COMMUNITY
HEALTH ASSESSMENT 2020

A thriving community where all people have the opportunity to be safe and healthy

Stanislaus County

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820 Scenic Drive
Modesto, CA 95350

Message from Director of Public Health

Vision
A thriving community where all people have the opportunity to be safe and healthy

Values
Respect, Collaboration, Inclusiveness, Trust, Commitment

Protecting and improving the health of our residents is why public health exists. To be able to effectively respond to the needs of our residents we must have a good understanding of their needs, the issues they face and the factors that contribute to health. Conducting this assessment gave us a chance to hear from the community- to hear firsthand what they were concerned about, what was working, what wasn't working and specifically what they needed to be able to live long, healthy and productive lives.

We define health as more than just the absence of illness, disease and disability. Our approach to health takes into consideration the whole person—their mind, body and spirit—and emphasizes the influences of the environment and other social factors on health and wellbeing. We know that health happens where people live, work and play and that the conditions surrounding their lives can create or destroy health. This assessment looks at health outcomes, and the factors that influence these outcomes such as housing, education, race, income and health care access.

This local CHA provides a comprehensive profile of the health and well-being of our community. It let us know how our community is doing- the strengths we have and the areas where we are challenged. It serves as a resource for our residents, partners and key stakeholders to deepen their understanding of the health status of our community and ultimately will serve as the foundation for making decisions for the Community Health Improvement Plan.

This work cannot be done alone it takes all of us working together to create healthy communities. I would like to extend my sincere gratitude and appreciation to the Steering Committee, the Data Subcommittee, Public Health staff, our partner organizations and the community residents who joined us on this journey and graciously shared their ideas, their expertise and their lived experiences. Throughout this process it has been a pleasure to connect with such dedicated and committed people ready and willing to create opportunities for everyone to experience optimal health. We trust you will find the CHA helpful and beneficial -it is our hope that it will adequately help us change our future together and create "a thriving community where all people have the opportunity to be safe and healthy".

Lori Williams, MSW

Public Health Director, Stanislaus County

PS. This Community Health Assessment was written using data available at the time of writing in 2019. Due to the 2020 COVID pandemic, publication was postponed until the end of 2020.

2020

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INTRODUCTION

This report is a product of the 2018-2019 Stanislaus County Mobilizing Action for Planning and Partnerships (MAPP) project, spearheaded by the Stanislaus County Health Services Agency Public Health Department (HSA/PH). MAPP is a community-driven strategic planning process for improving community health, available through the National Association of County and City Health Officials (NACCHO).

Using the MAPP framework, the Stanislaus County Public Health Core Team brought together leaders from across Stanislaus County to join the Steering Committee and Data Subcommittee for the six phases of MAPP: Organizing, Visioning, Four MAPP Assessments, Identifying Strategic Issues, Formulating Goals and Strategies, and Action Cycle.

The Core Team consisted of key members of HSA/PH staff to support and contribute to the planning of the MAPP process. The Steering Committee involved leaders in the community providing input into the Stanislaus County MAPP planning process to help identify the health issues most important to our county and develop strategies to address these concerns. The Data Subcommittee included a smaller group of individuals to review and lead data collection, review and analysis activities.

Steering Committee Agencies represented:

Area Agency on Aging
Behavioral Health and Recovery Services
Catholic Charities
Center for Human Services
City of Ceres
City of Hughson
City of Riverbank
Community Health Insights
Community Services Agency
CSU Stanislaus
Economic Development and Workforce Alliance
El Concilio
Focus on Prevention
Golden Valley Health Centers
Health Net
Health Plan of San Joaquin
Health Services Agency
Kaiser Permanente
LGBTQ Collaborative
Livingston Health
MoPride
Parent Resource Center
Sierra Vista Child and Family Services
Stanislaus County Children and Families Commission
Stanislaus County Office of Education
Sutter Health
United Way
Valley Children's Hospital
West Modesto King Kennedy Center

Data Subcommittee Agencies Represented:

Health Services Agency
Focus on Prevention
Behavioral Health and Recovery Services
Area Agency on Aging
Stanislaus County Office of Education
Mountain Valley EMS Agency

The organizing phase took place from June 2017-April 2018. Visioning was done May 2018-August 2018. The four assessments were conducted September 2018-March 2019. Identifying Strategic Issues was done March 2019-June 2019. Formulate Goals and Strategies was done July 2019-December 2019, with the Action Cycle following.

The four MAPP assessments include the Local Public Health System Assessment, Community Themes and Strengths Assessment, Community Health Assessment, and Forces of Change Assessment. This report primarily documents the results from the Community Health Assessment, with some highlights from the Community Themes and Strengths Assessment incorporated. Conclusions from the other assessments may be available as separate reports.

METHODOLOGY

This Community Health Assessment details information from the top 11 health needs identified through analysis of qualitative and quantitative data.

QUANTITATIVE DATA:

Quantitative data collection for the Community Health Assessment was conducted using secondary sources. For a list of sources, see Appendix A.

To identify indicators to be included in the analysis, a list of potential indicators was compiled from:

- 2013 Stanislaus County Community Health Assessment
- Healthy People 2020
- Let's Get Healthy California
- Stanislaus County CEO's Office
- County Health Rankings
- local Kaiser Community Health Needs Assessment (CHNA)
- local Sutter CHNA
- Stanislaus County's Focus on Prevention
- NACCHO recommended and extended indicator and topic lists

Those indicators were grouped into the NACCHO recommended categories and thematic subcategories. The MAPP Steering Committee prioritized categories for this report, with additional priorities contributed by the Public Health MAPP Core Team and suggestions from the MAPP Data Subcommittee. This list of indicators was thoroughly reviewed and edited by the MAPP Data Subcommittee. Through the data collection process, some of the indicators were removed due to unavailability of data.

QUALITATIVE DATA:

Qualitative data for the Community Themes and Strengths Assessment was gathered from primary sources.

For qualitative data collection, the Stanislaus County MAPP effort collaborated with Community Health Insights (CHI), a consultant firm that was gathering qualitative data for Memorial Medical Center's Community Health Needs Assessment at the same time. The MAPP committees worked with CHI to identify names and contact information for potential key informants and focus group coordinators for specific populations of interest for Memorial Hospital's assessment as well as the MAPP assessment. CHI conducted the focus groups and key informant interviews.

Nine Focus Groups were conducted (January 2019-February 2019) in the following communities in Stanislaus County:

Low income
Hispanic/Latino
Veterans
Seniors
LGBT
Spanish-speaking
Rural
African American
Youth
Homeless

Eleven Key Informant Interviews (December 2018-February 2019) represented the following agencies:

Health Services Agency
Behavioral Health and Recovery Services
West Modesto Community Collaborative
Stanislaus County Law Enforcement
Golden Valley Health Centers
Center for Human Services
Memorial Medical Center
CSU Stanislaus

Focus group and key informant responses to questions about key health needs were matched to the Community Health Assessment topic categories and subcategories.

ANALYSIS OF QUANTITATIVE AND QUALITATIVE DATA:

After gathering quantitative and qualitative data, topic categories and subcategories were considered as key health needs if they met the following criteria:

a. Indicators reviewed in secondary data demonstrated that the county estimate was worse by more than one percentage point when compared to the benchmark estimate (in most cases, California state average).
b. The health issue was identified as a key theme in at least three interviews.
c. The health issue was identified as a key theme in at least three focus groups.

This method revealed 9 key health needs:

1. Chronic Disease
2. Access to Care
3. Mental Health
4. Substance Use
5. Safety
6. Community
7. Economic Insecurity
8. Housing and Homelessness
9. Transportation.

Additionally, Education and Infectious Disease were added as they were just short of meeting the criteria, for a final total of 11 key health needs.

These 11 key health needs are highlighted in this report and were ranked by the community for prioritization in the Community Health Improvement Plan.

BENCHMARKS:

California

For reference, most of the data presented in this report is compared to California totals. These California data points represent state-wide rates and averages, including Stanislaus County.

Healthy People 2020

Healthy People 2020 (https://www.healthypeople.gov/) is a national initiative from the U.S. Department of Health and Human Services, aiming to improve the health of all Americans. The Healthy People framework is reviewed and updated every ten years. For example, some of the objectives from Healthy People 2010 were updated for 2020 due to changes in calculations, review of baseline data, or setting new goals once previous goals were reached. This report notes Healthy People goals where available to provide reference to national targets.

Let's Get Healthy California

Let's Get Healthy California (https://letsgethealthy.ca.gov/) is a health improvement plan from the California Department of Public Health with the goal of making California the healthiest state in the nation. Let's Get Healthy California was established in 2012 with the plan to review and reevaluate every ten years. Many of the Let's Get Healthy California indicators are only available for California, and not broken down into county-specific numbers.

LIMITATIONS:

The quantitative data included in this report has several limitations. Since quantitative data was gathered using secondary sources, availability of stratification by racial and ethnic group, poverty, gender, and other variables was often limited. Many of the sources relied on survey data which is subject to issues with study design, respondent bias, and over/under-sampling. As several sources were used, comparability between sources and differences in methods between sources must be acknowledged. For limitations specific to each data source, refer to the list of quantitative data sources and their websites, found in Appendix A.

The qualitative data analyzed to select the health needs for this report were limited primarily by sample size. With only 16 key informants and 11 focus groups to represent a community of over 500,000 residents, these qualitative data only reflect the perspectives and experiences of the individuals sampled and is not designed to represent the entirety of the population.

DISPARITIES:

Several examples of health disparities are highlighted throughout this report. Where available, data were analyzed by demographic category (age, racial and ethnic group, gender, income, etc.) and notable disparities are described. There may be additional disparities, and lack of inclusion in this report should not be taken to mean that they do not exist.

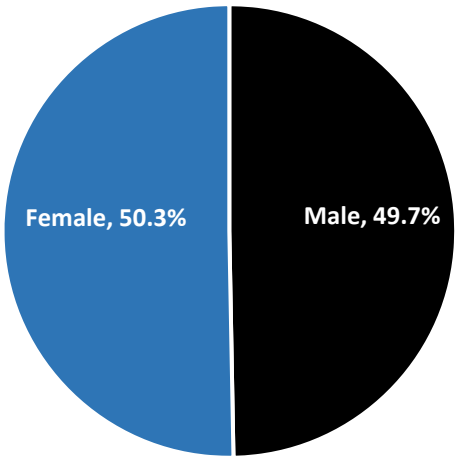
DEMOGRAPHICS

Stanislaus County

Located in the heart of California's central valley, Stanislaus County's vision is to be respected for our service to the community and known as the best in America. For over 150 years, Stanislaus County has been synonymous with rich agriculture and strong communities. Top commodities include almonds, milk, chickens, and cattle. Stanislaus County is governed by a CEO, and a board of supervisors, elected from each of five Supervisorial Districts. With the vision of "Water, Wealth, Contentment, Health," the City of Modesto is the county seat with 39% of the population (ACS, 2017). The county is intersected by two major freeways and truck routes, I-5 and CA-99, as they travel the length of California's central valley, transporting goods across the state and the country.

With an estimated population of 547,899 (ACS, 2017), Stanislaus County is almost evenly split by sex with 49.7% male and 50.3% female **(Figure 1).**

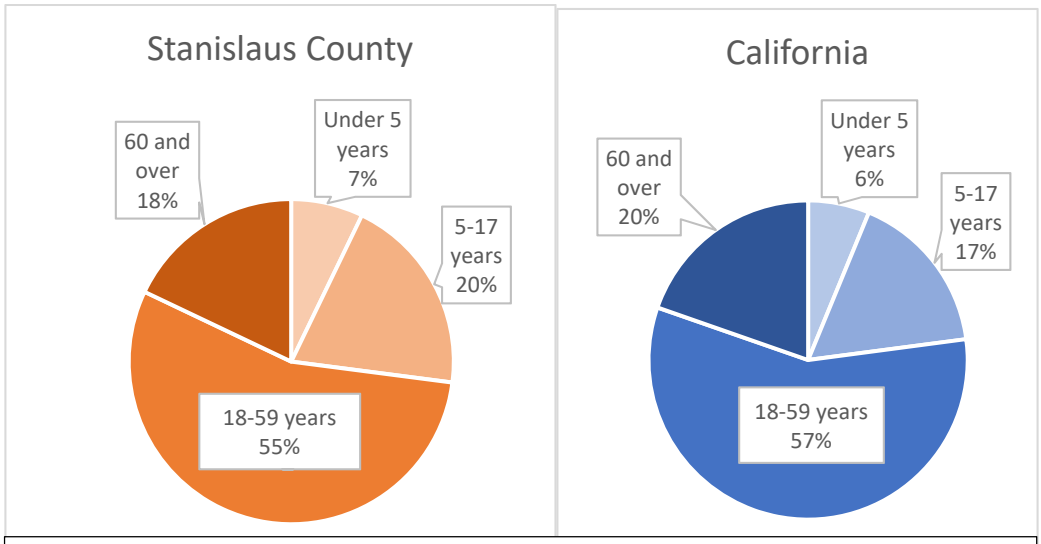
Figure 1: Population by Sex, Stanislaus County, 2017.



Source: American Community Survey, US Census, 2017 1 year estimate, table S0101

By age, Stanislaus County is 27.1% under 18, and 17.9% 60 and over (**see Figure 2**), with a median age of 34.1 years old. (ACS, 2017) California overall runs slightly older, with a median age of 36.5, 22.9% under age 18, and 19.7% 60 and older. (ACS, 2017)

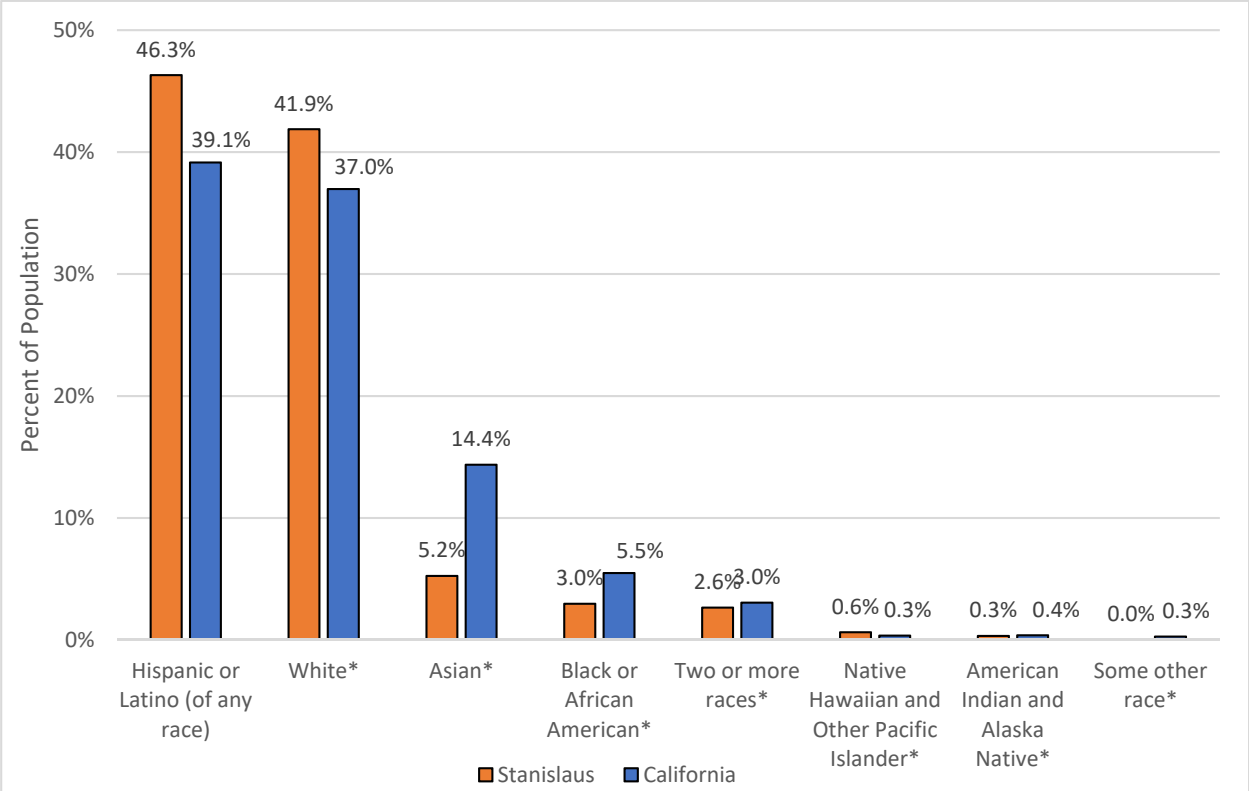
Figure 2: Population by Age, Stanislaus County and California, 2017.



Source: American Community Survey, US Census. 2017 1-year estimate, table S0101

Stanislaus County is more Hispanic/Latino and less Asian than California overall. The Hispanic/Latino population (of any race) surpassed White, Non-Hispanic/ Latino, as the largest portion of the Stanislaus County population in 2015. (**see Figure 3**)

Figure 3: Population by Racial and Ethnic Group, Stanislaus County and California, 2017.

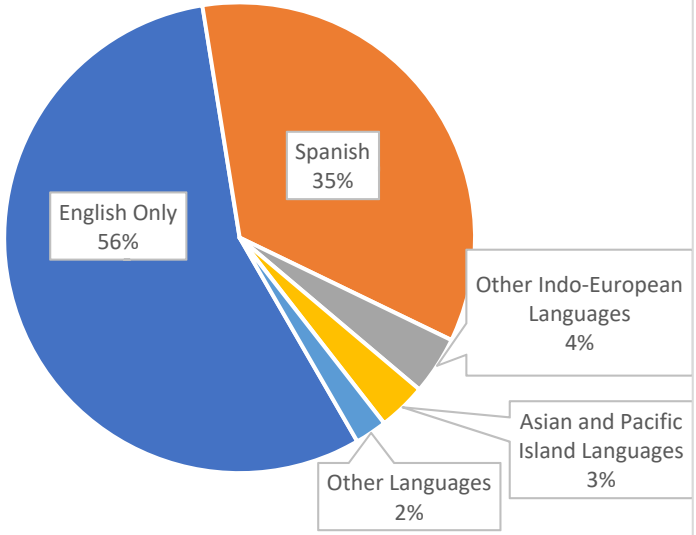


*Non-Hispanic/Latino

Source: American Community Survey, US Census. 2017 1-year estimate. Total Population Stanislaus County: 547,899. Total Population California: 39,536,653.

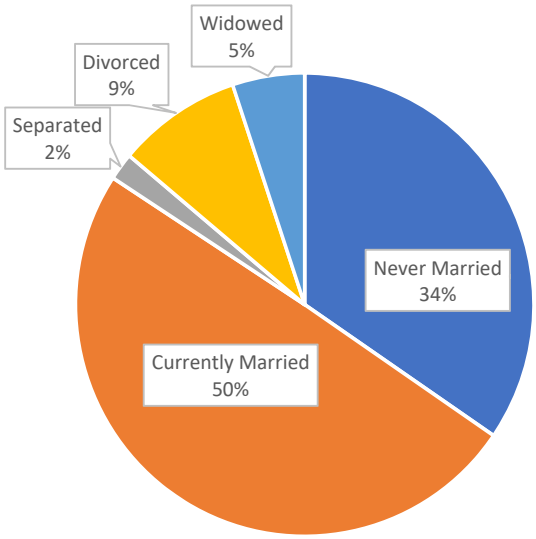
56% of the population of Stanislaus County speaks only English at home (**see Figure 4**). The majority of other languages spoken at home are Spanish (35%), followed by other Indo-European languages (4%), Asian and Pacific Island languages (3%), and other languages (2%) (ACS, 2017).

Figure 4: Language Spoken at Home, Stanislaus County, 2017.



Source: American Community Survey, US Census, 2017 1 year estimate.
Percentages out of Stanislaus population 5 years and older: 508,633.

Figure 5: Marital Status age 15 and over, Stanislaus County, 2017.



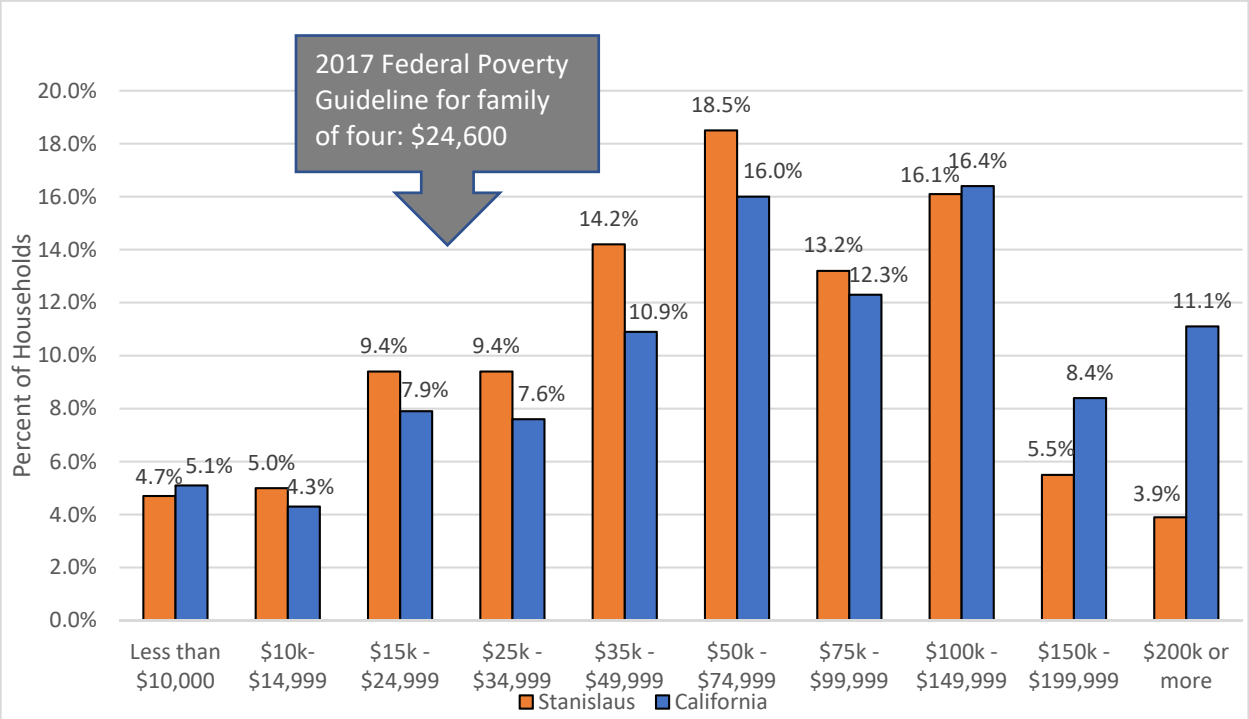
Source: American Community Survey, US Census, 2017 1-year estimate.
Percentages out of Stanislaus County Population 15 years and older:
425,063

For marital status, the US Census looks at all people age 15 and older. **Figure 5** illustrates the marital status of the population 15 years and older, (ACS, 2017)

- Almost half of the population age 15 and older are currently married.
- Just over a third of Stanislaus residents age 15 and older have never been married.
- One in 20 of Stanislaus residents age 15 and older are widowed.

Estimates of household income show that Stanislaus County has more households with lower incomes and less households with higher incomes compared to California (**see Figure 6**). The median household income for Stanislaus County is $59,517, which is 17% lower than California's median household income of $71,805. (ACS, 2017)

Figure 6: Household Income, Stanislaus County and California, 2017.



Source: American Community Survey, US Census. 2017 1-year estimate.
-Percents out of total households: Stanislaus County:173,573 California: 13,005,097.

The percentage of the population of all ages with disabilities in Stanislaus County (13.1%) is more than California (10.6%). See Table 1 below, for a breakdown of what percentage of the population has each kind of difficulty. Some people may have more than one difficulty.

Table 1: Disability by Type of Difficulty, Stanislaus County and California, 2017.

	Stanislaus	California
Any disability	13.1%	10.6%
Hearing difficulty	3.8%	3.0%
Vision difficulty	2.4%	2.0%
Cognitive difficulty	5.1%	4.3%
Ambulatory difficulty	7.3%	5.9%
Self-care difficulty	2.7%	2.6%
Independent living difficulty	6.4%	5.5%
Source: 2017 ACS, table S1810, Percents out of total civilian non-institutionalized population[1]: Stanislaus: 532,471 California: 38,488,069		

[1] Civilian non-institutionalized population: "All U.S. civilians not residing in institutional group quarters facilities such as correctional institutions, juvenile facilities, skilled nursing facilities, and other long-term care living arrangements." (US Census, 2019)

HEALTH

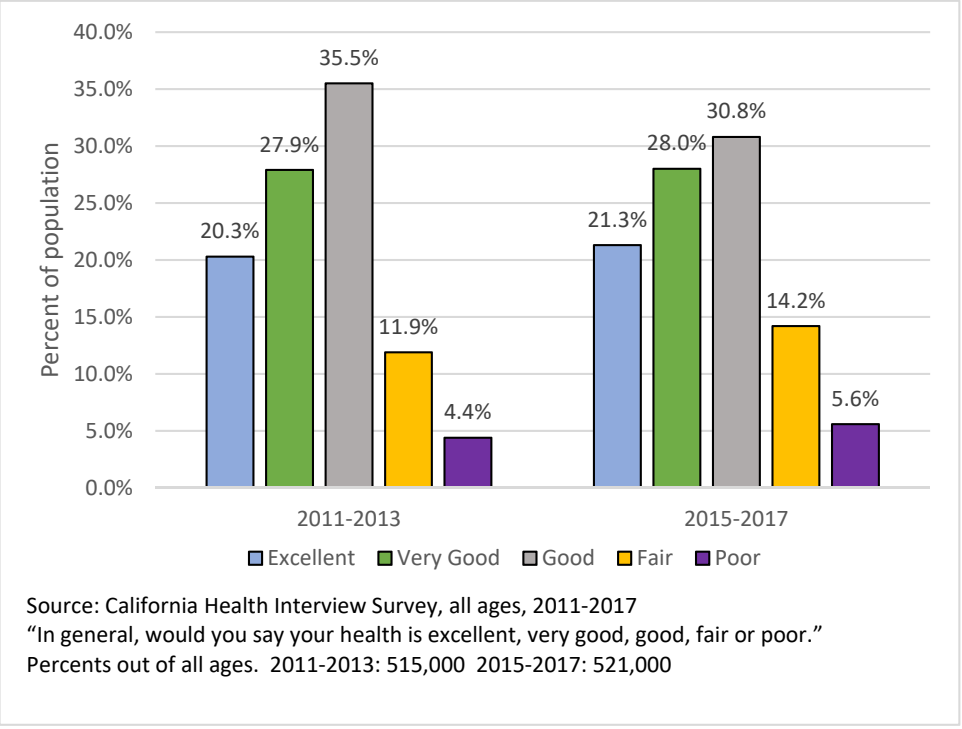
Stanislaus County

There are many aspects of health and many factors that influence the health of an individual and a community. In 1946, the World Health Organization defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 1946).

Figure 7 below looks at self-reported health status for all ages in Stanislaus County, comparing responses from 2011 to 2013 with responses from 2015 to 2017. Specifically, respondents to the California Health Interview Survey were asked, "In general, would you say your health is excellent, very good, good, fair or poor?" (California Health Interview Survey, 2011-2017)

- The percent of Stanislaus County residents identifying their health as fair or poor rose from 16.3% in 2011 to 2013 to 19.8% in 2015 to 2017.
- The percent of Stanislaus County residents identifying their health as good decreased 13%, the most of any category, from 2011-2013 to 2015-2017.
- The percent of Stanislaus County residents identifying their health as excellent or very good remained almost the same from 2011-2013 (48.2%) to 2015-2017 (49.3%).

Figure 7: Self-Reported Health Status, Stanislaus County, 2011-2013 and 2015-2017.



Source: California Health Interview Survey, all ages, 2011-2017
"In general, would you say your health is excellent, very good, good, fair or poor."
Percents out of all ages. 2011-2013: 515,000 2015-2017: 521,000

CHRONIC DISEASE

Chronic diseases are conditions that last a year or more, limit daily living activities, and/or require ongoing medical attention (CDC, 2019). They account for the majority of deaths in Stanislaus County, and are the leading drivers in health care costs (CDC, 2018) (CDC, 2019).

TOP CAUSES OF DEATH

Figure 8 illustrates the top 15 primary causes of death for Stanislaus County, by percentage of total deaths, compared to California for 2015 to 2017, as listed on the death certificates. If the deceased had other conditions that contributed to their deaths, that information is not included here.

Major Risk Factors for Chronic Disease:

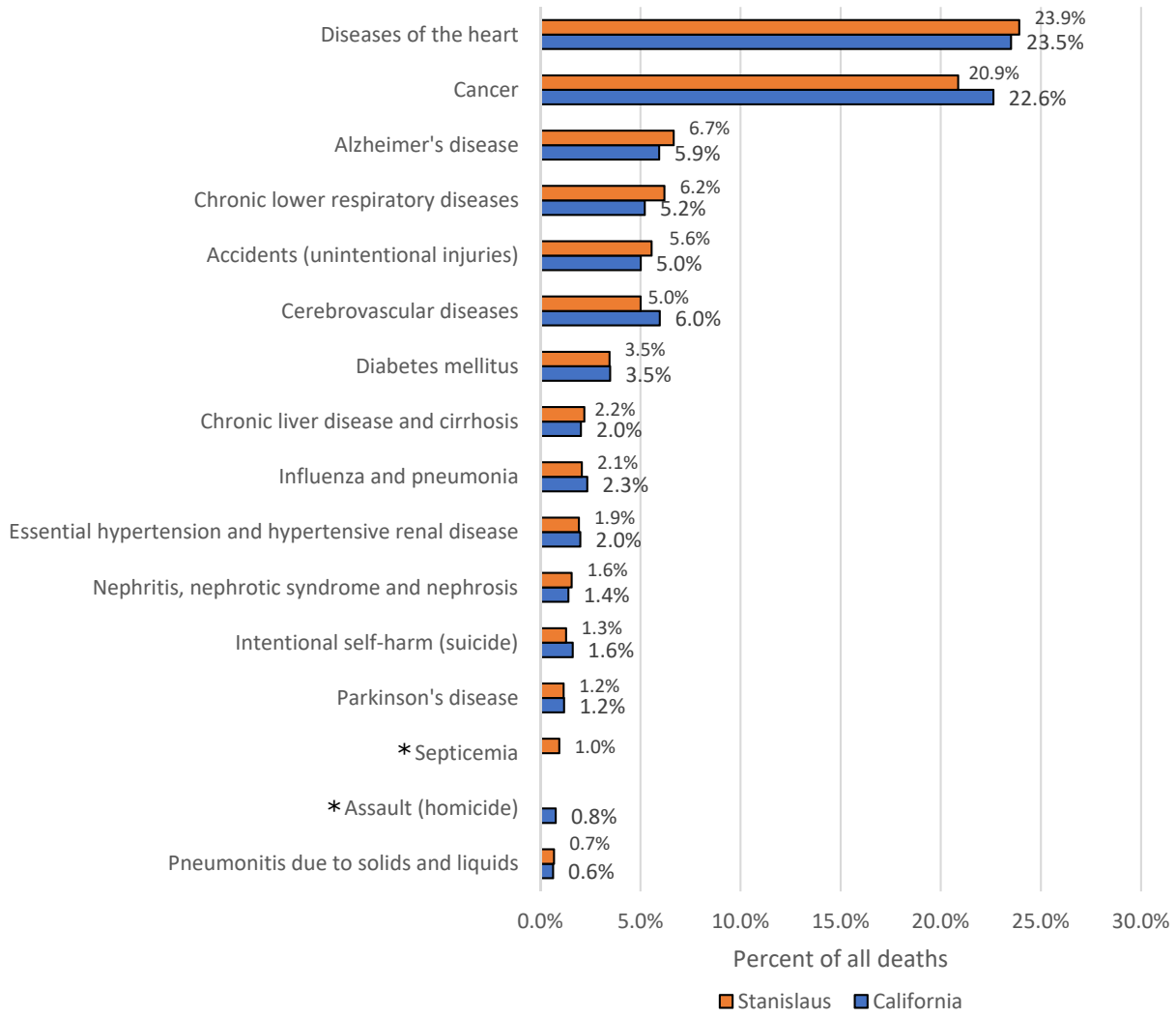
- **Tobacco Use**
- **Poor Nutrition**
- **Lack of Physical Activity**
- **Excessive Alcohol Use**

Source: (CDC, 2019)

- Diseases of the heart and cancer together constituted 44.8% of all Stanislaus County deaths from 2015-2017, and 46.1% of all California deaths from 2015-2017.
- The top five causes of death in Stanislaus County were:
    - Diseases of the heart
    - Cancer
    - Alzheimer's Disease
    - Chronic lower respiratory disease
    - Accidents (unintentional injuries)
- Compared to California, four of the top five causes of death in Stanislaus County all had higher percentages of total deaths than California deaths except for cancer.
- Cerebrovascular disease ranked as the sixth leading cause of death in Stanislaus County, but the third leading cause of death in California.

The top four leading causes of death in Stanislaus County are all chronic diseases and made up 57.7% of all deaths in Stanislaus County from 2015-2017.

Figure 8: Top 15 Causes of Death, Stanislaus County and California, 2015-2017.



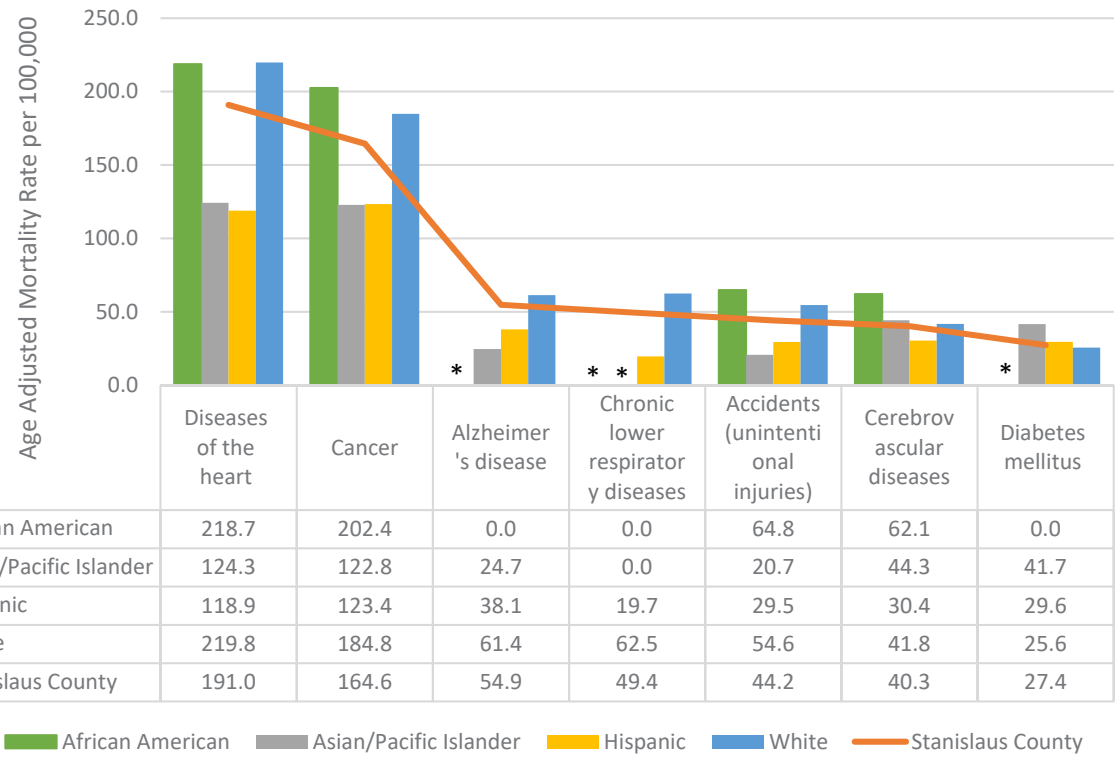
*Septicemia ranks number 14 for Stanislaus County, but is not in the top 15 ranked causes of death for California.
Assault (homicide) ranks number 14 for California, but is not in the top 15 ranked causes of death for Stanislaus County.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
Percents out of total deaths 2015-2017: Stanislaus: 12,937 California: 789,635

HIGHLIGHTING DISPARITIES: Top Causes of Death

Causes of death are not evenly distributed across racial and ethnic groups in Stanislaus County. **Figure 9** demonstrates the mortality rate for the top seven causes of death in Stanislaus County by racial and ethnic group for 2015 to 2017, with rates not calculated for groups with 20 or fewer deaths.

- The top two causes of death (diseases of the heart and cancer) have much higher rates in African American and White populations, compared to Asian/Pacific Islanders and Hispanics/Latinx.
- The mortality rate for chronic lower respiratory disease in Stanislaus County is three times higher for Whites compared to Hispanics/Latinx.
- Mortality rates for diabetes mellitus are highest for Asian/Pacific Islanders compared to Whites or Hispanics/Latinx.

Figure 9: Top 7 Causes of Death by Racial and Ethnic Group, Stanislaus County, 2015-2017.



	Diseases of the heart	Cancer	Alzheimer's disease	Chronic lower respiratory diseases	Accidents (unintentional injuries)	Cerebrovascular diseases	Diabetes mellitus
African American	218.7	202.4	0.0	0.0	64.8	62.1	0.0
Asian/Pacific Islander	124.3	122.8	24.7	0.0	20.7	44.3	41.7
Hispanic	118.9	123.4	38.1	19.7	29.5	30.4	29.6
White	219.8	184.8	61.4	62.5	54.6	41.8	25.6
Stanislaus County	191.0	164.6	54.9	49.4	44.2	40.3	27.4

*Unreliable, based on 20 deaths or less, rate not calculated.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

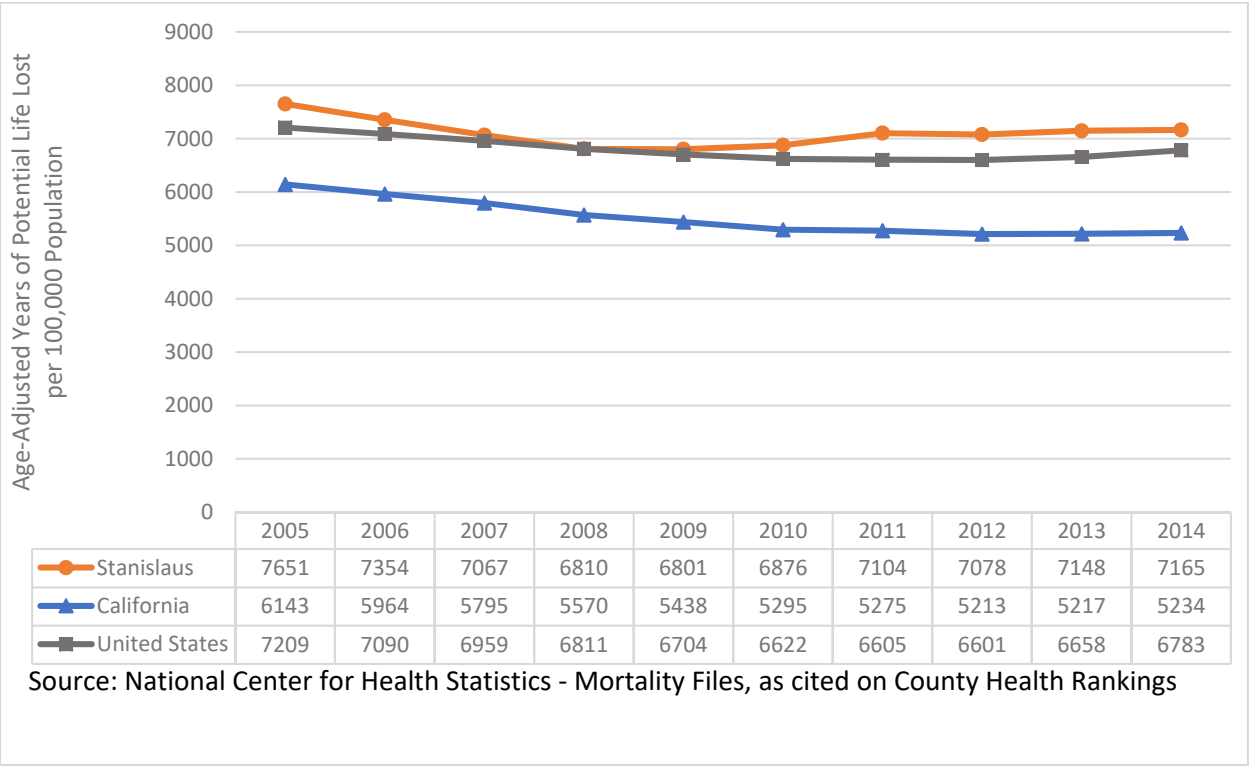
PREMATURE DEATH

If everyone was expected to live 75 years, then a person dying at 65 would have "lost" 10 years of potential life. Potential years of life lost from premature death calculates how many years of potential life was lost due to all those who died before the age of 75 across the county.

Figure 10 illustrates the years of potential life lost from premature death for Stanislaus County, all of California, and the United States from 2005 to 2014.

- With the exception of 2008, Stanislaus County had the highest rate of years of potential life lost compared to California and the United States from 2005-2014.
- California has consistently had the fewest years of potential life lost compared to Stanislaus County and the United States.

Figure 10: Potential Years of Life Lost from Premature Death, Stanislaus County, All of California, and United States, 2005-2014.



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Stanislaus	7651	7354	7067	6810	6801	6876	7104	7078	7148	7165
California	6143	5964	5795	5570	5438	5295	5275	5213	5217	5234
United States	7209	7090	6959	6811	6704	6622	6605	6601	6658	6783

Source: National Center for Health Statistics - Mortality Files, as cited on County Health Rankings

ADULT DIABETES

Diabetes is a condition characterized by insufficient insulin function, either by shortage of insulin or insensitivity to insulin, resulting in inappropriate levels of glucose and fat in the blood that can lead to eventual organ damage. (CDPH, 2019) There are three types of diabetes: Type 1 (autoimmune disease), Type 2 (lifestyle related), and Gestational (during pregnancy) (CDPH, 2019).

Figure 11 shows the percent of adults in Stanislaus County and California from 2011 to 2017 who reported ever being diagnosed with diabetes.

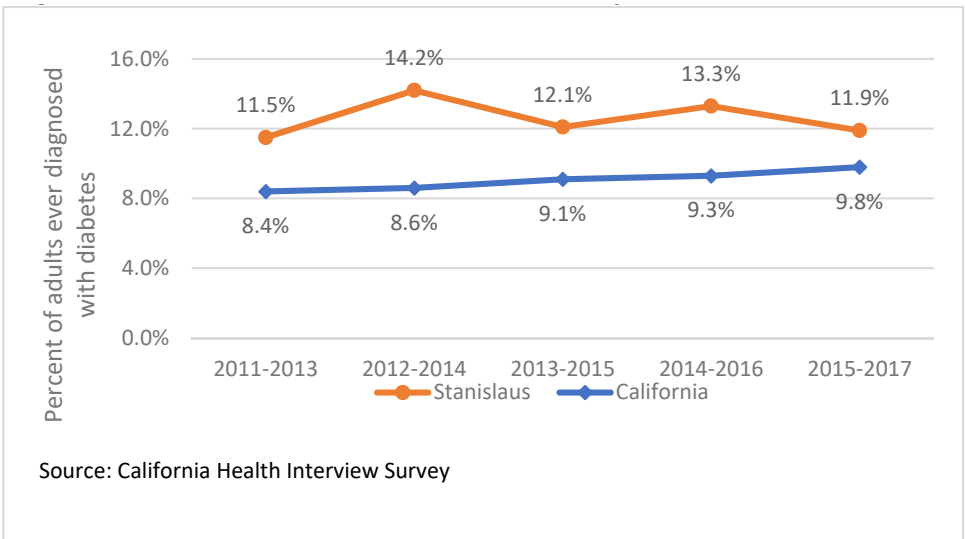
- From 2011-2017, Stanislaus County had more adults reporting that they had been diagnosed with diabetes compared to all of California.
- In California, the percent of adults who had been diagnosed with diabetes increased from 8.4% in 2011-2013 to 9.8% in 2015-2017.
- In Stanislaus County, the percent of adults reporting that they had ever been diagnosed with diabetes fluctuated from 2011-2017, with a high of 14.2% (2012-2014) and a low of 11.5% (2011-2013).

