

COMMUNITY HEALTH ASSESSMENT



12/16/2022

SACRAMENTO COUNTY PUBLIC HEALTH

Community Health Assessment 2017

Sacramento County Residents

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Community Health Assessment

SACRAMENTO COUNTY PUBLIC HEALTH

EXECUTIVE SUMMARY

Sacramento County Public Health (SCPH), a Division of Sacramento County Department of Health Services, is pleased to bring you the 2017 Community Health Assessment Report. The purpose of this report is to provide an overview of some of the key community health indicators and trends in our County. One of the primary roles of public health is to systematically collect, analyze, report and disseminate information about the health of the County's population. This is done to encourage collaboration, and support community-driven health improvement plans, and inform public health policy. This report presents data that can be directly compared with clearly established benchmarks, such as national standards and is meant to be a tool for learning as well as planning.

This report includes data on population demographics, social determinants of health, infectious diseases, chronic diseases, maternal child adolescent health, injury, mortality and community assets. As much as possible, we compare local data indicators to the State or National Healthy People 2020 (HP2020) Objectives. The report also spotlights a few of many notable public health initiatives and investigations in the County.

The community is our most valuable partner in Public Health. Therefore the broad purpose of this report is to community members and community partners identify priority issues and measure progress in the domain of population health. Our hope is to enable all communities to achieve optimal health, and address structural and systemic barriers that have resulted in health inequities. We value your opinions on this report and welcome the opportunity for feedback.

Olivia Kasirye, MD, MS.
Public Health Officer

Sacramento County Public Health

DEMOGRAPHICS AND DETERMINANTS OF HEALTH

Population Demographics

FIGURE 1: Current and 10-year projected County populations by race/ethnicity, 2017 vs. 2026¹

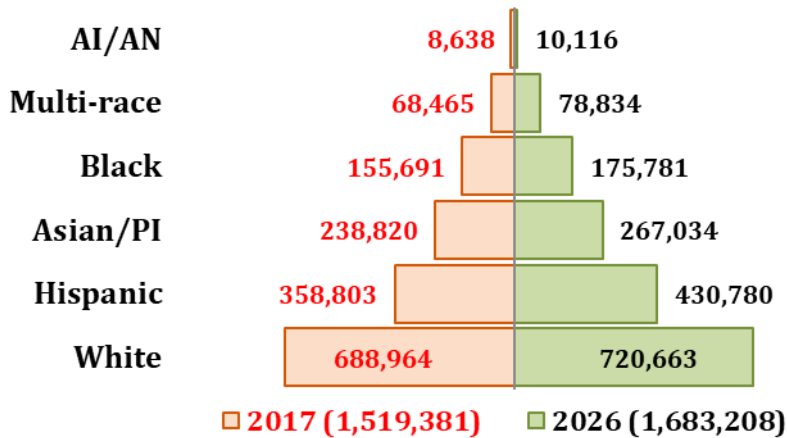
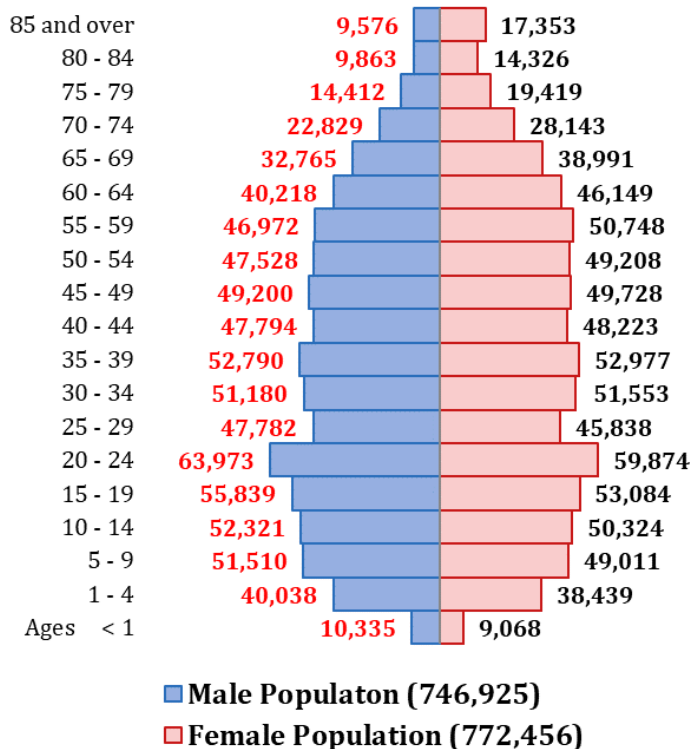


FIGURE 2: Population age-sex pyramid, 2017



Source: 1. California Department of Finance P-2 County Population Projections 2010-2060

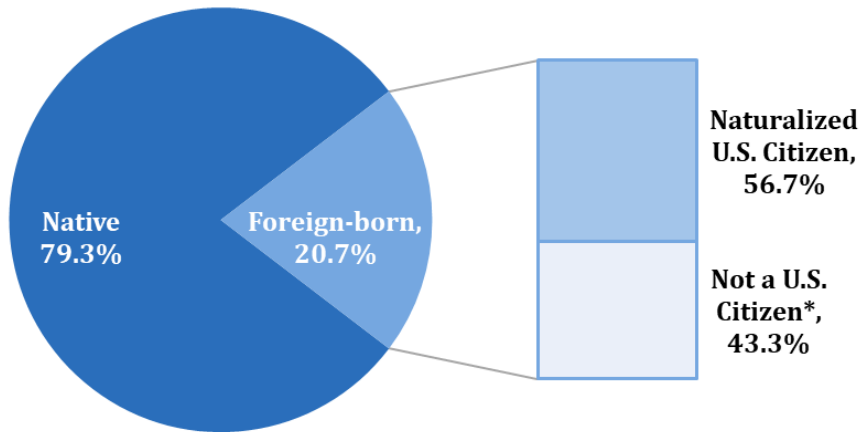
POPULATION DEMOGRAPHICS

Projections and race/ethnicity: There were over 1.5 million residents in the County in 2017 [Figure 1]. Whites were the largest group (45.3%), followed by Hispanics (23.6%), Asian/Pacific Islanders (15.7%), Blacks (10.2%), Multi-race (4.5%), and then American Indian/Alaskan Natives (0.6%). The County population is projected to increase by 10.8% over the next 10 years. Hispanics are projected to have the largest percent increase by 2026 (+20.1%). Whites are projected to have the smallest percent increase (+4.6%) but will still remain the largest single racial/ethnic group in the County in 2026.

Age and sex: The County population pyramid [Figure 2] is stationary, meaning that the percentages of age and sex have remained generally constant over time. Stationary populations occur when there is a balance between birth, death and migration rates. Population decreases are observed in males at a slightly younger age compared to females. The somewhat larger 20-24 age group categories may be partially attributable to the several local colleges and universities in the County.

Nativity and Language

FIGURE 3: County population by nativity, 2017¹



*Includes lawful permanent residents, certain legal non-immigrants (e.g., student or work visas), those admitted under refugee asylee status, and persons illegally residing in the U.S.

FIGURE 4: Foreign-born by world region of birth, County vs. State, 2017¹

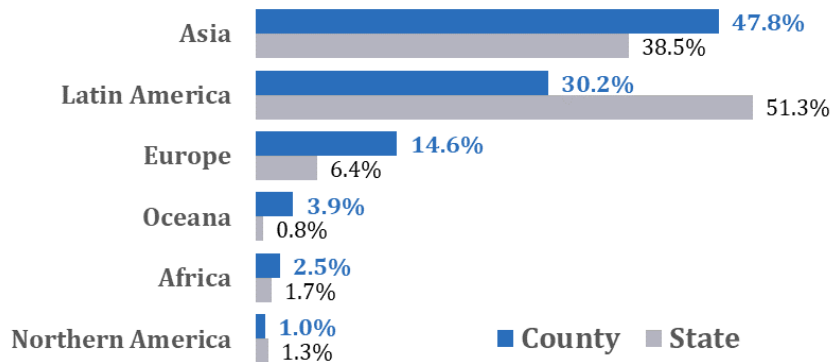


TABLE 1: Languages spoken at home (age >5), County vs. State, 2017¹

Language	County	State
English only	67.9%	56.0%
Asian/PI language	10.0%	9.9%
Spanish	13.6%	18.7%
Other Indo-European languages	7.5%	4.4%

Source: 1. 2017 American Community Survey 5-year estimates

NATIVITY AND LANGUAGE

Nativity: Nearly 80% of persons residing in Sacramento County were U.S. Natives and about one-fifth were persons who were not U.S. citizens at birth [Figure 3]. The largest proportion of foreign-born persons residing in the County were born in Asia, followed by Latin America and then Europe [Figure 4]. The County has a larger proportion of foreign-born residents who were born in Asia or Europe and fewer who were born in Latin America compared to the State overall.

Language: More than two-thirds of persons age five and older in the County spoke only English at home compared to more than half of households in the State [Table 1]. Compared to the State, there was a similar proportion of persons who spoke Asian/Pacific Islander languages, fewer who spoke Spanish, and more who spoke other Indo-European languages. Speaking English 'less than very well' was not as common in the County (13.6%) as the State overall (18.4%).

General Health Status and Access to Care



Good or better general health¹: **87.6%**
Compared to State: 83.3%

Health insurance coverage²: **91.6%**
Compared to State: 89.5%

Disability status²: **11.8%**
Compared to State: 10.6%

Poor mental health days³ (past 30 days): **3.9**
Compared to State: 3.6

FIGURE 5: Residents' perception of personal vs. community health status⁴

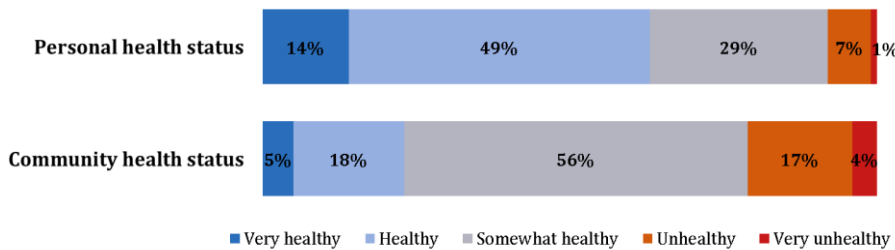


TABLE 2: Residents' rankings of health-related topics⁴

Most important factors for a healthy community	Most important health-related issues
1. Access to healthcare	1. Child abuse
2. Good jobs	2. Cancer
3. Affordable housing	3. Mental health & substance
4. Low crime	4. Diabetes
5. Good schools	5. Obesity

Sources: 1. 2017 California Health Interview Survey (CHIS), 2. 2017 American Community Survey 5-year estimates, 3. 2017 California County Health Rankings, 4. Sacramento County Community Themes and Strengths Assessment Survey 2015.

GENERAL HEALTH STATUS AND ACCESS TO CARE

Snapshot: Most Sacramento County residents self-reported that they were in good (26.3%), very good (34.6%) or excellent (26.7%) health. Over 90% of residents had health insurance coverage in 2017. There was a slightly higher proportion of County residents who were disabled compared to the State. County residents also experienced slightly more poor mental health days than the State on average.

Community perception and priorities: A survey of 548 County residents showed that respondents perceived their health to be better than the health of their communities overall [Figure 5]. This may be partially due to the respondents being younger on average than the general population. Respondents identified access to healthcare as the most important factor for a healthy community, and child abuse as the most important health-related issue [Table 2].

Economic Characteristics



Median household income¹: **\$60,239**

Compared to State: \$67,169

Receiving CalFresh benefits¹: **12.2%**

Compared to State: 9.3%

Median student loan debt: **\$15,010**

Compared to State: \$15,798

Unemployment (age ≥ 16)¹: **5.5%**

Compared to State: 4.8%

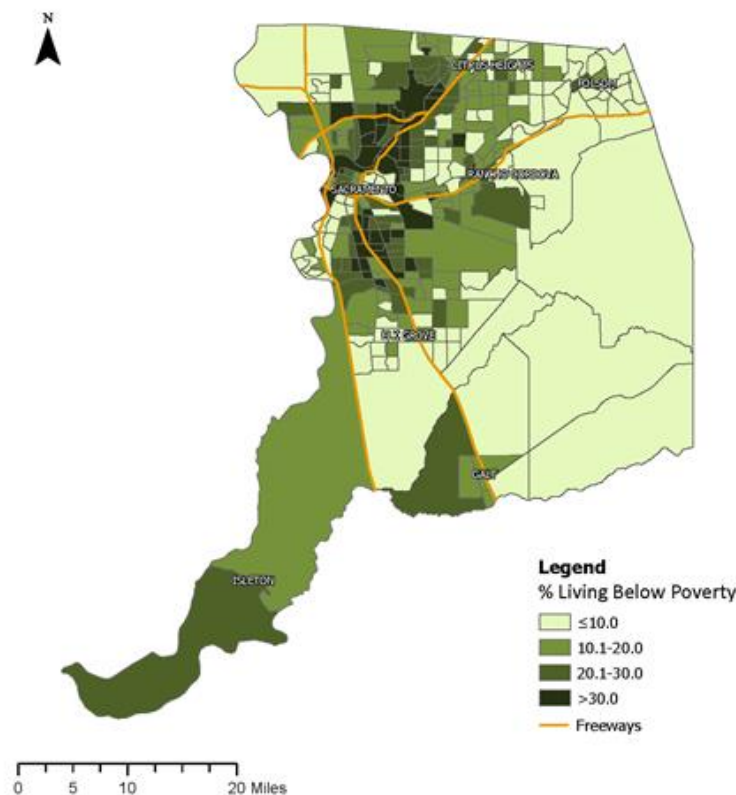
ECONOMIC CHARACTERISTICS

Economic characteristics are key determinants of health. Greater income is associated with lower likelihood of disease and premature death, according to the National Center for Health Statistics. Sacramento County residents identified 'good jobs' as one of the most important factors for a healthy community.

Snapshot: The median household income in the County was about \$60,000 with the average per capita income just under \$30,000. The County has a lower median household income and higher unemployment rate compared to the State. A larger proportion of County residents received CalFresh benefits compared to the State. The median student loan debt was over \$15,000 for both the County and State.

Poverty: The overall adult (age 18+) poverty rate for the County was 14.8% and the overall child (age <18) poverty rate was 22.6% in 2017. Poverty rates varied geographically within the County [Figure 6]. The areas of highest poverty were the same areas with lower high school graduation rates, more single-parent households, and higher unemployment.

FIGURE 6: Poverty rate by census tract, 2017¹



Sources: 1. 2017 American Community Survey 5-year estimates, 2. Urban Institute Debt in America: An Interactive Map <https://apps.urban.org> accessed July 30, 2019.

Housing Characteristics



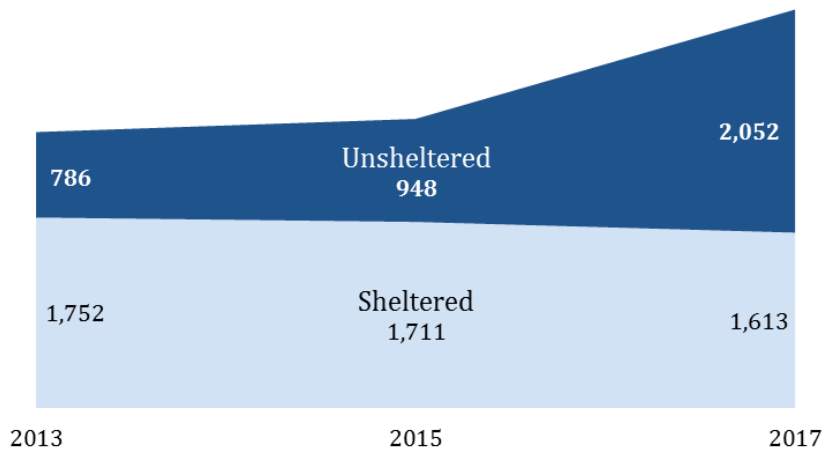
Owner occupied¹: **55.5%**
Compared to State: 54.5%

Median home value¹: **\$308,300**
Compared to State: \$456,700

Median rent (2 bedroom)¹: **\$1,073**
Compared to State: \$1,380

Severe housing problems²: **24%**
Compared to State: 28%

FIGURE 7: Sheltered and unsheltered homeless population point-in-time counts 2013-2017³



HOUSING CHARACTERISTICS

Sacramento residents identified affordable housing as one of the most important factors for a healthy community. Accessible, quality and affordable housing is an essential social determinant of health.

