

UCI Health

2022

UCI Medical Center Community Health Needs Assessment



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Executive Summary

UCI Health comprises the clinical enterprise of the University of California, Irvine. UCI Medical Center (UCIMC) is a 417-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 UCI School of Medicine.

Community Health Needs Assessment

UCIMC has undertaken a Community Health Needs Assessment (CHNA). The Patient Protection and Affordable Care Act through IRS section 501(r)(3) regulation direct nonprofit hospitals to conduct a CHNA every three years and develop a three-year Implementation Strategy that responds to community needs.

Service Area

UCIMC is located at 101 The City Drive South, Orange, Calif., 92868. The service area comprises all of Orange County, California. 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.

Methodology

Secondary Data

Secondary data were collected from a variety of county and state sources to present community demographics, social determinants of health, access to health care, maternal and infant health, leading causes of death, disability and disease, COVID-19, health behaviors, mental health, substance use and preventive practices. These data are presented in the context of Orange County and California.

Analysis of secondary data includes an examination and reporting of health disparities for some health indicators. The report includes benchmark comparison data that measure the data findings as compared to Healthy People 2030 objectives, where appropriate. Healthy People objectives are a national initiative to improve the public's health by providing measurable objectives that are applicable at national, state, and local levels.

Primary Data

Fourteen (14) phone interviews were conducted during December 2021 and January

2022. Community stakeholders identified by the hospital were contacted and asked to participate in the needs assessment interviews. Interview participants included a broad range of stakeholders concerned with health and wellbeing in Orange County, who spoke to issues and needs in the communities served by the hospital.

Significant Community Needs

Significant needs were identified through a review of the secondary health data and validation through stakeholder interviews. The identified significant needs included:

- Access to health care
- Chronic diseases (Alzheimer's disease, asthma, cancer, diabetes, heart disease, liver, stroke)
- COVID-19
- Housing and homelessness
- Mental health
- Overweight and obesity
- Preventive practices (vaccines and screenings)
- Substance use

COVID-19

COVID-19 continues to have an unprecedented impact on the health and well-being of the community. This CHNA identified an increase in economic insecurity, food insecurity, housing and homelessness, mental health conditions and substance use as a direct or indirect result of the pandemic. Additionally, access to routine care, preventive screenings, disease maintenance, healthy eating and physical activity declined. Community stakeholder comments on the effect of COVID in the community are included in the CHNA.

Prioritization of Health Needs

The identified significant community needs were prioritized with input from the community. Interviews with community stakeholders were used to gather input on the significant needs. Mental health, access to care, chronic diseases, housing and homelessness and preventive practices were ranked as the top five priority needs in the service area.

Report Adoption, Availability and Comments

This CHNA report was adopted by the UC Irvine Chancellor on **June 27**, 2022. This report is widely available to the public on the hospital's web site, ucihealth.org/community-health. Written comments on this report can be submitted to Christopher M. Leo, UCI Health Director of Government Affairs, at cmleo@hs.uci.edu.

Introduction

Background and Purpose

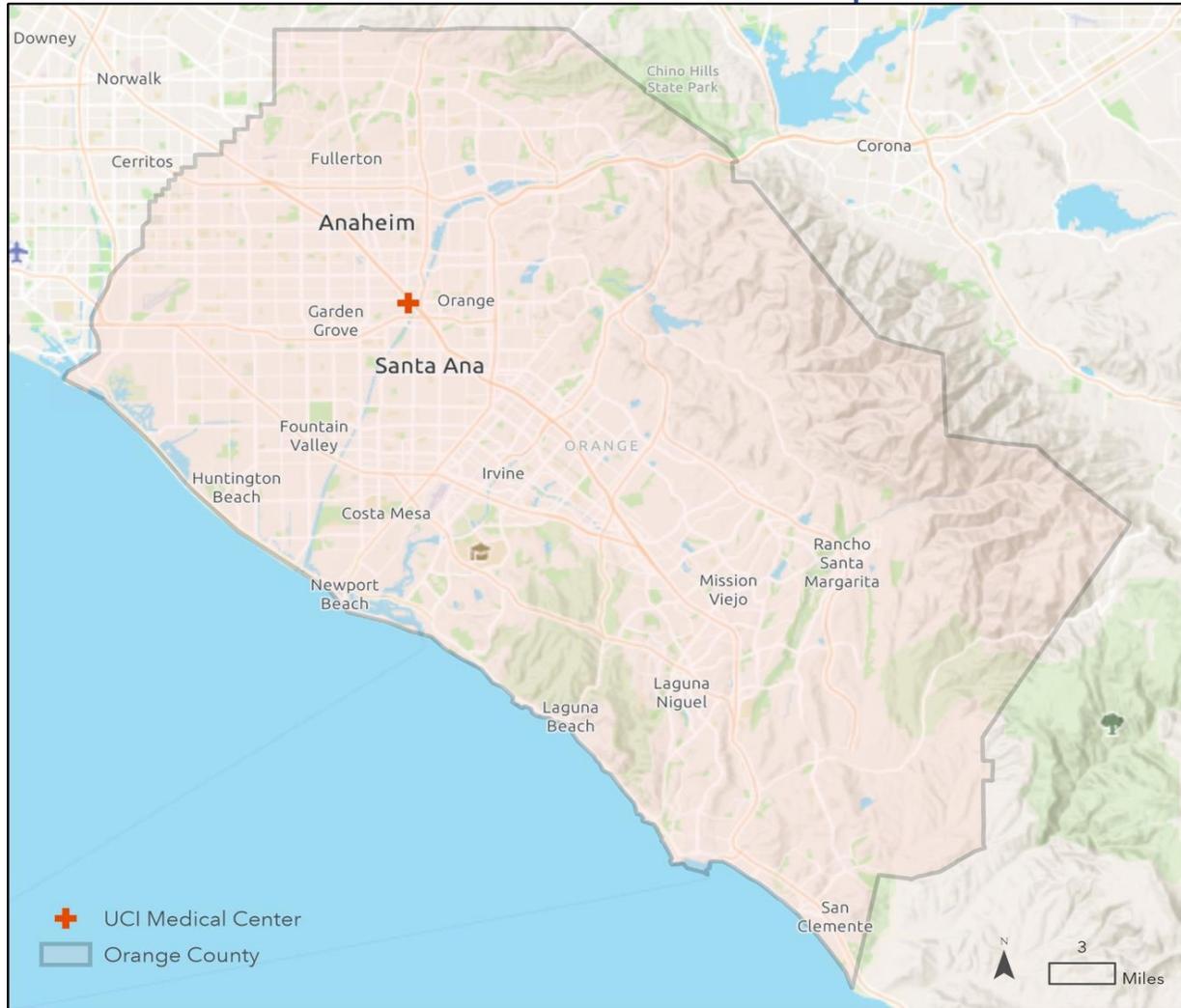
UCI Health comprises the clinical enterprise of the University of California, Irvine. The medical center is a 417-bed acute care hospital providing tertiary and quaternary care, ambulatory and specialty medical, behavioral health and rehabilitation services. It is the primary teaching location for UCI School of Medicine. UCIMC 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 49 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 health care standard-setting organization. Serving our communities in Orange County and the surrounding region is one of UCI Health's highest priorities.

The passage of the Patient Protection and Affordable Care Act (2010) requires tax-exempt hospitals to conduct Community Health Needs Assessments (CHNA) every three years and adopt an Implementation Strategy to meet the priority health needs identified through the assessment. A CHNA 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

UCIMC is located at 101 The City Drive South, Orange, Calif., 92868. As a regional health care provider, the service area comprises all of Orange County, the sixth most populous county in the nation. 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.

UCI Medical Center Service Area Map



Project Oversight

The Community Health Needs Assessment process was overseen by:
Christopher M. Leo, Esq.
Director of Government Affairs
UCI Health

Acknowledgements

For input on the stakeholder interviews, thank you to:
Sora Park Tanjasiri, DrPH, MPH
Professor, UCI Dept of Epidemiology
Equity Advisor, UCI Program in Public Health
Associate Director, Cancer Health Disparities & Community Engagement

Consultants

Biel Consulting, Inc. conducted the CHNA. Dr. Melissa Biel was joined by Melissa A. King, PhD, MPA and JuHyun Y. Šakota, MPA of People's Health Solutions to complete the data collection. Biel Consulting, Inc. is an independent consulting firm that works with hospitals, clinics and community-based nonprofit organizations. Biel Consulting, Inc. has over 25 years of experience conducting CHNAs and working with hospitals on developing, implementing, and evaluating community benefit programs.

www.bielconsulting.com + www.peopleshealthsolutions.com

CHNA Approval

This CHNA report was adopted by the UC Irvine Chancellor on **June 27**, 2022.

Data Collection Methodology

Secondary Data Collection

Secondary data were collected from a variety of county and state sources to present community demographics, social determinants of health, access to health care, maternal and infant health, leading causes of death, disability and disease, COVID-19, health behaviors, mental health, substance use and preventive practices. These data are presented in the context of Orange County and California.

Secondary data for the service area were collected and documented in data tables with narrative explanation. The data tables present the data indicator, the geographic area represented, the data measurement (e.g., rate, number, or percent), and state comparisons, the data source, data year and an electronic link to the data source.

Analysis of secondary data includes an examination and reporting of health disparities for some health indicators. The report includes benchmark comparison data that measure the data findings as compared to Healthy People 2030 objectives, where appropriate. Healthy People objectives are a national initiative to improve the public's health by providing measurable objectives that are applicable at national, state, and county levels.

Significant Community Needs

Initially, significant health needs were identified through a review of the secondary health data collected. The identified significant needs included:

- Access to health care
- Chronic diseases (Alzheimer's disease, asthma, cancer, diabetes, heart disease, liver, stroke)
- COVID-19
- Housing and homelessness
- Mental health
- Overweight and obesity
- Preventive practices (vaccines and screenings)
- Substance use

Primary Data Collection

UCIMC conducted interviews with community stakeholders to obtain input on significant community needs, barriers to care and resources available to address the identified health needs. Fourteen (14) phone interviews were conducted during December 2021 and January 2022. Community stakeholders identified by the hospital were contacted and asked to participate in the needs assessment interviews. Interview participants

included a broad range of stakeholders concerned with health and wellbeing in Orange County, who spoke to issues and needs in the communities served by the hospital.

The identified stakeholders were invited by email to participate in the phone interview. Appointments for the interviews were made on dates and times convenient to the stakeholders. At the beginning of each interview, the purpose of the interview in the context of the assessment was explained, the stakeholders were assured their responses would remain confidential, and consent to proceed was given.

During the interviews, participants were asked to share their perspectives on the issues, challenges and barriers relative to the identified health needs (i.e.; what makes each health need a significant issue in the community? What are the challenges people face in addressing these needs?), along with identifying known resources to address these health needs, such as services, programs and/or community efforts. Attachment 1 lists the stakeholder interview respondents, their titles and organizations. Attachment 2 provides stakeholder responses to the interview overview questions.

Public Comment

In compliance with IRS regulations 501(r) for charitable hospitals, a hospital CHNA and Implementation Strategy are to be made widely available to the public and public comment is to be solicited. The previous CHNA and Implementation Strategy were made widely available to the public on the website and can be accessed at ucihealth.org/community-health. To date, no comments have been received.

Prioritization of Significant Needs

The identified significant community needs were prioritized with input from the community. Interviews with community stakeholders were used to gather input on the significant needs. The following criteria were used to prioritize the significant needs:

- The perceived severity of a health or community issue as it affects the health and lives of those in the community.
- Improving or worsening of an issue in the community.
- Availability of resources to address the need.
- The level of importance the hospital should place on addressing the issue.

Each of the stakeholder interviewees was sent a link to an electronic survey (SurveyMonkey) in advance of the interview. The stakeholders were asked to rank each identified 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, COVID-19, overweight and obesity and substance use had the highest scores for severe and very severe impact on the community. Mental health, housing and homelessness and substance use were the needs with the highest scores for worsened over time. Housing and homelessness, mental health and substance use had the highest scores for insufficient resources available to address the need.

Significant Health Needs	Severe and Very Severe Impact on the Community	Worsened Over Time	Insufficient or Absent Resources
Access to health care	75%	25%	58.3%
Chronic disease	75%	25%	58.3%
COVID-19	83.3%	8.3%	41.7%
Housing and homelessness	75%	66.7%	91.7%
Mental health	91.7%	75%	83.3%
Overweight and obesity (healthy eating and physical activity)	83.3%	50%	75%
Preventive practices	58.3%	16.7%	33.3%
Substance use	83.3%	66.7%	83.3%

The interviewees were also asked to prioritize the health needs according to highest level of importance in the community. The total score for each significant need (possible score of 4) was divided by the total number of responses for which data were provided,

resulting in an overall score for each significant need. Mental health, access to care and chronic diseases were ranked as the top three priority needs in the service area. Calculations resulted in the following prioritization of the significant needs:

Significant Needs	Priority Ranking (Total Possible Score of 4)
Mental health	3.92
Access to health care	3.83
Chronic disease	3.82
Housing and homelessness	3.67
Preventive practices	3.64
Substance use	3.58
COVID-19	3.45
Overweight and obesity (healthy eating and physical activity)	3.27

Community input on these health needs is detailed throughout the CHNA report.

Resources to Address Significant Needs

Community stakeholders identified community resources potentially available to address the significant community needs. The identified community resources are presented in Attachment 3.

Review of Progress

In 2019, UCIMC conducted the previous CHNA. Significant needs were identified from issues supported by primary and secondary data sources gathered for the CHNA. The hospital’s Implementation Strategy associated with the 2019 CHNA addressed: access to care, preventive health care, cancer, mental health, overweight and obesity and related chronic diseases through a commitment of community benefit programs and resources. The impact of the actions that UCIMC used to address these significant needs can be found in Attachment 4.

Demographics

Population

The population in the service area is 3,192,521. Population in Orange County has increased by 6% between 2010 and 2021.

Population Growth, 2010-2021

	Population 2021	Percent Population Change
Orange County	3,192,521	+6.06%
California	39,740,046	+6.67%

Source: Orange County's Healthier Together, Claritas, 2021. www.ohealthiertogether.org

Gender

In Orange County, 49.4% of the population is male and 50.6% is female.