Risk Factors for Diabetes:

- **Family History**
- **Age** (Type 1: Child, Teen or Young Adult, Type 2: 45 or older)
- **Prediabetes**
- **Overweight**
- **Physical Inactivity**
- **Gestational Diabetes**
- **Race and Ethnicity**
- **Polycystic Ovarian Syndrome** (Gestational Diabetes)
- **Pregnant with history of Gestational Diabetes, or previous birth over 9 pounds** (Gestational Diabetes)

Source: (CDC, 2019)

Figure 11: Adults Reporting Ever Being Diagnosed with Diabetes, Stanislaus County and California, 2011-2017.



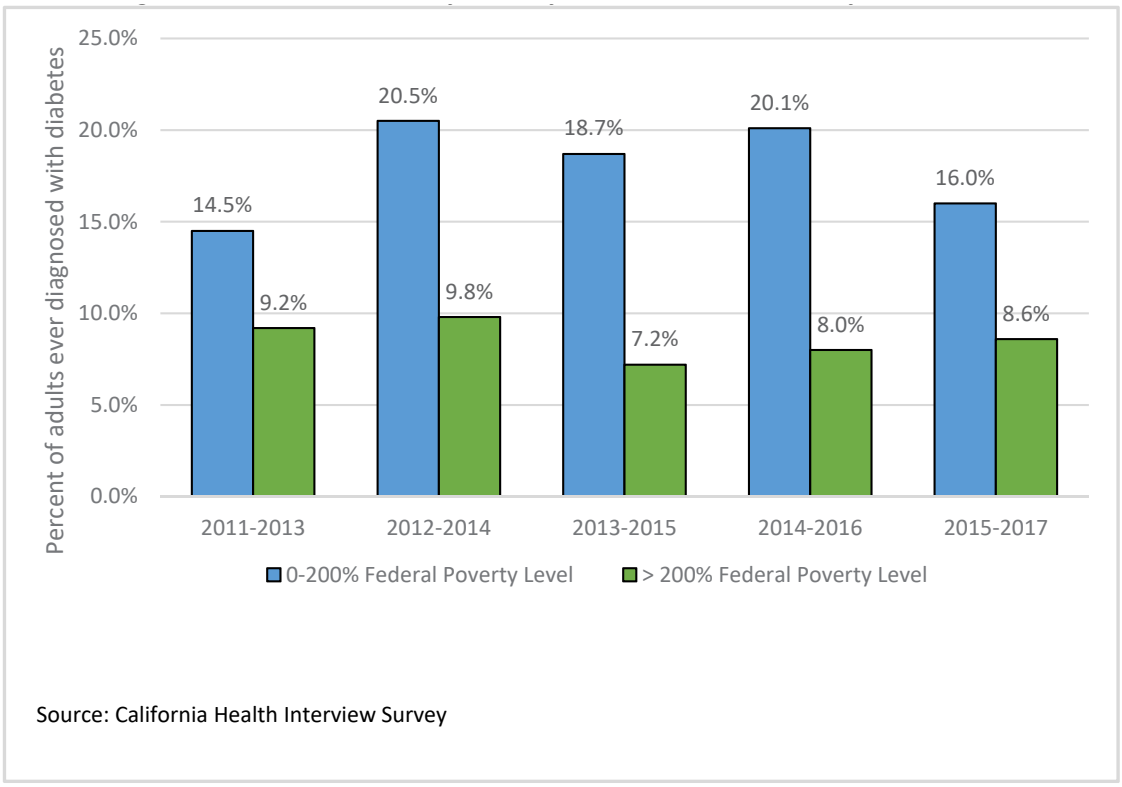
Source: California Health Interview Survey

HIGHLIGHTING DISPARITIES: Adult Diabetes

There is a notable difference in the percent of adults who have been diagnosed with diabetes by poverty level. **Figure 12** illustrates the differences in adult diabetes for those who make up to 200% of the federal poverty level, compared with those above 200% of the federal poverty level in Stanislaus County from 2011-2017.

- From 2011-2017, the percent of adults at or below 200% of the federal poverty level who had ever been diagnosed with diabetes ranged from 14.5% (2011-2013) to 20.5% (2012-2014).
- From 2011-2017, the percent of adults above 200 percent of the federal poverty level who had ever been diagnosed with diabetes ranged from 7.2% (2013-2015) to 9.8% (2012-2014).
- In 2015-2017, adults at or below 200% of the federal poverty level were 86% more likely to have been diagnosed with diabetes compared to those above 200% of the federal poverty level.

Figure 12: Adult Diabetes by Poverty Level, Stanislaus County, 2011-2017.



Source: California Health Interview Survey

HEART DISEASE

Heart disease is the leading cause of death in Stanislaus County, all of California, and the United States (CDC, 2018). Heart disease includes coronary heart disease, heart attacks, angina, and several other cardiovascular conditions.

Figure 13 illustrates the mortality rate from heart disease for Stanislaus County, all of California, and the United States from 2008 to 2017.

- From 2008-2017, the heart disease mortality rate for Stanislaus County was higher than for California or the United States.
- From 2008-2017, the heart disease mortality rate for California was lower than for Stanislaus County or the United States.
- For Stanislaus County, all of California, and the United States, heart disease mortality rates all decreased from 2008-2017.

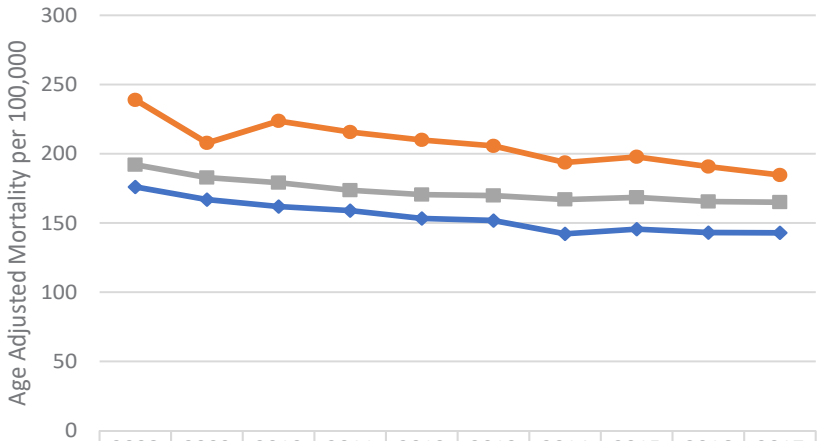
Risk Factors for Heart Disease:

- **High Blood Pressure**
- **High LDL Cholesterol**
- **Smoking**
- **Diabetes**
- **Overweight and Obesity**
- **Poor Diet**
- **Physical Inactivity**
- **Excessive Alcohol Use**

Source: (CDC, 2017)

The 2019 CDPH County Health Status Profiles ranked Stanislaus County 56th out of 58 counties for deaths due to coronary heart disease. (Only two counties had worse rates.)

Figure 13: Heart Disease Mortality, Stanislaus County, all of California, and United States, 2008-2017.



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Stanislaus	238.9	207.8	223.7	215.7	210	205.7	193.7	197.8	190.8	184.7
California	176.1	166.9	161.9	159	153.3	151.8	142.2	145.6	143.1	142.9
US	192.1	182.8	179.1	173.7	170.5	169.8	167	168.5	165.5	165

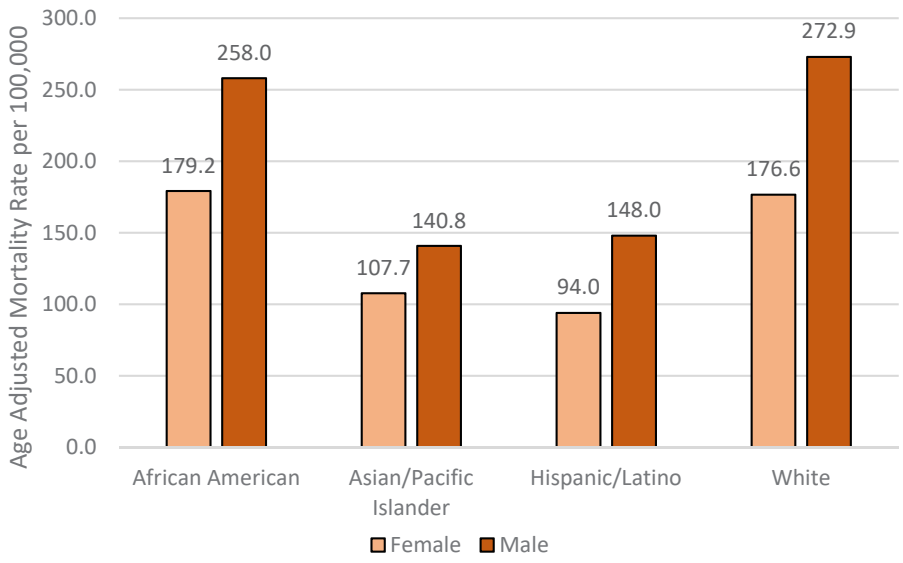
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER

HIGHLIGHTING DISPARITIES: Heart Disease Mortality

Heart disease mortality rates have some differences amongst racial and ethnic groups and sex. **Figure 14** demonstrates those difference for Stanislaus County residents from 2015-2017.

- For all racial and ethnic groups, males have higher rates of heart disease mortality than females.
- The highest heart disease mortality rate in Stanislaus County from 2015-2017 was for White men, at 272.9 heart disease deaths per 100,000.
- The lowest heart disease mortality rates in Stanislaus County from 2015-2017 were for Hispanic/Latina women, at 94.0 heart disease deaths per 100,000.
- For females, the highest heart disease mortality rate in Stanislaus County was seen in African Americans, but the highest heart disease mortality rate for males was among Whites.
- The lowest heart disease mortality rate for women was among Hispanics/Latinx, but for men the lowest heart disease rate was among Asian/Pacific Islanders.
- White men had almost double the rate of heart disease mortality compared to Asian/Pacific Islander men.
- African American women had almost double the heart disease mortality rate compared to Hispanic/Latino women.

Figure 14: Heart Disease Mortality by Racial and Ethnic Group and Sex, Stanislaus County, 2015-2017.



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

CANCER

Cancer is a potentially deadly type of disease "characterized by the uncontrolled growth and spread of abnormal cells" in the human body (American Cancer Society, 2017). Cancer is the second leading cause of death in Stanislaus County, accounting for one in five deaths from 2015-2017 (CDC, 2018).

Figure 15 shows the mortality rates for all cancers in Stanislaus County and California from 2006-2015.

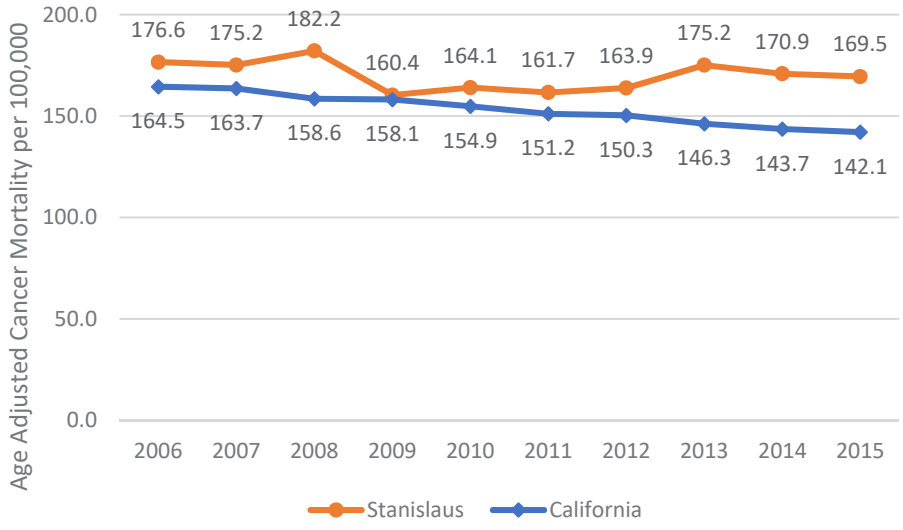
- From 2006-2015, Stanislaus County cancer rates were higher every year compared to California rates.
- California cancer mortality rates declined steadily from 2006-2015.
- From 2006-2015, Stanislaus County cancer mortality rates ranged from a high of 182.2 per 100,000 (2008) to a low of 160.4 per 100,000 (2009).

Risk Factors for Cancer:

- **Lifestyle Factors** (tobacco use, excess body weight, etc.)
- **Internal Factors** (genetic mutations, hormones, immune conditions, etc.)

Source: (American Cancer Society, 2017)

Figure 15: Cancer Mortality Rates, Stanislaus County and California, 2006-2015.

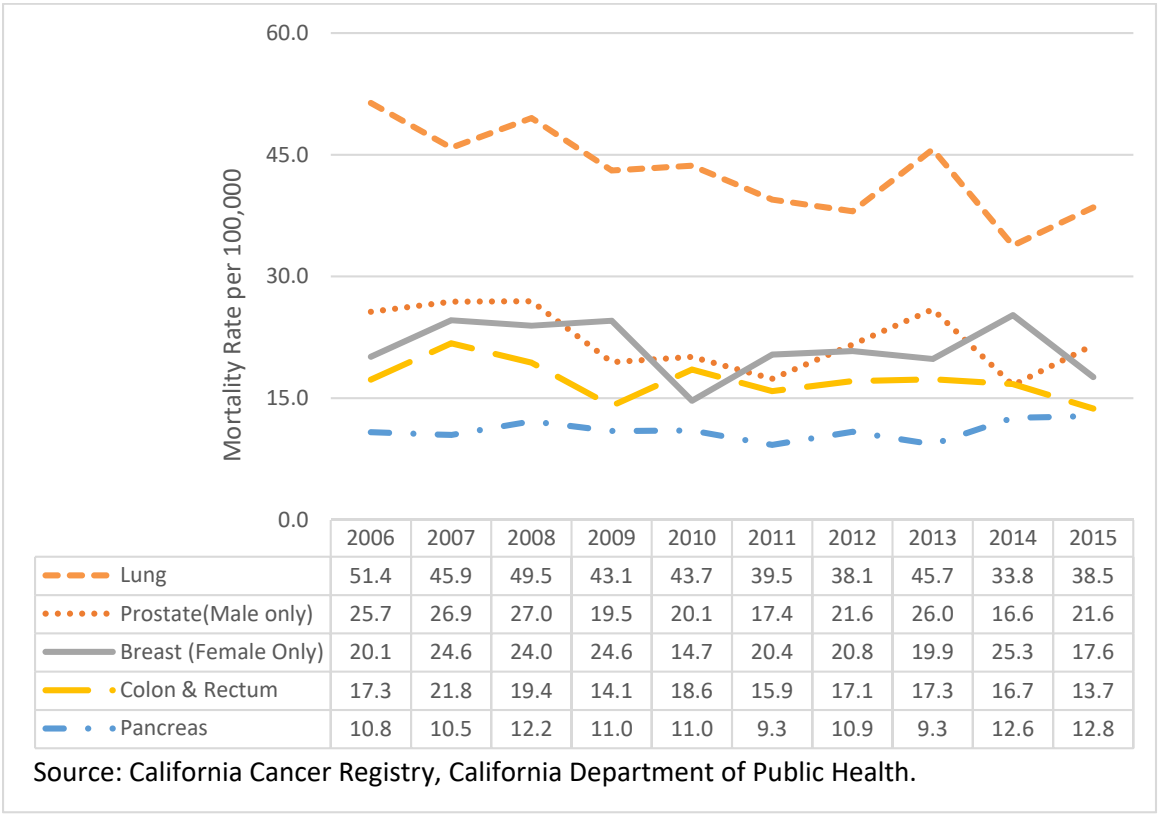


Source: California Cancer Registry, *Age-Adjusted Invasive Cancer Incidence Rates by County in California, 2011 - 2015*. Based on January 2018 data. Excludes cases reported by the Department of Veterans Affairs. Cancer-Rates.info. Accessed on Feb 4, 2019. California Cancer Registry. <http://cancer-rates.info/ca/>

Figure 16 demonstrates the cancer mortality rates for five top cancer types from 2006-2015 for people who live in Stanislaus County.

- Lung cancer has the highest cancer mortality rate.
- Pancreatic cancer has the lowest cancer mortality rate in **Figure 16.**
- Overall from 2006-2015, lung cancer mortality rate has decreased from 51.4 per 100,000 to 38.5 per 100,000.

Figure 16: Cancer Mortality Rate by Cancer Type, Stanislaus County, 2006-2015.



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lung	51.4	45.9	49.5	43.1	43.7	39.5	38.1	45.7	33.8	38.5
Prostate(Male only)	25.7	26.9	27.0	19.5	20.1	17.4	21.6	26.0	16.6	21.6
Breast (Female Only)	20.1	24.6	24.0	24.6	14.7	20.4	20.8	19.9	25.3	17.6
Colon & Rectum	17.3	21.8	19.4	14.1	18.6	15.9	17.1	17.3	16.7	13.7
Pancreas	10.8	10.5	12.2	11.0	11.0	9.3	10.9	9.3	12.6	12.8

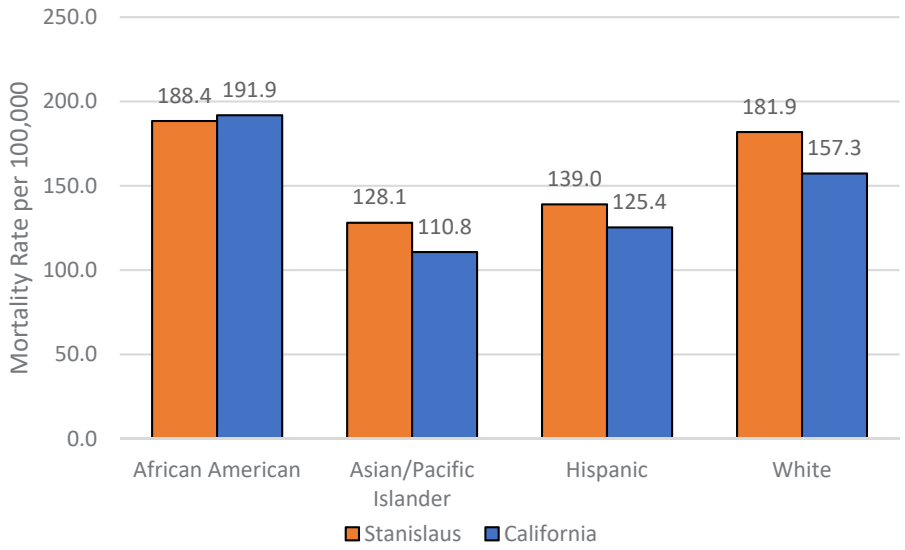
Source: California Cancer Registry, California Department of Public Health.

HIGHLIGHTING DISPARITIES: Cancer Mortality Rates

Figure 17 demonstrates the differences in cancer mortality rates by racial and ethnic groups for Stanislaus County and California from 2011-2015.

- For Stanislaus County and California, African Americans had the highest cancer mortality rate of all racial and ethnic groups.
- For Stanislaus County and California, Asian/Pacific Islanders had the lowest cancer mortality rate of all racial and ethnic groups.
- Except for African Americans, all racial and ethnic groups had higher cancer mortality rates in Stanislaus County compared to California.

Figure 17: Cancer Mortality Rate by Racial and Ethnic Group, Stanislaus County and California, 2011-2015.



Source: California Cancer Registry, *Age-Adjusted Invasive Cancer Incidence Rates by County in California, 2011 - 2015*. Based on Jan 2018 data. Excludes cases reported by the Department of Veterans Affairs. Cancer-Rates.info. Accessed on Feb 4, 2019. California Cancer Registry. <http://cancer-rates.info/ca/>

Alzheimer's Disease is the most common type of dementia, progressing from mild memory loss to potentially losing the ability to converse and respond to the environment (CDC, 2018). It most commonly presents after age 60, and the risk increases with age (CDC, 2018).

Figure 18 shows the Alzheimer's Disease mortality rates for Stanislaus County, all of California, and the United States from 2008-2017, as reported on death certificates.

Risk Factors for Alzheimer's Disease:

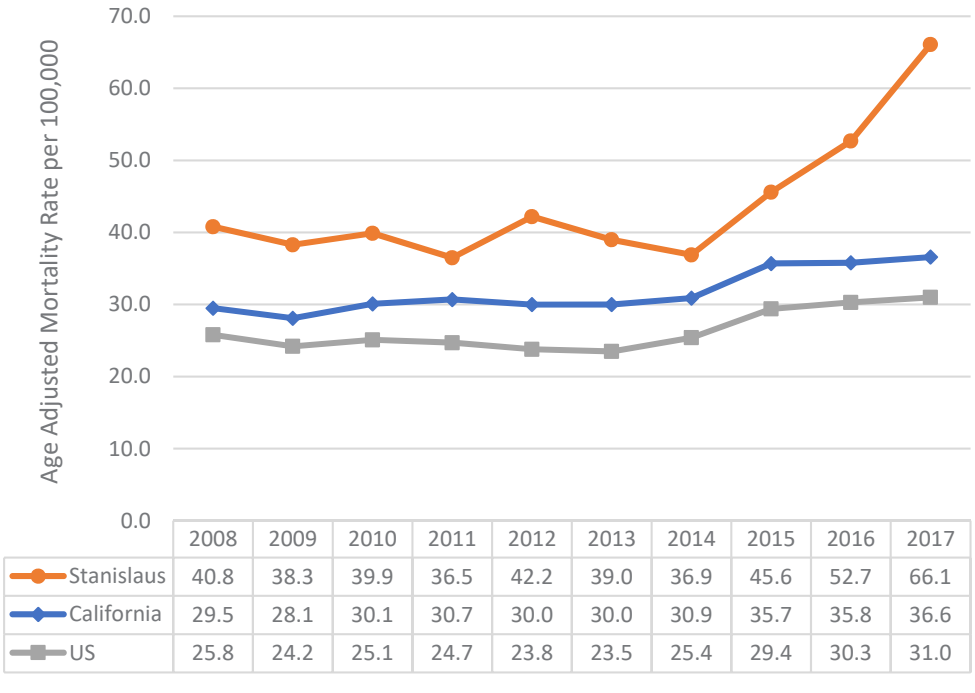
- **Age**
- **Family History**
- **Genetics**
- **Other Risk Factors**

(head injury, heart health etc.)

Source: (Alzheimer's Association, 2019)

- Stanislaus County Alzheimer's Disease mortality rates were higher than California or the United States from 2008-2017.
- California Alzheimer's Disease mortality rates were consistently higher than the United States rates from 2008-2017.
- Stanislaus County Alzheimer's Disease mortality rates were on a similar trend with California and the United States until 2014 but have increased sharply from 2014-2017.
- In 2017, Stanislaus County's Alzheimer's Disease mortality rate was 213% of the United States rate, and 181% of the California rate.

Figure 18: Alzheimer's Disease Mortality Rate, Stanislaus County, All of California, and United States, 2008-2017.



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Stanislaus	40.8	38.3	39.9	36.5	42.2	39.0	36.9	45.6	52.7	66.1
California	29.5	28.1	30.1	30.7	30.0	30.0	30.9	35.7	35.8	36.6
US	25.8	24.2	25.1	24.7	23.8	23.5	25.4	29.4	30.3	31.0

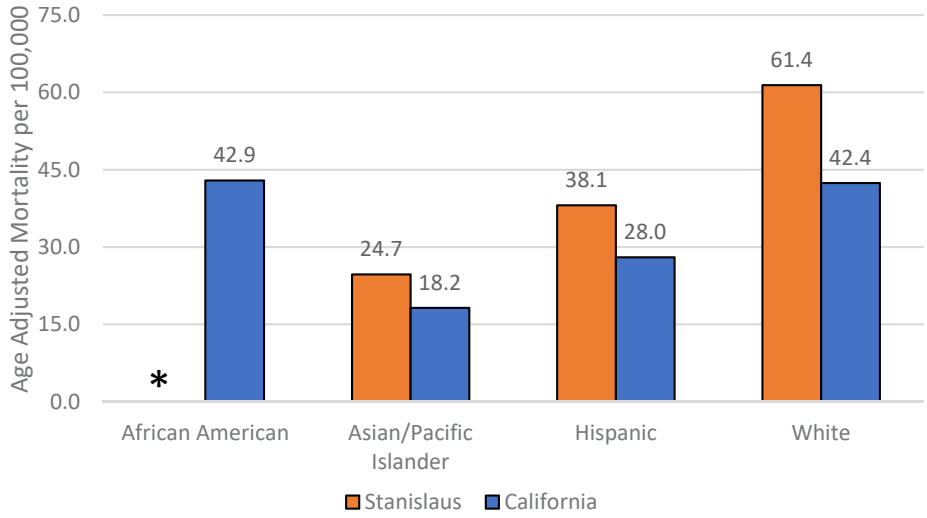
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

HIGHLIGHTING DISPARITIES: Alzheimer's Disease

There are differences seen in the Alzheimer's Disease mortality rates between racial and ethnic groups. **Figure 19** shows Alzheimer's Disease mortality rates for Stanislaus County and California from 2015-2017 by racial and ethnic group.

- In Stanislaus County and California, Asian/Pacific Islanders had the lowest mortality rate from Alzheimer's Disease.
- In Stanislaus County, the highest Alzheimer's Disease mortality rate was among Whites, with 2.5 times the rate of Asian/Pacific Islanders.
- In California, the highest Alzheimer's Disease mortality rate was among African Americans, with a rate 2.4 times that of Asian/Pacific Islanders.

Figure 19: Alzheimer's Disease Mortality Rate by Racial and Ethnic Group, Stanislaus County and California, 2005-2019



*Rate note calculated, based on less than 20 deaths.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

OBESITY

Obesity is a category of body mass index, measured by dividing a person's weight in kilograms by the square of their height in meters. The calculated body mass index falls within one of four categories (CDC, Defining Adult Overweight and Obesity, 2017):

- Less than 18.5: Underweight
- 18.5 to under 25: Normal
- 25 to under 30: Overweight
- 30 or more: Obese

From 2012 to 2017, adult obesity rates in Stanislaus County rose from 27.5% to 39.8%: a 45% increase.

Source: California Health Interview Survey

Obesity is associated with several diseases and health conditions including (CDC, Adult Obesity Causes and Consequences, 2017):

- All-causes of death (mortality)
- High blood pressure (Hypertension)
- High LDL cholesterol, low HDL cholesterol, or high levels of triglycerides (Dyslipidemia)
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis (a breakdown of cartilage and bone within a joint)
- Sleep apnea and breathing problems
- Some cancers (endometrial, breast, colon, kidney, gallbladder, and liver)
- Low quality of life
- Mental illness such as clinical depression, anxiety, and other mental disorders
- Body pain and difficulty with physical functioning

Risk Factors for Obesity:

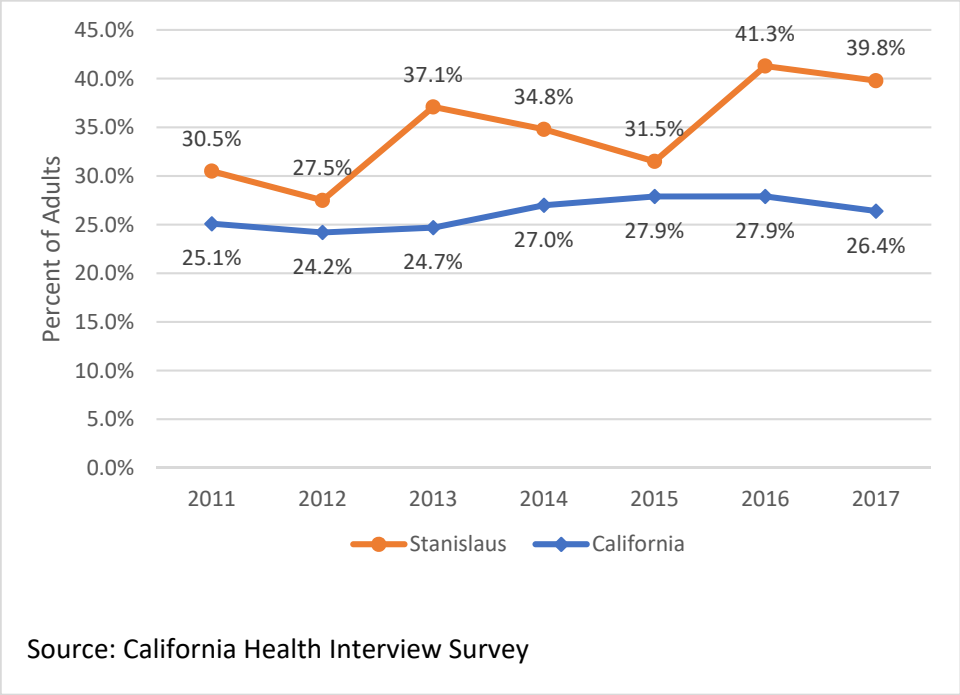
- **Genetics**
- **Family Lifestyle**
- **Inactivity**
- **Unhealthy Diet**
- **Medical Problems**
- **Certain Medications**
- **Social and Economic Issues**
- **Age**
- **Pregnancy**
- **Quitting Smoking**
- **Lack of Sleep**

Source: (Mayo Clinic, 2015)

Figure 20 below demonstrates the percent of adults who are obese in Stanislaus County and California from 2011-2017.

- Stanislaus County adults had higher rates of obesity than California adults from 2011-2017.
- Stanislaus County obesity rates were 30% higher in 2017 than they were in 2011.

Figure 20: Adults who are Obese, Stanislaus County and California, 2011-2017.



Source: California Health Interview Survey

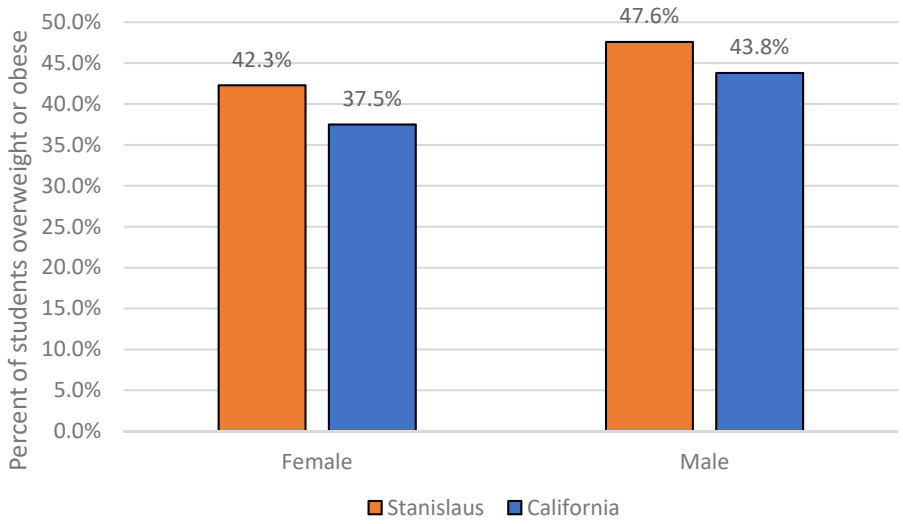
Children who are obese are more likely to have (CDC, 2016):

- "High blood pressure and high cholesterol, which are risk factors for cardiovascular disease (CVD).
- Increased risk of impaired glucose tolerance, insulin resistance, and type 2 diabetes.
- Breathing problems, such as asthma and sleep apnea.
- Joint problems and musculoskeletal discomfort.
- Fatty liver disease, gallstones, and gastro-esophageal reflux (i.e., heartburn).

Figure 21 displays the percent of 5th graders who were overweight or obese by sex for Stanislaus County and California for the 2016-2017 school year.

- For Stanislaus County and California, more male 5th graders were overweight or obese than female 5th graders.
- For females and males, higher percentages of Stanislaus County 5th graders were overweight or obese compared to California 5th graders.

Figure 21: Fifth Grade Students Overweight or Obese by Sex, Stanislaus County and California, 2016-2017.



Source: California Department of Education, Physical Fitness Testing Research Files, as cited on KidsData.org

For more information on Chronic Disease, go to:

- National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention: https://www.cdc.gov/chronicdisease/index.htm
- Chronic Disease Control Branch, California Department of Public Health: https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CDCB/Pages/ChronicDiseaseControlBranch.aspx
- Nutrition, Physical Activity, and Obesity, Healthy People 2020: https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Nutrition-Physical-Activity-and-Obesity

INFECTIOUS DISEASE

Infectious diseases are diseases caused by bacteria, viruses, fungi, or parasites. Some infectious diseases can be passed from person to person, such as sexually transmitted diseases--chlamydia, gonorrhea, syphilis, and HIV. Some infectious diseases are contracted from the environment like valley fever and some can be prevented through vaccinations like measles and mumps. Infectious diseases can have immediate or long-lasting effects on the lives and health of the people affected, and their control and prevention are vital pieces of public health service. California requires providers and labs to report certain diseases to the local health department and the state for monitoring purposes, including chlamydia, gonorrhea, syphilis, HIV, and many others.

CHLAMYDIA

"Chlamydia is the most frequently reported bacterial sexually transmitted infection in the United States" (CDC, 2016). It can lead to serious health problems including pelvic inflammatory disease, infertility, and potentially fatal ectopic, or tubal, pregnancy (CDC, 2016). People with chlamydia are easily treated with antibiotics but are susceptible to reinfection (CDC, 2016).

Figure 22 shows the rate of people diagnosed with chlamydia from 2013-2017 for Stanislaus County and California.

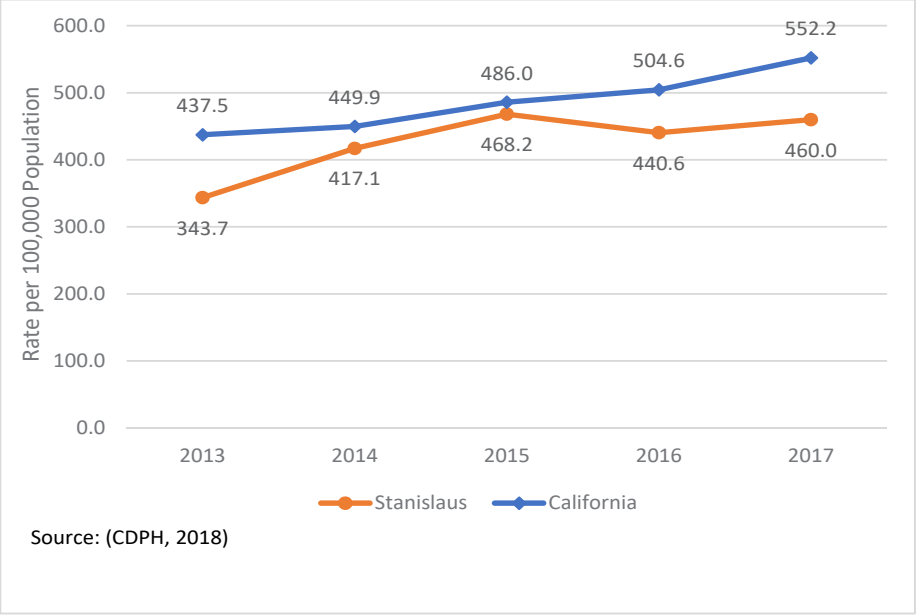
- California's chlamydia incidence rate has increased every year from 2013-2017.
- California rates of chlamydia diagnosis were higher than Stanislaus County rates every year from 2013-2017.
- Stanislaus County rates of chlamydia diagnosis climbed sharply from 2013-2015, but the rates have not changed very much from 2015-2017.

Risk Factors for Chlamydia:

- **Unprotected Vaginal, Anal or Oral Sex**
- **Sex with New or Multiple Sex Partners**
- **Men who have Sex with Men**
- **Having HIV**
- **Being Sexually Active and Under 25 Years Old**
- **Having a Sexual Partner who is Infected with Chlamydia**

Source: (HHS, 2019)

Figure 22: Chlamydia Incidence Rate, Stanislaus County and California, 2015-2017.



Source: (CDPH, 2018)

HIGHLIGHTING DISPARITIES: Chlamydia

There are several disparities seen among chlamydia rates.

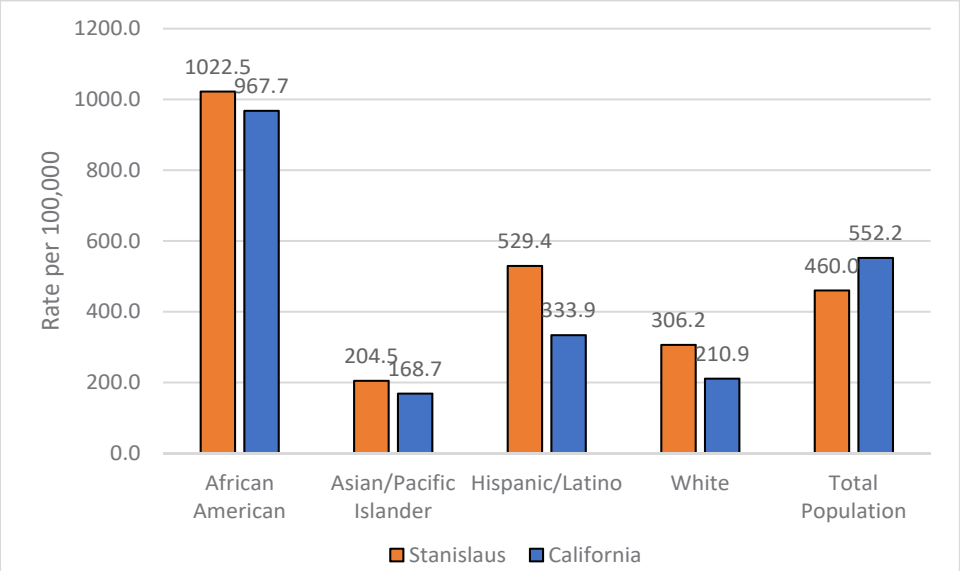
Two of the disparities are likely closely related to standards of practice.

- The U.S. Preventative Services Task Force recommends screening sexually active women age 24 years and younger, and older women who are at increased risk of infection for chlamydia and gonorrhea (USPSTF, 2014).
- The five-year age group with the highest rate is age 20 to 24 (CDPH, 2018).
- Men only account for 28% of chlamydia diagnoses from 2013 to 2017 (CDPH, 2018).

Chlamydia rates also vary by racial and ethnic group. **Figure 23** shows the chlamydia incidence rates by racial and ethnic group for Stanislaus County and California in 2017.

- Stanislaus County rates of chlamydia are higher than California rates for all racial and ethnic groups in the graph, despite the total Stanislaus County rate being lower than the California total. This is because 10% of Stanislaus County Chlamydia cases are categorized as "Other/ Multi/Not Specified" for race and so no rate it calculated, and 47% of California cases fall in that category.
- Native American/Alaska Natives had less than 20 cases in 2017 in Stanislaus County, so rates were not calculated.
- Asian/Pacific Islanders had the lowest rates of chlamydia among all racial and ethnic groups for Stanislaus County and California.
- African Americans had the highest rates of chlamydia in Stanislaus County and California, five times that of Asians/Pacific Islanders in 2017.

Figure 23: Chlamydia Incidence Rates by Racial and Ethnic Group, Stanislaus County and California, 2017.



Source: California Department of Public Health, Data Request from the Sexually Transmitted Diseases Branch, 2018

GONORRHEA

Gonorrhea is the second most commonly reported notifiable disease in the United States (CDC, 2018). Gonorrhea can cause serious and permanent health problems in men and women, including infertility and pelvic inflammatory disease (CDC, 2018). Like chlamydia, gonorrhea can be treated with medication, but once cured, patients are susceptible to reinfection (CDC, 2018).

Figure 24 below highlights the incidence rate for gonorrhea in Stanislaus County and California from 2013-2017.

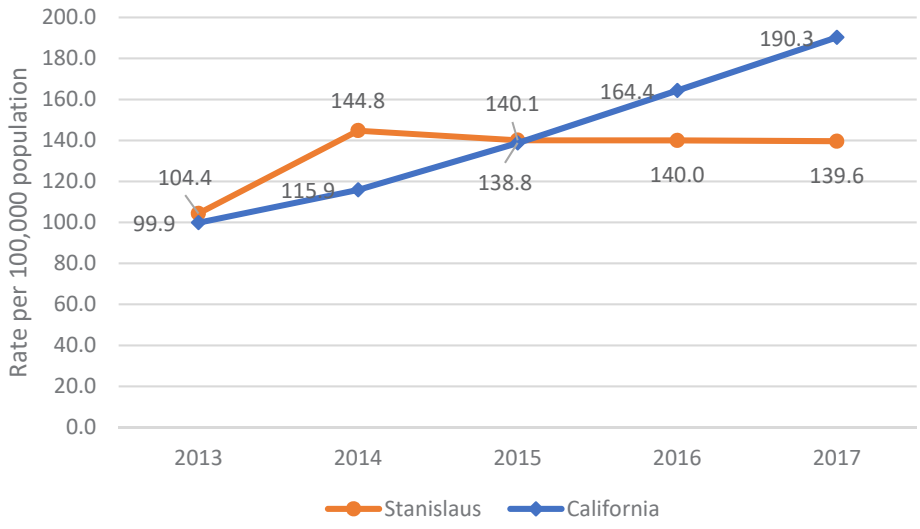
- Gonorrhea incidence rate in California has been increasing by at least 15 cases per 100,000 every year from 2013-2017.
- The gonorrhea incidence rate in Stanislaus County peaked in 2014 and has remained fairly stable from 2014-2017.
- Stanislaus County gonorrhea rates were higher than California rates from 2013-2015 but have been below California rates in 2016 and 2017 as California rates continue to climb.

Risk Factors for Gonorrhea:

- **Unprotected Vaginal, Anal or Oral Sex**
- **Sex with New or Multiple Sex Partners**
- **Men who have Sex with Men**
- **Having HIV**
- **Being Sexually Active and Under 25 Years Old**
- **Having a Sexual Partner who is Infected with Gonorrhea**

Source: (HHS, 2019)

Figure 24: Gonorrhea Incidence Rates, Stanislaus County and California, 2013-2017.



Source: California Department of Public Health, Data Request from the Sexually Transmitted Diseases Branch, 2018

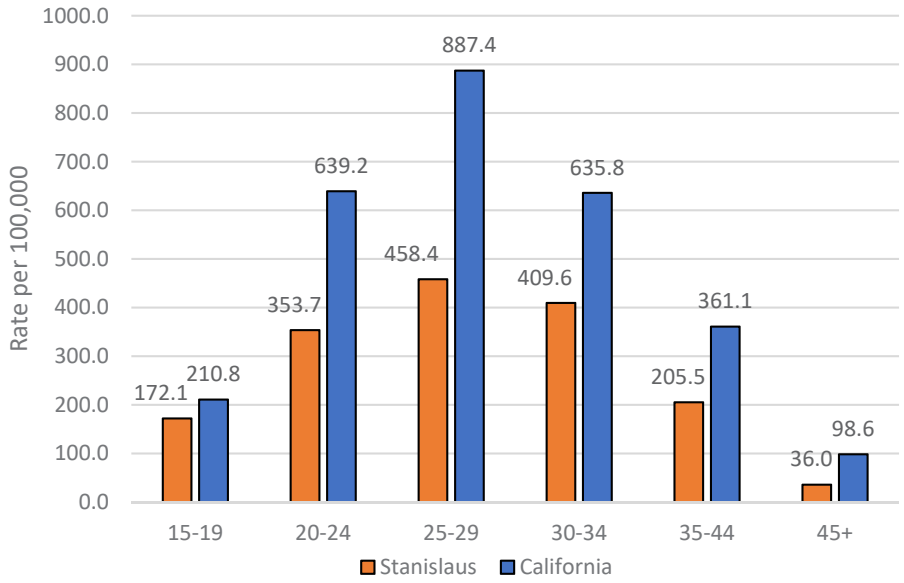
HIGHLIGHTING DISPARITIES: Gonorrhea

There are disparities seen among gonorrhea incidence rates in Stanislaus County, by age, sex, and racial and ethnic group.

