percent – Home Expenditures Spent on Alcohol

Alcohol expenditure data from Nielsen showed the percent of at home expenditures on alcohol at the census tract level. Data for 2014 aggregated to the MHF HSA level showed that the percent of expenditures was at 15.3%, above the state percent at 12.9%.

Percent – Prevalence of Tobacco Usage

Data taken from the California Health Interview Survey for 2014 showed that the percent of smoking among adults and teens in Sacramento County was 14.3% and 15.1% in El Dorado County, both which exceeded the state benchmark of 10.8%.

Percent – Home Expenditures Spent on Tobacco

Tobacco expenditure data from Nielsen indicated the percent of home expenditures on tobacco at the census tract level. This indicator aggregated to the MHF HSA level revealed that the percent of expenditures for tobacco was 1.2%, higher than 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 MHF HSA. 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 MHF HSA. The key informant stated, *"It is just trying to bail the ocean with a teacup" (KI_2).*

Percent – Overweight and Obesity among Youth

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

	Percent Overweight	**Percent Obese**
Sacramento County	19.4%	17.5%
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, Sacramento County has a higher percentage of overweight youth compared to the state benchmark, yet has a lower percentage of obese youth than the state. The percentages of overweight and obese youth in El Dorado County are substantially lower than the state benchmarks.

Additionally, data by race and ethnicity for Sacramento County indicated that the percent overweight for White students was 17.6% compared to Black students at 21.7% and Hispanic students at 21.4%. In El Dorado County, the percent overweight for White students was 14.2% compared to Black students at 17.1% and for Hispanic students at 19.7%. 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 of infant mortality. According to data from the California Department of Public Health for 2012, the percent of mothers who reported breastfeeding their infants at birth was slightly lower for Sacramento County at 91.7% compared to the state percent at 93.0%, yet higher for El Dorado County at 96.9%. Data by race and ethnicity for Sacramento County revealed that while 95.3% of Whites reported breastfeeding, only 87.3% of Blacks, 93.5% of Hispanic/Latinos, 87.7% of Asians, and 92.3% of Native American/Alaskan Natives 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 MHF HSA.

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

[20] Ibid.

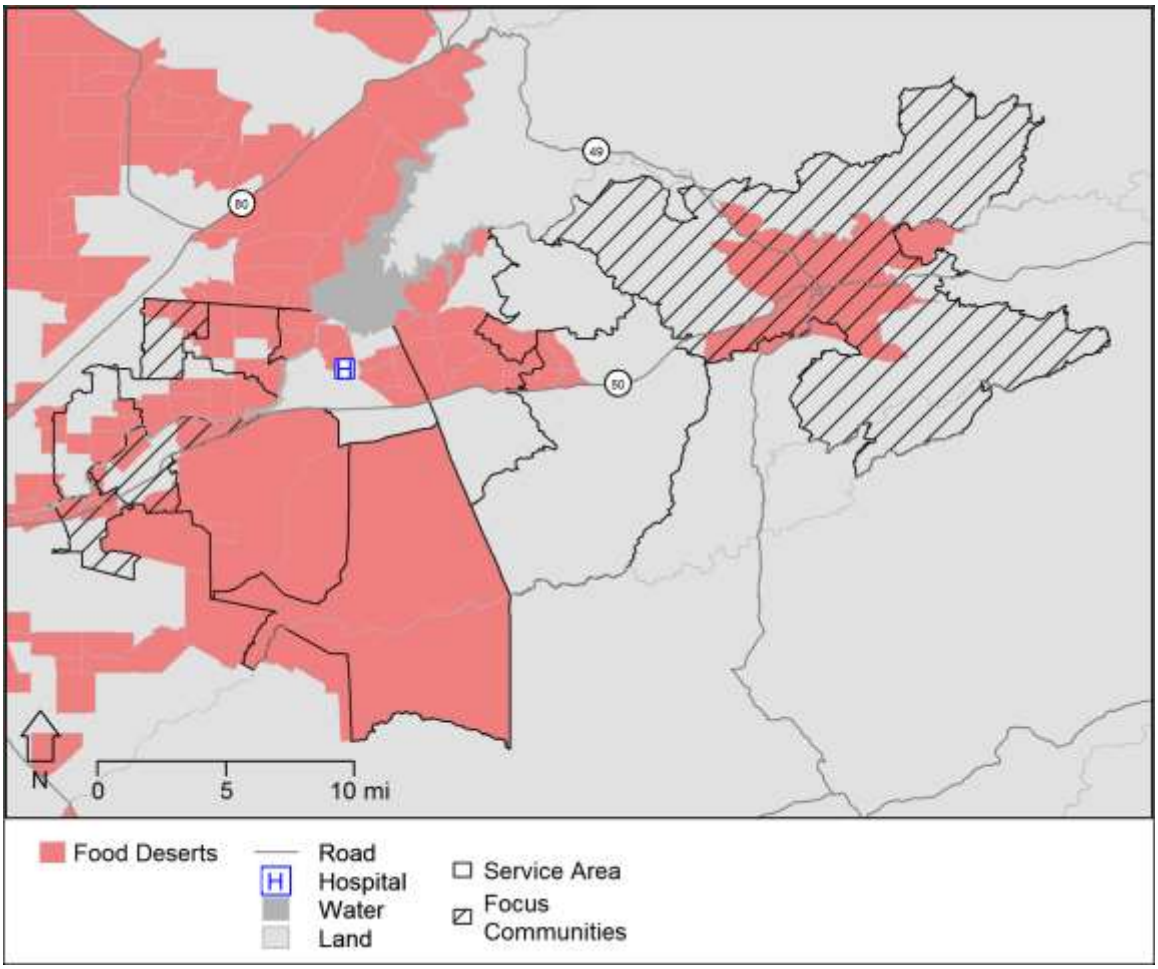

Figure 9: USDA Defined Food Deserts

As shown in Figure 9, five of the nine ZIP codes in Sacramento County were designated USDA defined food deserts, including the three Focus Communities, 95610 (Citrus Heights/Orangevale), 95670 (Rancho Cordova) and 95827 (Rancho Cordova/La Riviera/Rosemont). Two of the four ZIP codes in the El Dorado ZIP codes were designated USDA defined food deserts, including the Focus Community 95667 (Placerville/Coloma) and 95682 (Cameron Park/Shingle Springs).

Primary data highlighted low-income communities in Sacramento County that struggle with limited access to healthy, affordable foods. 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_14)*

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_14).*

Food desserts were also highlighted in El Dorado County. The county encompasses 1,805 square miles of rolling hills and mountainous terrain[21]. Communities living in the rural areas of the county have less access to food retailers and healthy, affordable food than a more densely-populated area, as was highlighted in the primary data. One participant stated, *"access can be more difficult in the more remote areas in the county…they may even have access issues getting to the grocery store" KI_7.*

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

According to Feeding America, the percentage of population with food insecurity in 2013 was higher for Sacramento County and lower for El Dorado County relative to the state level. Also, the percent receiving SNAP (Supplementary Nutrition Assistance Program) in 2011 was highest for Sacramento County compared to the state and El Dorado County percentages, as displayed in Figure 10.

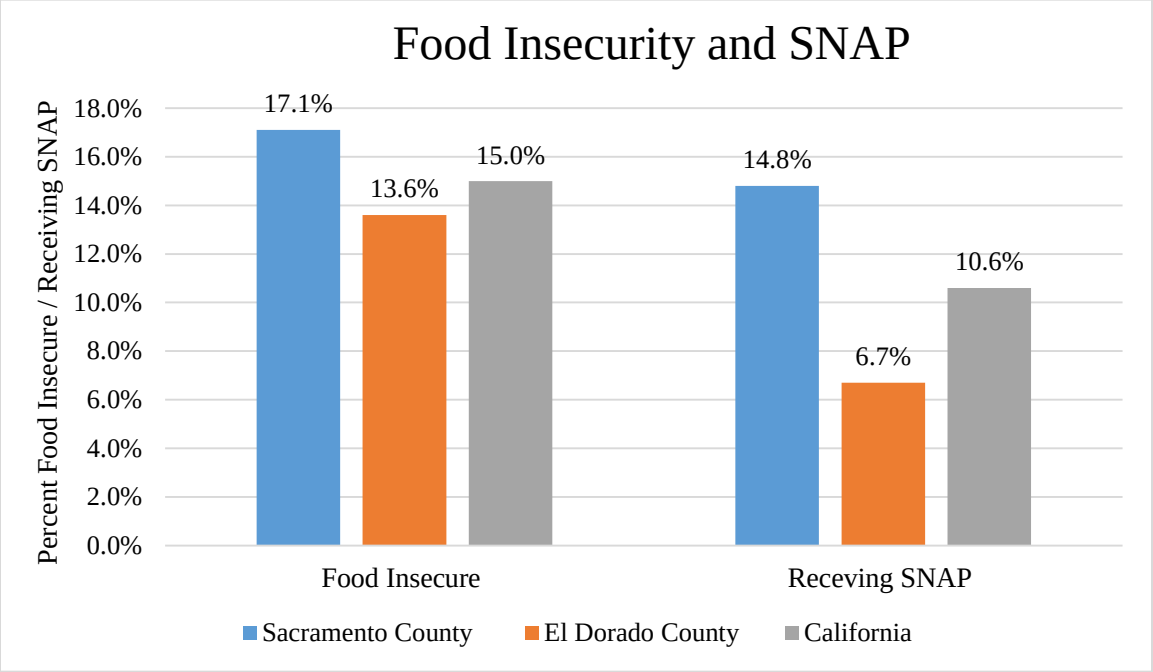

Figure 10: Percent Food Insecure and Percent Receiving SNAP

[21] County of El Dorado. (n.d.) *About Us*. Retrieved from: http://www.edcgov.us//AboutUs.aspx

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 code, 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 MHF HSA. Lighter areas indicate poor or no access to healthy food outlets and darker areas indicate greater access to healthy food outlets.

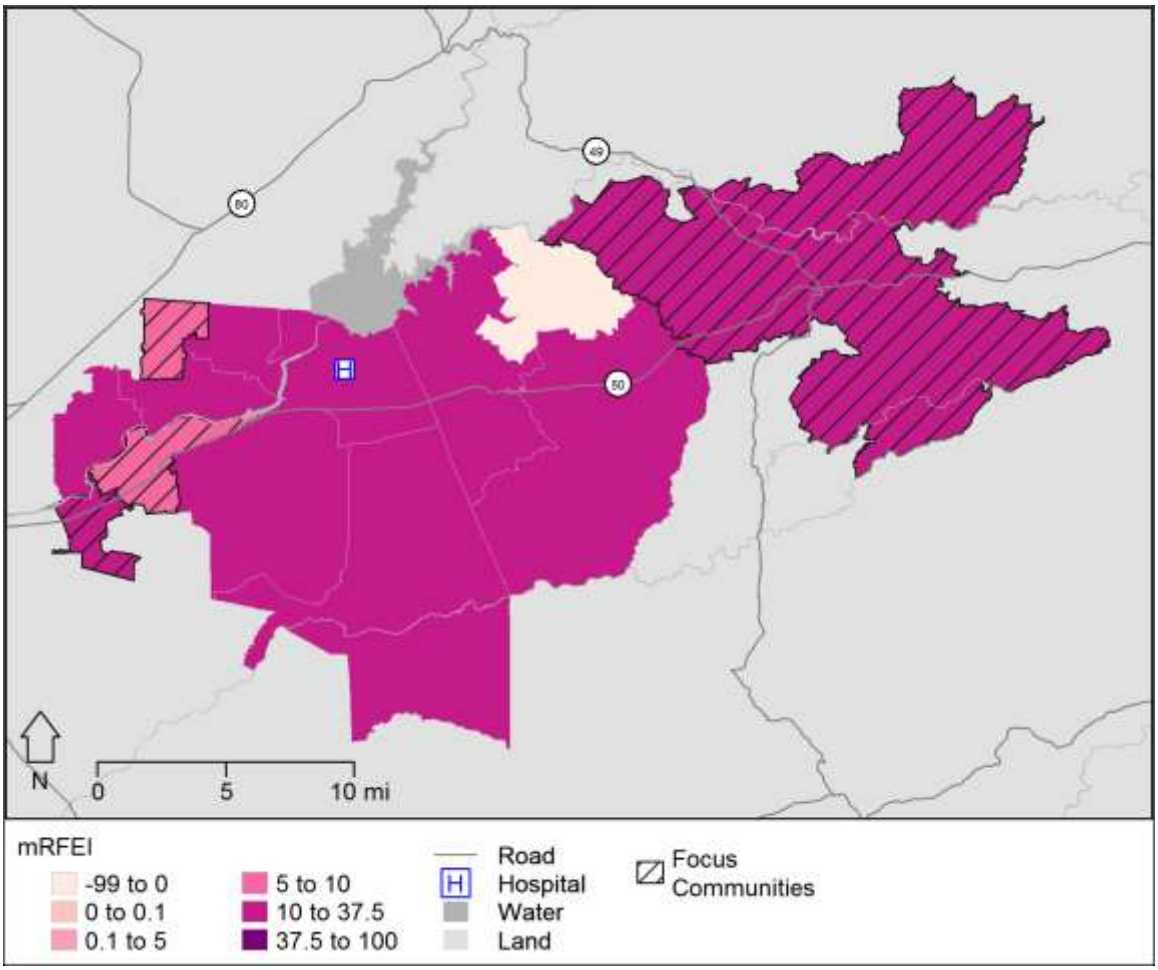

Figure 11: Modified Retail Food Environment Index (mRFEI)

As shown in Figure 11, few of the ZIP codes within the MHF HSA have low mRFEI scores, which indicate poor or no access to healthy foods. Specific mention are the ZIP code areas of 95672 (El Dorado Hills/Cameron Park) in El Dorado County and Focus Communities 95670 (Rancho Cordova) and 95610 (Citrus Heights/Orangevale) in Sacramento County, which had the lowest index values of the 13 ZIP codes that make up the MHF HSA. The ZIP code with the greatest index value, greater access to healthy food outlets, was ZIP code 95683 (Rancho Murieta).

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

According to business data reported by the U.S. Census Bureau, the rate of fast food restaurants for the MHF HSA was below the state rate of 74.51 per 100,000 population. However, the rate of grocery stores in the MHF HSA was also lower than the state rate of 21.51 per 100,000 population. Figure 12 below depicts the findings.

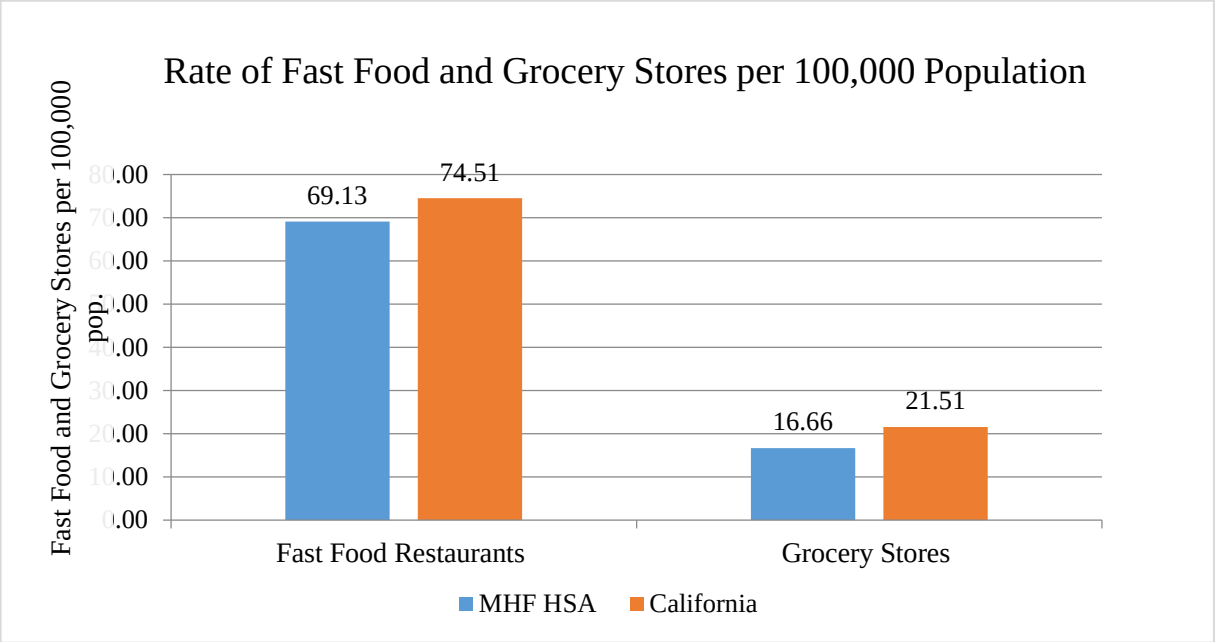

Figure 12: Fast Food Restaurants and Grocery Stores per 100,000 Population

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 reported eating less than five servings of fruits and vegetables daily, only slightly above the state percent at 47.40%. Examination by race and ethnicity in Sacramento County showed that 36.2% of Black and 43.0% of Hispanic/Latino youth reported eating less than five servings a day compared to Whites at 43.5%. El Dorado County showed that 58.3% of White youth report eating less than five servings a day, compared to Hispanic/Latino at 43.0%. No data were available for the Black population.