Population, by Gender

	Orange County	California
Male	49.4%	49.7%
Female	50.6%	50.3%

Source: Orange County's Healthier Together, Claritas, 2021. www.ohealthiertogether.org

Age

Children and youth make up 21.6% of the county's population. The county population tends to be older than the state overall with a higher percentage of adults, ages 45-64 and adults, ages 65 and older. The median age in Orange County is 39 years compared to 37.5 years for California.

Population, by Age

	Orange County		California	
	Number	Percent	Number	Percent
Ages 0-4	185,640	5.8%	2,432,198	6.1%
Ages 5-17	504,365	15.8%	6,522,118	16.4%
Ages 18-24	286,888	9.0%	3,681,847	9.3%
Ages 25-44	869,030	27.2%	11,247,139	28.3%
Ages 45-64	844,187	26.4%	9,802,776	24.7%
Ages and older 65	502,411	15.7%	6,053,968	15.2%

Source: Orange County's Healthier Together, Claritas, 2021. www.ohealthiertogether.org

Race/Ethnicity

In Orange County, 38.3% of the population is white and 21.5% are Asian. Hispanics or Latinos make up 34.9% of the population. Black/African Americans are 1.7% of the population. The county has a higher percentage of whites and Asians and a lower

percentage of Latinos/Hispanics and Black/African Americans than the state.

Race/Ethnicity

	Orange County		California	
	Number	Percent	Number	Percent
White	1,223,157	38.3%	13,954,640	35.1%
Asian	685,728	21.5%	5,928,068	14.9%
Hispanic or Latino	1,115,740	34.9%	16,124,059	40.6%
Other or Multiple	100,297	3.1%	1,286,475	3.2%
Black/African American	52,696	1.7%	2,149,325	5.4%
American Indian/Alaskan Native	6,018	0.2%	156,343	0.4%
Native Hawaiian/Pacific Islander	8,885	0.3%	141,136	0.4%

Source: Orange County's Healthier Together, Claritas, 2021. www.ochealthiertogether.org.

Citizenship

Orange County has a higher percentage of foreign-born residents compared to the state. In the county, 30.1% of residents are foreign born and 45.4% of the foreign-born residents are not U.S. citizens. It is important to note that not being a U.S. citizen does not indicate an illegal resident status within the U.S.

Foreign-Born Residents and Citizenship

	Orange County	California
Foreign born	30.1%	26.8%
Of foreign born, not a U.S. citizen	45.4%	48.3%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, B05001, B05002. <http://factfinder.census.gov>

Language

In Orange County, 53.2% of residents speak English only in the home. Spanish is spoken at home among 26.8% of the population.

Language Spoken at Home, Population 5 Years and Older

	Orange County	California
Only English	53.2%	55.3%
Spanish	26.8%	29.8%
Asian/Pacific Islander Language	14.4%	9.5%
Indo-European language	4.8%	4.7%
Other language	0.8%	0.8%

Source: Orange County's Healthier Together, Claritas, 2021. www.ochealthiertogether.org.

Veterans

In the county, 4.4% of the population, 18 years and older, are veterans.

Veterans

	Percent
Orange County	4.4%
California	5.2%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, B21001. <http://factfinder.census.gov>

Sexual Orientation

Among Orange County adults, 3.3% identify as gay, lesbian, or homosexual. 3.9% identify as bisexual.

Sexual Orientation, Adults

	Orange County	California
Straight or heterosexual	90.1%	90.4%
Gay, lesbian, or homosexual	3.3%	3.3%
Bisexual	3.9%	3.3%
Not sexual/celebrate/none/other	2.7%	3.1%

Source: California Health Interview Survey, 2020. <http://ask.chis.ucla.edu/>

Social Determinants of Health

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 58 evaluated counties are ranked according to social and economic factors with 1 being the county with the best factors to 58 for the county with the poorest factors. This ranking examines: unemployment, high school graduation rates, children in poverty, income inequality, social support, and others. In 2021, Orange County ranked tenth among counties in California.

Social and Economic Factors Ranking

	County Ranking (out of 58)
Orange County	10

Source: County Health Rankings, 2021. www.countyhealthrankings.org

Poverty

Orange County residents are less likely to be in poverty compared to those in the state overall. Among county residents, 13.8% are living at or below the 100% poverty level, and 32% are living at or below the 200% poverty level (low income).

Ratio of Income to Poverty Level

	Below 100% Poverty	Below 200% Poverty
Orange County	13.8%	32.0%
California	17.6%	39.7%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, B05010. <http://factfinder.census.gov>

In the county, 14.2% of children, 9.2% of seniors, and 27.9% of female-headed households with children live in poverty.

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

	Children Under 18 Years Old	Seniors	Female HH with Children
Orange County	14.2%	9.2%	27.9%
California	18.1%	10.2%	33.1%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, DP03, B17001. <http://factfinder.census.gov>

Unemployment

The average unemployment rate in the county was 8.8% in 2020, as compared to the state rate of 10.1%.

Unemployment Rate

	Unemployment Rate
Orange County	8.8%
California	10.1%

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS), 2020 average, accessed September 9, 2021. <https://www.bls.gov/lau/>

Households

The median household income for the county is \$98,086. This is higher than the median income for the state (\$82,565).

Median Household Income

	Median Household Income*
Orange County	\$98,086
California	\$82,565

Source: Orange County's Healthier Together, Claritas, 2021. www.ohealthiertogether.org
*Average of median household income for the ZIP Codes within the service area

Among 1,053,392 households in the county, 28.9% of households are two-person households and 33% of households are four or more person households.

Household Size

	Orange County	California
1 person households	21.3%	23.6%
2 person households	28.9%	28.6%
3 person households	16.8%	16.4%
4+ person households	33.0%	31.4%

Source: Orange County's Healthier Together, Claritas, 2021. www.ohealthiertogether.org

Safe and affordable housing is an essential component of healthy communities. According to the U.S. Department of Housing and Urban Development, families who pay more than 30 percent of their income for housing are considered “cost burdened” and may have difficulty affording other necessities including food, transportation, medical care, paying off student loans or other loans, and contributing to personal monetary savings. Over half of Orange County renters (56.6%) spend 30% or more of their household income on housing.

Spending 30% or More of Income on Rent

	Orange County	California
Renters who spend \geq 30% of income on housing	56.6%	54.8%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, DP04.

Seniors Living Alone

In Orange County, 20.9% of seniors, ages 65 and older, live alone.

Seniors, Ages 65 and Older, Living Alone

	Percent
Orange County	20.9%
California	22.6%

Source: Orange County's Healthier Together, U.S. Census American Community Survey (2015-2019). www.ochealthiertogether.org

In Orange County, 4.4% of residents received Supplemental Security Income (SSI), 1.9% received Public Assistance, and 6.0% received Food Stamps/SNAP. These rates of public assistance are lower than the state rates.

Household Supportive Benefits

	Orange County	California
Households	1,037,492	13,044,266
Supplemental Security Income (SSI)	4.4%	6.1%
Public Assistance	1.9%	3.2%
Food Stamps/SNAP	6.0%	8.9%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, DP03. <http://factfinder.census.gov>

Food Insecurity

Food insecurity is “a lack of consistent access to enough food for every person in a household to live an active, healthy life” (*Feeding America*, 2021). The percentage of people experiencing food insecurity in Orange County is 8.3%, which is lower than the state rate (10.2%). Feeding America projects that the overall food insecurity rate for Orange County has increased by 45% in 2020 due to the COVID-19 crisis.

Food Insecurity

	Orange County	California
Overall food insecurity rate	8.3%	10.2%
Child food insecurity rate	10.1%	13.7%

Source: Feeding America, State-by-State Resource: The Impact of Coronavirus on Food Insecurity, 2019, <https://feedingamericaaction.org/resources/state-by-state-resource-the-impact-of-coronavirus-on-food-insecurity/>.

Educational Attainment

In Orange County, 14.2% of adults have not graduated from high school. 17.2% are high school graduates. 48.6% adults in the county are post-secondary degree holders.

Educational Attainment, Adults, 25 Years and Older

	Orange County	California
Population 25 years and older	2,215,628	27,103,883
Less than 9 th grade	7.8%	9.1%
Some high school, no diploma	6.4%	7.4%
High school graduate	17.2%	20.7%
Some college, no degree	20.0%	21.0%

	Orange County	California
Associate degree	7.8%	7.9%
Bachelor's degree	26.3%	21.1%
Graduate or professional degree	14.5%	12.8%

Source: Orange County's Healthier Together, Claritas, 2021. www.ochealthiertogether.org.

High school graduation rates are the number of high school graduates who graduated four years after starting ninth grade. In Orange County, the high school graduation rate is 89.7%, which is higher than the state average (84.5%). The county rate does not meet the Healthy People 2030 objective for a 90.7% high school graduation rate.

High School Graduation Rates

	Percent
Orange County	89.7%
California	84.5%

Source: California Department of Education, 2018-2019 Four-Year Cohort Graduation Rates. <http://dq.cde.ca.gov/dataquest/>

Homelessness

The U.S. Department of Housing and Urban Development (HUD) conducts an annual Point-in-Time count (PIT) of homeless, with data reported by Continuums of Care. On any given night, there are 6,860 residents experiencing homelessness in Orange County. Between 2017 and 2019, homelessness has increased in the county, and most increase comes from unsheltered homelessness.

Homeless Annual Count, Santa Ana/Anaheim/Orange County CoC

Year of Count	Total Homeless	Sheltered	Unsheltered
2017	4,792	46%	54%
2019	6,860	42%	58%

Source: HUD Continuum of Care Homeless Assistance Programs Homeless Population and Subpopulations, 2017 and 2019. <https://www.hudexchange.info/programs/coc/coc-homeless-populations-and-subpopulations-reports/>

The Point In Time count in Orange County focused on the sheltered homeless. In 2020 there were 3,017 homeless persons and in 2021 there were 2,441 sheltered homeless persons. It is difficult to draw conclusions regarding homelessness in the county. The number of people in shelters can change due to many reasons. Given the impact of COVID on homeless shelter capacity, it is expected to see fewer numbers of sheltered homeless persons and it is likely that unsheltered homelessness increased.

Sheltered PIT Count, Orange County, 2020-2021 Comparison

Year of Count	Sheltered Persons
2020	3,017
2021	2,441

Source: Orange County HMIS, 2021 Sheltered Point-In-Time Homeless Count Overview. <http://ochmis.org/wp-content/uploads/2021/05/2021-PIT-Report.pdf>

Among the sheltered homeless population, 6.6% are veterans, 4.2% are youth, 7.7% are chronically homeless, 12.1% are seniors and 11.8% are homeless as a result of domestic violence.

Sheltered Homeless, by Subpopulations

Year of Count	Veterans	Youth	Chronically Homeless	Seniors	Domestic Violence
2020	4.3%	4.2%	27.3%	10.7%	8.7%
2021	6.6%	4.2%	17.7%	12.1%	11.8%

Source: Orange County HMIS, 2021 Sheltered Point-In-Time Homeless Count Overview. <http://ochmis.org/wp-content/uploads/2021/05/2021-PIT-Report.pdf>

In Orange County, 4.5% of students are experiencing homelessness.

Students Experiencing Homelessness

	Percent
Orange County	4.5%
California	3.1%

Source: California Department of Education Enrollment Multi-Year Summary by Grade, 2020-2021 (Accessed August 24, 2021) <https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdYears.aspx>

Community Input – Housing and Homelessness

Stakeholder interviews identified the following issues, challenges and barriers related to housing and homelessness. Following are their comments edited for clarity:

- The number-one reason that people lose their homes and experience homelessness is because of a loss of income – not substance use or mental health issues. It is loss of income, which is seen most commonly people experiencing illnesses, divorces, and/or domestic violence.
- Transportation is a barrier to health care access among individuals experiencing housing stability or homelessness.
- Mental health, substance use, and chronic disease are major health issues among people experiencing homelessness. Addressing them requires regular contact with a health care provider, and continuity of care is difficult when someone is highly mobile or facing housing instability.
- Mental health status is something that often prevents unsheltered individuals from obtaining permanent housing. Shelters provide a place to sleep for an evening, but do not provide support for mental health conditions.
- Public stigma exists around homelessness and mental health conditions. Many do not understand that substance use isn't necessarily the cause of homelessness, and that being unhoused often leads to substance use as a coping mechanism
- Adults, between the ages of 25 and 40, are disproportionately represented among people experiencing homelessness.

- A lack of financial literacy education, particularly among youth and students, can lead to homelessness as loans or other unexpected life events can create substantial financial burdens, leading to declining mental health and increased substance use.
- Families with lower incomes or who are facing housing instability do not have space to properly isolate and quarantine themselves, as they are more likely to live in an apartment or small house where the bathroom is shared. High living costs have made it difficult for people to afford their own private room or bathroom.

Crime and Violence

Violent crimes include homicide, rape, robbery and assault. Crime statistics indicate that Orange County has lower rates of violent crime (230 per 100,000 persons) than the state (438 per 100,000 persons).

Violent Crimes Cases and Rates, per 100,000 Persons

	Cases	Rate
Orange County	7,340	230
California	173,864	438

Source: California Department of Justice, Office of the Attorney General, 2020. <https://openjustice.doj.ca.gov/exploration/crime-statistics/crimes-clearances>. Accessed on August 9, 2021. Population data from Claritas, 2021.

In Orange County, there were 341 domestic violence calls per 100,000 persons, which is lower than the state rate (404 per 100,000 persons).

Domestic Violence Calls and Rate, per 100,000 Persons

	Total Calls	Rate
Orange County	8,452	341
California	169,362	404

Source: California Department of Justice, Office of the Attorney General, 2021. <https://openjustice.doj.ca.gov/exploration/crime-statistics/domestic-violence-related-calls-assistance>. Accessed on August 9, 2021. Population data from Claritas, 2021.

Health Access

Health Insurance

Health insurance coverage is considered a key component to accessing health care. The Healthy People 2030 objective is 92.1% of insurance coverage. Among county residents, 92.4% of the population has health insurance. 98.9% of seniors have health insurance.