Figure 25 looks at gonorrhea incidence by age group for Stanislaus County and California in 2017.

- California gonorrhea rates are higher than Stanislaus County rates for every age group.
- Despite the same screening recommendations for gonorrhea as for chlamydia (sexually active women 24 and younger, and older women who are at increased risk), gonorrhea rates are higher in the 25 to 29 age group for both Stanislaus County and California (USPSTF, 2014).

Figure 25: Gonorrhea Incidence Rates by Age Group, Stanislaus County and California, 2017.



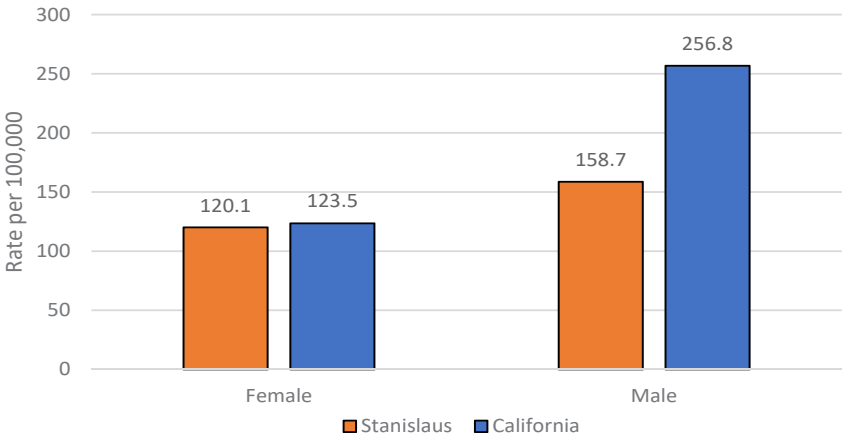
*Rates for ages 0-14 suppressed due to less than 20 cases
Source: California Department of Public Health, Data Request from the Sexually Transmitted Diseases Branch, 2018

(Con't pg 42)

Gonorrhea rates also show differences by sex (**Figure 26**).

- Men had higher rates of gonorrhea diagnosis than women in Stanislaus and California.
- Gonorrhea incidence rates were higher in Stanislaus County compared to California for both sexes.
- Gonorrhea incidence rates for males in Stanislaus County in 2017 were 60% higher than California rates for males in 2017.

Figure 26: Gonorrhea Incidence Rates by Sex, Stanislaus County, 2017.

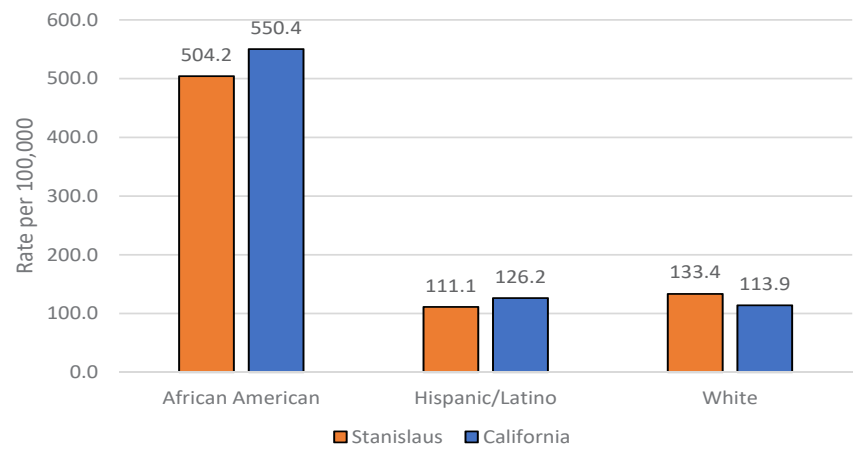


Source: Data Request from the California Department of Public Health Sexually Transmitted DIseases Branch

Figure 27 below displays gonorrhea incidence rate by racial and ethnic group for Stanislaus County and California in 2017.

- African Americans had the highest rate of gonorrhea in Stanislaus County and California, with rates over four times that of Hispanics/Latinx.
- In Stanislaus County, gonorrhea rates were higher among Whites compared to Hispanics, but in California gonorrhea rates were higher among Hispanics/Latinx compared to Whites.

Figure 27: Gonorrhea Incidence Rate by Racial and Ethnic Group, Stanislaus County and California, 2017.



*Rates for other racial/ethnic groups supressed due to less than 20 cases in Stanislaus County County.
Source: (CDPH, 2018)

SYPHILIS

Syphilis is a bacterial sexually transmitted disease that can be serious and fatal but can be cured with antibiotics (CDC, 2017). Syphilis is often classified by stage:

- Primary: sore(s) at the infection site
- Secondary: rashes and/or lesions and possibly additional symptoms
- Latent: infection without visible signs or symptoms
- Tertiary: serious and possibly fatal effects on organ systems
- Congenital: syphilis infection in a baby passed from the mother during pregnancy (CDC, 2017)

Figure 28 below shows the incidence rates for primary and secondary syphilis for Stanislaus County and California from 2013-2017.

Risk Factors for Syphilis:

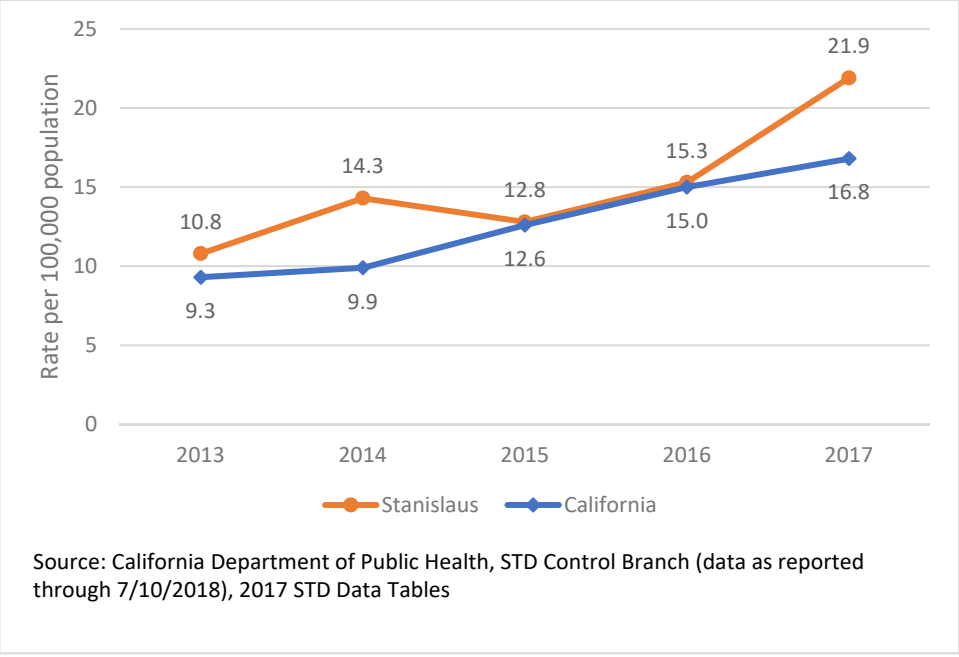
- **Unprotected Vaginal, Anal or Oral Sex**
- **Sex with Multiple Partners**
- **Men who have Sex with Men**
- **Having HIV**
- **Having a Sexual Partner who has Tested Positive for Syphilis**

Source: (HHS, 2019)

- From 2013-2017, Stanislaus County incidence rates of primary and secondary syphilis have been higher than California rates.
- With the exception of 2015 in Stanislaus County, primary and secondary syphilis rates have been increasing from 2013-2017.
- In 2017, the Stanislaus County primary and secondary syphilis incidence rate was 30 percent higher than the California rate.

From 2013-2017, almost three out of four cases of primary and secondary syphilis in Stanislaus County were in men.

Figure 28: Syphilis (Primary and Secondary) Incidence Rates, Stanislaus County and California, 2013-2017.

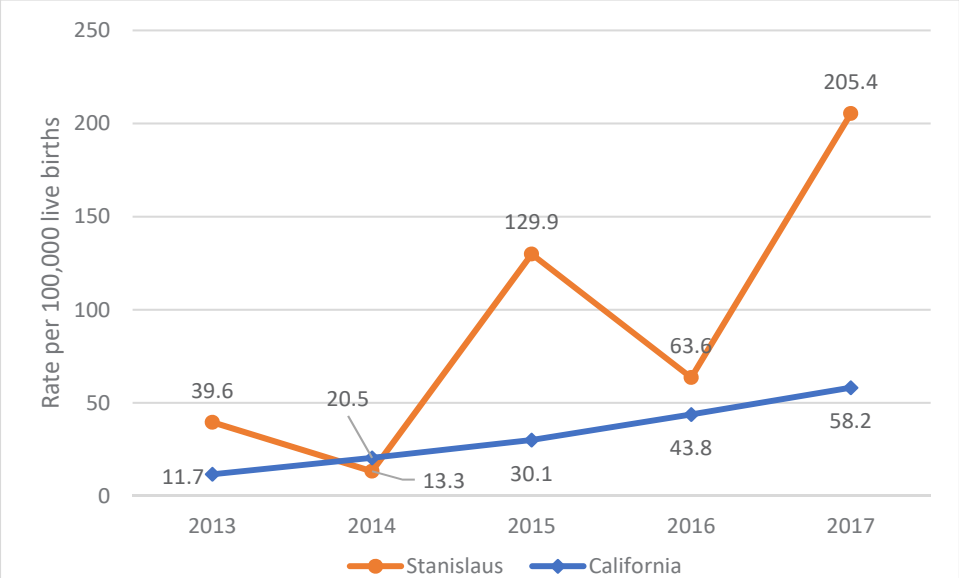


Source: California Department of Public Health, STD Control Branch (data as reported through 7/10/2018), 2017 STD Data Tables

Figure 29 below shows the incidence rates for congenital syphilis for Stanislaus County and California from 2013-2017.

- Stanislaus County congenital syphilis incidence rates are unstable because they are based on small numbers of cases and should be interpreted with caution.
- The overall trend for congenital syphilis rates for Stanislaus County and California has been increasing from 2013-2017.
- Stanislaus County rates of congenital syphilis were higher than the California average from 2015-2017.

Figure 29: Congenital Syphilis Rates, Stanislaus County and California, 2013-2017.



Source: California Department of Public Health, STD Control Branch (data as reported through 7/10/2018), 2017 STD Data Tables
*Note: Stanislaus County County congenital syphilis rates are based on less than 20 cases each and should be interpreted with caution.

HIV

Human Immunodeficiency Virus, or HIV, is a virus that is spread in the United States primarily through sex or sharing syringes and other injection equipment with someone who is infected with HIV (CDC, 2018). HIV attacks the body's immune system, reducing their ability to fight off infections (CDC, 2019). While HIV has no cure at this time, current antiretroviral treatments can control HIV, lowering viral load and allowing for long and healthy lives for those affected (CDC, 2019).

HIV infection rates are calculated for incidence (how many new people are being diagnosed with HIV) and prevalence (how many people are living with HIV).

Risk Factors for HIV:

- **Unprotected Vaginal, Anal, or Oral Sex**
- **Sex with Multiple Partners**
- **Men who have Sex with Men**
- **Using Injection Drugs and Sharing Needles, Syringes, or other equipment with Someone who is Infected with HIV**

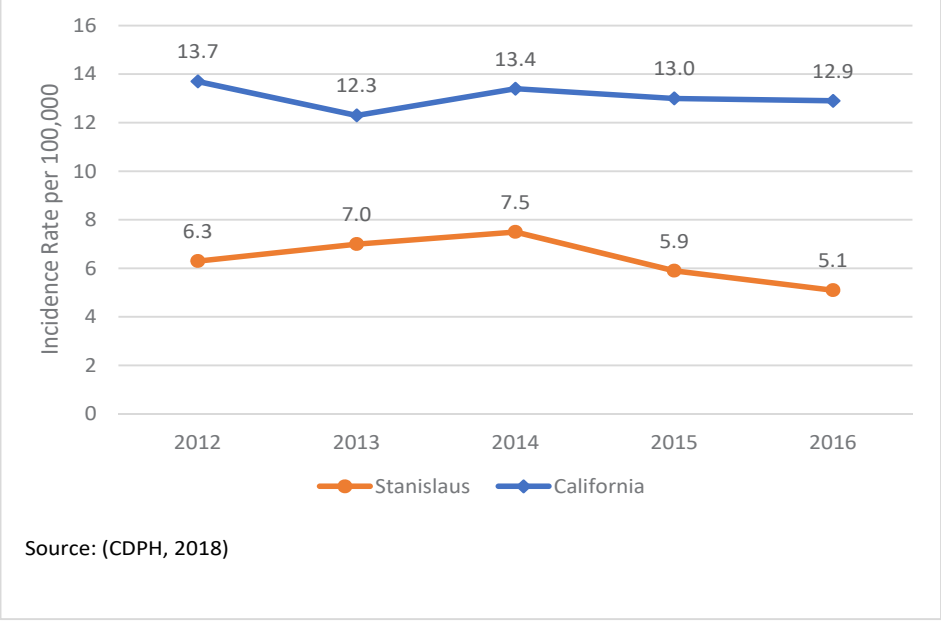
Source: (HHS, 2019)

Figure 30 shows the HIV incidence rate in Stanislaus County and California from 2012-2016.

In 2016, there were 707 people living with HIV in Stanislaus County. (CDPH, 2018)

- California has had a higher rate of new HIV diagnoses than Stanislaus County every year from 2012-2016.
- California HIV incidence rates have fluctuated from 13.7 per 100,000 to 12.3 per 100,000 from 2012-2016.
- Stanislaus County HIV incidence rates peaked in 2014 at 7.5 per 100,000 and have declined since to the rate of 5.1 per 100,000 in 2016.
- In 2016, the HIV incidence rate in California was over two and a half times the incidence rate in Stanislaus County.

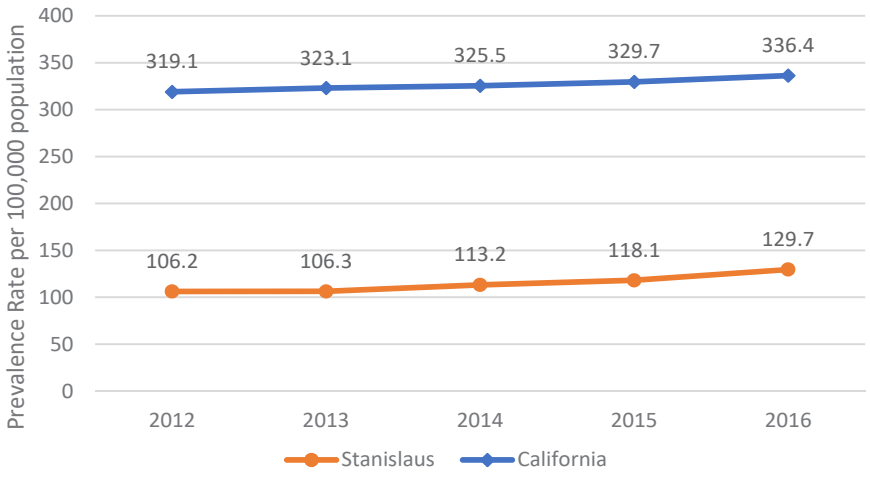
Figure 30: HIV Incidence Rates, Stanislaus County and California, 2012-2016.



Source: (CDPH, 2018)

Figure 31 below shows the HIV prevalence rates in Stanislaus County and California from 2012-2016.

Figure 31: HIV Prevalence Rates, Stanislaus County and California, 2012-2016.



Source: California HIV Surveillance Report, California Department of Public Health Office of AIDS, Revised July 12, 2018

- California has had over two and a half times the rate of people living with HIV compared to Stanislaus County from 2012-2016.
- The HIV prevalence rates for Stanislaus County and California have slowly been rising from 2012-2016.

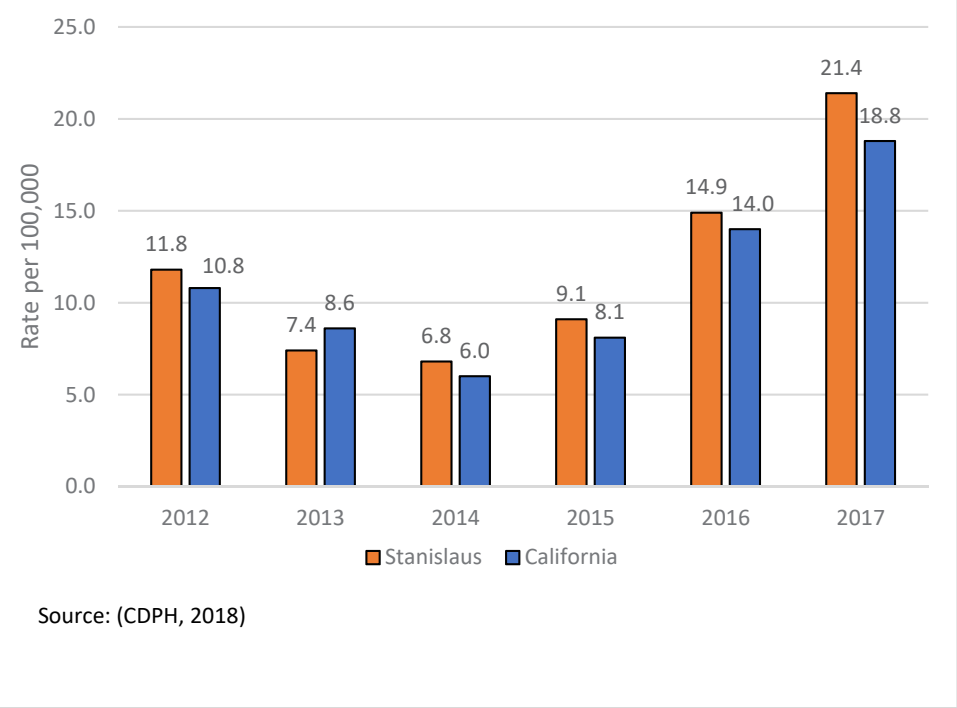
Valley Fever, also known as coccidioidomycosis, is a fungal infection in the lungs. The fungus grows in the dirt and can cause flu-like infection when it is inhaled. Valley Fever is endemic to the southwestern United States (including California's central valley), and parts of Mexico and Central and South America (CDC, 2019).

Figure 32 below examines the rate of Valley Fever for Stanislaus and California by year from 2012-2017.

- Stanislaus County rates of Valley Fever were higher than California averages for every year from 2012-2017, except 2013.
- Rates of Valley Fever varied significantly from 2012-2017. The Valley Fever rate for Stanislaus County in 2017 was over three times the rate in 2014.

October is the month with the largest number of Valley Fever diagnoses in Stanislaus County, with almost twice as many as March.

Figure 32: Valley Fever Rates, Stanislaus County and California, 2012-2016.



Source: (CDPH, 2018)

KINDERGARTEN IMMUNIZATION RATES

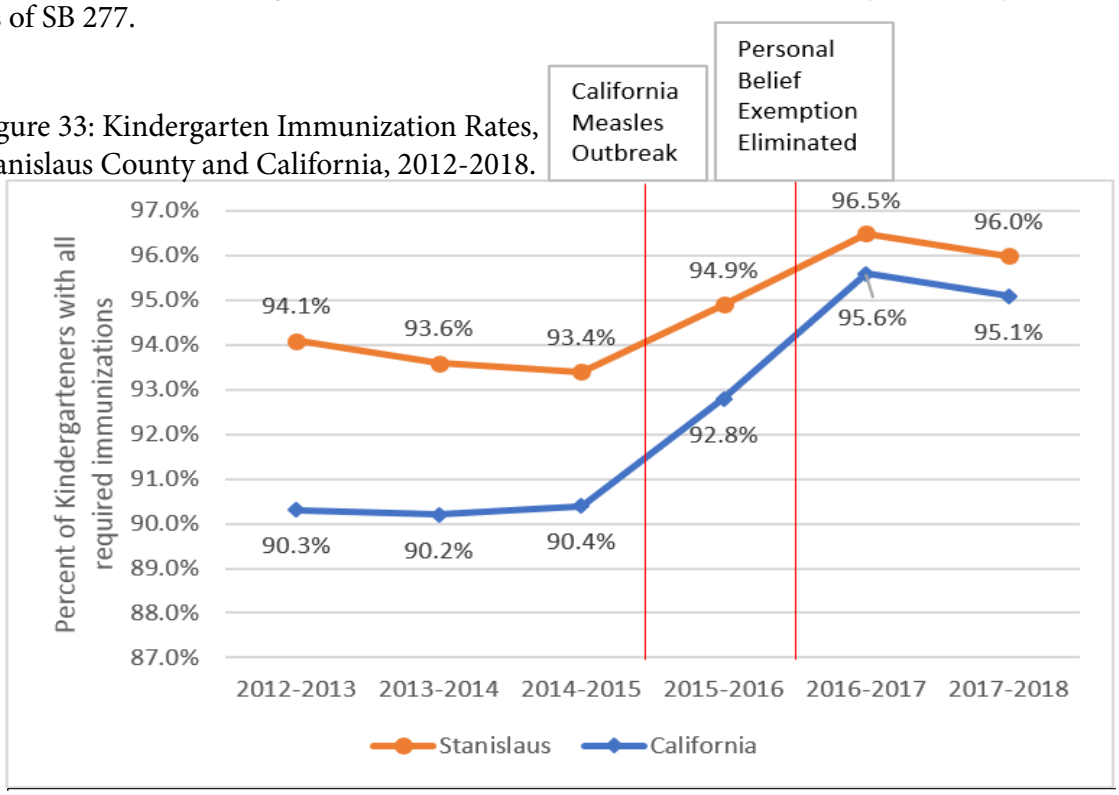
Vaccinations are a powerful tool used to prevent outbreaks of certain diseases within communities, as well as provide individual protection against infection.

There are several vaccinations required of kindergarteners prior to enrolling in schools with classroom based instruction, with some exceptions. Prior to July of 2016, exemptions were offered on medical grounds or because of personal beliefs (California Legislative Information, 2015). From December 2014 through February 2015, there was a widely publicized measles outbreak in California, leading to measles diagnosis for 110 California residents, and another 15 United States residents outside of California (Zipprich J., 2015). On the heels of that outbreak came California Senate Bill 277, removing the option of personal belief exemption from vaccination requirements, beginning July 2016 (California Legislative Information, 2015).

Figure 33 looks at the percent of kindergarteners with all required immunizations for Stanislaus County and California from 2012-2018, highlighting important events in the timeline.

- From 2012-2018, Stanislaus County kindergarten vaccination rates were higher than for California.
- The 2015-2016 school year (immediately following the outbreak), entering kindergarteners had higher rates of immunization in both Stanislaus County and California.
- Immunization rates were highest for the 2016-2017 and 2017-2018 school years, likely related to the effects of SB 277.

Figure 33: Kindergarten Immunization Rates, Stanislaus County and California, 2012-2018.



Source: As cited from kidsdata.org, (California Department of Public Health Immunizations Branch , 2016)

For more information on Infectious Diseases, go to:

- Infectious Diseases, World Health Organization: https://www.who.int/topics/infectious_diseases/en/
- Sexually Transmitted Diseases, CDC: https://www.cdc.gov/std/
- Division of Communicable Disease Control, CDPH: https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/DCDC.aspx

ASTHMA/AIR QUALITY

Asthma is a chronic lung condition that can swell the airways, making it hard to breathe. Asthma attacks can be triggered by many things including pollutants and substances in the air, exercise, and certain infections (CDPH, 2019). The air pollutants that are most likely to trigger asthma symptoms are ozone and particle pollutants (EPA).

ASTHMA

Figure 34 below looks at the rate of emergency department visits for asthma for Stanislaus County and California from 2007-2016.

- From 2008-2016, Stanislaus County had higher rates of emergency department visits for asthma compared to California.
- From 2007-2016, California rates of emergency department visits for asthma varied between 43.7 and 50.4 per 10,000 residents.
- The rate of emergency department visits for asthma in Stanislaus County rose from 2007-2014, and then declined in 2015 and 2016.

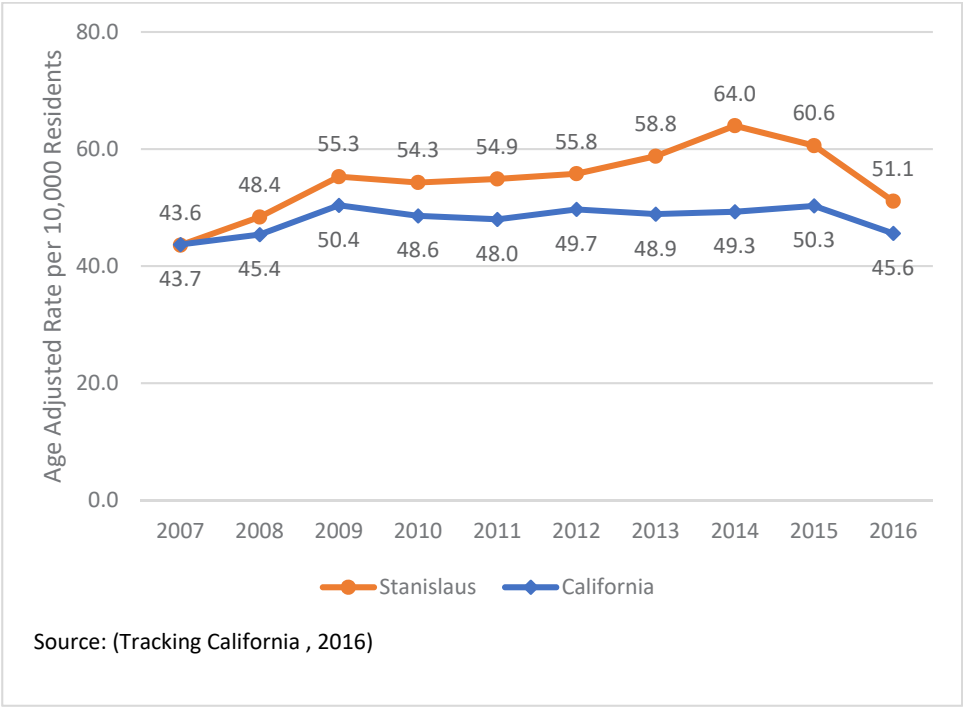
Contributing Factors for Asthma:

- **Family History**
- **Viral Respiratory Infections**
- **Allergies**
- **Occupational Exposures**
- **Smoking**
- **Air Pollution**
- **Obesity**

Source: (American Lung Association, 2019)

On 11/18/18, Stanislaus County Air Quality was categorized as "Very Unhealthy," the worst it had been in at least 5 years, due to the smoke from the Camp Fire

Figure 34: Rate of Emergency Department Visits for Asthma, Stanislaus County and California, 2017-2016.

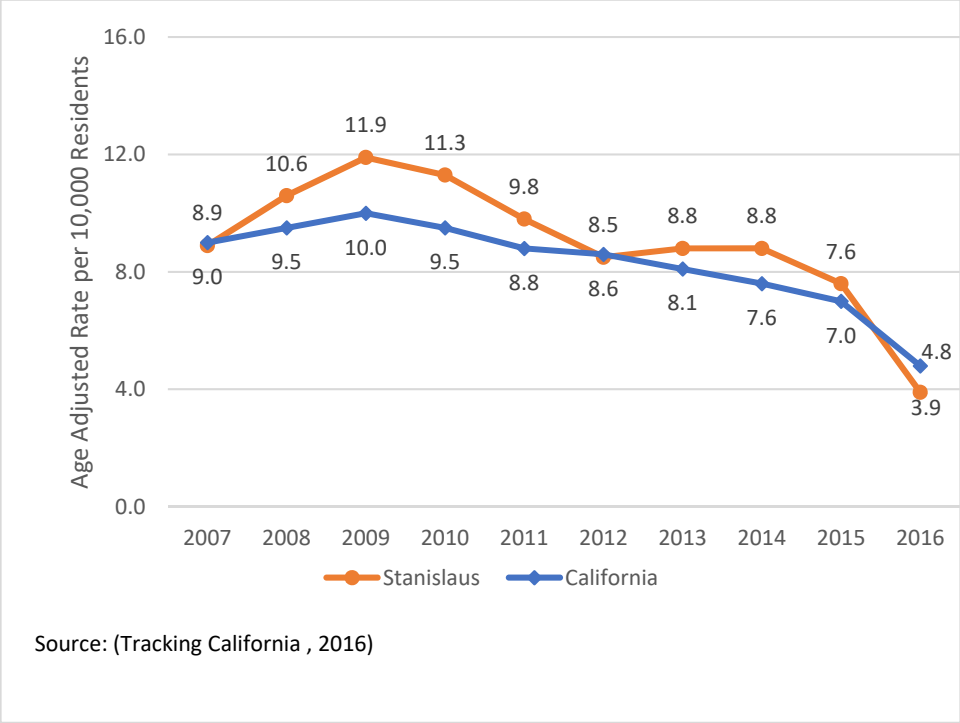


Source: (Tracking California , 2016)

The rate of hospitalizations for asthma for Stanislaus County and California from 2007-2016 is shown in **Figure 35**.

- In California, the rate of hospitalizations for asthma has decreased by half from 2009-2016.
- In Stanislaus County, the rate of hospitalization for asthma decreased from 2009-2012, and again from 2014-2016.
- From the peak of 11.9 per 10,000 residents in 2009 to the lowest in 2016, the asthma hospitalization rate in Stanislaus County has decreased by 67%.

Figure 35: Rate of Asthma Hospitalizations, Stanislaus County and California, 2007-2016.



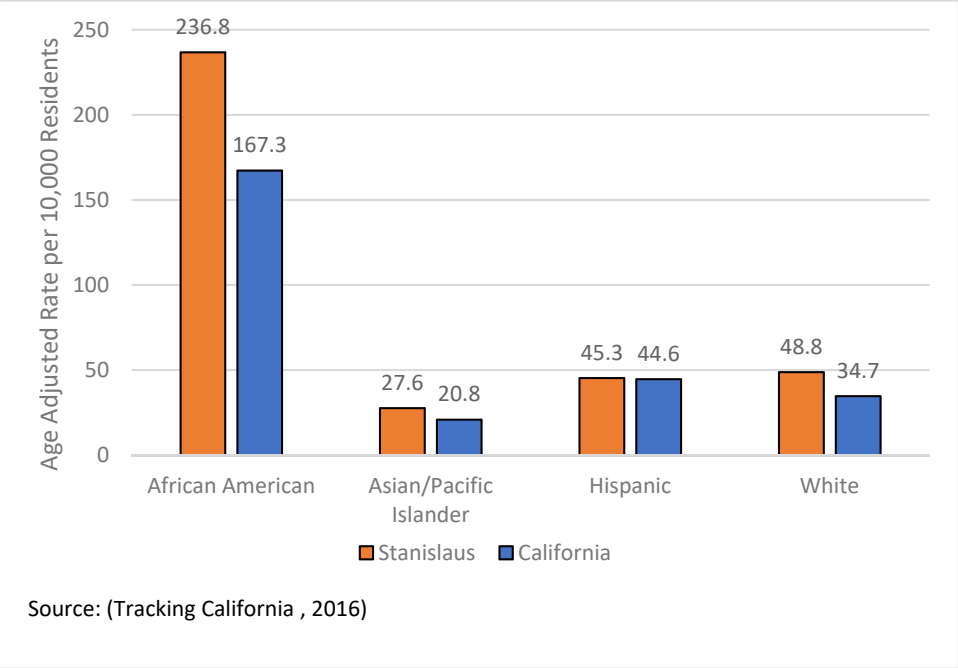
Source: (Tracking California , 2016)

HIGHLIGHTING DISPARITIES: Asthma Emergency Department Visits

There is a distinct difference in the rate of emergency department visits for asthma between people of varying races and ethnicities. **Figure 36** shows the rate of emergency department visits by racial and ethnic group for Stanislaus County and California.

- For Stanislaus County and California, the rate of African Americans visiting the Emergency Department for asthma is over 4.8 times as high as the rate for Whites.
- For Stanislaus County and California, the rate of visiting the emergency department for asthma is the lowest among Asians.
- Stanislaus County rates of emergency department visits were higher for every racial and ethnic group compared to California rates.

Figure 36: Emergency Department Visits by Racial and Ethnic Group, Stanislaus County and California, 2016.



Source: (Tracking California , 2016)

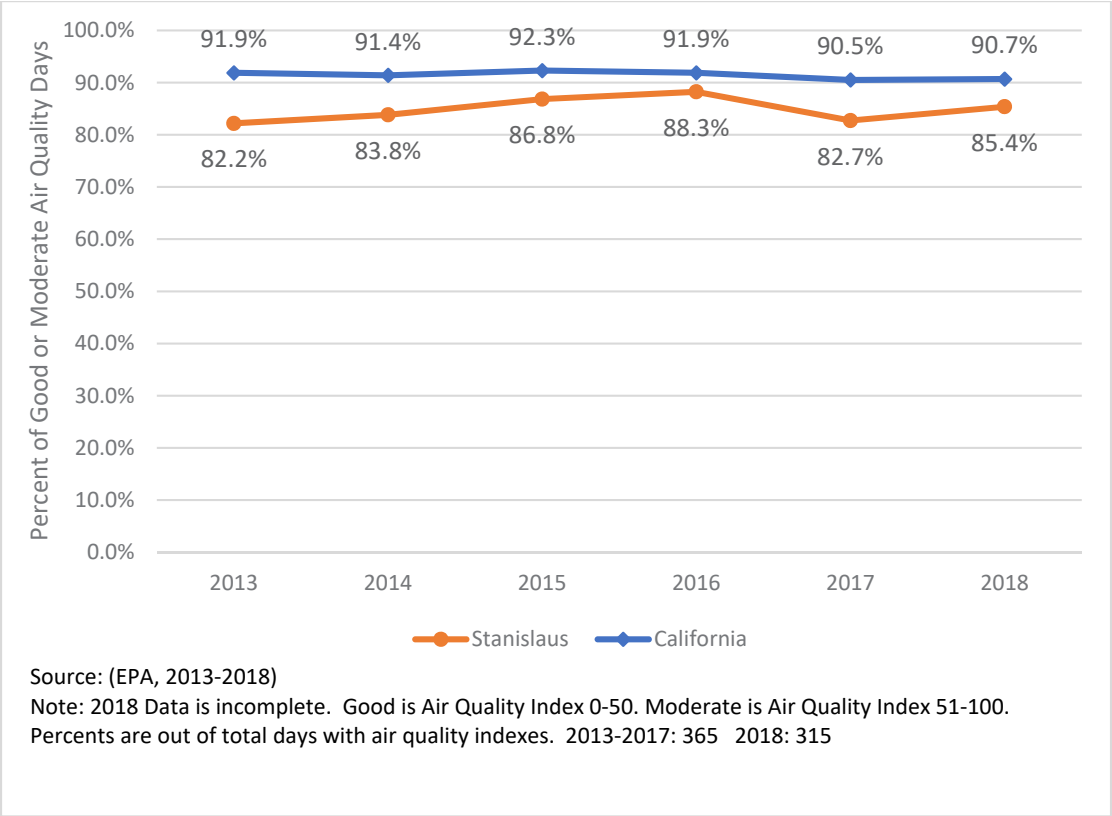
BRIEF FACTS ON AIR QUALITY:

- California had 2,816 wildfires reported, with 244,556 acres burned in 2016.
- 7,951,325 pounds of pesticides were applied in Stanislaus County in 2016.
- Among all California counties, Stanislaus County ranks 8th highest in agricultural pesticide use.

The Air Quality Index (AQI) reviews the daily index value for each air pollutant measured (CO, NO2, O3, SO2, PM 2.5, and PM 10), and takes the highest index value as the Air Quality Index for the day (EPA, 2019). Stanislaus County does not measure CO or SO2 in the air (EPA, 2013-2018). The percent of days with outdoor air categorized as good (AQI 0-50) or moderate (AQI 51-100) is seen in **Figure 37**, for Stanislaus County and California.

- California consistently has more days with good or moderate air quality compared to Stanislaus County.
- From 2013-2018, over 90% of all days had an average air quality of good or moderate in California.
- From 2013-2018, Stanislaus County had between 82.2% and 88.3% of all days with good or moderate air quality.

Figure 37: Good or Moderate Outdoor Air Quality, Stanislaus County and California 2013-2018.

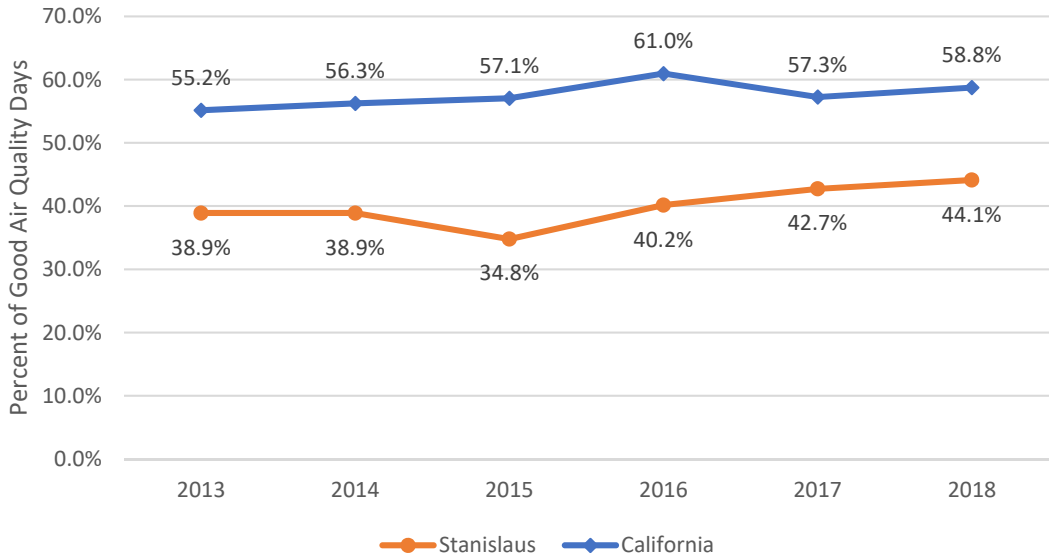


Source: (EPA, 2013-2018)
Note: 2018 Data is incomplete. Good is Air Quality Index 0-50. Moderate is Air Quality Index 51-100.
Percents are out of total days with air quality indexes. 2013-2017: 365 2018: 315

Figure 38 below shows the percent of good air quality days in Stanislaus County and California from 2013-2018.

- California overall has a higher percentage of good outdoor air quality days compared to Stanislaus County.
- From 2013-2018 the percent of days with good outdoor air quality in California overall has ranged from 55.2% to 61.0%.
- From 2013-2018 the percent of days with good outdoor air quality in Stanislaus County has ranged from 34.8% to 44.1%.

Figure 38: Good Air Quality, Stanislaus County and California, 2013-2018.

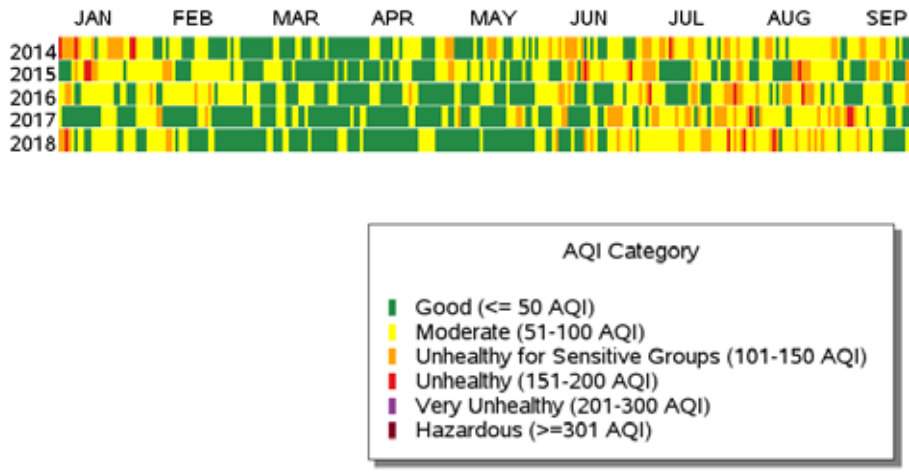


Source: (EPA, 2013-2018)
Note: 2018 Data is incomplete. Good is Air Quality Index 0-50.
Percents are out of total days with air quality indexes. 2013-2017: 365 2018: 315

Figure 39 below shows a daily representation of air quality categories for Stanislaus County from 2014-2018.

- The majority of good air quality days are consistently found in March and April in Stanislaus County.
- The worst air quality days were in November 2018, when Stanislaus County air quality was directly affected by the 153,336-acre Camp Fire in Butte County (Cal Fire, 2019).
- From 2014-2018, there was only one day categorized as Very Unhealthy (11/16/2018), and an average of seven days per year in the Unhealthy category.

Figure 39: Visualization of Daily Outdoor Air Quality Values, Stanislaus County, 2014-2018.



Source: (EPA, 2019)

U.S. Environmental Protection Agency, Outdoor Air Quality Data, generated 5/29/19.

For more information on Asthma and Air Quality, go to:

- Outdoor Air Quality Data, U.S. Environmental Protection Agency: https://www.epa.gov/outdoor-air-quality-data
- Asthma, American Lung Association: https://www.lung.org/lung-health-and-diseases/lung-disease-lookup/asthma/
- Respiratory Diseases, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases

ACCESS TO CARE

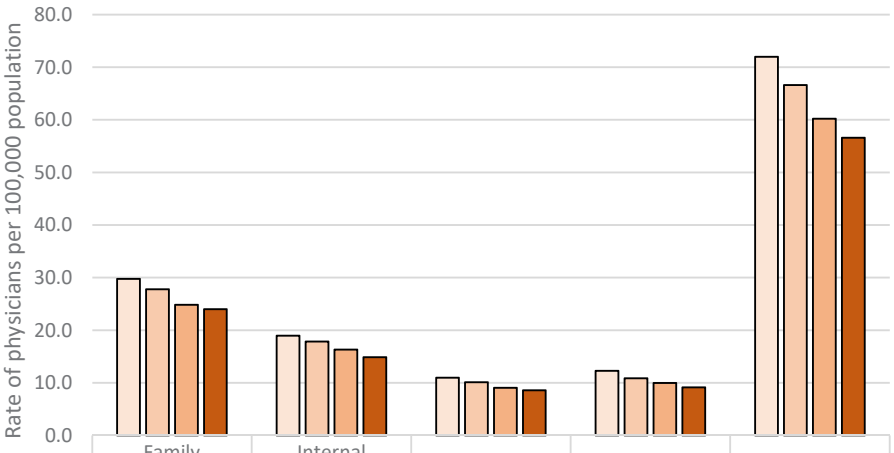
Healthy People 2020 states: "Access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans" (Healthy People 2020, 2019). Access to care involves physician and health services availability, cost of care, location, and other factors that impact the ability to get appropriate health care in a timely manner.

"I can build all the buildings I want. Have all the clinics I want. But if I don't have providers to see the patients, then I have an access issue."- Key Informant

RATE OF PRIMARY CARE PHYSICIANS TO TOTAL POPULATION

There is a growing shortage of physicians in the United States, primarily due to increase in need (growing and aging population) and decrease in supply (retirement of older physicians) (Association of American Medical Colleges News, 2019). Stanislaus County is seeing similar trends in decreasing physician to population statistics. **Figure 40** illustrates the number of primary care physicians per 100,000 population by type in Stanislaus County annually from 2015 to 2018.

