2016

UC Irvine Medical Center

Community Health Needs Assessment

UC Irvine Health

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Approved by Governing Body on May 23, 2016.

Introduction

Background and Purpose

UC Irvine Medical Center is an integral component of UC Irvine Health. UC Irvine Medical Center is a 411-bed acute care hospital providing tertiary and quaternary care, ambulatory and specialty medical clinics, behavioral health and rehabilitation. It is the primary teaching location for UC Irvine School of Medicine. UC Irvine Medical Center has been rated among the nation's best hospitals by *U.S. News & World Report* for 14 consecutive years, and is ranked No. 1 in Orange County, California. It is home to the county's only adult Level I and pediatric Level II trauma center. Our Chao Family Comprehensive Cancer Center is one of only 41 in the nation, and the only one in Orange County designated for excellence by the National Cancer Institute. Our Comprehensive Stroke & Cerebrovascular Center is the first in Orange County to be certified as a Comprehensive Stroke Center by the nation's preeminent healthcare standard-setting organization. The medical center provides ambulatory, rehabilitation and mental health services, as well as the full spectrum of specialty care.

The passage of the Patient Protection and Affordable Care Act requires tax-exempt hospitals, including government hospital organizations, to conduct Community Health Needs Assessments every three years, and adopt Implementation Strategies to meet the priority health needs identified through the assessment. A Community Health Needs Assessment identifies unmet health needs in the service area, provides information to select priorities for action and target geographical areas, and serves as the basis for community benefit programs. This assessment incorporates components of primary data collection and secondary data analysis that focus on the health and social needs of the service area.

Service Area

UC Irvine Medical Center is located at 101 The City Drive South, Orange, California 92868. As a regional health care provider, the community benefit service area comprises all of Orange County. Orange County cities include: Aliso Viejo, Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Habra, La Palma, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, Los Alamitos, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster and Yorba Linda. Additionally, there are a number of unincorporated areas in the county. This assessment focuses on the county overall. To access zip code level data for Orange County, California, as well as additional data resources, visit Orange County's Healthier Together website www.ochealthiertogether.org.

Map of Orange County

Project Oversight

The Community Health Needs Assessment process was overseen by:

Jon D. Gilwee, FACHE
Executive Director
Government Affairs
UC Irvine Health

Consultant

Biel Consulting, Inc. conducted the Community Health Needs Assessment. Biel Consulting, Inc. is an independent consulting firm that works with hospitals, clinics and community-based nonprofit organizations. Dr. Biel has 20 years of experience conducting hospital Community Health Needs Assessments and is a specialist in the field of community benefit for nonprofit hospitals. She was assisted by Sevanne Sarkis, JD, MHA, MEd and Irene Graff, MA.

Methods

Secondary Data Collection

Secondary data were collected from a variety of county and state sources to present demographics, social and economic factors, health access, birth characteristics, leading causes of death, chronic disease, mental health, health behaviors and preventive practices.

Sources of data include: the U.S. Census Bureau American Community Survey, California Department of Public Health, California Health Interview Survey, California Department of Education, California Office of Statewide Health Planning & Development, County Health Rankings, Orange County Healthier Together, Orange County Indicators Report, and others. When pertinent, these data are presented in the context of California, framing the scope of an issue as it relates to the state benchmark.

The report includes benchmark comparison data that measures community data findings with Healthy People 2020 objectives. Healthy People 2020 objectives are a national initiative to improve the public's health by providing measurable objectives and goals that are applicable at national, state, and local levels.

Primary Data Collection

UC Irvine Health conducted targeted interviews to gather information and opinions from persons who represent the broad interests of the community. Twenty-six interviews were completed during September - October, 2015.

Community stakeholders, identified by the hospital, were contacted and asked to participate in the needs assessment. Interview participants included leaders and representatives of medically underserved, low-income, and minority populations, as well as the local health department that has "current data or information relevant to the health needs of the community served by the hospital facility," per IRS requirements. The interviews took into account input from persons located in or serving the community including, nonprofit and community-based organizations, local school districts, health care providers and community health centers. The list of the stakeholder interview respondents can be found in Attachment 1.

The Needs Assessment interviews were structured to obtain greater depth and richness of information on significant health needs identified through a review of the secondary health data collected and analyzed prior to the interviews. Interview participants were also asked to rate the impact and importance of each health need on a brief survey prior to participating in the telephone interviews. These results were used to help guide the interviews. During the interviews, participants were asked to share their perspectives

on the issues, challenges and barriers relative to the identified health needs, and identify resources to address these health needs, such as services, programs and/or community efforts.

The interviews focused on these health needs:

1) Access to care
2) Cancer
3) Chronic disease, including asthma, heart disease, and stroke
4) Mental health
5) Overweight and obesity
6) Preventive practices

Interview participants were asked to share community concerns or health issues and provide additional comments to share with UC Irvine Medical Center. The responses are included in the following Community Health Needs Assessment chapters.

Information Gaps

Information gaps that impact the ability to assess health needs were identified. Some of the secondary data are not always collected on a regular basis, meaning that some data are several years old.

Public Comment

In compliance with IRS regulations 501r for charitable hospitals, a hospital Community Health Needs Assessment (CHNA) and Implementation Strategy are to be made widely available to the public and public comment on the CHNA and Implementation Strategy are to be solicited. The previous Community Health Needs Assessment and Implementation Strategy were made widely available to the public on the website http://www.ucirvinehealth.org/community-health/. Public comment was solicited on the reports, however, to date, no written comments have been received.

Identification of Significant Health Needs

Review of Primary and Secondary Data

Based on the results of the primary and secondary data collection, significant health needs were identified. The health needs were based on the size of the problem (relative portion of population afflicted by the problem); or the seriousness of the problem (impact at individual, family, and community levels). To determine size or seriousness of a problem, the health needs identified in the secondary data were measured against benchmark data, specifically county and state rates, and Healthy People 2020 objectives. Indicators related to the health needs that performed poorly against these benchmarks were considered to have met the size or seriousness criteria. Additionally, primary data sources were asked to identify and validate community and health issues based on the perceived size or seriousness of a problem.

Significant Health Needs

The following significant health needs were determined:

- Access to care
- Cancer
- Chronic disease (asthma, heart disease, stroke)
- Mental health
- Overweight/obesity
- Preventive practices

Resources to Address Significant Needs

Guidelines for the Community Health Needs Assessment request input from the community to identify community resources available to address the significant health needs. Through the interview process, community stakeholders identified community resources to address the identified health needs. The identified community resources are presented below. This is not a comprehensive list of all available resources. For additional resources refer to Orange County Healthier Together at www.ochealthiertogether.org and 211 Orange County at www.211oc.org.

Significant Health Needs	Community Resources
Access to Care	• Latino Health Access and their promotoras are accepted and recognized as community members to help navigate the system. • Costa Mesa Hope Clinic provides care on school campus for kids and families in the neighborhood. • SOS-El Sol Clinic with UCI nursing program provides community-based nursing outreach. • Public health nurses. • Abrazar, Inc. provides transportation assistance.

	• Heroes at Home provides support for those in the military with PTSD, multiple deployments and traumatic brain injury. • Telehealth can cut healthcare costs immensely and remove the burden of transportation and wait times. • Access OC connects low-income patients to services. • Lestonnac Free Clinic created a virtual queue for community clinics that need specialty care. Participating providers can review the list and claim a patient. • Southern California School of Optometry in Fullerton does outreach. • Kids Vision for Life helps kids get exams and glasses. • Orange County Coalition of Community Health Centers does a good job with enrollment specialists to assist in signing up for insurance plans. • CalOptima has an intergovernmental transfer system (IGT) with UCI on their facility side. CalOptima uses funding to fill unmet needs in the community like respite care, school based dental and vision, and personal care coordinators. • OC Transit provides nonemergency services, door-to-door taxi, for senior population. • Illumination Foundation has hotels and donated homes for the homeless. • Community clinics. • MOMS of Orange County has a Navigator program. Paraprofessionals work under registered nurses and visit with women who are pregnant until the baby is year old. • Alliance for Healthy Orange focuses on transportation issues.
Cancer	• County of Orange partners with schools, nonprofits and clinics for tobacco prevention collaborative and smoking cessation programs. • Komen Foundation. • American Cancer Society provides support for transportation, education, and help with chemotherapy. • Smallest Angels; if you are on chemo and need childcare, they can help. • American Lung and Liver Associations often provide education or other resources in community. • Vietnamese American Cancer Foundation screens for cancer, and Hepatitis B and C. • Orange County is Healthier Together organization has a wonderful set of resources and dashboards. • Orange County Cancer Coalition myOC3.org run by American Cancer Society is a helpful website with available resources.
Chronic Disease	• Eat Play Breathe – eat fresh play someway and breathe tobacco free every day. This is our new OC campaign. Those 3 areas have major impact long term. • Partnerships to Improve Community Health. A CDC-funded program facilitated by Community Action Program. Cities of Anaheim, Garden Grove and Santa Ana experience higher rates

	of obesity and chronic diseases. This project will improve health food drinks, activities and partnerships with city agencies and nonprofits. Interventions include paths to walk, improve parks, bike, water fountains, gardens, healthy food at kiosks. Reduces chronic diseases in poorest communities. • Obesity and diabetes are priorities on a County level. We are trying to bring together work groups for each of our priority areas. • CHOC Breath Mobile. • Asian and Latino markets have really good fresh fruits and veggies. If live in little Saigon etc. and have access to these little stores, you have great produce. The encouragement to follow traditional and ethnic foods is helpful for diabetes concerns. • Orange County's health improvement plan and partnership through the local public health department.
Mental Health	• Orange County Prenatal and Postpartum Wellness Program and the Orange County Prenatal Counsel. The Counsel engages providers who address issues with parenting and early childhood issues. They are making a lot of progress on standardized depression screenings. • Recuperative care has been working for those hospitals using it. Homeless can be moved from inpatient care to after care for basic medical needs in a shelter based facility. • CHOC has launched a campaign specifically to create pediatric mental health beds in Orange County. • Illumination Foundation is working with HASC and CalOptima to educate hospital discharge planners, administrators, and health care agencies to funnel homeless through us to help them get their medications and a follow up appointment. • Through telehealth services mental health care can be well monitored and done remotely in community centers.
Overweight and Obesity	• At UC Irvine Health's FQHC we host a food pantry every month. We provide cooking demonstrations and a chef will prepare a meal from the foods being giving away that day. We work with Second Harvest Food Pantry. • Obesity Coalition working to improve transportation with more bike lanes. Alliance for Healthy Orange County is lead for this. • Waste Not OC – food surplus matched with food need. People can monitor on cell phones restaurants and grocery stores before they throw food out. • WIC doing great work. Some run by County, others through Planned Parenthood. Great programs to educate pregnant and new parenting mothers about good nutrition and breast feedings. They also provide wellness and food vouchers. • MOMS of Orange County does intensive counseling and group education for young mothers to promote nutrition and parenting skills and life skills for low-income parents. • Latino Health Access has diabetes education classes with several clinics doing cooking, diabetes and management, etc. to address weight loss. • Latino Heath Access walking clubs and advocacy for more park

	and safe areas. • Community walking clubs and incentives provided to join gyms. • Dr. Candice Taylor- Lucas brings in all sectors of the community to address childhood obesity.
Preventive Practices	• There are number of collaboratives and partnerships in Orange County focused on health. Our strength is our ability to talk together and come together to make collective impact. • Children and Families Commission has First LA 5 Bridges for Newborns. Screens mother and newborns in the hospital and links them to providers in the community. • Vaccines provided at Planned Parenthood, community clinics and school-based health centers. • Healthy Smiles of Orange County is a dental van that provides screenings at schools. • UCI is doing wonderful job training nurse practitioners focusing on community health. • Community clinics have a health scholars program that exposes pre-med students to primary care.

Priority Health Needs

The identified significant health needs were prioritized with input from the community. Interviews with community stakeholders were used to gather input on the identified health needs.

The following criteria were used to prioritize the health needs:

- Severity – the perceived impact of the health need on the community.
- Change over time – determination if the health need has improved, stayed the same or worsened.
- Resources – availability of resources in the community to address the health need.

Each of the stakeholder interviewees was sent a link to an electronic survey (Survey Monkey) in advance of the interview. The stakeholders were asked to rank each identified health need. The percentage of responses were noted as those that identified the need as having severe or very severe impact on the community, had worsened over time, and had a shortage or absence of resources available in the community. Not all survey respondents answered every question, therefore, the response percentages were calculated based on respondents only and not on the entire sample size. Mental health, overweight/obesity and chronic diseases had the highest scores in the survey. This indicated severe impact in the community, a worsening of the issues over time and a shortage or absence of resources available in the community to address these needs. Access to health care also rated high on insufficient resources available to address the need. These results are listed in the table below.