Snapshot: Slightly more than half of homes in Sacramento County were owner-occupied in 2017, with slightly less than half renter-occupied. The median home value was 32% lower than the State average and the median rent for a 2-bedroom dwelling was over \$1,000. Nearly one quarter of housing units were either lacking complete kitchen or plumbing facilities, overcrowded or severely cost burdened.

Homelessness: There was an estimated total of 3,665 persons experiencing homelessness in the County in 2017, less than half of whom were sheltered [Figure 7]. The number of sheltered individuals remained relatively steady since 2013, but there was a sharp increase in the number of unsheltered individuals.

Did you know? County acts to reduce homelessness

Sacramento County offers an array of services aimed at helping individuals and families experiencing homelessness to regain health, income and permanent housing stability.

2017 County homelessness initiatives

1. Improve Family Crisis and Response Shelters
2. Preserve Mather Community Campus
3. Full-service Re-Housing Shelter
4. Flexible Supportive Re-Housing Program

For more information about these initiatives and what else the County is doing to reduce homelessness, visit www.saccounty.net/Homelessness

Sources: 1. 2017 American Community Survey 5-year estimates, 2. 2017 California Health Rankings, Comprehensive Housing Affordability Strategy (CHAS), 3. Sacramento Steps Forward 2017 homeless point in time count

Family Units



Average family size¹: **3.38**

Compared to State: 3.54

Families with children (age <18)¹: **31.0%**

Compared to State: 31.0%

Householders living alone¹: **26.4%**

Compared to State: 23.9%

Responsible for grandchildren¹: **29.9%**

Compared to State: 23.5

FIGURE 8: Marital status by sex (age 15+)¹

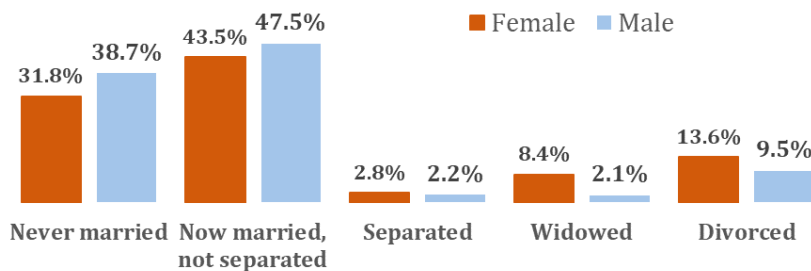
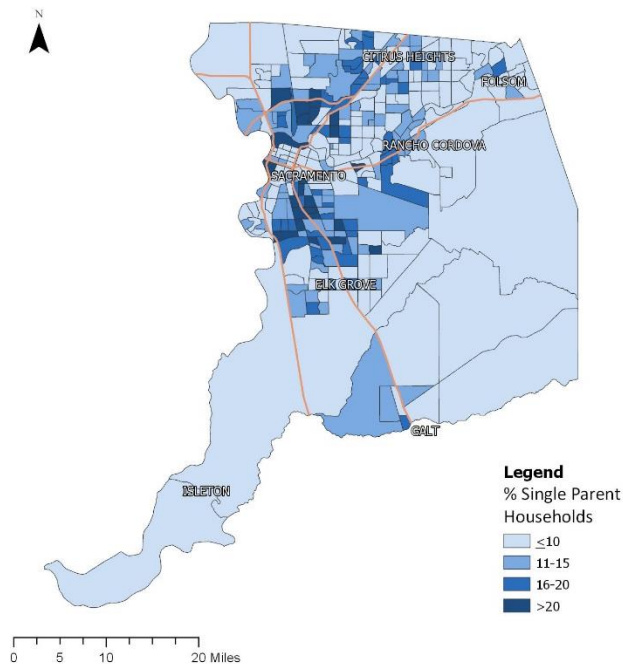


FIGURE 9: Single parent households by census tract¹



Source: 1. 2017 American Community Survey 5-year estimates

FAMILY UNITS

Family structure and composition may influence health behaviors and outcomes.

Snapshot: The average family size in the County and State was 3-4 persons and about one third of households were families with children. Householders in the County were more likely to live alone or be grandparents responsible for grandchildren. About 9% of those age 65+ lived alone.

Marital status: Over two thirds of females and nearly half of males age 15 or older were married and not separated [Figure 8]. Males were more likely than females to have never been married. Females were more likely than males to be separated, widowed or divorced.

Single parents: Female householders with children and no spouse made up 7.6% and males householders with children and no spouse made up 3.0% of households in the County. There was geographic variation in the distribution of single-parent households [Figure 9].

Neighborhood and Built Environment



Access to exercise opportunities¹: **97%**
Compared to State: 94%

Mean travel time to work²: **27.6** minutes
Compared to State: 29.8 minutes

Liquor store density³: **7.3** (per 100,000)
Compared to State: 10.2

Food insecurity rate⁴: **14%**
Compared to State: 11%

FIGURE 8: Walkability scores by city⁵

Scores range from 0 (least walkable) to 100 (most walkable)

Note: data for Isleton not available



Did you know? Sacramento County promotes active design

Sacramento County included a walking person icon in their Countywide Design Guidelines to show which policies support public health and contribute to an active and healthy built environment.



The active design designation helps the County to achieve its goal of creating a built environment that is healthy, sustainable, livable, and promotes active design.

For more information and to review the Countywide Design Guidelines and case Studies, visit the [Sacramento County Planning and Environmental Review website](#).

Sources: 1. 2017 California County Health Rankings, 2. 2017 American Community Survey 5-year estimates, 3. US Census County Business Patterns, 2016, 4. Feeding America, 2017, 5. Walk Score

NEIGHBORHOOD AND BUILT ENVIRONMENT

The built environment is the infrastructure of a community including transportation, roadways, buildings and land-use. Built environment design can help mitigate climate change, influence lifestyles, and improve public health.

Snapshot: Sacramento County residents on average had higher access to exercise opportunities and shorter travel times to work compared to State residents overall in 2017. The County also had relatively fewer liquor stores than the State. Food insecurity in the County decreased from 17% in 2011 to 14% in 2017 but remained higher than the State rate.

Walkability: All major cities in Sacramento County were car-dependent (walk score <50). The city of Sacramento was the most walkable city in the County [Figure 10]. Sacramento City was also considered a bike-able city (score 66/100) but had limited public transportation options (score 34/100).

Educational Attainment



High school diploma (age ≥25): **87%**
Compared to State: 83%

Bachelor's degree or higher: **30%**
Compared to State: 33%

Student/teacher ratio: **23.2**
Compared to State: 23.4

Chronic absenteeism rate²: **14%**
Compared to State: 11%

FIGURE 9: Racial/ethnic disparities in suspension rates²

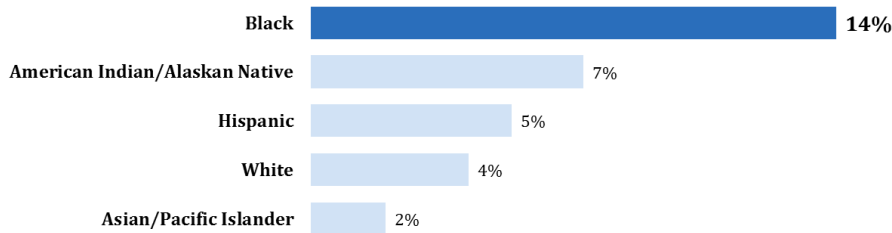
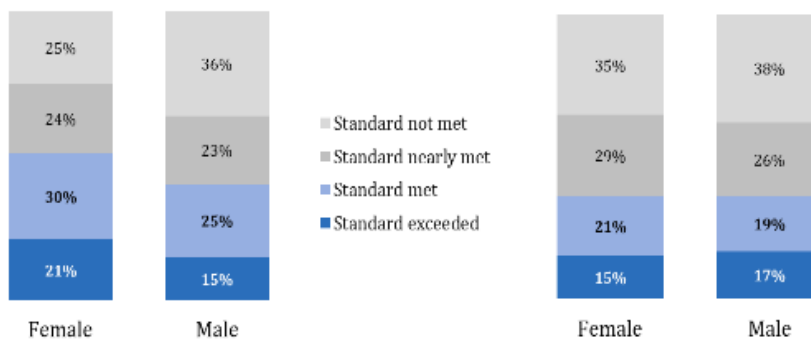


FIGURE 10: English language arts and mathematics achievement levels by gender, all grades (3-8, 11)⁴



Sources: 1. 2017 American Community Survey 5-year estimates, 2. National Center for Education Statistics 2016-2017 academic year 3. California Department of Education DataQuest 2016-2017 academic year 4. California Department of Education California Assessment of Student Performance and Progress 2017

EDUCATIONAL ATTAINMENT

Education can create opportunities for better health. Applicants with more education are more likely to get higher paying jobs with benefits such as health insurance, and therefore have access to more health resources.

Snapshot: Nearly nine out of every ten County residents (age ≥25) had a high school diploma or higher and 30% had a bachelor's degree or higher in 2017. There were about 23 students for every teacher. Chronic absenteeism was slightly higher in the County compared to the State.

Disparities in discipline: Black students were more likely than their non-Black peers to be suspended or expelled from school [Figure 9].

Academic Achievement: About half of female grade school students met or exceeded English language arts achievement levels compared to 40% of male students [Figure 10]. There was no gender difference in mathematics achievement.

Crime and Safety



Violent crime rate¹: **487.4** (per 100,000)
Compared to State: 450.8

Property crime rate¹: **2,406.0** (per 100,000)
Compared to State: 2491.2

13,407 Felony Arrests¹

2,298 Sworn law enforcement¹
officers: (Excludes CA Highway Patrol)

FIGURE 11: Trend in number of domestic violence calls for assistance¹

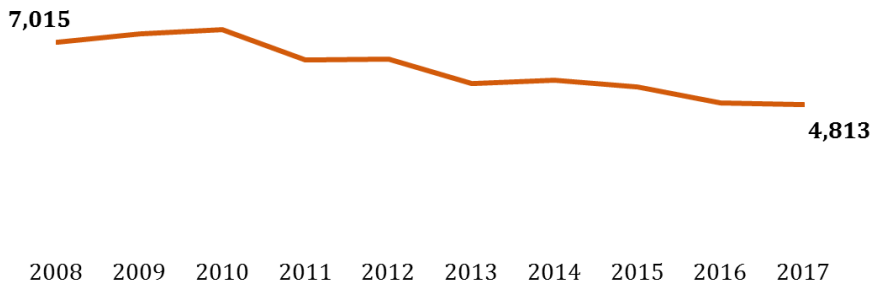
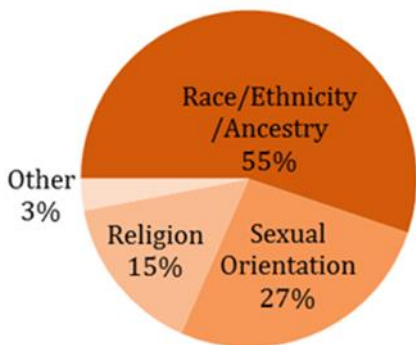


FIGURE 12: Hate crimes in County by bias type 2008-2017¹



Race/Ethnicity/Ancestry Bias:

1. Anti-Black (59%)
2. Anti-Hispanic (10%)
3. Anti-White (9%)
4. Anti-Arab (4%)
5. Other (18%)

Religion Bias:

1. Anti-Jewish (50%)
2. Anti-Islamic (20%)
3. Anti-Catholic (11%)
4. Other (19%)

Source: 1. California Department of Justice 2017 OPENJUSTICE data; 2. Sacramento County Community Themes and Strengths Assessment Survey 2015.

CRIME AND SAFETY

Residents of Sacramento identified low crime as one of the top five most important factors for a healthy community².

Snapshot: The County violent crime rate was 8% higher than the State overall but the property crime rate was 3% lower. There were over 13,000 felony arrests in the County in 2017, including 5,074 violent offenses, 1,109 drug offenses and 318 sex offenses.

Domestic Violence (DV): There was a 31% decrease in the number of DV-related calls for assistance from 2008 to 2017 [Figure 11]. Data should be interpreted with caution as DV is generally underreported and many social and cultural factors can influence reporting likelihood.

Hate crimes: The number of hate crimes in the County decreased from 36 in 2008 to 25 in 2017 [Figure 12]. Of the 299 hate crimes during the 10-year period, over half were bias based on race/ethnicity or ancestry and more than one quarter were bias based on sexual orientation. Anti-Jewish was the most common religion bias.

Veteran Population



Veteran population (age 18+)¹: **7.2%**
Compared to State: 5.6%

Unemployed veterans¹: **8.1%**
Compared to State: 7.1%

Veterans with any disability¹: **29.1%**
Compared to State: 28.5%

Veteran living in poverty¹: **9.0%**
Compared to State 7.5%:

FIGURE 13: County veteran population by period of service¹

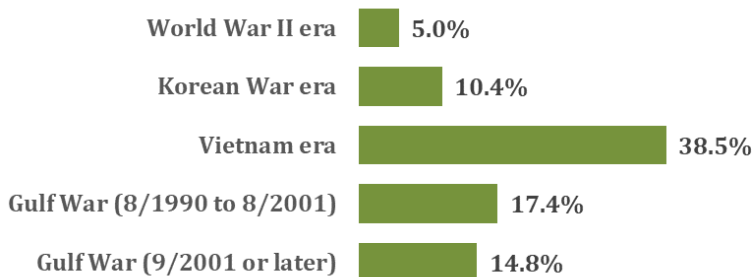


TABLE 3: Select demographic characteristics of adult (age 18+) veteran vs. non-veteran populations¹

	Veteran population	Non-veteran population
Male	91.2%	44.8%
Age 55 or older	68.0%	30.4%
Black	12.6%	9.6%
White	66.5%	48.3%

VETERAN POPULATION

A veteran is a former member of the Armed Forces of the United States who served on active duty and was discharged under honorable conditions.

Snapshot: A larger proportion of the adult population in the County were veterans in 2017 compared to the State. There were a slightly higher proportion of veterans who were unemployed, disabled and living in poverty compared to the State. Veterans were much more likely to be disabled, but less likely to be unemployed or living in poverty compared to non-Veterans.

Period of Service: More veterans in the County served during the Vietnam era than any other period [Figure 13]. The number of Veterans who served in the Gulf War will likely continue to grow.

Veteran demographics: County veterans were much more likely to be male, age 55 or older, and either Black or White compared to non-veteran residents [Table 3].