- For every type of primary care physician, the number of physicians per population has decreased every year from 2015-2018 in Stanislaus County.
- From 2015-2018, the total number of primary care physicians of all types has decreased 21%.
- The biggest decrease in primary care physicians from 2015-2018 in Stanislaus County was among pediatricians where the decrease was 26%.



	Family Medicine	Internal Medicine	OB/GYN	Pediatrics	Total
2015	29.8	19.0	11.0	12.3	72.0
2016	27.8	17.8	10.1	10.9	66.6
2017	24.8	16.3	9.1	10.0	60.2
2018	24.0	14.9	8.6	9.1	56.6

Figure 40: Primary Care Physicians per Population, by Type, Stanislaus County, 2015-2018.

Source: Stanislaus County Health Services Agency analysis of data from Stanislaus Medical Society

RATE OF DENTISTS TO POPULATION

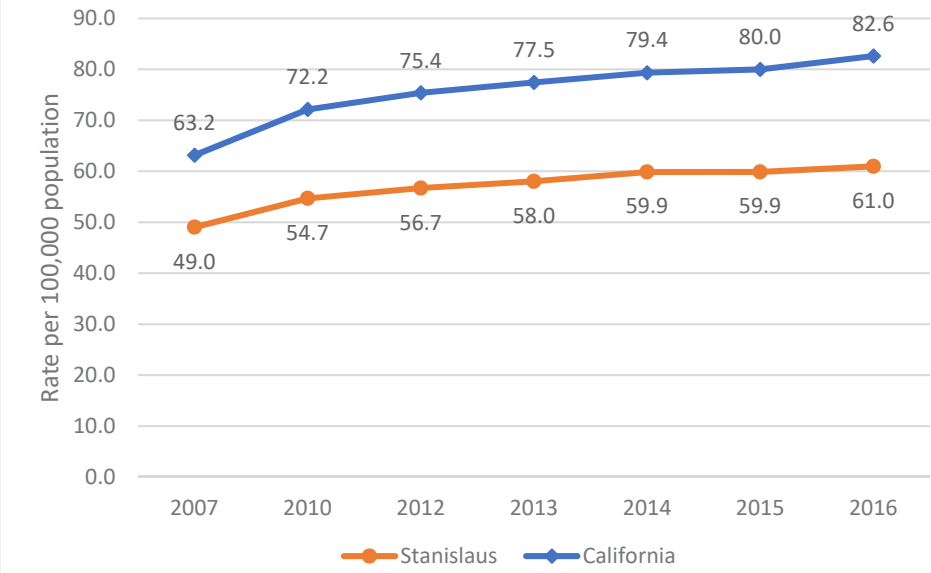
Oral health affects overall health. According to the Mayo Clinic, oral health can be linked with: (Mayo Clinic, 2019)

- Endocarditis
- Cardiovascular disease
- Pregnancy and birth complications
- Pneumonia

Just as physician shortages leads to difficulty getting medical care, dental shortages create difficulties getting oral care. **Figure 41** illustrates the number of dentists per 100,000 population in Stanislaus County and California from 2007-2016.

- The number of dentists per 100,000 population has risen from 2007-2016 for both Stanislaus and California.
- Stanislaus has a much lower number of dentists per population than California.
- For every four dentists per population in California in 2016, Stanislaus had only three.

Figure 41: Number of Dentists per Population, Stanislaus County and California, 2007-2016.



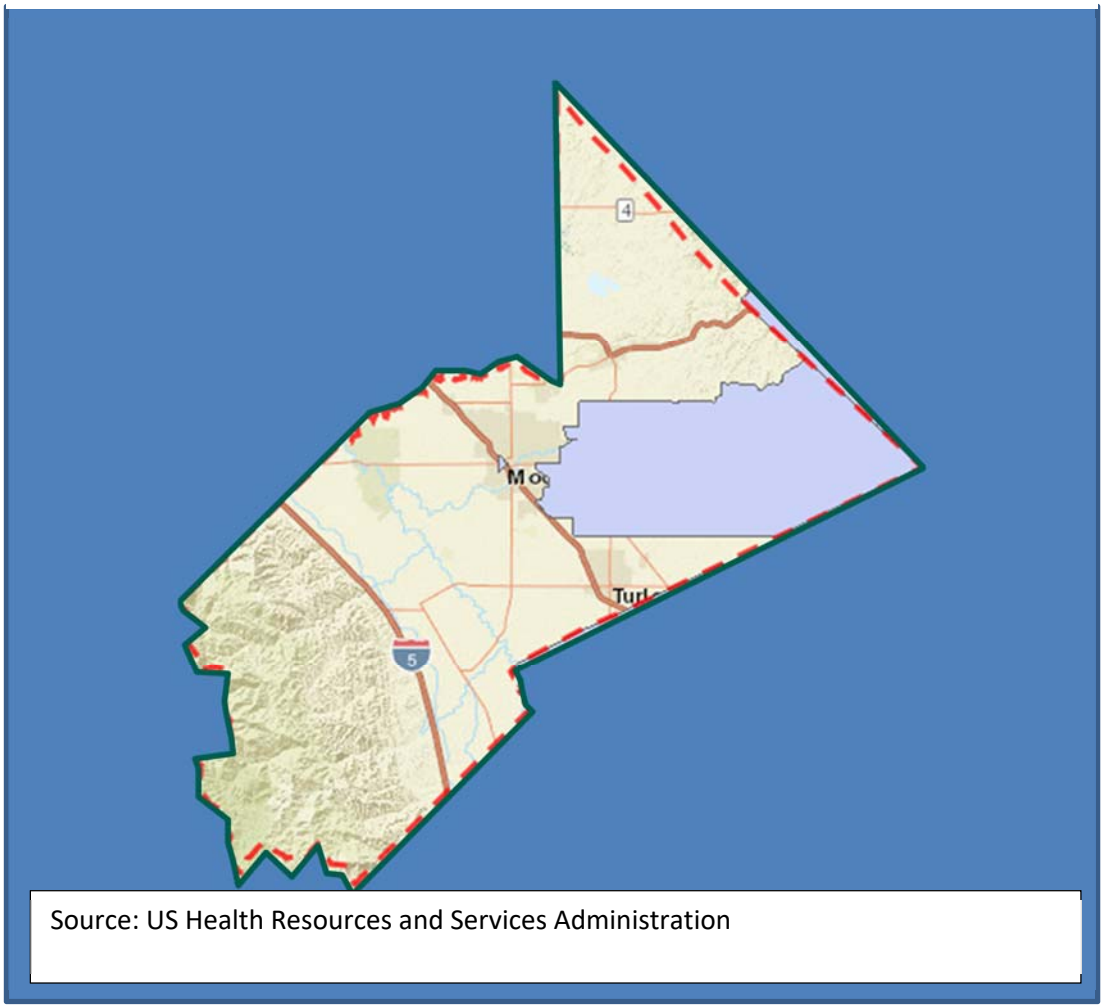
Source: Area Health Resource File/National Provider Identification File, as cited on County Health Rankings.

MEDICALLY UNDERSERVED AREAS

"Medically Underserved Areas/Populations are areas or populations designated by HRSA as having too few primary care providers, high infant mortality, high poverty or a high elderly population" (US HRSA). Areas and populations are evaluated by a medical underservice index score with 0 indicating the highest need, and 100 as the lowest need. A medical underservice index of 62.0 or less qualifies an area or population to be a "medically underserved" classification (US HRSA).

The US Health Resources and Services Administration have designated Stanislaus County as a Medically Underserved Area (medical underservice index 61.1), and the Hughson region as a Medically Underserved Population due to low income (medical underservice index 61.2) (see designated area in **Figure 42**).

Figure 42: Map of Hughson Medically Underserved Population Area, Stanislaus County, 2019.



Source: US Health Resources and Services Administration

HEALTH INSURANCE

High cost of health care is a major barrier to accessing care, and health insurance helps to decrease that burden. Healthy People 2020 states that uninsured people are:

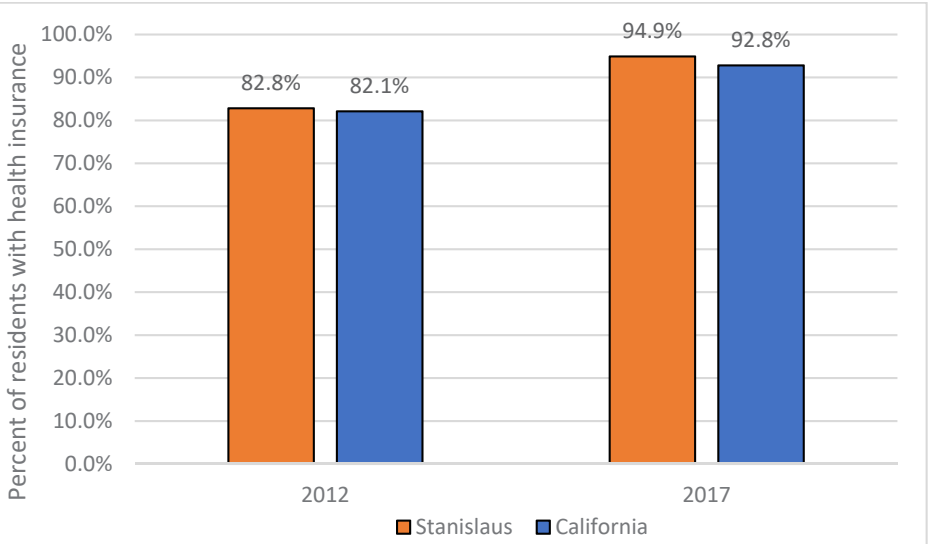
- More likely to have poor health status
- Less likely to receive medical care
- More likely to be diagnosed later
- More likely to die prematurely (HP 2020, 2019)

In 2014, the Affordable Care Act came into effect, requiring health insurance for all Americans and expanding eligibility for public health insurance through programs like Medi-Cal.

Figure 43 below illustrates the increase in residents with health insurance for Stanislaus County and California from 2012-2017.

- Both in 2012 and 2017, Stanislaus County had a higher percentage of residents with health insurance than California.
- Stanislaus County and California saw an increase of at least 10 percentage points in residents with health insurance from 2012-2017.

Figure 43: Residents with Health Insurance, Stanislaus County and California, 2012 and 2017.

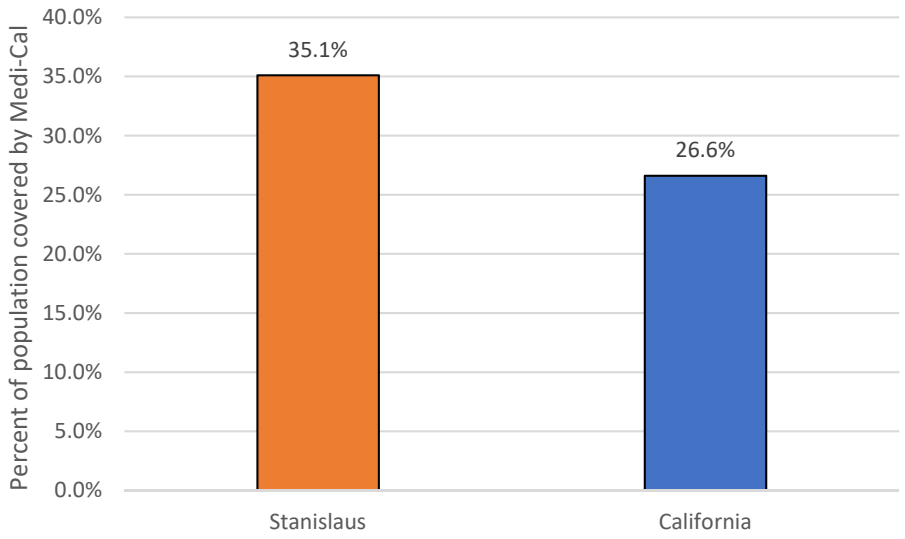


Source: American Community Survey, US Census, One year estimates, Table S2701
Percents out of civilian non-institutionalized populations: Stanislaus 2012:518,230 California 2012: 37,524,274 Stanislaus 2017:544,767 California 2017: 39,046,835

Medi-Cal is the California health insurance program that offers free or low cost health insurance for children and adults with limited income and resources, including: "low-income adults, families with children, seniors, persons with disabilities, pregnant women, children in foster care and former foster youth up to age 26" (Covered California, 2019). **Figure 44** illustrates the percent of residents with Medi-Cal health insurance coverage.

- Stanislaus County has a much higher percent of residents covered by Medi-Cal than California overall.

Figure 44: Residents with Medi-Cal, Stanislaus County and California, 2017.



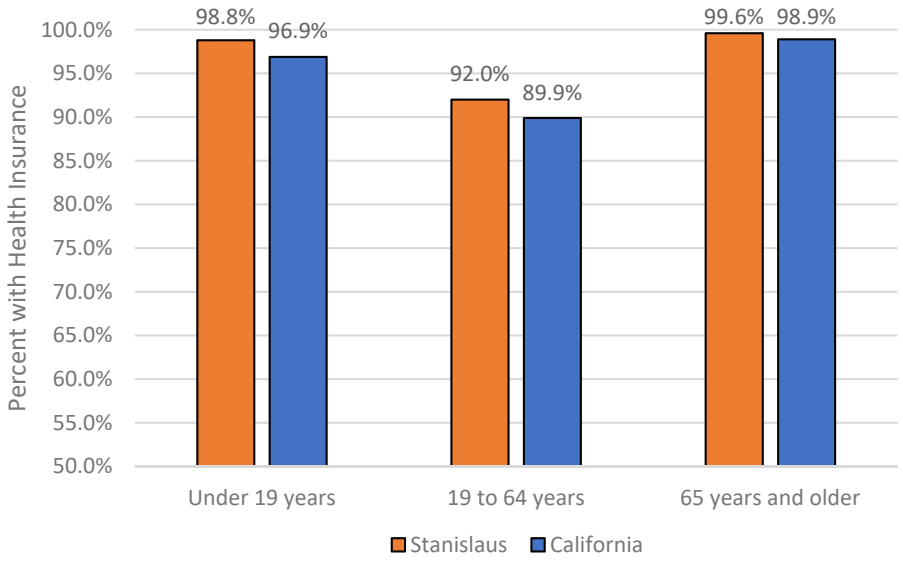
Source: American Community Survey, US Census, One year estimate, table S2704
Percents out of Civilian Non-institutionalized Population 2017: Stanislaus: 544,767 California: 39,046,835

HIGHLIGHTING DISPARITIES: Health Insurance

The increases in health insurance coverage from 2012 to 2017 affected many Californians, but coverage differs by age. **Figure 45** illustrates age differences in percent of residents with health insurance for Stanislaus and California in 2017.

- The residents with the lowest percent of health insurance coverage in Stanislaus County and California were age 19 to 64.
- The residents with the highest percent of health insurance coverage in Stanislaus County and California were age 65 and over.
- Stanislaus County has higher percentages of residents with health insurance than California for every age category.

Figure 45: Percent of Residents with Health Insurance, by Age Group, Stanislaus County and California, 2017.

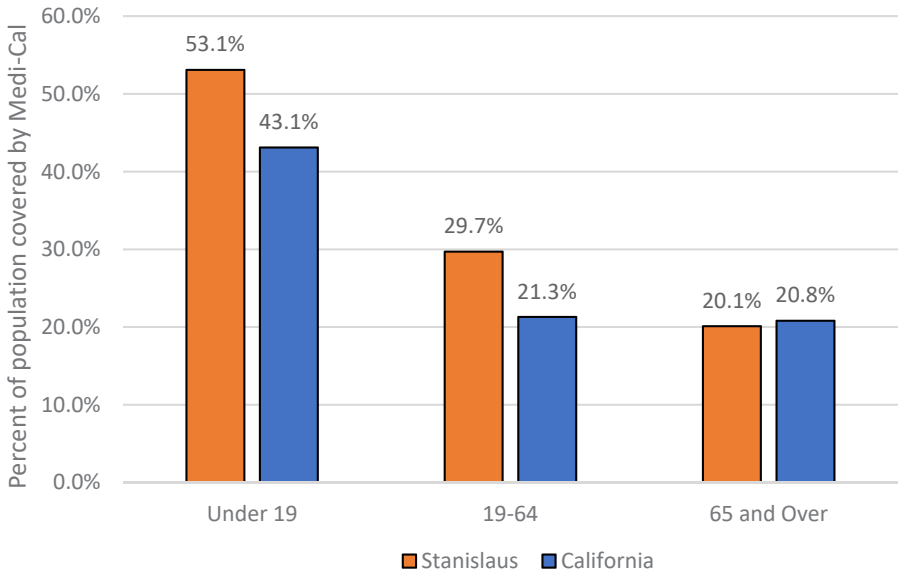


Source: American Community Survey, US Census, One year estimate, table S2701
Percents out of Civilian Non-institutionalized Population:
Under 19 years: Stanislaus: 155,212 California: 9,567,473
19 to 64 years: Stanislaus: 320,102 California: 24,069,284
65 years and older: Stanislaus: 69,453 California: 5,410,078

Figure 46 shows the differences in the percent of residents with Medi-Cal health insurance coverage by age group for Stanislaus County and California in 2017.

- Over half of Stanislaus County children (ages 0-18) have Medi-Cal health insurance coverage.
- Stanislaus County has higher percentages of residents with Medi-Cal for both age groups under 65, compared to California.
- Children under 19 have the highest rates of Medi-Cal coverage for Stanislaus and California.

Figure 46: Percent of Residents with Medi-Cal, by Age Group, Stanislaus and California, 2017.



Source: American Community Survey, US Census, One year estimate, table S2704
Percents out of Civilian Non-institutionalized Population:
Under 19 years: Stanislaus: 155,212 California: 9,567,473
19 to 64 years: Stanislaus: 320,102 California: 24,069,284
65 years and older: Stanislaus: 69,453 California: 5,410,078

For more information on Access to Care, go to:

- Medi-Cal, Covered California: https://www.coveredca.com/medi-cal/
- Access to Health Services, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services

MENTAL HEALTH

Mental health is a very important topic, but can carry stigma that can prevent some people from getting the help they need.

Risks to Mental Health:

- **Early Adverse Life Experiences** (trauma or history of abuse)
- **Experiences Related to Chronic Medical Conditions** (cancer or diabetes)
- **Biological Factors** (genes or chemical imbalances in the brain)
- **Use of Alcohol or Recreational Drugs**
- **Having Few Friends**
- **Having Feelings of Loneliness or Isolation**

Source: (CDC, 2018)

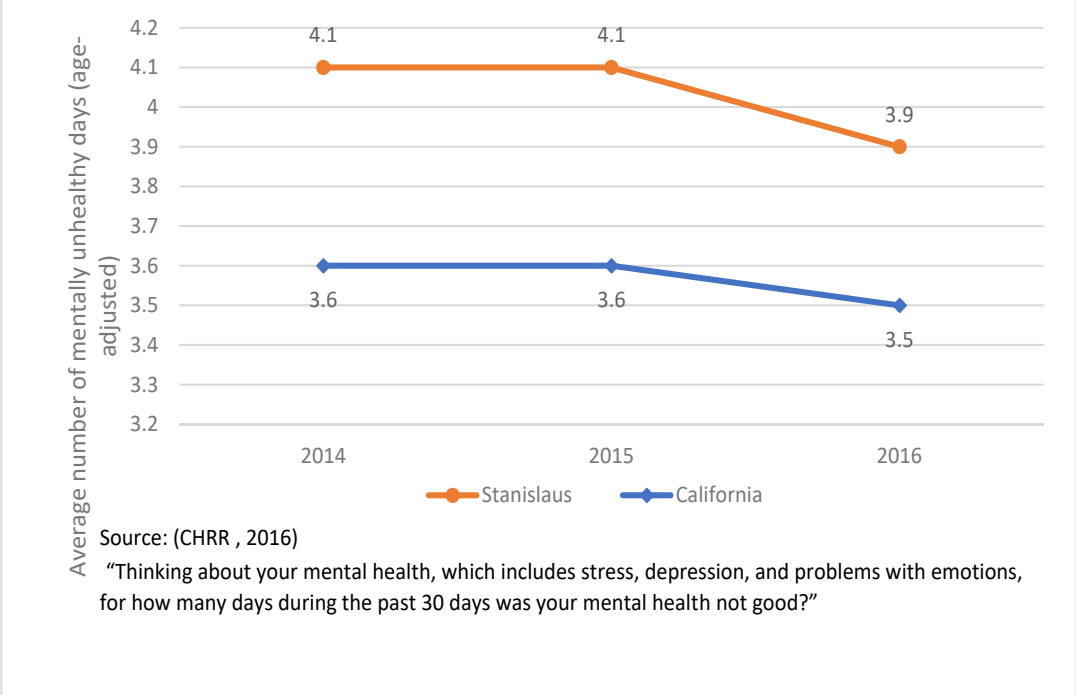
AVERAGE NUMBER OF MENTALLY UNHEALTHY DAYS

Figure 47 below illustrates the average response to the Behavioral Risk Factor Surveillance System question, "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" for Stanislaus County and California from 2014-2016.

- The average number of mentally unhealthy days for Stanislaus County and California held steady in 2014 and 2015, with a decline in 2016.
- Stanislaus County residents reported an additional half a day per month on average of mentally unhealthy days compared to the California average.

91% of Key Informant Interviews and 100% of Focus Groups identified Mental Health as a community health need.

Figure 47: Average Number of Mentally Unhealthy Days (out of the past 30), Stanislaus County and California, 2014-2016.



Source: (CHRR , 2016)

"Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"

ADVERSE CHILDHOOD EXPERIENCES

Adverse childhood experiences (ACEs) refer to abuse, neglect, and other potentially traumatic experiences that happen before a person turns 18 years old. Several studies have been done on ACEs (Center for Youth Wellness, 2015), and they have found increasing numbers of ACEs linked to increases in:

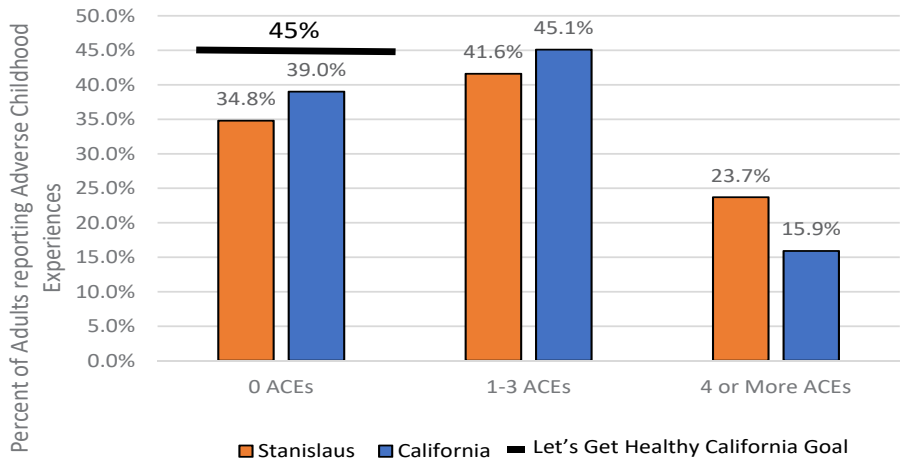
- risky health behaviors,
- chronic health conditions,
- low life potential, and
- early death (CDC, 2019)

Figure 48 shows the number of adverse childhood experiences reported by adults in Stanislaus County and California from 2008 to 2013 from the California Behavioral Risk Factor Surveillance System. Although there may be more traumatic events that can have long term impacts on the life of a child, this survey asked only about the following eight experiences:

- ✔ Household Member Abused Substances
- ✔ Household Member Mentally Ill
- ✔ Household Member in Jail/Convicted to Serve Time
- ✔ Parents Divorced/Separated
- ✔ Witnessed Domestic Violence
- ✔ Experienced Physical Abuse
- ✔ Experienced Verbal Abuse
- ✔ Experienced Sexual Abuse

- From 2008-2013, Stanislaus County adults reported higher numbers of adverse childhood experiences before they turned 18 compared to California adults.
- Almost one in four Stanislaus County adults reported experiencing four or more ACEs in their childhood, compared with only one in six California adults. Studies have shown higher risks of negative outcomes in people with four or more ACEs. (Giovanelli A, 2016)
- Over one third of Stanislaus County adults reported none of the listed adverse childhood events before they turned 18.

Figure 48: Adult Report of Adverse Childhood Experiences, Stanislaus County and California, 2008-2013.



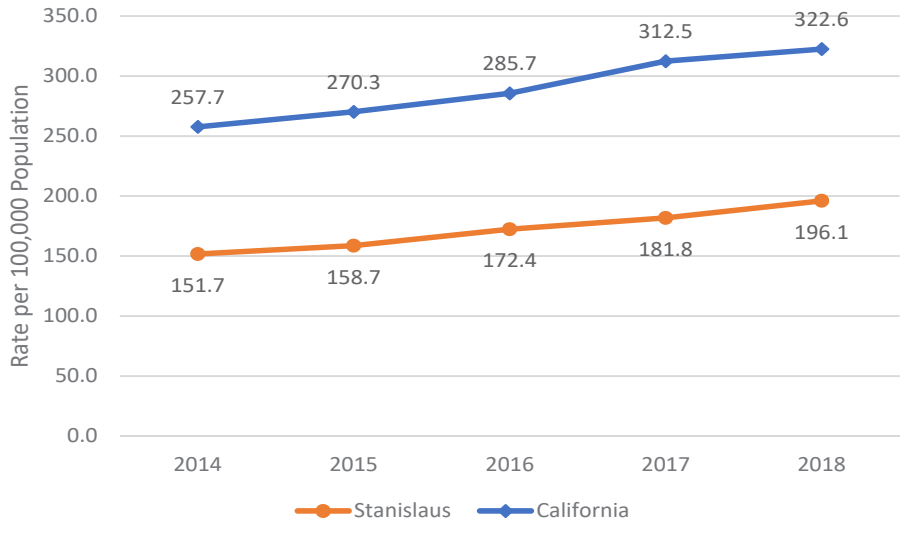
Source: As cited on Kidsdata.org, Rodriguez, D., et al. (2016). *Prevalence of adverse childhood experiences by county, California Behavioral Risk Factor Surveillance System 2008, 2009, 2011, and 2013*. Public Health Institute, Survey Research Group.

MENTAL HEALTH PROVIDERS

In addition to the general physician provider shortage discussed in the Access to Care section, there is also a specific mental health provider shortage in Stanislaus County. **Figure 49** shows the number of mental health providers per 100,000 population for Stanislaus County and California 2014-2018.

- The number of mental health providers per population in California has been steadily increasing from 2014-2018.
- The number of mental health providers per population in Stanislaus County has risen every year from 2014-2018.
- For every 5 mental health providers population in California, Stanislaus County only had 3.

Figure 49: Mental Health Providers per 100,000 Population, Stanislaus County and California, 2014-2018.



Source: CMS, National Provider Identification, as reported by County Health Rankings, 2015-2019.

MENTAL HEALTH SERVICES PENETRATION RATES

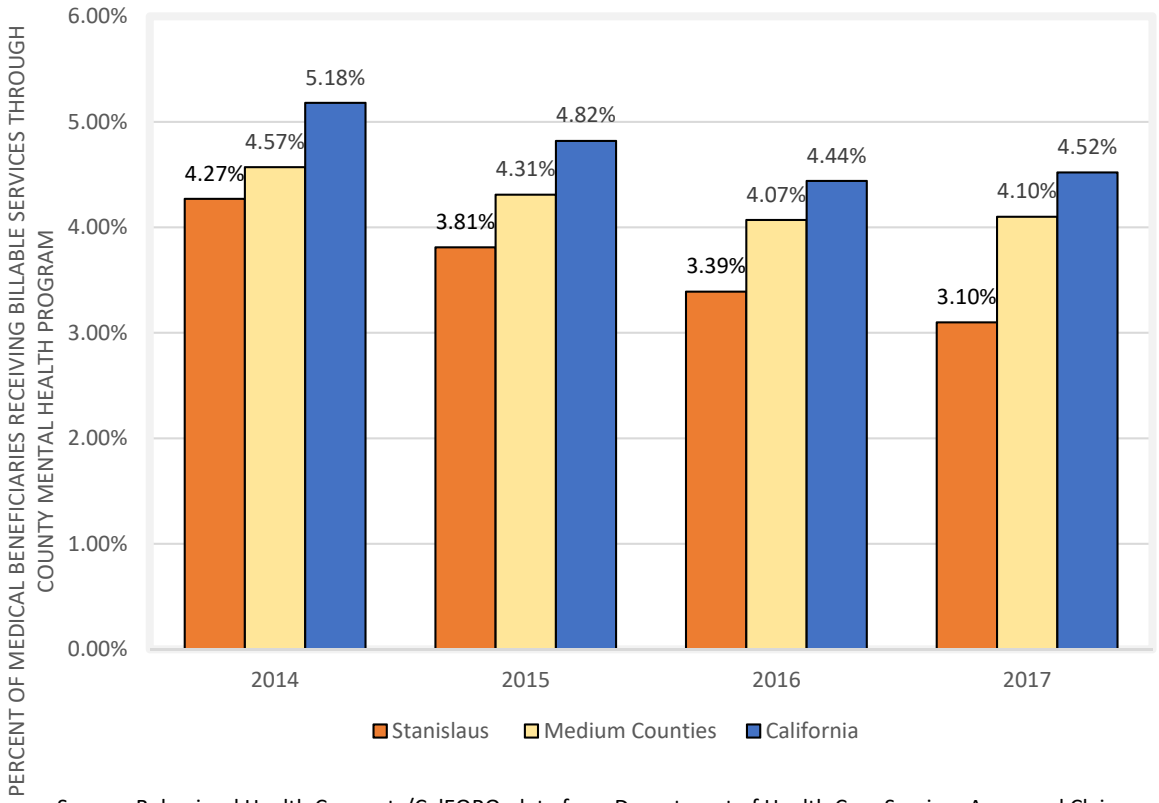
Penetration rates generally describe the percent of people who need services (or who have access to services) that are receiving services. The following graph (**Figure 50**) illustrates the mental health services penetration rates for Stanislaus County, other "medium-sized counties"[2], and California overall. This data is calculated as the number of Medi-Cal beneficiaries served by Stanislaus County's Mental Health Program divided by the monthly Medi-Cal enrollee count regardless of Severe Mental Illness (adults) or Serious Emotional Disturbance (children and adolescents) status. These rates are based on Medi-Cal eligibility and approved service claims, and do not consider the following:

- Treatment and other services that are not billable (such as prevention, early intervention and ..... support services),
- Residents who are not enrolled in Medi-Cal, or
- Mental health services that are provided outside of Stanislaus County's Mental Health Program.

- For Stanislaus County, other medium-sized counties, and California, the mental health services penetration rates have been declining from 2014-2017.
- California has consistently seen higher mental health services penetration rates overall compared to Stanislaus County and other medium-sized counties.
- Stanislaus County had lower mental health services penetration rates compared to California and other medium-sized counties from 2014-2017.
- Only California in 2014 had a mental health services penetration rate over five percent. Stanislaus County and other medium counties, 2014-2017, and California, 2015-2017, all had rates under five percent.

[2]Some California publications compare counties of similar sizes. Stanislaus is compared with the combined rate of "medium sized counties" including: Butte, Marin, Merced, Monterey, Placer, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Cruz, Sierra, Solano, Sonoma, Stanislaus, Tulare, Tuolumne, and Yolo.

Figure 50: Mental Health Services Penetration Rates, Stanislaus County, Other Medium-Sized Counties, and California, 2014-2017.



Source: Behavioral Health Concepts/CalEQRO; data from Department of Health Care Services Approved Claims and MMEF Data

Medium Counties includes the combined rate of: Butte, Marin, Merced, Monterey, Placer, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Cruz, Sierra, Solano, Sonoma, Stanislaus, Tulare, Tuolumne, and Yolo Counties.

5. SUICIDE

Suicide is one of the strongest examples of how mental health can have direct effects on physical health. Healthy People 2020 set a goal of suicide rates at or below 10.2 per 100,000. **Figure 51** below shows the suicide rate for Stanislaus County and California, from 2013-2017[3].

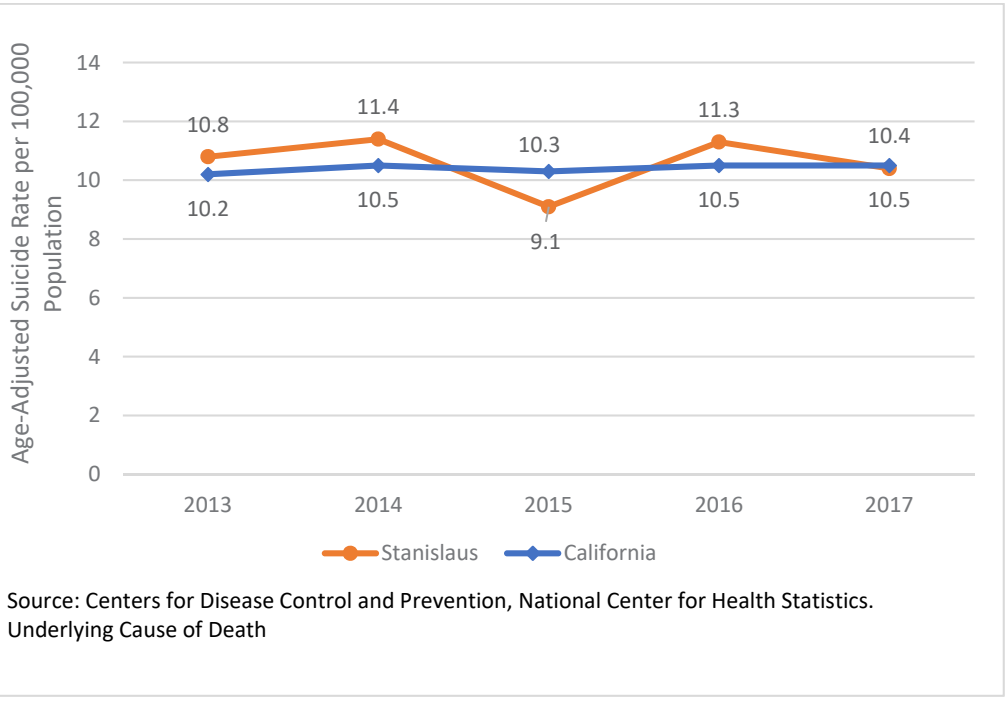
- Stanislaus County and California suicide rates were very similar from 2013-2017.
- California suicide rates stayed steady between 10.2 and 10.5 per 100,000 from 2013-2017.
- Stanislaus County suicide rates fluctuated from a low of 9.1 per 100,000 in 2015 to a high of 11.4 per 100,000 in 2014 during the 2013-2017 time period.
- Only California in 2013 and Stanislaus in 2015 met the Healthy People 2020 goal of 10.2 or less suicides per 100,000 people.

Risk Factors for Suicide:

- **Family History of Suicide or Child Maltreatment**
- **Previous Suicide Attempt(s)**
- **History of Mental Disorders (especially clinical depression), Alcohol and Substance Abuse**
- **Feelings of Hopelessness**
- **Impulsive or Aggressive Tendencies**
- **Cultural and Religious Beliefs**
- **Local Epidemics of Suicide**
- **Isolation (feeling of being cut off from other people)**
- **Barriers to Accessing Mental Health Treatment**
- **Loss (Relational, Social, Work, or Financial)**
- **Physical Illness**
- **Easy Access to Lethal Methods**
- **Unwillingness to Seek Help Due to Stigmas (with Mental Health, Substance Use Disorders, or Suicidal Thoughts)**

Source: (CDC, 2018)

Figure 51: Suicide Rate, Stanislaus County and California, 2013-2017.



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death

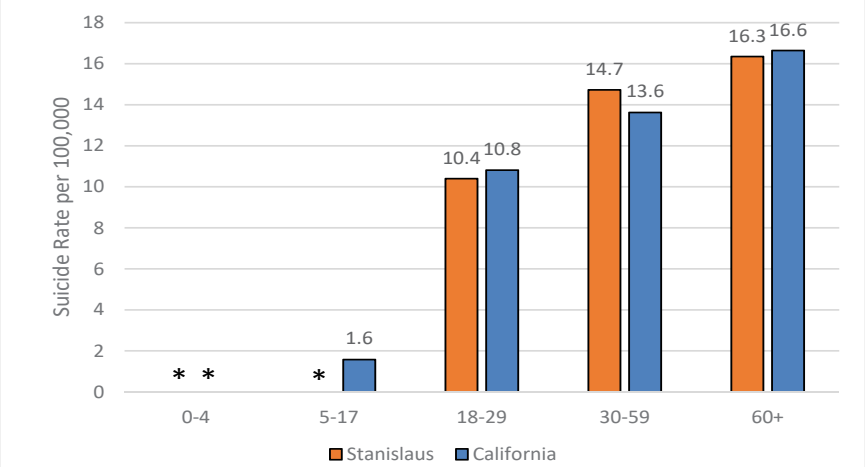
[3]Reported suicide rates may vary due to definitions and data sources used.

HIGHLIGHTING DISPARITIES: Suicide

There are some marked differences in suicide rates when analyzed by demographics. Age group, gender and different racial and ethnic groups all show distinct disparities in suicide rate data. **Figure 52** below shows the suicide rate by age group for Stanislaus County and California from 2013-2017.

- Rates for ages 0-4 in Stanislaus County and California, and 5-17 in Stanislaus County were suppressed because there were less than 20 cases from 2013-2017.
- Suicide rate increased with age group for both Stanislaus County and California from 2013-2017.
- Stanislaus County suicide rates were slightly below California rates for ages 18-29 and 60 and older, and slightly above California rates for ages 30-59.

Figure 52: Suicide Rate by Age Group, Stanislaus County and California, 2013-2017.

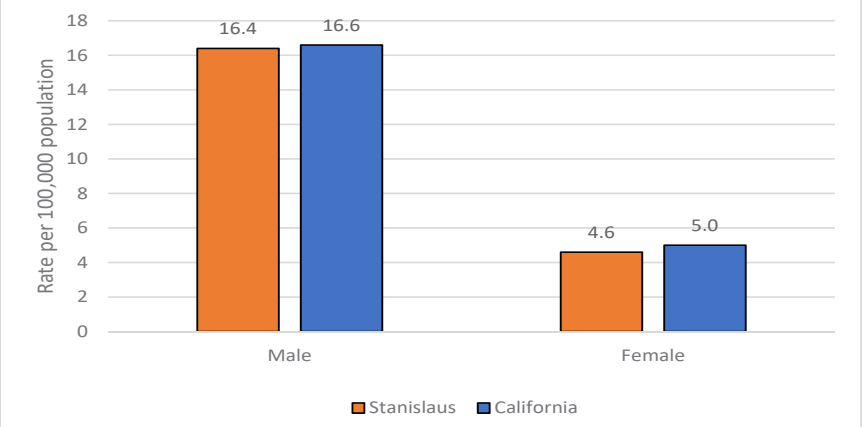


*Data supressed, less than 20 cases (Rate less than 3.8 per 100,000)
Source: Epicenter, CDPH Vital Statistics Death Statistical Master Files

Figure 53 shows suicide rates for Stanislaus County and California by sex.

- For Stanislaus County and California, the rate of death by suicide for males is more than three times the rate for females.
- While there is a large difference between suicide rates for men and women, the Stanislaus County and California rates are very similar for each group separately from 2013-2017.

Figure 53: Suicide Rate by Sex, Stanislaus County and California, 2013-2017.

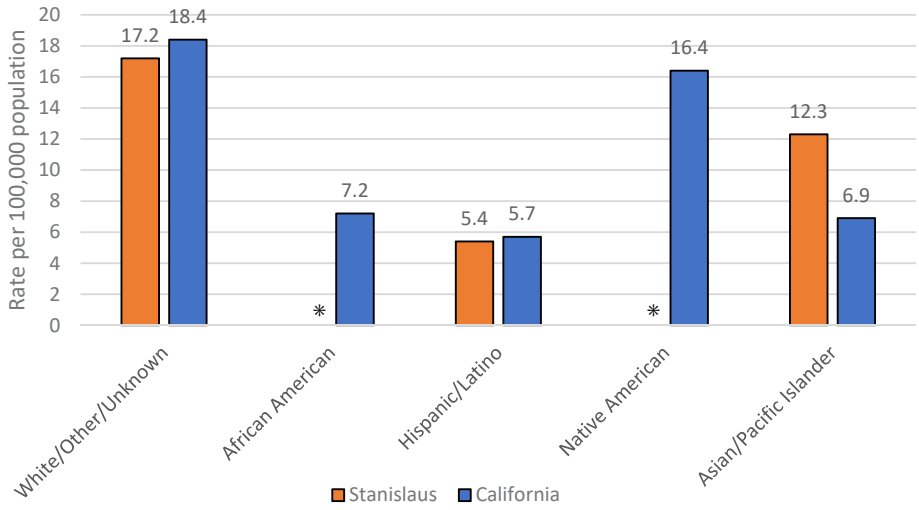


Source: Epicenter, CDPH Vital Statistics Death Statistical Master Files

Figure 54 shows suicide rates for Stanislaus County and California by racial and ethnic groups from 2008-2017.

- In Stanislaus County from 2008-2017, there were 20 or fewer suicides for African Americans and for Native Americans, so their rates were suppressed.
- From 2008-2017, the highest suicide rates in California and Stanislaus County were in residents of the White/Other/Unknown group with rates over three times that of Hispanics/Latinx.
- In California, the lowest suicide rates for 2008-2017 were seen in the Hispanic/Latinx group.
- The Stanislaus County rate of suicide among Asian/Pacific Islanders was almost double the California rate from 2008-2017.

Figure 54: Suicide Rate by Racial and Ethnic Group, Stanislaus County and California, 2008-2017.



*Data supressed, less than 20 cases
Source: Epicenter, CDPH Vital Statistics Death Statistical Master Files

For more information on Mental Health, go to:

- Mental Health and Mental Disorders, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders
- Mental Health, CDC: https://www.cdc.gov/mentalhealth/index.htm
- What is Mental Health?, Mental Health.gov: https://www.mentalhealth.gov/basics/what-is-mental-health
- Stanislaus County Behavioral Health and Recovery Services: https://www.stancounty.com/bhrs
- Stanislaus County Mental/Behavioral Health Network of Care: http://stanislaus.networkofcare.org/mh/
- Substance Abuse and Mental Health Services Administration: https://www.samhsa.gov/

SUBSTANCE USE

Substance abuse not only affects the individual, but also their families and their communities. Healthy People 2020 lists the following problems associated with substance abuse: (Healthy People 2020, 2019)

- Teenage pregnancy
- Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS)
- Other sexually transmitted diseases (STDs)
- Domestic violence
- Child abuse
- Motor vehicle crashes
- Physical fights
- Crime
- Homicide
- Suicide

Substance Use was identified as a top health priority by participants in four focus groups.