Percent – Home Expenditures Spent on Fruits and Vegetables and Soda

Results for the percent of at-home food expenditures on fruits and vegetables, as well as soda were notable for the MHF HSA. Data from Nielsen for 2014 showed the percent spent for fruits and vegetables for the HSA was 13.2%, lower than the state percent at 14.1%. However, the inverse is true for soda expenditures. The soda expenditure percent was 3.9%, above the state percent at 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 that indicated they perform no regular physical activity was 16.8% for Sacramento County, slightly higher than the state benchmark of 16.6%, while El Dorado showed 13.6% physically inactive adults. When examining physical inactivity among youth in grades 5, 7, and 9, Sacramento County showed 35.3% physical inactivity among youth, as reported using the FitnessGram Physical Fitness Test, while El Dorado County had 21.7% of youth classified as physically inactive. Both El Dorado and Sacramento County percentages fell below the state benchmark of 35.9%. Examination by race and ethnicity for Sacramento County revealed that while 30.5% of White youth in Sacramento County were classified as physically inactive,

42.3% of Blacks, 44.6% of Hispanic/Latino, 31.4% of Asian and 36.6% 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 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.

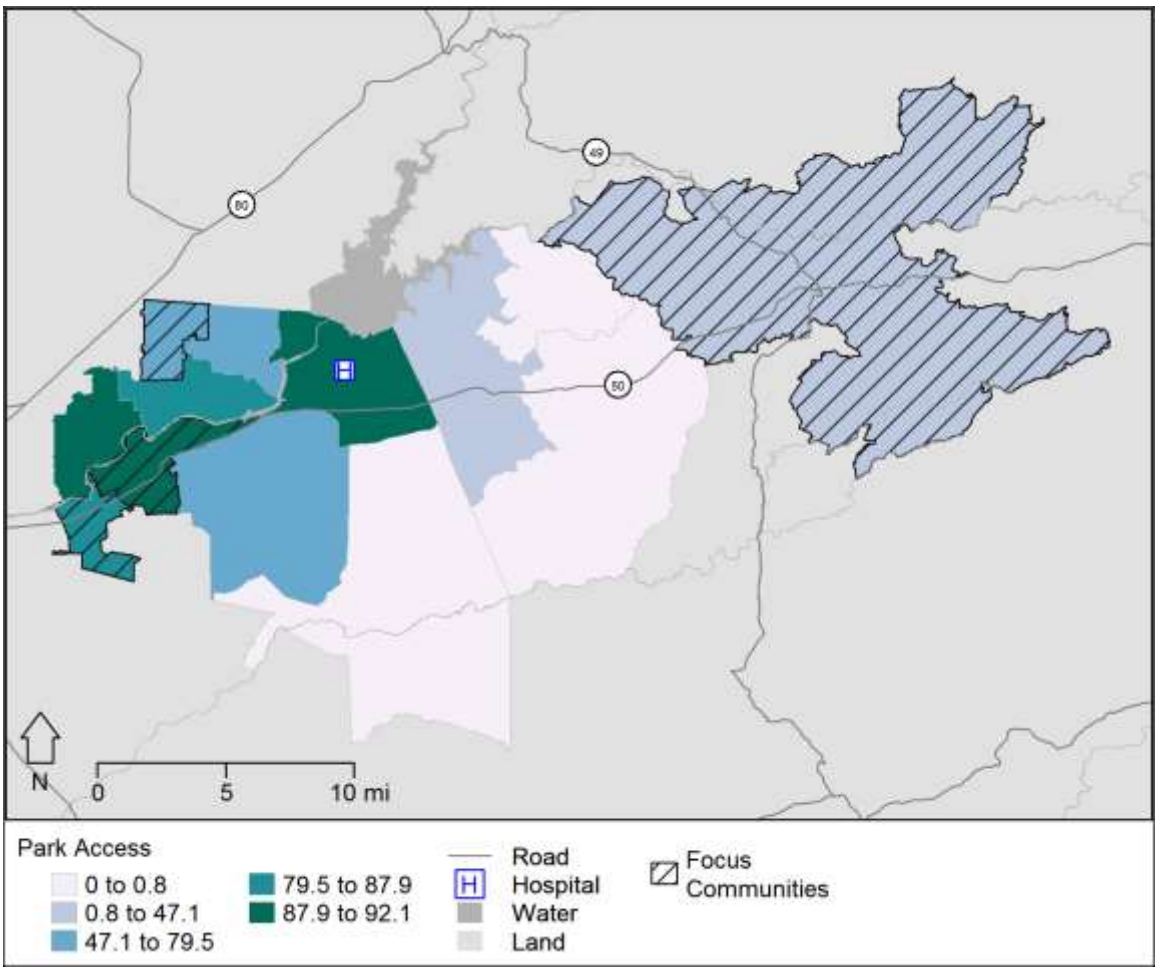

Figure 13: Percent of Population within ZIP Code that Live within One-Half Mile of a Park

As displayed in Figure 13, accessibility to a park varied among the 13 ZIP codes within the MHF HSA. ZIP codes 95683 (Rancho Murieta), 95672 (El Dorado Hills/Cameron Park) and 95682 (Cameron Park /Shingle Springs) had the least access to a park within the HSA, with zero percent of residents living within one-half mile of a park. 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 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_12)

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 years

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 HSA. Data from 2013 indicates that the national rate for teen births (age 15-19) currently sits at 26.5 per 1,000 live births. [22] Figure 14 shows the teen birth rate for the MHF HSA.

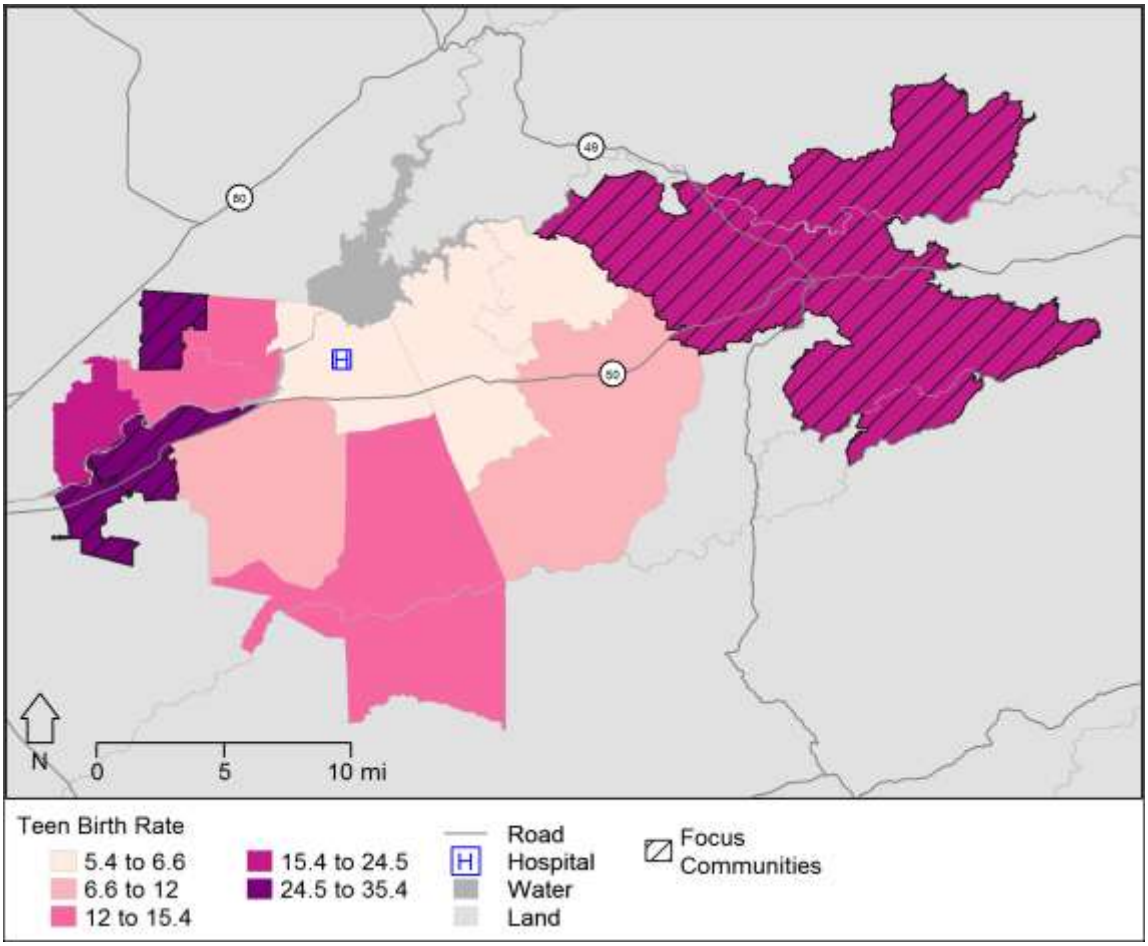

Figure 14: Teen Birth Rate for 15-19 Year Olds per 1,000 Live Births

Three of the 13 ZIP codes in the MHF HSA 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 95610 (Citrus Heights/Orangevale) with a rate of 35.34 teen births per 1,000, 95670 (Rancho Cordova) with a rate of

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

31.31 teen births per 1,000, and 95827 (Rancho Cordova/La Riviera/Rosemont) with a rate of 28.84 teen births per 1,000. In El Dorado County, 95667 (Placerville/Coloma) had a rate of 17.20 teen births per 1,000, which exceeded the county benchmark of 12.80 teen births per 1,000.

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, knowledge of where community members are infected by STIs helps to target interventions for treatment and prevention. Table 24 displays incidence rates for chlamydia and gonorrhea by ZIP code for 2014 compared to county and state benchmarks. Incidence rates are a measure or 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	95608	33.86	7.80
	95610*	41.31	6.69
	95628	23.46	5.86
	95630	18.22	3.45
	95662	26.42	6.05
	95670*	47.13	12.02
	95683	14.16	-
	95742	32.68	-
	95827*	56.16	14.91
	Sacramento County	*47.07*	*12.51*
	95667*	15.31	3.62
	95672	-	-
	95682	20.62	2.03
	95762	13.47	1.71
	El Dorado County	*17.02*	*2.65*
	CA State	*45.34*	*11.68*

Source: Sacramento County Public Health, 2014
*Indicates Focus Community

Incidence rates for chlamydia in Sacramento County were above both the county and state benchmarks in 95827 (Rancho Cordova/La Riviera/Rosemont) and 95670 (Rancho Cordova). In El Dorado County, the incidence rate for chlamydia was above that of the county in ZIP code 95682 (Cameron Park/Shingle Springs). The incidence rate for gonorrhea in 95827 (Rancho Cordova/La Riviera/Rosemont) was the only ZIP code with available data that exceeded the Sacramento County benchmark. In El Dorado County, the highest incidence rate for gonorrhea was found in 95667 (Placerville/Coloma), at a rate of 3.62 new cases per 10,000 population.

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	95608	4.03	3.60	2.16	2.66
	95610*	4.10	2.00	1.68	1.08
	95628	2.85	2.44	1.51	1.19
	95630	1.22	1.83	0.43	1.50
	95662	2.95	1.92	1.06	0.76
	95670*	4.15	2.62	1.12	1.19
	95683	0.64	1.17	0.00	0.61
	95742	0.92	2.93	0.47	2.09
	95827*	5.60	3.50	1.99	2.17
	Sacramento County	*5.53*	*3.95*	*2.23*	*2.78*
	95667*	1.22	1.32	0.66	0.21
	95672	0.00	0.00	0.00	0.00
	95682	1.39	0.73	0.81	0.14
	95762	0.28	0.37	0.00	0.11
	El Dorado County	*1.31*	*1.31*	*0.81*	*0.65*
	MHF HSA	*2.62*	*2.07*	*1.09*	*1.20*
	CA State	*3.20*	*4.58*	*1.95*	*3.36*

Source: OSHPD, 2011-2013

**HIV/AIDS is considered a subcategory of STIs in the ICD 9 diagnostic codes.

*Indicates Focus Community

As is indicated in Table 25, rates of ED visits due to STIs in Sacramento County were elevated in only one of the nine ZIP codes, 95827(Rancho Cordova/La Riviera/Rosemont). However, ZIP codes 95670 (Rancho Cordova), 95610 (Citrus Heights/Orangevale) and 95608 (Carmichael/Arden-Arcade) had ED visit rates due to STIs that exceeded the state rate of 3.20 ED visits per 10,000 population. In El Dorado County the rate of ED visits due to STIs was higher in 95682 (Cameron Park/Shingle Springs) when compared to the county rate. In Sacramento County, none of the ZIP codes had elevated rates of hospitalization due to STIs, ED visits due to HIV/AIDS or of hospitalization due to HIV/AIDS when compared to county benchmarks. None of the ZIP codes in El Dorado showed elevated rates of ED visits or hospitalization due to HIV/AIDS when compared to county benchmarks; however, 95667 (Placerville/Coloma) exceeded the county rate for hospitalizations related to STIs.

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

The CDC reported that for 2010, the prevalence of HIV/AIDS in the MHF HSA was 272.4 cases per 100,000 population, lower than the state rate of 363.0 cases per 100,000. Data by race and ethnicity for Sacramento County showed that Hispanic/Latinos had a rate of 229.7 and Whites had a rate of 289.12 cases per 100,000, both much lower compared to Blacks who had a rate of 670.03 cases per 100,000. El Dorado County showed that Whites had a rate of 90.38 cases and that Hispanic/Latinos had a higher rate at 122.96 cases per 100,000 population. No data were available for the prevalence of HIV/AIDS among Blacks in El Dorado County.

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.

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 residents within the MHF HSA. The indicators are organized in accordance to the BARHII model, discussed previously, in the sections: physical environment, social environment, economic/work environment, and service environment.

Physical Environment

Examination of the physical environment of the MHF HSA includes 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.[23] 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 MHF 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 MHF HSA that are within one-half mile from a transit stop.