Significant Health Need	Severe and Very Severe Impact on the Community	Worsened over Time	Absence of or Insufficient Resources in the Community
Access to health care	60.0%	10.5%	79.0%
Cancer	20.0%	10.5%	31.6%
Chronic diseases	65.0%	42.1%	68.4%
Mental health	90.0%	73.7%	89.5%
Overweight and obesity	70.0%	57.9%	57.9%
Prevention	30.0%	10.5%	36.8%

The stakeholder interviewees were also asked to rank order the health needs according to highest level of importance in the community. The total score for each health need (possible score of 4) was divided by the total number of surveys for which data were provided, resulting in an overall average for each health need. The calculations of the community stakeholder survey resulted in the following prioritization of the significant health needs:

Significant Health Need	Rank Order Score (Total Possible Score of 4)
Mental health	4.0
Access to health care	3.6
Chronic diseases	3.5
Overweight and obesity	3.5
Cancer	3.4
Prevention	3.4

Impact Evaluation

In 2013, UC Irvine Medical Center conducted their previous Community Health Needs Assessment (CHNA). Significant health needs were identified from issues supported by primary and secondary data sources gathered for the Community Health Needs Assessment. In developing the hospital's Implementation Strategy associated with the 2013 CHNA, UC Irvine Medical Center chose to address access to care, chronic diseases, and cancer through a commitment of community benefit programs and resources. The evaluation of the impact of actions the hospital used to address these significant health needs can be found in Attachment 2.

Demographics

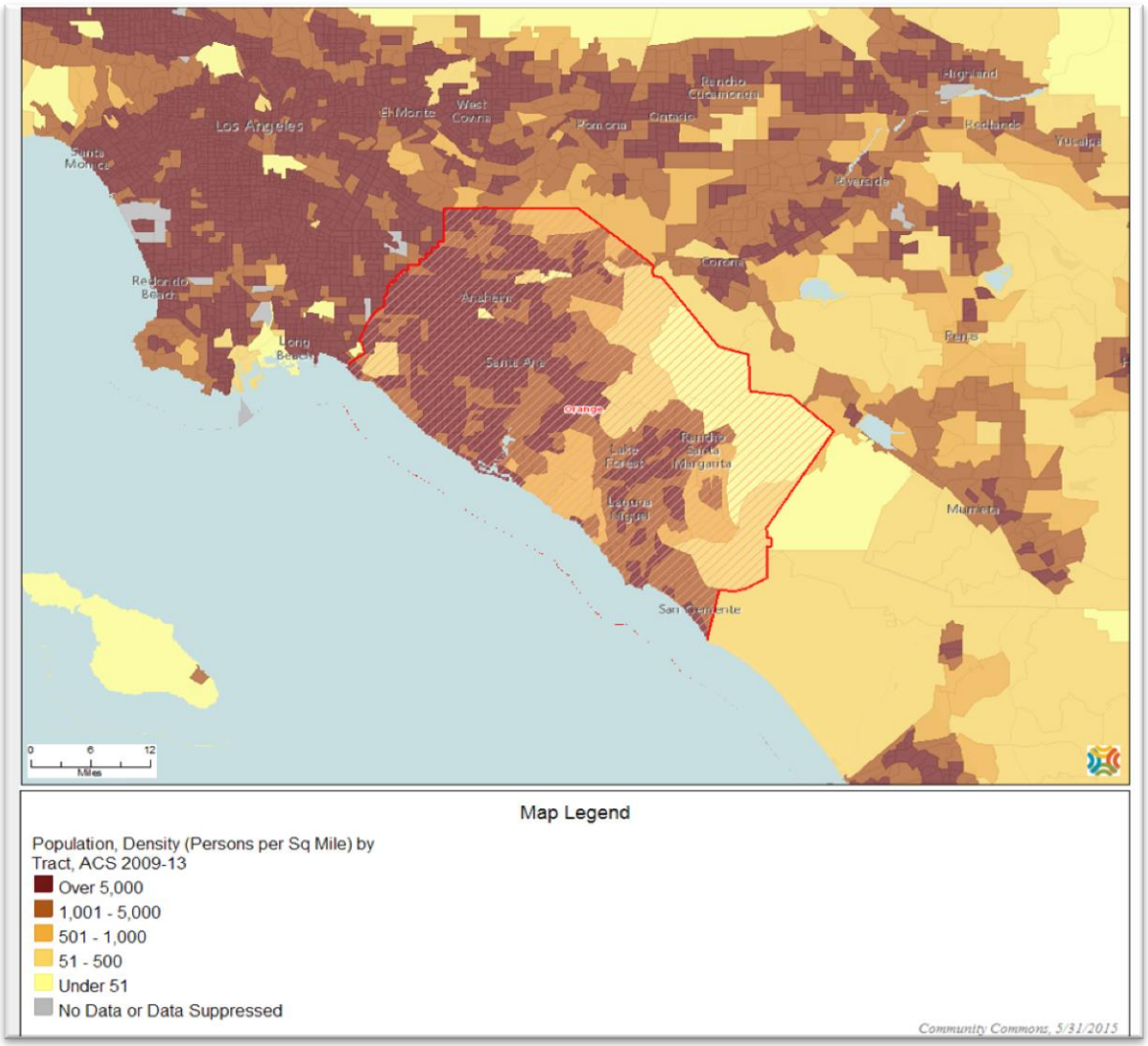
Population

The population of Orange County, California is 3,160,437. The county's population density, estimated at 3,861.25 persons per square mile, is greater than the state average population density of 241.81 persons per square mile.

Population Density

Geography	Total Land Area (Square Miles)	Population Density (Per Square Mile)
Orange County	790.36	3,861.25
California	155,738.02	241.81

Source: U.S. Census Bureau, American Community Survey, 2009-2013. http://factfinder.census.gov



Orange County has experienced a 5% growth in population from 2010 to 2015. This surpasses the state population growth rate of 4.2%.

Population Growth, 2010-2015

Geography	Current Population Estimate	Percent Population Change (2010-2015)
Orange County	3,160,437	5.0%
California	38,822,536	4.2%

Source: Orange County's Healthier Together, Claritas, 2015. www.ochealthiertogether.org

Children and youth, ages 0-17 make up 24.0% of the population; 10.2% are 18-24 years of age; 28.1% are 25-44; 25.7% are 45-64; and 12.0% of the population are seniors, 65 years of age and older. The county's age distribution is similar to California, but it is a slightly older population with a median age of 36.4 compared to 35.2 for California.

Population by Age

Age Groups	Orange County		California	
	Number	Percent	Number	Percent
Age 0-4	192,168	6.3%	2,543,777	6.8%
Age 5-17	540,673	17.7%	6,739,029	18.1%
Age 18-24	310,122	10.2%	3,924,945	10.5%
Age 25-44	857,748	28.1%	10,543,274	28.2%
Age 45-64	783,683	25.7%	9,273,537	24.8%
Age 65+	367,377	12.0%	4,300,506	11.5%
Total	3,051,771	100.0%	37,325,068	100.0%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP05. http://factfinder.census.gov

Gender

Of the county population, 49.5% are male and 50.5% are female.

Population by Gender

Gender	Orange County	California
Male	49.5%	49.7%
Female	50.5%	50.3%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP05. http://factfinder.census.gov

Race/Ethnicity

In Orange County, 43.5% of the population is White and 33.8% are Hispanic or Latino. Asians are the third largest race or ethnic group (18.2%). The remaining 4.4% of the population is distributed across African Americans, Native Americans, Hawaiians, other races, and those of multiple races. The county has a considerably larger percentage of Whites and a smaller percentage of Latinos than California as a whole.

Race/Ethnicity

Race/Ethnicity	Orange County		California	
	Number	Percent	Number	Percent
White	1,327,507	43.5%	14,937,880	39.7%
Hispanic or Latino	1,032,879	33.8%	14,270,345	37.9%
Asian	555,650	18.2%	4,938,488	13.1%
Other or Multiple	74,534	2.4%	1,076,578	2.9%
Black or African American	45,900	1.5%	2,153,341	5.7%
Native Hawaiian / Pacific Islander	9,138	0.3%	136,053	0.4%
American Indian/Alaska Native	6,163	0.2%	146,496	0.4%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP05. ***http://factfinder.census.gov***

Citizenship

In Orange County, 30.4% of the population are foreign born and 15.1% are not citizens, slightly higher percentages than in California. Approximately 44% of the foreign born population comes from Asia, while 47% comes from Latin America.

Foreign Born Residents and Citizenship

Citizenship	Orange County	California
Foreign born	30.4%	27.0%
Not a U.S. citizen	15.1%	14.3%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP02. http://factfinder.census.gov

Language

In Orange County, 54.5% of residents speak English only. Spanish is spoken in over one-quarter of homes (26.5%), a smaller percentage than in California (28.8%). Nearly 14% speak an Asian or Pacific Island language, higher than the state rate (9.6%). Other languages are spoken in 4.2% of households.

Language Spoken at Home, Population 5 Years and Older

Language	Orange County	California
Speaks only English	54.5%	56.3%
Speaks Spanish	26.5%	28.8%
Speaks Asian/Pacific Islander language	13.9%	9.6%
Speaks other Indo-European language	4.2%	4.4%
Speaks other language	0.9%	0.9%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP02. http://factfinder.census.gov

Among students enrolled in county school districts, 26% are English learners, higher than the state average (22.3%).

English Learners

Geography	Percent
Orange County	26.0%
California	22.3%

Source: California Department of Education DataQuest, 2014-2015 Language Group Data. http://dq.cde.ca.gov/dataquest/

Veterans

In Orange County, 5.7% of the population 18 years and older are veterans.

Veterans

Geography	Percent
Orange County	5.7%
California	6.7%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP02. http://factfinder.census.gov

Social and Economic Factors

Social and Economic Factors Ranking

The County Health Rankings rank counties according to health factors data. Social and economic indicators are examined as a contributor to the health of a county's residents. California's 57 evaluated counties (Alpine excluded) are ranked according to social and economic factors with 1 being the county with the best factors to 57 for that county with the poorest factors. This ranking examines: unemployment, high school graduation rates, children in poverty, social support, and others. In 2015, Orange County ranked seventh, putting the county in the top 20% of all California counties on social and economic factors. This ranking has remained the same for the past four years.

Poverty

Poverty thresholds are used for calculating all official poverty population statistics. They are updated each year by the Census Bureau. For 2013, the Federal Poverty Level for one person was $11,490 and for a family of four $23,550. Among Orange County residents, 12.4% are at or below 100% of the federal poverty level (FPL) and 29.5% are at 200% of FPL or below (low-income). These poverty levels are below state averages.

Ratio of Income to Poverty Level

Geography	Below 100% Poverty	Below 200% Poverty
Orange County	12.4%	29.5%
California	15.9%	35.9%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S1701. http://factfinder.census.gov

Examining poverty levels by community paints an important picture of the population within the hospital service area. Orange County children experienced poverty rates of 16.9%. Families with female head of household had an average poverty rate of 29.6%. For seniors, the Orange County poverty rate was 8.4%. These rates of poverty are less than the state average.

Poverty Levels of Children, Seniors, and Female Head of Household with Children

Geography	Children Under 18 Years Old	Seniors	Female Head of Household with Children
Orange County	16.9%	8.4%	29.6%
California	22.1%	9.9%	36.8%