Risks for Substance Use:

- **Familial Risk Factors (maltreatment/abuse/neglect, familial substance use, socioeconomic status, etc.)**
- **Social Risk Factors (popularity, bullying, gang association, peer relationships)**
- **Individual Risk Factors (Attention Deficit Hyperactivity Disorder, Depression, Post-Traumatic Stress Disorder, mental illness)**

Source: (Whitesell, 2013)

ALCOHOL – BINGE DRINKING

The National Institute on Alcohol Abuse and Alcoholism "defines binge drinking as a pattern of drinking that brings blood alcohol concentration (BAC) levels to 0.08 g/dL. This typically occurs after 4 drinks for women and 5 drinks for men—in about 2 hours" (NIAAA, n.d.). According to the CDC:

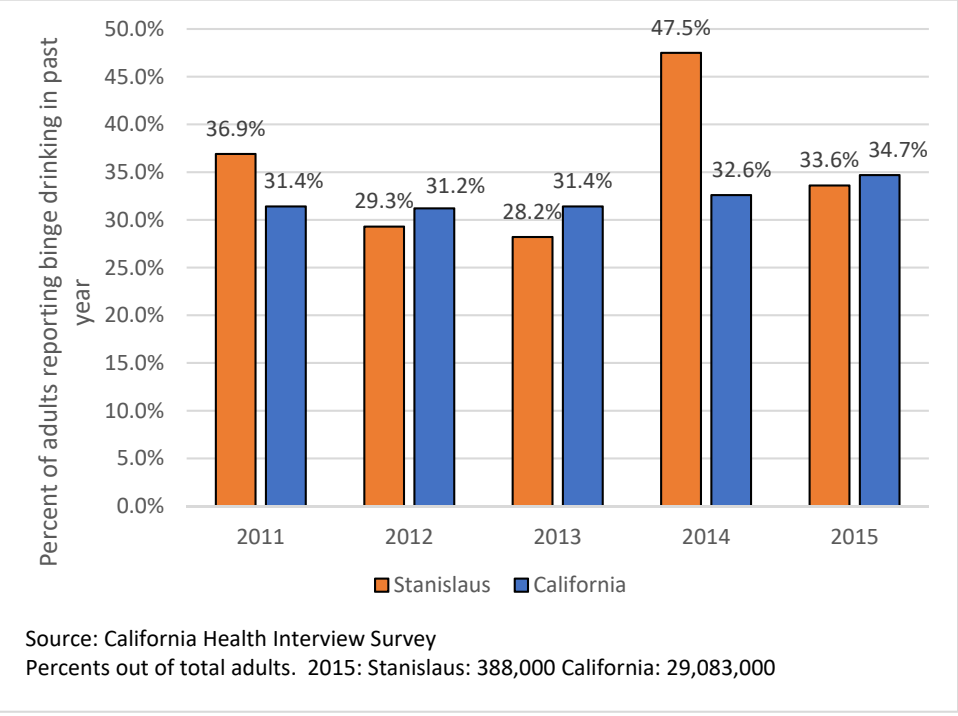
Binge drinking is associated with many health problems, including the following:

- Unintentional injuries such as car crashes, falls, burns, and alcohol poisoning
- Violence including homicide, suicide, intimate partner violence, and sexual assault
- Sexually transmitted diseases
- Unintended pregnancy and poor pregnancy outcomes, including miscarriage and stillbirth
- Fetal alcohol spectrum disorders
- Sudden infant death syndrome
- Chronic diseases such as high blood pressure, stroke, heart disease, and liver disease
- Cancer of the breast, mouth, throat, esophagus, liver, and colon
- Memory and learning problems
- Alcohol dependence (CDC, 2018)

In the California Health Interview Survey, adult participants answered questions about their alcohol consumption. **Figure 55** illustrates the percentage of male and female respondents who indicated that they had been binge drinking within the past year for Stanislaus County and California from 2011 to 2015. For this survey, binge drinking was defined as 5 or more alcoholic drinks on at least one occasion for men and four or more alcoholic drinks on at least one occasion for women.

- In 2011 and 2014, Stanislaus County rates of binge drinking were much higher than California rates (2011: 36.9% Stanislaus County, 31.4% CA; 2014: 47.5% Stanislaus County, 32.6% CA).
- In 2012, 2013, and 2015, Stanislaus County rates of binge drinking were almost as high as California rates.
- California rates of binge drinking remained similar from 2011 (31.4%) to 2015 (34.7%).
- Reported Stanislaus County rates of adult binge drinking varied widely in five years from 28.2% in 2013 to 47.5% in 2014. This variation may be related in part to small numbers of people sampled in Stanislaus County.

Figure 55: Adult Binge Drinking in past year, Stanislaus County and California, 2011-2015.



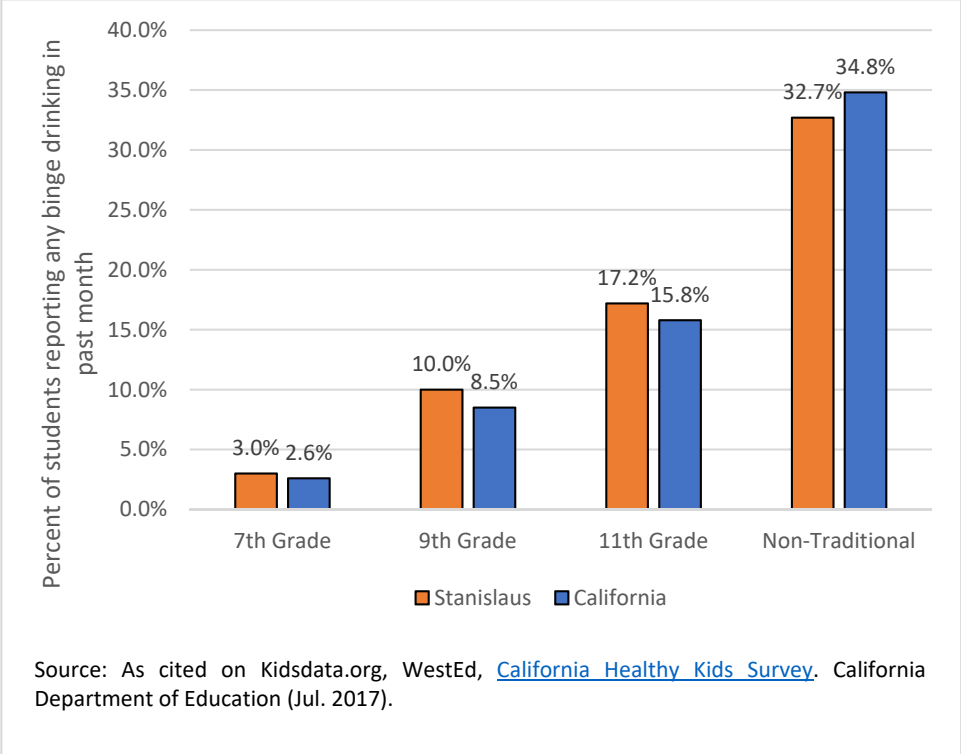
Source: California Health Interview Survey
Percents out of total adults. 2015: Stanislaus: 388,000 California: 29,083,000

In addition to the overall negative effects of binge drinking, youth may also experience "potentially long-lasting [brain] alterations" (Chung, 2018).

The California Healthy Kids Survey asked youth in 7th, 9th, 11th, and non-traditional[4] grades about their alcohol consumption. In this survey, binge drinking was defined as consumption of five or more alcoholic drinks within a couple of hours. **Figure 56** compares the percent of students reporting binge drinking in the past month for Stanislaus County and California by grade for school years 2013-2014 and 2014-2015.

- In Stanislaus County and California, non-traditional students reported the highest percentage of binge drinkers (32.7% Stanislaus County, 34.8% California).
- Stanislaus County and California students of each grade level reported similar rates of binge drinking (within 2.1 percentage points).
- For grades 7, 9 and 11, reported binge drinking in the past month increased by grade level for California and Stanislaus County.

Figure 56: Youth Binge Drinking in Past Month, by Grade, Stanislaus County and California, 2013-2015.



Source: As cited on Kidsdata.org, WestEd, California Healthy Kids Survey. California Department of Education (Jul. 2017).

[4]Non-traditional students are those in community day school (for students who have been expelled from school or have had problems with attendance or behavior) or continuation education (alternative high school diploma program for students age 16-18 at risk of not graduating high school).

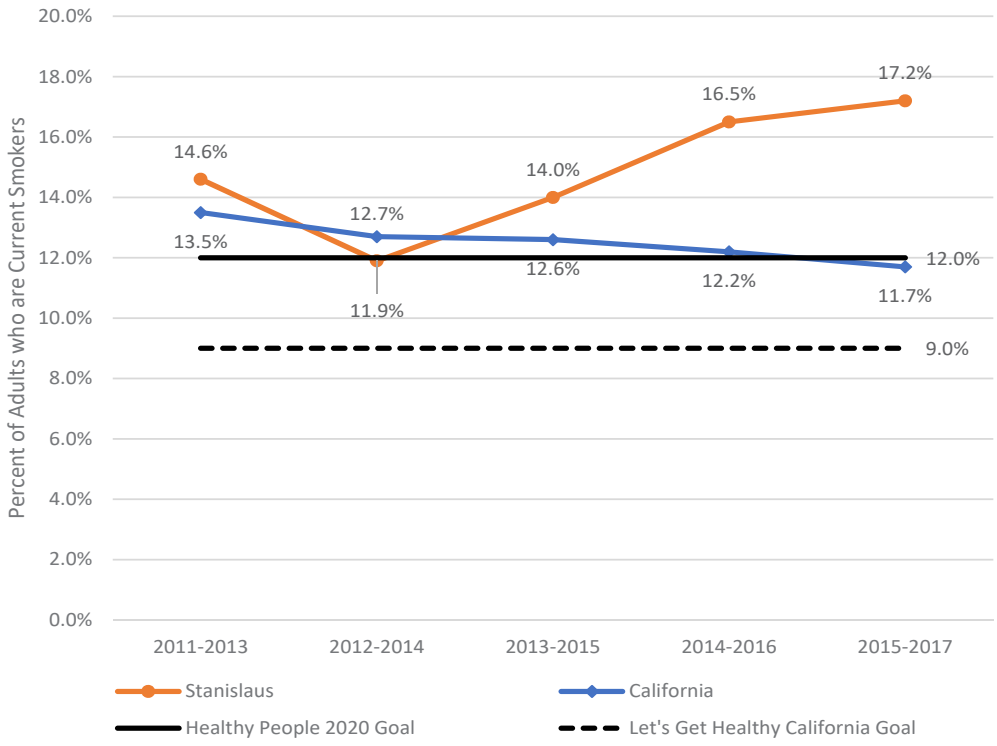
TOBACCO

According to the CDC, "Smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases risk for tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis" (CDC, 2018). Let's Get Healthy California has set a goal of 9.0% or less of adults reporting being current smokers by 2022. Healthy People 2020 has set a goal of 12.0% or less of adults reporting being current smokers by 2020.

Figure 57 below shows the percentage of adults in Stanislaus County and California that reported current tobacco smoking on the California Health Interview Survey.

- California adult smoking rates have been decreasing steadily from 2011-2013 (13.5%) to 2015-2017 (11.7%).
- Stanislaus County rates of adult smoking have been increasing from 2012-2014 (11.9%) to 2015-2017 (17.2%).
- The 2015-2017 data show Stanislaus County adult smoking rates 47% higher than California (Stanislaus County 17.2%, California 11.7%).
- Stanislaus County adult smoking rates did not meet the Let's Get Healthy California goals from 2011-2017.
- California adult smoking rates fell below the Healthy People 2020 goal in 2015-2017.

Figure 57: Percent of Adults who Currently Smoke Tobacco, Stanislaus County and California, 2011-2017.

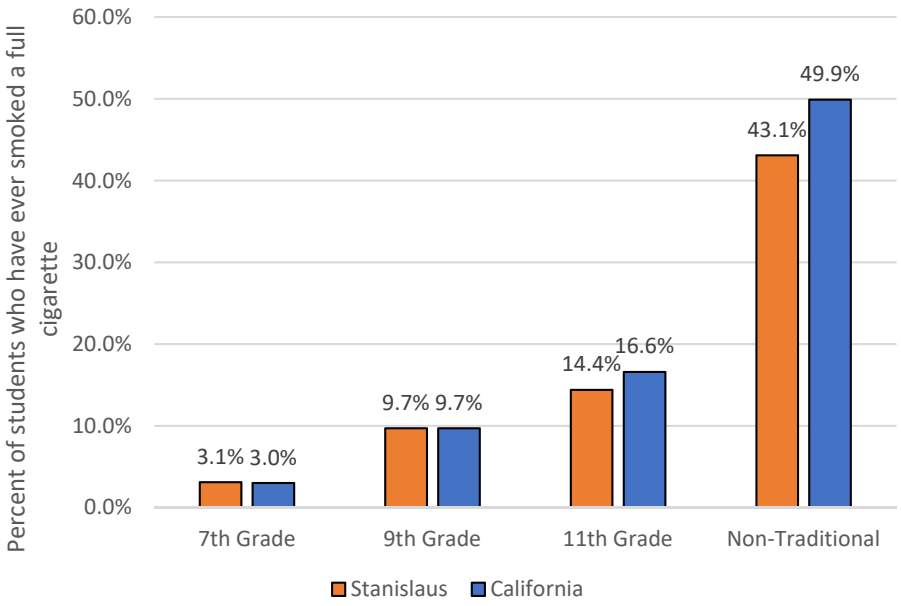


Source: California Health Interview Survey, 2011-2017.
Percents out of total adults: 2015-2017: Stanislaus: 405,000 California: 29,310,000

Tobacco use is often established during the teen years. According to the Surgeon General's Report on Smoking, "the majority (88%) [of adult cigarette smokers] started smoking before 18 years of age, and nearly all first use of cigarettes occurs before 26 years of age" (USDHHS, 2014). **Figure 58** shows cigarette use ever by grade level for Stanislaus County and California for school years 2013-2014 and 2014-2015.

- Non-traditional students in Stanislaus County (43.1%) are almost three times as likely to have ever smoked a cigarette compared to 11th grade students (14.4%).
- 11th grade (16.6%) and non-traditional (49.9%%) students in California are more likely to have ever smoked a cigarette compared to Stanislaus County students (11th grade 14.4%, non-traditional 43.1%).

Figure 58: Ever Smoked a Cigarette by Grade, Stanislaus County and California, 2013-2015.



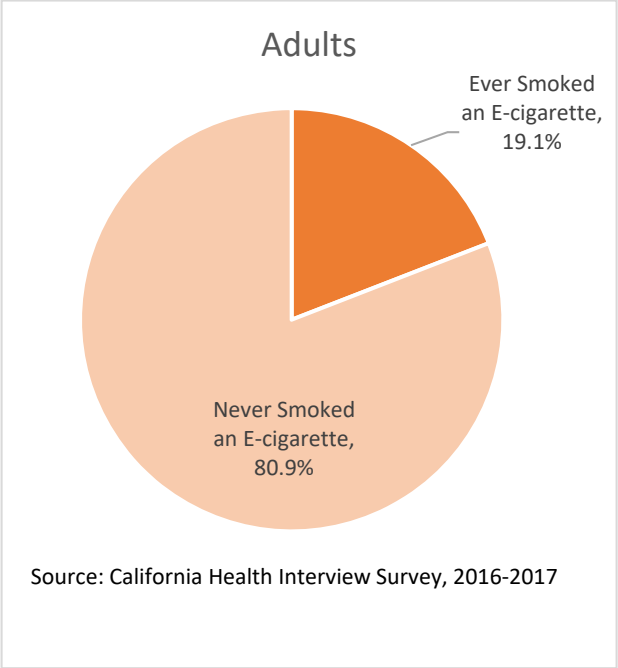
Source: As cited on Kidsdata.org, WestEd, California Healthy Kids Survey. California Department of Education (July 2017).

Electronic cigarettes, or "e-cigarettes," hit the U.S. market in the 2000s and by 2011 1.5% of high school students were using them, with that number rising to 16% by 2015 (USDHHS, 2016).

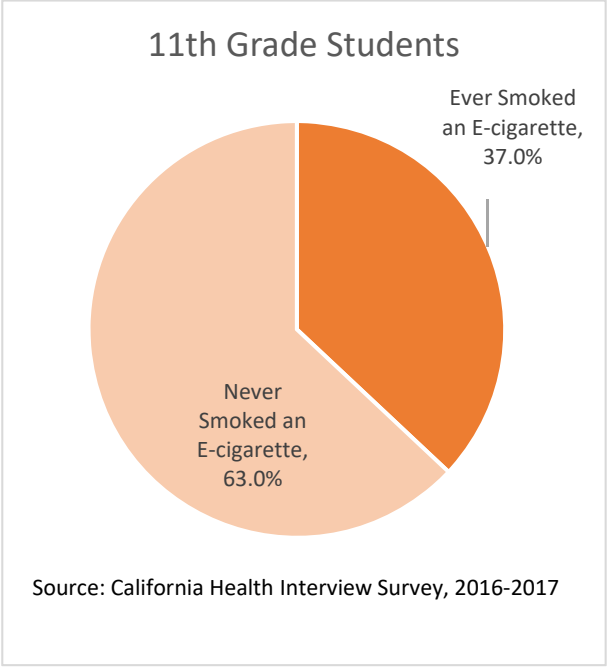
Figure 59 below shows the percent of adults (2016-2017) and the percent of 11th grade students (2013-2015) who had ever smoked an e-cigarette.

- In 2016-2017, 19.1% of Stanislaus County adults had ever smoked an electronic cigarette, compared to 16.7% of California adults.
- In 2013-2015, 37.0% of Stanislaus County 11th grade students had ever smoked an e-cigarette, compared to 30.5% of California 11th grade students.

Figure 59: Percent of Adults and 11th grade students who had ever smoked an e-cigarette, Stanislaus County.



Source: California Health Interview Survey, 2016-2017



Source: California Health Interview Survey, 2016-2017

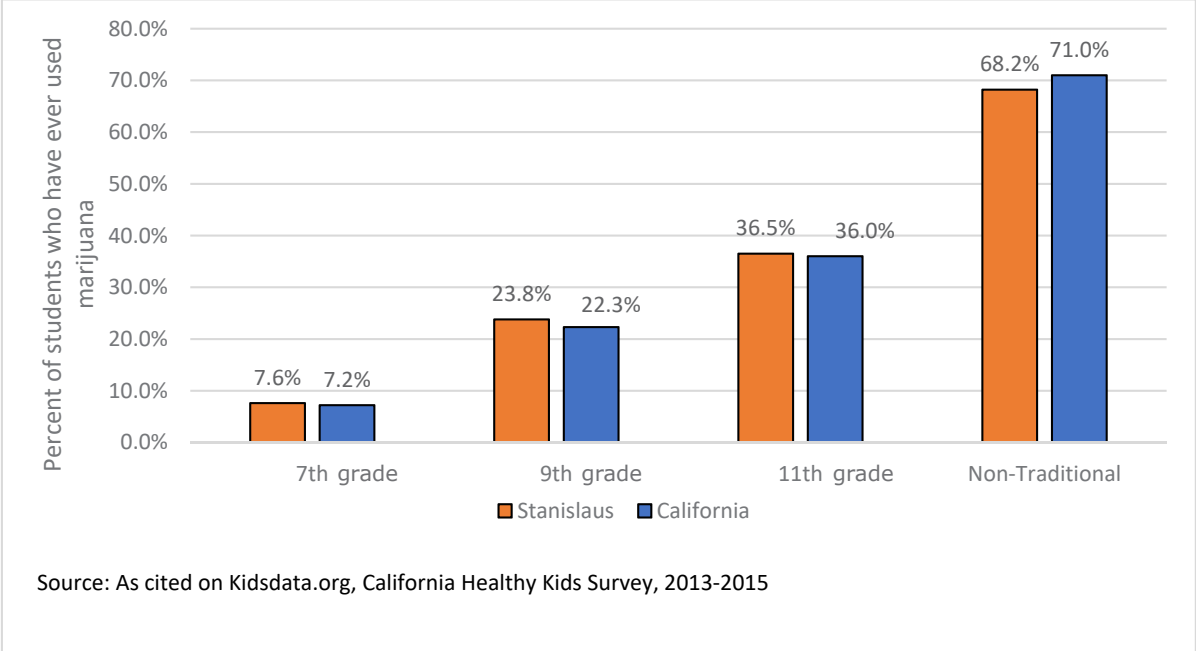
MARIJUANA

In November of 2016, California voters passed Proposition 64, decriminalizing possession, cultivation, and use of "specified amounts of marijuana for recreational use" for adults 21 and older (CA POST, 2019). In addition to associations with depression, anxiety and suicide among teens, "marijuana users are significantly more likely than nonusers to develop temporary psychosis (not knowing what is real, hallucinations and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might see or hear things that aren't really there)" (CDC, 2018).

Figure 60 below illustrates the percent of students of varying grades who had ever used marijuana for the 2013-2014 and 2014-2015 school years, in Stanislaus County and California. This timeframe was before the law came into effect allowing for adult recreational use and is the most current data available.

- The percent of students who had ever used marijuana for each grade was very similar between Stanislaus County and California, less than 3 percentage points different.
- Non-traditional students had the highest percentage of students who had ever used marijuana, almost double that of 11th grade students (Stanislaus County non-traditional 68.2%, 11th grade 36.5%)

Figure 60: Percent of Students who have ever used Marijuana, by Grade, Stanislaus County and California, 2013-2015.

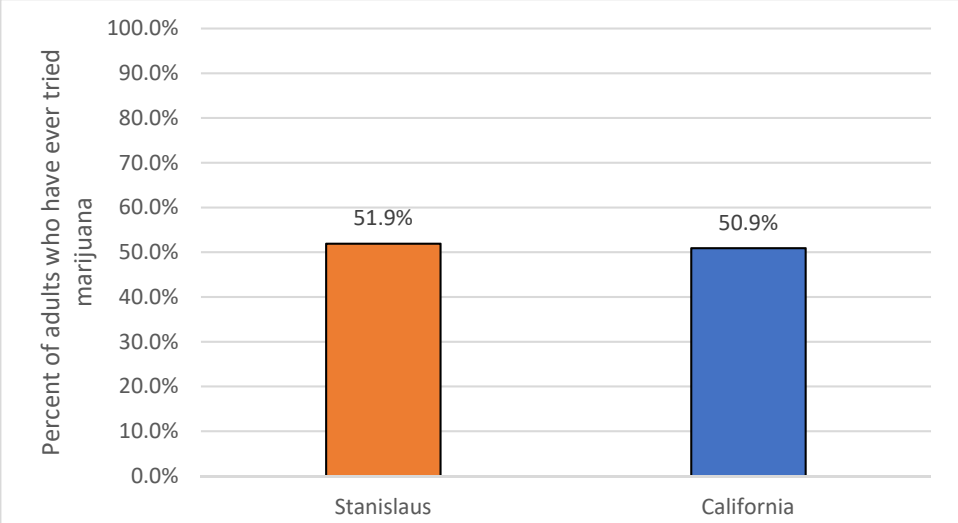


Source: As cited on Kidsdata.org, California Healthy Kids Survey, 2013-2015

Figure 61 below shows the percent of adults who have ever tried marijuana or hashish, in 2017 for Stanislaus County and California. This was collected after Proposition 64 took effect, and earlier data is not available from this source.

- The percentage of adults who had ever tried marijuana or hashish was very similar in California (51.9%) and Stanislaus County (50.9%).
- Just over half of all California and Stanislaus County adults have tried marijuana or hashish as of 2017.

Figure 61: Percent of Adults who have Ever Tried Marijuana or Hashish, Stanislaus County and California, 2017.



Source: California Health Interview Survey
Percents out of adults ages 18-106. Stanislaus: 432,000 California: 29,456,000

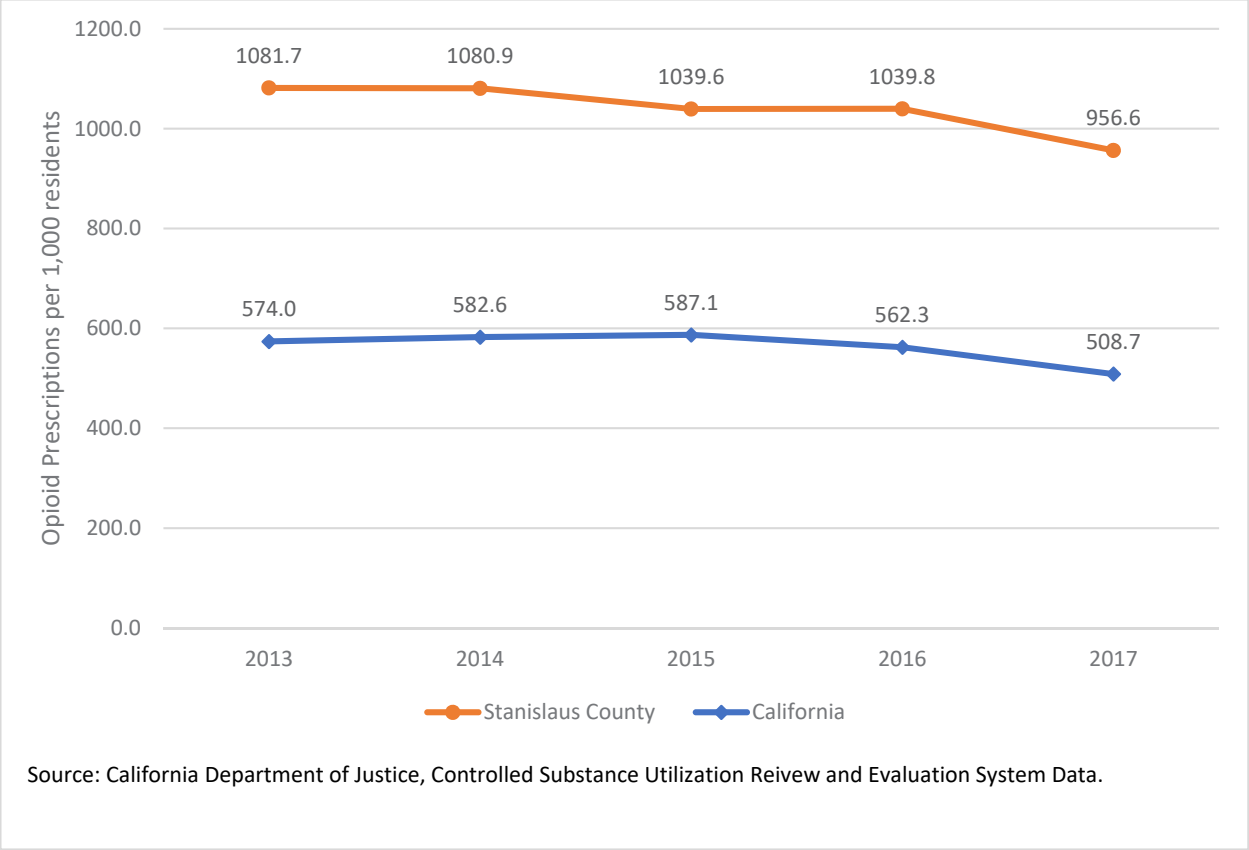
OPIOIDS

Opioids are strong pain relief medications. They include prescription medication like oxycodone and morphine, as well as illegal drugs like heroin and synthetic opioids like fentanyl, which can be prescribed by a doctor or illegally manufactured and distributed (CDC, 2018). The US is seeing a rise in opioid-overdose deaths, often referred to as an opioid epidemic.

One concern with opioids is over-prescribing. When a patient begins taking prescription opioid medication, there is the potential for addiction and dependence. According to the CDC, "as many as one in four patients receiving long-term opioid therapy in a primary care setting struggles with opioid addiction" (CDC, 2017). **Figure 62** looks at the prescribing rates of prescription opioids in Stanislaus County and California from 2013-2017.

- From 2013-2016, there was more than one opioid prescription per person in Stanislaus County per year.
- Rates of opioid prescriptions have been decreasing since 2013 for Stanislaus County and 2015 in California.
- Stanislaus County rates of opioid prescriptions are almost double the California average.

Figure 62: Rate of Opioid Prescriptions per 1,000 residents, Stanislaus County and California, 2013-2017.



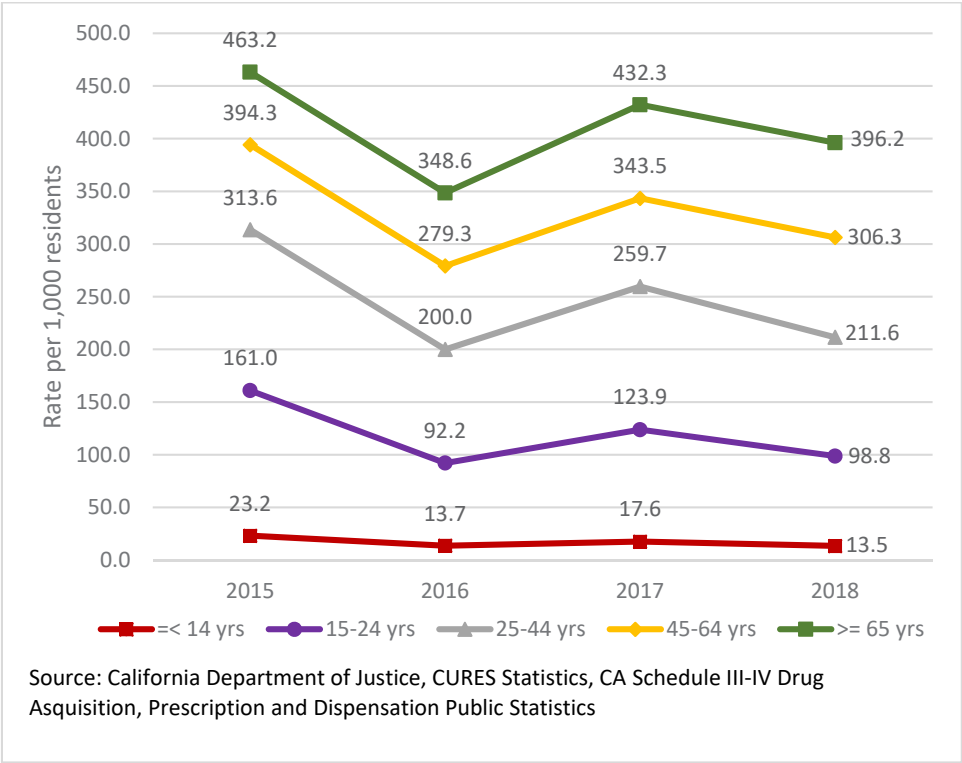
Source: California Department of Justice, Controlled Substance Utilization Reivew and Evaluation System Data.

HIGHLIGHTING DISPARITIES: Opioid Prescriptions

Over-prescription of opioid medication is a factor in the national opioid epidemic. There are two big disparities observed in the opioid prescription data: age and sex.

Figure 63 looks at rate of opioid prescription by age for Stanislaus County in 2017. Opioid prescription rate increases steadily with age. This may be related to more short-term acute uses in children (distinct injury or surgery), and more prolonged uses in older populations such as for chronic pain, or cancer.

Figure 63: Rate of Opioid Prescriptions per 1,000, by Age, Stanislaus County, 2015-2018.



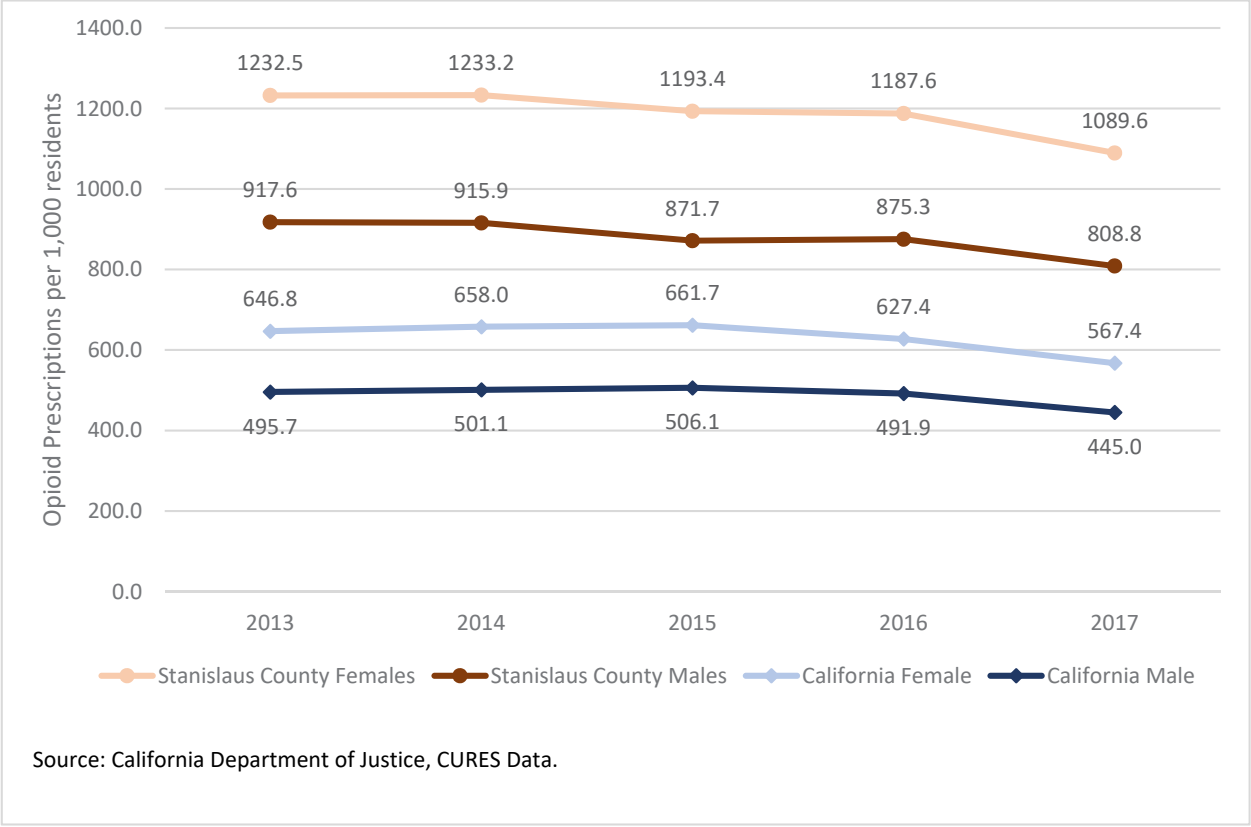
Source: California Department of Justice, CURES Statistics, CA Schedule III-IV Drug Asquisition, Prescription and Dispensation Public Statistics

Figure 64 shows the disparity by sex for opioid prescription rate for Stanislaus County and California.

- For both Stanislaus County and California, the opioid prescription rate is consistently higher for females than males.
- In Stanislaus County in 2017, females were prescribed opioids 35% more frequently than males.
- In California in 2017, the rate of opioid prescription was 28% higher for females than males.

Some research has indicated that women have more chronic pain, lower pain sensitivity, and are more likely to seek help from medical professionals, which may account for some of the disparities seen here. (Serdervic, Striley, & LB, 2017)

Figure 64: Rate of Opioid Prescriptions per 1,000 Residents, by Sex, Stanislaus County and California, 2013-2017.



Source: California Department of Justice, CURES Data.

OPIOID OVERDOSE

For deaths caused by opioid overdose, **Figure 65** below examines rates for Stanislaus County and California from 2013-2017.

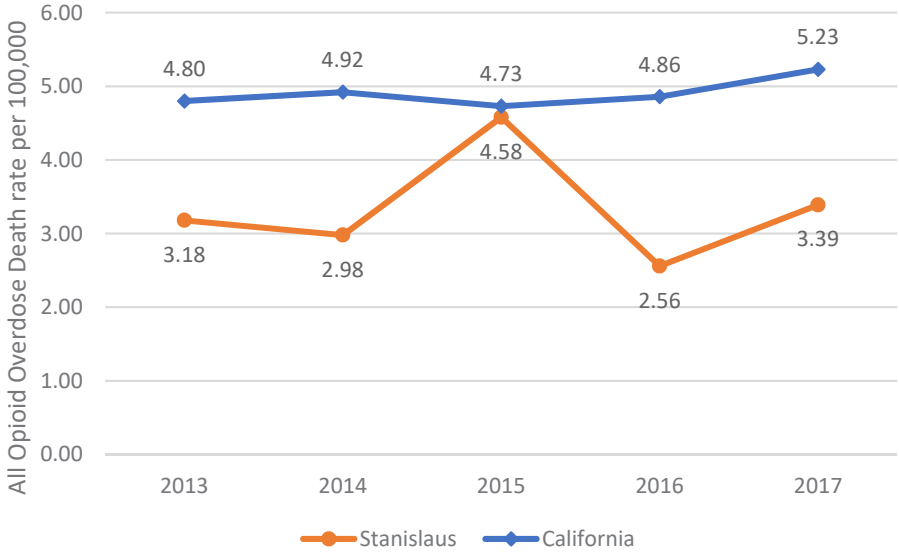
- California had higher rates of death by opioid overdose from 2013-2017 compared to Stanislaus County.
- California rates of opioid overdose death have risen slowly from 4.80 to 5.23 per 100,000 from 2013-2017.
- Stanislaus County rates of opioid overdose death have fluctuated from 2.56 to 4.58 per 100,000 from 2013-2017.

Contributing Factors for Prescription Opioid Abuse and Overdose:

- **Obtaining overlapping prescriptions from multiple providers and pharmacies.**
- **Taking high daily dosages of prescription pain relievers.**
- **Having mental illness or a history of alcohol or other substance abuse.**
- **Living in rural areas and having low income.**

Source: (CDC, 2017)

Figure 65: Opioid Overdose Deaths, Stanislaus County and California, 2013-2017.

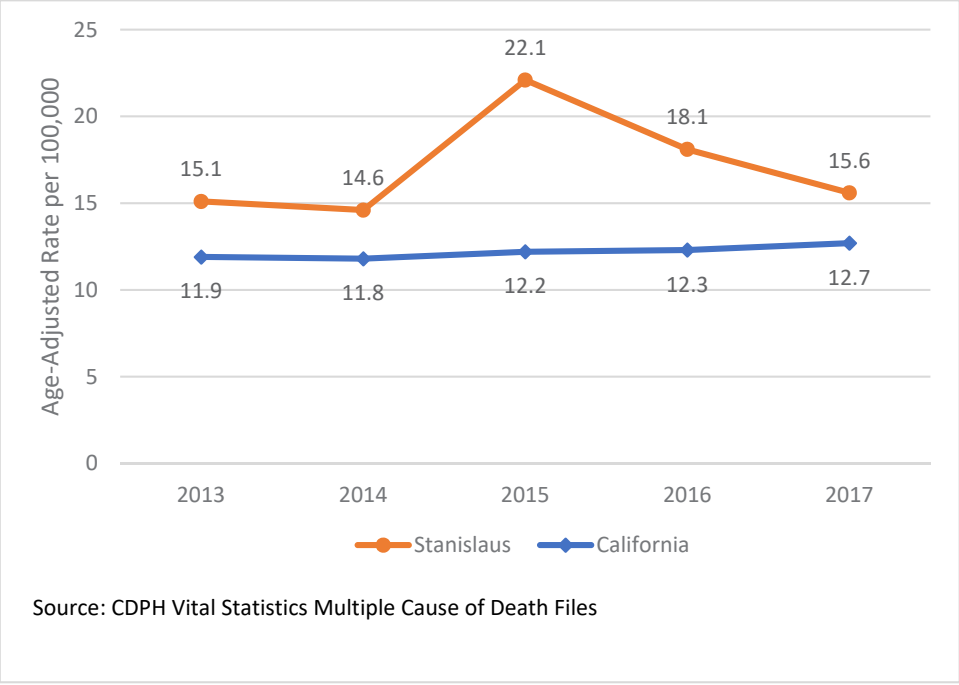


Source: CDPH Vital Statistics Multiple Cause of Death Files

Figure 66 below shows the death rate from drug overdose for Stanislaus County and California from 2013-2017.

- From 2013-2017, the drug overdose death rate for Stanislaus County was consistently above the drug overdose death rate for California.
- From 2013-2017, the drug overdose death rate in California rose 7%.
- After a peak death rate of 22.1 drug overdose deaths per 100,000 in 2015, the drug overdose death rate in Stanislaus County has declined in 2016 and 2017 to almost the 2013 level.

Figure 66: Drug Overdose Death Rate, Stanislaus County and California, 2013-2017.



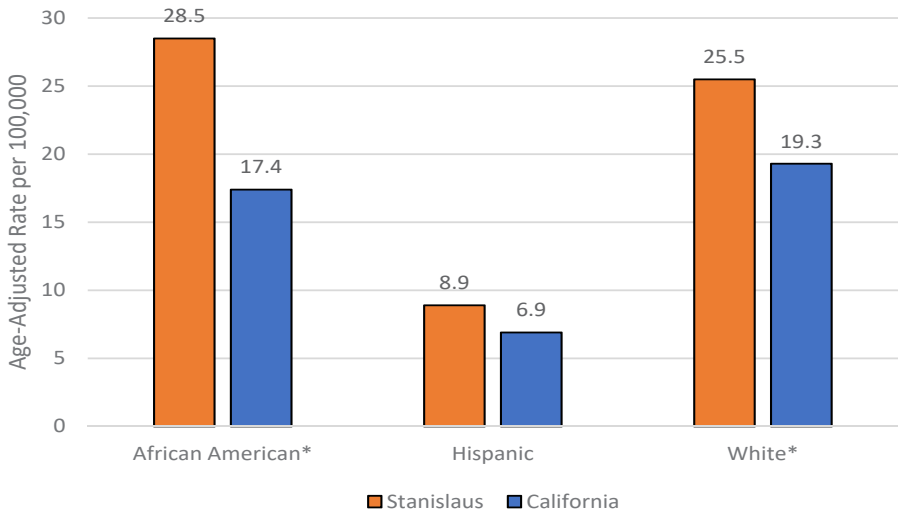
Source: CDPH Vital Statistics Multiple Cause of Death Files

HIGHLIGHTING DISPARITIES: Drug Overdose Deaths

For all drug overdose deaths, a difference can be seen by racial and ethnic group. **Figure 67** shows drug overdose deaths from 2013-2017 in Stanislaus County and California.

- The death rate from drug overdoses is higher in Stanislaus County than California for all racial and ethnic groups.
- Hispanic/Latinx residents had less than half of the death rate from drug overdoses compared to African Americans or Whites, for both Stanislaus County and California.
- In Stanislaus County, the drug overdose death rate for African Americans was the highest, just above that of Whites, but in California, the drug overdose death rate for Whites was the highest.

Figure 67: Drug Overdose Death Rates by Racial and Ethnic Group, Stanislaus County and California, 2013-2017.



*Non-Hispanic
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018.

For more information on Substance Use, go to:

- National Institute on Alcohol Abuse and Alcoholism: https://www.niaaa.nih.gov/
- Smoking and Tobacco Use, CDC: https://www.cdc.gov/tobacco/index.htm
- CDPH Tobacco Control Program: https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CTCB/Pages/CaliforniaTobaccoControlBranch.aspx
- Marijuana and Public Health, CDC: https://www.cdc.gov/marijuana/index.htm
- Opioids Portal, CDC: https://www.cdc.gov/opioids/
- California's Approach to the Opioid Epidemic, CDPH: https://www.cdph.ca.gov/Pages/Opioids.aspx
- Substance Abuse and Mental Health Services Administration: https://www.samhsa.gov/

SAFETY

Stanislaus County

Healthy People 2020 lists Injury and Violence Prevention as one of their categories, with 43 associated objectives. They list the following outcomes that injuries and violence impact: "premature death, years of potential life lost, disability and disability-adjusted life years lost, poor mental health, high medical costs, and lost productivity" (Healthy People 2020, 2014).

Falls are the leading cause of injury death among seniors age 60+.

Contributing Factors:

- **Individual behaviors (substance use, risk taking, etc.)**
- **Physical Environment (safety hazards etc.)**
- **Access to Services (affects the consequences of injuries like death and long-term disability)**
- **Social Environment (individual social experiences, social relationships, community environment, societal-level factors)**

Source: (Healthy People 2020, 2014)

INJURY DEATHS

According to the Centers for Disease Control and Prevention (CDC), injury is the leading cause of death for people 1-44 in the US (CDC, Key Injury and Violence Data, 2017). CDC estimates that for every injury death, 13 people are hospitalized and 129 are treated in an emergency room for injuries (CDC, Key Injury and Violence Data, 2017). Since most injuries are preventable, injury data provides insight into opportunities for interventions that have direct impact on the health of Stanislaus County residents.

ALL INJURY DEATHS

Healthy People 2020 lists reduction of fatal injuries among their objectives for improving the health of the United States.

- The baseline fatal injury rate for Healthy People 2020 is 59.7 per 100,000 in 2007 with a target of less than 53.7 fatal injuries per 100,000 people (age-adjusted) by 2020. (Healthy People 2020, 2014)
- California has remained below the Healthy People 2020 target, with a fatal injury rate of 48.6 per 100,000 in 2016. (Healthy People 2020, 2014)
- For 2017, the Stanislaus County fatal injury rate was 57.4 fatal injuries (unintentional, suicide, homicide), age adjusted rate per 100,000. (CDC, 2018)

Injury data can be categorized by intention (unintentional, homicide, or suicide), as well as by method. Different life stages lend themselves to increased risks for certain types of injury. **Table 2** below lists the top three causes of injury death by age group, with rates per 100,000 for 2012-2016.