Did you know? Sacramento County Supports its Veterans

Sacramento County is proud to be home to over 81,000 veterans. The County Veterans Services office encourages veterans to take advantage of the available benefits and resources that are in place to assist veterans, their family members and their dependents. For more information on available services, visit www.dha.saccounty.net/benefits/VeteransServices

Sources: 1. 2017 American Community Survey 5-year estimates

Adverse Childhood Experiences



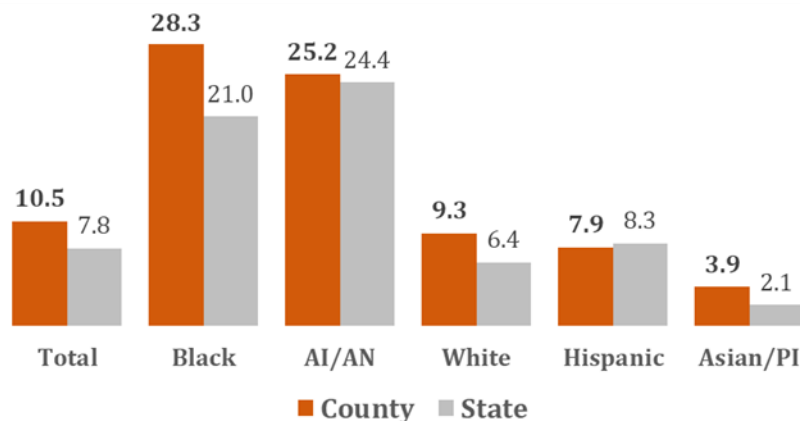
- Children with ≥ 2 ACEs¹: **16.5%**
Compared to State: 16.4%
- Children who are resilient¹: **52.3%**
Compared to State: 52.4%
- Adults with 1-3 ACEs as child²: **46.7%**
Compared to State: 46.7%
- Adults with ≥ 4 ACEs as child²: **19.3%**
Compared to State 16.5%:

FIGURE 14: Adult self-reported adverse experience prior to age 18^{2*}



**Alcohol and other drug use are typically combined as a single ACE but were separated in this source*

FIGURE 15: Racial/ethnic disparities in substantiated child abuse rates per 1,000 children, County vs. State, 2017³



Sources: 1. 2016 National Survey of Children's Health, accessed via HealthKidsdata.org; 2. California Behavioral Risk Factor Surveillance System 2008-2013, accessed via HealthKidsdata.org; 3. UC Berkeley California child Welfare Indicators Project

ADVERSE CHILDHOOD EXPERIENCES

Adverse Childhood Experiences (ACEs) are traumatic events that occur before the age of 18. A CDC study found that ACEs are major risk factors for illness, death and poor quality of life.

Snapshot: About one in six children in the County have experienced two or more ACEs, according to their parents. Parents also reported that over half of these children are resilient, staying calm and in control when faced with a challenge. About two thirds of County adults self-reported at least one ACE as a child. ACEs reported statewide were similar to County prevalence.

Adult self-reported ACEs: The most commonly reported ACEs in the County were verbal abuse, parental divorce/separation and alcohol misuse [Figure 14].

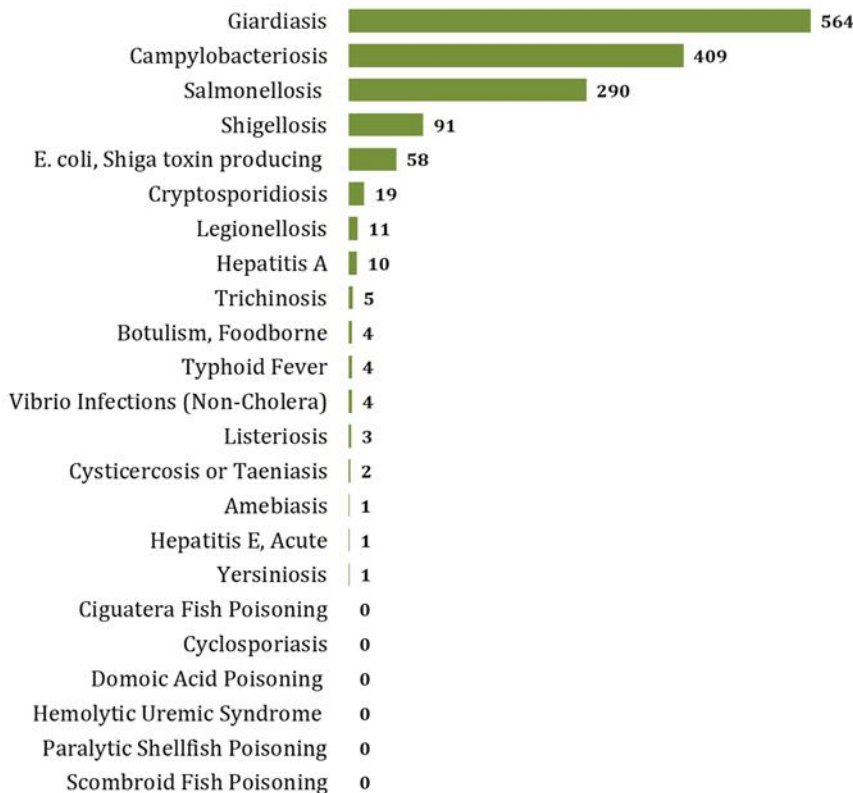
Disparities in child abuse: Black and American Indian children experienced disproportionate rates of child abuse. Child abuse rates were higher in the County compared to the State [Figure 15].

INFECTIOUS DISEASE

Foodborne and Waterborne Illness

Foodborne illness (FBI) and waterborne illness (WBI) are common yet preventable. Each year, one in six Americans gets sick by consuming contaminated foods or beverages according to the Centers for Disease Control and Prevention (CDC). FBI/WBI infections are caused by swallowing a variety of different bacteria, viruses or parasites. Typical symptoms may include upset stomach, nausea, vomiting, diarrhea and/or fever. FBI/WBI can result during bathing, washing, drinking or in food preparation. Following four basic food safety steps at home – clean, separate, cook and chill – can help prevent these illnesses.

FIGURE 16: Number of foodborne and waterborne illnesses reported to the County, 2017¹



FOODBORNE AND WATERBORNE ILLNESS

The most commonly reported FBI/WBI cases in the County in 2017 were giardiasis, campylobacter, and salmonellosis [Figure 16]. However, for some FBI/WBI illnesses, even a few cases are notable. For example, five cases of trichinosis is rare – and was associated with an outbreak among hunters eating undercooked game meat. FBIs/WBIs are often under-reported due to lack of clinical specimen collections needed to obtain a more specific diagnosis than ‘food poisoning’ via laboratory confirmation.

Source: 1. California Reportable Disease Information Exchange (CalREDIE)

FIGURE 17: Trends in giardiasis rates per 100,000 population, County vs. State, 2012-2017¹⁻²

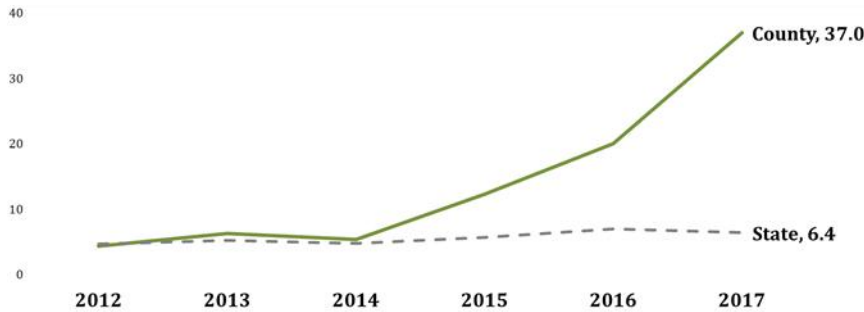


FIGURE 18: Trends in shiga-toxin producing *Escherichia Coli* rates per 100,000 population, County vs. State, 2012-2017¹⁻²

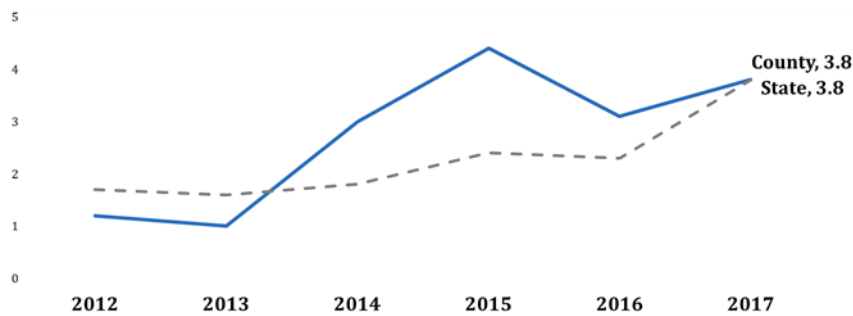
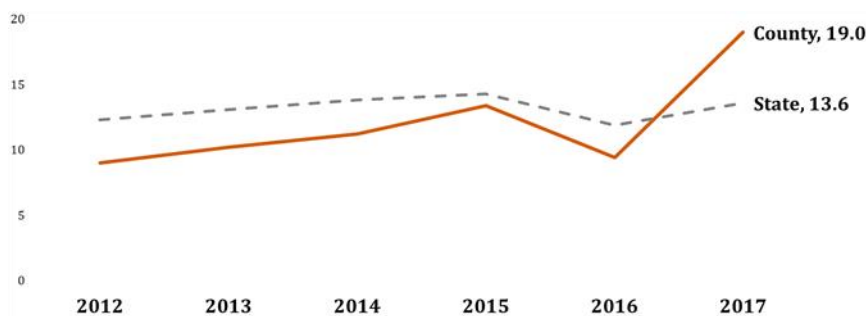


FIGURE 19: Trends in salmonellosis rates per 100,000 population, County vs. State, 2012-2017¹⁻²



Sources: 1. California Reportable Disease Information Exchange (County data); 2. California Department of Public Health (State data)

FOODBORNE AND WATERBORNE DISEASES

Giardiasis: The rate of giardiasis infections per 100,000 population increased from 2013 to 2017 (Figure 17). Increased laboratory testing for these infections, including testing performed at the Sacramento County Refugee Medical Evaluation Clinic, likely accounts for this increase.

STEC: Shiga-toxin producing *Escherichia coli* (STEC) rates varied by year [Figure 18]. Localized outbreaks can explain some of the variation in these rates over time. A STEC outbreak associated with unpasteurized apple cider sickened 13 people, including 11 County residents in the fall of 2015.

Salmonellosis: Similar to STEC, localized outbreaks can explain some of the variation in County Salmonellosis rates over time [Figure 21]. Sixty-three persons, many County residents, became ill with *Salmonella infantis* in the spring of 2017 after eating a meal containing improperly cooked/handled chicken served at a school fundraiser.

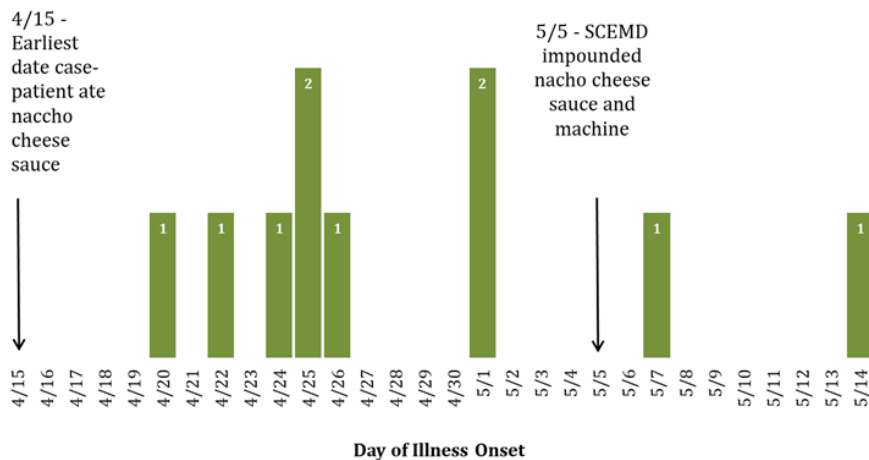
Spotlight: Foodborne botulism outbreak

Background: Foodborne botulism is a rare form of botulism disease caused by the bacterium *Clostridium botulinum*. This bacterium is found in soil and can produce a toxin when in conditions without oxygen (e.g., in home canned goods). Even one case of foodborne botulism is unusual, though other forms of the disease are more common (i.e., wound botulism, infant botulism). Signs and symptoms of foodborne botulism include difficulty swallowing, double vision, trouble breathing and/or paralysis among others. *Clostridium botulinum* is also especially concerning because of its potential use in bioterrorism.

Outbreak investigation: Sacramento County Public Health (SCPH), in collaboration with other agencies, conducted an investigation to determine the source of illness in patients hospitalized with foodborne botulism in the spring of 2017. Interviews related to the first four patients led the SCPH Outbreak Investigation Team to suspect nacho cheese sauce from a gas station to be the vehicle of transmission, prompting Sacramento County Environmental Management (SCEMD) to impound the nacho cheese machine and sauce. Laboratory findings later confirmed this hypothesis; clinical specimens from the ten cases and cheese sauce taken from the gas station tested positive for *Clostridium botulinum* toxin type A. Evidence suggested that the nacho cheese sauce was likely accidentally contaminated at the gas station.

Case-patients: A total of ten persons, including four County residents, were diagnosed with laboratory-confirmed botulism related to this outbreak. Eight of the ten were verified as having eaten nacho cheese sauce from the same gas station. All ten were hospitalized in the intensive care unit and one patient tragically died from the illness.

FIGURE 20: Number of foodborne botulism outbreak case-patients by day of illness onset, 2017¹



Source: 1. Sacramento County Public Health Epidemiology Unit

“OUR TEAM DID A GREAT JOB INVESTIGATING, IDENTIFYING AND ELIMINATING THE SOURCE OF THE OUTBREAK EARLY, DESPITE THE CHALLENGE OF GETTING INFORMATION FROM INTUBATED PATIENTS AND THE ATYPICAL VEHICLE OF DISEASE TRANSMISSION” – JUNE NASH, SR. PUBLIC HEALTH NURSE

JUNE NASH IS A SUPERVISING PUBLIC HEALTH NURSE WITH THE SCPH COMMUNICABLE DISEASE PROGRAM AND WAS A KEY LEADER ON THE OUTBREAK INVESTIGATION TEAM

Human Immunodeficiency Virus

Human Immunodeficiency Virus (HIV) is most commonly spread through unprotected sexual contact or through sharing equipment for injection drug use. Acquired Immunodeficiency Syndrome (AIDS) is the last stage of HIV infection and occurs when the immune system is damaged to an extent that the person is vulnerable to life-threatening opportunistic infections. No effective cure exists for HIV. Antiretroviral therapy (ART) can help control HIV infection, slow progression to AIDS and reduce HIV transmission. Pre-exposure prophylaxis (PrEP) can be highly effective in reducing risk of HIV in certain populations when taken as directed under the care of a medical professional.

FIGURE 21: Trend in rates of HIV diagnosis per 100,000 population, County vs. State, 2008-2017¹⁻²

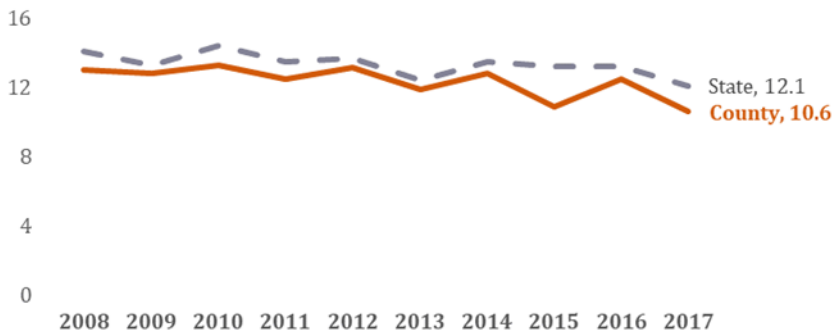
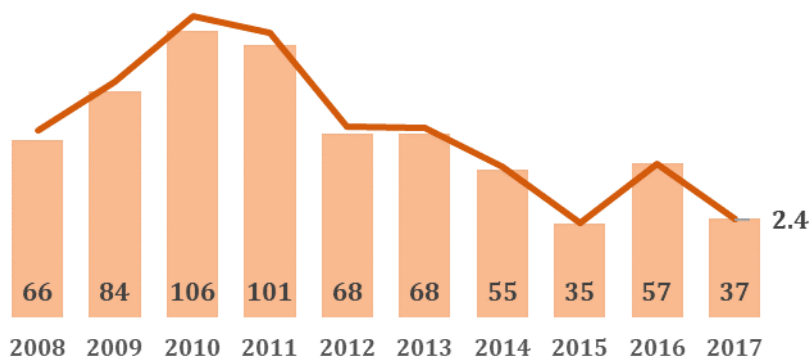


FIGURE 22: Trend in number and rates of AIDS diagnoses per 100,000 population, 2008-2017¹



HUMAN IMMUNODEFICIENCY VIRUS

Newly-diagnosed HIV:

There were 161 newly-diagnosed cases of HIV in 2017, or a rate of 10.6 per 100,000 population [Figure 21]. Trends in the County rates were relatively stable from 2008-2017. Recent slight decreases in rates may be due to delayed reporting.