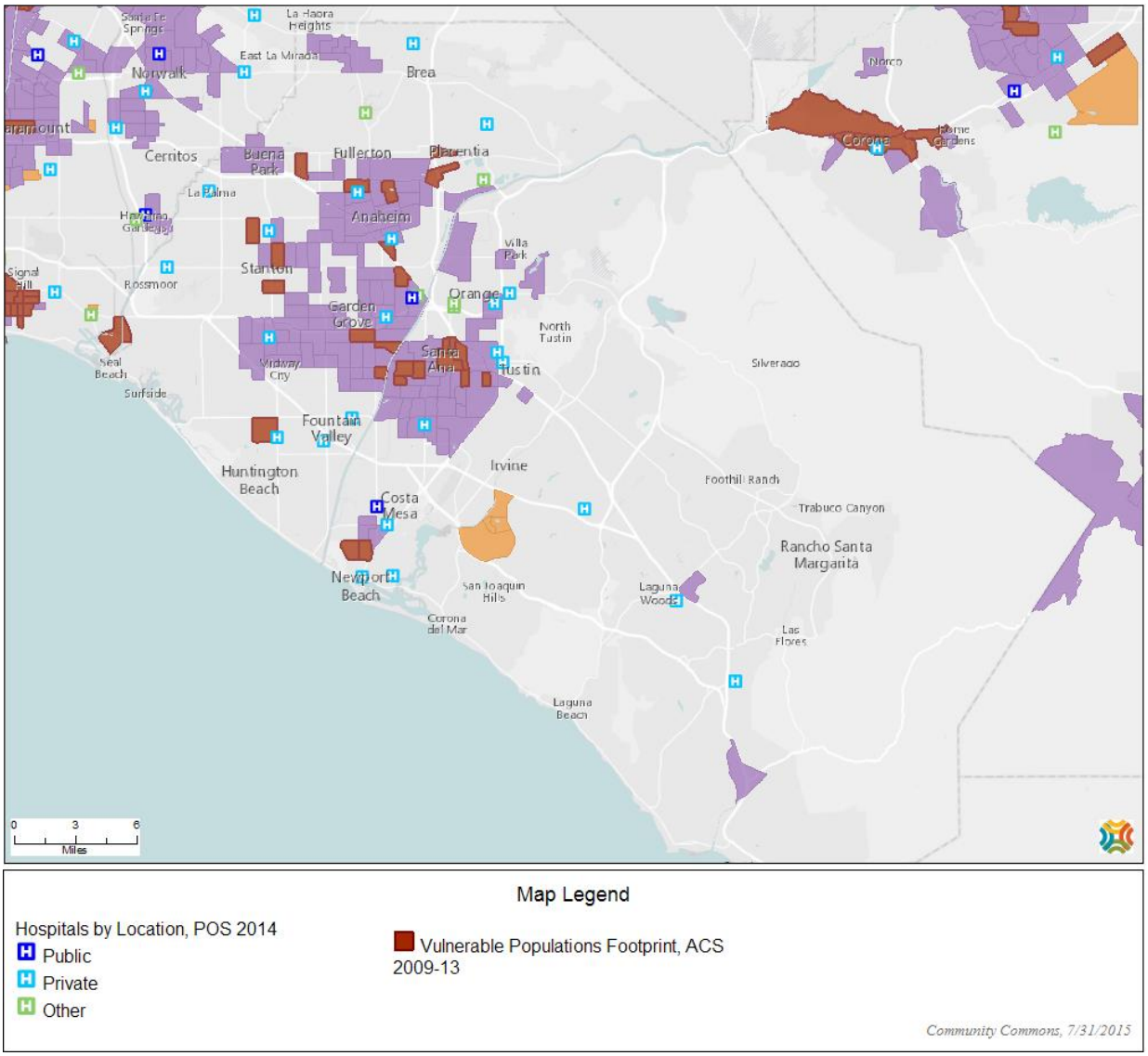
Source: U.S. Census Bureau, American Community Survey, 2009-2013, S1701. http://factfinder.census.gov

Vulnerable Populations

Poverty and education attainment are two indicators that are predictive of at-risk or vulnerable populations. Visualization of vulnerable populations is provided in the following map. Communities where 30% or more of the residents are in poverty are

shown as orange on the map. Communities where 25% or more of the residents do not have a high school education are shown as purple on the map. The overlap of high poverty and low education attainment is depicted as brown on the map. The brown areas indicate communities with vulnerable populations and are clustered primarily in the north central part of the county.

Vulnerable Populations Footprint for Orange County



Map Legend

Hospitals by Location, POS 2014
- Public
- Private
- Other

Vulnerable Populations Footprint, ACS 2009-13

Community Commons, 7/31/2015

Households

The median household income for Orange County is $75,422. This is higher than the California median of $61,094.

Median Household Income

Geography	Median Household Income
Orange County	$75,422
California	$61,094

Source: U.S. Census Bureau, American Community Survey, 2009-2013, DP03. http://factfinder.census.gov

There are 995,512 occupied housing units in Orange County. The percentage of 1-person households is 21.6% and 31.3% are 4+ person households.

Household Size

Household Size	Orange County	California
1 person households	21.6%	24.2%
2 person households	30.3%	29.9%
3 person households	16.7%	16.3%
4+ person households	31.3%	29.5%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S2501. http://factfinder.census.gov

In Orange County, residents receive lower rates of supportive benefits than found in the state. Four percent of county households receive SSI benefits, 2.4% receives cash public assistance income and, 5.1% of residents receive food stamp benefits.

Household Supportive Benefits

Benefits	Orange County	California
Households	995,512	12,542,460
Supplemental Security Income (SSI)	4.0%	5.8%
Public Assistance	2.4%	4.0%
Food stamps/SNAP	5.1%	8.1%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S2501. http://factfinder.census.gov

Food insecurity is the lack of access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. Food security then is access to sufficient, safe and nutritious food. This indicator was asked of adults ages 18+ with an income < 200% FPL. Among low-income adults in Orange County, 35.8% reported food insecurity, which is lower than the state rate of 38.4%.

Low-Income (<200 FPL) Adult with Food Insecurity

Geography	Percent
Orange County	35.8%
California	38.4%

Source: California Health Interview Survey, 2014. http://askchis.ucla.edu

Free or Reduced Price Meals

The number of students eligible for the free or reduced price lunch program is one indicator of the socioeconomic status within a region. The county rate of eligibility was 49% in the 2014-2015 school year compared with 58.6% statewide.

Eligibility for Free or Reduced Price Meals (FRPM) Program

Geography	Students Eligible for FRPM
Orange County	49.0%
California	58.6%

Source: California Department of Education DataQuest, 2014-2015. http://dq.cde.ca.gov/dataquest/

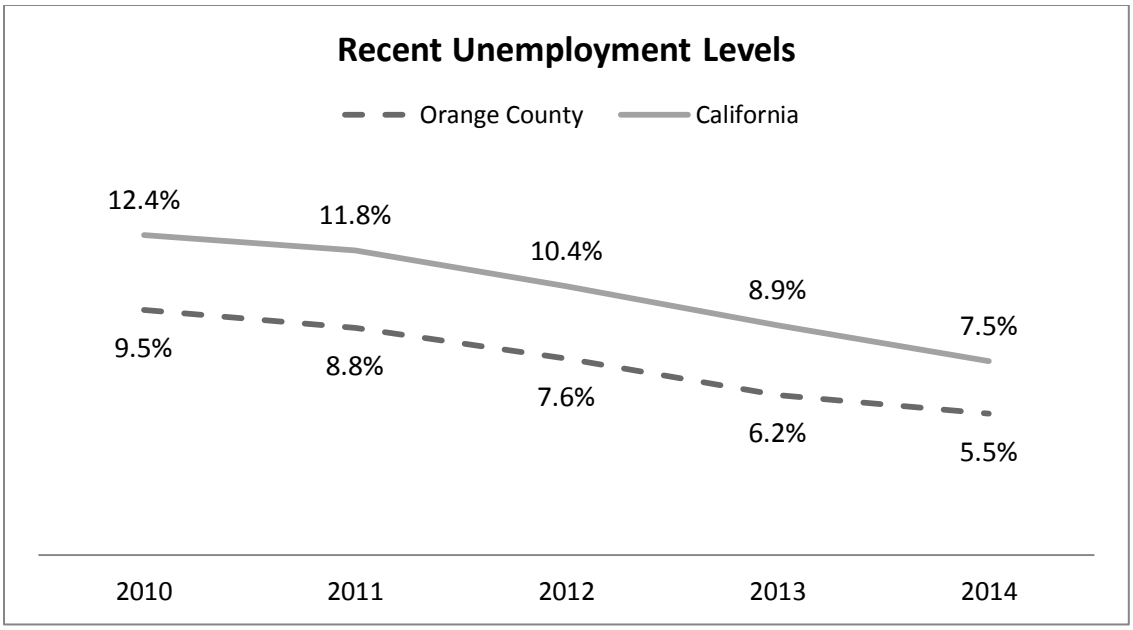
Unemployment

Orange County's unemployment rate averaged 5.5% in 2014. Orange County ranks fifth in unemployment levels among California counties, with the first-ranked county having the lowest unemployment. Rates have dropped steadily over the past five years for both the state and county.

Unemployment Rate, 2014 Average

Geography	Unemployment Rate
Orange County	5.5%
California	7.5%

Source: California Employment Development Department, Labor Market Information, 2014. Not seasonally adjusted.



Source: California Employment Development Department, Labor Market Information, 2010-2014.

Educational Attainment

Eighteen percent (18%) of county adults are high school graduates and 44.6% are college graduates. The level of college degree attainment in the state is 38.4%.

Educational Attainment of Adults, 25 Years and Older

Education	Orange County	California
Population 25 years and older	2,008,808	24,455,010
Less than 9th grade	8.8%	10.2%
Some high school, no diploma	7.4%	8.5%
High school graduate	18.0%	20.7%
Some college, no degree	21.3%	22.1%
Associate degree	7.8%	7.8%
Bachelor degree	23.9%	19.4%
Graduate or professional degree	12.9%	11.2%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S1501. http://factfinder.census.gov

Of the population age 25 and over, 16.2% in Orange County does not have a high school diploma, lower than the state average of 18.7%.

Population, 25 Years and Older, with No High School Diploma

Geography	Percent
Orange County	16.2%
California	18.7%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S1501. http://factfinder.census.gov

High school graduation rates or the number of high school graduates that graduated four years after starting ninth grade. In Orange County the high school graduation rate is 88.6%, which is higher than the state average (80.9%). The county rate exceeds the Healthy People 2020 objective for high school graduation of 82.4%.

High School Graduation Rates, 2013-2014

Geography	Percent
Orange County	88.6%
California	80.9%

Source: California Department of Education DataQuest, Cohort Outcome Data for Class of 2013-14. http://dq.cde.ca.gov/dataquest/

Homelessness

The US Department of Housing and Urban Development (HUD) conducts an annual 'point-in-time' count of homeless, with data reported by Continuums of Care (CoC). Among Smaller City, County, and Regional CoCs, the Santa Ana/Anaheim/Orange County CoC observed 3,833 homeless persons in January 2014. Recent trends show that rates of homelessness declining in Orange County, along with the percentage of homeless who are unsheltered.

Homeless Annual Count, Santa Ana/Anaheim/Orange County CoC, 2010 to 2014

Year of Count	Total Homeless	Sheltered	Unsheltered
2010	8,333	31.3%	68.7%
2011	6,939	38.4%	61.6%
2012	7,010	39.1%	60.9%
2013	4,251	60.5%	39.5%
2014	3,833	56.2%	43.8%

Source: HUD Annual Homeless Assessment Report, 2014; HUD PIT Counts by CoC.
https://www.hudexchange.info/resource/4074/2014-ahar-part-1-pit-estimates-of-homelessness/

Among school-aged children, 6.5% of public school enrollees in Orange County were recorded as being homeless at some point during the 2013-2014 school year, according to the California Department of Education (Source: kidsdata.org, January 2015); this rate is higher than the California average of 4.8%.

Crime and Violence

Violent crimes include homicide, rape, robbery and assault. Crime statistics indicate that Orange County has lower rates of violent crime than the state, with 199.7 crimes per 100,000 persons, nearly half the California rate of 393.3.

Violent Crimes, per 100,000 Persons, 2014

Geography	Number	Rate
Orange County	6,257	199.7
California	151,425	393.3

Source: California Department of Justice, Office of the Attorney General, 2014. http://oag.ca.gov/crime/cjsc/stats/crimes-clearance

Calls for domestic violence are categorized as with our without a weapon. The majority of domestic violence calls in Orange County did not involve a weapon (85.7%), which was lower than the state average (57.3%).

Domestic Violence Calls, 2014

Geography	Total	Rate	Without Weapon	With Weapon
Orange County	7,928	253.1	85.7%	14.3%
California	155,965	405.1	57.3%	42.7%

Source: California Department of Justice, Office of the Attorney General, 2014. http://oag.ca.gov/crime/cjsc/stats/domestic-violence

The 2015 Orange County Community Indicators report noted that in the10-year period from 2004 to 2013, child abuse reporting increased 9% while confirmed reports of abuse (substantiated allegations) fell 43%. Over the same 10-year period, entries to foster care fell 42% (http://ocgov.com/about/infooc/facts/indicators).

Community Input – Social and Economic Factors

Stakeholder interviews identified the following issues, challenges and barriers related to socioeconomic issues:

- When you look at rankings/report cards of Orange County, we do really well overall when compared to other counties in California. We have some of the best rankings. But when you drill down, there are huge disparities, which may be tied to socioeconomic factors.
- Income and where you live determine activities and walk-able streets and helps with increasing activity and decreasing obesity. If you do not make enough money, it leads to lack of good housing, food, limited or no access to green space, neighborhood violence and poorer health outcomes.
- Language barriers contribute to not understanding or taking advantage of available resources.
- Orange County is known for Latino and Vietnamese communities. But the County is more diverse including Persian and Korean. Unfortunately, the focus of most health intervention programs is not on these populations.
- Immigrants often suffer from trauma and adjustment issues. The immigrant community does not know how to access resources, nor do they fully trust the system. This all contributes to not seeking care.
- We are seeing a large increase in the Chinese immigrant population. In Irvine you can sense the growth and change and there aren't adequate health care advocates for that Mainland Chinese community.
- We live in a conservative Republican County and the demographics have shifted. We no longer look like what we want to look like or want to be and leadership hasn't caught up. It's not at a crisis level yet, but there is real poverty,

homelessness, and ethnic and racial issues. We don't even have a homeless shelter in our County.

- Domestic violence and child abuse – we spend a lot of time on this. We must integrate health care sector with nonprofits and shelters and raise awareness within health care sector that this is a health issue. In County Needs Assessment we found there is a need for health professionals to recognize domestic violence, how it impacts health, give counseling and connect, and link them to other services.