- Suffocation was only listed as a top three cause of injury death for children 0-4 years old.
- Homicide with a firearm was listed as the second leading cause of injury death for 5-17-year-olds and 18-29-year-olds but was not in the top three for any other age groups.
- Self-inflicted/suicide with a firearm was the third leading cause of injury death for 30-59-year-olds and was the fourth leading cause of injury death for those over 60 (rate 8.5 per 100,000).
- Unintentional poisoning ranked in the top three causes of death for three age groups: 18-29, 30-59, and 60 and older.
- Death by motor vehicle accident was a top ranked cause of injury death for every age category.

Table 2: Top Three Causes of Injury Death by Age Group, Stanislaus County, 2012-2016.

	0-5	Annual Rate per 100,000
1	Suffocation	*
2	Drowning	*
3	Motor Vehicle Accident	*

	6-17	
1	Motor Vehicle Accident	4.7
2	Homicide with Firearm	*
3	Self-inflicted/Suicide by Hanging/Suffocation	*

	18-29	
1	Motor Vehicle Accident	22.5
2	Homicide with Firearm	10.0
3	Unintentional Poisoning	8.5

	30-59	
1	Unintentional Poisoning	27.5
2	Motor Vehicle Accident	15.0
3	Self-inflicted/Suicide with Firearm	6.1

	60+	
1	Unintentional Fall	24.7
2	Motor Vehicle Accident	16.3
3	Unintentional Poisoning	13.6
*Rate not calculated, based on 20 or less deaths		
Source: CDPH Vital Statistics Death Statistical Master Files, Epicenter		

MOTOR VEHICLE CRASH DEATHS

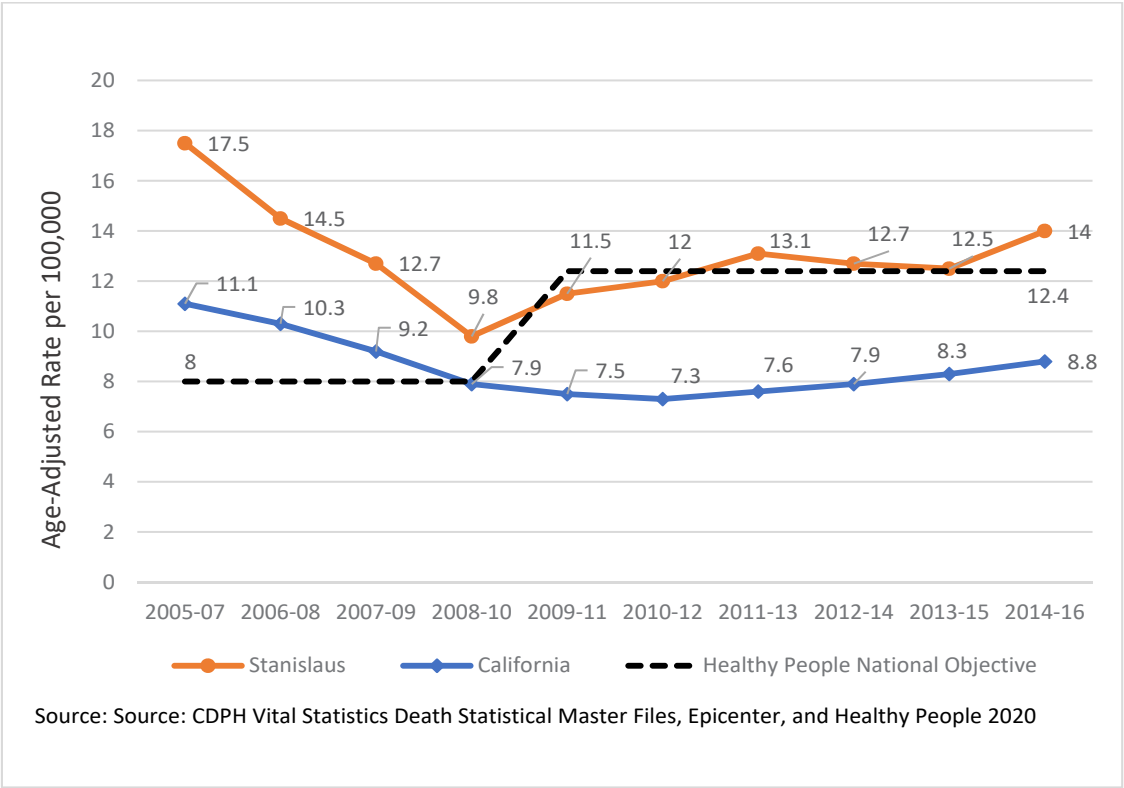
Deaths from motor vehicle crashes are preventable. The CDC recommends:

- Use a seat belt in every seat, on every trip, no matter how short
- Make sure children are always properly buckled in the back seat in a car seat, booster seat, or seat belt, whichever is appropriate for their age, height, and weight
- Choose not to drive while impaired by alcohol or drugs, and help others do the same
- Obey speed limits
- Drive without distractions (such as using a cell phone or texting) (CDC, 2016)

The Healthy People 2020 initiative originally set an objective of less than 8.0 motor vehicle crash deaths per 100,000 population (age-adjusted rate) for their Healthy People 2010 initiative. For the Healthy People 2020 update to the 2010 objectives, the goal was adjusted to less than 12.4 motor vehicle crash deaths per 100,000 population. **Figure 68** below illustrates the rates of motor vehicle crash deaths for Stanislaus County and California by three-year average rates as compared to the Healthy People targets.

- The California rates consistently remained below the Healthy People 2020 target.
- Stanislaus County rates of motor vehicle crash deaths fell from 2005-2007 to 2008-2010, but rose after that, with rates between 12 and 14 per 100,000 for the past five years of data.
- After rates being very close to the national objective, the 2014-2016 Stanislaus County rate of motor vehicle crash deaths is rising above the Healthy People 2020 target.
- Stanislaus County has much higher rates of motor vehicle crash deaths compared to California (14 per 100,000 compared to 8.8 per 100,000 in 2014-2016).

Figure 68: Motor Vehicle Crash Death Rates, Stanislaus County, All of California, and Healthy People Objectives, 2005-2016.



Source: Source: CDPH Vital Statistics Death Statistical Master Files, Epicenter, and Healthy People 2020

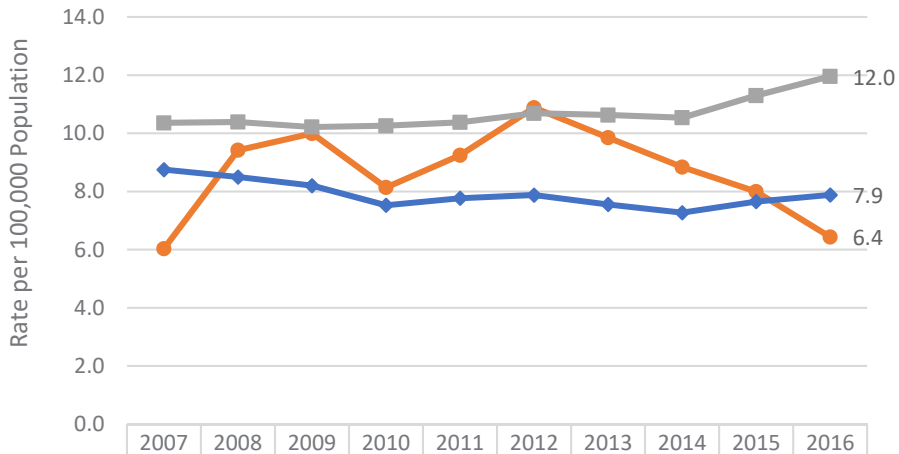
FIREARM FATALITIES

Deaths due to firearms are a common topic in the news. The 2018 fatal shooting of Newman police officer Ronil Singh during a routine traffic stop the morning after Christmas, made national headlines. (Stapely, 2018)

Figure 69 shows that from 2007 to 2016:

- Rates of death due to firearm in Stanislaus County were below U.S. rates for every year except 2012.
- California rates of deaths due to firearms stayed fairly consistent between 7.3 and 8.8 per 100,000, always well below US rates.
- Stanislaus County rates of death due to firearms fluctuated between 6.0 (2007) and 10.9 (2012) with rates dropping since 2012 to 6.4 per 100,000 in 2016.

Figure 69: Firearm Mortality Rates, by Jurisdiction, 2007-2016.



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Stanislaus	6.0	9.4	10.0	8.1	9.2	10.9	9.9	8.8	8.0	6.4
California	8.8	8.5	8.2	7.5	7.8	7.9	7.6	7.3	7.7	7.9
US	10.36	10.39	10.22	10.26	10.38	10.69	10.63	10.54	11.3	11.96

Source: CDPH Vital Statistics Death Statistical Master Files, Epicenter

HIGHLIGHTING DISPARITIES: Firearm Mortality

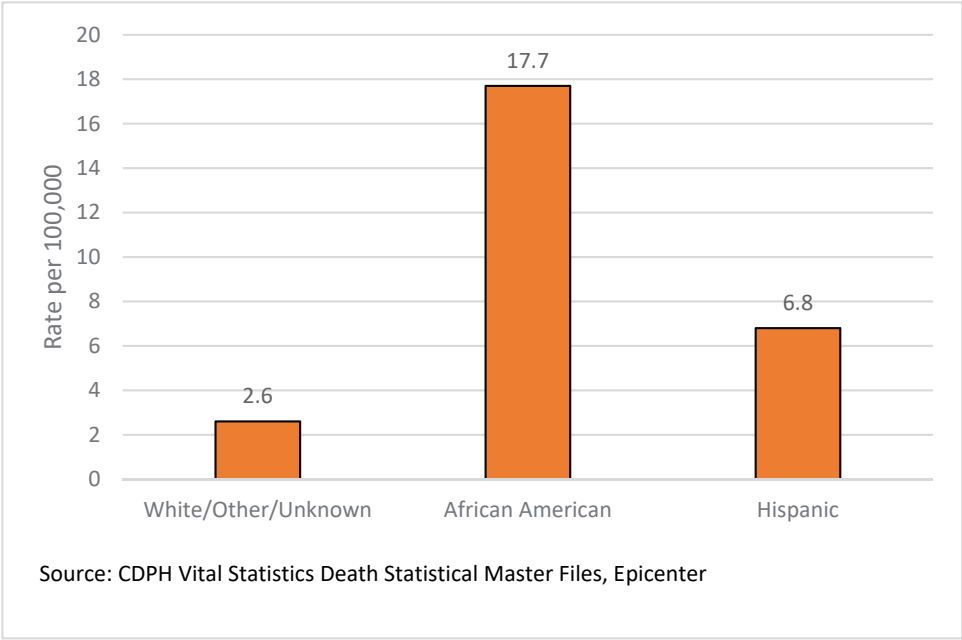
There are several disparities observed in the firearm mortality data. For example, in 2016 in Stanislaus County (Epicenter, 2018):

- 71% of firearm deaths were men
- 57% of firearm deaths were in the 25-44 age group
- 51.4% of firearm deaths were self-inflicted/suicide
- 80.7% of firearm suicides were among White/Other/Unknown, with a rate four times that of Hispanic/Latinx (7.7/100,000 firearm suicides among White/Other/Unknown, 1.9/100,000 firearm suicides among Hispanics)

Racial and ethnic disparities are also observed in victims of firearm homicide. From 2007-2016 in Stanislaus County (Epicenter 2019) (**Figure 70**):

- The death rate for firearm homicide for African Americans was 17.7 per 100,000 population, almost seven times the rate for White/Other/Unknown.
- The death rate for firearm homicide for Hispanics/Latinx was 6.8 per 100,000 population, over double the rate for White/Other/Unknown.

Figure 70: Rate of Death by Homicide with Firearm, by Race/Ethnicity, Stanislaus County, 2007-2016.



Source: CDPH Vital Statistics Death Statistical Master Files, Epicenter

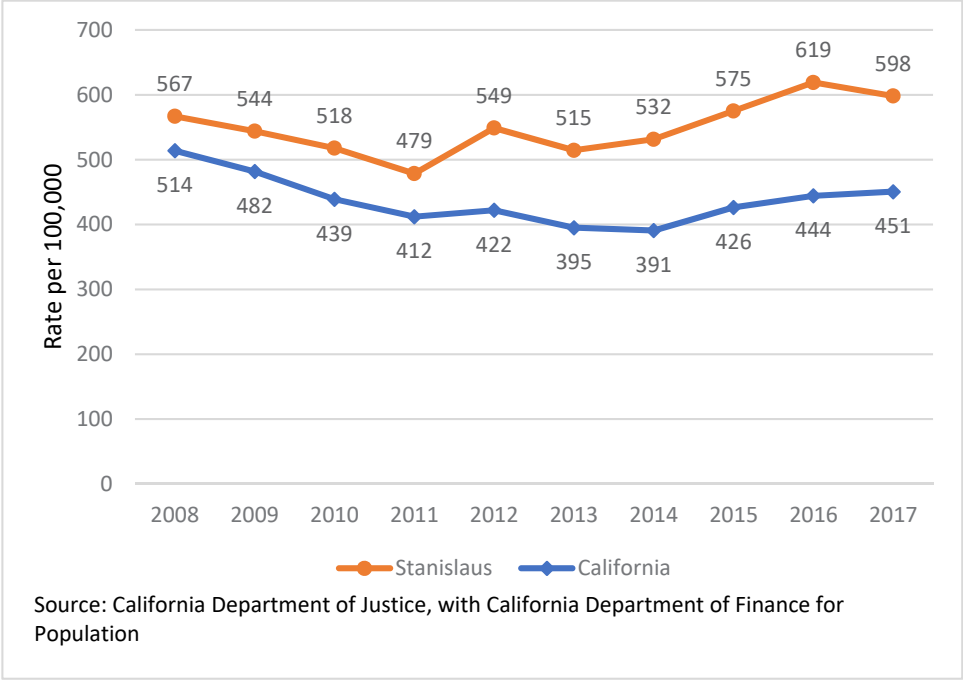
VIOLENT CRIME

Violent crime directly affects the health and lives of victims and their families, but its effects reach far into the community. According to the United States Department of Housing and Urban Development, "Exposure to violent crime can damage people's health and development, and violence can push communities into vicious circles of decay" (**USDHUD, 2016**). Additionally, violent crime has been found to have the largest effect on residents' perception of crime (**Hipp, 2013**).

There have been a few nationally reported violent crimes in Stanislaus County from the 2002 Laci Peterson murder to the recent 2018 murder of Ronil Singh, Newman police officer. **Figure 71** below shows the violent crime rate for Stanislaus County and California from 2008-2017.

- Stanislaus County has a higher violent crime rate than California, and the difference is growing.
- Stanislaus County saw an increase in violent crime rate of 5.5% from 2008-2017.
- California experienced a decrease in violent crime from 2008-2017, of 12%.

Figure 71: Violent Crime Rates, Stanislaus County and California, 2008-2017.

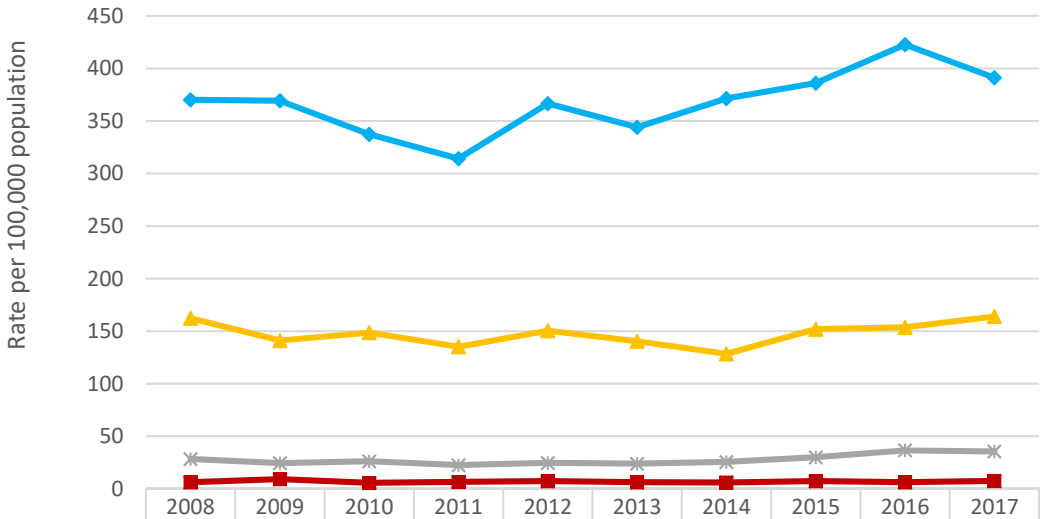


Source: California Department of Justice, with California Department of Finance for Population

When Stanislaus County's violent crime rate is analyzed by type (Homicide, Rape, Robbery, Aggravated Assault), the difference in the rates is clear (**Figure 72**).

- Aggravated assault accounted for 65.4% of Stanislaus County violent crime in 2017.
- Stanislaus County rates of reported homicide and rape have remained relatively consistent from 2008-2017, with homicide varying from 6-9 per 100,000, and rape from 23-37 per 100,000.
- Robbery rates have varied a little, but the Stanislaus County 2017 rate (164 per 100,000) is almost identical to the 2008 rate (162 per 100,000).

Figure 72: Violent Crime Rate by Type, Stanislaus County, 2008-2017.



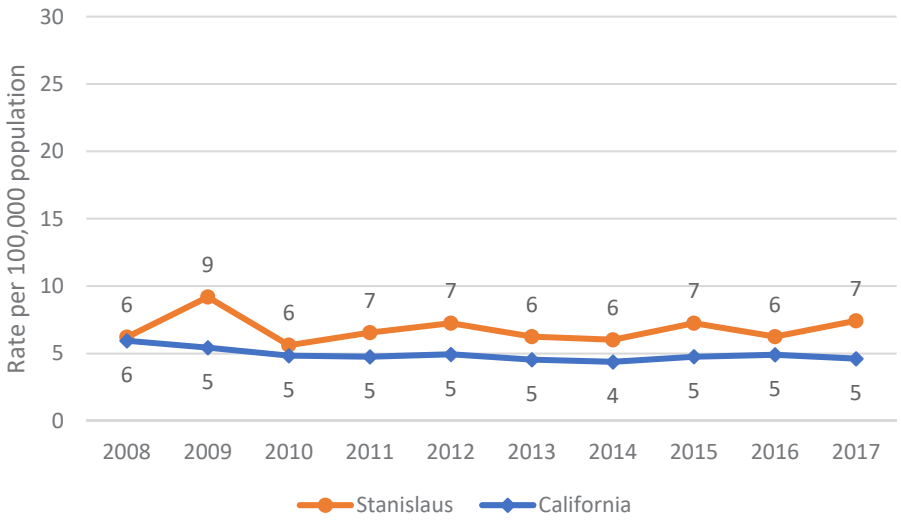
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Homicide	6	9	6	7	7	6	6	7	6	7
Rape	28	24	26	23	25	24	26	30	37	36
Robbery	162	141	149	135	150	140	128	152	154	164
Aggravated Assault	370	369	337	314	367	344	372	386	423	391

Source: California Department of Justice, with California Department of Finance for Population

Looking closer at homicide rates, Stanislaus County's rates are higher than the California average, but the numbers are small, so they vary a bit more. **Figure 73** below compares the homicide rate for Stanislaus County and California from 2008-2017.

- California homicide rates were at 6 per 100,000 population in 2008, and remained at 5 per 100,000 from 2009-2017, with 2014 showing a decrease to 4 per 100,000.
- Stanislaus County homicide rates were between 6 and 7 from 2008-2017, with an outlier in 2009 with a rate of 9 per 100,000.
- Healthy People 2020 set a goal of less than 5.5 homicides per 100,000 population. In 2017, California met that goal, but Stanislaus County did not.

Figure 73: Homicide Rate, Stanislaus County and California, 2008-2017.



Source: California Department of Justice, with California Department of Finance for Population

For more information on Injury and Violent Crime, go to:

- Injury and Violence Prevention, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention
- Safe and Active Communities Branch, California Department of Public Health: https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/SACB/Pages/Program-Landing2.aspx#
- Epicenter, CDPH Vital Statistics Death Statistical Master Files: http://epicenter.cdph.ca.gov
- Uniform Crime Reporting Program, Federal Bureau of Investigation: https://www.fbi.gov/services/cjis/ucr

THRIVING

Stanislaus County

ECONOMIC INSECURITY

Economic insecurity and health are closely linked. Low income families struggle to take care of their health, and the sick are less able to maintain steady income (Roberts, 2018).

"Healthy living, healthy life: you have a job, a good income, a place to live with your family all together. Then you have a healthy environment." -Key Informant Interviewee

Healthy People 2020 lists economic stability as one of five social determinants of health, encompassing poverty, employment, food insecurity, and housing instability. (Healthy People 2020, 2019) Economic insecurity is also an emerging social determinant of mental health. (Kopasker D, 2016)

POVERTY RATE

Poverty is associated with poor health outcomes. "[Low income families] have higher than average child and maternal mortality, higher levels of disease, and more limited access to health care and social protection." Also children in poverty are more likely to experience low birth weight, chronic diseases like asthma, obesity and high blood pressure, increased accidental injuries, lack of school readiness, toxic stress, and adverse childhood experiences (American Academy of Pediatrics, 2016).

Risk Factors for Poverty

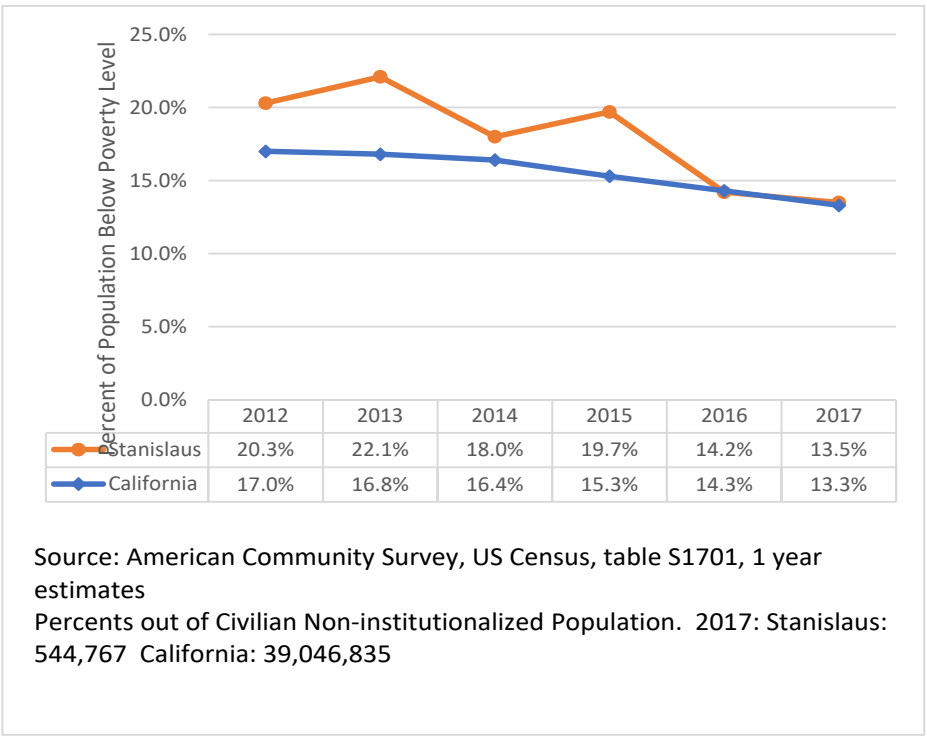
- **Race**
- **Education**
- **Marital Status**
- **Age**

Source: (Washington University in St. Louis, 2016)

Figure 74 below illustrates the percent of the population below federal poverty level in Stanislaus County and California from 2012 to 2017.

- From 2012-2015, Stanislaus County poverty rates were higher than California rates.
- In 2016 and 2017, estimates of poverty rates in Stanislaus County and California were very similar.
- Overall, from 2012-2017, poverty rates in California and Stanislaus County have decreased; Stanislaus County poverty rates have decreased by 33%, and California rates have decreased by 22%.

Figure 74: Poverty Rate, Stanislaus County and California, 2012-2017.



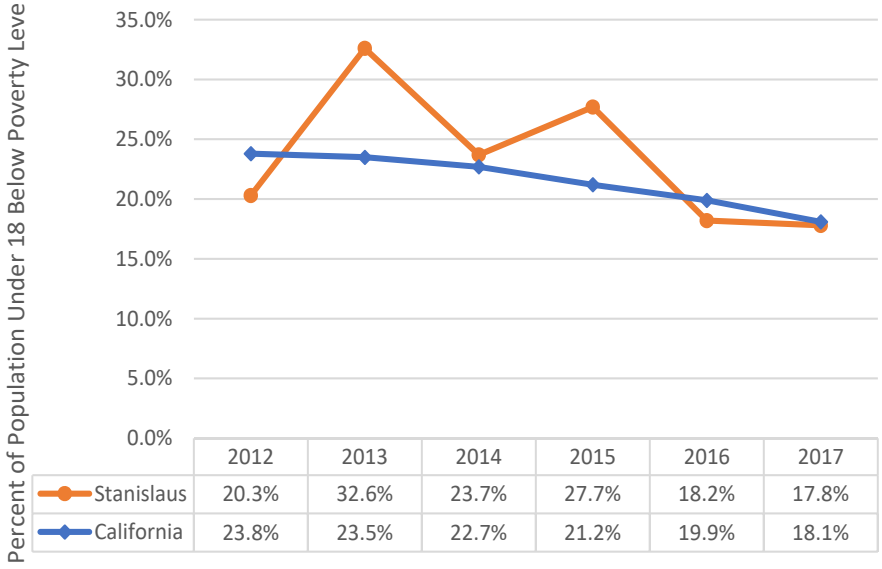
	2012	2013	2014	2015	2016	2017
Stanislaus	20.3%	22.1%	18.0%	19.7%	14.2%	13.5%
California	17.0%	16.8%	16.4%	15.3%	14.3%	13.3%

Source: American Community Survey, US Census, table S1701, 1 year estimates
Percents out of Civilian Non-institutionalized Population. 2017: Stanislaus: 544,767 California: 39,046,835

Figure 75 below shows the percentage of children under 18 below the federal poverty level for Stanislaus County and California from 2012-2017.

- The California child poverty rate has been steadily decreasing from 2012-2017.
- The Stanislaus County child poverty rate has fluctuated from 2012-2017.
- Overall, from 2012-2017, child poverty rates in Stanislaus County and California have decreased; the Stanislaus County child poverty rate in 2017 was 12 percent less than in 2012, the California child poverty rate in 2017 was 24 percent less than in 2012.

Figure 75: Child Poverty Rate, Stanislaus County and California, 2012-2017.



	2012	2013	2014	2015	2016	2017
Stanislaus	20.3%	32.6%	23.7%	27.7%	18.2%	17.8%
California	23.8%	23.5%	22.7%	21.2%	19.9%	18.1%

Source: American Community Survey, US Census, 1 year estimates, table S1701.
Percents out of children under 18 years for whom poverty status is determined: 2017: Stanislaus 146,544 California: 8,921,391

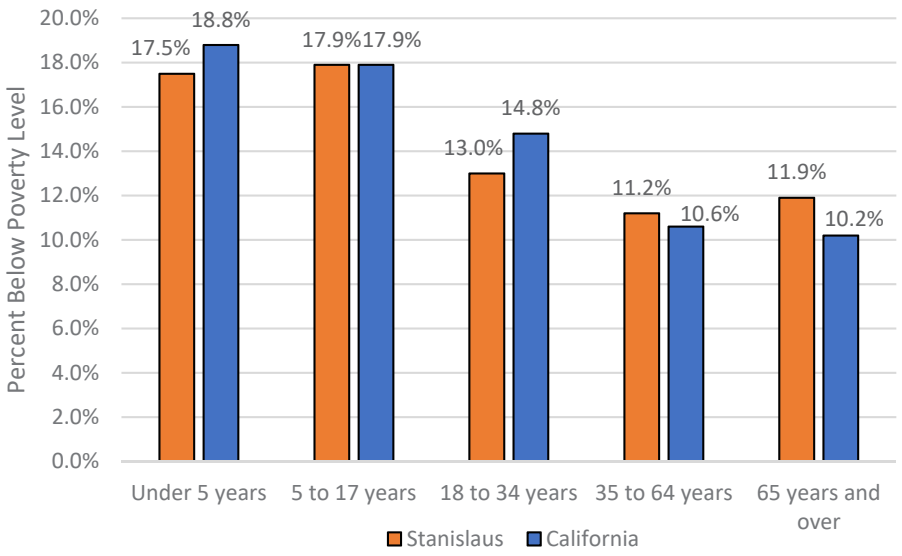
HIGHLIGHTING DISPARITIES: Poverty Rates

Poverty rates vary by many factors. Age, racial and ethnic group, and geography show notable differences in Stanislaus County poverty rates.

Breaking down poverty rates by age group shows that economic insecurity is not evenly distributed (**See Figure 76**).

- In California, poverty rates decrease with increasing age.
- In Stanislaus County, the highest poverty rate was among children ages 5 to 17. In California, the highest poverty rate group was among children under 5 years old.
- With the exception of young adults ages 18 to 34 years, Stanislaus County poverty rates were higher or equal to California poverty rates for every age group.
- In Stanislaus County, the poverty rate for seniors age 65 and older was higher than for adults age 35 to 64. In California, the poverty rate for seniors age 65 and older was lower than for adults age 35 to 64.

Figure 76: Poverty Rates by Age Group, Stanislaus County and California, 2017.

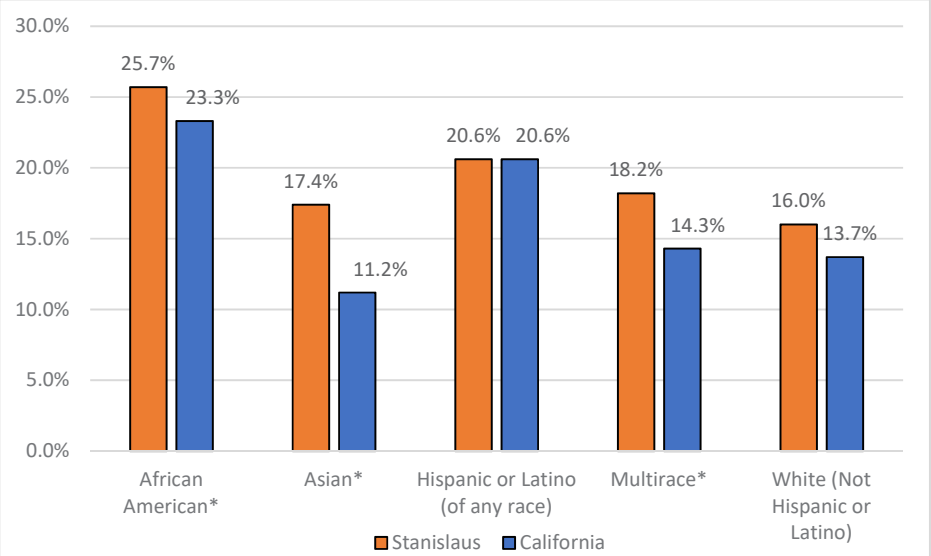


Source: American Community Survey, US Census, Table S1701, 2017 1-year estimate
Percents out of population for whom poverty status is determined:
Under 5 years: Stanislaus: 39,051 California: 2,421,496
5 to 17 years: Stanislaus: 107,493 California: 6,499,895
18 to 34 years: Stanislaus: 132,156 California: 9,451,738
35 to 64 years: Stanislaus: 195,389 California: 15,009,820
65 years and over: Stanislaus: 69,453 California: 5,410,078

Figure 77 below looks at poverty rates by racial and ethnic group for Stanislaus County and California in 2017.

- In California and Stanislaus County, the highest poverty rates were among African Americans and Hispanics/Latinos.
- In California, the lowest poverty rate was among Asians.
- In Stanislaus County the lowest poverty rate was among White Non-Hispanics.

Figure 77: Poverty Rates by Racial and Ethnic Group, Stanislaus County and California, 2017

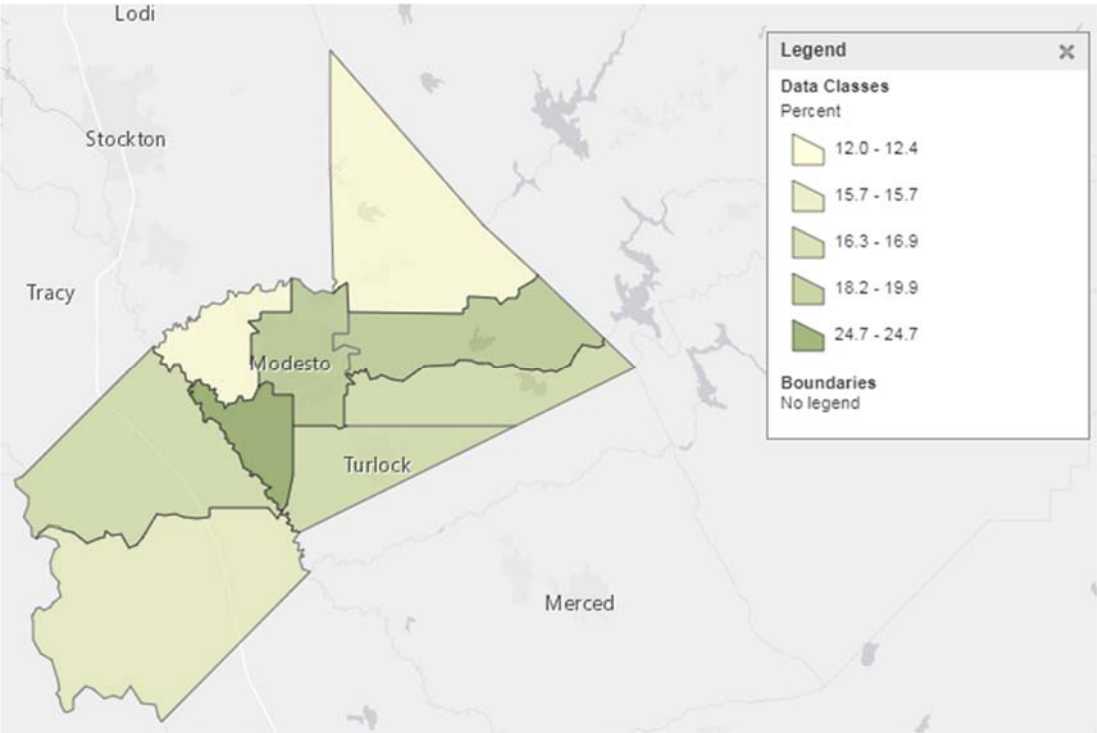


*Hispanic/Latino and Non-Hispanic/Latino
Source: American Community Survey, US Census, Table S1701, 2017 5-year estimate

Figure 78 is a map of Stanislaus County census districts by poverty rate from 2013-2017.

- The Westport census district, a primarily agricultural area between Patterson and Modesto, had the highest poverty rate in Stanislaus County from 2013-2017.
- The Salida census district had the lowest poverty rate in Stanislaus County from 2013-2017.
- Where the countywide poverty rate from 2013-2017 was 17.2 percent, the range for census districts was 12.0 to 24.7 percent.

Figure 78: Poverty Rate by Census District, Stanislaus County, 2013-2017.



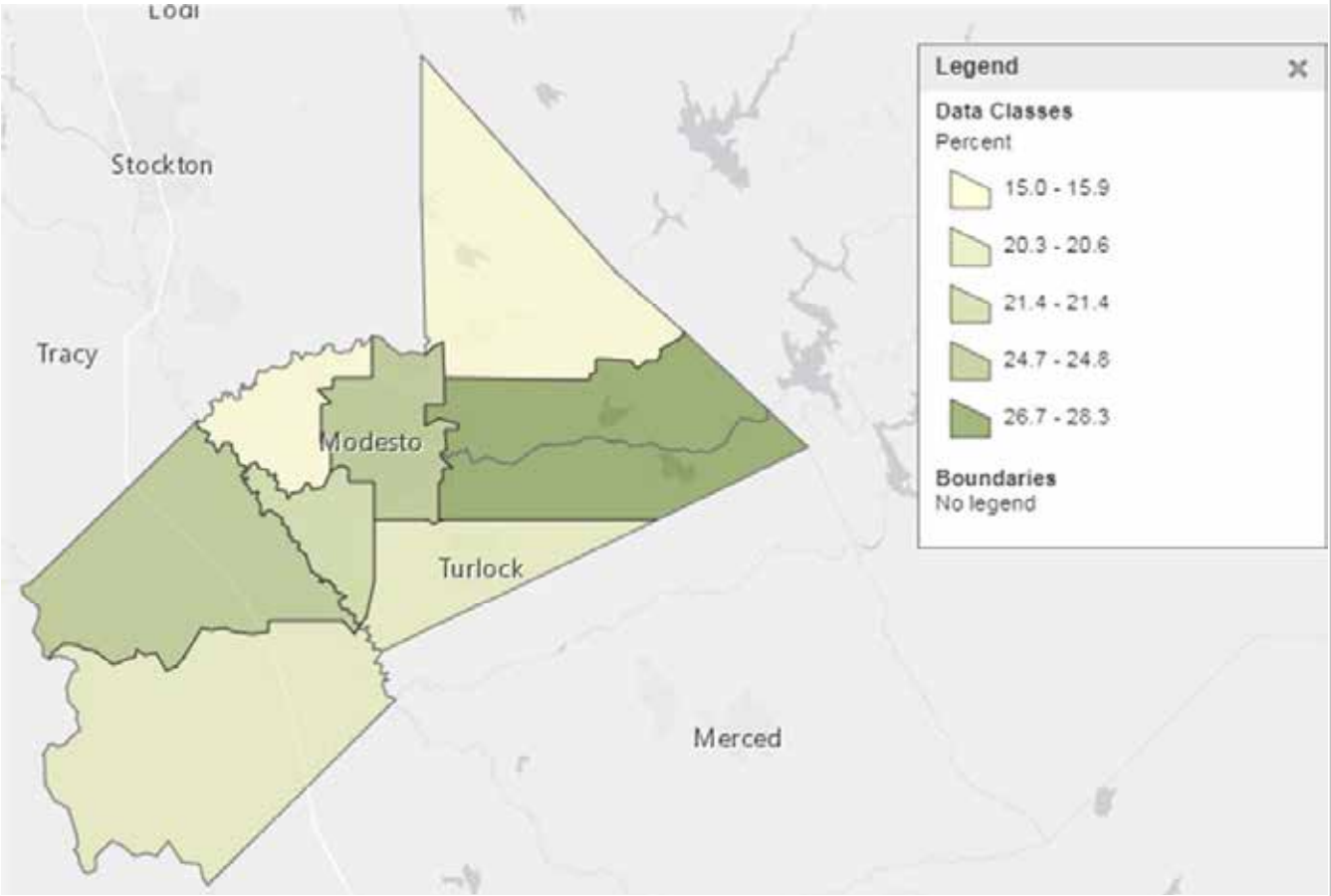
Poverty rate by Census District	
Stanislaus County Overall	17.2%
Hughson CCD	16.9%
Modesto CCD	18.2%
Newman CCD	15.7%
Oakdale CCD	12.4%
Patterson CCD	16.5%
Salida CCD	12.0%
Turlock CCD	16.3%
Waterford CCD	19.9%
Westport CCD	24.7%

Source: American Community Survey, US Census, Table S1701, 2013-2017 5-year estimate

Figure 79 is a map of Stanislaus County census districts by child poverty rate from 2013-2017.

- The Oakdale census district had the highest child poverty rate in Stanislaus County from 2013-2017.
- The Waterford census district had the lowest child poverty rate in Stanislaus County from 2013-2017.
- Where the countywide child poverty rate from 2013-2017 was 23.2 percent, the range of child poverty rates by census district was 15.0 percent to 28.3 percent.

Figure 79. Child Poverty Rate by Census District, Stanislaus County, 2013-2017.



Child Poverty rate by Census District

Stanislaus County Overall	23.2%
Hughson CCD	26.7%
Modesto CCD	24.7%
Newman CCD	20.3%
Oakdale CCD	15.0%
Patterson CCD	24.8%
Salida CCD	15.9%
Turlock CCD	20.6%
Waterford CCD	28.3%
Westport CCD	21.4%

Source: American Community Survey, US Census, Table S1701, 2013-2017 5-year estimate

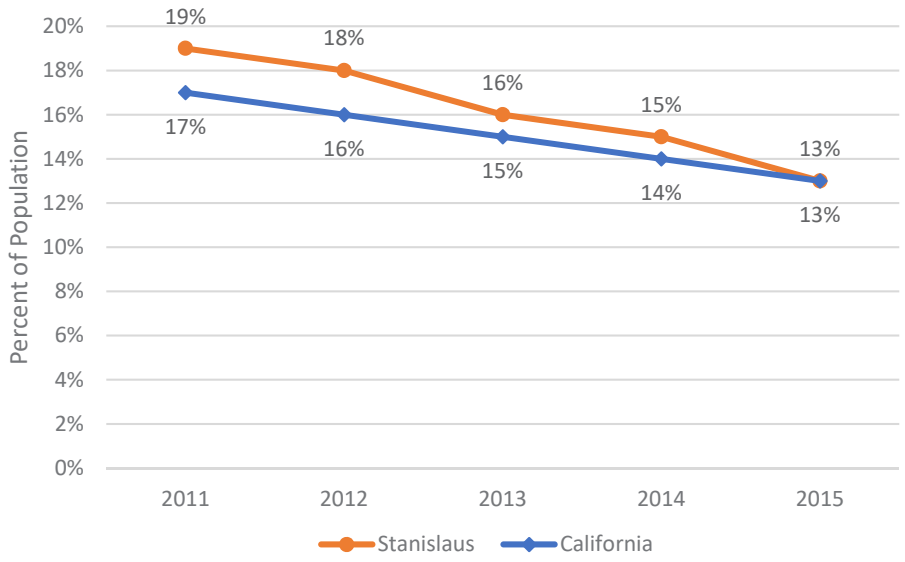
FOOD INSECURITY

Food insecurity describes not having enough food to eat. County Health Rankings uses data from Map the Meal Gap to compare data on food insecurity with the definition of "the percentage of the population who lack adequate access to food" (County Health Rankings, 2019).

Figure 80 looks at the percent of the population lacking adequate access to food in Stanislaus County and California from 2011-2015.

- For Stanislaus County and California, the percent of the population lacking adequate access to food decreased steadily from 2011-2015.
- Stanislaus County rates of food insecurity were two percentage points higher than California in 2011, but Stanislaus County and California rates were the same in 2015.

Figure 80: Percent of Population Lacking Adequate Access to Food, Stanislaus County and California, 2011-2015.



Source: Map the Meal Gap, as cited on County Health Rankings 2014-2018
Percents are out of total population.

UNEMPLOYMENT RATE

Unemployment has direct effects on a person's health, and that of their family. "A good-paying job makes it easier for workers to live in healthier neighborhoods, provide quality education for their children, secure child care services, and buy more nutritious food—all of which affect health" (Robert Wood Johnson Foundation, 2013).