Newly-diagnosed AIDS:

The number and rate of newly-diagnosed AIDS cases has decreased since 2010, indicating that local efforts to delay progression from HIV to AIDS have been effective in recent years [Figure 22].

Sources: 1. California Department of Public Health (CDPH) Office of AIDS (OA) January 2019 Data Use Agreement File; 2. CDPH OA (State rates).

FIGURE 23: Number of HIV infections by sex and transmission category, 2008-2017¹

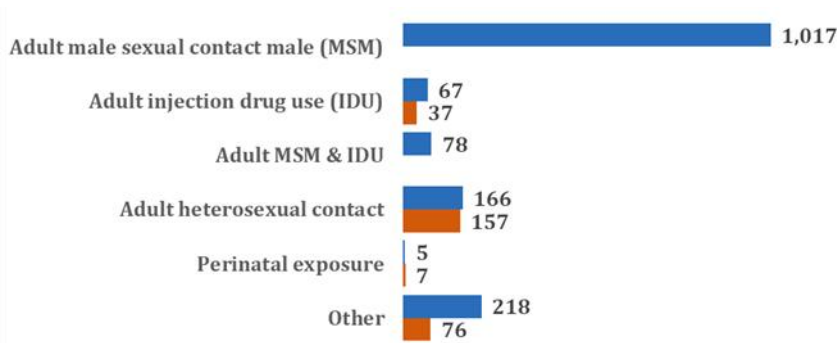
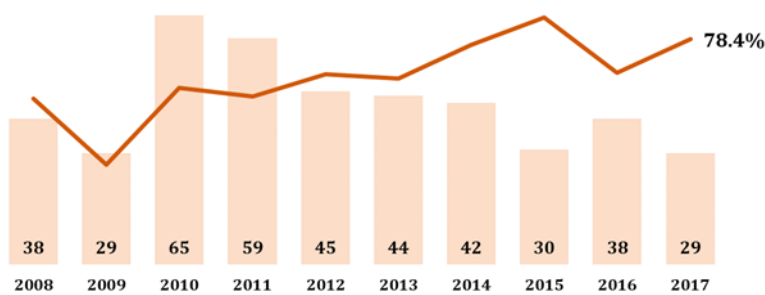


FIGURE 24: Trend in number and percent of AIDS cases that were concurrently diagnosed with HIV and AIDS, 2008-2017¹



Did you know? Ryan White Program

The Ryan White Comprehensive AIDS Resources Emergency Program provides HIV-related services in a multi-county area to about 2,700 HIV-positive individuals who do not have sufficient healthcare coverage or financial resources for coping with living with HIV. The majority of Ryan White funds support primary medical care, dental care, medical case management, mental and substance use services and essential support services. The County Program is responsible for dissemination and oversight of funds allocated to nine providers in four counties in compliance with Service Standards and Federal Guidelines on the Treatment of Persons with HIV/AIDS.

Sources 1. California Department of Public Health (CDPH) Office of AIDS (OA) January 2019 Data Use Agreement File

HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Transmission category by sex: Transmission category is a classification of the risk factor most likely to have been responsible for spread of HIV. The most common transmission category among males from 2008-2017 was adult male sexual contact whereas the most common transmission category for females was adult heterosexual contact [Figure 23].

Concurrent diagnosis: HIV usually advances to AIDS in ten years or longer without antiretroviral treatment. Concurrent diagnosis is when a person is diagnosed as having progressed to AIDS within a year of an initial HIV diagnosis. This means that individuals who are concurrently diagnosed may have been unknowingly exposing others to the infection for more than a decade prior to diagnosis. Over three-quarters of the total AIDS cases in 2017 were concurrently diagnosed [Figure 24].

Other Sexually Transmitted Infections

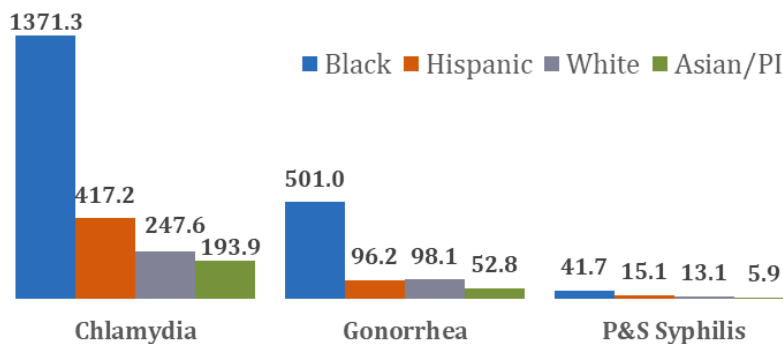
Sexually transmitted infections (STIs), also called sexually transmitted diseases (STDs) are some of most frequently-reported infections at the local, state and national level. Symptoms of STIs vary, and may be mild or absent, making routine screening vital to ensure prompt treatment. STIs can effect anyone, yet there are persistent disparities in rates of STIs based on age, sex, race/ethnicity and sexual orientation. Bacterial STIs (e.g., chlamydia, gonorrhea) are curable, but untreated infections can cause irreversible damage such as female infertility. Pregnant women and unborn children are especially vulnerable to complications of STIs.

TABLE 4: Number and rates of sexually transmitted infections reported to the County, 2017¹⁻²

Infection	Count	Rate*	State rank
Chlamydia	9,803	644.6	8
Gonorrhea	3,344	219.9	10
Syphilis	678	44.6	12
primary	124	8.2	
secondary	163	10.7	
early latent	167	11.0	
late latent	218	14.3	
Neuro-syphilis (any stage)	11	0.7	N/A
Congenital syphilis	6	30.7	18

*Congenital syphilis rate is per 100,000 live births; all other rates are per 100,000 population

FIGURE 25: Racial/ethnic disparities in select STI rates per 100,000 population, 2017²



Sources: 1. California Reportable Disease Information Exchange (CalREDIE); 2. California Department of Public Health Sexually Transmitted Diseases Branch

SEXUALLY TRANSMITTED INFECTIONS

Most commonly reported STI's: The most commonly reported STIs in the County in 2017 were chlamydia, followed by gonorrhea and then syphilis [Table 4]. Syphilis in the primary or secondary (P&S) stage accounted for just over two-fifths of all syphilis cases reported in 2017.

Racial/ethnic disparities: Blacks were disproportionately affected by STI's in 2017, with rates of chlamydia and gonorrhea more than five times that of Whites [Figure 25]. Asian/Pacific Islanders had the lowest rates of STIs.

FIGURE 26: Chlamydia rates per 100,000 population by sex and age group, 2017¹

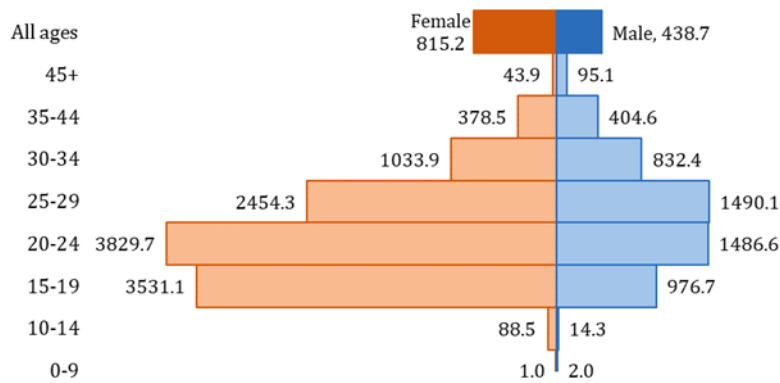


FIGURE 26: Gonorrhea rates per 100,000 population by sex and age group, 2017¹

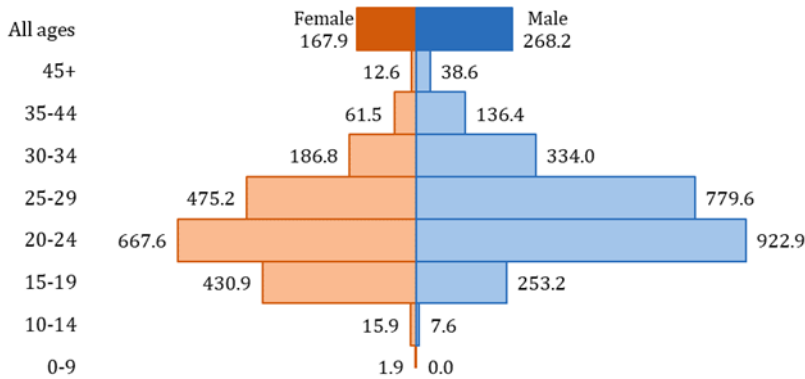
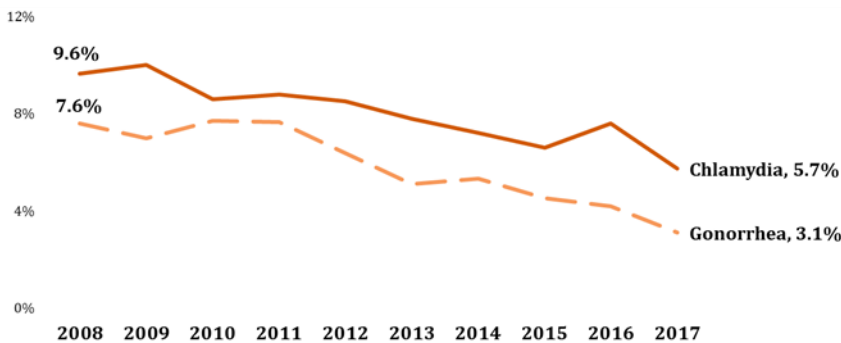


FIGURE 28: Trend in percent of female chlamydia and gonorrhea cases who were pregnant, 2008-2017¹



Source: 1. California Department of Public Health Sexually Transmitted Diseases Branch

SEXUALLY TRANSMITTED INFECTIONS

Chlamydia: Rates of chlamydia were higher for females than for males in 2017 [Figure 26]. The majority (64.1%) of female cases were between ages 15 and 24. Male cases were slightly older on average, with about half (49.3%) between ages 20-29.

Gonorrhea: Rates of gonorrhea were higher for males than for females in 2017 [Figure 27]. Rates were the highest in age group 20-24 for both sexes, though female cases were slightly younger than males on average. Over two-thirds (41.9%) of male cases were between ages 20 and 29.

Pregnant cases: Rates of chlamydia and gonorrhea have increased statewide since 2008 (data not shown). However, the proportion of female chlamydia and gonorrhea cases who were pregnant has decreased over time [Figure 28]. This may be partially due to increased hormonal birth control usage and/or increased targeted prevention and education efforts for women of childbearing age.

FIGURE 27: Trend in primary and secondary syphilis rates per 100,000 population, County vs. State, 2008-2017¹

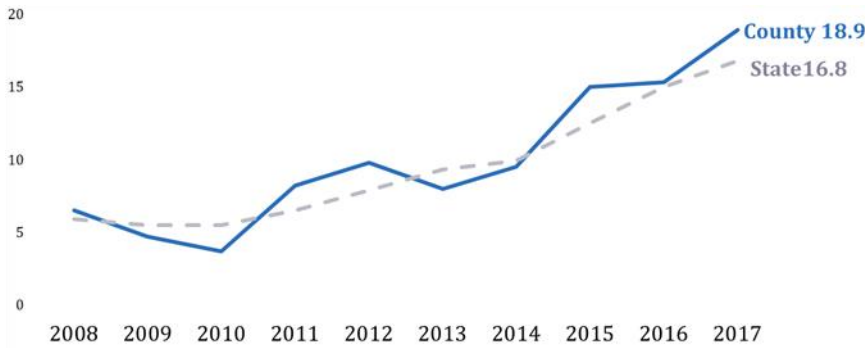


FIGURE 30: Primary and secondary syphilis rates per 100,000 population by sex and age group, 2017¹

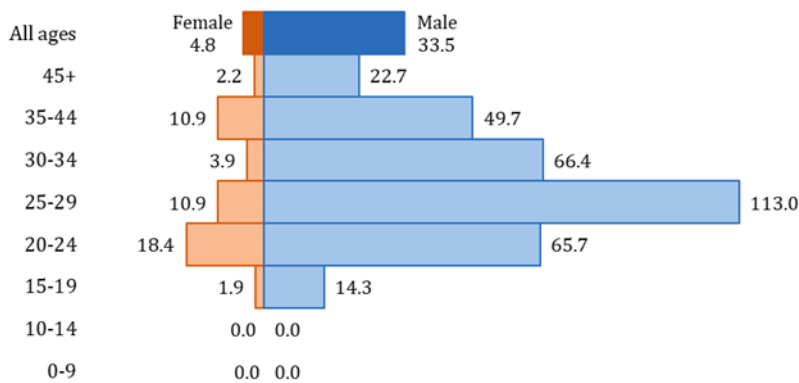
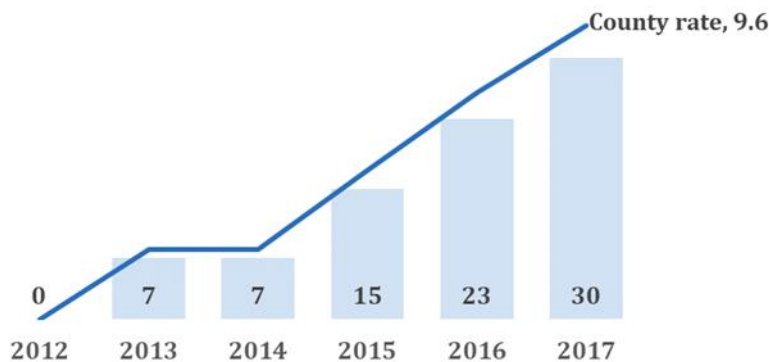


FIGURE 31: Trend in number and rate of primary and secondary cases per 100,000 population among females age 15-44¹



Source: 1. California Department of Public Health Sexually Transmitted Diseases Branch

SEXUALLY TRANSMITTED INFECTIONS

Syphilis trend: The County primary and secondary (P&S) syphilis rate increased 191% from 6.5 per 100,000 population in 2008 to 18.9 in 2017 [Figure 29]. This was very similar to the increasing trend statewide.

Syphilis sex and age: P&S syphilis rates were higher in males than females in 2017 [Figure 30]. This disparity is largely due to the state-wide syphilis outbreak initially among men who have sex with men (MSM) populations that later to heterosexual populations. Rates were highest in the 25-29 age group for males and 20-24 for females.