Health Access

Health Insurance

Health insurance coverage is considered a key component to accessing health care. In Orange County, 82.7% of the total civilian non-institutionalized population of Orange County is insured, similar to the state rate of 82.2%. Among children, 91% of children have insurance coverage. More than three-quarters of non-senior adults are insured (76.6%). And nearly all seniors are insured (98%). These rates of insured persons are comparable to state rates. According to the 2015 Orange County Community Indicators report, in the six-month period between October 1, 2013 and March 31, 2014, 131,804 Orange County residents enrolled in a Covered California health plan (http://ocgov.com/about/infooc/facts/indicators).

Insurance Coverage for Children, 0-17

Geography	Total Population	Children, 0-17	Adults, 18-64	Seniors, 65+
Orange County	82.7%	91.4%	76.6%	98.0%
California	82.2%	91.7%	75.5%	98.3%

Source: U.S. Census Bureau, American Community Survey, 2009-2013, S2701. http://factfinder.census.gov

In Orange County, 49.9% of the population has employment-based health insurance. 19.4% are covered by Medi-Cal and 11.3% of the population has coverage that includes Medicare. Orange County has higher rates of employment-based and private purchase insurance than found in the state.

Insurance Coverage by Type of Coverage

Insurance Coverage	Orange County	California
Total Insured	88.8%	88.1%
Employment-based	49.9%	44.8%
Medi-Cal	19.4%	22.5%
Medicare and others	7.6%	9.0%
Private purchase	7.6%	6.4%
Medicare and Medi-Cal	3.1%	3.0%
Other public	0.6%	1.0%
Medicare	0.6%	1.4%
No Insurance	11.2%	11.9%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Sources of Care

Residents who have a medical home and access to a primary care provider improve continuity of care and decrease unnecessary ER visits. A total of 86.5% reported a regular source for medical care. The source of care for 70.3% of Orange County is a doctor's office, HMO, or Kaiser. This is higher than the state rate (60.7%). Clinics and

community hospitals are the source of care for 15.3% in the county, while 13.5% of county residents have no regular source of care.

Sources of Care

Sources of Care	Orange County	California
Have usual place to go when sick or need health advice	86.5%	85.8%
Dr. office/HMO/Kaiser Permanente	70.3%	60.7%
Community clinic/government clinic/community hospital	15.3%	23.0%
ER/Urgent Care	0.1%	1.4%
Other	0.7%	0.7%
No source of care	13.5%	14.2%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Accessing health care can be affected by the number of providers in a community. According to the 2015 County Health Rankings, Orange County ranks 18 out of 58 California counties for clinical care, which includes ratios of population-to-care providers and preventive screening practices, among others. The ratio of county population to health care providers indicates there are more primary care physicians and dentists, but fewer mental health providers for its population when compared to California.

Ratio of Population to Health Care Providers

Providers	Orange County	California
Primary Care Physicians	1,063:1	1,294:1
Dentists	987:1	1,291:1
Mental Health Providers	511:1	376:1

Source: County Health Rankings, 2015.
http://www.countyhealthrankings.org/app/california/2015/rankings/orange/county/outcomes/overall/snapshot

Delayed care may also indicate reduced access to care; 11.3% of county residents reported delaying or not seeking medical care and 10.8% reported delaying or not getting their prescription medication in the last 12 months.

Delay of Care

Delay of Care	Orange County	California
Delayed or didn't get medical care in last 12 months	11.3%	11.3%
Delayed or didn't get prescription medicine in last 12 months	10.8%	8.7%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Use of the Emergency Room

An examination of ER use can lead to improvements in providing community-based prevention and primary care; 14.4% of residents in Orange County visited an ER over

the period of a year. Seniors visited the emergency room at higher rates (23.8%) than other age groups.

Use of Emergency Room

ER Use	Orange County	California
Visited ER in last 12 months	14.4%	17.4%
0-17 years old	17.0%	19.3%
18-64 years old	11.8%	16.5%
65 and older	23.8%	18.4%
<100% of poverty level	16.1%	20.6%
<200% of poverty level	15.0%	19.8%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

UC Irvine Medical Center reported 47,352 emergency room encounters in 2014, with 9,919 resulting in admission (21%). Of the remaining 37,433 that did not result in admission, accidents and other causes of injury accounted for 20.1% of emergency room encounters.

Principal Causes of Injury, ER Encounters Not Resulting in Admission, UC Irvine Medical Center, 2014

Principal Cause of Injury Group	ER Encounters	Percent
No principal cause of injury reported	29,905	79.9%
Other accidents	1,815	4.85%
Accidental falls	56	0.1%
Rail & motor vehicle	222	0.6%
Natural/environmental factors	24	0.1%
Inflicted by others	459	1.2%
Misadventures/complication	61	0.2%
Adverse effects/therapeutics	482	1.3%
Submersion, suffocation, foreign body	161	0.4%
Other vehicle/transport	1,809	4.8%
Accidental poisoning	127	0.3%
Self-inflicted injury	118	0.3%
Fire accidents	24	0.1%
Undetermined injury	2,044	5.5%
Late effects of injury	126	0.3%
Total	**37,433**	**100.0%**

Source: California Office of Statewide Health Planning & Development, 2014.
http://report.oshpd.ca.gov/?DID=PID&RID=Facility_Summary_Report_Emergency_Department
http://report.oshpd.ca.gov/?DID=PID&RID=Facility_Summary_Report_Hospital_Inpatient

Dental Care

In Orange County, less than 1% of adults (0.7%) have never been to the dentist compared with 2.2% at the state level. 78.1% of adults have been to a dentist in the past two years.

Time since Last Dental Visit, Adult

Dental Care	Orange County	California
Less than 6 months to 2 years ago	78.1%	79.7%
More than 2 years to more than 5 years	21.2%	18.1%
Never been to dentist	0.7%	2.2%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

In Orange County, 1.8% of teens have never been to the dentist. 98% of teens have been to a dentist in the past two years.

Time since Last Dental Visit, Teens

Dental Care	Orange County	California
Less than 6 months to 2 years ago	98.0%	94.7%
More than 2 years to more than 5 years	0.2%	3.5%
Never been to dentist	1.8%	1.8%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Among children in Orange County, 88.7% had been to the dentist in the last two years. 11.3% of children in the county had never been to the dentist.

Time Since Last Dental Visit, Children, Ages 2-11

Dental Care	Orange County	California
Less than 6 months to 2 years ago	88.7%	83.8%
More than 2 years to more than 5 years	0%	0.9%
Never been to dentist	11.3%	15.3%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Community Input - Access to Care

Stakeholder interviews identified the following issues, challenges and barriers related to access to care:

- Passage of the Affordable Care Act did a great job of increasing access and coverage but the remaining uninsured, which include the undocumented, are still not covered and people haven't figured out how to provide or pay for services within this sector. The Medicaid health plan has grown from 380,000 to 760,000 in the past two years. In Orange County, 1 in 4 low-income people are now insured.
- We are seeing people floundering and fearful. They don't know how to navigate through the health care system. And the systems aren't coordinated. It has gotten much worse.
- In this community, there is a growing knowledge that if you are documented, you should have health insurance. So now people are afraid to say they don't have health insurance because people will assume they are illegal.
- Community clinics care for 300,000 patients. About a quarter are uninsured or not listing any insurance so we think they fall in the undocumented category. This

is important to note because in our County, the assumption is that because of the ACA, everyone should be covered so if you're not covered it's because you don't want to or you are undocumented and we don't care about you. However, that is not the mission of our clinic.

- The system is failing and families are falling through the cracks. Under Healthy Families premiums were $8 a month. With Covered CA that same family has to pay $200 a month because their income is over Medicaid thresholds. Now that family can't make the premium, coverage lapses and they go to the ED for care.
- Even when you are eligible for insurance, this doesn't mean the little money you have should go for insurance, maybe people need it for food or rent. ACA insurance was not as affordable as we hoped it would be for people.
- We lack a County hospital as a last resort. But we do have fantastic safety net clinics.
- Low medical reimbursement rates contribute to provider shortages and shortages for delivery of diagnostic services.
- Medicaid is not a strong payer and many primary care doctors are not accepting Medicaid. Consequently, insurance expansion hasn't always allowed access to medical care so people continue to present to ED for primary care issues.
- Undocumented care is a real challenge. In this community, payer of last resort does not expand to the undocumented. Community clinics have been picking up that burden as well as hospitals with charitable care programs.
- The challenge is that there are not enough access points for services. Oral care, behavioral health, primary care. We need more physical locations in accessible locations for target populations and incorporate bus routes and transportation.
- Medicaid expansion for childless adults has changed our service population. We're seeing different lifestyle issues like drugs and substance use that we did not see as much previously.
- There are shortages of some specialties in Orange County particularly for Medicaid and uninsured populations. Pediatric subspecialties like Neurology and Endocrinology. For adults, we see shortages with Urology, ENT, Neurology, and Cardiology.
- In some markets, we have an excess of specialty and subspecialty practitioners. Without primary care coordinating the care of each individual, the patient is bouncing between different specialists without a coordinated care plan, which increases costs.
- Navigating the public system and knowing what is available is very challenging. The problem isn't always lack of services or support but how to navigate it all. We don't have a lot of one-stop shops. People have to really work for their health care.

- There are no conveniently located services in my community. What we need are pop-up urgent care centers where we can get some quick care like flu shots or treatment for a minor accident. We need them strategically around the community.
- Patients are living with functional disabilities for years because they cannot get their surgeries. People are waiting 2-3 years to get hernias repaired. If someone is uninsured or poor they might be put on a waiting list for care that takes years.
- We need to move away from public health fairs for care. The community does not want medical intervention done in such a public arena.
- Geography is difficult for some families. People can access care when they are mobile and have competencies for navigating information and highways and communications to get to care. Other families are not as mobile and need care with trusted agencies like schools and churches. It is difficult to access our geography when you experience poverty.
- ACA says everyone has a medical home, prevention and regular check-ups, which is the way to improve the system. I am certain if we map out the opportunities to receive preventive care in the County and match it with people who have needs, we will have a disconnect. Community clinics do their best but they cannot handle all the primary health care needs in the County.
- Dental and vision care are absent in Orange County. When we do health outreach fairs for dental and vision we are swamped. As many as 1000 people come to get eye exams and glasses and dental care.

Birth Characteristics

Births

In 2013, there were 40,083 births in Orange County. The majority of births were to mothers who are Latino (46.0%) or White (31.5%), followed by 19.1% of births to Asian mothers. The remaining 3.5% of births were to African-Americans or other races (California Department of Health, 2013).

Teen Birth Rate

In 2013, teen pregnancy rates in Orange County occurred at a rate of 46.8 per 1,000 births (or 4.7% of total births). This rate is lower than the teen pregnancy rate found in the state (6.2% of total births).

Births to Teenage Mothers (Under Age 20)

Geography	Births to Teen Mothers	Live Births	Rate per 1,000 Live Births
Orange County	1,876	40,083	46.8
California	30,838	495,571	62.2

Source: California Department of Public Health, 2013, Vital Statistics Query System. http://www.apps.cdph.ca.gov/vsq/default.asp

Prenatal Care

In 2013, pregnant women in Orange County entered prenatal care early – within the first trimester - at a rate of 89.7%. This rate of early entry translates to 10.3% of women entering prenatal care late or not at all, lower than the California rate of 16.4%. Orange County met the Healthy People 2020 benchmark of 77.9% of women entering prenatal care in the first trimester.

Early Entry into Prenatal Care (In First Trimester)

Geography	Early Prenatal Care	Live Births*	Percent
Orange County	35,566	39,652	89.7%
California	407,064	486,912	83.6%

Source: California Department of Public Health, 2013, Vital Statistics Query System. http://www.apps.cdph.ca.gov/vsq/default.asp
**Births in which the first month of prenatal care is unknown are not included in the tabulation.*

Low Birth Weight

Low birth weight is a negative birth indicator. Babies born at a low birth weight are at higher risk for disease, disability and possibly death. Orange County has a lower rate of low birth weight babies (63.3 per 1,000 live births) when compared to the state (68.2 per 1,000 live births). The rate of incidence of low birth weight (6.3%) is lower than the Healthy People 2020 objective of 7.8%.

Low Birth Weight (Under 2,500 g)

Geography	Low Birth Weight	Live Births	Percent of Live Births
Orange County	2,536	40,083	6.3%
California	33,818	495,571	6.8%

Source: California Department of Public Health, 2013, Vital Statistics Query System. http://www.apps.cdph.ca.gov/vsq/default.asp

Infant Mortality

Infant mortality reflects deaths of children under one year of age. The infant death rate in the county is 3.3 deaths per 1,000 live births. This rate is lower than the California rate of 4.7 as well as the Healthy People 2020 objective of 6.0 deaths per 1,000 live births.