[23] *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

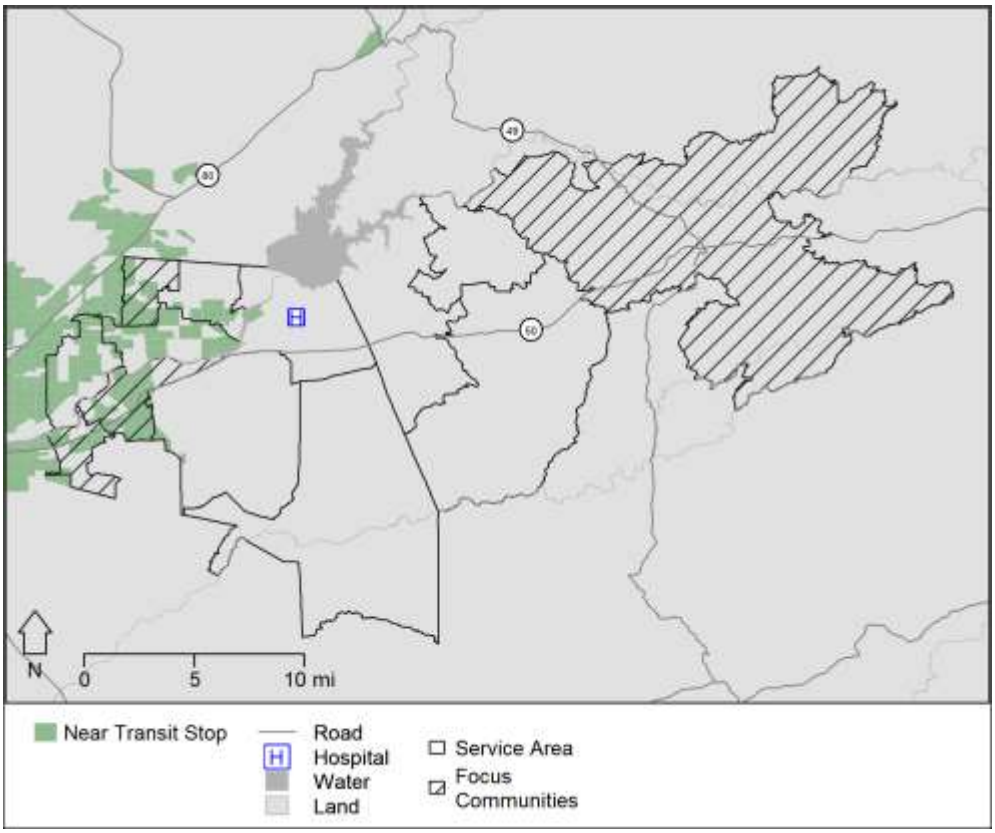

Figure 15: Locations in the HSA within One-Half Mile of a Transit Stop

In Figure 15, grey shaded portions of the map are locations that are more than a half-mile from a transit stop. As the figure displays, many of the MHF HSA communities do not have transit stops within one-half mile. Transportation is particularly limited in El Dorado County, where all areas of the four HSA ZIP codes are more than one-half mile from a transit stop.

Percent – Households with No Vehicle

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 MHF HSA.

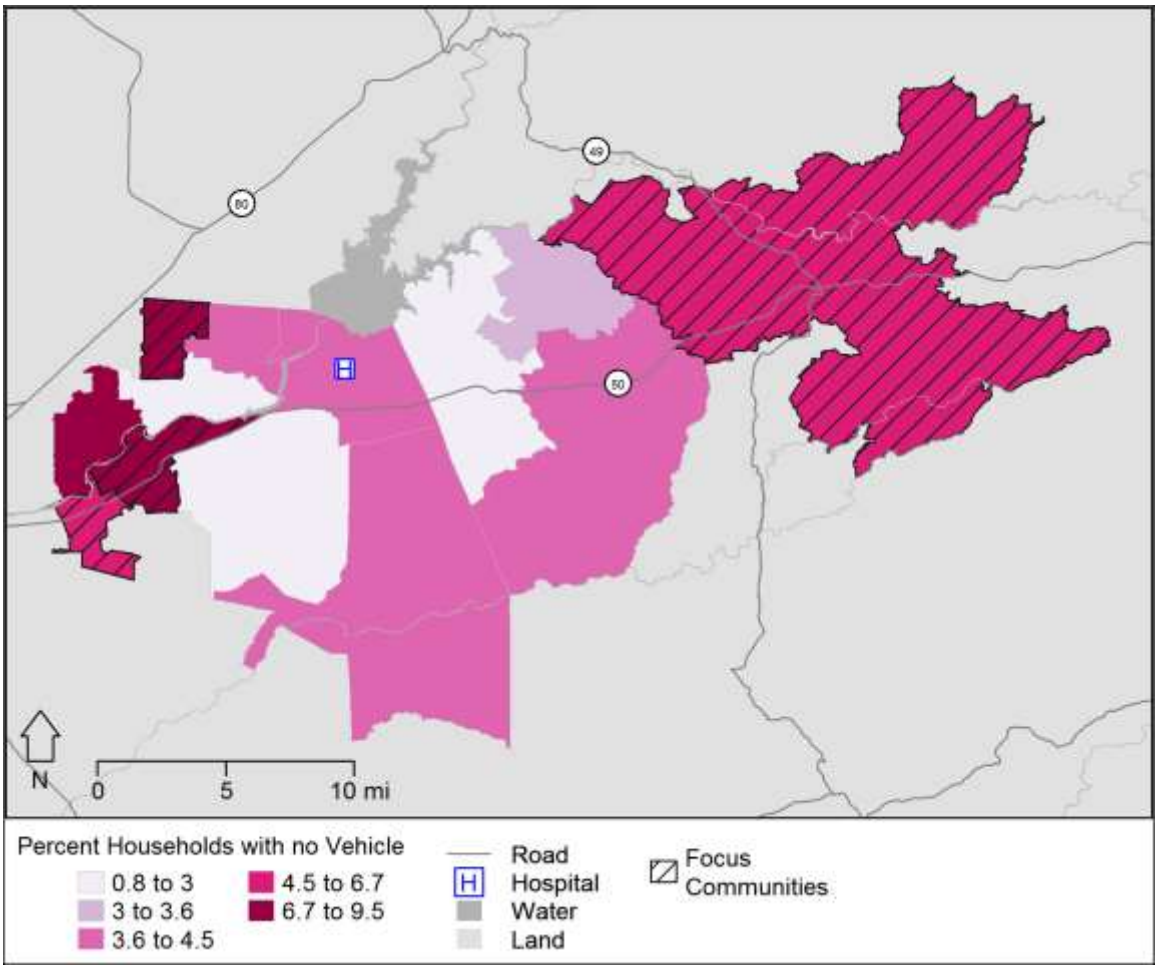

Figure 16: Percent Households with No Vehicle

The percent of households with no vehicle was 7.8% for the state, 7.6% in Sacramento County, and 4.5% in El Dorado County. As Figure 16 shows, few of the ZIP codes in the MHF HSA have a high percent of households with no vehicle. The two ZIP codes with the highest percentages of households with no vehicle were seen in the Sacramento County ZIP code 95610 (Citrus Heights/Orangevale) at 9.5% and in the El Dorado County ZIP code 95667 (Placerville/Coloma) at 5.9%.

Lack of safe and affordable transportation was mentioned as a significant barrier for HSA residents, and is the sixth prioritized health need for the MHF 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 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_10)*

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_10).*

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_3).* 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 accessing care related to transportation for the elderly and stated:

> *Because we are a little bit of an older county, we also have a very large chronic disease population and they require a lot of care, frequent care, and sometimes the access to specialty care is more difficult to get and their transportation needs again are more significant (KI_7).*

The key informant also discussed challenges of accessing medical care in the rural areas:

> *There are also some very more remote areas of the county and with that comes difficulties with access including things like transportation problems and difficulty getting to appointments or accessing medical services (KI_7)*

Percent – Workers That Commute More than 60 Minutes to Work

Long commute times are associated with increased likelihood of being overweight, having higher blood pressure, having increased stress and neck pain, increasing exposure to pollution, and having other negative health effects.[24] Figure 17 displays the percent of workers in each ZIP code which commute more than 60 minutes to work.

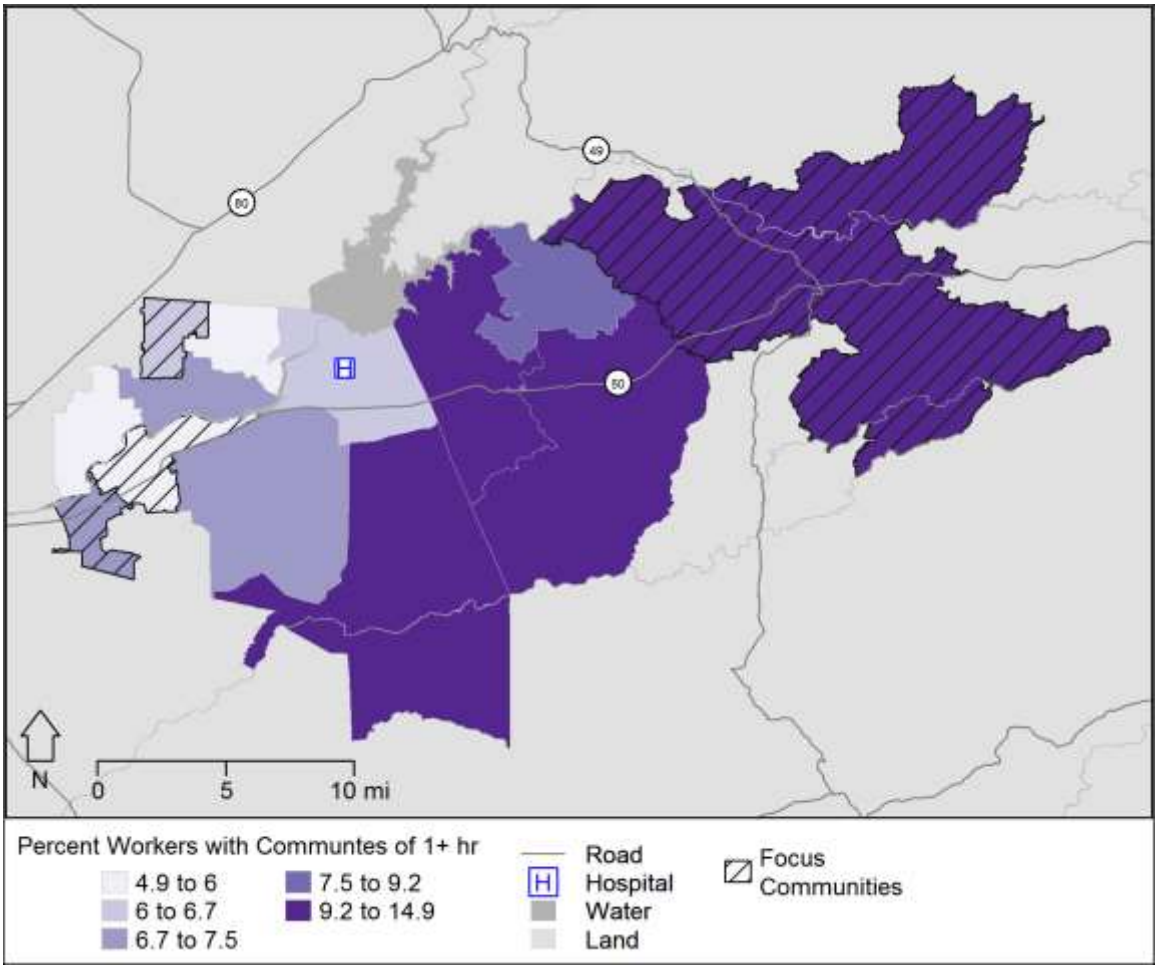

Figure 17: Percent Workers with Commutes of 1+ Hour

Many of the ZIP Codes within the MHF HSA had a high percentage of residents commuting more than 60 minutes to work. ZIP code 95667 (Placerville/Coloma) had the highest percent of residents commuting more than 60 minutes, at 14.9%, followed by ZIP code 95683 (Rancho Murieta), at 14.2%.

[24] 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/

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

As displayed in Figure 18, data from the U.S. Census Bureau indicted that 77.5% of respondents in the MHF HSA over the age of 16 years reported commuting to work alone, higher than the state percent at 73.2%. The Census data also indicated that 2.4% of respondents the MHF HSA stated that they walk or bike to work, below the state percent of 3.8%.

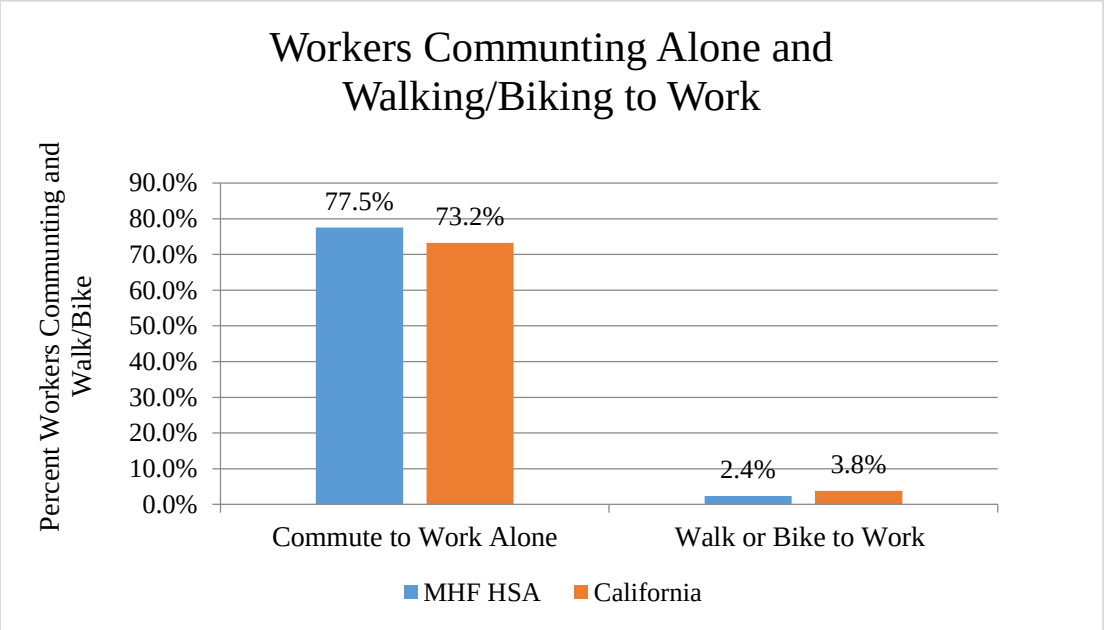

Figure 18: Percent of Workers Commuting to Work Alone and Walking or Biking to Work

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 the MHF HSA was 6.04 compared to 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

In Sacramento County, ZIP codes 95608 (Carmichael/Arden-Arcade), 95628 (Fair Oaks/ Carmichael) and 95630 (Folsom) had the highest number of fatal traffic accidents. In El Dorado County, ZIP codes 95667 (Placerville/Coloma) and 95762 (El Dorado Hills) had the highest number of 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.

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, showed that the MHF HSA rate of fatal accidents involving a motor vehicle and/or pedestrians was below the state rate, displayed below in Figure 19.

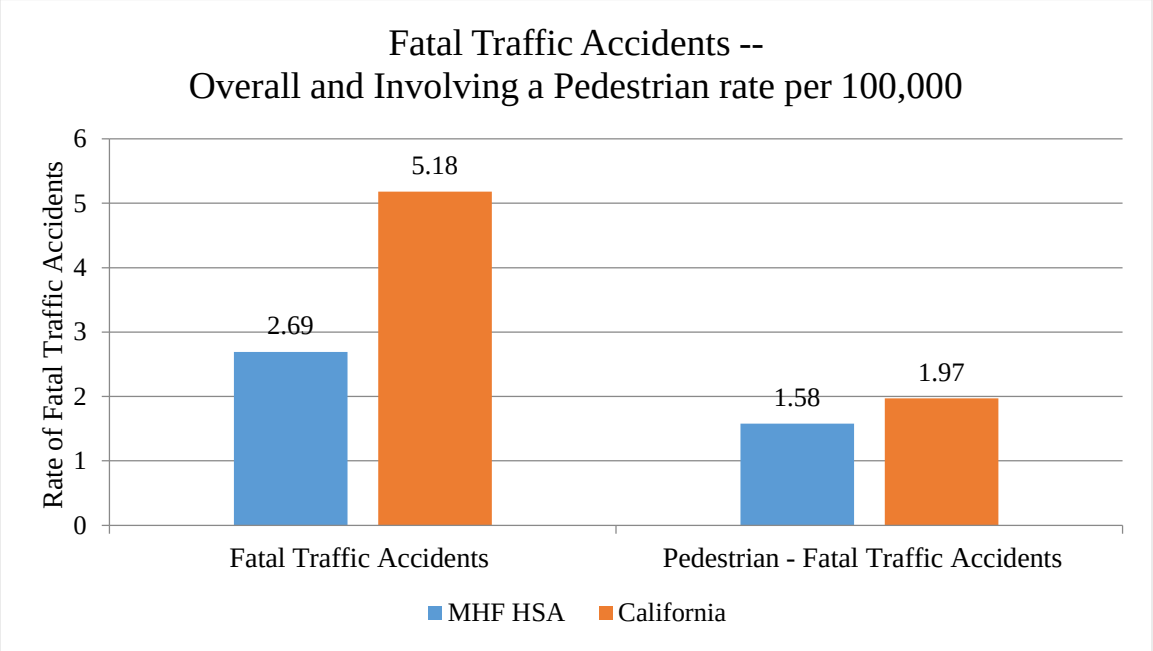

Figure 19: Rate of Fatal Accidents Overall and Involving a Pedestrian

Key informants spoke of concerns with the built environment in many of the ZIP codes in the MHF HSA. One major concern in the rural communities of El Dorado County was the poor road conditions and infrastructure with roads having little to no sidewalks and no street lights. As one key informant stated, *"We have very limited sidewalks, the roads are narrow and windy, and walking on a side of a road can be a hazard including biking on the side of the road, that infrastructure is limited" (KI_7).*

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.[25] Table 26 shows rates for various housing indicators by ZIP code for the MHF HSA as an indicator of housing stability.