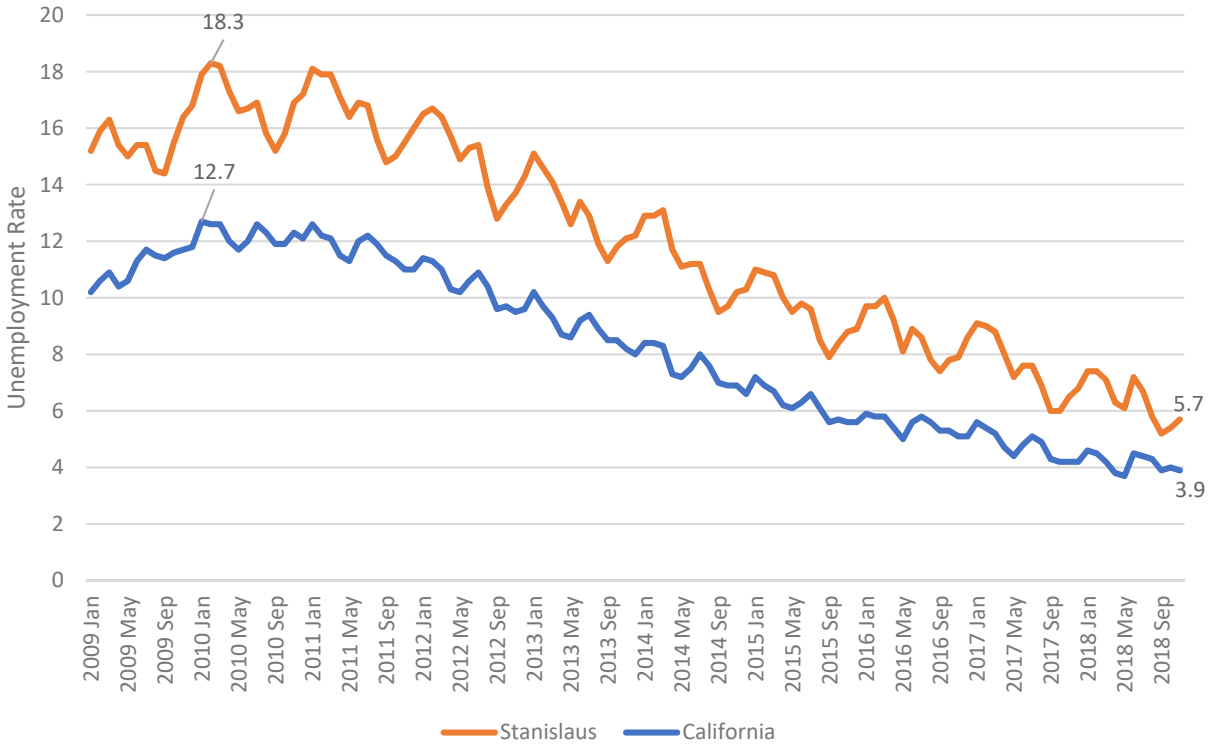
The unemployment rate is calculated as the percent of people who are unemployed[5] out of everyone in the labor force (employed and not employed) (Bureau of Labor Statistics, 2015).

[5]According to the Bureau of Labor Statistics, unemployed is defined as someone without a job, has actively looked for work in the past four weeks, and is currently available for work (except for temporary illness) (Bureau of Labor Statistics, 2015)

Figure 81 shows the non-seasonally adjusted monthly unemployment rates for Stanislaus County and California from January 2009 to November 2018.

- After peaks in January/February 2010, unemployment rates have been declining through November of 2018 for Stanislaus County and California.
- Stanislaus County unemployment rates have remained consistently higher than California from January 2009 through November 2018.
- Stanislaus County has stronger seasonal fluctuations in unemployment rates than California.

Figure 81: Monthly Unemployment Rate, Stanislaus County and California, January 2009 and November 2018.



Source: U.S. Department of Labor, Bureau of Labor Statistics, Unemployment Rate, Stanislaus County County.

For more information on Economic Insecurity, go to:

- Poverty, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/poverty
- Bureau of Labor Statistics, U.S. Department of Labor: https://www.bls.gov/home.htm

EDUCATION

Education is a key social determinant of health. The Virginia Commonwealth University Center on Society and Health (2014) identified three main connections between health and education in their issue brief "Why Education Matters to Health: Exploring the Causes":

"It [partnering with schools] provides a wealth of opportunity to set people on a different trajectory."
–Key Informant Interviewee

1. Education can create opportunities for better health. (Income resources, Social/psychological benefits, Healthy behaviors, Healthier neighborhoods)
2. Poor health can put education at risk (reverse causality). (Attendance, Concentration, Learning disabilities)
3. Conditions throughout people's lives can affect both education and health. (Social policies, Individual/family characteristics)

PRESCHOOL ENROLLMENT

Research has shown early education before school years to have beneficial effects including improved health and reduced behavioral risk factors by age 21 (Muenning P. R., 2011 Muenning P. S., 2009). Preschool enrollment and associated school readiness have been shown to improve educational achievement, especially for children from disadvantaged families. (Magnuson, 2004)

Preschool Enrollment Contributing Factors:

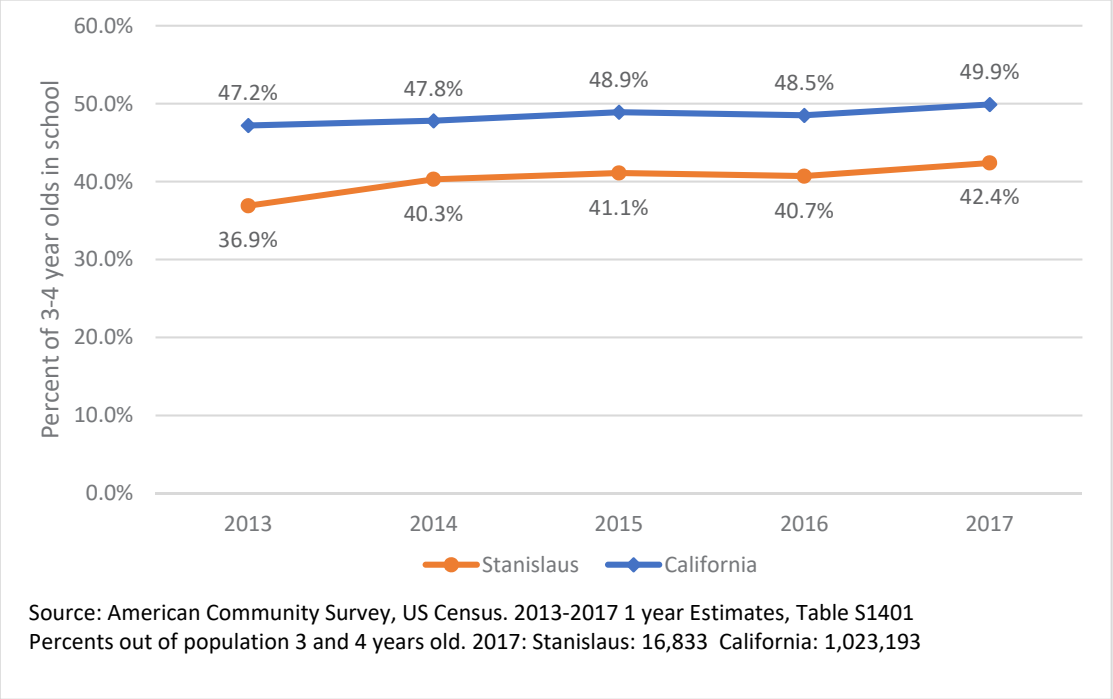
- **Poverty**
- **Ethnicity**
- **Maternal Education Level**
- **Maternal Employment**
- **Family Type**

Source: (Child Trends , 2014)

Figure 82 shows the percent of 3-4 year-olds enrolled in nursery school or preschool for Stanislaus County and California.

- The percent of 3-4 year-olds in school was consistently higher in California compared to Stanislaus County from 2013-2017.
- With the exception of 2016, the percent of 3-4 year-olds enrolled in school increased every year from 2013-2017.
- In 2017, almost half of all California 3-4 year-olds were enrolled in school, compared to only 42% of Stanislaus County 3-4 year-olds.

Figure 82: Percent of 3-4 year olds enrolled in Nursery School/Pre-School, Stanislaus County and California, 2013-2017.



Source: American Community Survey, US Census. 2013-2017 1 year Estimates, Table S1401
Percents out of population 3 and 4 years old. 2017: Stanislaus: 16,833 California: 1,023,193

THIRD GRADE READING LEVEL

"Up until the end of third grade, most children are learning to read. Beginning in fourth grade, however, they are reading to learn, using their skills to gain more information in subjects such as math and science, to solve problems, to think critically about what they are learning, and to act upon and share that knowledge in the world around them" (Annie E. Casey Foundation, 2010). "Struggling readers rarely catch up with their peers academically and are four times more likely to drop out of high school, lowering their earning power as adults and possibly costing society in welfare and other supports" (Center for Public Education , 2015).

Contributing Factors for Third Grade Reading Level:

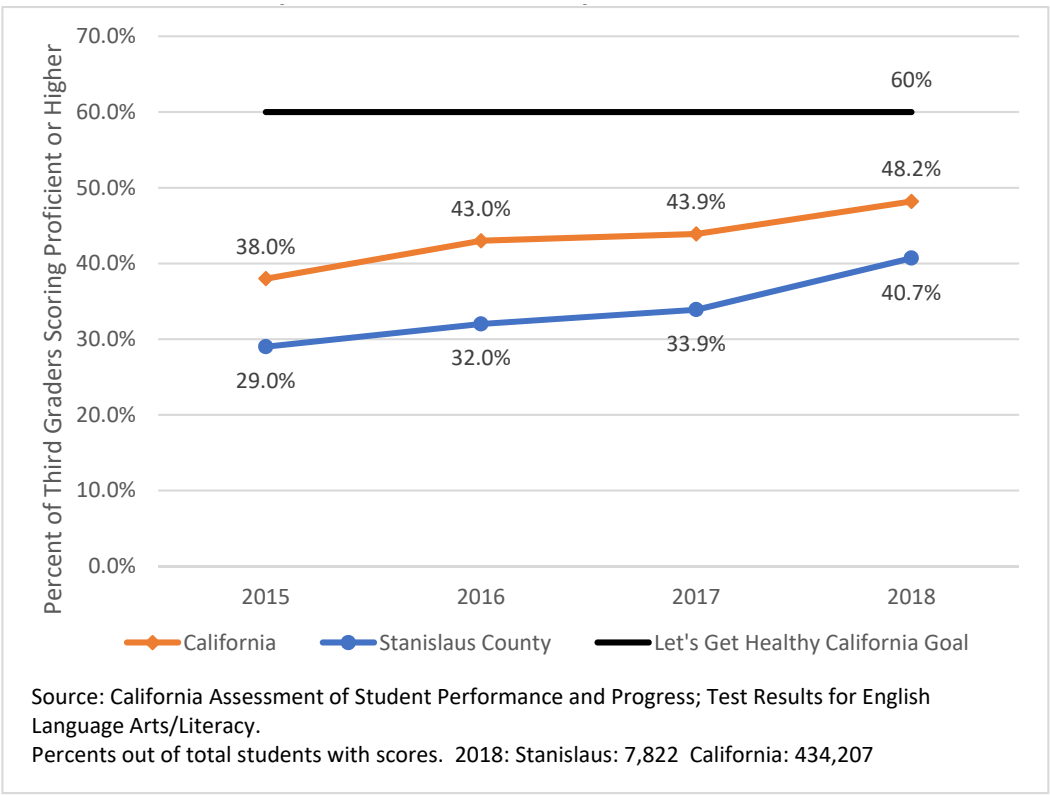
- **School Readiness** *(health, language, social-emotional skills, quality early care and learning)*
- **Chronic Absence** *(from school)*
- **Summer Learning Loss**
- **Family Stressors** *(hunger, housing insecurity, toxic stress etc.)*
- **High Quality Teaching** *(at home, school and community)*

Source: (Annie E. Casey Foundation, 2013)

In 2013, the California Assessment of Student Performance and Progress (CAASPP) program became the new standard assessment for school children. In the spring of 2016, these CAASPP assessments began to use the Smarter Balanced Assessment System with computerized adaptive technology to test students in grades three through eight and eleven for alignment with standards in English Language Arts/Literacy and Mathematics. The English Language Arts/Literacy assessment includes subsections of Reading, Writing, Listening, and Research/Inquiry. The CAASPP English Language Arts/Literacy results are used here as a proxy for third grade reading level. **Figure 83** shows the percent of third grade students scoring proficient or higher on the English Language Arts/Literacy CAASPP exam. Let's Get Healthy California set a goal of 60% of third grade students scoring proficient or better by 2022.

- From 2015-2018, the percent of students in Stanislaus County and California who have scored proficient or higher on the CAASPP English Language Arts/Literacy exam has been rising.
- In 2018, less than half of California third grade students, and only two in five Stanislaus County third grade students have scored proficient or higher on the CAASPP English Language Arts/ Literacy exam.
- Stanislaus County has a consistently lower percentage of third grade students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam compared with California third grade students.
- Neither California nor Stanislaus has reached the Let's Get Healthy California goal of 60% of third grade students scoring proficient or better as of 2018.

Figure 83: Percent of Third Grade Students Scoring Proficient or Higher on CAASPP English Language Arts/Literacy Exam, Stanislaus County and California, 2015-2018.



Source: California Assessment of Student Performance and Progress; Test Results for English Language Arts/Literacy.
Percents out of total students with scores. 2018: Stanislaus: 7,822 California: 434,207

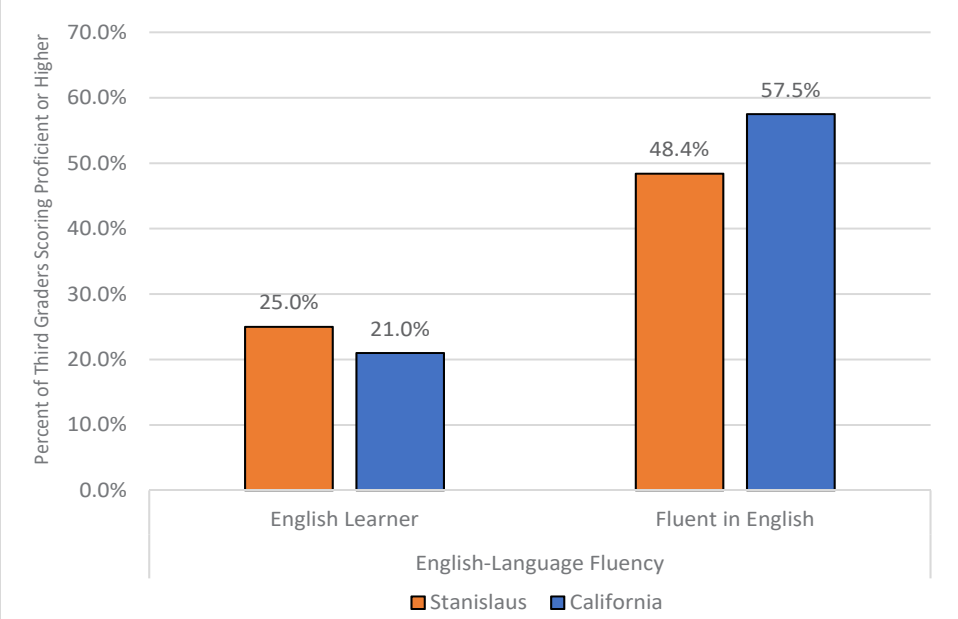
HIGHLIGHTING DISPARITIES: Third Grade Reading Level

Several notable disparities can be seen in the results of the CAASPP English Language Arts/ Literacy exam. The most striking disparities are in English-language fluency and economic status, but there is also a large variation in results between racial and ethnic groups.

Figure 84 shows the percentage of third grade students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam for English language learners[6] compared with students who are fluent in English.

- In Stanislaus County in 2018, the percent of third grade students who were fluent in English that scored proficient or higher on the CAASPP English Language Arts/Literacy exam was almost double compared to students who were English learners.
- In California in 2018, the percent of third grade students who were fluent in English and scored proficient or higher on the CAASPP English Language Arts/Literacy exam was almost triple compared to students who were English learners.
- Stanislaus County third grade English learner students scored higher on the CAASP English Language Arts/Literacy exam compared to California English learner students, but Stanislaus County third grade students fluent in English did not score as well as California students fluent in English.

Figure 84: Percent of Third Grade Students Scoring Proficient or Higher on CAASPP English Language Arts/Literacy Exam, by English Language Fluency, Stanislaus County and California, 2018.



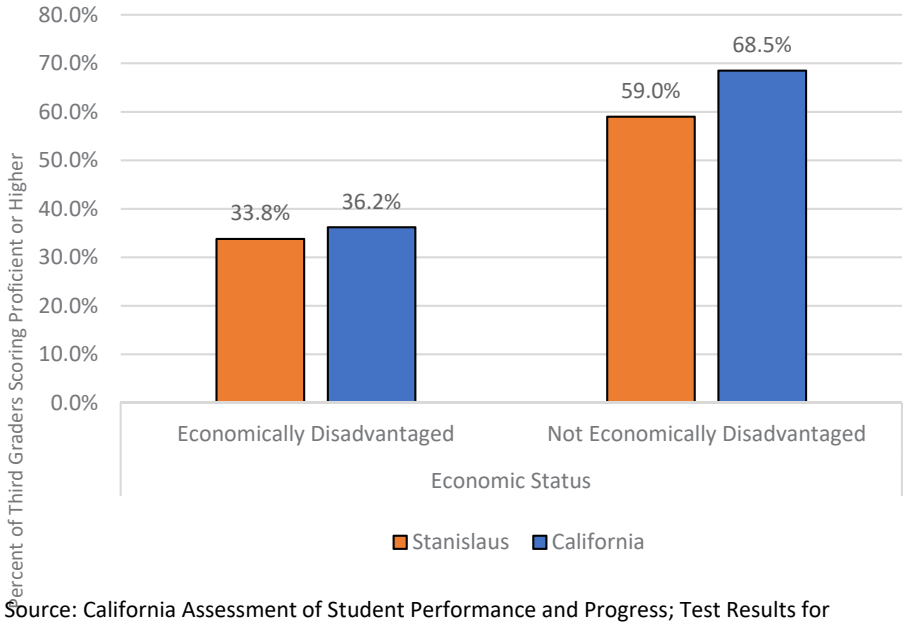
Source: California Assessment of Student Performance and Progress; Test Results for English Language Arts/Literacy.
Percents out of total students with scores: English Learner Stanislaus: 2,572 English Learner California: 109,880
Fluent in English: Stanislaus: 5,242 California: 323,704

[6]According to the California Department of Education, English learners are students who do not speak, read, write or understand English well as a result of English not being their home language. https://www.cde.ca.gov/sp/el/

Comparison of CAASPP scores by economic status also shows notable disparities. **Figure 85** looks at the percent of third graders who scores proficient or higher on the CAASPP English Language Arts/Literacy exam for students who were economically disadvantaged[7] compared to those not classified as economically disadvantaged for Stanislaus County and California in 2018.

- California third grade students of both economic categories scored proficient or higher more often than Stanislaus County students.
- Almost twice as many students who are not economically disadvantaged scored proficient or higher on the CAASPP English Language Arts/Literacy exam compared to students that are economically disadvantaged.

Figure 85: Percent of Third Grade Students Scoring Proficient of Higher on CAASPP English Language Arts/Literacy Exam, by Economic Status, Stanislaus County and California, 2018.



Source: California Assessment of Student Performance and Progress; Test Results for English Language Arts/Literacy.

Percents out of students with scores: Economically Disadvantaged: Stanislaus: 5,683 California: 272,413

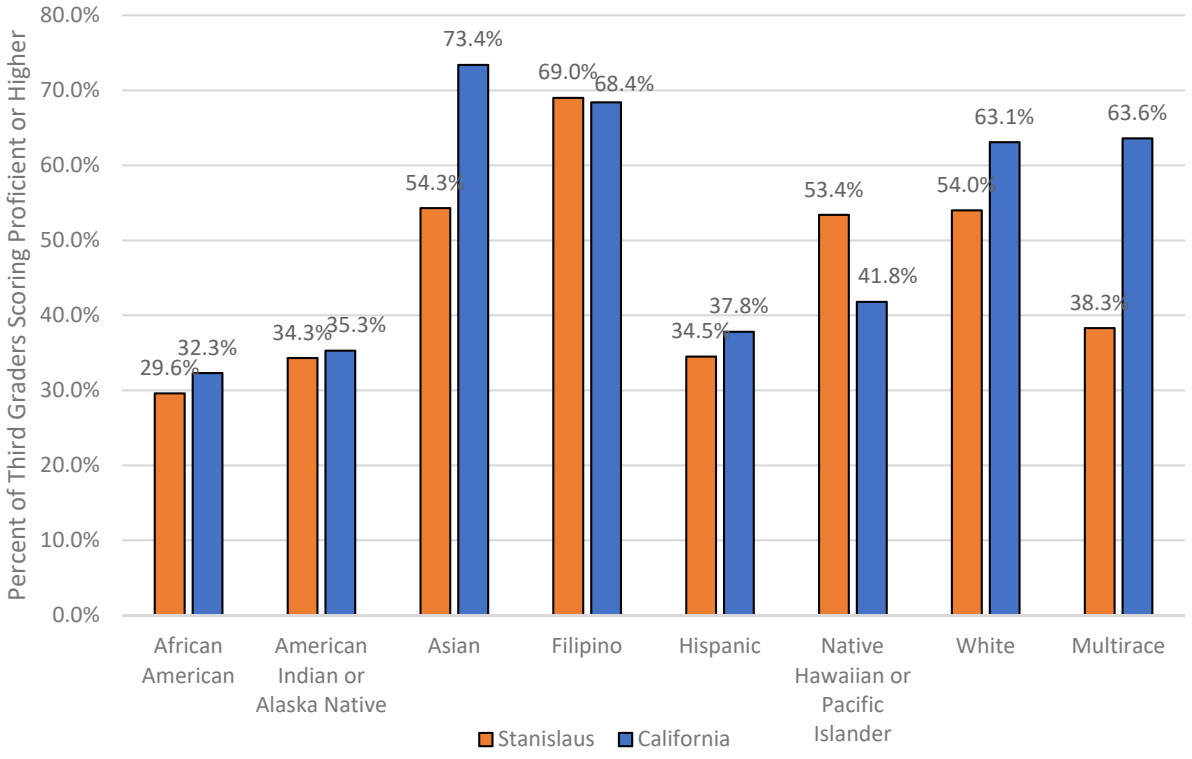
Not Economically Disadvantaged: Stanislaus: 2,139 California: 161,794

[7]According to the California Department of Education, students are classified as having an economic disadvantage if: (Student's parent or guardian is not a high school graduate), Student is directly certified to receive free meals through the National School Lunch Program (NSLP), and/or student has a Student Program record for one of the following programs: Free Meal Program, Reduced-Price Meal Program, Migrant Program, Homeless Program, or Foster youth. (CDOE , 2014)

Additionally, there were differences seen in CAASPP scores between students of different racial and ethnic groups. **Figure 86** illustrates the percent of third grade students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam by racial and ethnic group in Stanislaus County and California in 2018.

- African American third graders had the lowest percent of students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam out of all racial and ethnic groups.
- Among California students, the highest percentage of students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam was among Asian students, but in Stanislaus County the highest percentage was among Filipino students.
- With the exception of Filipino students and Native Hawaiian or Pacific Islander students, the percent of California students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam was higher than for Stanislaus County students.
- The largest differences in percentages of third grade students scoring proficient or higher on the CAASPP English Language Arts/Literacy exam between Stanislaus County and California was in multiracial students and Asian students.

Figure 86: Percent of Third Grade Students Scoring Proficient or Higher on CAASPP English Language Arts/Literacy exam, by Racial and Ethnic Group, Stanislaus County and California, 2018.



Source: California Assessment of Student Performance and Progress; Test Results for English Language Arts/Literacy.

HIGH SCHOOL GRADUATION RATE

Dropping out of high school is a risk factor for a myriad of economic and health outcomes. Students who drop out of high school are more likely to report overall poor health, more frequently suffer from chronic health conditions, and are at higher risk of premature death. (Healthy People 2020, 2019)

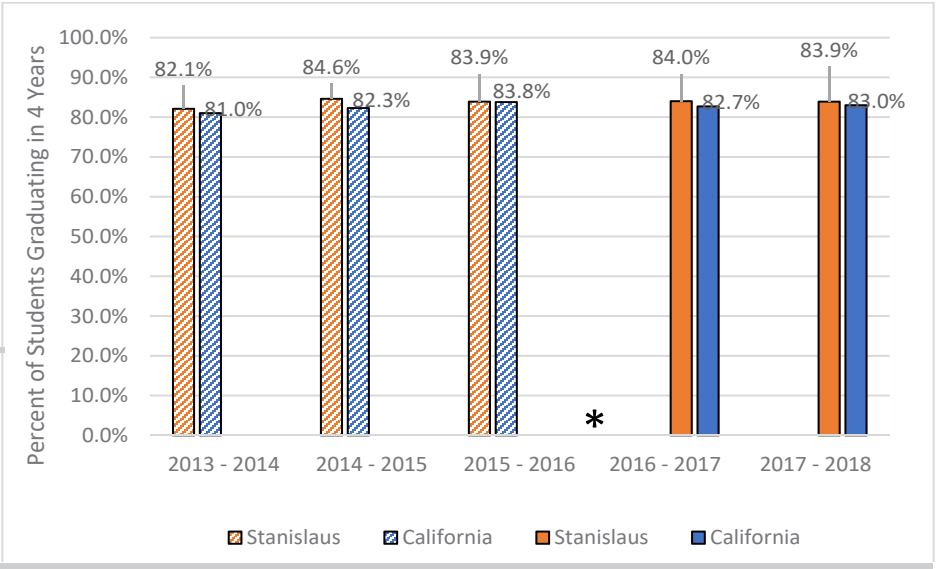
Figure 87 looks at the percent of high school students graduating in four years for Stanislaus County and California, for the 2013-2014 school year to the 2017-2018 school year. There was a change in how this number was calculated after the 2015-2016 school year to better match national guidance; rates from before that change should not be compared to rates after. Healthy People 2020's target for four-year graduation rates is 87%.

- The percent of Stanislaus County high school students graduating in four years was higher than for California students for both calculation methods.
- Graduation rates in Stanislaus County and California for 2016-2017 were almost the same as for 2017-2018.
- The Stanislaus County and California 2017-2018 four-year graduation rates did not meet the Healthy People 2020 goal of 87%.

Contributing Factors for Not Completing High School:

- **Pushed out**
  (missed school days, was getting poor grades/failing school, could not keep up with schoolwork, thought could not complete course requirements, could not get along with teachers, could not get along with others, was suspended, thought would fail competency test, did not feel safe, was expelled)
- **Pulled out**
  (thought it would be easier to get GED, was pregnant, had to support family, had to care for a member of the family, became parent of a baby, married or planned to get married, got a job, could not work at same time)
- **Falling Out**
  (did not like school, did not feel belonged there, changed schools and did not like the new one)

Figure 87: Four Year Graduation Rate for High School Students, Stanislaus County and California, 2013-2018.



Source: California Department of Education, 2019

*There was a change in how graduation rates were calculated after the 2015-2016 school year to better match national guidance; rates from before that change should not be compared to rates after.

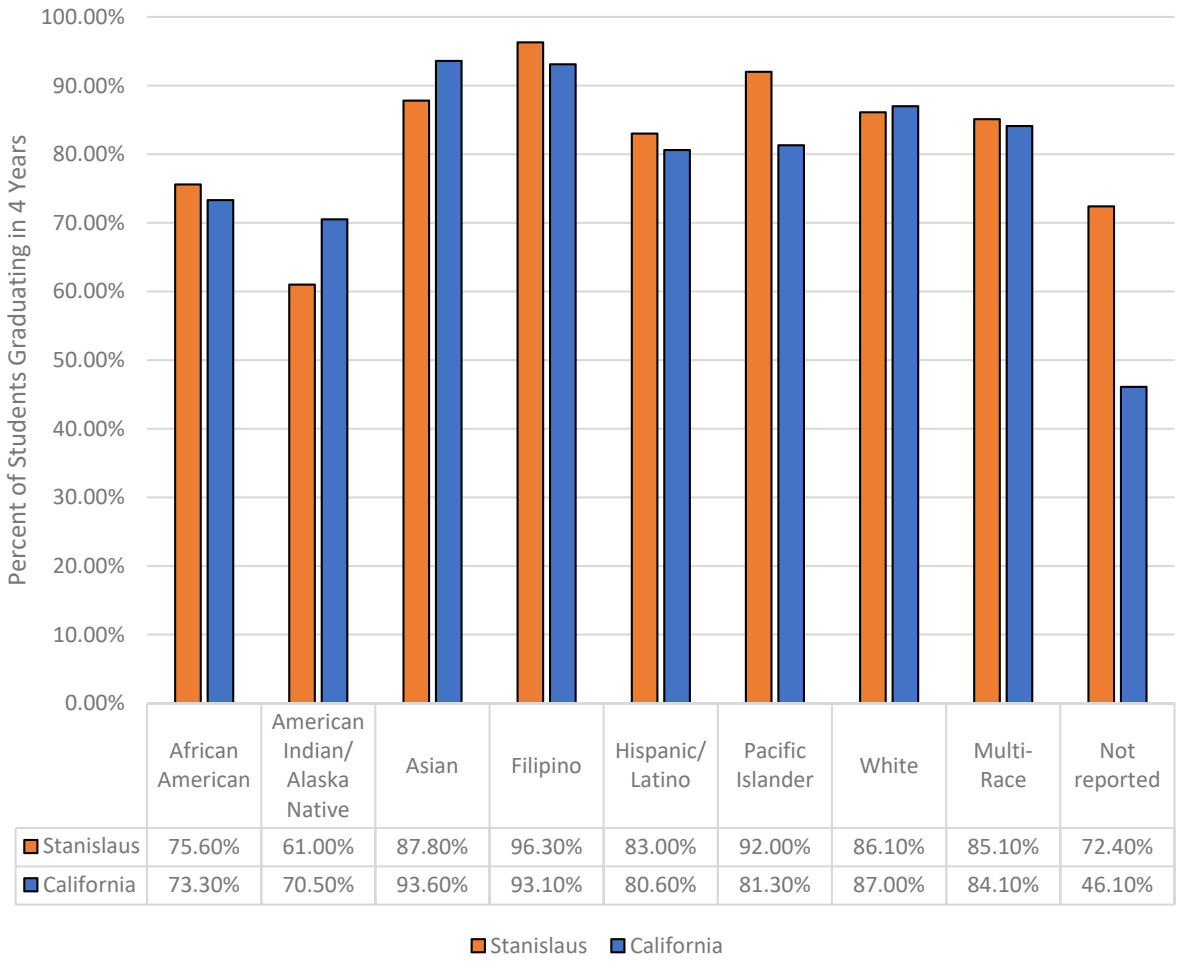
Percents are total number of students graduating with a regular high school diploma in four years out of number of students in the cohort (students who enter grade 9, plus transfers in, minus transfers out, leaves the country, transfers to prison or juvenile facility, or dies). 2017-2018 Stanislaus cohort: 8,450 California cohort: 504,073

HIGHLIGHTING DISPARITIES: High School Graduation Rate

Some differences are seen in the percent of students who graduate from high school in four years when stratified by racial and ethnic group. **Figure 88** looks at four-year high school graduation rates by racial and ethnic group for Stanislaus County and California for the 2017-2018 graduation school year.

- In Stanislaus County, the highest four-year graduation rate was for Filipino students, and the lowest was for American Indian/Alaska Native students.
- In California, the highest four-year graduation rate was for Asian students, and the lowest was for students who did not report a race or ethnicity.
- The biggest difference observed in four-year graduation rates between California students and Stanislaus County students was for the students who did not report a race or ethnicity.

Figure 88: Four-Year Graduation Rate for High School Students, by Racial and Ethnic Group, Stanislaus County and California, 2017-2018.



	African American	American Indian/ Alaska Native	Asian	Filipino	Hispanic/ Latino	Pacific Islander	White	Multi-Race	Not reported
Stanislaus	75.60%	61.00%	87.80%	96.30%	83.00%	92.00%	86.10%	85.10%	72.40%
California	73.30%	70.50%	93.60%	93.10%	80.60%	81.30%	87.00%	84.10%	46.10%

Source: California Department of Education, 2019

HIGHEST LEVEL OF EDUCATION BY INCOME

"Well-educated people experience better health than the poorly-educated, as indicated by high levels of self-reported health and physical functioning and low levels of morbidity, mortality and disability[…] We conclude that high educational attainment improves health directly, and it improves health indirectly through work and economic conditions, social-psychological resources, and health lifestyle" (Ross, 1995).

Figure 89 shows the highest level of education for adult residents of Stanislaus County, age 25 and Over.

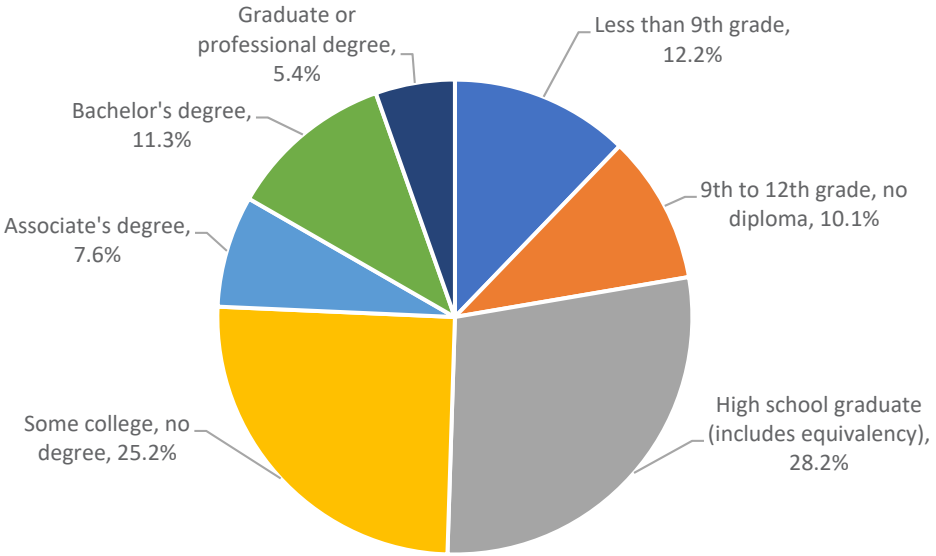
- Over half of Stanislaus County adults age 25 and older have a high school degree or less.
- Only 16 percent of Stanislaus County adults have at least a four-year college degree.
- Almost one-eighth of Stanislaus County adults have less than a 9th grade education.

Contributing Factors: for Educational Attainment

- **Schoolwide Factors** *(low expectations, class size, safety, rigorous curriculum, etc.)*
- **Teacher and Teaching-Related Factors** *(poor teacher preparation, inadequate materials, uncertified and inexperienced teachers, etc.)*
- **Student-Related Factors** *(interest in school, level of effort, etc.)*
- **Factors in the Local Community** *(access to health and social services, safety, economic opportunity, access to libraries, etc.)*
- **Students' Background** *(family income, diet and nutrition, mobility, primary language, etc.)*
- **Education Funding Shortfalls**
- **Families' Support of Students' Learning**

Source: (National Education Association , 2019)

Figure 89: Highest Level of Education Achieved, Ages 25 and Over, Stanislaus County, 2013-2017.

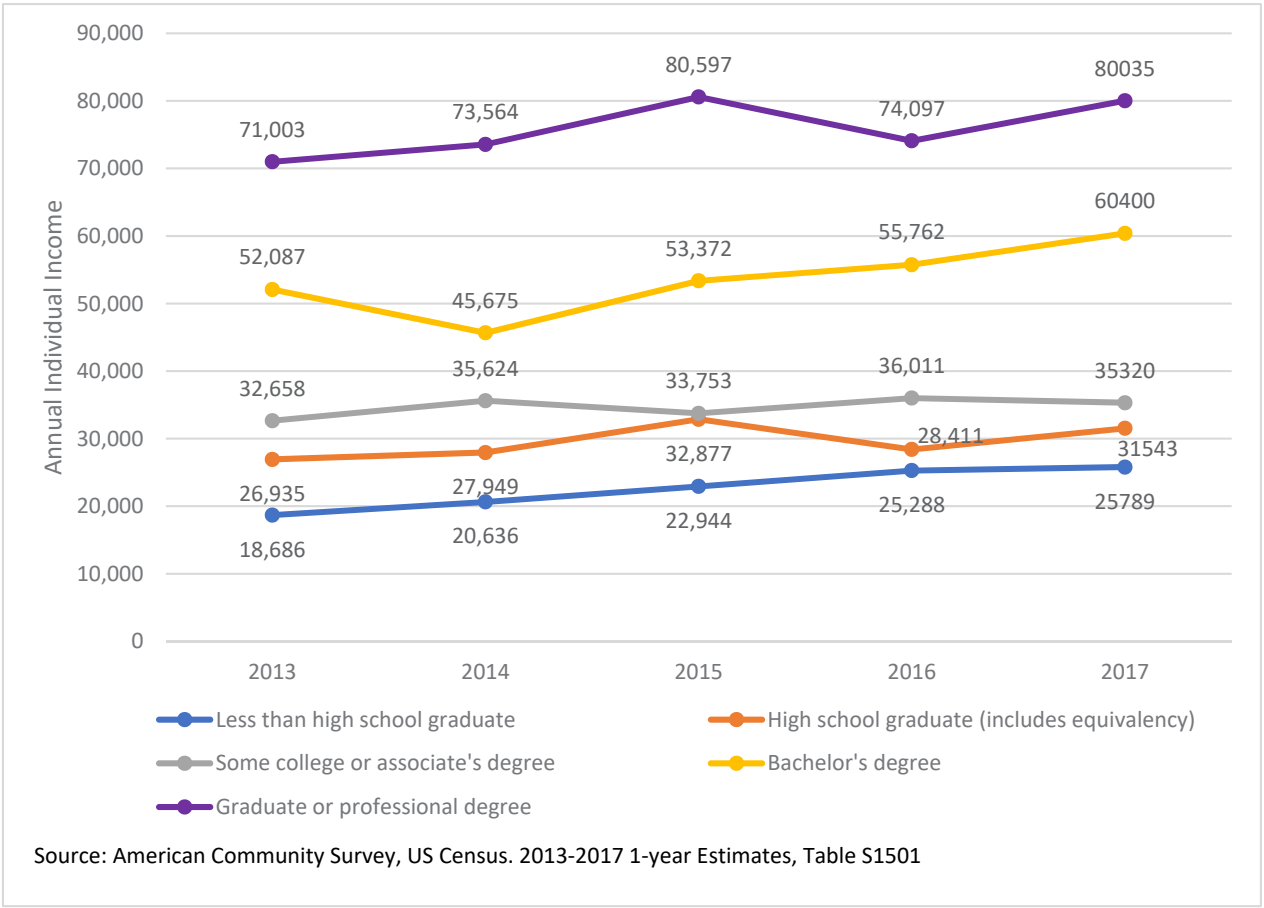


Source: American Community Survey, US Census. 2013-2017 5-year Estimate, Table S1501

Education level is very strongly tied to earning potential. **Figure 90** below illustrates the difference in median individual earnings by education level for adults 25 years and older.

- Higher educational levels corresponded with higher levels of median income from 2013-2017.
- The largest difference in annual median income in 2017 between adjascent education levels was seen between adults with some college or associate degree and those with a bachelor's degree.
- From 2013-2017, the median income level increased for all education levels, with the most increase seen in those with graduate or professional degrees ($9,032, a 12.7% increase), and the least increase for adults with some college or associate degrees ($2,662, an 8.2% increase).

Figure 90: Median Individual Income by Educational Attainment, Age 25 and Older, Stanislaus County, 2013-2017.



Source: American Community Survey, US Census. 2013-2017 1-year Estimates, Table S1501

For more information on Education, go to:

- California Department of Education: https://www.cde.ca.gov/
- Healthy People 2020. https://www.healthypeople.gov/2020/healthy-people-in-action/story/education-key-social-determinant
- Early Childhood Education, CDC: https://www.cdc.gov/policy/hst/hi5/earlychildhoodeducation/index.html

HOUSING

Housing is considered a basic need and a major social determinant of health.

"I'm on the street because all my money was going for housing and I was starving." -Focus Group Participant

"The likelihood of having frequent and severe mental or physical illnesses is higher among individuals experiencing homelessness, and families who forgo healthy food or medicine to pay high housing costs may experience poor health outcomes. In addition, unsafe conditions within the home, such as the presence of lead, can trigger or worsen health issues" (PD&R Edge, n.d.).

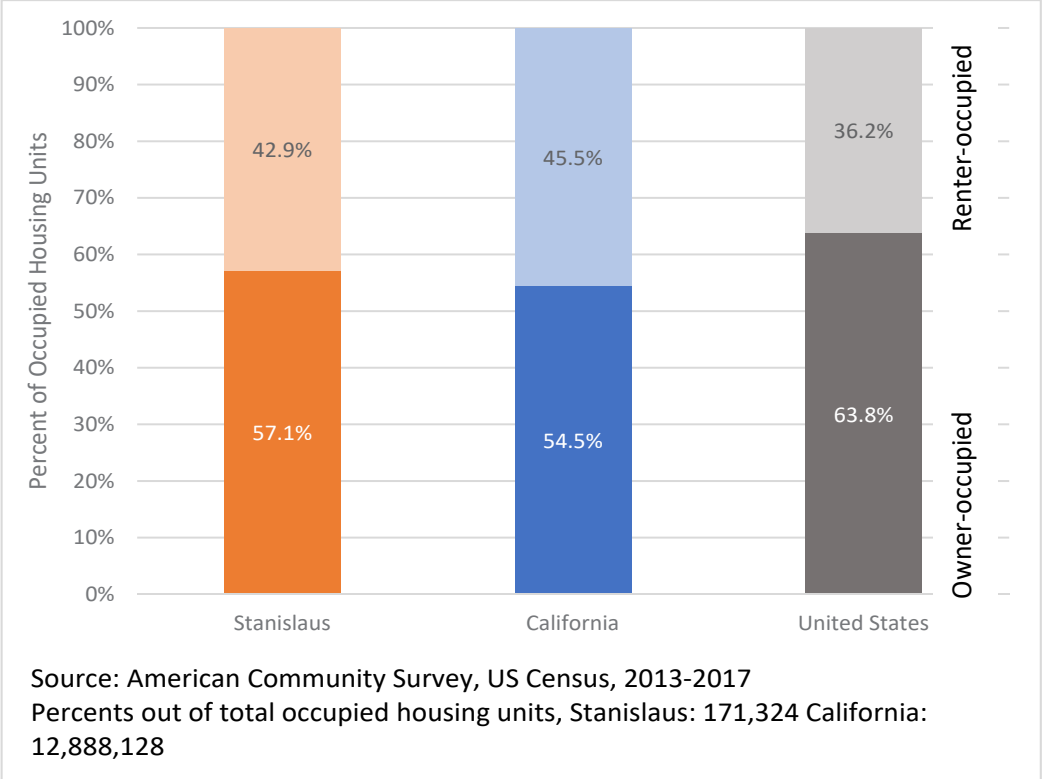
HOME OWNERSHIP

Owning a home allows for building financial equity and eventual decreased monthly home cost compared to renting. County Health Rankings said "Owning a home over time can help build savings for education or for other opportunities important to health and future family wealth" (County Health Rankings, 2019).

Figure 91 illustrates the percentage of homes that are owner versus renter occupied for Stanislaus County, all of California, and the United States from 2013-2017.

- California has the lowest rates of home ownership at 54.5%, compared to 57.1% in Stanislaus County and 63.8% in the United States.
- Stanislaus County has higher rates of home ownership than California.