Infant Mortality Rate, 2013

Geography	Infant Deaths	Live Births	Rate
Orange County	123	37,256	3.3
California	2,348	494,392	4.7

Source: California Department of Public Health, 2013, Vital Statistics Query System. http://www.apps.cdph.ca.gov/vsq/default.asp

Community Input – Maternal and Infant Health

Stakeholder interviews identified the following issues, challenges and barriers related to maternal and infant health:

- There continues to be great need for maternal and child health services in the community especially for low-income, disenfranchised and underserved.
- Those breastfed have much less risk of obesity as kids, which reduces rates as an adult. Even prenatal care is successful for obesity prevention.
- It is well known that Latinos have higher rates of obesity. This is a factor in postpartum hemorrhage. This is increasing and no one seems to be paying attention to it. We have more women dying now than 50 years ago. Placenta abnormalities and increasing blood pressure and obesity, and kidney problems all stemming from obesity. Also, in-utero kids are impacted by obesity and the ability to deal with glucose this impacts them their whole life.
- The Vietnamese population's gestational diabetes is surpassing Latinos with their genetic inability to metabolize high glucose and fats in our diet. They are thin but suffer from rampant blood sugars.

Mortality/Leading Causes of Death

Mortality Rates

The top five leading causes of death in Orange County are 1) cancer, 2) heart disease, 3) Alzheimer's disease, 4) stroke, and 5) lung disease. Age-adjusted death rates eliminate the bias of age in the makeup of the populations being compared. When comparing across geographic areas, age-adjusting is typically used to control for the influence that different population age distributions might have on health event rates. Death counts and death rates are averages for the three-year period, 2011-2013.

The cancer death rate is 145.1 per 100,000 persons, lower than the state average and the HP 2020 target rate of 161.4. The heart disease mortality rate in the county is 101.3 per 100,000 persons, lower than the state rate (104.3) and the Healthy People 2020 objective of 103.4 deaths per 100,000 persons. The death rates due to Alzheimer's disease ranked third at 38.4, which is higher than the state rate. The death rate due to stroke was 35.2 per 100,000 persons, which exceeded the Healthy People 2020 objective of 34.8. Liver disease death rate in Orange County was 10.3 per 100,000 persons; this exceeds the Healthy People 2020 objective of 8.2 per 100,000 persons.

Mortality Rates, Age Adjusted, per 100,000 Persons, 2011-2013

Causes of Death	Orange County		California	HP 2020
	Number	Rate	Rate	Rate
Cancer	4,458	145.1	150.9	161.4
Heart disease	3,111	101.3	104.3	103.4
Alzheimer's disease	1,154.7	37.6	30.9	No Objective
Stroke	1,081.7	35.2	35.7	34.8
Chronic Lower Respiratory Disease	950	30.9	35.0	No Objective
Unintentional injuries	695	22.6	28.4	36.4
Pneumonia and influenza	555.7	18.1	16.3	No Objective
Diabetes	470.3	15.3	20.7	No Objective
Liver disease	315.7	10.3	12.3	8.2
Suicide	306	10.0	10.4	10.2

Source: California Department of Public Health, 2011-2013. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx

The five-year average cancer mortality rate for all cancer sites in Orange County was 143.6, statistically significantly lower than the California rate. Mortality in the county from digestive system, respiratory system, and breast cancers were also significantly lower than the state rates.

Cancer Mortality Rates, per 100,000 Persons, 2008-2013

Cancer Sites	Orange County		California
	Number	Rate	Rate
Cancer, all sites	21,983	143.6	152.1
Digestive system	5,935	38.4	41.6
Respiratory system	5,018	33.4	35.8
Breast	1,677	10.7	11.5
Female genital	1,226	14.3	14.9
Male genital	1,209	19.9	21.0
Urinary system	1,119	7.3	7.7
Leukemia	1,001	6.6	6.5
Lymphoma	887	5.9	6.0

Source: California Cancer Registry, Cancer Surveillance Section, California Department of Public Health, 2008-2013.
http://www.cancer-rates.info/ca/

Chronic Disease

Health Status

Among the Orange County population, 17.4% reported being in fair or poor health. This rate is slightly higher than the California rate of 17%.

Health Status, Fair or Poor Health

Health Status	Orange County	California
Persons with fair or poor health	17.4%	17.0%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Diabetes

Diabetes is a growing concern in the community; 7.1% of adults in Orange County have been diagnosed with diabetes, and 9.2% have been diagnosed as pre-diabetic. Among adults with diabetes, 51.2% are very confident they can control their diabetes; 12.2% of adults in Orange County are not confident that they can control/manage their diabetes.

Adult Diabetes

Diabetes	Orange County	California
Diagnosed pre/borderline diabetic	9.2%	10.5%
Diagnosed with diabetes	7.1%	8.9%
Very confident to control diabetes	51.2%	56.5%
Somewhat confident	36.6%	34.7%
Not confident	12.2%	8.8%

Source: California Health Interview Survey, 2014. *http://ask.chis.ucla.edu*

The federal Agency for Healthcare Research and Quality (AHRQ) developed Prevention Quality Indicators (PQIs) that identify hospital admissions that may be avoided through access to high-quality outpatient care. Four PQIs are related to diabetes: long-term complications (renal, ophthalmic, or neurological manifestations, and peripheral circulatory disorders); short-term complications (ketoacidosis, hyperosmolarity and coma); amputation; and uncontrolled diabetes. For all indicators, hospitalization rates were lower for Orange County than for California.

Diabetes Hospitalization Rates* for Prevention Quality Indicators

Prevention Quality Indicators (PQI)	Orange County	California
Diabetes long term complications	92.4	107.4
Diabetes short term complications	39.9	56.1
Lower-extremity amputation among patients with diabetes	11.3	16.1
Uncontrolled diabetes	7.7	9.2

Source: California Office of Statewide Health Planning & Development, 2013.
http://www.oshpd.ca.gov/HID/Products/PatDischargeData/AHRQ/pqi_overview.html
** Risk-adjusted (age-sex) annual rates per 100,000 population.*

Heart Disease

For adults in Orange County, 6.3% have been diagnosed with heart disease. Among these adults, 57% are very confident they can manage their condition but 13.7% were not confident they could control their heart disease. 62.9% have a disease management care plan developed by a health care professional.

Adult Heart Disease

Heart Disease	Orange County	California
Diagnosed with heart disease	6.3%	6.1%
Very confident to control condition	57.0%	53.6%
Somewhat confident to control condition	29.3%	34.9%
Not Confident to control condition	13.7%	11.5%
Has a disease management care plan	62.9%	67.1%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

As noted, Prevention Quality Indicators (PQIs) identify hospital admissions that may be avoided through access to high-quality outpatient care. The three PQIs related to heart disease are hypertension, heart failure, and angina without procedure. In 2013, rates of hypertension, Congestive Heart Failure and Angina were lower in the county than in the state.

Hospitalization Rates* for Prevention Quality Indicators – Heart Disease

Prevention Quality Indicators (PQI)	Orange County	California
Congestive Heart Failure	213.2	292.0
Hypertension	22.5	33.3
Angina without procedure	8.5	16.9

Source: California Office of Statewide Health Planning & Development, 2013.
http://www.oshpd.ca.gov/HID/Products/PatDischargeData/AHRQ/pqi_overview.html
** Risk-adjusted (age-sex) annual rates per 100,000 population.*

High Blood Pressure

A co-morbidity factor for diabetes and heart disease is hypertension (high blood pressure). In Orange County, 27.8% of adults have been diagnosed with high blood pressure, and of those, 75% take medication to control their hypertension. The Healthy People 2020 objective is to reduce the proportion of adults with high blood pressure to 26.9%.

High Blood Pressure

Blood Pressure	Orange County	California
Ever diagnosed with hypertension	27.8%	28.5%
Takes medicine for hypertension	75.0%	68.5%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Cancer

In Orange County, the five-year, age-adjusted cancer incidence rate is 418.6 per 100,000 persons, statistically significantly lower than the California average (95% confidence). Rates for cancers of male genital, digestive system, female genital, and urinary system were all significantly lower than the state average. Cancers of breast (either sex), skin, and endocrine system/thyroid had modest but significantly higher rates. Other differences were non-significant.

Cancer Incidence, per 100,000 Persons, Age Adjusted, 2008-2012

Cancer Sites	Orange County	California
All sites	418.6	424.9
Male genital	127.6	133.7
Digestive system	76.4	81.1
Breast, either sex	67.4	65.3
Respiratory system	49.0	51.2
Female genital	45.1	47.6
Urinary system	30.2	33.5
Skin	28.4	23.0
Lymphoma	21.1	21.3
Endocrine system/thyroid	14.3	12.7
Leukemia	12.5	12.5
Oral Cavity and pharynx	10.6	10.4
Brain and nervous system	6.4	6.1

Source: California Cancer Registry, Cancer Surveillance Section, Cancer Surveillance and Research Branch, California Department of Public Health, 2008-2012. http://www.cancer-rates.info/ca/

Asthma

In Orange County, 14.6% of the population has been diagnosed with asthma. 95.8% have had symptoms in the past year and 53.9% take daily medication to control their asthma. Among county youth, 10.9% have been diagnosed with asthma, and 35.9% have visited the ER as a result of their asthma.

Asthma

Asthma	Orange County	California
Diagnosed with asthma, total population	14.6%	14.0%
Diagnosed with asthma, 0-17 years old	10.9%	14.5%
ER visit in past year due to asthma, total population	12.1%	9.6%
ER visit in past year due to asthma, 0-17 years old	35.9%	13.9%
Takes daily medication to control asthma, total population	53.9%	44.2%
Takes daily medication to control asthma, 0-17 years old	6.2%	39.0%
Had asthma symptoms in the past 12 months	95.8%	88.2%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Two Prevention Quality Indicators (PQIs) are related to asthma including chronic obstructive pulmonary disease (COPD) or Asthma in Older Adults, and Asthma in Younger Adults. In 2013, hospitalization rates for COPD and younger adult asthma were lower in the county than the state.

Asthma Hospitalization Rates* for Prevention Quality Indicators (PQI)

Prevention Quality Indicators (PQI)	Orange County	California
COPD or asthma in older adults	256.3	329.9
Asthma in younger adults	15.2	26.4

Source: California Office of Statewide Health Planning & Development, 2013.
http://www.oshpd.ca.gov/HID/Products/PatDischargeData/AHRQ/pqi_overview.html
** Risk-adjusted (age-sex) annual rates per 100,000 population.*

HIV/AIDS

The 2015 County Health Rankings reports an HIV prevalence rate, or the number of persons living with a diagnosis of human immunodeficiency virus (HIV) infection per 100,000 persons. The Orange County rate was 259, lower than the California rate of 363. There were 6,478 documented cases in the county in 2010.

Sexually Transmitted Diseases

The rate of Chlamydia cases in Orange County is 296.6 per 100,000 persons. This rate represents a 4-year high but remains well below the California rate of 453.4. The county rate of Gonorrhea is 57.3 per 100,000 persons, also lower than the state rate of 116.8. Rates of Syphilis are slightly lower than the state rates.

STD Cases, Rate per 100,000 Persons, 2014

STD	Orange County		California
	Cases	Rate	Rate
Chlamydia	9,292	296.6	453.4
Gonorrhea	1,796	57.3	116.8
Primary & Secondary Syphilis	205	6.5	9.9
Early Latent Syphilis	143	4.6	8.8

Source: California Department of Public Health, 2014. http://www.cdph.ca.gov/data/statistics/

Disability

Among of adults in Orange County, 27.3% had been identified as having a physical, mental or emotional disability. This rate is lower than the state rate of disability (28.5%). 4.6% of adults could not work for at least a year due to physical or mental impairment.

Population with a Disability

Disability	Orange County	California
Adults with a disability	27.3%	28.5%
Couldn't work due to impairment	4.6%	5.2%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Community Input – Chronic Disease

Stakeholder interviews identified the following issues, challenges and barriers related to chronic disease:

- Rates of stroke are increasing while the rate of heart attacks is level. Strokes that are hemorrhagic, bleeds into brain, resulting from elevated blood pressure, smoking genetics, these are increasing. Also, strokes and heart attacks are occurring at younger and younger ages. Females are quickly catching up with increasing numbers of strokes and heart attacks.
- The average life expectancy for our street homeless is 51 years of age. Chronic disease plays a huge role in this. When we take someone in they are usually in the end stages of their lives, and they have never had their chronic illnesses treated.
- A study from UCI and CHOC showed that Vietnamese kids have very high rates of asthma. When Vietnamese women are pregnant and working in nail salon or sewing factory, there are environmental factors impacting unborn children.
- As we have more sedentary lifestyles, dietary changes, and daily stress, all are known as indicators and factors for vascular disease, diabetes, and cardiac disease. This is reflective of societal changes. We are seeing people in their 30s and 40s have strokes and heart attacks.
- What we understand least is how to change human behavior. The doctor spends a few minutes with patients. These are lifestyle diseases, exposures to chemicals, tanning, large part preventable, and some are genetic. For behavioral side we aren't doing anything that is effective.
- The gap is that our medical system is more about treating illness than preventing illness. The percent of time that providers spend on prevention is small in comparison to intervention. It is because of our reimbursement system. We are paid when someone is sick. Population health management may play a big role in the future if financial incentives are aligned.
- A local community based family health center and Kaiser are involved with a health corridor promoting exercise and healthy food. A local food market, Northgate Gonzales Market, is setting aside space for blood pressure screenings and education on prevention. We are seeing increased awareness about obesity, chronic diseases, and interesting and collaborative responses are emerging.
- Tobacco prevention efforts have reduced cancer. We have some of the lowest rates of smoking but over 10% of adults are smokers. It is the leading cause of preventable death. We are trying to prevent smoking in the first place and its cascading effect over a lifetime.
- Vietnamese don't like to talk about Hepatitis B and Hepatitis C. If we could break that barrier, we could make more progress. They often have TB as well.