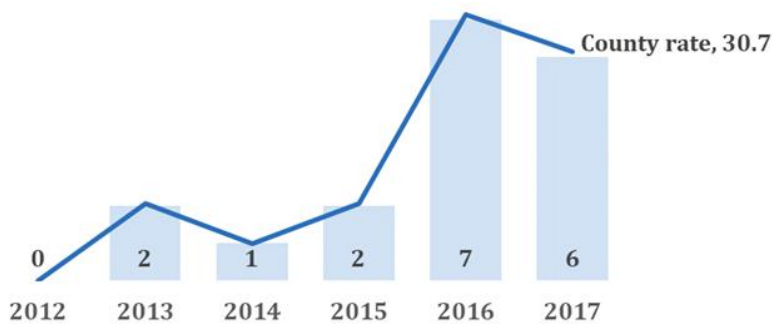
Syphilis in women of child-bearing age: Syphilis infections among women of child-bearing age (age 15-44) are especially concerning due to the potential risk of congenital syphilis. The rate of P&S syphilis cases among women of child-bearing age in the County steadily increased from 2012 to 2017 [Figure 31]. There were no P&S syphilis cases among women of child-bearing age in 2012, whereas there were 30 in 2017.

Spotlight: Congenital Syphilis

Background: Congenital syphilis (CS) is a disease that occurs when a mother with syphilis passes the infection on to her baby during pregnancy. How CS affects a baby’s health depends on how long the mother had syphilis and if or when she received treatment for the infection. CS can cause miscarriage, stillbirth, prematurity, low birth weight or death shortly after birth. Babies born with CS may have deformed bones, severe anemia, enlarged liver and spleen, jaundice, brain and nerve problems, meningitis, and/or skin rashes. Not all babies born with CS have symptoms, but they may develop serious health problems later if untreated. California has recently experienced a steep (>700%) increase in the annual number of CS cases, from 33 in 2012 to 1,460 in 2017¹. Figure 32 below shows the number and rate of CS in the County during this time period.

SCPH response: The SCPH STD/HIV Surveillance Unit receives reports of CS, interprets laboratory results, track and notify patients, ensure appropriate and timely treatment of patients, and counsel patients. SCPH Disease Investigators deliver Bicilin, the antibiotic used to treat syphilis, to private medical providers and community health centers for the treatment of confirmed syphilis-infected individuals and/or exposed partners residing in the County. The SCPH HIV/STD Prevention Program provides STD (including CS) training and capacity building for local agencies. SCPH also coordinates the Sacramento Workgroup to Improve Sexual Health (SacWISH), a community-wide effort to reduce new ST/HIV infections and eliminate CS. SacWISH is comprised of individuals representing local community-based clinics, healthcare organizations, educational institutions and non-profit providers.

Figure 32: Trend in number and rate of congenital syphilis, 2012-2017



Source: 1. California Department of Public Health Sexually Transmitted Diseases Branch

“THE INCREASE IN CONGENITAL SYPHILIS CASES IS TRULY OUR ‘CANARY IN THE MINE’—SIGNALING TO LOCAL PROVIDERS THE IMPORTANCE OF EARLY DIAGNOSIS AND TREATMENT AND ALERTING PUBLIC HEALTH PRACTITIONERS THAT WE MUST CONTINUE TO EDUCATE COMMUNITIES ABOUT THE RISKS FOR INFECTION AND ALSO REMIND WOMEN OF THE IMPORTANCE OF SEEKING EARLY AND CONTINUOUS PRENATAL CARE.” – STACI SYAS, PROGRAM MANAGER

Staci Syas is the SCPH Program Manager for the STD/HIV Surveillance, HIV/STD Education and Ryan White Programs

Tuberculosis

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*. TB is spread through the air from person to person. About 5-10% of infected persons who do not receive treatment for latent TB infection (LTBI) will later develop TB disease. The site of TB infection is most commonly the lungs (pulmonary TB) but infection can occur outside the lungs (extra-pulmonary TB). Common symptoms of pulmonary TB include a cough lasting at least three weeks, chest pain, and coughing up blood or sputum (phlegm in lungs). LTBI and TB disease are treatable with specific drug regimens. Treatment can be long and complicated depending on the characteristics of the patient (e.g., HIV co-infection) and the infection (e.g., drug resistance).

FIGURE 33: Trend in TB rates, County vs. State vs. HP2020 Objective, 2008-2017¹

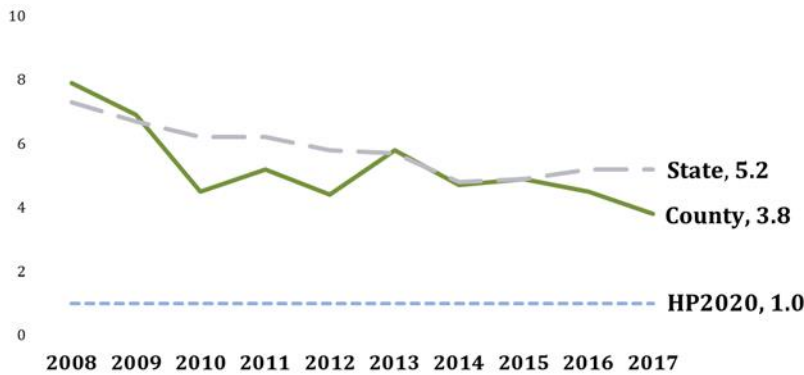
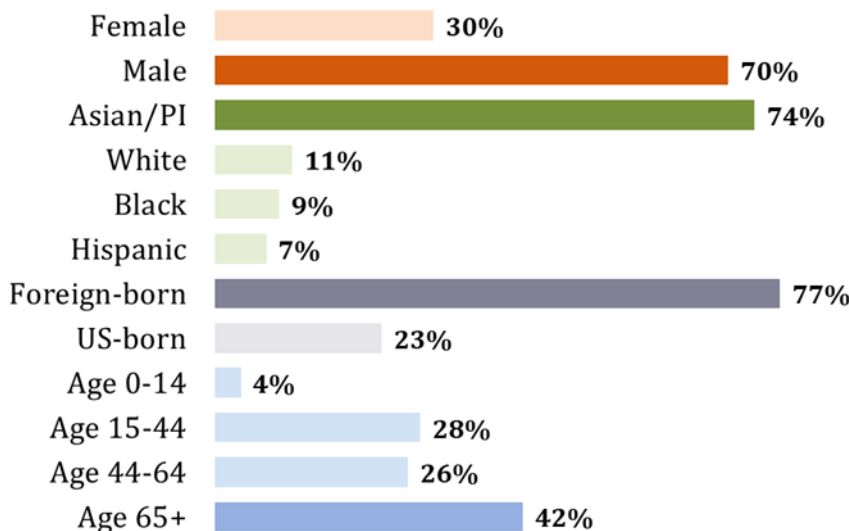


FIGURE 34: Select demographic characteristics of TB cases, 2017¹



TUBERCULOSIS

TB trends: The rate of TB disease in the County declined 51.9% from 7.9 per 100,000 population in 2008 to 3.8 in 2017 [Figure 33]. Both the County and State were above (i.e., did not meet) the Healthy People 2020 (HP2020) objective of a rate not more than 1.0.

TB demographics: A higher proportion of TB cases were male compared to female in 2017 [Figure 34]. Asian/Pacific Islanders and foreign-born persons were disproportionately represented among cases. Over one-third (42%) of TB cases in 2017 were age 65 or older.

Source: 1. California Department of Public Health Tuberculosis Control Branch

FIGURE 35: TB cases by site of disease, 2017¹

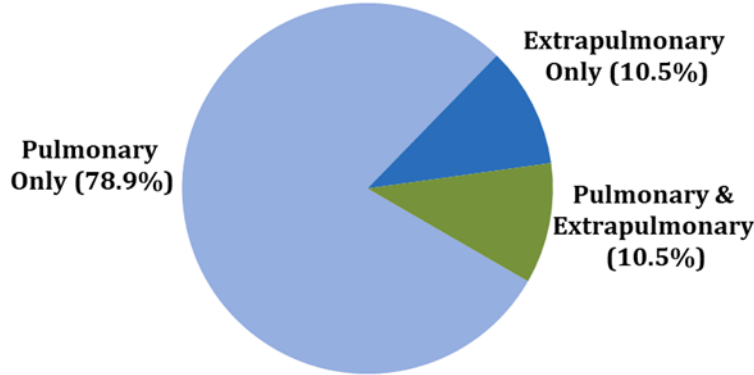
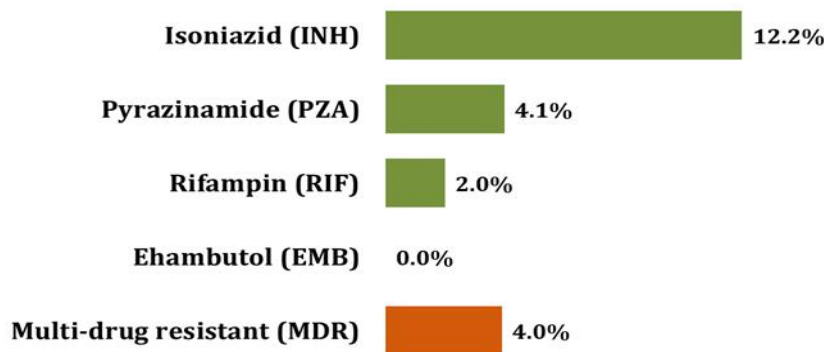


TABLE 5: Tuberculosis cases by select risk factors, 2017¹

Risk factors	Number (percent)
Place of residence	
Long-term care	0 (0.0%)
Corrections	1 (1.8%)
Homeless	6 (10.5%)
Substance use within past year	
Excess alcohol	3 (5.3%)
Injection drugs	1 (1.8%)
Non-injection drugs	0 (0.0%)
Co-morbidities	
Diabetes mellitus	17 (29.8%)
HIV	0 (0.0%)

FIGURE 36: First-line TB drug resistance, 2017¹



Source: 1. Source: 1. California Department of Public Health Tuberculosis Control Branch

TUBERCULOSIS

Site of disease: The majority of TB cases in the County in 2017 had TB infection of the lungs (pulmonary TB) only [Figure 35]. The most common extrapulmonary site of disease was cervical lymph nodes (data not shown).

TB Risk Factors: Table 5 shows TB risk factors. Homeless persons and persons living in congregate settings are at increased risk of developing TB. Five of six homeless cases were part of an outbreak. Substance use also increases the risk of developing TB disease and can complicate TB therapy; there were four cases in 2017 that either used excess alcohol and/or injection drugs. The most common risk factor among case was with diabetes mellitus, with close to one-third having this co-morbidity.

Drug-resistance: Of the 49 cases in 2017 for whom drug susceptibility testing was performed, six were resistant to Isoniazid (INH), two to pyrazinamide (PZA) and one to rifampin (RIF) [Figure 36]. Multi-drug resistant TB (MDR-TB) is when TB bacteria is resistant to at least INH and RIF.

Spotlight: 2014 TB Outbreak Investigation

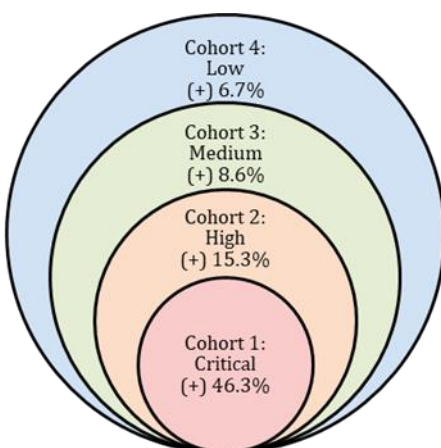
Background: The risk of tuberculosis (TB) infection is linked with intimacy and duration of contact, ventilation in the shared environment, and degree of infectiousness of the person with active TB. TB skin tests (TSTs) and TB blood tests are used to detect TB bacteria in the body. Other tests, such as chest x-rays and a sample of sputum, are needed to see if a person has TB disease.

Event: A student at a local school – a congregate setting - was reported to Sacramento County Public Health (SCPH) as having an active case of TB disease in the winter of 2014. The student was likely infectious for several months prior to diagnosis.

Response: SCPH conducted a large-scale tuberculosis (TB) contact investigation in consultation with the State TB Control Branch and with support of the SCPH Emergency Preparedness Program. Students, staff and other contacts were assigned to four different groups for testing prioritization (1. Critical priority, 2. High priority, 3. Medium priority, 4. Low priority) depending on determined risk of infection. SCPH used a concentric circle approach to testing [Figure 37]; After finding high positivity rates in the highest priority cohort, SCPH subsequently tested the other cohorts in order of priority.

Outcome: A total of 178 (23.5%) of the 757 persons screened by SCPH were found to have latent TB. Many of those with latent TB received treatment to prevent them from developing active TB disease. Four persons were found to have active TB and were treated for the disease.

Figure 28: Concentric circle approach: Exposed contacts positivity rate by risk cohort group

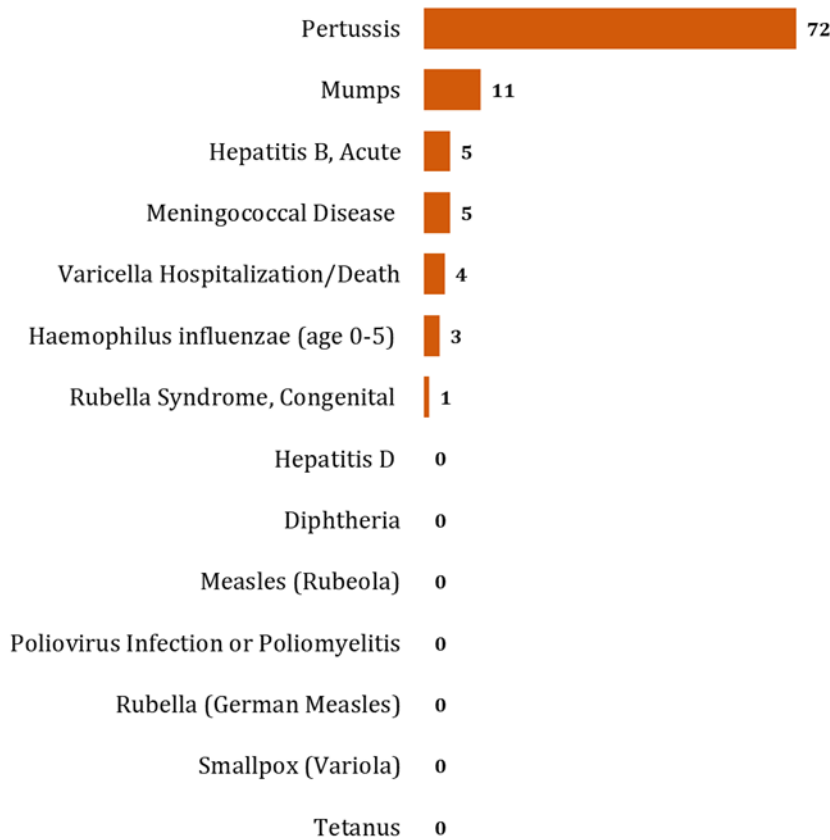


“WORKING THE LARGEST SCHOOL OUTBREAK FOR TB IN SACRAMENTO COUNTY CONFIRMED THAT INVOLVING THE COMMUNITY AND ALL STAKEHOLDERS IS THE MOST IMPORTANT COMPONENT OF A SUCCESSFUL RELATIONSHIP AND OUTCOME. THIS WILL ENSURE THAT THE SCREENING FOR TUBERCULOSIS INFECTION AND ADDITIONAL CASES ARE A SUCCESSFULLY LOCATED. THE POSITIVE RELATIONSHIP ESTABLISHED WITH THE COMMUNITY LEADERS, SCHOOL ADMINISTRATION, STAFF AND STUDENTS ENABLED US TO SCREEN 1500+ INDIVIDUALS AND ENSURE ALL THOSE REQUIRING TREATMENT AND EVALUATION WERE CARED FOR. EDUCATION REGARDING TUBERCULOSIS TRANSMISSION WITH THE COMMUNITY AND STUDENTS HELPED TO OVERCOME ANY CHALLENGES THAT WERE PRESENTED. THE BIGGEST CHALLENGE WAS ORGANIZING THE SCREENING WHICH WAS SUCCESSFUL DUE TO ALL PARTIES ONBOARDING IN AGREEMENT.” – ETTA DIXON SR. HEALTH PROGRAM COORDINATOR TB CONTROL

Vaccine-Preventable Diseases

Vaccine-preventable diseases (VPDs) are diseases for which vaccines have been developed to provide protection against the germs (e.g., viruses) causing the diseases. Vaccines work by introducing certain weakened parts of the germs (i.e., antigens) in very small, safe amounts so that the body’s own natural immune system will recognize and make proteins (antibodies) to destroy the germs. Vaccines can prevent infectious diseases that once killed or harmed many infants, children and adults. They help protect the individual receiving the vaccine, and also help prevent the spread of the disease in a community – which is especially important to protect the most vulnerable among us (e.g., very young children, immunocompromised) who cannot receive the vaccine themselves.