[25] 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 Renting

ZIP Code	Percent Housing Vacancy	People per Housing Unit	Percent Renting
95608	7.7%	2.34	42.6%
95610*	6.4%	2.54	19.2%
95628	5.5%	2.57	9.6%
95630	5.1%	2.62	44.5%
95662	4.8%	2.61	50.0%
95670*	6.9%	2.75	32.6%
95683	4.9%	2.44	31.3%
95742	4.0%	3.38	26.6%
95827*	6.6%	2.76	42.3%
Sacramento County	*7.2%*	*2.72*	*43.3%*
95667*	10.4%	2.56	7.9%
95672	10.2%	2.91	25.7%
95682	7.8%	2.73	14.2%
95762	3.8%	3.01	26.2%
El Dorado County	*23.1%*	*2.64*	*25.2%*
CA State	*8.6%*	*2.94*	*44.7%*

Source: Census, 2013
*Indicates Focus Community

The largest percent of housing vacancy in Sacramento County was in ZIP code 95608 (Carmichael/Arden-Arcade), which exceeded the Sacramento County benchmark of 7.2%. The percent of housing vacancy was exceptionally high for El Dorado County at 23.1% housing vacancy. High vacancy rates are indicators of housing market conditions[26], 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. ZIP code 95742 (Rancho Cordova/Folsom) had the highest people-per-housing unit rate in Sacramento County, at 3.38 people per housing unit. In El Dorado County, three of the four ZIP codes had high rates of people per housing unit, when compared to the county benchmark. 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. In Sacramento County, ZIP codes 95662 (Orangevale) and 95630 (Folsom) showed the highest percentages of renters, at 50.0% and 44.5%, respectively. In El Dorado County, ZIP codes 95762 (El Dorado Hills) and 95672 (El Dorado Hills/Cameron Park) had the highest percentages of people renting, at 26.2% and 25.7%, respectively.

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:

> *"There is very little low-income housing, hardly any and there are very little apartments. So for those who cannot necessarily afford a house the choices are difficult and minimal, then there are usually multiple families in one location. For the folks that have less disposable income, it is more challenging to find livable housing because of that" (KI_7).*

Challenges in accessing housing created many challenges for community members in maintaining their health and transitioning to more stability. One service provider stated:

[26] 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

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

Availability and affordability of housing was also a big concern for women looking to escape abusive relationships in El Dorado County. As one community member mentioned, *"There's no kind of transitional housing…you're either in the shelter or you're with a family member or you're on the street" (FG_9).*

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

The United States Department of Housing and Urban Development (HUD) reported in 2013 that the total number of HUD-funded housing units in Sacramento County was 357.08 units per 10,000 housing units, which fell below the state rate of 368.32 units per 10,000. El Dorado County had a much lower rate of 99.14 units per 10,000. 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 reported that in 2013 the percent of households defined as substandard was 44.8% in Sacramento County, which was lower than the El Dorado County and state benchmark 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 MHF HSA included the examination of two indicators: mortgage payments greater than 30% of the household's income and rental housing payments greater than 30 % of the household's income. Figures 20 and 21 show the two indicators across the MHF HSA.

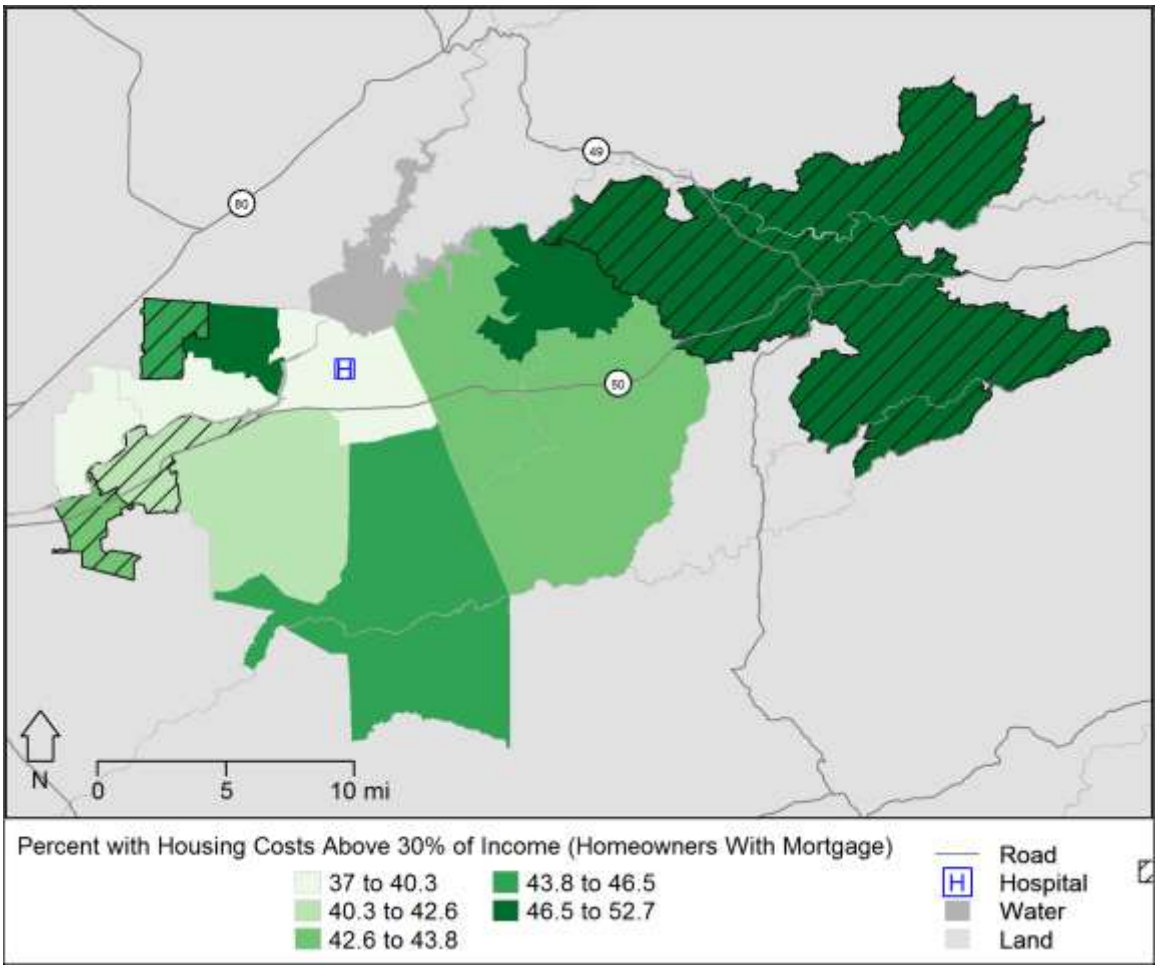

Figure 20: Percent of Residents by ZIP Code with a Mortgage Payment Above 30% of Their Household Income

Two of the 13 ZIP Codes within the MHF HSA had more than 50% of residents with a housing mortgage cost of greater than 30% percent of their household income. The ZIP codes with the highest percentages included 95672 (El Dorado Hills/Cameron Park) at 52.7% and 95667 (Placerville/Coloma) at 50.2%.

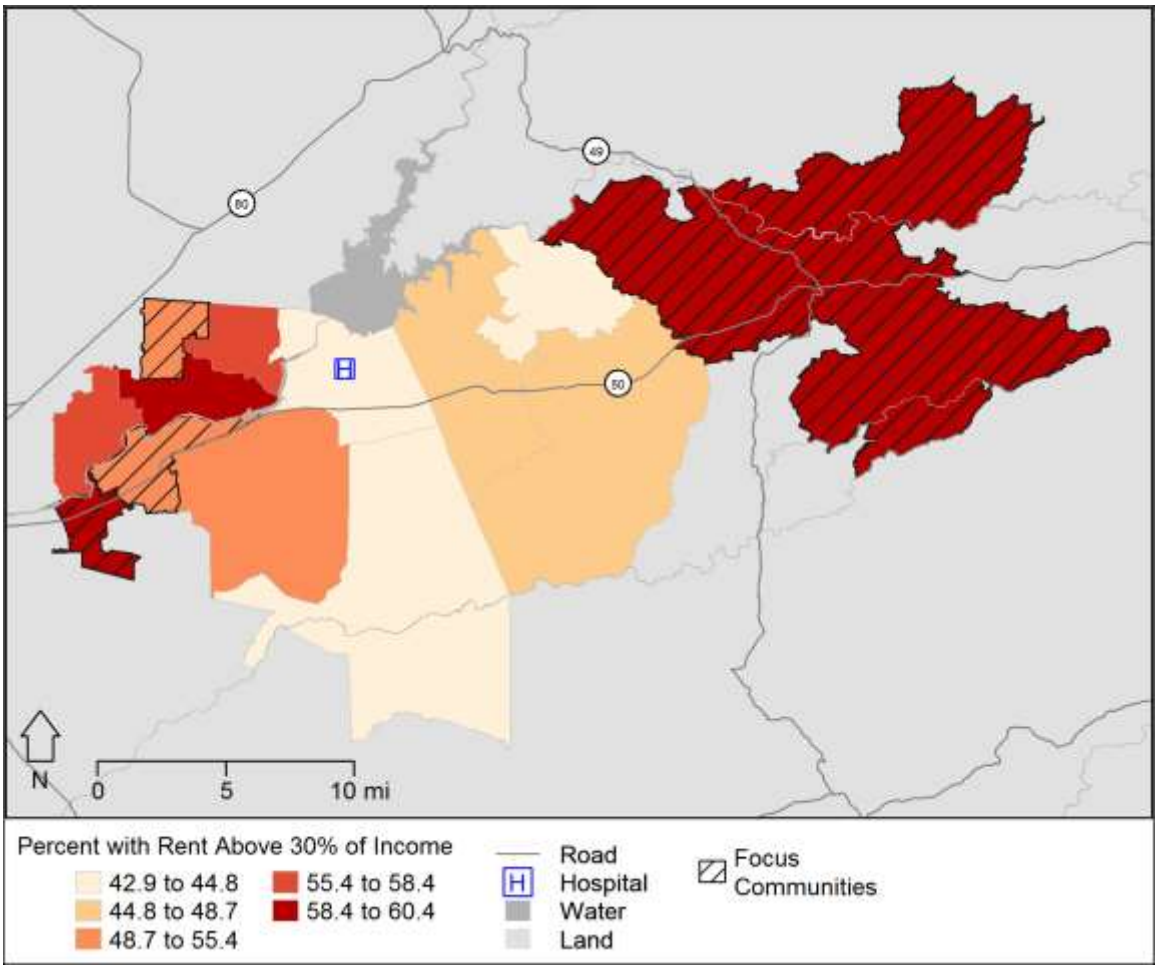

Figure 21: Percent of Residents by ZIP Code with Housing Rental Payments Above 30% of Their Household Income

Many of the ZIP codes within the MHF HSA had high rental housing costs. The percent of residents with rent above 30% of their income was 57.5% for Sacramento County, 27.9% for El Dorado County and 56.9% for the state. Four of the 13 ZIP codes in the MHF HSA had a high percentage of residents with rental costs above 30% of their income when compared to the state percent. The highest percentages were seen in ZIP codes 95608 (Carmichael/Arden Arcade), 95827 (Rancho Cordova/La Riviera/Rosemont), 95667 (Placerville/Coloma), and 95628 (Fair Oaks/Carmichael).

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*.[27] This tool was designed to identify California communities that are disproportionately burdened by multiple sources of pollution. The tool combines 13 types of pollution and 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.

[27] *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 MHF 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 Figure 22 census tracts with darker colors have higher pollution burden scores.

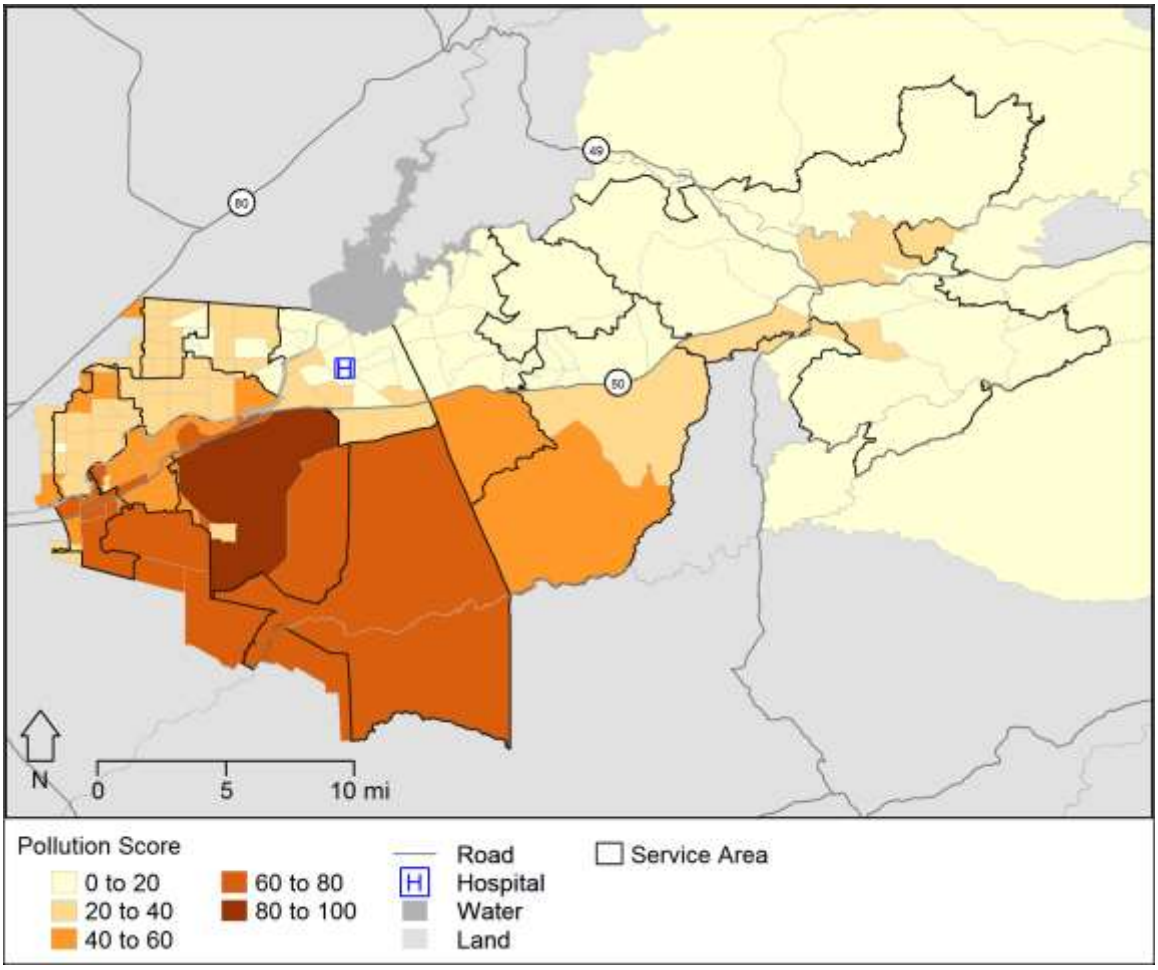

Figure 22: Pollution Burden Score by Census Tracts in the HSA

Figure 22 shows that a large portion of the ZIP code 95742 (Rancho Cordova/Folsom) 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 their concerns over smoking in low-income housing units affecting their health and living conditions. Trash removal from community streets and weed abatement were also mentioned as important parts of helping to remove the pollution from many areas of the MHF HSA. Participants were also concerned with pesticide use surrounding residential areas.

Social Environment

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

Rates – Major Crime, 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 MHF HSA and are compared to an estimated county benchmark.