Insurance Coverage

	Total Population	Children Ages 0-18	Adults Ages 19-64	Seniors Ages 65 and Older
Orange County	92.4%	96.7%	89.3%	98.9%
California	92.5%	96.7%	89.3%	98.9%

Source: U.S. Census Bureau, American Community Survey, 2015-2019, B27010

In Orange County, 60.2% of the population has employment-based health insurance. 16.8% are covered by Medi-Cal and 15.9% 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

	Orange County	California
Employment-based	60.2%	54.0%
Medi-Cal	16.8%	16.8%
Medicare & Others	13.1%	11.5%
Privately purchased	6.0%	5.2%
Medicare & Medicaid	1.4%	3.4%
Medicare only	1.4%	1.7%
Other public	1.1%	0.9%

Source: California Health Interview Survey, 2019. <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 Emergency Room (ER) visits. In Orange County, 89.3% of the population reported a regular source for medical care. The source of care for 74.2% of residents is a doctor's office, HMO, or Kaiser. Clinics and community hospitals are the source of care for 13% in the county, while 10.7% of county residents have no regular source of care.

Usual Sources of Care

	Orange County	California
Have usual place to go when sick or need health advice	89.3%	88.9%
Doctor's office/HMO/Kaiser Permanente	74.2%	66.1%
Community clinic/government clinic/community hospital	13.0%	20.7%

	Orange County	California
ER/urgent care	0.5%	0.8%
Some other place/no one place	1.6%	1.2%
No usual source of care	10.7%	11.1%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Accessing health care can be affected by the availability of providers in the community. According to the [2021 County Health Rankings](#), Orange County ranks 17 out of 58 among California counties for clinical care, which includes health insurance coverage, ratios of population-to-care providers and preventive screening practices, among others.

When availability of health care providers in Orange County is compared to the state, the county has relatively good access to primary care physicians (one doctor per 1,010 residents) and dentists (one dentist per 870 residents). The ratio of population to mental health providers (one mental health provider to 340 residents) in Orange County indicates the county has fewer mental health providers than the state ratio.

Ratio of Population to Health Care Providers

	Orange County	California
Primary care physicians	1,010:1	1,250:1
Dentists	870:1	1,150:1
Mental health providers	340:1	270:1

Source: County Health Rankings, 2021. (Measure used data from 2018)

<http://www.countyhealthrankings.org/app/california/2017/rankings/orange/county/outcomes/overall/snapshot>

Delayed care may indicate reduced access to care. 13.8% of county residents reported delaying or not seeking medical care. 7.5% reported delaying or not getting prescription medication in the last 12 months.

Delay of Care

	Orange County	California
Delayed or didn't get medical care in last 12 months	13.8%	14.4%
Delayed or didn't get prescription medicine in last 12 months	7.5%	9.3%

Source: California Health Interview Survey, 2019. <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. In Orange County, 17.7% of residents visited an ER in the past 12 months. Seniors in the county visited the emergency room at a higher rate (21.2%) than other age groups.

Use of Emergency Room

	Orange County	California
Visited ER in last 12 months	17.7%	21.5%
0-17 years old	12.6%	18.7%
18-64 years old	18.7%	22.0%
65 and older	21.2%	24.3%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Dental Care

In Orange County, adults and children tend to have better access to dental care than compared to the state overall. 62.1% of adults and 71.1% of children had visited a dentist in the past six months.

Time since Last Dental Visit, Adult, Ages 18 and Older

	Orange County	California
6 months ago, or less	62.1%	57.2%
More than 6 months up to 1 year ago	16.4%	15.2%
More than 1 year up to 2 years ago	9.5%	10.0%
More than 2 years ago	11.2%	14.9%
Never been to dentist	0.9%	2.7%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Time since Last Dental Visit, Child (0-17)

	Orange County	California
6 months ago, or less	71.1%	70.8%
More than 6 months up to 1 year ago	13.7%	15.2%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Community Input – Access to Care

Stakeholder interviews identified the following issues, challenges and barriers related to access to care. Following are their comments edited for clarity:

- CalOptima (County-organized health plan) is an option for residents with low incomes to access health coverage. However, CalOptima does not have a contract with health providers with relatively higher-cost structures for care (including UCI). It creates a barrier for people with CalOptima plans in accessing highly-specialized care, especially for cancer treatment.
- Health care providers (including UCI Health) are building more clinics and hospitals, as well as consolidating clinics across the County through alignments and collaboration with other health care agencies. A challenge will be overcoming cultural differences and the way the health care system is structured to leverage alignments and collaborations to provide greater and more equitable access.
- Access must mean more than just linking people to health care; access also means ensuring there is continuity of care. The pandemic is challenging health care providers to improve their management abilities, creating access to the types of care

people need, when they need it, and ensuring people have the insurance benefits needed to continue care.

- There is a need for targeted, cross-sector programs with components that address holistic needs (housing, insurance, health care, social services, etc.).
- There is a need for creativity and flexibility when it comes to service hours for people who work set shifts and can't take time off from work.

Maternal and Infant Health

Births

There were 37,779 births in Orange County in 2019.

Delivery Paid by Public Insurance or Self-Pay

Mothers in Orange County were less likely to deliver without private health insurance (423 per 1,000 live births), compared to the state (499 per 1,000 live births).

Delivery Paid by Public Insurance or Self-Pay, Rate per 1,000 Live Births

	Orange County	California
Delivery paid by public insurance or self-pay	423	499

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001.

Health Status

Over 93% of women in Orange County were in good to excellent health before pregnancy. 20.3% of pregnant women in Orange County had inadequate weight gain and 35.3% had excessive weight gain during pregnancy. 11.7% of Orange County women experienced food insecurity during pregnancy.

Health Status Before and During Pregnancy

	Orange County	California
Good to excellent health before pregnancy	93.3%	92.0%
Inadequate weight gain during pregnancy	20.3%	18.2%
Excessive weight gain during pregnancy	35.5%	41.2%
Food insecurity during pregnancy	11.7%	15.6%

Source: California Department of Public Health, Maternal Infant Health Assessment, 2013-2015.

<https://www.cdph.ca.gov/Programs/CFH/DMCAH/MIHA/Pages/Data-and-Reports.aspx?Name=SnapshotBy>

Prenatal Care

Mothers in Orange County were less likely to delay their prenatal care compared to mothers in California overall. Pregnant women in the county entered prenatal care after the first trimester at a rate of 125 per 1,000 live births. This rate of late entry into prenatal care translates to 12.5% of women entering prenatal care late or not at all, while 87.5% of women entered prenatal care on time.

Mother Received Late Prenatal Care, Rate per 1,000 Live Births

	Orange County	California
Late prenatal care (after 1st trimester)	125	162

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001.

Teen Birth Rate

The teen birth rate in the county is 29.7 per 1,000 females, ages 15-19. This is a lower rate compared to the state (17.3 per 1,000 females, ages 15-17).

Teenage Birth Rate, per 1,000 Females, Ages 15-19

	Orange County	California
Births to teen mothers	12.2	17.3

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence, 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001

Mother Smoked Regularly During Pregnancy

In the county, the rate of mothers who smoked during pregnancy was nine per 1,000 live births, which is lower than the state rate (16 per 1,000 live births).

Mothers Who Smoked Regularly During Pregnancy, Rate per 1,000 Live Births

	Orange County	California
Smoked during pregnancy	9	16

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence, 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001

Premature Birth

The county rate of premature birth, occurring before the start of the 38th week of gestation, was 76 per 1,000 live births. This rate of premature birth was lower than the state rate (85 per 1,000 live births).

Premature Birth, Before Start of 38th Week, Rate per 1,000 Live Births

	Orange County	California
Premature birth	76	85

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence, 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001

Low Birth Weight

Babies born at a low birth weight are at higher risk for disease, disability and possibly death. The county rate of babies born at low birth weight was 62 per 1,000 live births (6.2%). The county rate meets the Healthy People 2020 objective of 7.8% of births being low birth weight. This objective has been eliminated for the Healthy People 2030 objectives.

Low Birth Weight (<2,500g) Births, Rate per 1,000 Live Births

	Orange County	California
Low birth weight	62	69

Source: Calculated by Gary Bess Associates using California Department of Public Health Birth Profiles by ZIP Code of Residence, 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001

Infant Mortality

Infant mortality reflects deaths of children under one year of age. The infant death rate in the county was 3.2 per 1,000 live births. This rate was lower than the state rate of 4.2 per 1,000 live births. Orange County fares better than the Healthy People 2030 objective of 5.0 deaths per 1,000 live births.

Infant Mortality Rate, per 1,000 Live Births

	Rate
Orange County	3.2
California	4.2

Source: California Department of Public Health, 2017 <https://letsgethealthy.ca.gov/goals/healthy-beginnings/reducing-infant-mortality/>

Breastfeeding

Breast feeding has been proven to have considerable benefits to baby and mother. The California Department of Public Health highly recommends babies be fed only breast milk for the first six months of life. Data on breastfeeding are collected by hospitals on the Newborn Screening Test Form. Breastfeeding rates at UCI Medical Center indicated 93.3% of new mothers breastfeed and 82.1% breastfeed exclusively. The rate of breastfeeding exclusively at UCI Medical Center is higher than the rates among hospitals in the county and state.

In-Hospital Breastfeeding

	Any Breastfeeding		Exclusive Breastfeeding	
	Number	Percent	Number	Percent
UCI Medical Center	1,036	93.3%	911	82.1%
Orange County	31,757	93.9%	22,333	66.0%
California	361,719	93.7%	270,189	70.0%

Source: California Department of Public Health, Breastfeeding Hospital of Occurrence, 2019 <https://www.cdph.ca.gov/Programs/CFH/DMCAH/Breastfeeding/Pages/In-Hospital-Breastfeeding-Initiation-Data.aspx>

There are ethnic/racial differences noted in breastfeeding rates of mothers who deliver at UCIMC. Asian mothers initiated any breastfeeding (97.4%) and exclusive breastfeeding (93%) at UCIMC at a higher rate compared to mothers of other racial/ethnic groups. White mothers had the lowest rate of initiating any breastfeeding (90.4%) and mothers of Other races had the lowest rate of exclusive breastfeeding (71.4%)

In-Hospital Breastfeeding, UCI Medical Center, by Race/Ethnicity

	Any Breastfeeding		Exclusive Breastfeeding	
	Number	Percent	Number	Percent
Latino/Hispanic	635	93.0%	543	79.5%

	Any Breastfeeding		Exclusive Breastfeeding	
	Number	Percent	Number	Percent
White	160	90.4%	152	85.9%
Asian	111	97.4%	106	93.0%
Black/African American	32	94.1%	26	76.5%
Multiple races	27	96.4%	24	85.7%
Other	20	95.2%	15	71.4%
UCI Medical Center	1,036	93.3%	911	82.1%

Source: California Department of Public Health, Breastfeeding Hospital of Occurrence, 2019

<https://www.cdph.ca.gov/Programs/CFH/DMCAH/Breastfeeding/Pages/In-Hospital-Breastfeeding-Initiation-Data.aspx>

Leading Causes of Death

Mortality Rates

Age-adjusted death rates are an important factor to examine when comparing mortality data. A crude death rate is a ratio of the number of deaths to the entire population. Age-adjusted death rates eliminate the bias of age in the makeup of the populations. The age-adjusted death rate in Orange County is 537.9 per 100,000 persons, which is lower than the California rate (614.4 deaths per 100,000 persons).

Mortality Rate, Age-Adjusted, per 100,000 Persons, Five-Year Average

	Orange County	California
Mortality rate	537.9	614.4

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Leading Causes of Death

The top two leading causes of death in the service area are heart disease and cancer. When compared to the state average, Alzheimer's disease and kidney disease mortality rates are higher in the county. All leading causes of death rates in the county, with the exception of cancer, ischemic heart disease, and stroke, met the Healthy People 2030 objectives, where comparisons were available.

Leading Causes of Death Rates, Age-Adjusted, per 100,000 Persons

	Orange County	California	Healthy People 2030 Objective
Heart disease	128.9	142.7	No Objective
Cancer	128.7	139.6	122.7
Ischemic heart disease	82.8	88.1	71.1
Alzheimer's disease	37.4	35.4	No Objective
Stroke	35.6	36.4	33.4
Chronic lower respiratory disease	26.3	32.1	Not Comparable
Unintentional injuries	24.9	31.8	43.2
Pneumonia and influenza	14.7	14.8	No Objective
Diabetes	13.7	21.3	Not Comparable
Liver disease	10.4	12.2	10.9
Kidney disease	9.8	8.5	No Objective
Suicide	9.7	10.5	12.8
Homicide	2.1	5.0	5.5
HIV	0.9	1.9	No Objective

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Heart Disease and Stroke

The age-adjusted mortality rate for ischemic heart disease is 82.8 deaths per 100,000 persons, and the age-adjusted death rate from stroke is 35.6 deaths per 100,000 persons in the service area. These rates did not meet the Healthy People 2030 objectives of 71.1 ischemic heart disease deaths and 33.4 stroke deaths per 100,000 persons.

Ischemic Heart Disease and Stroke Mortality Rates, Age-Adjusted, per 100,000 Persons

	Orange County	California
Ischemic heart disease	82.8	88.1
Stroke	35.6	36.4

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Cancer

In the county, the age-adjusted cancer mortality rate is 128.7 per 100,000 persons. This rate did not meet the Healthy People 2030 objective of 122.7 deaths from cancer per 100,000 persons.

Cancer Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Cancer	128.7	139.6

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

In Orange County, the rate of death from cancer (131.2 deaths per 100,000 persons) is lower than the state cancer death rate (140 deaths per 100,000 persons). Rates of death from some cancers are higher, including: ovarian cancer, leukemias, brain and nervous system cancers and melanoma of the skin.