Figure 91: Owner Versus Renter Home Occupation,
Stanislaus County, All of California, and the United States, 2013-2017



Source: American Community Survey, US Census, 2013-2017
Percents out of total occupied housing units, Stanislaus: 171,324 California: 12,888,128

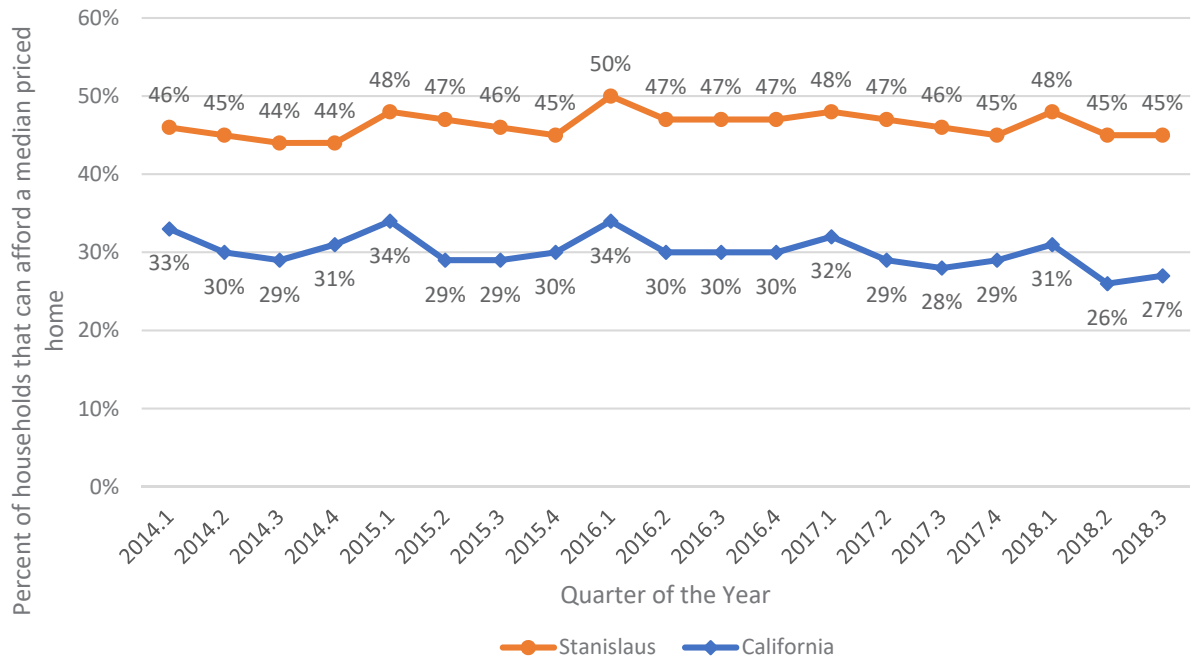
HOUSING AFFORDABILITY INDEX

The California Association of Realtors has a calculation called the Housing Affordability Index. It calculates the percentage of households that can afford a standard payment on a median priced home in a given region. The standard payment includes principal, interest, taxes and insurance based on the assumptions of 20% down payment and current interest rates. A household is considered able to afford the payment if it is at or below 30% of the household income (California Association of Realtors, 2019).

For third quarter 2018, the housing affordability index was based on a median home price of $319,900 in Stanislaus, with an associated minimum income of $68,240 and a median home price of $588,530 with an associated minimum income of $125,540 in California (California Association of Realtors, 2019). **Figure 92** illustrates the quarterly housing affordability index for Stanislaus County and California from first quarter 2014 through third quarter 2018.

- According to the housing affordability index, from 2014-2018, the number of Californians who could theoretically afford a median priced home in California was between 26% and 34%.
- According to the housing affordability index, from 2014-2018, the number of Stanislaus County residents who could afford a median priced home in Stanislaus County was between 44% and 50%.
- Stanislaus County had a consistently higher housing affordability index score than California, 13 to 19 percentage points higher than California from 2014-2018.
- Even though Stanislaus County housing affordability is much higher than California, only one quarter from 2014 to 2018 estimated that 50% of residents could afford a median priced home; every other quarter estimated less than 50%.

Figure 92: Housing Affordability Index, Stanislaus County and California, 2014-2018



Source: California Association of Realtors, 2019. American Community Survey estimates of households in 2017: Stanislaus: 173,573 California: 13,005,097

HOUSING PROBLEMS

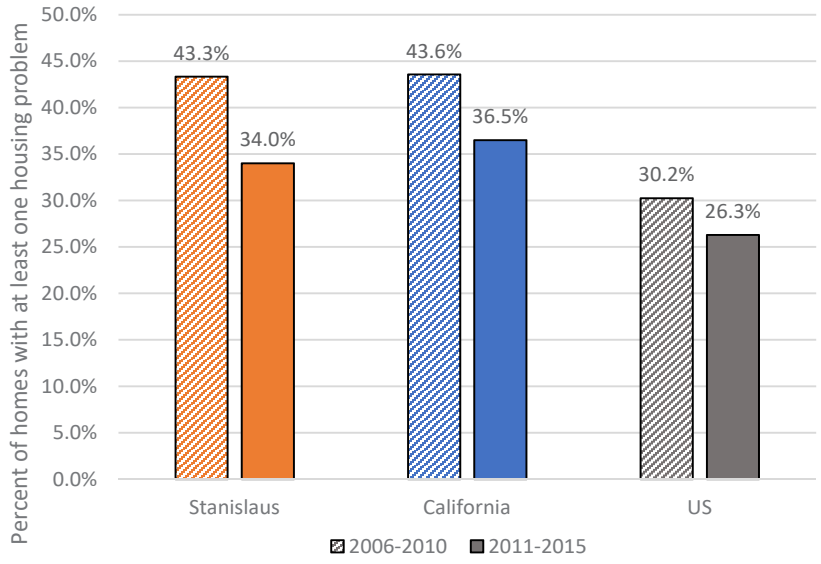
Quality of housing has a considerable effect on health. Substandard housing can increase allergens and exacerbate respiratory conditions, be linked with physical and mental illness, and create financial burdens that leave little room for healthy investments (Braveman P, 2011).

This section uses data from the US Department of Housing and Urban Development which looks at four housing problems, and the percent of households that have at least one. The four housing problems are:

- Incomplete kitchen facilities
- Incomplete plumbing facilities
- More than one person per room
- Cost burden[8] greater than 30% (USHUD, 2018)

Figure 93 demonstrates the percent of owner-occupied homes with at least One housing problem for Stanislaus County, all of California, and the United States, comparing 2006-2010 with 2011-2015.

- For both time periods, the United States had the lowest percentages of owner-occupied housing with at least one housing problem.
- Stanislaus County rates of owner-occupied home with at least one housing problem were very similar to the California rates, or just below.
- For all geographies, the number of owner-occupied homes with at least one housing problem decreased from 2006-2010 to 2011-2015.



Source: 2011-2015 American Community Survey as cited on US Department of Housing and Urban Development, Comprehensive Housing Affordability Strategy
Percents out of owner-occupied households: Stanislaus 2006-2010: 101,825 Stanislaus 2011-2015: 95,955 California 2006-2010: 7,112,050 California 2011-2015: 6,909,175 US 2006-2010: 76,978,405 US 2011-2015: 75,569,795

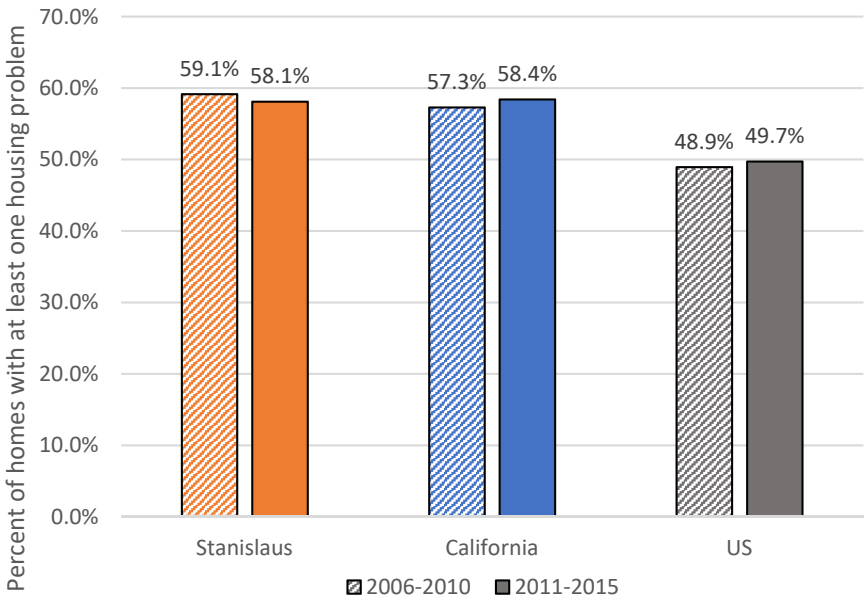
Figure 93: Percent of Owner-Occupied Homes with at Least One Housing Problem, Stanislaus County, All of California, and the United States, 2006-2015

[8] "Cost burden is the ratio of housing costs to household income. For renters, housing cost is gross rent (contract rent plus utilities). For owners, housing cost is "select monthly owner costs", which includes mortgage payment, utilities, association fees, insurance, and real estate taxes." (USHUD, 2018)

Figure 94 demonstrates the percent of renter-occupied homes with at least One housing problem for Stanislaus County, all of California, and the United States, comparing 2006-2010 with 2011-2015.

- For both time periods, the United States had the lowest percentages of renter-occupied homes with at least one housing problem.
- Stanislaus County rates of renter-occupied home with at least one housing problem were very similar to the California rates.
- For Stanislaus County, the number of renter-occupied homes with at least one housing problem decreased from 2006-2010 to 2011-2015, but increased slightly in California and the United States.

Figure 94: Percent of Renter-Occupied Homes with at Least One Housing Problem, Stanislaus County, All of California, and the United States, 2006-2015



Source: 2011-2015 American Community Survey as cited on US Department of Housing and Urban Development, Comprehensive Housing Affordability Strategy Percents out of renter-occupied households: Stanislaus 2006-2010: 62,015 Stanislaus 2011-2015: 73,240 California 2006-2010: 5,280,800 California 2011-2015: 5,808,625 US 2006-2010: 38,484,635 US 2011-2015: 42,600,715

Residential segregation describes communities which do not have the same racial distribution as the larger area. "The effects of residential segregation are often stark: African Americans and Hispanics/Latinx who live in highly segregated and isolated neighborhoods have lower housing quality, higher concentrations of poverty, and less access to good jobs and education. As a consequence, they experience greater stress and have a higher risk of illness and death." (Schwarz, 2018)

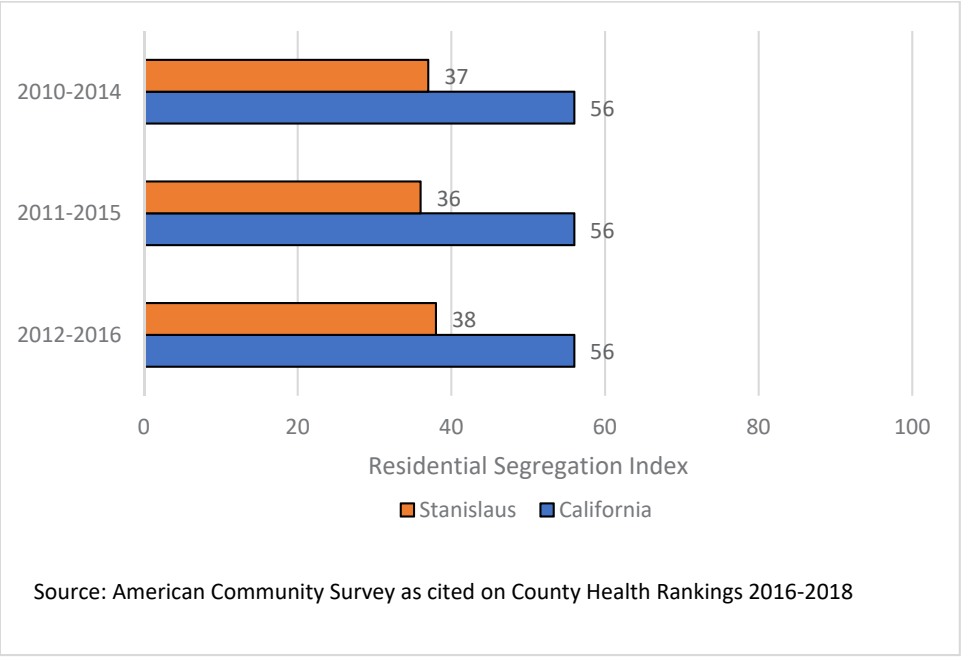
County Health Rankings examines residential segregation between African Americans and Whites, and also between Whites and non-Whites, without regard to ethnicity. Stanislaus County's population of only 3.0% African American, and 41.9% White Non-Hispanic should be considered when looking at residential segregation compared to a more diverse California (ACS, 2017).

The residential segregation index looks at the two compared racial groups, on a scale of 0 to 100. An index score of 0 indicates complete integration, and 100 indicates complete segregation (County Health Rankings, 2018).

The graphs in **Figure 95** and **Figure 96** show the residential segregation index for African American and White residents (**Figure 95**) or Non-White and White residents (**Figure 96**) in Stanislaus County and California from 2010-2016 for five year ranges.

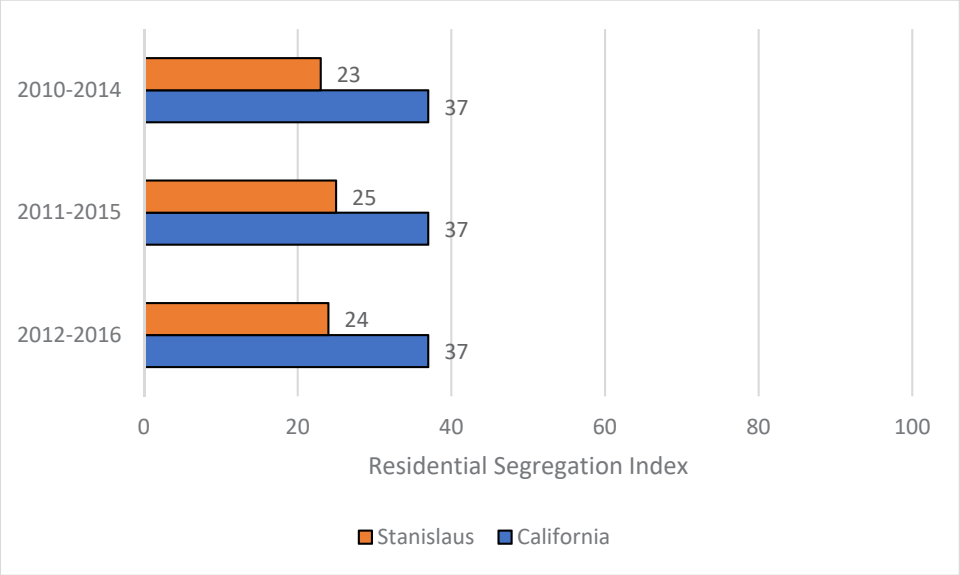
- The residential segregation index for California is much higher than Stanislaus for both African American/White and Non-White/White groups.
- There is more African American and White residential segregation in Stanislaus and California than Non-White and White segregation.

Figure 95: Residential Segregation Index (African American and White), Stanislaus County and California, 2010-2016



Source: American Community Survey as cited on County Health Rankings 2016-2018

Figure 96: Residential Segregation Index (Non-White and White), Stanislaus County and California, 2010-2016



VACANCY RATE

Home vacancy rates demonstrate what proportion of homes are vacant and available for rent or purchase. Lower vacancy rates lead to higher rent and purchase prices in a competitive market. **Figure 97** shows the homeowner vacancy rate[9] for Stanislaus County and California from 2008-2012 and 2013-2017.

- The homeowner vacancy rate in Stanislaus decreased by more than half from 2008-2012 to 2013-2017.
- The homeowner vacancy rate in California decreased by almost half from 2008-2012 to 2013-2017.
- From 2008-2012, the California homeowner vacancy rate was 70 percent of the Stanislaus rate, but from 2013-2017, the California rate was 92 percent of the Stanislaus County rate.

[9]The homeowner vacancy rate is the proportion of the homeowner housing inventory which is vacant for sale. It is computed by dividing the number of vacant units for sale only by the sum of owner-occupied units and vacant units that are for sale only, and then multiplying by 100. (US Census, 2019)

Figure 97: Homeowner Vacancy Rate, Stanislaus County and California, 2008-2017

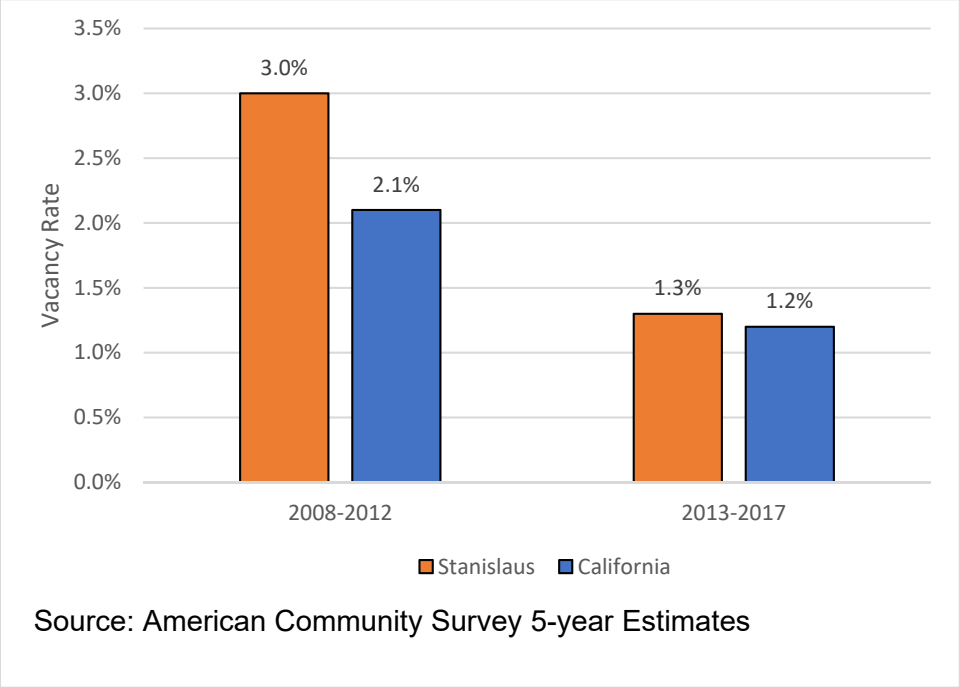
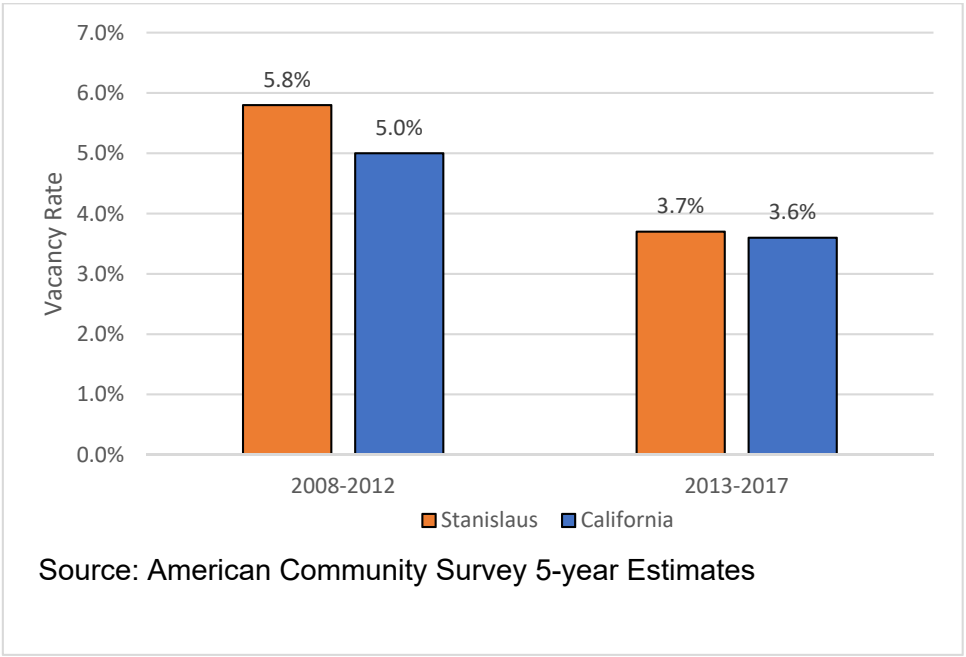


Figure 98 shows the home rental vacancy rate[10] for Stanislaus County and California from 2008-2012 and 2013-2017.

- The home rental vacancy rate in Stanislaus decreased by 36% from 2008-2012 to 2013-2017.
- The home rental vacancy rate in California decreased by 28% from 2008-2012 to 2013-2017.
- From 2008-2012, the California home rental vacancy rate was 86% of the Stanislaus rate, but from 2013-2017, the California rate was 97% of the Stanislaus County rate.

Figure 98: Home Rental Vacancy Rate, Stanislaus County and California, 2008-2017



[10] The proportion of the rental inventory which is vacant for rent. It is computed by dividing the number of vacant units for rent by the sum of the renter'occupied units and the number of vacant units for rent, and then multiplying by 100. (US Census, 2019)

HOMELESS POPULATION

Homelessness is associated with several negative health outcomes. Homelessness is associated with:

- Lack of access to health care
- Higher rates of mental illness
- Poor physical health
- Higher rates of medical hospitalizations (American Psychological Association, 2019)

Every January, on one night, local volunteers go out into the community to identify and gather information from all of the homeless people they can find. This Point-in-Time Count is organized locally, using standards from the US Department of Housing and Urban Development. The numbers of homeless people found during these homeless counts in Stanislaus County is illustrated in **Figure 99**, by type of location from 2014-2018.

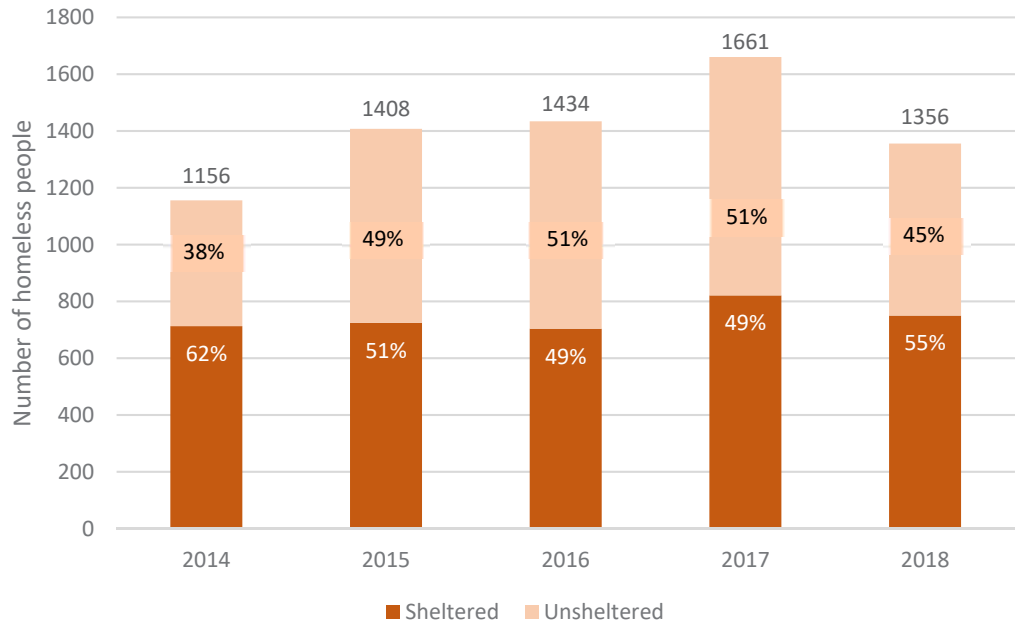
Risk Factors for Homelessness:

- **Lack of Affordable Housing**
- **Poverty**
- **Lack of Employment Opportunities**
- **Decline in Available Public Assistance**
- **Lack of Affordable Health Care**
- **Domestic Violence**
- **Mental Illness**
- **Addiction**

Source: (National Coalition for the Homeless, 2018)

- The most homeless people identified during the homeless count from 2014 to 2018 was 1,661 people in 2017.
- The highest percentage of homeless people found in a sheltered location was in 2014, which was also the year with the lowest overall count.
- From 2015 to 2018, between 49 and 55 percent of homeless people counted were in a sheltered location.

Figure 99: Homeless Population by Location, Stanislaus County, 2014-2018

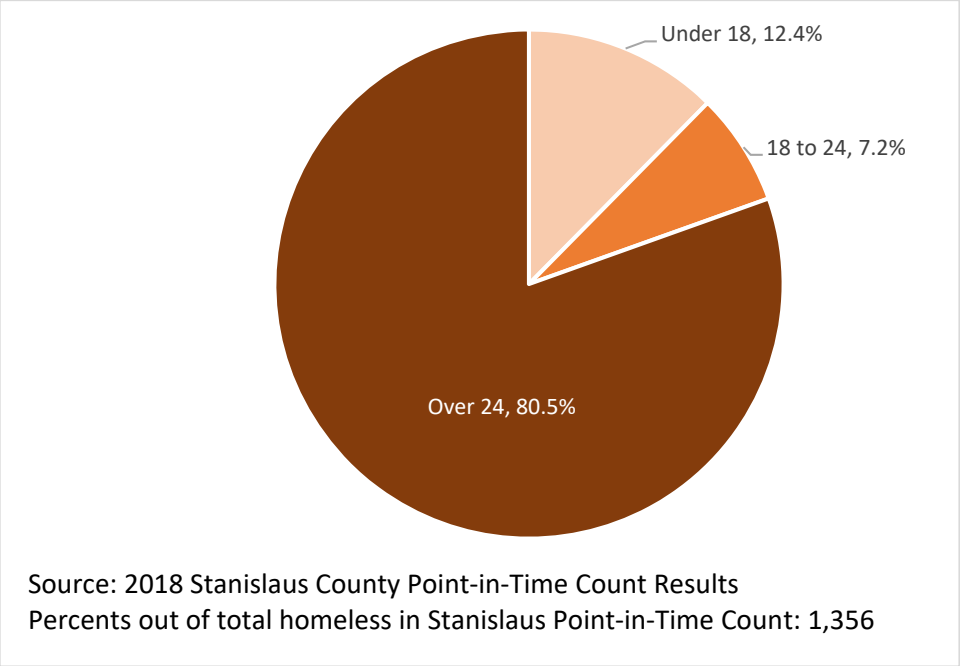


Source: US Department of Housing and Urban Development, Point in Time Count, 2019

Figure 100 illustrates the age distribution in the homeless count for 2018 in Stanislaus County.

- In 2018, 12.4% of homeless people from the point in time count were under 18.
- In 2018, 80.5% of homeless people from the point in time count were over the age of 24.

Figure 100: Homeless Population by Age, Stanislaus County, 2018



Source: 2018 Stanislaus County Point-in-Time Count Results
Percents out of total homeless in Stanislaus Point-in-Time Count: 1,356

SHELTER CAPACITY

According to the US Department of Housing and Urban Development, provider programs that offer beds and units for homeless people fit into five categories:

Emergency Shelter- "Emergency shelter means any facility, the primary purpose of which is to provide temporary or transitional shelter for the homeless in general or for specific populations of the homeless" (USHUD, 2001).

Transitional Housing- "Transitional housing (TH) is designed to provide homeless individuals and families with the interim stability and support to successfully move to and maintain permanent housing. Transitional housing may be used to cover the costs of up to 24 months of housing with accompanying supportive services" (USHUD, 2019).

Rapid Re-Housing- "Rapid re-housing (RRH) emphasizes housing search and relocation services and short- and medium-term rental assistance to move homeless persons and families (with or without a disability) as rapidly as possible into permanent housing" (USHUD, 2019).

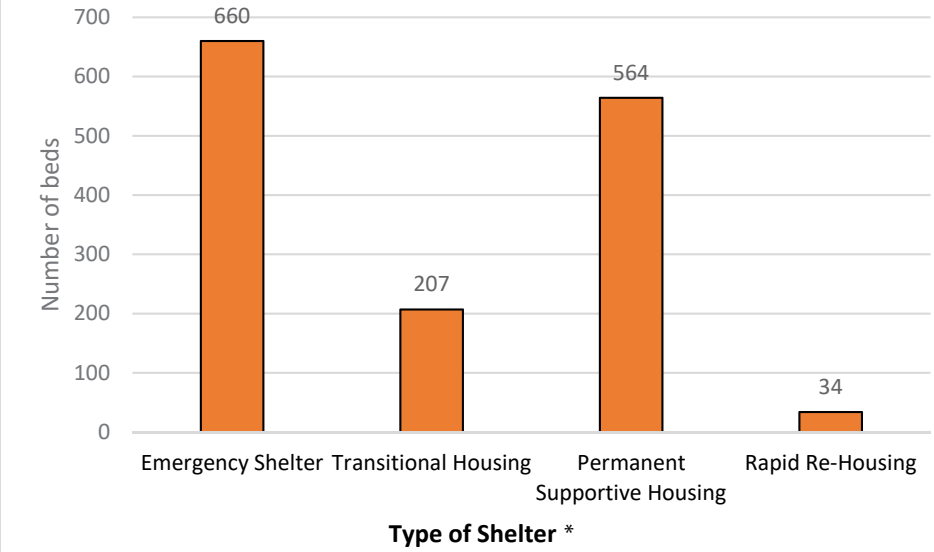
Safe Haven- "Safe Haven, as defined in the Supportive Housing Program, is a form of supportive housing that serves hard-to-reach homeless persons with severe mental illness who come primarily from the streets and have been unable or unwilling to participate in housing or supportive services" (USHUD, 2012).

Permanent Supportive Housing- "Permanent supportive housing is permanent housing with indefinite leasing or rental assistance paired with supportive services to assist homeless persons with a disability or families with an adult or child member with a disability achieve housing stability" (USHUD, 2019).

The graph in **Figure 101** shows the number of beds available in Stanislaus County by type of shelter in 2018.

- Emergency shelters had the biggest capacity in 2018 with 660 beds available.
- Rapid re-housing had the fewest openings with only a capacity of 34 clients.
- The total shelter capacity in Stanislaus County in 2018 was 1,465 people.

Figure 101: Shelter Capacity by Type of Shelter, Stanislaus County, 2018



Source: US Department of Housing and Urban Development 2018 Continuum of Care
* Stanislaus reported 0 people in safe havens during the 2018 point-in-time court.

For more information on Housing and Homelessness, go to:

- The Homelessness Data Exchange 2.0, US Department of Housing and Urban Development: https://hudhdx2.info/
- Housing Instability, Healthy People 2020: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/housing-instability
- Office of Health Equity, California Department of Public Health: https://www.cdph.ca.gov/Programs/OHE/Pages/HCI-Search.aspx

TRANSPORTATION

Availability of reliable transportation is a key element in ensuring access to health care, but thoughtful approaches to transportation design can have positive impacts on the health of a community in a wide variety of ways. The Centers for Disease Control have identified the following examples of how transportation policy can improve community health:

Transportation was mentioned as a top health issue in 3 key informant interviews and 5 focus groups.

- Reduce injuries associated with motor vehicle crashes
- Encourage healthy community design
- Promote safe and convenient opportunities for physical activity by supporting active transportation infrastructure
- Reduce human exposure to air pollution and adverse health impacts associated with these pollutants
- Ensure that all people have access to safe, healthy, convenient, and affordable transportation (CDC, 2018)

ACCESS TO PUBLIC TRANSIT

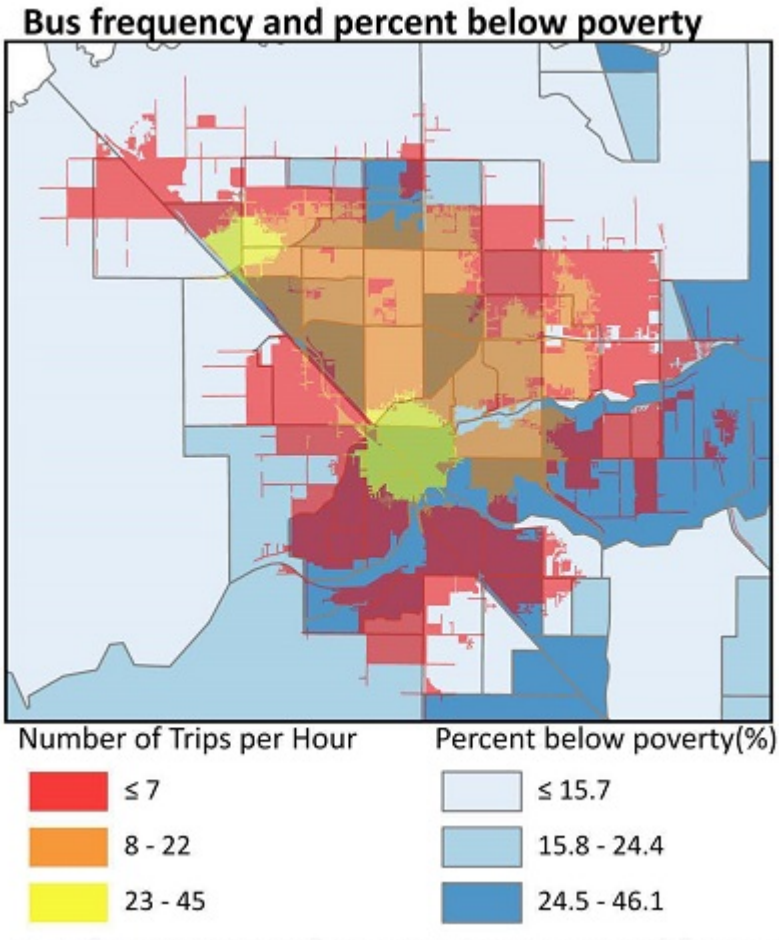
Expanding public transportation infrastructure may decrease disparities in access to services, employment, and recreation opportunities for individuals with low incomes, individuals with disabilities, and the elderly" (County Health Rankings, 2017).

There are a few different public transit systems in Stanislaus County including Modesto Area Express, Stanislaus County Regional Transit, and Turlock Transit. The 2018 Regional Transportation Plan from the Stanislaus County of Governments acknowledged that "for populations with limited financial, physical, or other means, having convenient access to transit is critical." (StanCOG, 2018)

Figure 102 below looks at the relationship between bus frequency of the Modesto Area Express and the percent of the population below poverty for different areas of Modesto.

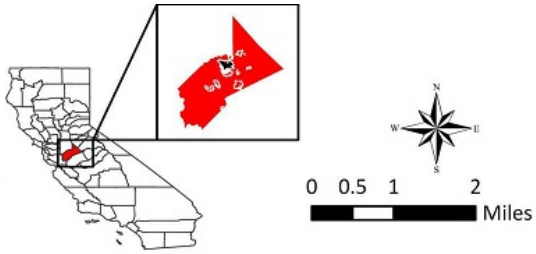
- The south and southeastern portions of the map show some of the highest levels of poverty, and some of the lowest number of trips per hour.
- Modesto Area Express bus routes are most concentrated (23-45 stops per hour) in the downtown city center area and the area surrounding the Vintage Faire Mall.
- There are several areas with high levels of poverty with little to no bus service at all.

Figure 102: Bus Frequency and Percent Below Poverty, Modesto CA, 2018.



This map measures access to public transportation by using both proximity and bus frequency to develop a full picture of access to public transportation in Modesto, California. The frequency of bus arrivals is overlaid on maps of select socio-demographic variables in order to visualize relationships that may exist between the two data sets. The areas in red have fewer bus arrivals, and thus, the wait is longer between each arrival.

Method: The average number of bus arrivals per hour was calculated for a 1 mile radius around each MAX Transit bus stop in Modesto from 5am to 8pm on Monday.



Data Source: MAX GTFS, US Census Bureau ACS 2010-2014, Stanislaus County Health Services Agency, Public Health Division, 2018; Author(s): KB Fliflet, T Oyeladun,
Contact: Titus Oyeladun, MPH; toyeladun@schsa.org

HEALTH SERVICES AGENCY

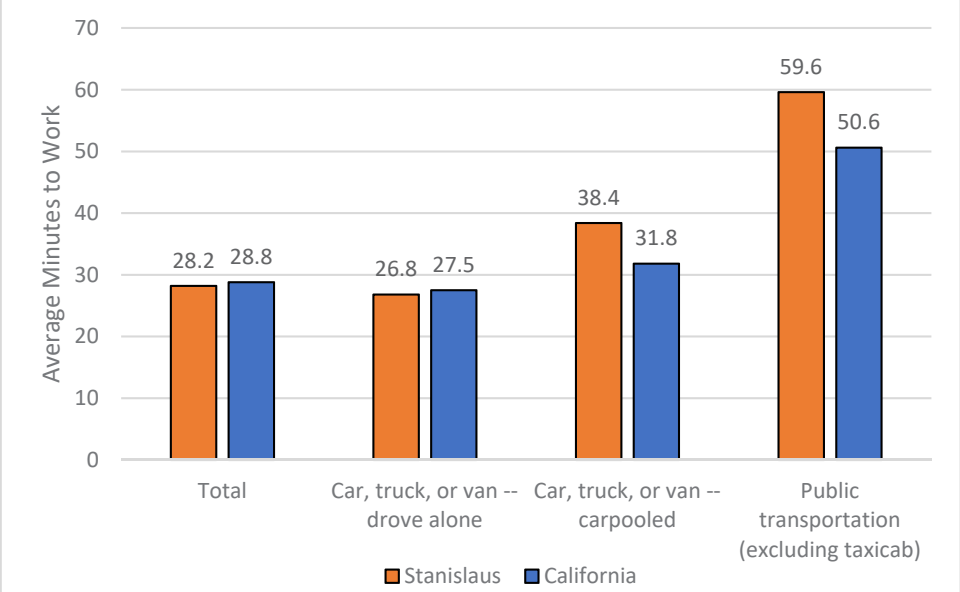
COMMUTING TIME

Commuting time influences time available for other activities, but also can have direct effects on mental health. A 2014 study in the United Kingdom found that for each additional minute of commuting, worker life satisfaction, a sense that their activities are worthwhile, and happiness all decreased, and average anxiety levels increased (Office for National Statistics, 2014).

Time spent commuting can limit time available for other activities such as physical activity or healthy cooking. **Figure 103** looks at the average time residents spend commuting to work by mode of transportation for Stanislaus County and California from 2013-2017.

- Residents who carpool and take public transit have longer commutes on average in Stanislaus County compared to California.
- Residents who take public transportation have more than twice as long of a commute on average as those who drive alone in Stanislaus County, and California.

Figure 103: Average Minutes to Commute to Work by Mode of Transportation, Stanislaus and California, 2013-2017.



Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

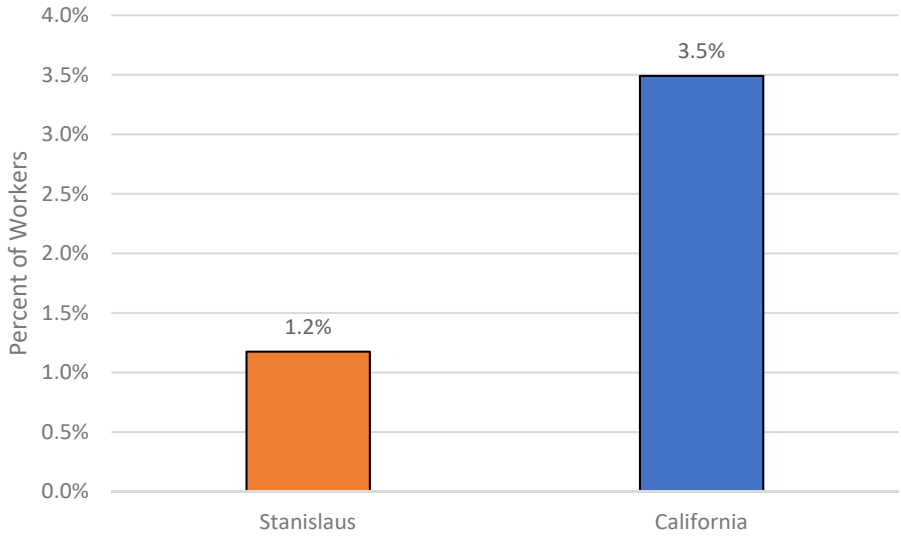
ACTIVE COMMUTE

Active commuting (walking or riding a bicycle to work) can have positive benefits for the health of commuters. A recent study in the United Kingdom found that commuting by bicycle was associated with a lower risk of cardiovascular disease, cancer and all-cause mortality, and commuting by walking was associated with a lower risk of cardiovascular disease (Celis-Morales CA, 2017).

Figure 104 below shows the percent of workers age 16 and older in Stanislaus County and California that take an active commute, defined as walking or bicycling to work.

- For Stanislaus County and California, less than four percent of workers take an active commute to work.
- From 2013-2017, the percent of Stanislaus County workers who had an active commute was less than half the percent of California workers taking an active commute

Figure 104: Percent of Workers Taking an Active Commute to Work, Stanislaus County and California, 2017.



Active Commute: Workers age 16 and over walking or bicycling to work.
Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimate
Percents out of total workers age 16 years and over. Stanislaus: 230,328 California: 18,320,629

For more information on Transportation, go to:

- Transportation and Health, American Public Health Association: https://www.apha.org/topics-and-issues/transportation
- Transportation Health Impact Assessment Toolkit, CDC: https://www.cdc.gov/healthyplaces/transportation/hia_toolkit.htm
- Transportation Recommendations, CDC: https://www.cdc.gov/transportation/

NEXT STEPS

With the vision of *"A thriving community where all people have the opportunity to be safe and healthy"*, the Community Health Assessment (CHA) is a window into Stanislaus County to see how close we are to that goal. Stanislaus County has its share of challenges to the health, safety and thriving of its residents. In health, we saw the highest rates of coronary heart disease deaths in California, rapidly rising rates of syphilis, declines in the number of primary care and mental health providers available to care for residents, and opioid prescription rates almost double the California average. In safety, motor vehicle deaths were in the top three causes of death for every age group, and high violent crime rates were driven by aggravated assaults. In thriving, housing availability is limited, and some of the poorest areas have the least public transit options. And across the county there were disparities across different racial and ethnic groups, sex, age, language, income and geography. But there are also improvements to celebrate. Kindergarten immunization rates have risen, percent of residents with health insurance has risen, opioid prescription rates are going down, firearm mortality rates are dropping, employment rates are rising, and third grade reading levels are improving. While we applaud the victories, there is always more work to be done.

There are several opportunities to use the CHA to improve our county. As designed, the CHA provides the data backbone for the Community Health Improvement Plan, the next phase of MAPP. The CHIP process involves reviewing the findings from the CHA to select key focus areas and develop goals and strategies to address those focus areas to make a difference in our community. The CHA data provides historical and baseline data to compare with future measurements to evaluate the effectiveness of CHIP interventions. In addition to the CHIP, Stanislaus County boasts an array of agencies, organizations, and groups dedicated to the improvement of our residents. These partners will find a wealth of information in the CHA to inform their programs and projects. Stanislaus County Health Services Agency will also use this data for our own planning and services.

This Community Health Assessment is only the beginning. The disparities and gaps in this report highlight opportunities to promote health equity and improve conditions for all residents. This information must not stand alone, but rather serve as the impetus for change.

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APPENDIX A: QUANTITATIVE DATA SOURCES

American Community Survey, US Census. 2013-2017 5 year estimate https://www.census.gov/programs-surveys/acs

Bureau of Labor Statistics https://data.bls.gov/map/MapToolServlet

CAASPP Test Results https://caaspp.cde.ca.gov/

California Cancer Registry https://www.cancer-rates.info/ca/

California Department of Education https://www.cde.ca.gov/

California Department of Justice https://oag.ca.gov/cures

California Department of Public Health https://www.cdph.ca.gov/

California Environmental Health Tracking Program https://trackingcalifornia.org

California Health Interview Survey- http://healthpolicy.ucla.edu/chis/data/Pages/GetCHISData.aspx

CDC https://www.cdc.gov/

CDPH Epicenter http://epicenter.cdph.ca.gov/

County Health Rankings https://www.countyhealthrankings.org/

Department of Health Care Services https://www.dhcs.ca.gov/Pages/default.aspx

Environmental Protection Agency https://www.epa.gov/

KidsData.org https://www.kidsdata.org/

Stanislaus Medical Society http://www.stanislausmedicalsociety.com/

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