FIGURE 29: Number of select* vaccine-preventable diseases reported to the County, 2017¹



Source: 1. California Reportable Disease Information Exchange (CalREDIE)

VACCINE - PREVENTABLE DISEASES

Figure 38 shows some of the vaccine-preventable diseases (VPDs) reported to the County in 2017. 2017 counts for Hepatitis B – the most commonly reported VPD – were not available at the time of this report. Severe influenza cases were omitted as they are tabulated by influenza season rather than calendar year. Pertussis (whooping cough) cases vary drastically by year, with increases typically seen every 3-5 years. Even a few cases of other VPDs can be concerning due to their high level of infectiousness, severity of outcomes and/or resurgence in the U.S after a period of near elimination.

FIGURE 39: Number of influenza intensive care unit (ICU) and deaths among persons age <65 by season, 2012/13 – 2016/17¹

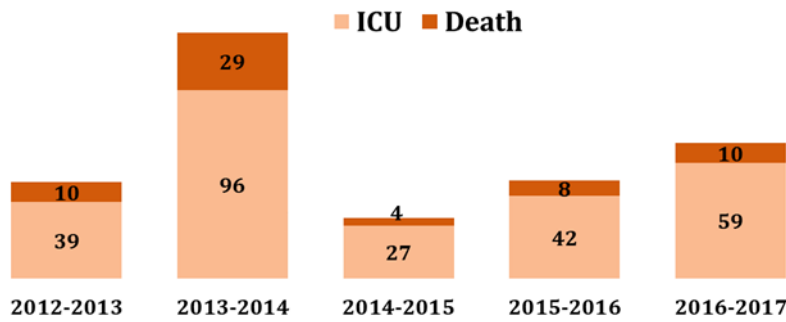
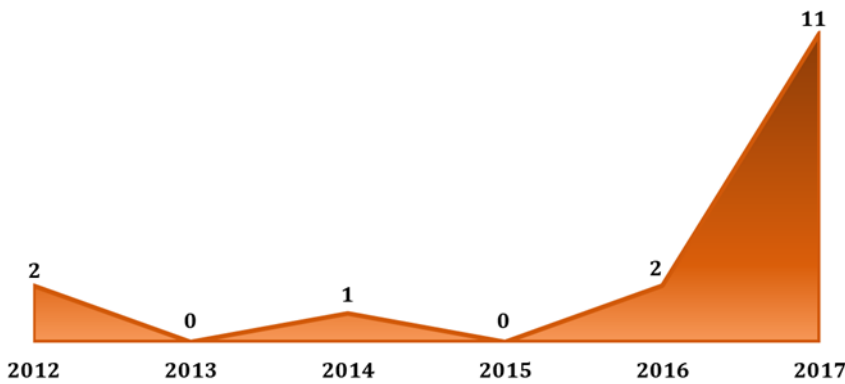


FIGURE 40: Trend in number of mumps cases by year, 2012-2017¹



**VACCINE-
PREVENTABLE
DISEASES**

Severe influenza: The 2013/14 influenza season was the most severe in recent years, with 29 deaths among persons age less than 65 [Figure 39]. The 2016/17 influenza season was not as severe as the 2013/14 season but was more severe compared to the prior two years.

Mumps cases: The number of mumps cases increased dramatically in 2017 [Figure 40]. This increase was partially attributable to an outbreak of mumps at a local college affecting nine students, some of whom were County residents.

Did you know? Public School Immunizations

Children are required to have certain vaccines to attend public schools, including the measles, mumps and rubella (MMR) vaccine. California Senate Bill (SB) 277, passed in 2015/16 school year) eliminated personal belief exemptions (PBEs) for vaccines. The percent of kindergarten students up-to-date on MMR vaccine increased, likely as a result of SB277.

Sources: 1. California Reportable Disease Information Exchange (CalREDIE); 2. Shots for Schools (www.shotsforschools.org)

FIGURE 41: Chronic hepatitis B rates by sex and age group, 2016¹

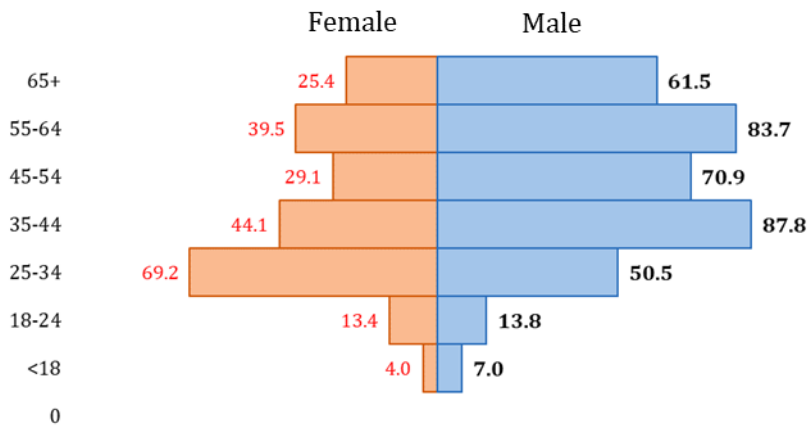
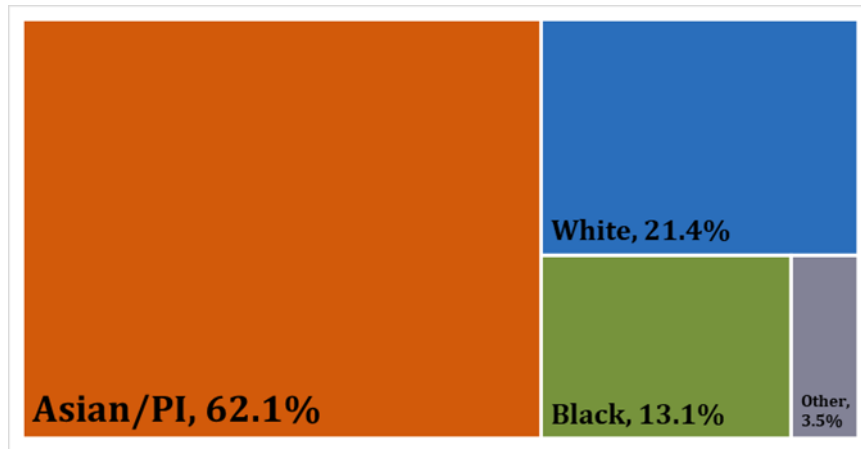


FIGURE 42: Chronic hepatitis B cases by select race/ethnicity, 2016²



Did you know? Perinatal Hepatitis B (HBV) Program

The SCPH Perinatal HBV Program follows up on reports of females age 11 to 50 years who have a positive HBV screening test. The program works with local hospitals to ensure that infants born to HBV positive mothers are vaccinated and receive immune globulin within 12 hours of birth. Once the baby is home, the program follows up to ensure the infant receives the full series of three immunizations and post-vaccination serology testing. Largely due to these immunization and outreach efforts, there was only one infant diagnosed with HBV in 2017.

Source: 1. Centers for Disease Control and Prevention; 2. California Department of Public Health Office of Viral Hepatitis Prevention

VACCINE - PREVENTABLE DISEASES

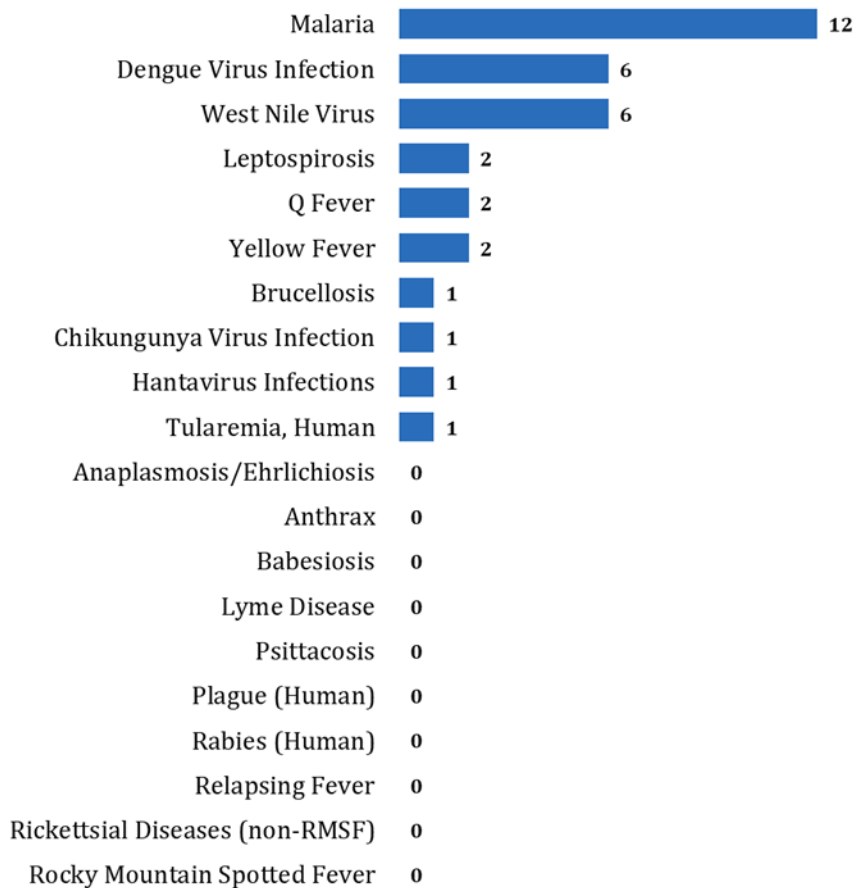
Hepatitis B: Hepatitis B (HBV) is a viral infection that attacks the liver and causes both acute and chronic disease. Acute disease usually resolves on its own but chronic disease is life-long and can lead to serious health outcomes, such as cirrhosis, liver cancer or even death. HBV is transmitted when blood, semen or another body fluid from a person infected with the virus enters the body of someone not infected.¹

Chronic HBV: The highest rates of hepatitis B (cHBV) occurred in males and those in age groups 35-44 or older in 2016 [Figure 41]. Female cHBC cases were much younger on average at the time of infection, with the highest rates in those age 25-34. Asian/Pacific Islanders accounted for the majority of cHBV cases, followed by Whites and Blacks [Figure 44]. Hispanics and American Indian/Alaskan Natives accounted for less than 5 percent of total cHBV cases in 2016.

Zoonotic Diseases

Zoonotic diseases, are diseases that can be spread between animals and humans. Zoonotic diseases can be caused by viruses, bacteria, parasites and fungi through contact with body fluids (blood, saliva, or waste) of infected animals. Vector-borne diseases (VBDs) are a subset of zoonotic diseases that are spread to humans through bites from mosquitoes, ticks and fleas. Taking steps to prevent bites and reduce local population of the vectors is the best way to avoid these diseases. Common diseases that are considered both zoonotic and foodborne/water-borne (e.g., salmonellosis) were included in the foodborne section of this report.

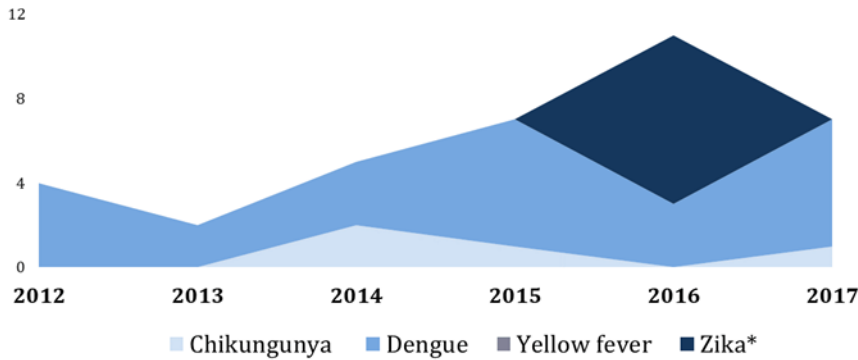
FIGURE 43: Number of zoonotic diseases reported to the County, 2017¹



ZOONOTIC DISEASES

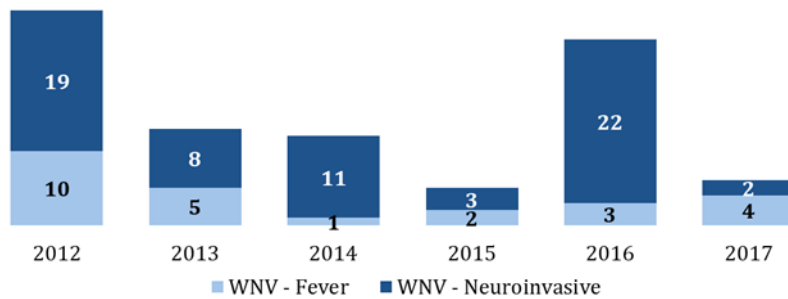
The three most commonly reported zoonotic diseases in 2017 were vector-borne diseases transmitted through mosquito bite – malaria, dengue and West Nile [Figure 43]. The number of Q-fever (2) and brucellosis (1) cases were typical of the amount reported each year to the County; these are bacteria often transmitted from contact with infected animals such as goats, sheep and cattle. The single case of tularemia, also known as rabbit fever, is particularly notable as human cases are exceedingly rare in the County. There were no other cases of tick-borne diseases reported to the County in 2017.

FIGURE 44: Trend in number of infections transmitted by the *Aedes species* mosquitos, 2012-2017¹



*Zika virus surveillance began in 2016

FIGURE 45: Trend in number of West Nile (WNV) virus fever and WNV neuroinvasive cases, 2012-2017¹



ZOO NOTIC DISEASES

***Aedes species* mosquitos:** *Aedes aegypti* mosquitoes are the main type of mosquito that spreads chickungunya, dengue, yellow fever and Zika viruses as they prefer to feed on humans. They are not native to California and were not yet found in the County in 2017. All of the cases of chickungunya, dengue and Zika among County residents from 2012-2017 were associated with travel outside the County [Figure 44]. There were no cases of yellow fever during this period.

West Nile virus: West Nile virus (WNV) is the leading cause of mosquito-borne disease in the continental United States. Most people infected with WNV do not feel sick. About one in five develop a fever and other symptoms. About one in 150 persons infected get severe (neuroinvasive) disease. Despite being rare, severe cases are more likely to be diagnosed and reported; the number of WNV fever (non-neuroinvasive) cases is generally under-diagnosed and therefore under-reported [Figure 45].