- There is only one female Vietnamese Oncologist in area. Cancer centers have to be sure to have providers and interpreters for care.
- Some of our clinics have as high as 25% undocumented or uninsured. Most of them will get surgery but not chemo, and it's a huge problem. Not getting chemo because cannot afford it.
- Accessing diagnostic screening is too hard for community. If everything was located in one place that would be good. But it is spread out and people have to go to several locations for help and take several days off work for several appointments.
- From a communicable disease control level, the County has made the decision to offer services without regard to documentation status. Our goal is to deliver care and prevent the spread of infection, like HIV/AIDS, TB, and STDs.
- There is a known need and well-focused effort to reach young adults with cancer to provide support for that transitional age with cancer.
- We may want to consider eliminating multiple centers that treat complex diseases and move to Regional Centers. Complex care should be done where there is a lot of oversight, and a lot of shared ideas.
- There are disparities with breast and cervical cancer. First, we find that women of color are screened at lower rates, and we have a problem accessing care for women under 40. There are no diagnostics or public revenue streams to cover those services. In Orange County we have high rates of breast cancer late diagnoses. This cancer is more aggressive and fatal and we do not have services in place for diagnostics.
- We are seeing high rates of cervical and breast cancer. Also a lot more throat cancer.

Health Behaviors

Health Behaviors Ranking

County Health Rankings examines healthy behaviors and ranks counties according to health behavior data. California's 57 evaluated counties (Alpine excluded) are ranked from 1 (healthiest) to 57 (least healthy) based on a number of indicators that include: adult smoking, obesity, physical inactivity, excessive drinking, sexually transmitted infections, and others. A ranking of 8 puts Orange County in the top 20% of California counties for health behaviors. This ranking has been stable for the past three years.

Overweight and Obesity

In Orange County, 41.9% of the adult population reported being overweight. The county adult rate of overweight exceeds the state rate of 35.5%. 12.7% of teens and 12.8% of children in the county are overweight.

Overweight

Age Groups	Orange County	California
Adult (ages 20+ years)	41.9%	35.5%
Teen (ages 12-17 years)	12.7%	16.3%
Child	12.8%	13.6%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

The Healthy People 2020 objectives for obesity are 30.5% of adults and 16.1% of teens. In Orange County, 18.2% of adults and 16.6% of teens are obese.

Obese

Age Groups	Orange County	California
Adult (ages 20+ years)	18.2%	27.0%
Teen (ages 12-17 years)	16.6%	14.6%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

When adult obesity levels are tracked over time, the county has experienced a variable trend, increasing over time. California has seen a small but measurable increase in rates of obesity.

Adult Obesity, 2005-2013

Geography	2005	2007	2009	2011	2013
Orange County	17.3%	18.5%	17.3%	24.2%	20.8%
California	21.2%	22.6%	22.7%	25.1%	24.7%

Source: California Health Interview Survey, 2005, 2007, 2009, 2011, 2013. http://ask.chis.ucla.edu

Adult overweight and obesity by race and ethnicity indicate high rates among Latinos (75.3%) and African Americans (71.4%). Whites also report higher levels of overweight and obesity (60.2%) compared with state averages (58.9%). Asians in Orange County have the lowest rates of overweight and obesity (36.5%).

Adult Overweight and Obesity by Race/Ethnicity

Race/Ethnicity	Orange County	California
Latino	75.3%	73.2%
African American	71.4%	71.2%
White	60.2%	58.9%
Asian	36.5%	43.7%
Total Adult Population	60.1%	62.5%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

The physical fitness test (PFT) for students in California schools is the FitnessGram®. One of the components of the PFT is measurement of body composition (measured by skinfold measurement, BMI, or bioelectric impedance). Children who do not meet the "Healthy Fitness Zone" criteria for body composition are categorized as needing improvement or at high risk (overweight/obese). In Orange County, 18.3% of 5th grade students tested as needing improvement or at high risk for body composition, slightly lower than the California rate of 21%. Among 9th graders, the county rate was 12.8%, also below the state average (16.8%).

5th and 9th Graders, Body Composition, Needs Improvement + High Risk

School District	Fifth Grade	Ninth Grade
Orange County	18.3%	12.8%
California	21.0%	16.8%

Source: California Department of Education, Fitnessgram Physical Fitness Testing Results, 2013-2014.
http://data1.cde.ca.gov/dataquest/

Fast Food

In Orange County, 20.2% of children and 29.2% of adults consume fast food three to four times a week. This rate of fast food consumption is higher than the state rate.

Fast Food Consumption

Fast Food Consumption	Orange County	California
Children who were reported to eat fast food 3-4 times a week	20.2%	14.6%
Adults who reported eating fast food 3-4 times a week	29.2%	22.2%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Soda Consumption

14.2% of children in Orange County consume at least two sodas or sweetened drinks a day. Among county adults, 6.7% drank at least seven sodas or sweetened drinks weekly; 63.3% of adults drank no soda or sweetened drinks.

Soda or Sweetened Drink Consumption

Soda or Sweetened Drink Consumption	Orange County	California
Children reported to drink at least 2 sodas or sweetened drinks a day*	14.2%	14.2%
Adults who reported drinking at least 7 sodas or sweetened drinks weekly^	6.7%	10.1%
Adults who reported drinking no soda or sweetened drinks weekly^	63.3%	61.4%

*Source: California Health Interview Survey, *2012, ^2014. http://ask.chis.ucla.edu*

Fresh Fruits and Vegetables

58.8% of children and teens in Orange County consume two or more servings of fruit in a day. Adults (86.6%) report that they could usually or always find fresh fruits and vegetables in the neighborhood. And 80.2% of adults reported the fruits and vegetables were always or usually affordable.

Access to and Consumption of Fresh Fruits and Vegetables

Fresh Fruits and Vegetables	Orange County	California
Children and teens who reported eating 2 or more servings of fruit in the previous day	58.8%	63.3%%
Adults who reported finding fresh fruits and vegetables in the neighborhood always or usually	86.6%	86.7%
Adults who reported fresh fruits and vegetables were always or usually affordable in the neighborhood	80.2%	78.1%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Physical Activity

For school-aged children in Orange County, 25.5% engage in physical activity for at least one hour a day, 7 days a week, which is less than the state rate of 32.8%. 92.8% of Orange County teens and children visited a park, playground or open space in the last month.

Physical Activity, Children and Teens, Ages 6-17

Physical Activity	Orange County	California
Activity available one hour or more per day, 7 days per week	25.5%	32.8%
Visited a park, playground or open space in the last month	92.8%	83.9%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Among adults in Orange County, 15.4% are sedentary and do not participate in leisure time physical activities. This rate compares favorably to the Healthy People 2020 objective of 32.6%.

Adults who are Sedentary

Physical Activity	Orange County	Healthy People 2020 Objective
Adults (ages 20+) who did not participate in any leisure-time physical activities during past month	15.4%	32.6%

Source: Centers for Disease Control and Prevention, 2012. Accessed from www.ochealthiertogether.org

One of the components of the physical fitness test (PFT) for students in schools is measurement of aerobic capacity through run and walk tests. Seventy percent of 5th grade students in Orange County meet the Healthy Fitness Zone standards for aerobic capacity, higher than the state rate of 63.4%. Seventy percent (70.2%) of 9th graders meet the standards, compared to 63.9% statewide.

5th and 9th Grade Students, Aerobic Capacity, Healthy Fitness Zone

School District	Fifth Grade	Ninth Grade
Orange County	70.2%	72.0%
California	63.4%	63.9%

Source: California Department of Education, Fitnessgram Physical Fitness Testing Results, 2013-2014.
http://data1.cde.ca.gov/dataquest/

Cigarette Smoking

In Orange County, 10.8% of adults smoke cigarettes, lower than the state rate of 11.6% and the Healthy People 2020 objective of 12%.

Cigarette Smoking, Adults

Smoking	Orange County	California
Current smoker	10.8%	11.6%
Former Smoker	21.8%	22.4%
Never smoked	67.5%	66.0%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Among teens in Orange County, 5.5% smoke cigarettes and 3.2% have smoked an electronic (vaporizer) cigarette.

Smoking, Teens

Smoking	Orange County	California
Current cigarette smoker	5.5%	3.1%
Ever smoked an e-cigarette	3.2%	10.3%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Alcohol and Drug Use

Binge drinking is defined as consuming a certain amount of alcohol within a set period of time. For males this is five or more drinks per occasion and for females it is four or

more drinks per occasion. Among adults, 35.1%% of county adults had engaged in binge drinking in the past year.

Alcohol Consumption Binge Drinking, Adult

Alcohol Consumption	Orange County	California
Reported binge drinking in the past year	35.1%	34.0%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Among Orange County teens, 17.6% had reported having an alcoholic drink and 1.9% had engaged in binge drinking in the past month.

Alcohol Consumption and Binge Drinking, Teens

Alcohol Consumption	Orange County	California
Ever had an alcoholic drink	17.6%	22.5%
Reported binge drinking in the past month	1.9%	3.6%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

7.5% of teens in Orange County had tried marijuana, cocaine, sniffing glue, other drugs and 3.8% had used marijuana in the past year. These rates of reported drug use are less than state rates of teen drug use.

Illicit Drug Use, Teens

Drug Use	Orange County	California
Ever tried marijuana, cocaine, sniffing glue, other drugs	7.5%	12.4%
Marijuana use in the past year	3.8%	8.6%

Source: California Health Interview Survey, 2012. http://ask.chis.ucla.edu

Community Input – Health Behaviors

Stakeholder interviews identified the following issues, challenges and barriers related to health behaviors:

- For Asians, parents work multiple jobs all day. For safety reasons the kids do not leave home. They eat Raman noodles and do homework and play video games. They are sedentary, there are not a lot of parks, and safety is an issue.
- For Vietnamese, the doctor says eat well, exercise and these things will improve your health. But we don't follow directions very well. We say yes to the doctor but it does not mean we will do it. We are just being polite. Other cultures will say no, but Vietnamese try to please.
- We have very high rates of smoking and binge drinking in Orange County.
- Obesity and diabetes are priority areas on a County level. There are a number of collaboratives working on related issues and we are trying to get everyone rowing in the same direction and harness all efforts.

- Schools do not allow soda and candy anymore, instead they are promoting drinking water.
- More farmers' markets are available around Westminster and Garden Grove. They are being incorporated into their swap meets, which is very effective.
- Asian and Latino markets have really good fresh fruits and vegetables. Encouragement to follow traditional and ethnic foods is helpful for diabetes concerns.
- Orange County's health improvement plan and partnership through the local public health department seems to be working really well to set an agenda.
- For the elderly population, we see poor nutrition due to inability to buy and prepare food, and lack of adequate socialization causing loneliness and depression related to isolation and health conditions.
- People aren't monitoring their health and doing adequate preventive screenings and so when they get diagnosed, it is already more advanced.
- Vietnamese are sedentary and culturally do not do as much exercise. We just launched a program last week called Walk with a Doc. While they walk they can ask questions. Hope this will be successful for elderly and younger people. In our culture we don't focus on things that are prevention and physical activity is prevention.
- Look at the current debate about sugar in soda compared to tobacco prevention programs. It wasn't just cessation: it involved policies, taxes, environmental changes, enforcement in sales to minors, and prevention and cessation efforts, a holistic, decade's long approach.
- We cannot just say obesity is about personal choice. We aren't set up as a society for healthy choices to be easy – it is often the hard choice.
- Some ethnic communities, like Asian populations, may not look obese but it's the way they carry fat around their organs. Obesity is different in different populations. We need more education for providers about various ethnic populations and these differences.
- Obesity is going to end up being like mental health – we didn't get on top of it before it got out of control. And we are going to have a bunch of young people who are very sickly. We won't be able to afford to pay for their care and it will have a ripple effect.
- Prevention isn't just education, it's looking at policy and the environment people are in. Access to safe places to exercise, buy healthy food, parks, safe ways to ride bikes. Do we build environments that are easy to walk and get around in or are we 5 miles away from nearest store? This needs to be a top priority because it underlies so many other issues like cardiac, cancer, diabetes, and hypertension.

Preventive Practices

Immunization of Children

Most Orange County school districts have high rates of compliance with childhood immunizations upon entry into kindergarten, with the county rate similar to the state average.