Cancer Mortality Rates, Age-Adjusted, per 100,000 Persons

	Orange County	California
Cancer all sites	131.2	140.0
Lung and bronchus	25.8	28.0
Breast (female)	18.6	19.3
Prostate (males)	17.9	19.8
Colon and rectum	10.9	12.5
Pancreas	10.0	10.3
Ovary (females)	7.1	6.9
Liver and intrahepatic bile duct	7.0	7.7
Cervical and uterine (female)*	6.0	7.2
Leukemia, all	6.0	5.8
Non-Hodgkin lymphoma	4.9	5.2

	Orange County	California
Brain and other nervous system	4.6	4.3
Urinary bladder	3.8	3.8
Stomach	3.7	3.9
Kidney and renal pelvis	2.9	3.3
Esophagus	2.9	3.1
Myeloma	2.7	2.9
Melanoma of the skin	2.4	2.1

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018. <https://explorer.ccrca.org/application.html>

*Cervix Uteri, Corpus Uteri and Uterus, NOS

When examined by race/ethnicity, Blacks in Orange County had the highest rate of cancer mortality (147.9 per 100,000 persons), followed by Whites (140.9 per 100,000 persons). Latinos have a lower rate (123.1 per 100,000 persons), and Asians/Pacific Islanders have the lowest rate of cancer mortality (102.5 deaths per 100,000 persons). Blacks have a high mortality rate from prostate cancer (36.7 per 100,000 persons) and Asians and Latinos experienced high mortality rates from liver and bile duct cancer and stomach cancer. In addition, Latinos experienced high mortality rates from kidney and renal pelvis and female reproductive cancers (ovary/cervix/uterine).

Cancer Mortality Rates, Age-Adjusted, per 100,000 Persons, by Race

	White	Black	Latino	Asian/PI	All
Cancer all sites	140.9	147.9	123.1	102.5	131.2
Lung and bronchus	28.9	27.8	16.4	23.2	25.8
Breast (female)	20.8	27.4	15.8	12.1	18.6
Prostate (males)	20.6	36.7	17.7	7.7	17.9
Colon and rectum	11.4	12.7	10.1	9.5	10.9
Pancreas	10.4	9.4	10.8	8.0	10.0
Ovary (female)	7.9	N/A	7.5	4.8	7.1
Liver and bile duct	4.8	7.4	10.6	10.2	7.0
Cervical and uterine* (female)	6.0	N/A	7.3	4.5	6.0
Leukemia, all	6.6	N/A	5.3	3.9	6.0
Non-Hodgkin lymphoma	5.0	N/A	5.4	3.9	4.9
Brain and other nervous system	5.9	N/A	3.9	2.4	4.6
Urinary bladder	4.6	N/A	2.3	2.3	3.8
Stomach	2.1	N/A	6.0	6.0	3.7
Kidney and renal pelvis	2.9	N/A	4.1	1.6	2.9
Esophagus	3.7	N/A	1.9	1.5	2.9
Myeloma	2.7	7.6	3.1	1.8	2.7
Melanoma of the skin	3.8	N/A	0.7	N/A	2.4

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html>

*Cervix Uteri, Corpus Uteri and Uterus, NOS. Rates are age-adjusted to the 2000 U.S. Standard Population. N/A means data is not available due to low number of incidences.

The mortality to incidence ratio (MIR) examines the percentage of persons who die from their diagnosed cancer. Examining mortality rates versus incidence rates by race show

variations. In general, one would expect to see the highest incidence rates paired with the highest mortality rates; however, several variations are noted. Overall cancer incidence rates (diagnoses) are highest among White residents, while the mortality rate from cancer is highest among Black residents. Similarly, while the incidence rate (diagnosis) of breast cancer is highest among White women, the mortality rate is highest among Black women.

Cancer Mortality and Incidence Rates, Age-Adjusted, per 100,000 Persons, by Race

	White		Black		Latino		Asian/PI		All	
	Mor	Inc.	Mor	Inc.	Mor.	Inc.	Mor.	Inc.	Mor.	Inc.
Cancer all sites	140.9	451.4	147.9	369.7	123.1	329	102.5	287.4	131.2	402.1
Lung and bronchus	28.9	42.7	27.8	31.6	16.4	23.8	23.2	35.1	25.8	38.0
Breast (female)	20.8	148.1	27.4	127.8	15.8	98.7	12.1	96.2	18.6	128.6
Prostate (males)	20.6	99.2	36.7	136.9	17.7	79.7	7.7	43.5	17.9	94.0
Colon and rectum	11.4	33.3	12.7	30.9	10.1	28.4	9.5	29.1	10.9	32.0
Pancreas	10.4	12.1	9.4	14.9	10.8	12.3	8	10.3	10.0	11.8
Ovary (females)	7.9	12.6	N/A	N/A	7.5	10	4.8	10	7.1	11.6
Liver and bile duct	4.8	5.8	7.4	6.9	10.6	12.1	10.2	14.2	7.0	8.6
Cervical and uterine* (female)	6	33.9	N/A	N/A	7.3	29.8	4.5	25.4	6.0	32.2
Leukemia, all	6.6	14.1	N/A	12.4	5.3	10.3	3.9	8.3	6.0	12.7
Non-Hodgkin lymphoma	5	21	N/A	15.7	5.4	19.4	3.9	14.3	4.9	19.4
Brain and other nervous system	5.9	7.5	N/A	5.3	3.9	4.9	2.4	3.8	4.6	6.0
Urinary bladder	4.6	10.2	N/A	8	2.3	5.7	2.3	5.2	3.8	8.6
Stomach	2.1	5	N/A	6	6	9.3	6	10.3	3.7	7.2
Kidney and renal pelvis	2.9	13.8	N/A	17.4	4.1	16	1.6	7.4	2.9	13.2
Myeloma	2.7	6.4	7.6	12.2	3.1	6.9	1.8	3.2	2.7	5.9
Melanoma of the skin	3.8	47.6	N/A	N/A	0.7	6.4	N/A	1.2	2.4	30.1

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html>

*Cervix Uteri, Corpus Uteri and Uterus, NOS. Rates are age-adjusted to the 2000 U.S. Standard Population. N/A means data is not available due to low number of incidences.

According to the mortality to incidence ratio (MIR), higher percentages of the population in Orange County die from cancer of the pancreas, liver and bile duct, brain and nervous system, lung and bronchus, and ovary. Among the races examined, Black residents tend to have worse outcomes (higher MIR ratios) for those cancers for which data are available, particularly when diagnosed with liver and bile duct, lung and bronchus, and myeloma cancers. MIR rates for all cancers tend to be lowest among Asians and Whites.

Latinos have a higher-than-average MIR for stomach, female reproductive (ovary/cervical/uterine) and liver and bile duct cancers. Asian/Pacific Islanders and Whites have higher rates of pancreatic and liver and bile duct cancers.

Ratio of Cancer Mortality to Incidence Rates, Age-Adjusted, per 100,000 Persons, by Race

	White	Black	Latino	Asian/PI	All
Cancer all sites	31%	40%	37%	36%	33%
Lung and bronchus	68%	88%	69%	66%	68%
Breast (female)	14%	21%	16%	13%	14%
Prostate (males)	21%	27%	22%	18%	19%
Colon and rectum	34%	41%	36%	33%	34%
Pancreas	86%	63%	88%	78%	85%
Ovary (females)	63%	N/A	75%	48%	61%
Liver and bile duct	83%	107%	88%	72%	81%
Cervical and uterine* (female)	18%	N/A	24%	18%	19%
Leukemia, all	47%	N/A	51%	47%	47%
Non-Hodgkin lymphoma	24%	N/A	28%	27%	25%
Brain and other nervous system	79%	N/A	80%	63%	77%
Urinary bladder	45%	N/A	40%	44%	44%
Stomach	42%	N/A	65%	58%	51%
Kidney and renal pelvis	21%	N/A	26%	22%	22%
Myeloma	42%	62%	45%	56%	46%
Melanoma of the skin	8%	N/A	11%	N/A	8%

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html>
 *Cervix Uteri, Corpus Uteri and Uterus, NOS. Rates are age-adjusted to the 2000 U.S. Standard Population. N/A means data is not available due to low number of incidences.

The impact of race and gender on cancer mortality rates, incidence and outcomes tend to be better among women, except Black women. Black men and Asian/Pacific Islander men have higher mortality rates when diagnosed with cancer. White women have the lowest mortality rates when diagnosed with cancer.

Cancer Mortality and Incidence Rates and Ratios, Age-Adjusted, per 100,000 Persons, by Race and Gender

	Mortality	Incidence	Mortality to Incidence Ratio (MIR)
Black men	188.2	416.7	45.2%
Asian/Pacific Islander men	123.6	282.9	43.7%
Hispanic men	140.3	339.7	41.3%
All men	153.9	419.8	36.7%
Black women	119.3	337.2	35.4%
White men	164.6	467.3	35.2%
Hispanic women	111.9	329.6	34.0%
Asian/Pacific Islander women	85.9	293.2	29.3%

	Mortality	Incidence	Mortality to Incidence Ratio (MIR)
All women	115.1	393.6	29.2%
White women	124.5	445.8	27.9%

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html>. Rates are age-adjusted to the 2000 U.S. Standard Population.

Chronic Lower Respiratory Disease

Chronic Lower Respiratory Disease (CLRD) and Chronic Obstructive Pulmonary Disease (COPD) include emphysema and bronchitis. The age-adjusted death rate for respiratory disease in the county is 26.3 per 100,000 persons. This is lower than the state rate (32.1 per 100,000 persons).

Chronic Lower Respiratory Disease Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Chronic Lower Respiratory Disease	26.3	32.1

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Alzheimer's Disease

The mortality rate from Alzheimer's disease is 37.4 deaths per 100,000 persons. This is higher than the state rate (35.4 deaths per 100,000 persons).

Alzheimer's Disease Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Alzheimer's disease	37.4	35.4

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Diabetes

The age-adjusted mortality rate from diabetes in the service area is 13.7 deaths per 100,000 persons. This is lower than the state rate (21.3 deaths per 100,000 persons).

Diabetes Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Diabetes	13.7	21.3

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million. -- Values of 3 or less are withheld per HIPAA guidelines.

Unintentional Injury

The age-adjusted death rate from unintentional injuries in the county is 24.9 deaths per 100,000 persons. This rate is lower than the state rate (31.8 per 100,000 persons). The service area meets the Healthy People 2030 objective of 43.2 unintentional injury deaths per 100,000 persons.

Unintentional Injury Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Unintentional injuries	24.9	31.8

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Pneumonia and Influenza

The age-adjusted death rate for pneumonia and influenza is 14.7 per 100,000 persons. This rate is lower than the state (14.8 per 100,000 persons) rate.

Pneumonia and Influenza Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Pneumonia and Influenza	14.7	14.8

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Liver Disease

The death rate from liver disease in the service area is 10.4 deaths per 100,000 persons. This is lower than the state rate (12.2 per 100,000 persons). The death rate from liver disease meets the Healthy People 2030 objective of 10.9 deaths per 100,000 persons.

Liver Disease Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Liver Disease	10.4	12.2

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Kidney Disease

The death rate from kidney disease in Orange County is 9.8 per 100,000 persons, which is higher than the state rate (8.5 deaths per 100,000 persons).

Kidney Disease Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Kidney Disease	9.8	8.5

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Suicide

The suicide rate in the county is 9.7 per 100,000 persons, which meets the Healthy People 2030 objective for suicide of 12.8 per 100,000 persons.

Suicide Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Suicide	9.7	10.5

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Homicide

The homicide rate in Orange County is 2.1 deaths per 100,000 persons. This rate is lower than the state rate (5 deaths per 100,000 persons) rates. The rate meets the Healthy People 2030 objective for homicide death of 5.5 per 100,000 persons.

Homicide Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
Homicide	2.1	5.0

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

HIV

The rate of HIV deaths in the county rate is 0.9 per 100,000 persons, which is lower than the state rate (1.6 deaths per 100,000 persons).

HIV Mortality Rate, Age-Adjusted, per 100,000 Persons

	Orange County	California
HIV	0.9	1.6

Source: Calculated by Gary Bess Associates using California Department of Public Health Master Death File 2014-2018 and U.S. Census Bureau American Community Survey, 5-Year Average 2014-2018, Table B01001, and using the 2000 U.S. standard million.
-- Values of 3 or less are withheld per HIPAA guidelines.

Disability and Disease

Health Status

Among the Orange County population, 12.1% reported being in fair or poor health, which is comparable to the state rate.

Health Status, Fair or Poor Health

	Orange County	California
Persons with fair or poor health	12.1%	12.5%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Disability

Among Orange County adults, 24.0% were identified as having a physical, mental, or emotional disability, which was lower than the state disability rate (29.7%). 3.7% of county adults could not work for at least 30 days due to illness, injury, or disability.

Disability, Adults

	Orange County	California
Adults with a disability ⁺	24.0%	29.7%
Couldn't work for 30 or more days due to injury, illness, or disability [*]	3.7%	2.4%

Source: California Health Interview Survey, ⁺2016, ^{*}2019. <http://ask.chis.ucla.edu>

In Orange County, 4.5% of the population had an ambulatory difficulty that limited physical activity. 2.5% of the population had a hearing difficulty, 2.2% had a self-care difficulty, 1.5% of Orange County residents had a vision difficulty, and 3.4% had a cognitive difficulty.

Health Status Disabilities

	Orange County	California
Persons with ambulatory difficulty	4.5%	5.8%
Persons with hearing difficulty	2.5%	2.9%
Persons with self-care difficulty	2.2%	2.6%
Persons with vision difficulty	1.5%	2.0%
Persons with cognitive difficulty	3.4%	4.3%

Source: Orange County's Healthier Together, US Census Bureau American Community Survey, 2015-2019. www.ochealthiertogether.org

Diabetes

Among adults in Orange County, 6.9% had been diagnosed with diabetes compared to 9.9% of adults in the state.

Diabetes, Adults

	Orange County	California
Diagnosed diabetic	6.9%	9.9%

Source: California Health Interview Survey, 2019. <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 in Orange County than in California.

Diabetes Hospitalization Rates* for Prevention Quality Indicators

	Orange County	California
Diabetes long term complications	88.3	97.1
Diabetes short term complications	44.3	60.9
Lower extremity amputation among patients with diabetes	23.4	29.6
Uncontrolled diabetes	29.0	30.5

Source: California Office of Statewide Health Planning & Development, 2019. <https://oshpd.ca.gov/data-and-reports/healthcare-quality/ahrq-quality-indicators/> *Risk-adjusted (age-sex) annual rates per 100,000 persons.

Heart Disease

For adults in Orange County, 5.7% have been diagnosed with heart disease. Among these adults, 76.4% have a disease management care plan developed by a health care professional.

Heart Disease, Adults

	Orange County	California
Diagnosed with heart disease*	5.7%	7.0%
Has a disease management care plan*	76.4%	78.2%

Source: California Health Interview Survey, *2019, *2017-2018. <http://ask.chis.ucla.edu>

The PQIs related to heart disease are congestive heart failure and hypertension. The rates of hypertension (39.8 per 100,000 persons) and congestive heart failure (286 per 100,000 persons) were lower in the county than in the state.