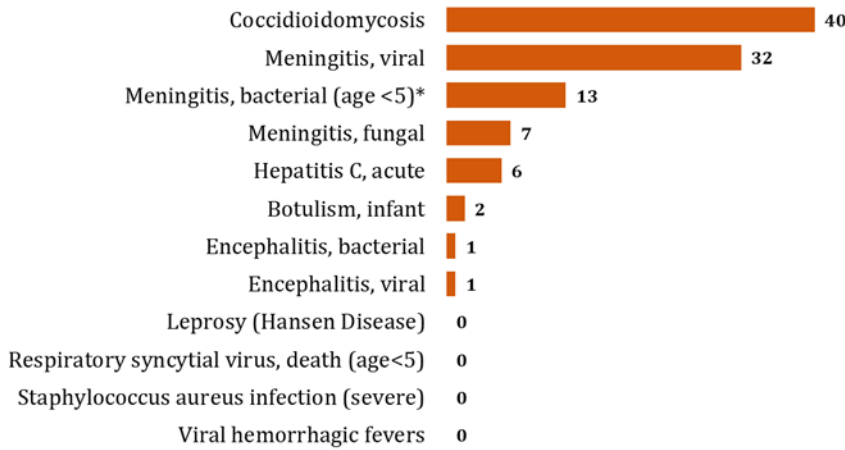
Did you know? Tularemia

The one case of tularemia in the County in 2017 was one of three patients who were recipients of solid organs from a common asymptomatic donor. Two developed tularemia, one of whom unfortunately died. The 3rd patient was treated with prohylaxis (preventative medicine). The SCPH Laboratory and Communicable Disease Programs were key to diagnosing the organ recipient and helping to trace the source back to the organ donor.

Source: 1. California Reportable Disease Information Exchange (CalREDIE)

Other Infectious Diseases

FIGURE 46: Other select infectious diseases reported to the County, 2017¹



*excludes meningococcal meningitis

FIGURE 3030: Chronic hepatitis C rates by race/ethnicity, 2016¹

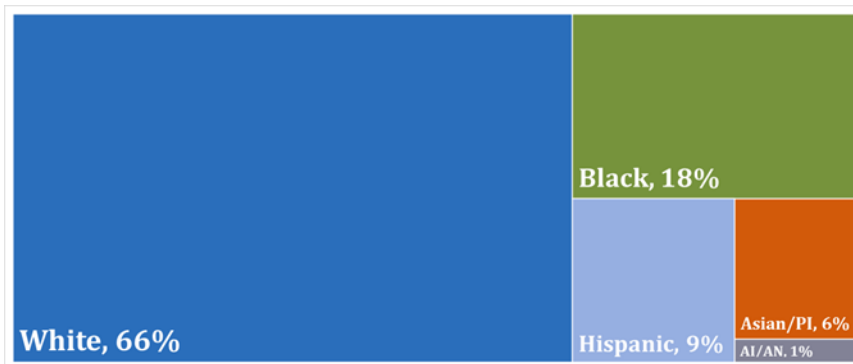
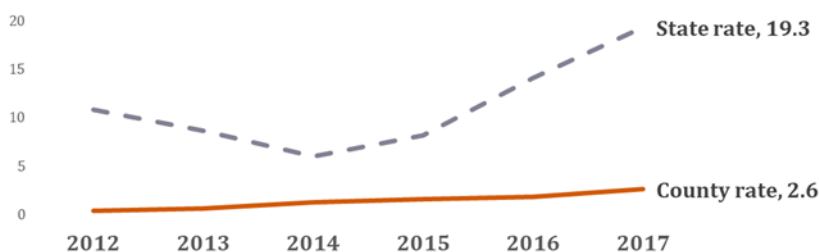


FIGURE 48: Trend in coccidioidomycosis rates, County vs. State, 2012-2017¹⁻²



Sources: 1. California Reportable Disease Information Exchange (CalREDIE); 2. Epidemiologic Summary of Coccidioidomycosis in California, 2018, California Department of Public Health

OTHER INFECTIOUS DISEASES

Other reportable conditions: There are several reportable infectious diseases and conditions that are not categorized as FBI/WBI, STI, VPD, or zoonotic [Figure 46]. Meningitis is the inflammation (swelling) of the protective membranes covering the brain and spinal cord, and encephalitis is inflammation of the brain. Meningitis and encephalitis can be caused by a variety of viruses, bacteria, fungi and parasites.

Chronic hepatitis C: Chronic hepatitis C (cHCV) is one of the most commonly reported diseases in the County, with 1,758 new infections reported in 2016. The majority of cHCV cases in the County were White [Figure 47].

Coccidioidomycosis: Coccidioidomycosis (cocci), also known as Valley Fever, is an infection caused by inhaling spores of certain fungi. Cocci is endemic to some Counties in the San Joaquin Valley (SJV). Sacramento County has lower rates than SJV Counties, but experienced moderate increases from 2012 to 2017 [Figure 48].

Spotlight: Ebola Preparedness and Response

Background: The 2014-2016 Ebola epidemic was the first and largest epidemic of its kind, with widespread urban transmission and a massive death count of more than 11,300 people in Guinea, Liberia and Sierra Leone. The CDC directed its response simultaneously at controlling the epidemic in West Africa and strengthening preparedness for Ebola in the United States.¹

Local Public Health role: The CDC tasked local health departments with monitoring persons returning from travel in affected countries for a 21-day incubation period, the period of time it can take for symptoms to appear following exposure to Ebola Virus. SCPH Public Health Nurses (PHNs) made contact with these returning travelers twice every day to check for fever and evaluate for other symptoms. SCPH also provided education, coordinated laboratory testing, and helped coordinate patient transport. SCPH Laboratory obtained certification to be able to test for Ebola.

Patients under investigation: There were four patients under investigation (PUI) in the County during the monitoring period. One PUI was prior to implementation of returning traveler monitoring. Two were returning travelers who developed fevers and one self-presented at a local emergency department. All four tested negative for Ebola virus. Two PUIs were diagnosed with influenza, explaining their fevers.

Communicable Disease Taskforce and Law Enforcement Communicable Disease Advisory Committee: The County and law enforcement agencies sought legal consultation following the end of traveler monitoring. This resulted in two recommendations: 1. Create a task force of officers that are trained to use personal protective equipment (PPE) while restraining someone involuntarily, and 2. Establish an advisory committee of law enforcement officials in case the need to activate this task force arose. A memorandum of understanding (MOU) formalized the Communicable Disease Task Force (CDT) and Law Enforcement Communicable Disease Advisory Committee (LECDAC) in February 2017. It is the first known public health-law enforcement collaboration of its kind in the nation. The County Health Officer and a Law Enforcement Officer from the Sacramento County Sheriff's Office co-chair the LECDAC. Sacramento Police Department (PD), Citrus Heights PD, Folsom PD, Elk Grove PD, and Galt PD have all appointed LE officers to be CDT members. CDT members complete hazardous waste operations and emergency response (HAZWOPER) training annually and the LECDAC convenes regularly to review policies and exercise procedures.

THE CENTER FOR DISEASE CONTROL CERTIFIED SACRAMENTO COUNTY PUBLIC HEALTH LABORATORY TO PERFORM ITS NEWLY DEVELOPED MOLECULAR TEST FOR EBOLA VIRUS. HAVING THIS NEW TEST IN OUR LABORATORY MARKEDLY REDUCED THE TURNAROUND TIME FOR GETTING RESULTS FROM TWO TO THREE DAYS TO WITHIN 24 HOURS. THIS RESULTED IN MORE RAPID COMPLETION OF THE EVALUATION OF PATIENTS, SAVED RESOURCES REQUIRED TO KEEP SOMEONE IN ISOLATION, AND HELPED EASE PUBLIC CONCERN.” – DR. GONZALEZ, SCPH LABORATORY CHIEF

CHRONIC DISEASE

Alzheimer's Disease

Alzheimer's disease is a progressive disease beginning with mild memory loss possibly leading to loss of the ability to carry on a conversation and respond to the environment. It involves parts of the brain that control thought, memory and language. Alzheimer's is the most common type of dementia in the United States, with an estimated five million Americans living with the disease. Age is the best known risk factor for Alzheimer's, with symptoms typically appearing after age 60. Researchers are studying whether education, diet and the environment play a role in developing Alzheimer's. Physical, mental and social activities may reduce the risk of the disease.¹

FIGURE 49: Trend in age-adjusted Alzheimer's disease death rate, 2008-2017²

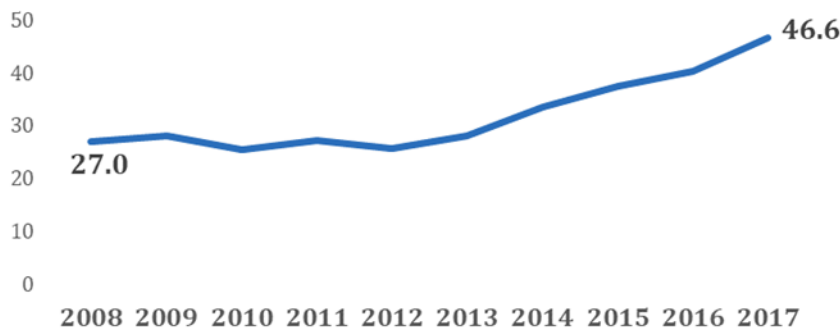
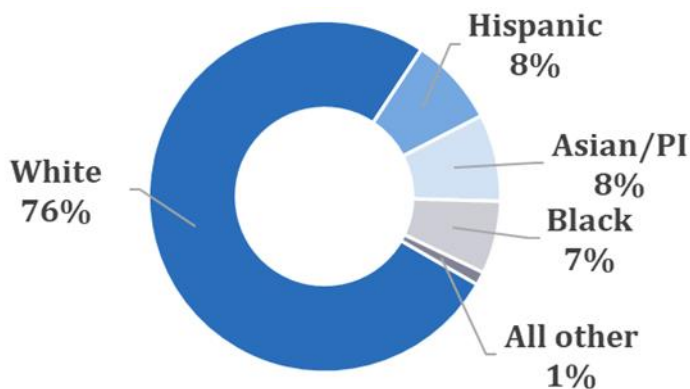


FIGURE 50: Alzheimer's disease deaths by race/ethnicity, 2017²



ALZHEIMER'S DISEASE

Trend: Deaths due to Alzheimer's disease increased dramatically during the ten-year period from 2008 to 2017. The age-adjusted rate of death increased 72.6% from 27.0 in 2008 to 46.6 in 2017 [Figure 49]. The number of cases increased 133.8% from 355 deaths in 2008 to 830 in 2017.

Race/ethnicity: Whites made up the majority of deaths due to Alzheimer's and are disproportionately affected by the disease compared to all other racial/ethnic groups [Figure 50].

Sources: 1. Centers for Disease Control and Prevention; 2. Vital Records Business Intelligence System

FIGURE 51: Proportion of Alzheimer’s disease emergency department visits by sex, 2016¹

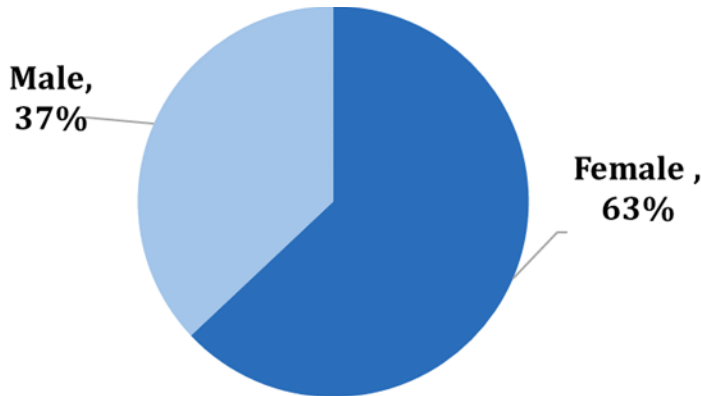


FIGURE 52: Number of Alzheimer’s emergency department visits by age group, 2016¹

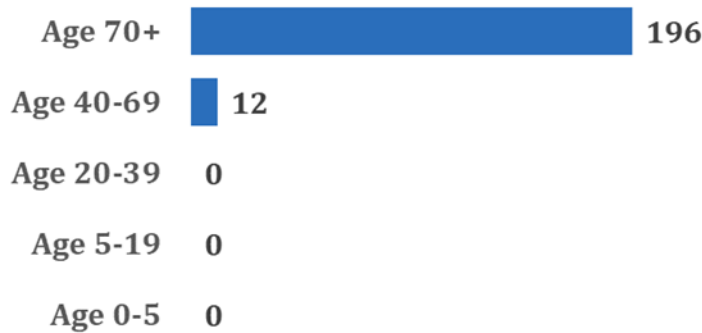
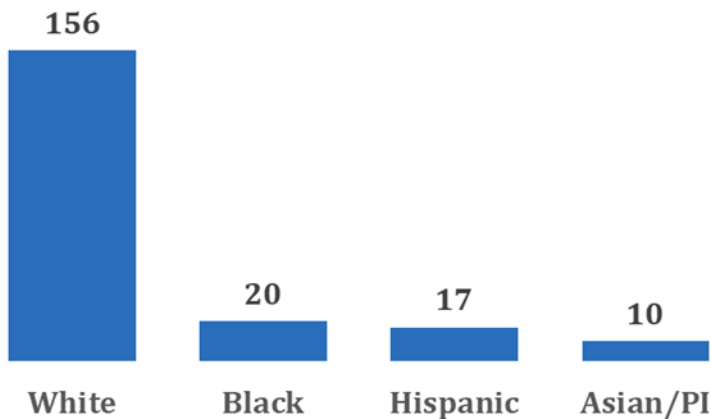


FIGURE 53: Number of Alzheimer’s disease emergency department visits by race/ethnicity, 2016¹



Source: 1. Office of Statewide Planning and Development Emergency Department Data 2016

ALZHEIMER’S DISEASE

Emergency Department

Visits: There were a total of 208 emergency department (ED) visits due to Alzheimer’s disease which did not result in a hospital admission in the County in 2016.

Sex: Nearly two-thirds of all Alzheimer’s ED visits in the County were among females in 2016 [Figure 51].

Age group: Nearly all (94.2%) Alzheimer’s ED visits in the County were among persons age 70 and older in 2016 [Figure 52]. Not surprisingly, there were no Alzheimer’s ED visits among those age less than 40.

Race/ethnicity: Three-quarters of all Alzheimer’s ED visits in the County were among Whites in 2016 [Figure 53]. Blacks, Hispanics and Asian/Pacific Islanders accounted for the other quarter of Alzheimer’s ED visits. The racial/ethnic breakdown of 2016 Alzheimer’s ED visits is similar to the pattern seen in 2017 deaths.

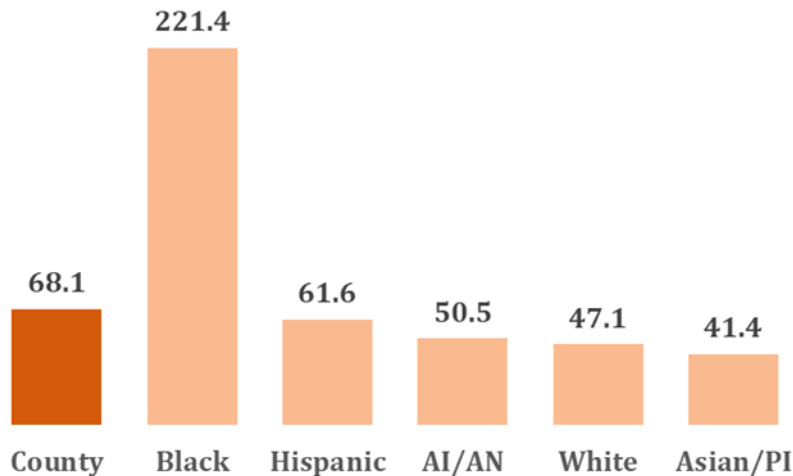
Asthma

Asthma is a chronic disease of the lungs that affects 25 million people in the United States, including six million children. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. In an asthma attack, the airways become inflamed, making breathing difficult. The exact causes of asthma are unknown in most cases. Asthma can be controlled by taking medicine and avoiding triggers in the environment that can cause an attack. Asthma can result in frequent emergency department (ED) visits, hospitalizations and premature death without proper management.¹

TABLE 6: Estimated asthma prevalence (all ages), County vs. State, 2015-2016²

	County	State
Lifetime asthma prevalence	18.8%	14.8%
Active asthma prevalence	9.6%	8.7%

FIGURE 54: Age-adjusted emergency department visits by race/ethnicity, 2017³



ASTHMA

Prevalence: The estimated lifetime asthma prevalence and active asthma prevalence were higher in the County compared to the State in 2015/2016 [Table 6]. Nearly one in five County residents were estimated to have ever had asthma and one in ten to have active asthma.