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 City	460.40	66.66	390.24	3.50	32.98
Sacramento County Sheriff	363.10	52.36	308.85	1.90	38.64
Sacramento County	*344.68*	*54.56*	*288.94*	*1.18*	*35.44*
Placerville	343.83	60.68	283.16	0.00	50.08
South Lake Tahoe	327.77	54.08	272.75	0.93	84.39
El Dorado County Sheriff	202.67	21.55	180.79	0.33	64.32
El Dorado County	*174.86*	*14.15*	*160.44*	*0.27*	*62.42*

Source: California Department of Justice, 2013
*Combination of violent crimes, property crimes, and arson

Table 27 indicates that the Isleton and Sacramento City jurisdictions have noticeably higher major crime, violent crime and property crime rates compared to the Sacramento county benchmark and the other seven jurisdictions listed within the county. Within El Dorado County, the Placerville and South Lake Tahoe jurisdictions had noticeably higher major crime, violent crime, and property crime rates compared to county benchmarks. The South Lake Tahoe jurisdiction had the highest arson rate in El Dorado County, 0.93 per 10,000 population. Domestic violence rates within the Citrus Heights jurisdiction were the highest among all ZIP codes within the MHF HSA, with a domestic violence rate of 127.17 per 10,000 population—almost four times the Sacramento County benchmark.

Primary data collected from the 95667 (Placerville/Coloma) reflected domestic violence as a major issue in El Dorado County communities. As one community member mentioned,

There's definitely a stigma… I feel like mental health and domestic violence a lot of times go hand in hand, at least that's my experience, and domestic violence is brushed under the rug here in El Dorado County. This center has saved my life … and is the only place that anyone in El Dorado County who is in a domestic violence situation can turn to (FG_9).

Rates – ED Visits and Hospitalizations due to Assault

Understanding safety in the MHF 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 MHF HSA. Figure 23 and 24 show ED visits and hospitalizations related to assaults in the area.

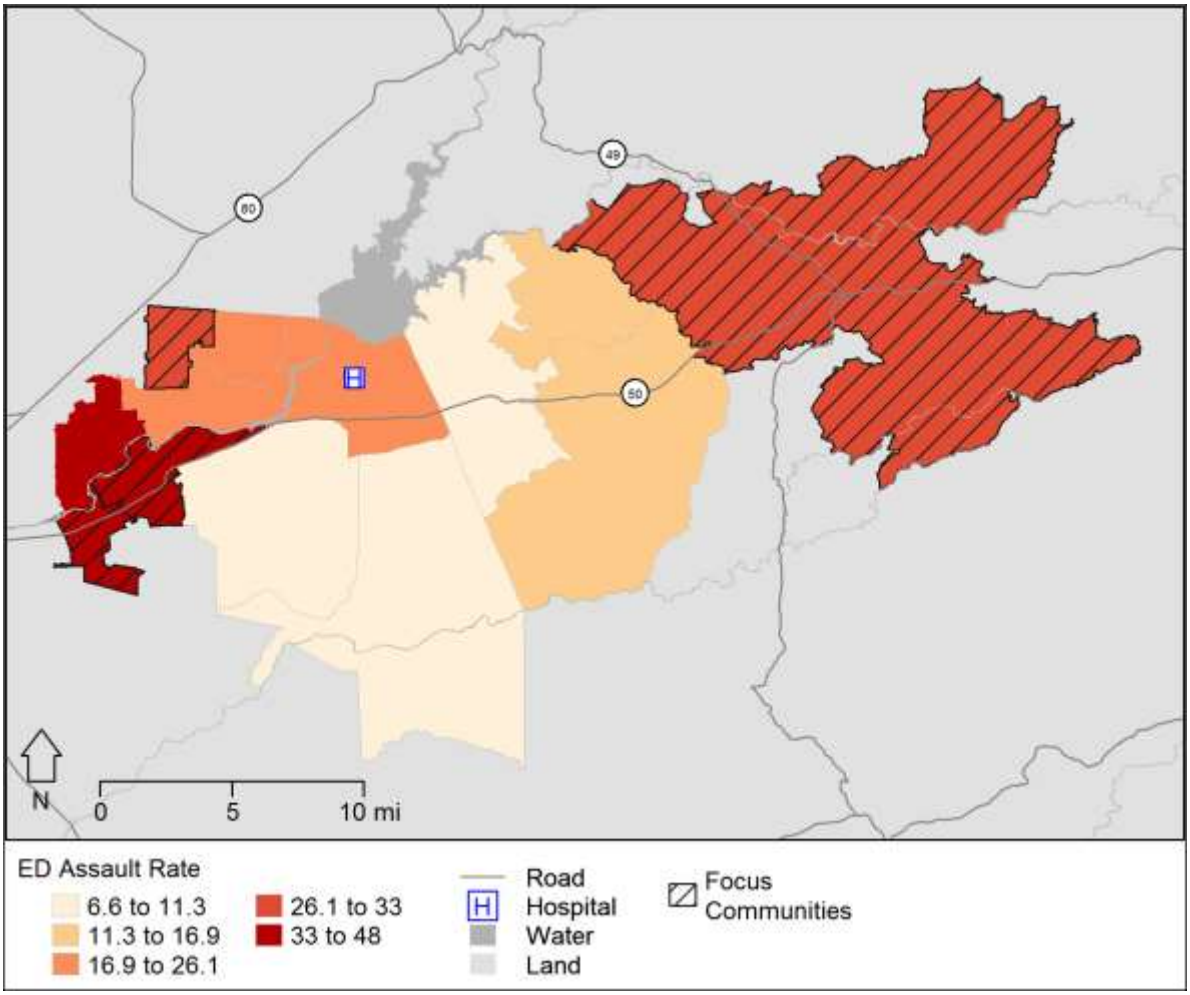

Figure 23: ED Visits Related to Assault

The El Dorado County ZIP code 95667 (Placerville/Coloma) and the Sacramento County ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) had the highest rates of ED visits due to assault in the MHF HSA, ranging from 28.30 to 47.97 ED visits per 10,000 population. Although 95670 (Rancho Cordova), 95608 (Carmichael/Arden-Arcade) and 95610 (Orangevale) also showed high rates of ED visits due to assault, they did not surpass the respective county rates.

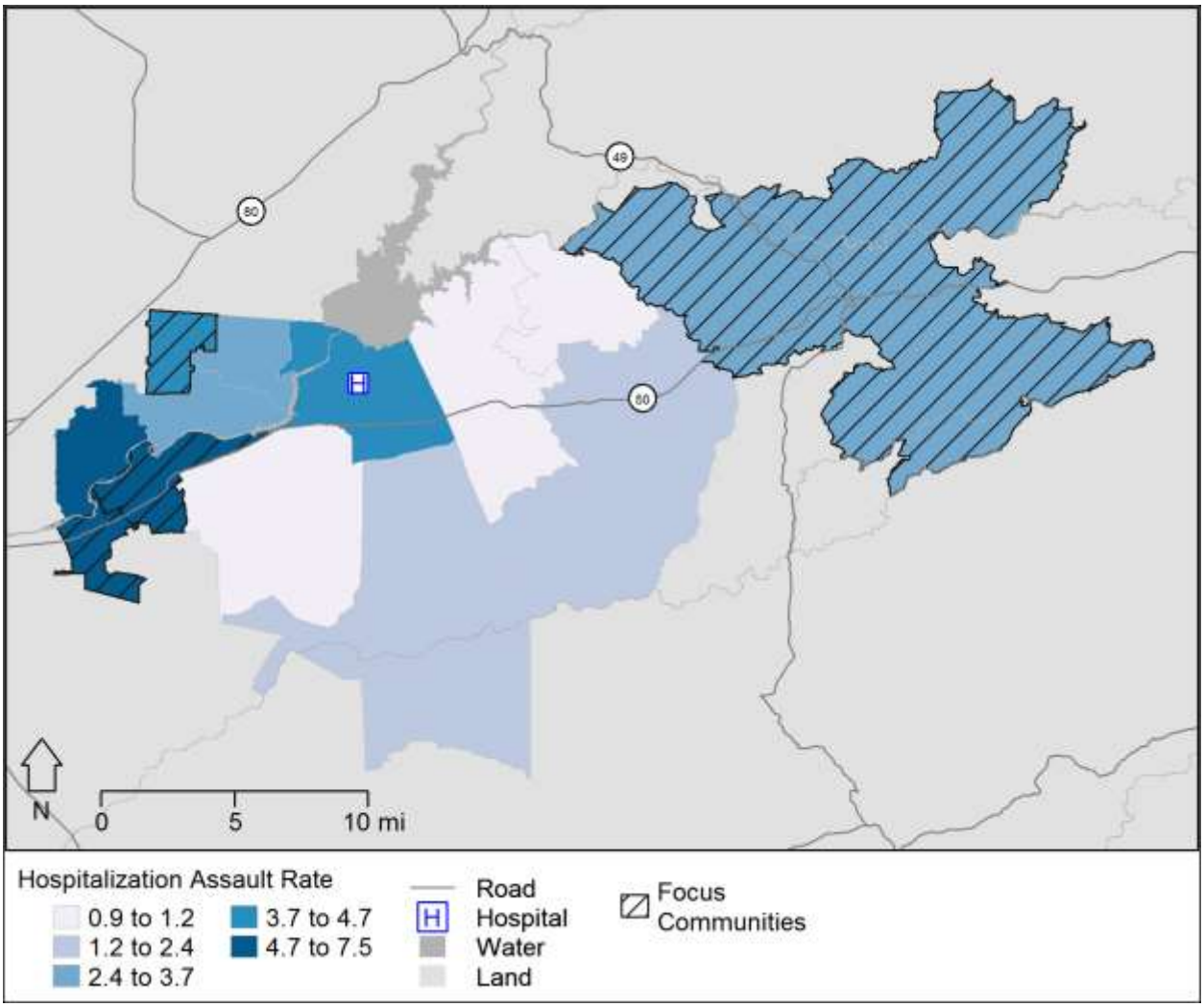

Figure 24: Hospitalization Related to Assault

As Figure 24 shows, the geographic pattern seen for hospitalizations due to assault is similar to that of ED visits. The El Dorado County ZIP code 95667 (Placerville/Coloma) and the Sacramento County ZIP code 95827 (Rancho Cordova/La Riviera/Rosemont) had the highest rates of hospitalization due to assault, exceeding the respective county benchmarks. ZIP code 95827 had a rate of 7.49 hospitalizations per 10,000 population, which exceeded both the Sacramento County rate of 5.78 and the state benchmark of 3.88 hospitalizations per 10,000 population. ZIP code 95667 (Placerville/Coloma) had a rate of 2.70 assault-related hospitalizations per 10,000 population.

Rate – Mortality due to Homicide

Data from the California Department of Public Health on the mortality rate due to homicide for 2010-2012 revealed that the MHF HSA had a lower rate of mortality due to homicide, with a rate of 3.77 deaths per 100,000, relative to the state rate at 5.15 deaths per 100,000 population.

Economic and Work Environment

Economic stability is crucial to overall health and wellbeing. 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	95608	15.0%	$51,981
	95610*	13.3%	$96,278
	95628	8.2%	$96,165
	95630	15.4%	$54,322
	95662	13.7%	$50,928
	95670*	12.1%	$73,720
	95683	9.2%	$98,547
	95742	13.6%	$64,991
	95827*	13.2%	$54,915
	Sacramento County	*13.7%*	*$55,064*
	95667*	10.1%	$93,209
	95672	11.5%	$77,718
	95682	8.3%	$119,382
	95762	15.3%	$57,468
	El Dorado County	*12.0%*	*$69,297*
	CA State	*11.5%*	*$61,094*

Source: Census, 2013

*Indicates Focus Community

As Table 28 shows, the percent of unemployment among residents in Sacramento County was highest in ZIP codes 95630 (Folsom) at 15.4% and 95608 (Carmichael/Arden-Arcade), at 15.0%, both over the Sacramento County percent of 13.7%. In El Dorado County, the ZIP code with the highest percent unemployed was 95762 (El Dorado Hills) at 15.3 %, which is above the county rate at 12.0%. Four of the nine ZIP codes in Sacramento County had median annual incomes below the county and state benchmarks, with the lowest median income in 95662 (Orangevale) at $50,928. In El Dorado County, the only ZIP with a median income below that of the county and state was 95762 (El Dorado Hills) with a median income of $57,468.

Percent – Population Living in Poverty (Total Population, Families with Children, Single Female-Headed Households, and Elderly Households)

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 Below 100% Federal Poverty Level	Percent Families with Children in Poverty	Percent Single Female Headed Households (FHH) in Poverty	Percent Elderly Households in Poverty
Poverty	95608	16.6%	19.7%	31.5%	3.4%
	95610*	6.8%	4.2%	27.4%	0.0%
	95628	4.4%	7.1%	35.6%	2.8%
	95630	12.5%	15.6%	29.4%	1.9%
	95662	14.9%	15.9%	29.3%	1.3%
	95670*	10.2%	10.9%	20.9%	1.7%
	95683	4.6%	3.6%	15.3%	1.8%
	95742	7.6%	6.3%	14.7%	0.7%
	95827*	16.7%	21.7%	39.2%	1.4%
	Sacramento County	*17.6%*	*20.1%*	37.6%	*1.9%*
	95667*	2.2%	0.0%	0.0%	0.8%
	95672	7.6%	7.4%	24.1%	0.9%
	95682	3.7%	2.9%	4.4%	1.4%
	95762	12.6%	15.5%	30.6%	2.3%
	El Dorado County	*9.0%*	*9.5%*	*24.6%*	*1.3%*
	CA State	*15.9%*	*17.8%*	*36.8%*	*2.3%*

Source: Census, 2013

*Indicates Focus Community

In all Sacramento County ZIP codes within the MHF HSA, a lower percentage of the population was living below the Federal Poverty Level (FPL), relative to the county benchmark of 17.6%. However, ZIP codes 95608 (Carmichael/Arden-Arcade) and 95827 (Rancho Cordova/La Riviera/Rosemont) exceeded the state level for percentage of households below the FPL. The ZIP Code 95827 (Rancho Cordova/La Riviera/Rosemont) also showed a high percentage of families with children and single female-headed households living in poverty, when compared to county and state benchmarks. Two of the nine ZIP codes in Sacramento County had percentages of elderly households in poverty that were above the county rate. These two ZIP codes were 95608 (Carmichael/Arden-Arcade) and 95628 (Fair Oaks/Carmichael), at 3.4% and 2.8%, respectively. The El Dorado ZIP code 95762 (El Dorado Hills) showed a high percentage of households living below 100% FPL, as well as among families with children and single female-headed households. Within El Dorado County, ZIP codes 95762 (El Dorado Hills) and 95682 (Cameron Park/Shingle Springs) had a higher percentage of elderly households living in poverty when compared to the 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 clearly stated, *"Poverty does not discriminate" (KI_15).* 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_15)

Percent – Population Uninsured

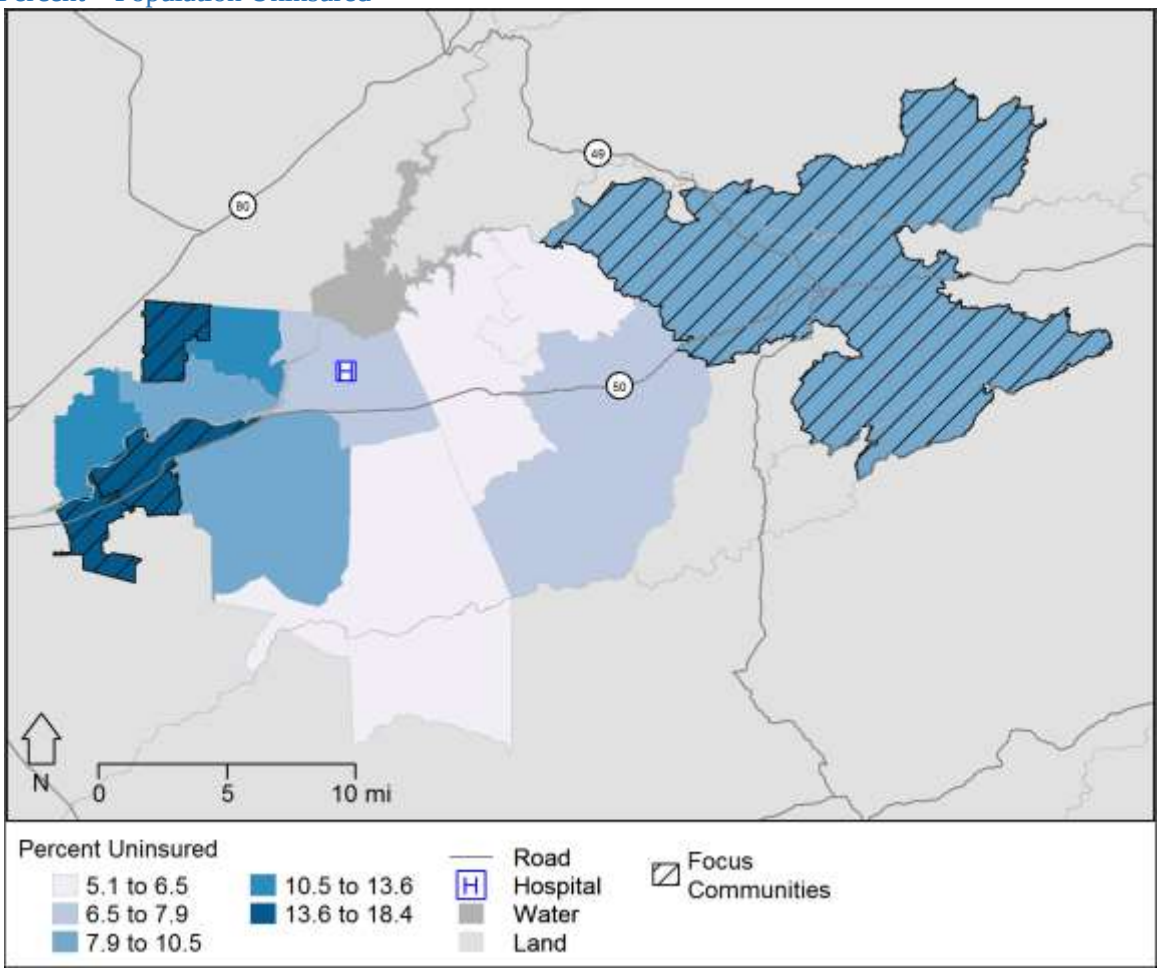

Figure 25: Percent Uninsured by ZIP Code in the HSA

The percent of the population without health insurance was 14.6% in Sacramento County and 10.2% in El Dorado County, both below the state benchmark of 17.8%. The ZIP codes with the highest percent uninsured were 95610 (Citrus Heights/Orangevale) at 18.4% and 95670 (Rancho Cordova) at 15.3%. Primary data findings related to health insurance are discussed in the "Access to care" section of this report.