Heart Disease PQI Hospitalization Rates*, per 100,000 persons

	Orange County	California
Congestive heart failure	286.0	355.0
Hypertension	39.8	43.4

Source: California Office of Statewide Health Planning & Development, 2019. <https://oshpd.ca.gov/data-and-reports/healthcare-quality/ahrq-quality-indicators/> *Risk-adjusted (age-sex) annual rates per 100,000 persons.

High Blood Pressure

A co-morbidity factor for diabetes, heart disease and stroke is hypertension (high blood pressure). In Orange County, 26.8% of adults have been diagnosed with high blood pressure. Of those adults, 71.5% take medication to control their hypertension. The Healthy People 2030 objective is to reduce the proportion of adults with high blood pressure to 27.7%. Orange County meets the objective.

High Blood Pressure

	Orange County	California
Ever diagnosed with hypertension ⁺	26.8%	29.8%
Takes medicine for hypertension*	71.5%	70.7%

Source: California Health Interview Survey, ⁺2018, ^{*}2017. <http://ask.chis.ucla.edu>

Cancer

In Orange County, the five-year, age-adjusted cancer incidence rate was 402.1 per 100,000 persons, which was higher than the state cancer incidence rate (394.5 per 100,000 persons). The top three cancers by incidence were female breast, prostate, and lung and bronchus cancers.

Cancer Incidence Rates, Age-Adjusted, per 100,000 Persons

	Orange County	California
Cancer all sites	402.1	394.5
Breast (female)	128.6	122.2
Prostate (males)	94.0	91.7
Lung and bronchus	38.0	40.0
Colon and rectum	32.0	34.8
Melanoma of the Skin	30.1	23.1
Corpus Uteri (females)	25.7	26.6
Non-Hodgkin lymphoma	19.4	18.3
Thyroid	15.1	13.1
Kidney and renal pelvis	13.2	14.7
Leukemia	12.7	12.4
Pancreas	11.8	11.9
Ovary (females)	11.6	11.1
Urinary bladder	8.6	8.7
Liver and bile duct	8.6	9.7
Stomach	7.2	7.3
Cervix uteri (females)	6.5	7.4
Brain and other nervous system	6.0	5.9
Testis (males)	5.9	6.2
Myeloma	5.9	6.0

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html> Rates are age-adjusted to the 2000 U.S. Standard Population.

When examined by race, Blacks and Whites have the highest rates of diagnosed cancers in the county, while Asians have the lowest rates.

Cancer Incidence Rates, Age-Adjusted, per 100,000 Persons, by Race/Ethnicity

	White	Black	Latino	Asian/PI	All
Cancer all sites	451.4	369.7	329.0	287.4	402.1
Breast (female)	148.1	127.8	98.7	96.2	128.6
Prostate (males)	99.2	136.9	79.7	43.5	94.0
Lung and bronchus	42.7	31.6	23.8	35.1	38.0
Colon and rectum	33.3	30.9	28.4	29.1	32.0
Melanoma of the Skin	47.6	N/A	6.4	1.2	30.1
Corpus Uteri (females)	28.3	21.4	21.1	19.6	25.7
Non-Hodgkin lymphoma	21.0	15.7	19.4	14.3	19.4
Thyroid	15.3	6.2	14.8	15.0	15.1
Kidney and renal pelvis	13.8	17.4	16.0	7.4	13.2
Leukemia	14.1	12.4	10.3	8.3	12.7
Pancreas	12.1	14.9	12.3	10.3	11.8
Ovary (females)	12.6	N/A	10.0	10.0	11.6
Urinary bladder	10.2	8.0	5.7	5.2	8.6
Liver and bile duct	5.8	6.9	12.1	14.2	8.6
Stomach	5.0	6.0	9.3	10.3	7.2
Cervix uteri (females)	5.6	N/A	8.7	5.8	6.5
Brain and other nervous system	7.5	5.3	4.9	3.8	6.0
Testis (males)	7.5	N/A	5.6	2.5	5.9
Myeloma	6.4	12.2	6.9	3.2	5.9

Source: California Cancer Registry, Cal*Explorer-CA Cancer Data tool, 2014-2018 <https://explorer.ccrca.org/application.html> Rates are age-adjusted to the 2000 U.S. Standard Population. N/A means data is not available due to low number of incidences.

Asthma

In Orange County, 14.8% of the population has been diagnosed with asthma. Among those with an asthma diagnosis, 36.9% take daily medication to control asthma symptoms, which is lower than the state rate (43%). Among youth, ages 0-17, 12.8% have been diagnosed with asthma. 31.8% of people with asthma had asthma attack in the past months, which is higher than the state rate of 29.5%.

Asthma

	Orange County	California
Diagnosed with asthma, total population	14.8%	15.2%
Diagnosed with asthma, ages 0-17	12.8%	12.3%
Takes daily medication to control asthma, total population	36.9%	43.0%
Had asthma attack in the past 12 months, total population	31.8%	29.5%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Prevention Quality Indicators (PQIs) related to asthma include chronic obstructive pulmonary disease (COPD) and asthma in younger adults. Hospitalization rates for

COPD were lower in the county (153.2 per 100,000 persons) than the state (220.2 per 100,000 persons). Hospitalization rates for asthma in younger adults were lower in the county (16.3 per 100,000 persons) than the state (19.7 per 100,000 persons).

Asthma Hospitalization Rates* for PQIs, per 100,000 Persons

	Orange County	California
COPD or asthma in older adults, ages 40 and older	153.2	220.2
Asthma in younger adults, ages 18-39	16.3	19.7

Source: California Office of Statewide Health Planning & Development, 2019. <https://oshpd.ca.gov/data-and-reports/healthcare-quality/ahrq-quality-indicators/> *Risk-adjusted (age-sex) annual rates per 100,000 persons.

Chronic Diseases among Seniors

More than half of Medicare beneficiaries, ages 65 and older, in Orange County utilized medical services to treat hypertension (high blood pressure) (56.4%) and hyperlipidemia (high blood cholesterol) (53.4%). Arthritis (34.1%) and diabetes (26.5%) were the next most common chronic diseases among Medicare beneficiaries.

Top Ten Chronic Diseases among Medicare Beneficiaries

	Orange County	California
Hypertension	56.4%	53.0%
Hyperlipidemia	53.4%	45.3%
Arthritis	34.1%	31.2%
Diabetes	26.5%	27.2%
Ischemic heart disease	26.4%	24.7%
Chronic kidney disease	25.4%	24.3%
Depression	15.7%	16.2%
Heart failure	13.7%	13.9%
Alzheimer's disease/dementia	12.0%	10.5%
Osteoporosis	10.6%	7.8%

Source: Centers for Medicare and Medicaid Services, 2018. www.ochealthiertogether.com

Community Input – Chronic Diseases

Stakeholder interviews identified the following issues, challenges and barriers related to chronic diseases. Following are their comments edited for clarity:

- Screening is critical in prevention and early detection of cancer. However, it is more challenging for uninsured or underinsured people to access preventive screenings, especially if it requires referrals outside primary care providers. For example, viral hepatitis leads to cirrhosis, and it is most common among Asians. People with cirrhosis are recommended to have liver cancer screening twice per year. However, uninsured/underinsured individuals face challenges accessing high-quality ultrasound and reimbursement through their Medi-Cal plans (CalOptima).
- There has been significant progress in clinical cancer treatment, but less in terms of

prevention. There is a particular need to achieve equity in screening and early cancer diagnosis alongside the goal of driving down the overall burden of cancer in Orange County.

- There exist disparities at all stages of cancer treatment, from staging of diagnoses to mortality. People of different socioeconomic status, race, and ethnicity have different levels of access to care and are treated differently by health care providers.
- Chronic disease prevention is not prioritized in youth. Many do not think they can be affected by chronic diseases, and therefore they are not accessing the necessary precautionary measures such as screenings.
- There is a lack of community education and engagement that encourages self-management of chronic diseases. Many people find out about their chronic diseases too late, as they may be asymptomatic and feel they have no reason to go see their primary care physician.
- There is a general lack of education with regard to healthy diets, exercise, and how a healthy lifestyle is the best means of preventing chronic diseases.
- Seniors are more likely to be affected by chronic diseases, and the senior population is the fastest-growing demographic in Orange County.
- There is no cure for Alzheimer's Disease. With a rapidly-aging population in Orange County, there will continue to be a need for more research on prevention and treatment.
- Many patients have multiple chronic diseases, and there is a lack of coordination among health care providers.
- There exists fragmentation in the health care system, where physicians and specialists are not able to easily access a patient's information from one another, making it more difficult to provide efficient care.
- Orange County has large and diverse Latino/Hispanic and Asian populations who have unique needs to be addressed. There should be more of a focus on individuals of Middle Eastern origin who are immigrating to Orange County.
- People experiencing housing instability and homelessness are disproportionately affected by uncontrolled high blood pressure and diabetes.

COVID-19

In Orange County, there have been 511,255 confirmed cases of COVID-19, as of January 28, 2022. This was a lower rate of infection (160.4 cases per 1,000 persons) than the state rate (194.9 cases per 1,000 persons). Through January 28, 2022, 6,038 county residents had died due to COVID-19 complications. The rate of deaths in the county (1.89 per 1,000 persons) is lower than the state rate (1.99 per 1,000 persons).

COVID-19, Cases and Crude Death Rates, per 1,000 Persons, as of 1/28/22

	Orange County		California	
	Number	Rate	Number	Rate
Cases	511,255	160.4	7,706,395	194.9
Deaths	6,038	1.89	78,825	1.99

Source: California for All, Tracking COVID-19 in California, accessed on January 29, 2022. <https://covid19.ca.gov/state-dashboard/>
Rates calculated using U.S. Decennial Population 2020 P1 Redistricting data.

The number of Orange County residents, ages 5 and older, who have received at least one dose of a COVID-19 vaccine is 2,452,568, or 81% of that population. This is lower than the 81.6% statewide COVID-19 vaccination rate for those ages 5 and older. Among seniors, 92.1% have received at least one vaccine dose, which is higher than the statewide rate of 91.1% for seniors. For adults, ages 18 to 64, the county rate of any level of vaccination is 86.1%, compared to 87.2% statewide. For children, ages 5 to 17, the rate of at least partial vaccination is 50.4%, compared to 51.8% for children in the state.

COVID-19 Vaccination, Number and Percent, by Age, as of 1/28/22

	Orange County				California			
	Partially Vaccinated		Completed		Partially Vaccinated		Completed	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Population, ages 5-11	24,190	8.9%	63,292	23.3%	329,427	9.4%	846,322	24.1%
Population, ages 12-17	16,696	6.7%	159,082	63.4%	261,703	8.3%	2,026,547	64.0%
Population, ages 18-64	139,925	7.1%	1,557,053	79.0%	2,216,824	9.1%	19,130,031	78.2%
Population, ages 65+	37,335	7.0%	454,995	85.1%	526,979	8.1%	5,417,725	83.0%

Source: California Department of Public Health. <https://covid19.ca.gov/vaccination-progress-data/#progress-by-group>. Updated January 29th, 2022 with data through January 28, 2022.

In Orange County, Hispanic/Latino residents appear to be underrepresented among the number of vaccines administered compared to the corresponding vaccine-eligible population. While they represent 35.4% of the vaccine eligible population, only 26.4% have received a vaccination.

COVID-19 Vaccinations, by Race, as of 1/25/2022

	Percent of Vaccines Administered*	Percent of Vaccine Eligible Population
White (non-Hispanic)	42.7%	41.8%
Latino	26.4%	35.4%
Asian (non-Hispanic)	25.8%	18.2%
Multiracial	2.9%	2.5%
Black (non-Hispanic)	1.6%	1.5%
Native Hawaiian/Pacific Islander (NH)	0.5%	0.3%
American-Indian/Alaska Native (NH)	0.2%	0.2%

Source: California State Health Department, COVID19 Vaccination Dashboard, Updated January 26th, 2022 with data from January 25th. <https://covid19.ca.gov/vaccination-progress-data/> *Where race/ethnicity was known.

Community Input – COVID-19

Stakeholder interviews identified the following issues, challenges and barriers related to COVID-19. Following are their comments edited for clarity:

- There is an urgent need to have more than 80 percent of the general population vaccinated, so that another strain doesn't emerge that can overcome the immunity that people have built through infection and vaccination.
- Health disparities in vaccination rates still exist, with one area of need for achieving vaccine equity being outreach to Latino communities in Santa Ana.
- The requirement to register for vaccines with an email address or phone number is a challenge to COVID-19 mitigation and prevention, particularly among older adults without cell phones or computers.
- Transportation is another impediment to COVID-19 mitigation and prevention. Efforts to deliver test kits, vaccines, and health information via mobile units or pop-ups to senior housing or unhoused individuals have helped reach populations who don't have the means to seek information about COVID-19, obtain tests, or register for the vaccine.
- There is a lack of education on the potential long-term effects of COVID-19.
- Female-led industries have been severely impacted by COVID-19. Women have had to drop out of the workforce, not because they lost their jobs, but because someone had to tend to either young children or older adults in the family.
- There have been increases in intimate partner violence.
- Since public entities such as Counties don't have the resources or finances to do all that they want to in responding to the COVID-19 pandemic, leveraging and building community partnerships is essential (between hospitals, federally-qualified health centers, culturally-specific providers, etc.) This means not just aligning tactics, but also aligning strategies and building a collaborative where each entity contributes their comparative strength.
- With regard to new variants of COVID-19, there is a need to be able to quickly activate community partnerships and target areas with high positivity rates.

Health Behaviors

Health Behaviors Ranking

The County Health Ranking examines healthy behaviors and ranks counties according to health behavior data. California has 58 counties, which are ranked from 1 (healthiest) to 58 (least healthy) based on indicators that include: adult smoking, obesity, physical inactivity, excessive drinking, sexually transmitted infections, and others. Orange County was ranked the 4th healthiest among counties in California.

Health Behaviors Ranking

	County Ranking (out of 58)
Orange County	4

Source: County Health Rankings, 2021. <http://www.countyhealthrankings.org>

Overweight and Obesity

In Orange County, 31.3% of the adult population reported being overweight and 20.9% were obese. Overall, adults in Orange County were less likely to be overweight or obese compared to the state. Among older adults, 16.8% reported being obese.