Up-to-Date Immunization Rates of Children Entering Kindergarten, 2014-2015

Geography	Immunization Rate
Orange County	90.1%
California	90.5%

Source: California Department of Public Health, Immunization Branch, 2014-2015. https://cdph.data.ca.gov/Healthcare/School-Immunizations-In-Kindergarten-2014-2015/4y8p-xn54

Flu Vaccine

46.4% of Orange County residents have received a flu shot. 60.4% of children, 0-17, and 74.6% of seniors in Orange County received flu shots. The Healthy People 2020 objective is for 70% of the population to receive a flu shot.

Flu Vaccine in Past 12 months

Vaccines	Orange County	California
Vaccinated for flu in past 12 months	46.4%	45.8%
Vaccinated for flu in past 12 months, 0-17	60.4%	53.7%
Vaccinated for flu in past 12 months, 18-64	36.7%	37.4%
Vaccinated for flu in past 12 months, 65+	74.6%	72.8%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Mammograms

In Orange County, 72.3% of women have obtained a mammogram in the past two years. This rate is less than the Healthy People Objective of 81% of women 50 to 74 years to have a mammogram within the past two years.

Mammograms

Mammograms	Orange County	California
Women ages 50-74 who reported having a mammogram in the past 2 years	72.3%	65.1%

Source: California Health Interview Survey, 2012. http://ask.chis.ucla.edu

Colorectal Cancer Screening

In Orange County, the rate of compliance for colorectal cancer screening is 80.8%, which exceeds the Healthy People 2020 objective for colorectal cancer screening of 70.5%. Of adults advised to obtain screening, 73.6% of county residents were compliant at the time of the recommendation.

Colorectal Cancer Screening, Adults 50+

Colorectal Cancer Screening	Orange County	California
Screening sigmoidoscopy, colonoscopy or fecal occult blood test	80.8%	78.0%
Compliant with screening at time of recommendation	73.6%	68.1%

Source: California Health Interview Survey, 2009. http://ask.chis.ucla.edu

Community Input – Preventive Practices

Stakeholder interviews identified the following issues, challenges and barriers related to prevention:

- Increased coverage increases access to preventive screenings and immunizations at no cost. The challenge is to get the consumer to understand what resources are available to them and walk into the provider and get that flu shot and colonoscopy.
- Now we have Costco and the grocery stores and local community clinics and the new policy that you can't get into school unless vaccinated, so we're doing very well.
- For Hepatitis B, it exists in less than 1% in the general population. For Asians, it is close to a 19% carrier rate. For babies and children, they are vaccinated so we see it less and less. But for older adults, we still see high rates of it. We need more screening for this. It will help to lessen some liver cancers.
- Biggest issue is concern of vaccines and autism among residents of South Orange County and coastal areas.
- Prevention is the heart of all public health. When you are healthy is when you can benefit most from a good checkup. This is the basis of a medical home, lower costs and keeping people from getting sick. But those with access may not go if not on medications, why bother. Young people feel invulnerable, need to do more work to change attitudes. Also, we need to train health providers that prevention is just as important as curing cancer or doing surgery.
- Ban health fairs. Screenings done within a medical home are great, but at a health fair with no context or follow-up is pointless.
- Lot of disparities with screenings with immigrant populations. We need education that they exist, are not to be feared and are free.
- New coverage for preventive screenings is underutilized. People don't know about them, lack transportation, or have no medical home.
- One of the challenges to some preventive screenings is that the guidelines have changed in the last few years. For Pap smears it used to be every year now it is every 3 years. The guidelines for mammograms and breast exams are also changing.

Mental Health

Mental Health

In Orange County, 6.3% of adults experienced serious psychological distress in the past year. 14.9% of adults saw a health care provider for emotional, mental health, alcohol or drug issues, however, 55.3% of those who sought or needed help did not receive treatment. The Healthy People 2020 objective is for 64.6% of adults with a mental disorder to receive treatment (35.4% who do not receive treatment). 11.1% of adults took prescription medicine for emotional/mental health issues in the past year.

Mental Health Indicators, Adults

Mental Health	Orange County	California
Adults who likely had serious psychological distress during past year	6.3%	7.7%
Adults who needed help for emotional-mental and/or alcohol-drug issues in past year	14.9%	15.9%
Adults who saw a health care provider for emotional/mental health and/or alcohol-drug issues in past year	9.9%	12.0%
Adults who sought/needed help but did not receive treatment	55.3%	56.6%
Adults who took prescription medicine for emotional/mental health issue in past year	11.1%	10.1%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

In Orange County, 33.1% of teens needed help for an emotional or mental health problem and 15.1% received counseling.

Mental Health Indicators, Teens

Mental Health	Orange County	California
Teens who needed help for emotional/mental health problems in past year	33.1%	23.2%
Teens who received psychological/emotional counseling in past year	15.1%	11.6%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

In Orange County, 7.7% of adults had seriously considered suicide. This is less than the state rate.

Thought about Committing Suicide

Suicide	Orange County	California
Adults who ever seriously thought about committing suicide	7.7%	7.8%

Source: California Health Interview Survey, 2014. http://ask.chis.ucla.edu

Community Input – Mental Health

Stakeholder interviews identified the following issues, challenges and barriers related to mental health:

- In the last decade mental health saw reductions in funding with the recession and at same time, we saw the Mental Health Services Act bring in tens of millions for

preventive mental health resources. But this influx of resources came with restrictions on how it can be used and did not insure that everyone has basic access to mental health.

- Illumination Foundation exposed a huge gap in services when they started taking mental health patients from the hospitals. Patients were being discharged with minimal psych drugs. Those discharge drugs would run out within two weeks but the patient would experience 6-8 week wait time before she/he could get in for the outpatient meeting with a doctor. Recuperative care is helpful. We found that if hospitals directly called health care agencies, they could get an appointment for these discharged patients within 2 weeks. Then they felt comfortable writing prescriptions for those two weeks so there was no disruption in their care.
- Numerous catchment organizations are starting to realize that behavioral incidents that happen at school and in families are often a result of trauma. Health agencies and nonprofits have become more sophisticated in their questioning to see if kids are being exposed to trauma and they are experiencing mental illness.
- We are training our primary care level practitioners about mental health issues so when they see the early stages of mental illness, they can treat and prevent it from advancing to a more serious state.
- Prisoners have medications in jail. When they get out, they are given a few days of medications but they are not connected to the system. This is a critical gap period.
- Our police department responds to over 100 service calls a month for mental health in crisis. We take between 16-25 persons into custody each month and officers take these people in crisis to the nearest ED for 5150 involuntary holds. Officers must then wait until clinicians can evaluate, medically clear, and manage the clients' care. All officers are mandated to participate in crisis intervention training.
- Orange County has a lack of inpatient mental health beds or long-term psych units.
- FQHC payment structure at this point is limited in billing for behavioral health. We have an encounter-based system, not fee for service. So we can only bill for one service a day. So for example, an individual comes in for care and during their brief screening, we see depression and bring them see our counselor for intervention. They receive help but it's not a billable service unless we arrange for care on a separate day.
- Culture and expectations influence mental illness. There is lots of pressure with homework and I want my kids to be in a top school so they sign them up for dancing, karate, etc. and this can hurt kids.

- The County does not have the infrastructure for adequate treatment of mental health issues. We are asking why. There is no County hospital. We have one system of 10 beds opened in 1980s and that serves 3.5 million. We've grown as a community and other counties have 4-6 times the number of beds. Minors fall under different penal code – they should go to a children's hospital, but again there are no beds for kids at all in Orange County.
- Not a lot of psychiatrists accept Medicaid. Even though there is funding coming into the County, the system is disjointed and we don't collaborate enough. The ED is not getting reimbursed and we do not know where to refer people. Hospitals have formed an alliance to address this issue but we could all work together and use the funds better.
- Finding bilingual care is difficult. We have one Korean psychiatrist in all Orange County.
- Coordination of care is what we are focusing on right now. We need more coordination and to ensure everyone is informed of care.
- If in crisis, people go to the ED. If the hospital does not have access to a psych unit, the patients could be in ED for days waiting to be transferred. Everyone in the community knows it's an issue that people are stuck in the ED.
- Priorities are to do appropriate screenings with the goal of increasing residents who experience mental wellbeing. This impacts suicide rates and binge drinking and prescription drug overdoses.
- We do not have a good system so we don't know how extensive the problem is. With chronic depression, it is hard to get someone to care. We need to destigmatize mental health problems and provide more services. We do almost nothing to prevent mental health problems.
- In Orange County we do not have an institution that is dedicated to mental health. It is a part of social and behavioral health, but they are focused on other chronic diseases.
- It is particularly important with mental health issues to look at the racial and ethnic diversity of Orange County. These diverse groups often do not recognize mental illness or it is viewed with stigma.
- One of the challenges is the medical care system and mental health system are in silos, they are not integrated. This creates fragmentation and less than optimal care. We are beginning to see screenings for mental and substance abuse. The shortage of inpatient and outpatient beds and shortages of culturally diverse and linguistically appropriate care also creates barriers.
- Fairview, a state home for the developmentally disabled, is facing closure. They used to house over 800, now there are about 300 people. The clients are being moved into the community to cut costs. However, they are used to having 24/7 nursing home support. Without the same level of support they quickly default

back to the ED for care. Once in the ED, there is nowhere to move them so they are stuck in ED without care sometimes for days.

- Throughout the community, mental health care is disjointed, underfunded, and not integrated with primary care. We don't see the quality or quantity for the range of populations we have in Orange County.
- Suicide rates for elderly and young continue to be problem in Orange County.
- We need more mental health services. The existing programs are all full. Even our wraparound program that works with children and transitional youth, we only have 55 slots and they are full. Others have programs but their slots are filled too.
- The Hospital Association of Southern California (HASC) has an initiative we are developing for mental health outpatient facilities that will accept all patients regardless of payment instead of being diverted to hospitals. We've developed an Ad hoc group to try and focus on a public-private partnership to run one or more of these facilities.

Community Input

In addition to offering input on specific significant health needs in Orange County, the community stakeholders were asked about health or social services that are most difficult to access or are missing in the community. Their responses included:

- Denti-Cal funding has been cut back and many dentists not accept it. The wait list for dental care at clinics is months.
- Homelessness in minority populations plays out in different ways: you get a cot in the garage, we build you a room off the house, or you get a sleeping bag in the living room. It isn't as visible as the park, but you are homeless. There are not a lot of advocates and at the policy level, they are not listening to the minority voice.
- Homelessness is significantly higher than what is being reported. Because many families are living together in apartments that are not meant to accommodate multiple families.
- Veterans are having challenges with affordable housing when they return home after being discharged. They often have to live with family outside of our County or live with multiple families in a house.
- Frequently, we see isolated elderly with minimal resources and lack of transportation, which causes further deterioration.
- Most public school districts don't comply with state education code on getting appropriate sex education. Resources are lacking in the County. When kids are not getting the correct information at home or at school, they believe the mythology from their friends.
- In moderate to high-income areas we're seeing minute clinics. They're also popping up in high rises and housing developments. We need to expand those innovative ideas to low income areas.
- Recuperative care is a big opportunity.
- It would be helpful if hospitals could support the process of communication with protected health information to reduce barriers for individuals to obtain their own medical records. We also need to become better at allowing consents to be done electronically.
- I would like to see more patient navigator and wraparound services for medical care. And health issues supported by all areas including environment, finances, education and health literacy.
- There are not a lot of programs available for substance abuse. In school districts, Middle and High School students are using drugs and alcohol and there are not a lot of programs on prevention and treating these kids.
- The Asian Pacific Islanders category lumps everyone together. Someone from Guam has nothing in common with someone from Mongolia but they are lumped

together. There are big issues with prevention. The data is there but there is no dialogue on this.

Additional Comments or Concerns

Finally, interview participants were asked if they had any other comments or concerns they wanted to share with UC Irvine Health. Their responses included:

- The older adult population will become a significant issue in 2030; 1 in 5 persons will be 65 or older. Mobility, abuse, cognitive disorders, we are not prepared for all this. There is a lot of opportunity and preparation needed for more upstream thinking to age in a more healthy way.
- We need to increase our attention on homelessness. It's very hard to get people to prioritize health when they don't know where their next meal is coming from or where they are sleeping. They also need help getting to appointments, getting a medical home, etc.
- There is a shift in our immigrants. Latin America, Asia and Middle East, the population is relatively healthy coming to the U.S. Mostly young and middle aged and they are leaving their sick behind.
- UC Irvine Health can do a lot more on educating staff so they can educate patients on networks and preferred providers. If you want to keep your census and grow it, patients should know who is covered. People are getting insurance and think UC Irvine Medical Center is in-network, so people get into clinic and don't even know they are now out-of-network and the extra costs.
- More community partnerships would be great. UC Irvine Medical Center has such a great reputation. We do lot of patient navigation. We do interpreting, help patients get ready for their appointments, get prescriptions, etc. get them to the door of the health system and then the health system takes over. How can we partner?
- UC Irvine Health promotes a diverse health care workforce, but they need to look beyond – look at school districts and High Schools and Community Colleges to create diversity pipeline programs.
- There are two sides to UC Irvine Health. The facility is really great to work with. But the physician group is seen as not integrated into the community and they don't see themselves that way.
- If something came up, I'd want to go to UC Irvine Medical Center immediately. I think they have the best care. The criticism is they aren't working in a collaborative fashion. For the community's sake it would be amazing to have UC Irvine Medical Center's presence felt more strongly.
- It is important that UC Irvine Health consider looking at their own data from a health disparities perspective if they haven't already. Have they looked at

perspective outcomes based on financial status, race, ethnicity, so they can address disparities?