Service Environment

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

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 was 79.2 per 100,000 population in Sacramento County in 2012, compared to the state rate of 77.2 per 100,000. El Dorado County had limited access to primary care physicians compared to both the Sacramento County and state rates, with only 69.2 primary care physicians per 10,000 population.

Area – Health Professional Shortage Area – Primary Care

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).[28]

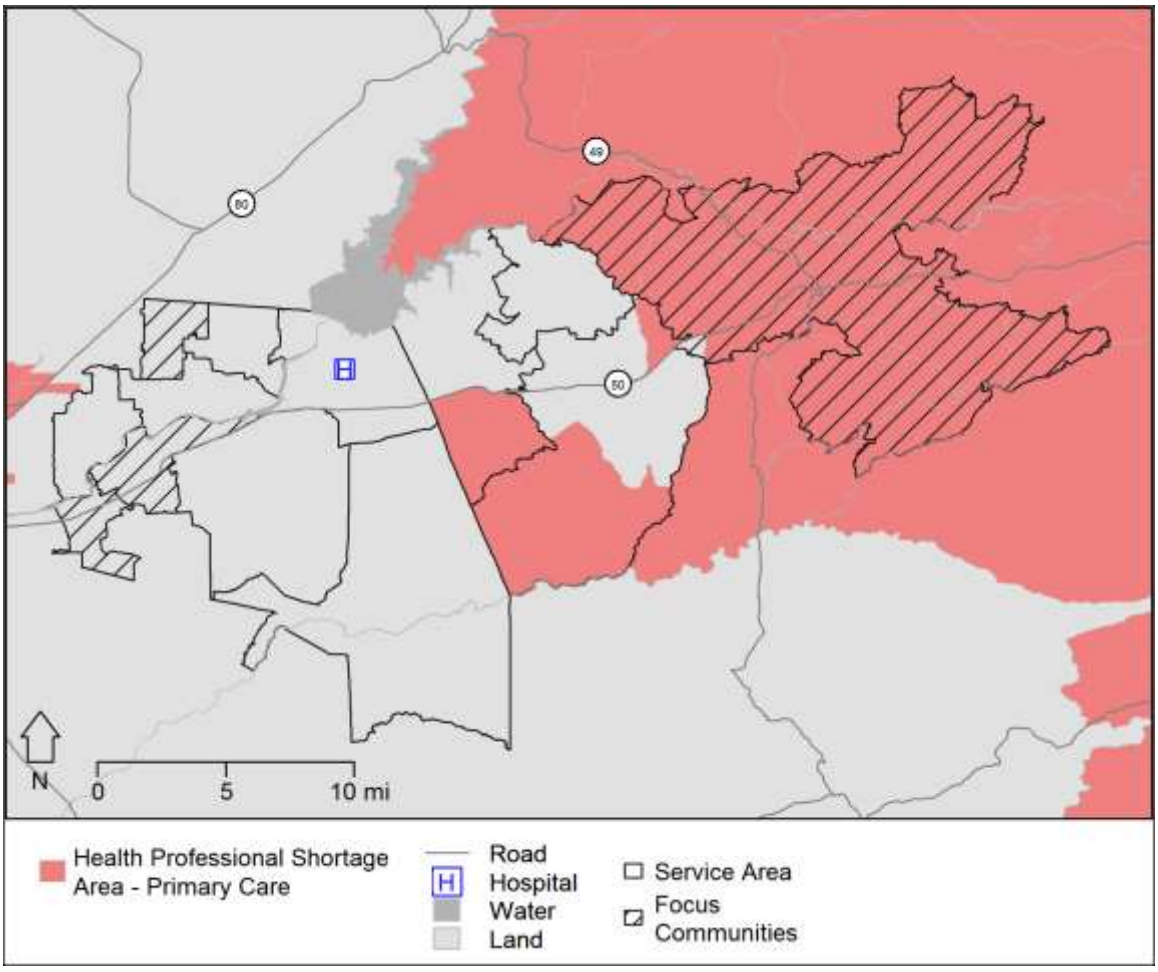

Figure 26: Health Professional Shortage Area- Primary Care

As represented in Figure 26, three of the 13 ZIP codes in the MHF HSA were designated HPSAs for Primary Care, with all three of the ZIP codes belonging to El Dorado County. These ZIP codes included

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

the entirety of 95667 (Placerville/Coloma), half of 95682 (Cameron Park/Shingle Springs), and half of 95762 (El Dorado Hills).

One of the biggest findings in the primary data was the need for increased access to primary care for residents of Focus Communities, and is the third highest prioritized health need for the MHF 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 accepting new patients, it's extremely common*" (FG_5). 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_27).* 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_5).*

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_17).*

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	95608	77.5%	6.6%
	95610*	78.4%	6.0%
	95628	82.8%	5.5%
	95630	89.7%	6.3%
	95662	81.8%	6.2%
	95670*	78.8%	6.5%
	95683	86.8%	6.8%
	95742	89.2%	6.8%
	95827*	76.1%	5.6%
	Sacramento County	*81.4%*	*6.9%*
	95667*	70.3%	7.1%
	95672	82.2%	6.8%
	95682	80.9%	5.9%
	95762	88.2%	6.2%
	El Dorado County	*78.6%*	*6.3%*
	MHF HSA	*81.1%*	*6.0%*
	CA State	*83.6%*	*6.8%*

Source: CDPH, 2010-2012
*Indicates Focus Community

Data revealed that fewer mothers receive prenatal care in the first trimester in four of the nine ZIP codes in Sacramento County, when compared to the county benchmark. The ZIP code with the lowest percentage of mothers who received prenatal care within their first trimester was 95827 (Rancho Cordova/La Riviera/Rosemont), at 76.1%. In El Dorado County, the ZIP code with the lowest percentage of mothers who received prenatal care within their first trimester was 95667 (Placerville/Coloma), at 70.3%. None of the ZIP codes in Sacramento County showed a higher percent of low-birth weight babies relative to the county benchmark. However, in El Dorado County, there were two ZIP codes with a higher percent of low-birth weight babies relative to the county benchmark. These ZIP codes included 95667 (Placerville/Coloma) and 95672 (El Dorado Hills/Cameron Park).

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 MHF HSA was below the state rate of 1.97 centers 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 was 62.69 per 10,000 population for El Dorado County, 80.23 per 10,000 for Sacramento County, and 83.17 per 10,000 population at the state level. 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.

Area – Health Professional Shortage Area – Mental Health

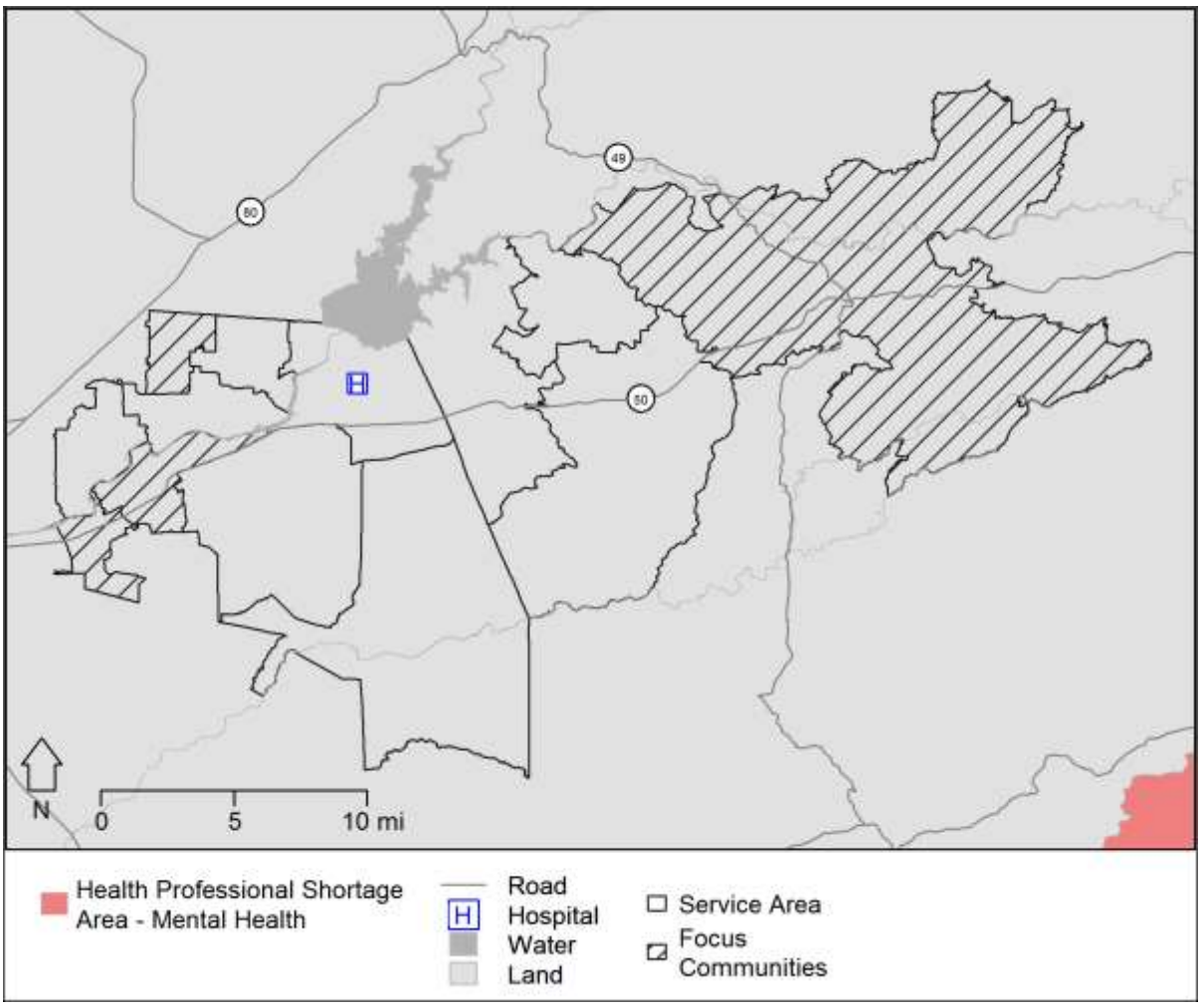

Figure 27: Health Professional Shortage Area- Mental Health

Data from the U.S. Department of Health and Human Services for 2015 revealed that the rate of mental health providers was 161.2 per 100,000 population for MHF HSA, compared to the state rate of 157.0 per 100,000 population. As shown in Figure 27, none of the ZIP codes within the HSA were designated as a shortage area.

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 was 79.2 per 100,000 population for El Dorado County and 71.9 per 100,000 population for Sacramento 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 Sacramento County or El Dorado County. 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.

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 79.4%, slightly below the state percent at 80.4%, while the El Dorado County graduation rate was 89.5%, above the state benchmark. Rates for Sacramento County by race and ethnicity showed that 84.1% of Whites and 89.7 % of Asians graduate in four years compared to 68.3 % of Blacks, 72.9% of Hispanic/Latinos, 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. Both key informants and community members stressed the importance of access to quality education for residents of MHF HSA.

Percent – Adults over the Age of 25 with No High School Diploma

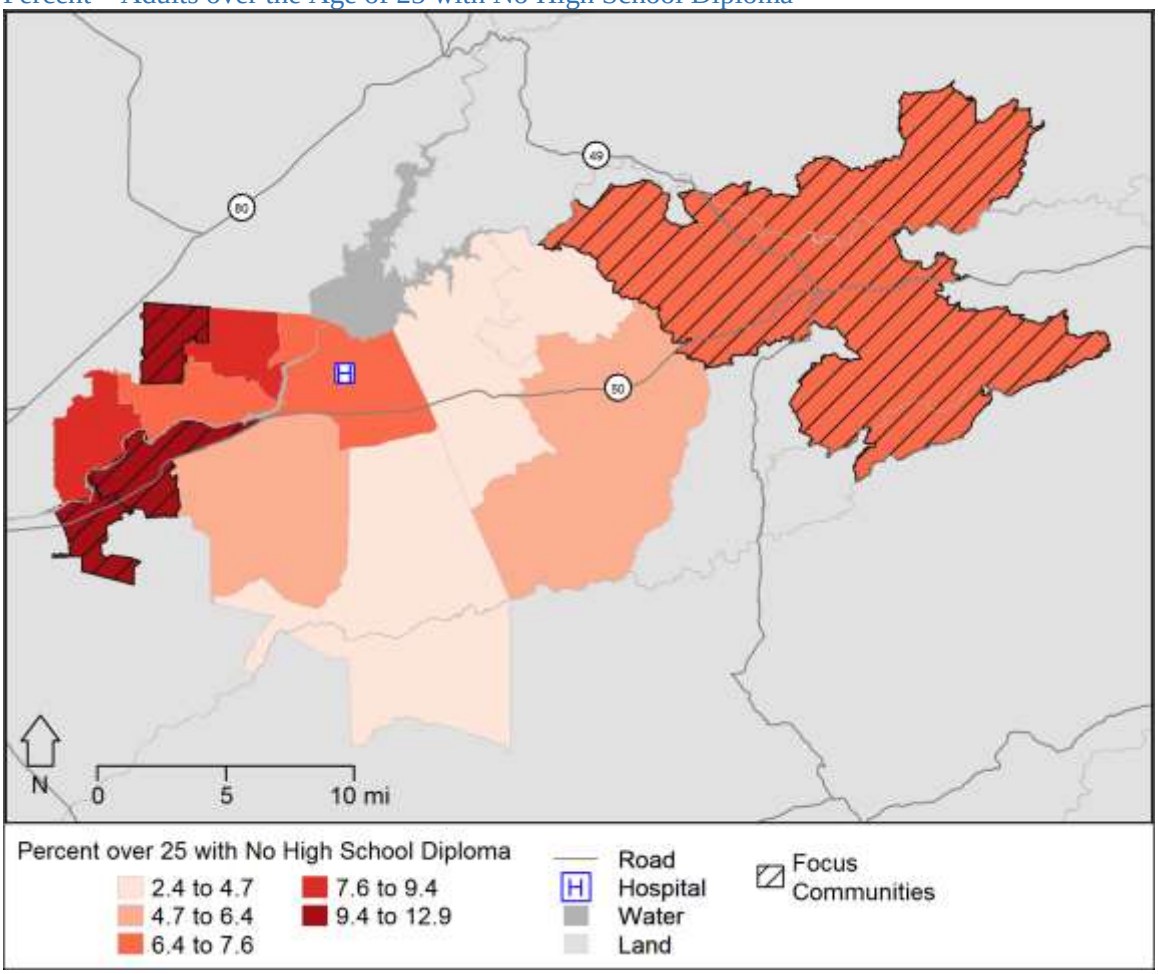

Figure 28: Percent over 25 Years Old with No High School Diploma

The percent of residents with no high school diploma was 14.1% in Sacramento County, 6.8% in El Dorado County and 18.8% in the state of California. Only one of the thirteen ZIP codes within the MHF

HSA had a higher percentage of residents without a diploma than the respective county benchmark. The highest percent was in 95667 (Placerville/Coloma), as depicted in Figure 28 above.