Overweight or Obese, Adults, Ages 20 and Older

	Orange County	California
Overweight (BMI 25.0-29.99)	31.3%	32.4%
Obese (BMI 30 or over)	20.9%	27.3%
Overweight or obese (BMI 25 or over)	52.2%	59.7%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Obesity, Seniors

	Orange County	California
Adults 65+ who are obese	16.8%	23.3%

Source: Orange County's Healthier Together, California Health Interview Survey, 2017-2018. <http://www.ochealthiertogether.org>

Between 2015 and 2019, the percentage of adults who were obese in Orange County ranged from 19% to 23.5%. The percentage decreased between 2015 and 2018, and there was a slight uptick from 2018 to 2019. The rate of obesity in the county is less than the state.

Obesity, Adults, 2015 - 2019

	2015	2016	2017	2018	2019
Orange County	23.5%	23.3%	20.1%	19.4%	20.9%
California	27.9%	27.9%	26.4%	27.1%	27.3%

Source: California Health Interview Survey, 2015, 2016, 2017, 2018, 2019. <http://ask.chis.ucla.edu>

Latino adults were more likely to be overweight or obese (61.8%) compared to other race/ethnicities in Orange County. Asians in Orange County had the lowest rates of overweight and obesity (26.1%).

Overweight and Obese, Adults, by Race/Ethnicity

	Orange County	California
Black/African American	44.1%*	65.9%
White	56.8%	57.6%
Latino	61.8%	72.8%
Asian	26.1%	36.5%
Total adult population	52.2%	59.6%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu> *Statistically unstable

Fresh Fruits and Vegetables

More than half of children and teens in Orange County (55.1%) consumed two or more servings of fruit in a day. This is lower than the state rate (64.5%). While 81.5% of adults responded they are always able to find fresh fruits and vegetables in their neighborhood, only 55.7% considered they were always affordable.

Access to and Consumption of Fresh Fruits and Vegetables

	Orange County	California
Children and teens who had two or more servings of fruit in the previous day	55.1%	64.5%
Always able to find fresh fruits and vegetables in the neighborhood	81.5%	79.1%
Fresh fruits and vegetables are always affordable in the neighborhood	55.7%	52.3%

Source: California Health Interview Survey, 2018. <http://ask.chis.ucla.edu>

Physical Activity

87.4% of Orange County children and teens visited a park, playground or open space in the last month.

Physical Activity, Children and Teens

	Orange County	California
Visited a park, playground or open space in the last month	87.4%*	81.4%

Source: California Health Interview Survey, 2018. <http://ask.chis.ucla.edu> *Statistically unstable

Among adults in Orange County, 77.3% exercised for 20 minutes or longer three or more days a week.

Physical Activity, Adults

	Orange County	California
Exercises for at least 20 minutes three or more days a week	77.3%	76.6%

Source: California Health Interview Survey, 2018. <http://ask.chis.ucla.edu>

Community Input – Overweight and Obesity

Stakeholder interviews identified the following issues, challenges and barriers related to overweight and obesity. Following are their comments edited for clarity:

- There are neighborhoods that have little green space for people to play and exercise or where residents don't feel safe active-commuting from home to school or work. Within these areas, there are higher rates of overweight, obesity, and diabetes.
- Provide health education for local businesses on effects of overconsumption of sugary beverages. Making alternatives available won't harm business and will contribute to larger community health efforts.
- Overweight and obesity seen affecting lower-income people who do not get screened often and don't see their doctor often, which manifests into other diseases like diabetes,
- Limited access to grocery stores selling fresh produce presents a barrier to preventing diabetes and other forms of metabolic syndrome. As an example, there was a client for whom the closest grocery store was miles away and required multiple bus rides over the course of a day. "They're not choosing to have diabetes."
- Healthier food options tend to be more expensive or are perceived as requiring more time in the kitchen to prepare.
- Grocery stores and markets selling healthy foods are not easily within reach for those that need it the most; a lack of transportation is a huge barrier.
- There is a lack of resources for providing healthy, nutritional meals. Those who lack basic necessities may be worried about having a safe place to sleep at night or how long it will be until their next meal. As a result, they do not have the mental capacity and energy to learn about a healthy diet, and nutrition may not be a priority.
- Hispanics/Latinos experience disproportionate rates of childhood obesity.
- Some resources or organizations have good intentions and provide low-income communities with meals; however, these meals are not always healthy or do not provide nutritional value. Most of the children receiving this food receive it on a daily basis, so harm is being done to their health. The community lacks a system to monitor these organizations who, while having good intentions, would benefit from some professional supervision.

Mental Health

In Orange County, 12.1% of adults experienced serious psychological distress in the past year. 19.5% of adults needed help for emotional, mental health, alcohol, or drug issues. However, 46.9% of those who sought or needed help did not receive treatment. The Healthy People 2030 objective is for 68.8% of adults with a serious mental disorder to receive treatment (a maximum of 31.2% who do not receive treatment).

Mental Health Indicators, Adults, Ages 18 and Older

	Orange County	California
Adults who likely had serious psychological distress during past year	12.1%	12.6%
Adults who needed help for emotional-mental and/or alcohol-drug issues in past year	19.5%	21.7%
Adults who sought/needed help but did not receive treatment	46.9%	45.6%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

In Orange County, 7.4% senior adults needed help for emotional, mental health, alcohol or drug issues. However, 44% of those who sought or needed help did not receive treatment.

Mental Health Indicators, Seniors, Ages 65 and Older

	Orange County	California
Seniors who needed help for emotional-mental and/or alcohol-drug issues in past year	7.4%	9.3%
Seniors sought/needed help but did not receive treatment	44.0%	35.2%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

The percentage of Orange County adults who ever seriously considered committing suicide was 15.7%. 6.4% of seniors had seriously contemplated suicide.

Seriously Thought about Committing Suicide, Adults

	Orange County	California
Adults, ages 18-64, ever seriously thought about committing suicide	15.7%	15.8%
Seniors, ages 65 and older, ever seriously thought about committing suicide	6.4%	6.9%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Community Input – Mental Health

Stakeholder interviews identified the following issues, challenges and barriers related to mental health. Following are their comments edited for clarity:

- Among those people who occupy acute hospital inpatient beds for mental health care are those who need a lower level of care and are not ready to be released on

their own without supervision. There is a lack of sub-acute beds in hospitals and nursing facilities.

- The Medicaid Institutions for Mental Disease (IMD) exclusion at the federal level presents a barrier to care for individuals with severe mental health conditions.
- Many people with severe mental health conditions are discharged when they are no longer a danger to themselves or others, when they actually need ongoing care or supervision or conservatorship. Clarity of mind takes time to establish after an addiction, and it can take a number of months for a person's health to improve following introduction of psychotropic medications such as mood stabilizers.
- There is also a lack of voluntary intensive outpatient treatment programs that could help people prevent hospitalization or help them transition out of inpatient settings and back into the community faster.
- Key informants said mental health is often delegated to emergency rooms when ideally it would be embedded in preventive health care. We should train primary care physicians, nurses, and other staff to include mental health as part of well visits.
- Stigma exists that mental health isn't something that should be discussed in the same way as other health conditions. There is a need to reduce stigma, so people don't feel they have to wait for a condition to become severe to seek counseling.
- There exists a particular stigma toward mental health in older generations. They may refuse to accept a mental health diagnosis and not seek help.
- There is a lack of therapists and psychiatrists of diverse ethnic backgrounds who speak languages other than English and understand how cultural differences affect a person's attitudes and beliefs relating to mental health. There is also a lack of providers who specialize in serving our lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community.
- There is an uptick in need for services to support mental health and wellbeing (not just treatment of diagnosable conditions) among youth. Youth face stressors such as education, paying off school loans, socialization, looking for a job, and trying to stay above water, such that health becomes a low priority. There is a need to normalize seeking support for mental health, including maintenance of wellbeing.
- There is an overall lack of education on mental health: Many are not aware of common mental health conditions. Others might be too busy to acknowledge how they are feeling.
- 211 Orange County, is an excellent resource for COVID-19, housing, and other resources, could be improved as a referral service for mental health. Such referrals are not effectively made in the 5 to 10 minutes that an associate has before they must move on to the next call.
- At the state level, mental health networks are fragmented by County divisions. This particularly poses an issue in providing care to people with severe and persistent

mental illness or who are unsheltered and move frequently from county to county. An Orange County resident who presents for services in a Los Angeles County hospital, and is told to return to Orange County for services, has no way to go back.

Substance Use and Misuse

Cigarette Smoking

In Orange County, 5% of adults smoke cigarettes, which is lower than the state rate of 6.7%. The county smoking rate meets the Healthy People 2030 objective of 5%.

Cigarette Smoking, Adults

	Orange County	California
Current smoker	5.0%	6.7%
Former smoker	19.5%	19.5%
Never smoked	75.5%	73.8%

Source: California Health Interview Survey, 2019. <http://ask.chis.ucla.edu>

Teens in Orange County are more likely to have smoked with an electronic cigarette/vaporizer (4%) than a regular cigarette (1%). Among 11th graders in Orange County, 2% had smoked a cigarette and 13% had used an e-cigarette (vaping) one or more days in the past 30 days.

Smoking, Teens

	7 th Graders	9 th Graders	11 th Graders
Smoked cigarette one or more days in the past 30 days	1%	1%	2%
Used e-cigarette one or more days in the past 30 days	4%	9%	13%

Source: California Healthy Kids Survey, 2017-2019. <https://calschls.org/reports-data/public-dashboards/secondary-student/>

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. 35.5% of Orange County adults had engaged in binge drinking in the past year.

Alcohol Consumption, Binge Drinking, Adults

	Orange County	California
Reported binge drinking in the past year	35.5%	34.7%

Source: California Health Interview Survey, 2016. <http://ask.chis.ucla.edu>

Among Orange County teens, 6.2% reported having an alcoholic drink and 2.6% engaged in binge drinking in the past month. The rate of binge drinking was the highest among 11th graders.

Alcohol Consumption Binge Drinking, Teens

	7 th Graders	9 th Graders	11 th Graders
Reported binge drinking one or more days in the past 30 days	1%	3%	7%

Source: California Healthy Kids Survey, 2017-2019. <https://calschls.org/reports-data/public-dashboards/secondary-student/>

10% of 11th grade students in Orange County reported they had used prescription drugs for recreational purposes. 12% had used marijuana and 3% had used inhalants.

Lifetime Drug Use, 11th Grade Students

	Orange County	California
Prescription drugs for recreational purposes	10%	11.4%
Marijuana	12%	16%
Inhalants	3%	5%

Source: California Healthy Kids Survey, 2017-2019. www.ohealthiertogether.com

Opioid Use

The rate of hospitalizations due to an opioid overdose was 7.4 per 100,000 persons in Orange County. This was lower than the state rate (9.7 per 100,000 persons). Opioid overdose deaths in Orange County increased between 2017 and 2020 - from 7.5 per 100,000 persons to 15.4 per 100,000 persons. The rate of opioid prescriptions in Orange County decreased from 429.7 per 1,000 persons to 294.3 per 1,000 persons between 2017 and 2020. This rate was lower than the state rate of opioid prescriptions (333.3 per 1,000 persons).

Opioid Use

	Orange County	California
Hospitalization rate for opioid overdose (excludes heroin), per 100,000 persons	7.4	9.7
Age-adjusted opioid overdose deaths, per 100,000 persons	15.4	13.2
Opioid prescriptions, per 1,000 persons	294.3	333.3

Source: California Office of Statewide Health Planning and Development, via California Department of Public Health, California Opioid Overdose Surveillance Dashboard, 2020. <https://discovery.cdph.ca.gov/CDIC/ODdash/>

Community Input – Substance Use

Stakeholder interviews identified the following issues, challenges and barriers related to substance use. Following are their comments edited for clarity:

- Substance use often results from living in constant stress. It is commonly an attempt to escape the stress of being unhoused or to self-medicate because co-occurring mental health conditions.
- Methamphetamine abuse and opiate abuse and addiction are all major issues.
- Social isolation during COVID-19 was an impacting behavioral health, with one public health researcher describing rates of alcoholism going up.

- A barrier to treatment is limited hours for resources. It is common for offices to be closed on weekends and to have limited hours on weekdays.
- Some cultures are less likely to acknowledge alcohol misuse.
- Privately-run substance use and addiction facilities are not well-regulated. There is a lot of fraud and scams, and they're very expensive. As a result, reputable providers are nervous about making referrals, creating a barrier to access.
- With regard to substance use in children/youth, it was emphasized that cannabis is not harmless, and there is an urgent need to educate parents not to allow their children to use cannabis.
- Cannabis is often used by youth to mask psychological or mental health conditions, and a key informant reflected, substance use is not mental health treatment.
- At the federal policy level, the Medicaid Institutions for Mental Disease (IMD) exclusion at the federal level presents a barrier to care for individuals with substance use conditions.

Preventive Practices

Immunization of Children

California law mandates that kindergarten students be up to date on vaccines that help prevent communicable childhood diseases, such as whooping cough, measles, and polio. Most Orange County school districts have high rates of compliance with childhood immunizations upon entry into kindergarten. Orange County's immunization rate (95.7%) was higher than the state rate (94.8%).

Required Immunizations for Kindergarten

	Immunization Rate
Orange County	95.7%
California	94.8%

Source: California Department of Health Immunization Branch, 2018. www.ochealthiertogether.com

Flu Vaccine

The Healthy People 2030 objective is for 70% of the population to receive a flu shot. In Orange County, 40.9% of residents have received a flu shot, which did not meet the Healthy People 2030 objective. Children, ages 0-17, in Orange County were less likely to receive a flu shot (37%) compared to children throughout the state (49.6%). Seniors have the highest rate of obtaining flu shots (68.4%).

Flu Vaccine in Past 12 months

	Orange County	California
Vaccinated for flu	40.9%	44.8%
Vaccinated for flu, ages 0-17	37.0%	49.6%
Vaccinated for, ages 18-64	36.5%	37.7%
Vaccinated for flu, ages 65 and older	68.4%	69.3%

Source: California Health Interview Survey, 2016. <http://ask.chis.ucla.edu>

Mammograms

The Healthy People 2030 objective for mammograms is for 77.1% of women, ages 50-74, to have had a mammogram in the past two years. In Orange County, 81% of women in this age group have obtained a mammogram in the past two years.