- There are over 30 hospitals in the County. They need to come together so we all do our fair share. Fact is that UC Irvine Health does tertiary services that others don't. We do research, novel treatments, and new equipment that other hospitals are not able to provide. These will eventually go away because there won't be funds.
- UC Irvine Medical Center has really improved their reputation from 5-10 years ago when the community felt they were not serving their fair share of the Medicaid population. Now they are looked at as a leader and a very good cancer center.
- UC Irvine Health has an opportunity to provide leadership in collaboratives in Orange County. As they develop their community benefit plan, I hope they consider taking on some leadership roles in the priorities they identify.
- UC Irvine Health is a critical player in all arenas. They are the largest provider, lots of community based health care, the only medical school in the County and university-based medical center; there is a huge responsibility to be a leader.
- From UCI perspective we should use our intelligence capital to develop models and study their effectiveness. There is a lack of focus and lack of taking advantage of resources we currently have.
- UCI should help the County and other agencies to study and track modern informatics.
- UC Irvine Health needs to take a leadership role in some of the issues raised in this assessment. The reality is there is a void in safety net services and UC Irvine Health could play a greater role. When you are bigger and publically funded, you have a responsibility to help more, do more, take more leadership roles, and embrace all parts of the community.

Attachment 1. Interview Stakeholders

Name	Title	Organization	Representing
Ellen Ahn, MSW, JD	Executive Director	Korean Community Services	Medically underserved, low-income, minority population
Peter Anderson, MD	Emergency Physician	Fountain Valley Regional Medical Center	Medically underserved, low-income, minority population
Whitney Ayers	Regional Vice President	Hospital Association of Southern California	Medically underserved
Kevin Baker	Chief of Police	City of Westminster	Broad interest of the community
Isabel Becerra	Chief Executive Officer	Coalition of Orange County Community Health Centers	Medically underserved, low-income, minority population
Michelle Burroughs	Director, Health and Evaluation	Orange County United Way	Medically underserved, low-income, minority population
Dan Cooper, MD	Professor and Chair, Director	Department of Pediatrics, Institute for Clinical and Translational Science	Broad interest of the community
Gio Corzo	Vice President, Home and Care Services	SeniorServ	Medically underserved, low-income, minority population
Ivan Coziahr	Executive Director	UC Irvine Family Health Centers (FQHC)	Medically underserved, low-income, minority population
Nancy Eagan	Senior Director	UC Irvine Chao Family Comprehensive Cancer Center	Medically underserved
Mary Ann Foo	Executive Director	Orange County Asian and Pacific Islander Community Alliance	Medically underserved, low-income, minority population
Holly Hagler	President/Chief Executive Officer	SeniorServ	Medically underserved, low-income, minority population
Richard Helmer, MD	Chief Medical Officer	CalOptima	Medically underserved
Paul Leon	Chief Executive Director and President	Illumination Foundation	Medically underserved, low-income, minority population
Marc Lerner, MD	Medical Officer	Orange County Department of Education	Medically underserved, low-income, minority population
Craig Myers	Health Care Consultant, President	Coalition of Orange County Community Health Centers	Medically underserved, low-income, minority population
Tricia Nguyen, MPH	Chief Executive Officer	Vietnamese Community of Orange	Medically underserved, low-income, minority population
Oladele Ogunseitan, PhD	Professor	UC Irvine Public Health	Public Health
Pamela Pimentel	Chief Executive	MOMS of Orange	Medically underserved,

	Officer	County	low-income, minority population
Mark Refowitz	Director	Orange County Health Care Agency	Public Health
Barry Ross	Vice President Healthy Communities	St. Jude Medical Center	Medically underserved, low-income, minority population
Javier Sanchez	Chief Network Officer	CalOptima	Medically underserved
Michael Schrader	Chief Executive Officer	CalOptima	Medically underserved
Allyson Sonenshine	Project Director	Orange County Women's Health Project	Medically underserved, low-income, minority population
David Souleles	Deputy Agency Director	Orange County Health Care Agency, Public Health Services	Public Health
Sam Stratton, MD	Medical Director	HCA Emergency Medical Services	Medically underserved, low-income, minority population

Attachment 2. Impact Evaluation

UC Irvine Medical Center developed and approved an Implementation Strategy to address significant health needs identified in the 2013 Community Health Needs Assessment. The Implementation Strategy addressed the following health needs through a commitment of community benefit programs and resources.

- Access to care
- Cancer
- Chronic disease

To accomplish the Implementation Strategy, goals were established that indicated the expected changes in the health needs as a result of community programs and activities. Strategies to address the priority health needs were identified and impact measures tracked. The following sections outline the impact made on the selected significant health needs since the completion of the 2013 CHNA.

Access to Care

Primary Care

UC Irvine Health operates the UC Irvine Family Health Center, a Federally Qualified Health Center, with locations in Santa Ana and Anaheim. Our mission is to improve the health and well-being of our patients by providing high-quality, accessible and comprehensive primary care to every member of the family. The majority of patients seen at the clinics from 2013-2015 were low-income, ethnic minorities. Affordable Care Act implementation began January 2014 and changes include a decrease in uninsured and increase in Medicaid/Medi-Cal patients. In 2013, 29.1% of the patients who were cared for were uninsured. In 2015, 14.2% of the patients were uninsured. Medi-Cal patients increased from 42.2% in 2013 to 73.9% in 2015.

Clinic Patients, Demographic Characteristics and Insurance Coverage

	2013	2014	2015
Patients	19,658	20,439	20,404
Ethnic minorities	84.4%	84.5%	84.9%
<200% FPL	96.4%	94.5%	94.9%
Uninsured	29.1%	17.7%	14.2%
Medi-Cal	42.2%	69.5%	73.9%

Source: http://bphc.hrsa.gov/uds/datacenter.aspx?q=d&bid=093080&state=CA&year=2014

Financial Assistance

The County of Orange does not operate a hospital or health care system. Instead, the County's Medical Services Initiative (MSI) provided for medical services for adults, ages 19 to 64, with incomes at or below 200 percent of FPL, who are legal Orange County residents, have no other health coverage, and do not qualify for Medi-Cal or any other

public health care program. The MSI program was terminated at the end of 2013. The 59,412 persons receiving health care through MSI were transitioned to CalOptima through the ACA required expansion of Medicaid effective January 1, 2014 (approximately 75% of the MSI population), or they were expected to acquire subsidized health care coverage through Covered California, California's health exchange (approximately 25%). In October 2013, the County began identifying and notifying those MSI-eligible patients who appeared unlikely to qualify for the transition to Medicaid coverage. These individuals were provided with information on how to acquire subsidized health coverage through Covered California, effective January 1, 2014.

UC Irvine Health collaborated with the Orange County Health Care Agency as a significant participating provider in the MSI program, which functioned as one of California's local Low-Income Health Programs (LIHP) for three years prior to its termination in 2013. The Orange County Health Care Agency indicated that during the period prior to January 1, 2014 (based on FY12/13 MSI Final Settlement data), UC Irvine Health provided approximately 21.3% of the hospital services utilized by Orange County MSI program beneficiaries. Payments by the County for hospital services provided by UC Irvine Medical Center only covered 16.5% of the cost of care provided. In effect, UC Irvine Medical Center contributed the unfunded 83.5% of costs (approximately $35.5 million) from university resources in support of this community need.

Beginning January 1, 2014, the County of Orange established the Medical Safety Net (MSN) program to support the emergent/urgent health care needs of Orange County legal residents who are unable to afford needed health care, unable to qualify for Medicaid coverage, or would need to wait until the next open enrollment period to apply for subsidized Covered California health coverage. Since all program recipients are expected to obtain California Coverage during the next open enrollment cycle, all eligibility is terminated effective each January 1. In 2015, approximately 150 persons are expected to benefit from this County program. Current estimates indicate there are 210,000 remaining uninsured persons, approximately 7.6% of the population in Orange County following ACA implementation (*Source: Care, Coverage, and Financing for Southern California's Remaining Uninsured, Insure the Uninsured Project, June, 2015*).

Hospital Charity Care Provided in Orange County, 2013-2015

	2013	2014	2015
Number of hospitals	29	28	28
Total charity care all Orange County hospitals	$353,128,484	$211,737,255	$154,276,983
Charity care UC Irvine Medical Center	$101,480,345	$52,800,169	$38,028,415
UC Irvine Medical Center percent of total charity care	28.7%	24.9%	24.8%

Source: OSHPD Hospital Financial Data, CY 2013, CY 2014, CY 2015.

In 2013, it was estimated that there were 523,895 uninsured Orange County residents. The diminution in needed charity care from 2013 to 2014 can be attributable to the ACA-required Medicaid expansion and implementation of Covered California coverage at the beginning of 2014. A substantial portion of the decrease is believed to be due to the expansion in Medicaid eligibility and the community outreach effort coordinated by state and local governments and aided by community organizations. UC Irvine Medical Center was supportive of these local outreach efforts and helped inform its patients about new health coverage options that may be available to them. UC Irvine Medical Center is an active and major disproportionate share hospital provider of Medicaid services. The combined impact of the remaining uninsured and the substantial number of new Medicaid beneficiaries demonstrate a need to maintain a viable health care safety net in Orange County.

UC Irvine Medical Center has been a significant participant in CalOptima, Orange County's Medicaid Managed Care Plan, since its inception in 1995. Currently, CalOptima provides health coverage to approximately 800,000 persons. UC Irvine Medical Center maintains a contract with CalOptima for hospital inpatient and outpatient services. UCI University Physicians & Surgeons, UC Irvine Health's faculty medical practice, maintains agreements for physician specialty care. The UC Irvine Family Health Center, a Federally Qualified Health Center, maintains contracts to provide primary care to approximately 20,000 CalOptima assigned patients.

Medicaid Participation, Inpatient Days

	2013	2014	2015
Orange County hospital total inpatient days	287.894	339.295	358,575
UC Irvine Medical Center inpatient days	39,186	49,700	52,587
UC Irvine Medical Center percent of total	13.6%	14.6%	14.7%

Medicaid Participation, Outpatient Visits

	2013	2014	2015
Orange County hospital total outpatient visits	464,323	604,509	674,540
UC Irvine Medical Center outpatient visits	106,647	122,591	132,284
UC Irvine Medical Center percent of total	23.0%	20.3%	20.0%

Source: OSHPD Hospital Financial Data, LTAC and State Developmental Center data excluded –Medi-Cal Fee for Service and Medi-Cal Managed Care combined.

Cancer

Through the UC Irvine Family Health Center in Santa Ana and Anaheim, colorectal cancer screening and cervical cancer screening were conducted. The rate of screening is shown in the table below based on the number of patients eligible for the screening.

Clinic Patients, Percent Receiving Preventive Cancer Screening

	2013	2014	2015
Colorectal cancer screening	44.3%	38.6%	28.6%
Cervical cancer screening	53.2%	58.0%	65.7%

Chronic Disease

At the UC Irvine Family Health Center, patients with chronic disease received primary care services to manage their conditions.

Clinic Patients with Chronic Diseases, Percent of Patients with Medical Conditions

	2013	2014	2015
Hypertension	9.3%	7.6%	15.6%
Asthma	1.8%	1.7%	5.3%
Diabetes	6.6%	8.9%	18.9%
HIV	0.2%	0.3%	1.3%

Compliance with chronic disease management measures for clinic patients is outlined below.

Chronic Disease Management Measures

	2013	2014	2015
Asthma treatment (appropriate treatment plan)	95.7%	61.4%	95.7%
Cholesterol treatment (lipid therapy)	87.5%	7.2%	58.6%
Heart attack/stroke treatment (aspirin therapy)	72.9%	52.2%	65.7%
Blood pressure control (<140/90)	60.0%	55.3%	55.6%
Diabetes control (HbA1c <=9%)	61.4%	33.0%	58.6%

To address these and other community health needs, UC Irvine Medical Center provided community group health education classes and community events to better inform the public and improve health and wellness.

Health Education and Outreach

	2013	2014	2015
Total classes sessions	320	351	402
Number of client encounters for health education	1,322	2,047	1,783
Number of client encounters for community events	357	1,011	649

Topics addressed in the community education programs included: Adult Asthma, Breastfeeding, Diabetes Management, Early Pregnancy, Health Failure, Heart Healthy Diet, Hypertension, Joint Replacement, Kidney Failure, Meditation for Health, Newborn Care, Ostomy, Pain Management, Parenting, Preparing for Surgery, Preventing Stroke, Preparing for Child Birth, Weight Management, Women's Health and Smoking Cessation.