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 are not proficient in reading at the 4th grade level, slightly above the state benchmark of 36%. The El Dorado County rates indicated that fewer students read below the 4th grade proficient reading level than in Sacramento County, with a rate of 27%. Reading proficiency in 4th grade is important because it is linked to poverty, unemployment and barriers to healthcare access. Percent of reading proficiency differs significantly by race and ethnicity. While 27% of White students in Sacramento County were not proficient, 53% of Black students, 49% of Hispanic/Latino students, 50% of Native American/Alaskan Native students, 47% of Native Hawaiian/Pacific Islander students, and 30% of Asian students were not proficient. In El Dorado County, 20% of White, 18% of Black, and 11.11% of Asian students were not proficient in the 4th grade reading level. Unfortunately, no data were available for Native American/Alaskan Native and Native Hawaiian/Pacific Islander students in El Dorado County.

Percent – 3 and 4 year olds Enrolled in Preschool

Data from the U.S. Census Bureau for 2009-2013 indicated that 55% of 3 and 4 year olds in the MHF HSA are in preschool, above the state benchmark of 49%. This data is important since 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, above the state rate of 4.04 per 100 students, while El Dorado fell below the state with a rate of 3.96 suspensions 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 price lunch.

Percent – Population on Public Health Insurance

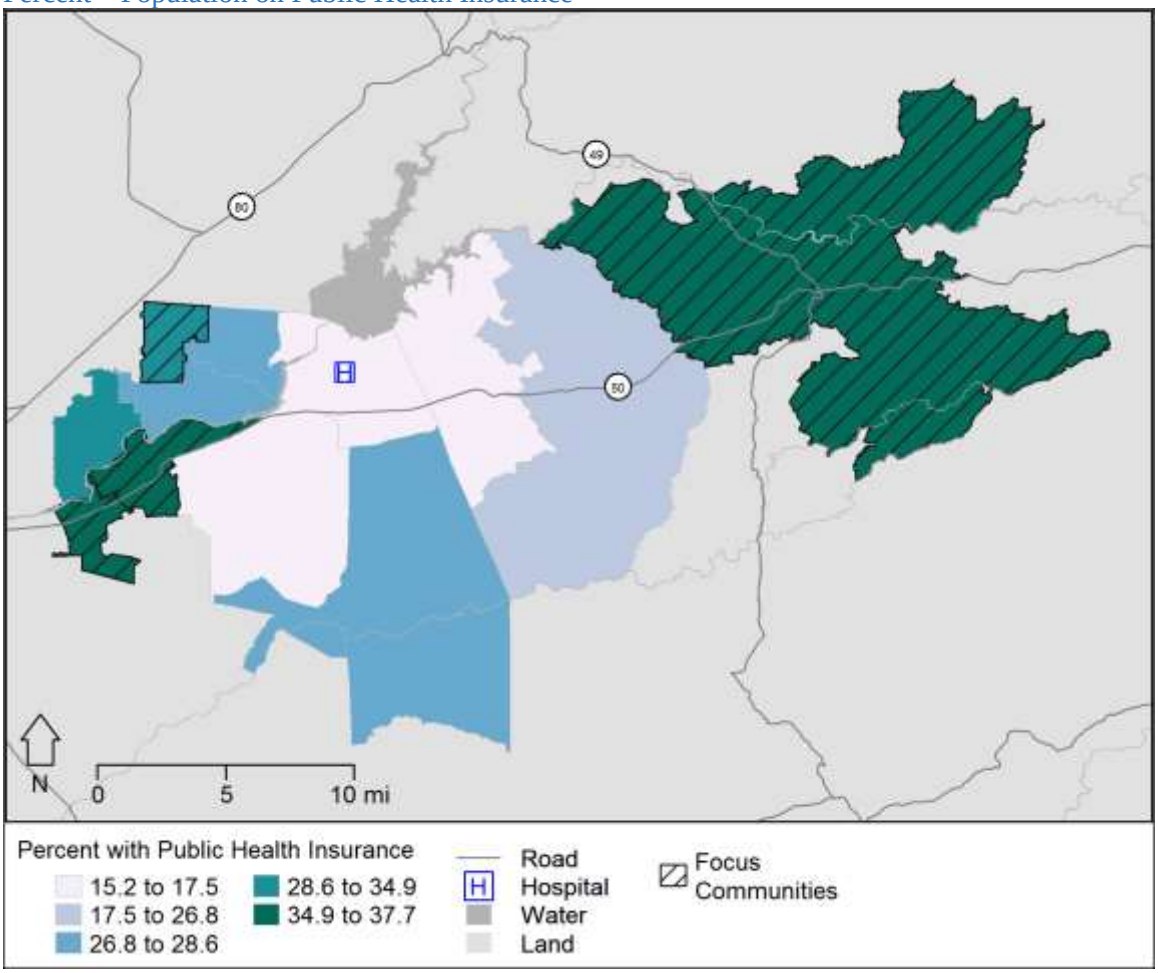

Figure 29: Percent of Population on Public Health Insurance

Data presented in Figure 29 shows the percent of residents with public insurance. Three of the nine ZIP codes in Sacramento County showed elevated rates of public health insurance when compared to the county benchmark of 32.5%. The three ZIP codes were 95670 (Rancho Cordova) at 35.5%, 95827 (Rancho Cordova/La Riviera/Rosemont) at 35.5%, and 95608 (Carmichael/Arden-Arcade) at 34.2%. The ZIP code 95667 (Placerville/Coloma) of El Dorado County had the highest percent of population with public health insurance when compared to the MHF HSA as a whole, with 37.7 % of its population utilizing public health insurance.

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 U.S. Census Bureau reports the percent of population receiving Medicaid specifically. The MHF HSA had 15.5% of residents receiving Medicaid, which is less than the state percent at 23.4%.

Percent – Population Receiving Public Assistance

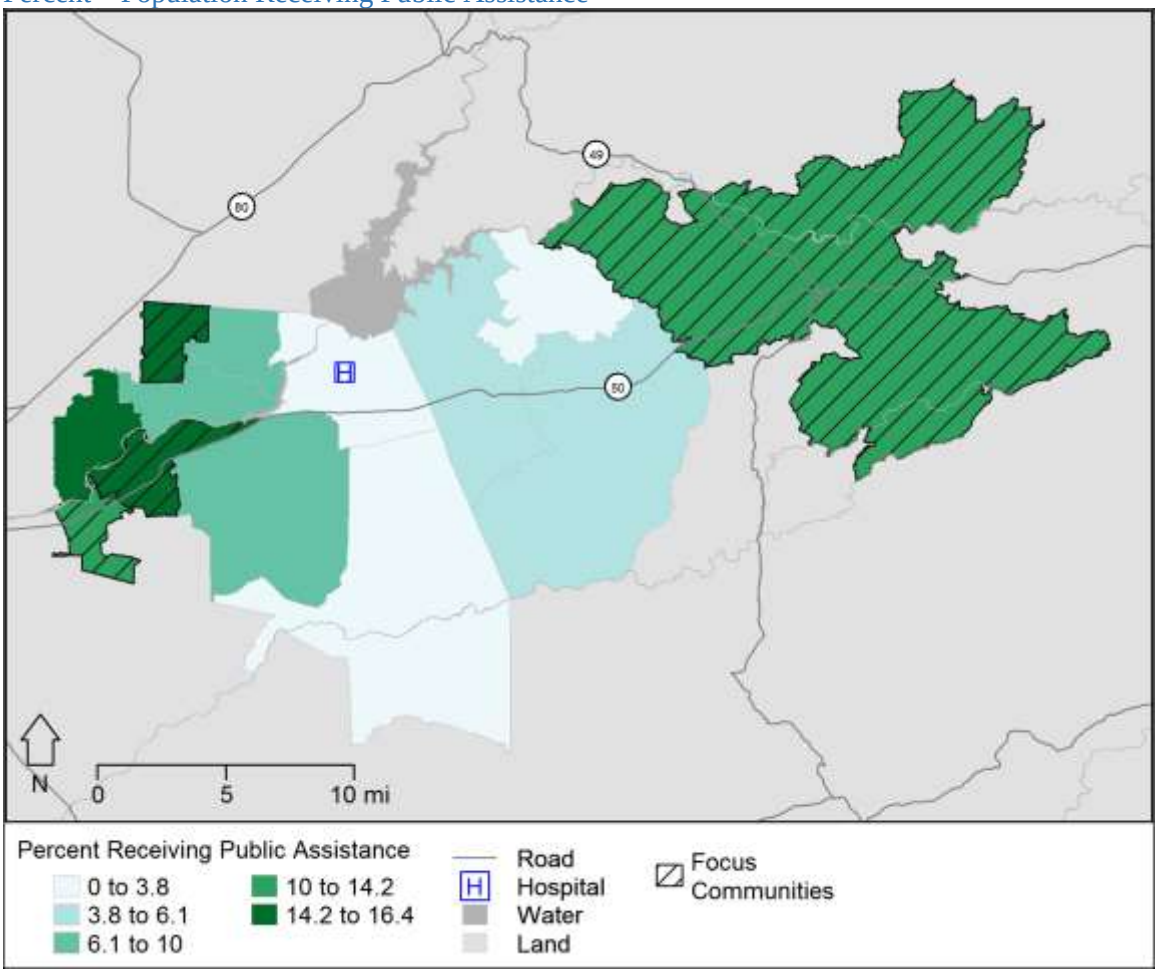

Figure 30: Percent of Population Receiving Public Assistance

The percent of population receiving public assistance varied greatly across the MHF HSA. The ZIP codes with the highest percent of population receiving public assistance were 95670 (Rancho Cordova), 95608 (Carmichael/Arden-Arcade), 95610 (Citrus Heights/Orangevale) and 95827 (Rancho Cordova/La Riviera/Rosemont)—all exceeding the state benchmark of 12.1%, but not the Sacramento County benchmark of 17.12%. In ZIP code 95667 (Placerville/Coloma), 11.5% of the population received public assistance, which is high compared to the El Dorado County benchmark of 7.6%.

Percent – Students Eligible for Free and Reduced-Priced Lunch in Schools

Data from the National Center for Education Statistics in 2013-2014 indicated that 38% of school age children in the MHF 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 MHF HSA 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. Access to High Quality Health Care and Services
4. Disease Prevention, Management and Treatment
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 (SHN)

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 MHF HSA.

Quantitative/Qualitative Analysis on PHN Categories

Once the PHN categories were created, quantitative and qualitative indicators associated with each category and subcategory 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 (SHNs)

While all potential health needs exist within the MHF 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 B.

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 data (50%) 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 Hospital of Folsom

Table 31 displays the full results of data synthesis to identify and prioritize the significant health needs for MHF. 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 Hospital of Folsom (N=32)					
	RANK	**Significant Health Needs**	**QUANT**	**QUAL**	**IMPORTANCE**
			50%	75%	
Tier 2	1	Behavioral Health	66%	94%	59%
	2	Active Living and Healthy Eating	57%	94%	38%
	3	Safe Communities	83%	97%	25%
	4	Disease Prevention/Management	71%	78%	31%
	5	Access to Care	33%	97%	34%
	6	Basic Needs	56%	97%	16%
Tier 1	7	Transport	78%	44%	3%
	8	Pollution Free Communities	67%	63%	0%

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

• Access to mental health providers
• Alcohol consumption
• Alcohol expenditures
• Tobacco expenditures
• Alzheimer's disease – Mortality
• Smoking Prevalence
• Lung Cancer – ED visits
• Lung Cancer incidence
• Substance abuse – ED visits
• Substance abuse – Hospitalizations
• CLRD – Mortality
• COPD – ED visits
• COPD – Hospitalizations
• Life expectancy at birth
• Poor mental health days
• 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)
	  ○ Alcohol, marijuana
	• 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
	• There is a need for social engagement and support for those with mental health and substance use issues and isolated older adults
	• There are limited resources for trauma informed pediatric mental health care that considers adverse childhood experiences
	  ○ There are limited mental health services and providers. When available, the wait is very long
	• 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 has 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 not include food security, which is a component of the Basic Needs category.

Quantitative Indicators	Qualitative Themes

• Physical Inactivity -- Adults
• Heart disease – ED visits
• Diabetes Management
• Diabetes Prevalence
• Fruit and vegetable expenditures
• Percent youth overweight
• Colorectal cancer – ED visits
• Colorectal cancer – hospitalization
• Colorectal cancer – incidence
• USDA defined food desert
• Hypertension – ED visits
• Commuting to work – walking
• Percent breastfeeding
• Soda expenditures
• Osteoporosis – ED visits
• Osteoporosis – hospitalizations
• Low fruit and vegetable consumption youth
• Park access
• 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, especially in rural, remote foothills
	  ○ 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 working parents need to feed a family
	• 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
	  ○ Poor road/sidewalk conditions

3. 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 ● 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 Citrus Heights and Arden-Arcade. ● Domestic violence and sexual assault were discussed, especially in Placerville and Citrus Heights. There are limited resources and shelter beds or transitional housing for victims of domestic violence. Domestic violence is thought to be connected to child abuse/neglect and other family violence issues. ● Alcohol and other substance abuse affect the community and contribute to crime, violence and mental health issues. ● Child abuse and trauma ● A lot of CPS cases in the rural communities of El Dorado County due to alcohol and substance abuse, this has created a distrust in government and services. ● Bullying among school-aged youth ● Tension with the police have created challenges for residents in feeling comfortable accessing law enforcement services, especially in low socioeconomic and/or rural communities

4. 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 ● Park Access ● Cancer screening – Mammogram ● Cancer screening – Pap ● Tobacco expenditures ● Smoking prevalence ● Heart disease – ED visits ● Heart disease prevalence ● 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-	● 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.

hospitalization
- Colorectal cancer – incidence
- Pollution Burden Score
- 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
- Prostate cancer – incidence - hospitalizations
- Stroke – ED visits

5. 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 ● Percent breastfeeding ● Soda expenditures ● Access to dentists ● Access to primary care ● Federally Qualified Health Centers ● Dental Issues – ED visits ● Dental Issues – hospitalizations ● HPSA – Primary Care ● Infant mortality rate ● Percent receiving prenatal care	● 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 ● Specialty care is hard to access from the rural areas of El Dorado County ● 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

***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
• 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 • Many residents struggle with accessing food, especially homeless individuals. Residents struggle with the affordability of healthy food, especially in food deserts • Residents desire additional grocery stores, especially in lower socioeconomic areas • With El Dorado being a high income area, there is no affordable housing or low-income housing, making it very difficult for low-income populations to thrive • Homelessness is more of a challenge in the rural area of El Dorado County because of the harsh conditions and the remote locations

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 • Transportation services are needed and essential in the rural communities of El Dorado County, because you need a car for everything

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 not 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 ● Pollution Burden Score ● 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, lice, 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 ● Cigarette smoke was a concern for those living in apartments

RESOURCES POTENTIALLY AVAILABLE TO MEET SIGNIFICANT HEALTH NEEDS

One hundred and eighty-six resources were identified in the MHF HSA in accordance with the analytical method detailed in Appendix C. The method included starting with the list of resources from the 2013 MHF CHNA, verification that the resource still existed, and adding newly identified resources in the primary data for the 2016 MHF 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	69
2. Active Living and Healthy Eating	36
3. Safe, Crime and Violence Free Communities	30
4. Disease Prevention, Management and Treatment	31
5. Access to High Quality Health Care and Services	70
6. Basic Needs (Food Security, Housing, Economic Security, Education)	68
7. Affordable and Accessible Transportation	4
8. Pollution-Free Living and Work Environments	6

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 Hospital of Folsom 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 FY 2013 through FY 2015 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-intervention 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 with hospital social workers to ensure patients are linked to appropriate public and community behavioral health services required for continued 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 Hospital of Folsom 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:
    - Expanding County Crisis Stabilization Unit with some open access anticipated
    - 3 new 15-bed crisis residential treatment centers
    - Mental health urgent care center
    - 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

Safe, Crime and Violence Free Communities

P.A.R.T.Y. (Prevent Alcohol and Risk-Related Trauma in Youth) - The hospital sponsors and participates in P.A.R.T.Y. which provides life-saving safety education to teens before they obtain their driver's license. Topics cover the risks of driving while texting, talking on the cell phone, drinking and doing drugs, as well as falling asleep at the wheel, tailgating, running stop signs, alcohol poisoning, drug abuse, and other potentially fatal actions.