Mammograms, Women, Ages 50-74

	Orange County	California
Received mammogram in the past 2 years	81.0%	82.9%

Source: California Health Interview Survey, 2015-2016. <http://ask.chis.ucla.edu>

Colorectal Cancer Screening

According to the Centers for Disease Control and Prevention (CDC), colorectal cancer - cancer of the colon or rectum - is one of the most commonly diagnosed cancers in the

United U.S. and is the second leading cancer killer in the country. The CDC estimates if adults, ages 50 or older, had regular screening tests for colon cancer, as many as 60% of the deaths from colorectal cancer could be prevented. Recommended screening procedures include one of the following: fecal occult blood tests (FOBT) annually, flexible sigmoidoscopy every five years; double-contrast barium enema every five years, or colonoscopy every 10 years.

In Orange County, 69.1% of adults, ages 50 to 75, were compliant with the recommended screening practices for colorectal cancer. This rate was lower than Healthy People 2030 target of 74.4%.

Colon Cancer Screening, Adults, Ages 50-75

	Orange County
Colorectal cancer screening	69.1%

Source: CDC PLACES Data Portal, County Data 2020 Release, estimates for 2018. <https://www.cdc.gov/places/>

Community Input – Preventive Practices

Stakeholder interviews identified the following issues, challenges and barriers related to preventive practices. Following are their comments edited for clarity:

- Lack of transportation and fear of accessing care due to immigration status are barriers to preventive practices. UCI has a mobile eye clinic that goes to schools and helps create access to preventive care. Having clinics that go beyond schools and provide preventive care on specific days in the community could help prevent a lot of disease. The need for mobile dental clinics in particular was named. There is a lack of resources tailored to women. There are particular needs for mental and behavioral health and reproductive health services among women who are unsheltered.
- Health conditions occurring in older adults are sometimes a delayed response to issues or behaviors that could be addressed when people are younger and healthier. Reaching young adults with health campaigns is a strategy for preventing major illness later in life.

Attachment 1: Community Stakeholder Interviewees

Community input was obtained from interviews with community stakeholders from community agencies and organizations that represent medically underserved, low-income, and/or minority populations.

Name	Title	Organization
Ellen Ahn, MSW, JD	Executive Director	Korean Community Services
Margaret Bredehoft, DrPH	Chief of Public Health Services and County Public Health Director	Orange County Health Care Agency
Helene M. Calvet, MD, BS	Deputy County Health Officer	Orange County Health Care Agency
Brennan Campbell	Special Projects Coordinator	Illumination Foundation
Laura Chandler, DrPH	Professor, Department of Health Science	California State University, Fullerton
Gio Corzo	Vice President, Home and Care Services	SeniorServ (Meals on Wheels Orange County)
Ambrocia Lopez	Manager, Patient Navigation, Orange County	Susan G. Komen®
José Mayorga, MD	Executive Medical Director and Assistant Clinical Professor	Family Health Center (FQHC) and Department of Family Medicine, UC Irvine Health
Oladele Ogunseitan, PhD	University of California Presidential Chair; Professor of Population Health & Disease Prevention; Director of Workforce Development, Institute for Clinical and Translational Science; Director of Education, UC Global Health Institute	University of California, Irvine
Susan B. Parks	President and CEO	Orange County United Way
Barry Ross, RN, MPH, MBA	Vice President, Healthy Communities (and co-chair of Health Improvement Partnership)	St. Jude Medical Center
Allyson Sonenshine	Project Director	Orange County Women's Health Project
Richard Van Etten, MD, PhD	Director, Chao Family Comprehensive Cancer Center; Chao Family Endowed Director's Chair in Cancer Research & Treatment; Professor of Medicine and Biological Chemistry; Senior Associate Dean & Associate Vice Chancellor for Cancer	University of California, Irvine
Anza Vang, MPH, MCR	Deputy Chief of Public Health Services - Strategy and Development	Orange County Health Care Agency

Attachment 2: Community Stakeholder Interview Responses

Interview participants were asked to name some of the major health issues affecting individuals in Orange County. Responses included:

- The COVID-19 pandemic is a major health issue, as are chronic disease, mental health, and housing.
- Among seniors, COVID-19 has led to higher occurrences of isolation which, increases anxiety and depression.
- Major issues facing our communities moving forward include how do we recover from COVID-19 and how do we better position ourselves to manage communicable disease control and surveillance.
- COVID-19 has been a major health issue in Orange County, however, it is impacting different communities at different rates given gender, racial, and ethnic disparities in access to resources.
- There exists a fallout from COVID-19 that is impacting health, as COVID-19 has led to long-term health problems and increases in rates of obesity and substance use, mental health conditions, unemployment, and loss of income.
- Chronic disease is a main health issue, including diabetes, hypertension, cancer and heart disease.
- Diabetes relating to mental and behavioral health issues, economic issues such as inadequate access to healthy food, and behaviors such as sedentary lifestyle.
- Mental and behavioral health are significant issues for Orange County. Since the pandemic, social isolation has affected people ages zero to 100.
- Housing is a major health issue particularly among those who are unsheltered and those who have co-occurring mental health and substance use conditions.
- Those experiencing housing insecurity face large amounts of stress that can lead to poor diets, mental health conditions, and substance use.
- There are health disparities among people who are economically disadvantaged, people of color, and/or those who identify as lesbian, gay, bisexual, transgender, and/or queer (LGBTQ+). Women experience inequitable outcomes and experiences with breast cancer, cervical cancer, domestic violence, and reproductive health (specifically among teens).
- Neurodegeneration is a growing issue given the rapidly-aging population in Orange County.
- Health among transition-age youth. If people can be encouraged to take preventive measures and engage in health care at that time (ages 16 to 25), there is a higher likelihood of them engaging in these practices as they grow older.
- Health conditions secondary to overuse of technology, such as weight gain and low mood because of physical inactivity (now that we're working from home and sitting 12 hours per day) and early hearing decline and loss among teens and

young adults due to use of electronic hearing devices (e.g., earbuds) at high volumes.

- Equity in health outcomes among people of different races, ethnicities, ages, abilities, socioeconomic groups, neighborhoods, etc. The COVID-19 pandemic has challenged us to redefine what equity means and address disparities among subpopulations not focused on before (those in congregate living situations in homes, dormitories, correctional facilities, long-term care).

Interview participants were asked about the most important socioeconomic, racial, behavioral, or environmental factors that influence health in the area. Their responses included:

- Economic security and poverty are important factors influencing health. There are residents who earn below 200% of the federal poverty level who have experienced disproportionate rates of COVID-19, cardiovascular disease, and diabetes.
- There are issues affecting individuals of medium to high socioeconomic status (diseases of affluence), including behavioral health conditions such as opioid addiction and suicide.
- Socioeconomic status has a significant influence on health. This is concerning, as the wealth gap continues to increase and there is already a lack of resources.
- Being uninsured/underinsured is an important determinant of health access that is linked to poverty and immigration status.
- People who lack documentation face economic insecurity and are also not eligible for certain resources that would provide them with health care.
- Racial factors such as racism result in inequitable access to resources.
- Climate change and water pollution are important factors influencing health in the coastal environment, given their direct effects and impacts on tourism. COVID-19 affected the economic wellbeing of residents given two summers with less tourism, which is a major source of revenue to the community.
- While air quality from smog has improved, there are ongoing issues with pollution from freeways, trucks, factories, dumps, and wildfires.
- Older adults, youth in local colleges, and residents of neighborhoods where there are proportionally fewer fresh food outlets lack access to adequate food.
- Housing insecurity, particularly since the onset of the COVID-19 pandemic. People who have roommates to help cover housing costs, as well as low-income families living for example in one or two bedrooms, have not had private spaces to isolate themselves or quarantine.
- Lack of affordable and accessible transportation.
- Different cultural norms and sensitivities around certain health issues that involve stigma and may deter individuals from seeking services.

- In Mexican culture, it is often frowned upon for men and matriarchs to show their feelings or signs of mental distress, since it is viewed as a form of weakness. This means that behavioral health providers need to understand that signs of mental distress can be very different depending upon a client's cultural background.
- Obesity is an issue that is disproportionately affecting children living in low-income communities. Factors influencing obesity include a lack of parks, green spaces, healthy food, and fitness opportunities, and easy access to junk food.

Who are some populations in the area who are not regularly accessing health care and social services and why? Responses included:

- People with incomes below 200% of the federal poverty level, mostly residing in the northern part of the county including Santa Ana, Tustin, Garden Grove, and Westminster.
- People who are uninsured face substantial barriers to affording health care. Those able to access care may not be able to afford the medications prescribed to them.
- People who are borderline middle class often do not qualify for benefits, but do not make enough to purchase health insurance.
- Certain neighborhoods have a surplus of food supply, whereas in others it is more difficult to access healthy foods. Quantity and quality of food available varies geographically, offering an opportunity to strategically locate markets and pantries. Individuals who have immigrated and lack documentation.
- People who lack documentation might not qualify for affordable health care or resources. There is also a fear of deportation as a result of accessing health care.
- Older adults have greater economic insecurity and health vulnerabilities.
- There are high rates of senior women who are housing insecure or losing their homes, since they tend to outlive their spouses and may not have the means to support themselves as they transition from two incomes to one income.
- Children and youth who are disrupted by the COVID-19 pandemic require significantly greater mental health and developmental support.
- While it is important for young adults and teens to begin preventive health care for a healthier life to come, they are more likely to skip physical exams and routine care. There is not much investment to encourage teens and young adults to access health care. Primary care clinicians tend to invest more in providing care for adults and older adults with chronic health conditions due to financial benefits.
- Young adults and men (specifically mental and behavioral health care, given high rates of suicide).

- Individuals who are members of minority ethnic groups face language and cultural barriers to their needs being met.
- Unsheltered individuals, as they cannot afford health care or may not be aware of the resources available. They are also less likely to go to clinics for preventive care.
- Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) residents tend to be isolated and have difficulty accessing care. There are few providers in the county who are providing appropriate care for people who identify as transgender or gender-non-conforming.

Orange County has a large proportion of Asian and Latino/Hispanic community members. Participants responded to the question of what cultural barriers these community members face when accessing health care. Responses included:

- Recognizing diversity of ethnicity, culture, and communities within the Asian American community (Korean, Indian, Chinese, Vietnamese, etc.) and Latino community and that each group has very different cultural experiences and health needs.
- Recognition of various subpopulations and subcultures among those who are often grouped together under the label of Asian Pacific Islander.
- Language is an issue. Health care providers are not translating enough of their health education interventions for communities and neighborhoods for whom access is a challenge.
- Cultural barriers exist among diverse Asian and Latino/Hispanic communities as related to cancer diagnosis and treatment. Some are skeptical about Western medical practices or are afraid of stigma associated with a cancer diagnosis in the family.
- Within some Asian and Latino families, they are hesitant to seek care. Older adults may feel they can recover on their own or by asking family members for help.
- There exists a mistrust of doctors among people of certain minority groups particularly among Hispanic/Latino males, as the cultural influences the way the doctor's opinion is seen.
- The proportion of physicians in the health workforce who identify as Asian or Latino is low when compared to the overall demographics of Orange County. People tend to gravitate toward physicians and other health care staff who have the same cultural background, as they feel more comfortable with someone who understands their language and customs.

How has the COVID-19 pandemic influenced or changed the unmet health-related needs in Orange County? Responses included:

- Severe mental health conditions, as well as unmet needs around adequate community mental health resources, existed prior to the pandemic, but have been exacerbated.
- Fear and isolation have contributed to growing mental health concerns for all.
- Social isolation during COVID-19 had a profound impact on mental and behavioral health. There were increased rates of suicide and alcoholism, as well as depression among children/youth.
- The pandemic has further strangled mental health resources. As mental health providers have historically had to be protective of the typically smaller share of funding, space, and other resources they receive relative to other medical specialties, this has meant using already scarce resources to attend to a large influx of patients.
- COVID-19 has contributed to an increase in mental health conditions among older adults in particular. Seniors have had to endure higher rates of isolation from lockdown, which has led to high levels of depression and anxiety.
- Individuals with unstable income and unstable housing had their income further reduced. This has led to increases in stress-related mental health conditions such as anxiety/depression and suicide attempts.
- Health care staff are facing high stress due to COVID-19. This has affected morale and confidence.
- The state budget has not rebounded, and many people have lost their jobs; the economic impact of COVID-19 has been huge.
- People who lack documentation are particularly affected, because they do not have access to government subsidies/COVID-19 relief.
- People who have lost their jobs have had to cut back on spending, and this includes the ability to afford medications and transportation to appointments.
- There has been a decline in preventive measures and follow-ups, particularly involving in-person visits, as people fear contracting COVID-19 while visiting a doctor's office.
- People are behind on routine health maintenance due to difficulty accessing care.
- People with chronic diseases have taken fewer preventive measures, and as a result there has been a worsening of chronic conditions.
- There has been a large decline in preventive practices for women's reproductive health.
- There have been significant increases in rates of syphilis diagnosis.
- While existing cancer patients have been well taken care of under an aggressive outreach and vaccination strategy during COVID-19, many people have had to forgo preventive screening. This has led to a wave of cancers being detected at later stages and a spike in cancer mortality.

- The pandemic undid progress related to childhood obesity. School lockdowns caused school gardens, farmers markets, physical education, and other programs to be discontinued, and good nutrition was no longer a priority.
- Technological disparities have exacerbated the access gap during COVID-19. Virtual care has become a crucial component of health care, and it requires not only access to smartphones or strong internet connection, but also knowledge and understanding of software applications. Underserved communities, as well as minority and non-English-speaking individuals face technological disparities.

Participants were asked how immigration status has affected access to care for communities in Orange County. Responses included:

- Immigrants without documentation can still sign up for Covered California/Medi-Cal. However, participation is low, since there's a fear that immigration status data can be shared with other government entities, including U.S. Immigration and Customs Enforcement (ICE).
- Immigrants who are uninsured often see a doctor for the first time in the emergency room, making this a common place where cancer diagnoses are received.
- It is important to plan health education with an understanding of when different waves of immigration are occurring. There are geographic regions and groups experiencing more constant waves of immigration, and it's important to keep up with targeted public health campaigns in order for health information to be received and to support relationship-building and access.
- People who are undocumented are afraid that their information and status can be tracked through their medical records, and that immigration services could be called on them when accessing health care. This has been seen with the COVID-19 vaccine.
- Residents without documentation do not qualify for some resources, and this presents additional barriers to accessing health care.