Expenses: $40,000 plus in-kind printing services

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 Hospital of Folsom 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.

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

The Caring Center- Operated by the hospital, the Center provides multiple healing therapies, like health touch, massage, therapeutic touch, reflexology and acupressure at no cost to the uninsured and underinsured living in the community.
Outcomes:

- 719 community residents served

Expenses: $82,361

Cancer Support Groups-The hospital offers weekly cancer support groups at no cost to patients to address health and emotional issues associated with managing this disease.
Outcomes:

- 1,765 persons served

Expense: $34,098

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

WellSpace Health Capacity Building Project – Mercy Hospital of Folsom partnered with sister hospital, Mercy San Juan Medical Center, and Federally Qualified Health Center, WellSpace Health, to establish three new full- service community clinics in parts of the region that lack access to primary care. Together, the hospitals have made a $2.8 million investment to enable WellSpace Health to open three clinics to serve the communities of Rancho Cordova, Citrus Heights/Carmichael and Folsom.
Outcomes:

- WellSpace Health opened the new Rancho Cordova Center, featuring 13 primary care exam rooms, an onsite lab and five pediatric dental chairs. In FY 2014, the clinic served over 12,500 residents and an additional 7,000 children. Property is currently being located for a new Folsom health center.

Expenses: $1,780,000

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 which is a shared expense by Dignity Health hospitals in Sacramento County.

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.

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

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 Hospital Folsom 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 medical home and Mercy Home Care, with the goal of transitioning participants into permanent housing.
FY 2015 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.

FY 2015 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 Roster

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[29] were compared to ZCTA boundaries[30]. 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.

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

[30] 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 below 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[31]

Derived Variable Name	Source Variable Names	Source
Percent Minority (Hispanic or non-Caucasian)	Total Population - Not Hispanic or Latino: - Caucasian 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

[31] 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 Caucasian (not Hispanic)	Total population - Not Hispanic or Latino - Caucasian 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[3,32]

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
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)

[32] 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 85 and over	85 years and over	American Community Survey 5-year Estimate Table DP05 (2011, 2012, 2013, 2014)
Caucasian	HISPANIC OR LATINO AND RACE - Total population - Not Hispanic or Latino - Caucasian 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 Caucasian, 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[33]	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

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 birthweight, and births with mother's age at delivery under 20. Table 36 consequently also lists the years for which each variable was collected.

[33] 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

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 Birthweight 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 zeros.

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)

Variable	Year	Definition	Reporting Unit	Data Source
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) 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

Variable	Year	Definition	Reporting Unit	Data Source
				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, Behaivoral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. U.S. Department of Health and 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.communitycommon

Variable	Year	Definition	Reporting Unit	Data Source
				s.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/Colonoscopy	2006 – 2012	Percent Adults Screened for Colon Cancer (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
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-

Variable	Year	Definition	Reporting Unit	Data Source
				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
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

Variable	Year	Definition	Reporting Unit	Data Source
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.communitycommons.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.communitycommon

Variable	Year	Definition	Reporting Unit	Data Source
				s.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-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.communitycommon

Variable	Year	Definition	Reporting Unit	Data Source
				s.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-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

Variable	Year	Definition	Reporting Unit	Data Source
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. 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[34]. 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.

[34] 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[35] 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 year and from 1 to 4 years 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[36,37], or else obtained from the County Health Status Profiles 2014[38]. 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.

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[35] 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.

[36] 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;

[37] 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/

[38] 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[39]. 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.

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[40] using the Human Ecology, Evolution, and Health Lab's[41] example

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[39] 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

[40] 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.

[41] 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

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[42]. 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[43], 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.

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

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[42] 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

[43] 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

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[44], 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[45] 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 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.

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

[45] 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

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	VV

										Benchmark	
Food Deserts	Yes							Yes	HSA Intersects Food Desert	Exceeds 25% of ZCTAs	VV
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	CCDP

										Benchmark	
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
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
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 scores in the state	Exceeds 25% of ZCTAs	VV
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 Quality Health Care and Services	• Continuity of care/coordinated care • 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	<u>Mental Health</u> • Comorbidity • Depression-anxiety • Desire for alternative treatment

Potential Health Need Category	Qualitative Indicators
	• 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 <u>Substance Abuse</u> • 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 • 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	<u>Housing</u> • Gentrification/displacement • Housing discrimination • Homelessness/shelter crisis • Lack of affordable housing • Role of public housing agencies • Seniors/aging in place • Substandard housing <u>Food Security</u> • 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

Potential Health Need Category	Qualitative Indicators
	<u>Economic Security</u> • Loss of safety net benefits • Need for job training resources • Safety net benefits (TANF, CalFresh, WIC) • Stigma/shame of poverty • Unemployment/lack of jobs <u>Education</u> • 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	<u>Asthma</u> • Air pollution/contamination • Anti-smoking laws and regulations • Cost of asthma medications • Environmental triggers (dust, mites, cockroaches, mold) • Secondhand smoke (cigarettes/marijuana) • Smoke shops <u>Cancer</u> • Air pollution exposure • 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 <u>CVD/Stroke</u> • Congestive heart failure (CHF) • Cost of medication • CVD/Stroke • Diagnosis, management, and treatment • Lack of healthy eating and active living opportunities • Hypertension • Stroke <u>HIV/AIDS/STDs</u> • Diagnosis, management, and treatment of STIs • Incidence/prevalence

Potential Health Need Category	Qualitative Indicators
	• 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 • 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

Potential Health Need Category	Qualitative Indicators
	• Human Trafficking • Motor vehicle accidents • Pedestrian accidents • Prostitution • Rape and sexual assault • Substance Use • Tension with police • Theft

Appendix D: Informed Consent

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

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

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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!

VALLEY VISION

Connect. Partner. Impact.

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

4. **What year were you born?** _____

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

   ☐ High school graduate (diploma or the equivalent, for example, GED)
   ☐ NOT a high school graduate (diploma or the 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)
   ☐ CalWORKS (TANF)
   ☐ Head Start
   ☐ Medi-Cal
   ☐ Reduced Price School Meal
   ☐ Section 8 Public Housing
   ☐ Supplemental Security Income (SSI)
   ☐ Women, Infants, & Children (WIC Program)

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

   ☐Yes ☐No

Thank you for your participation!

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

4. ¿En qué año naciste? _____

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

☐ Graduado de la escuela segundaria, (diploma o el equivalente, por ejemplo, el GED)

☐ No un graduado de la escuela secundaria, (diploma o el equivalente, por ejemplo, el 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)
☐ CalWORKS (TANF)
☐ Head Start
☐ Medi-Cal
☐ Comidas escolares gratis y reducido de precio
☐ Vivienda interés social
☐ Seguridad de ingreso suplementario (SSI)
☐ Programa Mujeres, bebes y niños (WIC)

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

☐Si ☐No

¡Gracias por participar!

Key Informant Interview Guide - Questions

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]**?**

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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]?**

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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

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?**

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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:

Dignity Health · KAISER PERMANENTE · Sutter Health We Plus You · UCDAVIS HEALTH SYSTEM

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

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

Dignity Health · KAISER PERMANENTE · Sutter Health We Plus You · UCDAVIS HEALTH SYSTEM

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

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
El Dorado County Health and Human Services Agency	3	Health and human services; public health; epidemiology	All residents of El Dorado County	5.20.15
El Dorado County Health and Human Services Agency	1	Public health nursing	All residents of El Dorado County	5.20.15
Mercy Hospital of Folsom; Kaiser Permanente Roseville Medical Center	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
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

Organization	Number of Participants	Area of Expertise	Populations Served	Date
Sacramento County Department of Human Assistance	1	Human assistance; social services	All residents of Sacramento County	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 Real Change	1	Community Based Organization; Social Services	Low-income; medically underserved; racial or ethnic minorities	7.8.15
El Dorado Community Health Center	1	Community health center	All residents of El Dorado County; low-income; medically underserved; racial or ethnic minorities	7.15.15
El Dorado County Mental Health Clinic	1	Mental health	All residents of El Dorado County	7.15.15
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
Sacramento Covered	1	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
Mercy Housing	1	Community Based Organization; Social Services	Low-income; medically underserved; racial or ethnic minorities	7.29.15
Wind Youth Services	1	Community Based Organization	Homeless youth; low-income; medically underserved; racial or ethnic minorities	8.4.15

Organization	Number of Participants	Area of Expertise	Populations Served	Date
El Hogar	1	Community Based Organization	Individuals with behavioral health challenges; low-income; medically underserved; racial or ethnic minorities	8.6.15
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
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	8.21.15
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

Appendix G: List of Focus Groups

Location	Date	Number of Participants	Demographic Information
Gender Health Center	8.21.15	8	Service providers
Sacramento Covered	9.4.15	6	Service providers
Slavic Assistance	9.28.15	10	Slavic/ Ukrainian/ Russian community members
Folsom Cordova Community Partnership	9.30.15	10	Mothers; Rancho Cordova and Folsom community members
Community Recovery Resources	10.2.15	9	Mothers in recovery
Sierra Health Foundation-Respite Care Partnership	10.12.15	5	Service providers
The Center for Violence Free Relationships	2.9.16	5	Victims of domestic violence/ abuse
Food Bank of El Dorado County	2.16.16	4	Food Bank of El Dorado Staff

Appendix H: Resources Potentially Available to Meet Identified Health Needs

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
A Community for Peace	Citrus Heights								X
Agency on Aging- Area 4	Arden-Arcade	X	X			X	X		X
AIDS Project- Rx Staffing & Home Care	Arden-Arcade	X	X	X	X	X	X		X
Alchemist Community Development Corporation	Midtown Sacramento			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							
Asian Pacific Community Counseling (APCC)	Tahoe Park	X							
Asian Resources Inc.	Oak Park, South Sacramento, Citrus Heights					X			

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
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	
Building Healthy Communities (BHC)	South Sacramento			X					X
C.O.R.E Medical Clinic	Midtown Sacramento	X	X						
Center for AIDS Research, Education and Services- CARES Community Health	Midtown Sacramento	X	X	X					
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			

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
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						
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		
Divide Wellness Center	Georgetown		X						
Drug Diversion (PC-1000) Program	South Sacramento	X							

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
El Dorado Community Health Center	Cameron Park, Placerville	X	X				X		
El Dorado County Health and Human Services	El Dorado Hills, Placerville	X	X	X	X	X	X	X	X
El Dorado County Mental Health Clinic	Placerville	X							
El Dorado County Public Health	Placerville	X	X	X			X	X	
El Hogar Community Services Inc.	Downtown Sacramento, North Sacramento	X				X			X
Elica Health Centers	Arden-Arcade, Midtown Sacramento, West Sacramento	X	X						
Eskaton	Carmichael	X	X			X			X
First 5 El Dorado	Placerville	X	X	X		X			
First 5 Sacramento Commission	North Sacramento	X	X	X		X	X		X
Folsom Cordova Community Partnership	Rancho Cordova	X	X			X			
Food Bank of El Dorado County	Cameron Park					X			
Francis House	Downtown Sacramento					X			

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
Gender Health Center	Oak Park	X	X			X			X
Golden Rule Services	South Sacramento		X				X		
Goodwill-Sacramento Valley & Northern Nevada	Rosemont					X			
Green Valley Church	Placerville	X				X			
Guest House Homeless Clinic	Downtown Sacramento	X	X						
Hands 4 Hope	El Dorado Hills			X		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 For All Community Clinics	Downtown Sacramento, North Sacramento, South Sacramento		X		X	X			
Helping Hearts Foundation Inc.	Rancho Cordova					X			X
Heritage Oaks Hospital	Arden-Arcade	X	X						

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
Human Services Coordinating Council (HSCC)	South Sacramento					X			
Interim HealthCare	Arden-Arcade	X	X			X			X
Johnston Community Center	Arden-Arcade			X		X			
Kaiser Permanente Sacramento Medical Center	Arden-Arcade		X						
Legal Services of Northern California-Health Rights	Downtown Sacramento					X			
Life Matters	Foothill Farms					X			
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			
MAAP (Mexican American Alcoholism Program)	South Sacramento	X							
McClellan VA Clinic	McClellan		X						

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
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		
Mexican Consulate General in Sacramento	Natomas					X			X
Molina Healthcare	North Sacramento, South Sacramento, Citrus Heights		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						
Next Move	Oak Park		X			X			X

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
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		
Powerhouse Ministries	Folsom					X			
PRIDE Industries	North Sacramento, North Highlands, South Sacramento					X			
River City Food Bank	Midtown Sacramento			X					
River Oak Center for Children	North Highlands	X							

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
River Oak Family Resource Center	Oak Park	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
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			

Resource/ Organization Name	Service Site Location(s)	Access to Behavioral Health Services	Access to High Quality Health Care and Services	Active Living and Healthy Eating	Affordable and Reliable Transportation	Basic Needs	Disease Prevention and Management	Pollution-Free Living and Work Environments	Safe, Crime and Violence-Free Communities
Sacramento Housing and Redevelopment Agency (SHRA)	Downtown Sacramento					X			
Sacramento Junior Giants	South Sacramento			X					
Sacramento LGBT Community Center	Midtown Sacramento					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 Works Job Center	Galt, Rancho Cordova, South Sacramento, North Sacramento					X			
Saint John's Program for Real Change	South Sacramento	X				X			
Senior Peer Counseling Program	Placerville					X			

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SeniorCare PACE	South Sacramento, Downtown Sacramento		X	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
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
Slavic Assistance Center	Arden-Arcade					X			
Smile Keepers - Dental Health Program	Rosemont		X						
Southeast Asian Assistance Center	South Sacramento	X							

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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						
Sutter Roseville Medical Center	Roseville		X				X		
Terra Nova Counseling	Citrus Heights, Midtown Sacramento	X							
The Birthing Project Clinic-Center for Community Health and Wellbeing	Midtown Sacramento		X						
The Center for Violence Free Relationships	Placerville	X				X			X
The Keaton Raphael Memorial	Roseville						X		
The Mental Health Association in California	Midtown Sacramento	X							

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The Salvation Army- Del Oro Division	Auburn, Colfax, Downtown Sacramento, Grass Valley, Midtown, North Sacramento, Oak Park, Rosemont	X	X			X			
The SOL Project-Saving Our Legacy, African Americans for Smoke-Free Safe Places	Downtown Sacramento	X							
TLCS Inc. (Transitional Living and Community Support)	Arden-Arcade	X	X			X			
Turning Point Community Programs	Rancho Cordova	X				X			
U.S Department of Veterans Affairs- Vet Center	Arden-Arcade, Citrus Heights	X				X			
UC Davis Medical Center	Oak Park	X	X				X		
University of California, Davis	Davis					X			
VA Northern California Health Care System	Mather	X	X			X			

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Volunteers of America-Northern California & Northern Nevada	Arden-Arcade					X			
WALK Sacramento	Downtown Sacramento			X					
WarmLine Family Resource Center	Downtown Sacramento, Rocklin	X	X			X			
WEAVE	Midtown Sacramento, South Sacramento	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					
Western Career College Dental Clinic	Rosemont		X						
WIC Sacramento	South Sacramento		X	X			X		

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Wind Youth Services	Midtown Sacramento	X				X			
Women's Empowerment	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		