Participants were asked how UCI Health can encourage community members to pursue care and restart cancer prevention and early detection. Responses included:

- Invest in the preventive screening programs based out of federally-qualified health centers (FQHCs) that engage community health workers.
- Position mobile health clinics at community events.
- Increase messaging (public service announcements) and education in multiple languages, and offer diverse forms of outreach tailored to individuals of different cultural backgrounds.
- Provide information in multiple languages, and make it clear that people who are undocumented should not fear accessing health care. Explain why preventive

practices are important and why UCI Health is a safe environment.

- Engage students who want to train to be peer educators or health educators.
- Partner with community leaders from churches or schools, so that people who are trusted by the community can be the ones informing the community on preventive screenings.
- Leverage social media platforms to inform the community about resources available, and to reach a younger audience with information about why they should also be participating in preventive care.
- Offer hybrid in-person and remote (telehealth) services, as well as in-person and virtual individual and group educational opportunities. UCI Health can leverage technologies for virtual care for those affected by COVID-19 who must isolate or quarantine.
- All staff members should have regular conversations with patients about the importance of screenings and preventive practices.

Participants were asked what barriers or opportunities community members have to receive current and accurate information about COVID-19 and vaccinations. Responses include:

- The challenge for health care providers is to distribute information uniformly over a broad range of media targeted to diverse audiences in appropriate languages (Mandarin, Vietnamese, Korean, Cambodian, Spanish, etc.).
- Distribution of vaccines is not uniform: There are large pockets in Orange County where people are not vaccinated. It is in these pockets where variants like Omicron will spread, making it important to develop targeted messages people can identify with.
- Knowledge of what the specific needs and concerns are in different communities and subpopulations can support moving from a focus on sharing general information on safety of COVID-19 vaccinations to potentially more personally-relatable details.
- Seniors tend to obtain their information from television, and different channels provide different perspectives. This presents a challenge to delivering uniform messages.
- “Rumors spread faster than facts.” Our world is “deeply divided” and “public health has become extremely political.”
- There is value in delivering health information through relatable stories (shared by trusted community members such as health care providers) that will inspire people to make that personal choice.
- Dispelling beliefs about COVID-19 vaccination that are scientifically inaccurate requires relationship-building and a case-by-case approach of having a deep

conversation with each individual to understand their underlying beliefs and address misconceptions.

- Trusted community members, such as health professionals and leaders of faith in the community, are important conduits for health communication.
- Orange County has a public health communication platform where residents can go to receive timely and accurate information.
- Health care providers have an opportunity to deploy their assets in a more targeted way to “move the needle” on health outcomes by using data. For example, pinpointing where there are high positivity and low vaccination rates by census tract and ZIP Code, and then working with organizations such as schools and businesses in those areas to deliver health information in culturally-appropriate ways.
- Community health partners can make sure that we’re cross-promoting and sharing each other’s messages. No single mechanism for sharing information can be pointed to since the population in Orange County is so diverse.
- There is a lack of cultural representation among the people who provide information about COVID-19 to the community. People will be more likely to listen when the information is provided by someone who they trust and has ties to the community.
- Employment policies, such as time off for recovery from vaccination, can create either incentive or disincentive to vaccinate.

Participants were asked what are the prominent health needs of unhoused community members in Orange County. Responses included:

- Food insecurity particularly affects individuals who are unhoused and low-income families with children who have to feed more people. Many times, the parents sacrifice meals so that their children can eat.
- Mental health care and substance use treatment are the prominent health needs of unhoused community members.
- Single mothers have a hard time finding jobs, as they need their children to be watched while they work. But child care is expensive and they cannot afford it.
- There is a lack of outpatient care for unhoused community members. Often, they become stuck in the hospital because a placement for them cannot be found.

Participants were asked how UCI Health can meet the needs of unhoused community members. Responses included:

- The best approach to supporting the health of people who are unsheltered is helping them obtain permanent supportive housing, where there are services/resources on-site.
- More recuperative care beds are needed for those who require ongoing medical

support, but do not need to be hospitalized.

- Engage patient navigators and housing navigators, who can help address the various social and economic issues that people are facing and help them obtain housing.
- Coordinate with homeless service organizations and partner with them on events.
- Provide trauma-informed parenting courses, as people who have experienced abuse and other forms of trauma may not know how to create healthy habits in their own families and break cycles of trauma that in turn affect the health and wellbeing of their own children.
- Provide unhoused community members with adequate outpatient services and more resources to support recovery.
- Staffing mobile vans or mobile medical clinics is a promising approach for increasing service access.
- Provide more resources for case management, so UCI can engage more individuals in outpatient care and follow up at more effective rates. This would especially help with chronic disease management. Care management should be a bigger investment, because ultimately, that's going to make a huge impact on readmissions.
- When an unhoused community member receives treatment and care at UCI, UCI should be better prepared with places to send them to. When people experiencing housing stability are discharged, they often have nowhere to go and are more likely to have to return due to that lack of transitional support and resources.

Participants were asked what mental health issues are the most prominent in the community how does that affect access to health care. Responses included:

- People with chronic diseases such as cancer are in need of psychological support, but it is lacking across UCI overall. There are few resources physicians can refer their patients to.
- Depression and suicide are major issues that are underreported. Subpopulations with comparatively high rates of suicide include older adults and White males.
- Collective trauma has been experienced during the pandemic, particularly as people face lack of security and uncertainty. This has manifested into depression and anxiety.
- Untreated psychosis, and a lack of resources/sub-acute beds for people who experience psychosis, are major issues.

Participants were asked what UCI Health can do to improve overall health and wellness among community members who lack access to healthy food. Responses included:

- Provide free community health and nutrition education.
- Work collaboratively with community organizations to promote easier access to healthy foods, fitness opportunities, parks, community gardens, etc., rather than solely focusing on nutrition education.
- Provide transportation to food banks and community events where there are food resources.
- Target resources to the neighborhoods who most need them.
- Include culturally-appropriate foods in food banks and resources.

Participants were asked what are the community barriers to cancer prevention, such as smoking prevention and HPV vaccination. Responses included:

- Cervical cancer is preventable through HPV vaccination, but there are barriers to vaccination across all communities. Barriers include mistrust of Western medicine, lack of awareness, or an impression that vaccinating an adolescent is going to increase his/her sexual activity.
- There is a need for health communication campaigns and resources that explain myths and misconceptions that exist in the community, especially when it comes to vaccinations.
- People who are undocumented are less likely to practice preventive care, as there is a fear of making their legal status known through accessing health care. Therefore, immigrants who are undocumented only tend to engage in cancer prevention when it's an emergency.

Attachment 3: Resources to Address Community Needs

Community stakeholders identified resources potentially available to address the identified community needs. This is not a comprehensive list of all available resources. For additional resources refer to 211 Orange County at <https://www.211oc.org/>.

Significant Needs	Community Resources
Access to health care	CalFresh/CalWorks CalOptima Health Insurance Community Clinic Association Korean Community Services (KCS) - CalOptima sign-up assistance for Korean communities, FQHC LGBTQ Center in Santa Ana Medi-Cal/Medicare Orange County Asian and Pacific Islander Community Alliance Refugee Health Assessment Program
Chronic diseases	American Cancer Society (ACS) Orange County Every Woman Counts (free breast and cervical cancer screenings and diagnostic services for underserved communities) Hoag Diabetes Clinic in Newport Beach Leukemia Lymphoma Society (LLS) Orange County (patient support groups and education) Orange County Health Improvement Partnership Orange County Healthier Together UCI Health Chao Family Comprehensive Cancer Center
COVID-19	Anaheim Union High School District Centers for Disease Control COVID-19 website CVS, Walgreens, and other pharmacies Klava Health Care Clinics ochealthInfo.com (including the “Chatbox” feature) Orange County City Net Orange County COVID-19 website
Housing and homelessness	American Family Housing Illumination Foundation Mary’s Kitchen Salvation Army Second Harvest
Mental health	Be Well Orange County Hoag, St. Joseph’s, and UCI Medical Center (psychiatric emergency care) National Alliance on Mental Illness
Overweight/obesity	Center for Healthy Neighborhoods in Fullerton Latino Health Access Wellness Corridor project in downtown Santa Ana (safe walking, biking, access to parks, community centers, bathrooms, water) Meals on Wheels
Preventive practices	Every Woman Counts Irvine Great Park Saturday Clinics (preventive care) Korean Community Services Planned Parenthood Southland Integrated Services (serving Vietnamese community) UCI Family Health Center - Santa Ana and UC Irvine Medical Center (health navigators to follow up with patients for preventive screenings)
Substance use	Be Well Orange Campus Illumination Foundation

Attachment 4: Report of Progress

UCIMC developed and approved an Implementation Strategy to address significant health needs identified in the 2019 Community Health Needs Assessment. The hospital addressed: access to care, preventive health care, cancer, mental health, overweight and obesity and related chronic diseases through a commitment of community benefit programs and charitable resources.

To accomplish the Implementation Strategy, goals were established that indicated the expected changes in the health needs as a result of community programs and education. Strategies to address the priority health needs were identified and measures tracked. The following section outlines the health needs addressed since the completion of the 2019 CHNA.

Access to Care and Preventive Health Care Response to Need

Primary Care

UCI Health operates the UCI Family Health Center, a Federally Qualified Health Center, with locations in Santa Ana and Anaheim. The mission of the health center is to improve the health and well-being of patients by providing high-quality, accessible and comprehensive primary care to every member of the family. In 2019, 22,083 patients were served, in 2020, the clinics treated 23,733 patients, and in 2021 the clinics treated 24,741 patients. The majority of patients seen at the clinic sites were low-income (over 99%), ethnic minorities (over 85%).

COVID-19

The UCI Family Health Center clinics undertook a community effort to address the COVID-19 pandemic.

- Launched drive-up testing sites in Anaheim and Santa Ana.
- As of August 20, 2021, had administered 28,707 vaccine doses of which 14,707 were second doses and 3,050 were for children, ages 12 – 17. Approximately 47% identified as Hispanic and 28% identified as Asian.
- Participated in townhalls, in English and Spanish.
- Provided 100 vaccine appointments daily at area schools. Provided 4,124 vaccines for 2,062 patients.
- Mass vaccination events in partnership with Orange County organizations.

Emergency Intake Shelter (EIS)

The EIS provided housing and support for the children until they could be reunified with their parents/sponsor families or placed in long term shelters. In Spring of 2021, over 13,000 children per month were received at the southern US border and overwhelmed

capacity and capabilities at US Customs and Border Patrol (CBP) Stations. Long Beach was one of 15 sites in the US that was created to provide care for the children. A 1,000-bed shelter with 200 isolation beds was made available. UCI Health participated in the EIS. During the time that the Long Beach EIS was functioning, 1,698 children were housed in the shelter and received medical exams, urgent care visits and vaccinations.

Financial Assistance and Transportation Support

The hospital provided available financial assistance to qualified patients. From FY19 through FY21, UCIMC provided \$260.2 million in charity care for indigent patients who did not have health care coverage. In addition, transportation support via taxi vouchers was provided for needy patients to increase access to health care services.

**Cancer
Response to Need**

Through the UCI 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

	2019	2020	2021
Colorectal cancer screening	47.1%	45.4%	51.4%
Cervical cancer screening	62.5%	62.7%	67.7%
Breast cancer screening	No Data	49.1%	57.6%
Screened for tobacco use, adults	91.7%	98.3%	97.8%

Source: <https://bphc.hrsa.gov/uds/datacenter>

At the UCI Chao Family Comprehensive Cancer Center, a number of support groups were provided for individuals coping with cancer and their caregivers. Support groups included:

- Oral, head and neck cancers support group
- Bladder cancer support group
- Pancreatic cancer support group
- Brain tumor support group
- Chronic Lymphocytic Leukemia (LLC) support group
- Korean Women’s cancer support group

**Mental Health
Response to Need**

At the UCI Family Health Center, patients were screened for clinical depression and provided with a follow-up plan, as needed.

Mental Health Screening

	2019	2020	2021
Screening for clinical depression and follow-up plan	83.0%	60.9%	70.6%

Source: <https://bphc.hrsa.gov/uds/datacenter>

UCI Health participated in Be Well OC, a community-based, cross-sector strategy to create a community-wide, coordinated ecosystem to support optimal mental health

Overweight and Obesity/Chronic Diseases Response to Need

At the UCI Family Health Centers, patients with chronic disease received primary care services to manage their conditions.

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

	2019	2020	2021
Hypertension	26.1%	19.0%	17.3%
Asthma	5.2%	4.3%	4.3%
Diabetes	19.8%	16.9%	13.6%

Source: <https://bphc.hrsa.gov/uds/datacenter>

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

Chronic Disease Management Measures

	2019	2020	2021
Cardiovascular disease treatment (statins)	71.7%	71.4%	74.5%
Ischemic vascular disease treatment (aspirin therapy)	81.4%	71.6%	77.8%
Blood pressure control (<140/90)	64.8%	64.9%	59.4%
Diabetes poor control (HbA1c >9%)	35.4%	34.4%	32.8%

Source: <https://bphc.hrsa.gov/uds/datacenter>

Weight assessment and physical activity and nutrition counseling were provided for children and adolescents. Body Mass Index (BMI) screening and follow up were provide to adult clinic patients.

Overweight and Obesity Measures

	2019	2020	2021
Weight assessment, nutrition and physical activity counseling, children and teens	76.2%	79.5%	79.5%
BMI screening and follow-up, adults	64.0%	60.4%	69.3%

Source: <https://bphc.hrsa.gov/uds/datacenter>

A Bariatric Support Group was offered free of charge and open to the public. Virtual meetings provided an opportunity for patients to connect to one another, provided emotional support associated with their bariatric journey and learned from guest speakers.

The UCI Family Health Center in Anaheim and Santa Ana hosted a mobile food pantry. The food pantry provided fruits and vegetables free of charge to community residents.