Demographics: The rate of asthma ED visits among Blacks was nearly five times the rate of asthma ED visits among Whites in 2017 [Figure 54]. Young children age 0-4 had the highest rate of asthma ED visits in 2017 compared to all other age groups (data not shown).

Sources: 1. Centers for Disease Control and Prevention; 2. California Health Interview Survey; 3. California Breathing County Asthma Profiles

Cancer

Cancer is a collection of related diseases. In all types of cancer, abnormal cells divide without control and can invade other tissues. Cancer can start almost anywhere in the human body. Many cancers (but not all) form solid tumors, which are masses of tissue. Cancerous tumors can be malignant, which means they can spread into, or invade, nearby tissues. As these tumors grow, they may also break off and travel to distant places in the body through the blood and lymph systems and form new tumors. About 38.4% of men and women will be diagnosed with cancer at some point during their lifetimes.¹⁻²

FIGURE 55: Trend in invasive cancer incidence rate per 100,000 population, County vs. State, 2007-2016³

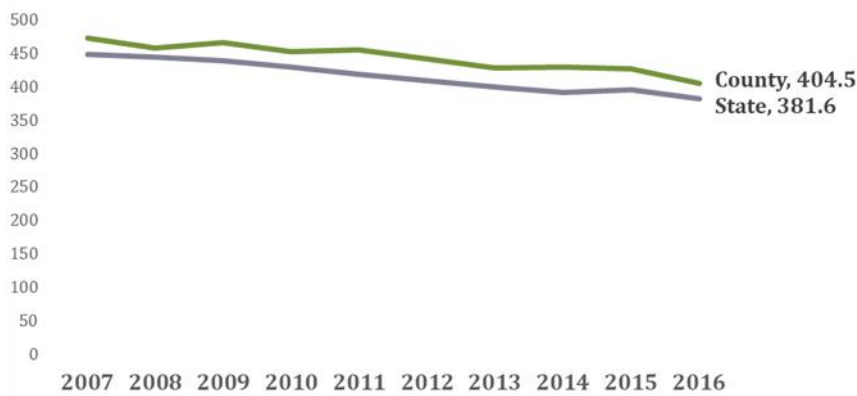
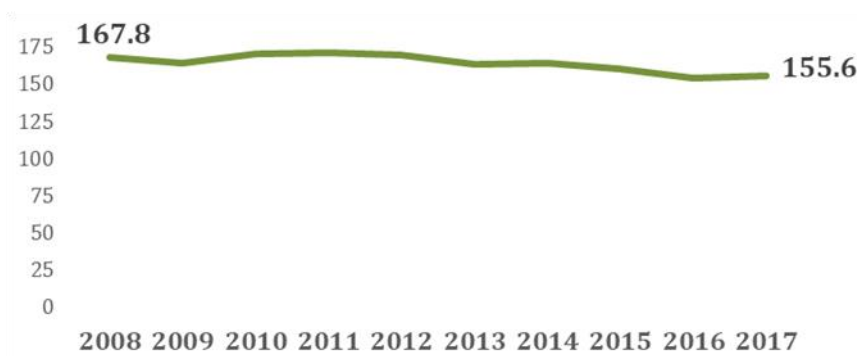


FIGURE 56: Trend in cancer (all sites) age-adjusted death rates per 100,000, 2008-2017⁴



CANCER

Trends: The invasive cancer (all sites) incidence rate has steadily decreased in the County and the State over time [Figure 55]. The County rate decreased by 14.5% from 473.1 per 100,000 population in 2007 to 404.5 in 2016. The County rate has remained slightly higher compared to the State rate. The age-adjusted cancer (all sites) death rate per 100,000 population decreased by 7.3% from 167.8 per 100,000 population in 2008 to 155.6 in 2017 [Figure 56].

Sources: 1. Centers for Disease Control and Prevention; 2. National Cancer Institute; 3. California Cancer Registry; 4. Vital Records Business Intelligence System

FIGURE 57: Invasive cancer incidence (all sites) by select race/ethnicity, 2016¹

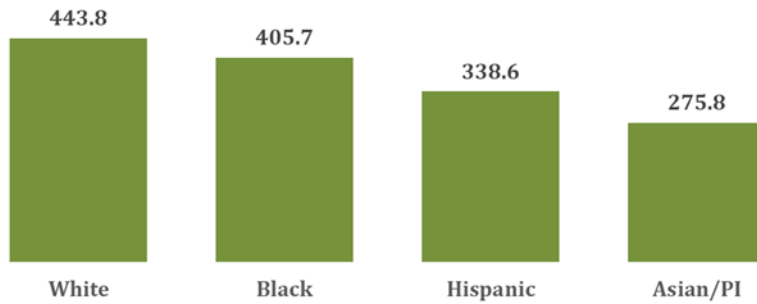


FIGURE 58: Proportion of Cancer (all sites) deaths by race/ethnicity, 2017²

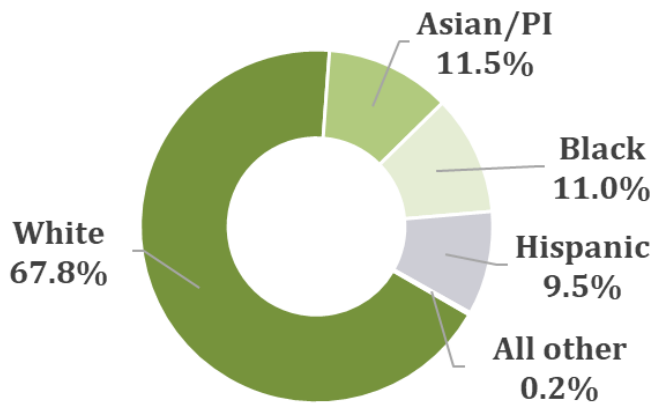


TABLE 7: Age-adjusted death rates by sex and cancer site, 2017²

Site of cancer	Female	Male
Lung and bronchus	29.3	39.2
Breast - female	22.0	---
Prostate	---	21.1
Colorectal	14.0	16.4
Leukemia	6.1	7.4
Lymphoma	6.0	8.4

Sources: 1. California Cancer Registry; 2. Vital Records Business Intelligence System

CANCER

Race/ethnicity: The incidence of cancer (all sites) was highest in 2016 among Whites, followed by Blacks, then Hispanics [Figure 57]. Over two-thirds of deaths due to cancer (all sites) were among Whites in 2017 [Figure 58]. The proportion of cancer deaths among Hispanics (9.5%) was lower than expected given the incidence rate and overall Hispanic population.

Site of disease by sex: Death rates by site of disease varied somewhat by sex in 2017 [Table 7]. Lung and bronchus cancer was the most deadly site of disease for both females and males. The second most deadly cancer for females was breast cancer, as opposed to prostate cancer for males. Colorectal, leukemia and lymphoma were in the top 3-5 most deadly cancers for both sexes.

Cardiovascular Diseases

Cardiovascular diseases include heart disease and stroke. The term ‘heart disease’ refers to several types of heart conditions and is the leading cause of death in the United States. The most common type of heart disease is coronary artery disease, which can lead to heart attack. A stroke, sometimes called a brain attack, occurs when something blocks blood supply to part of the brain or when a blood vessel in the brain bursts. A stroke can cause lasting brain damage, long-term disability or even death. Healthy lifestyle changes – diet, exercise, no smoking and limited alcohol – can greatly reduce the risk for cardiovascular diseases.¹

FIGURE 59: Trend in age-adjusted heart disease and stroke death rates, 2008-2017²

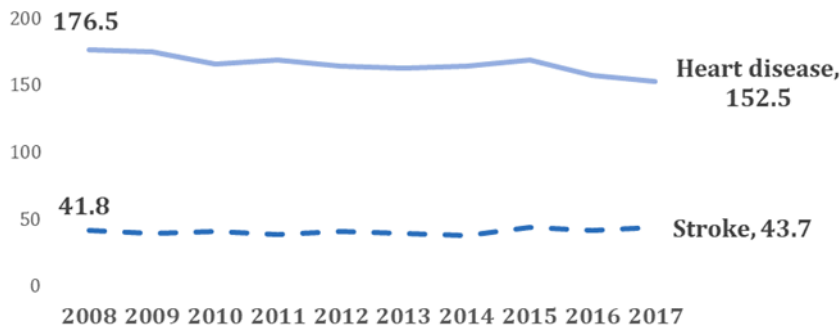
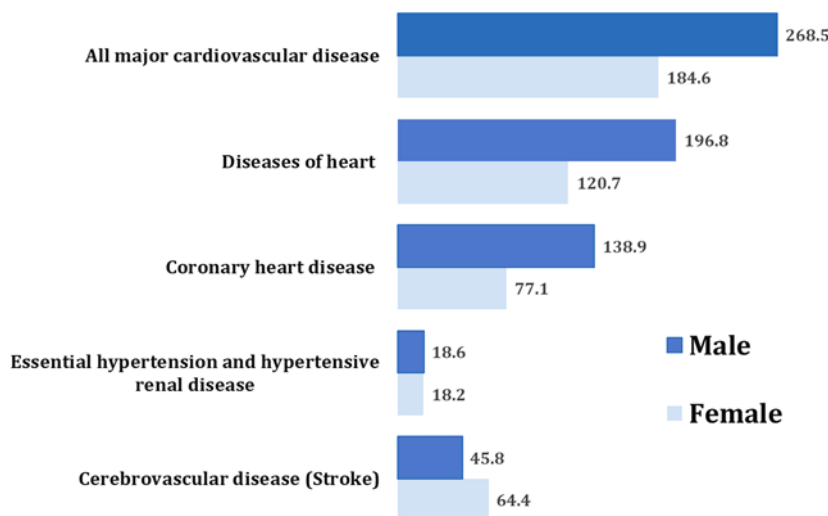


FIGURE 60: Age-adjusted major cardiovascular disease death rates overall and by subcategory by sex, 2017²



CARDIOVASCULAR DISEASES

Trends: The age-adjusted heart disease rate decreases by 13.6% from 176.5 deaths per 100,000 population in 2008 to 152.5 in 2016 [Figure 59]. There was a much lower death rate due to stroke across all years, but the rate increased slightly (+4.5%) from 41.8 in 2008 to 43.7 in 2017.

Cardiovascular disease subcategory by sex: Males had higher death rates of cardiovascular disease overall and in the most common subcategories [Figure 60]. However, females had higher rates of death due to stroke than males.

Sources: 1. Centers for Disease Control and Prevention; 2. Vital Records Business Intelligence System

Diabetes mellitus

Diabetes mellitus is a chronic health condition that affects how the body turns food into energy. Most food eaten is turned into glucose (sugar) and released it into the bloodstream. When blood sugar goes up, it signals the pancreas to release insulin so that body’s cells can use it for energy. Type 1 diabetes is thought to be an autoimmune reaction that stops the body from making insulin. Type 2 diabetes is when the body doesn’t use insulin well and can’t keep blood sugar at normal levels. Diabetes can be managed by maintaining a healthy weight, eating healthy food, being active and taking medicine as needed. Uncontrolled diabetes can lead to serious health problems, such as heart disease, vision loss and kidney disease.¹

TABLE 8: Estimated diabetes mellitus prevalence (all ages), County vs. State, 2017²

	County	State
Ever diagnosed with diabetes	10.3%	10.7%

FIGURE 61: Estimated diabetes mellitus prevalence (all ages) by select race/ethnicity, 2013-2017 pooled data²

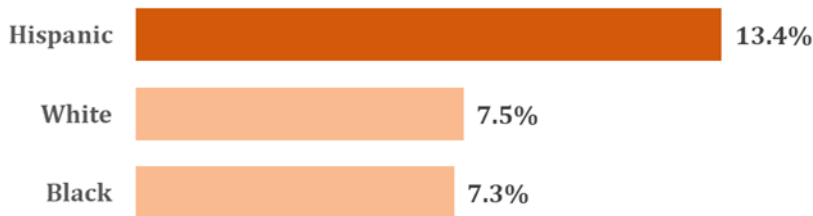
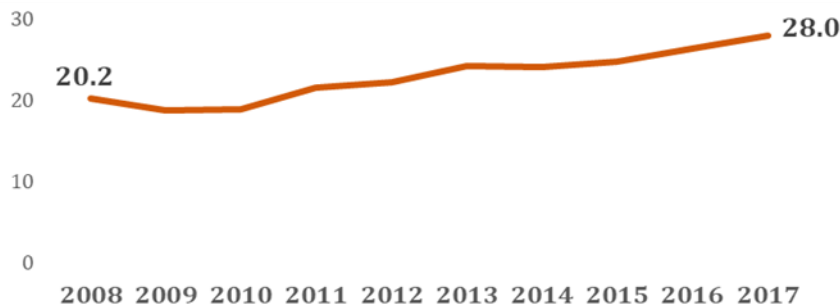


FIGURE 62: Trend in age-adjusted diabetes mellitus death rates, 2008-2017³



DIABETES MELLITUS

Prevalence: About one in ten persons in the County are estimated to have ever been diagnosed with diabetes [Table 8].

Race/ethnicity: Hispanics had the highest estimated proportion of population with diabetes compared to other racial/ethnic groups [Figure 61]. Estimates for Asian/Pacific Islander and American Indian or Alaskan Native groups were not stable due to small survey numbers.

Death trend: The death rate due to diabetes increased 27.9% from 20.2 per 100,000 population in 2008 to 28.0 in 2017 [Figure 62].

Sources: 1. Centers for Disease Control and Prevention; 2. California Health Interview Survey; 3. Vital Records Business Intelligence System

Obesity

Obesity is a national epidemic and a major contributor to some of the leading causes of death in the United States, including heart disease, stroke, diabetes, and some types of cancer. Body mass index (BMI) is used as a screening tool for adult overweight and obesity. A high BMI can be an indicator of high body fatness. CDC Growth charts are the most commonly used indicator to measure the size and growth patterns of children and teens in the United States. There is no single or simple solution to the obesity epidemic. Policy makers, state and local organizations, schools and individuals all must work together to create an environment that supports a healthy lifestyle and healthy choices.

FIGURE 63: Trend in age-adjusted obesity death rates, 2008-2017²

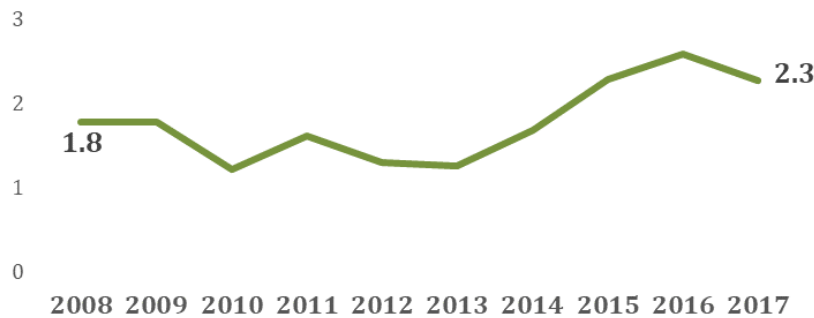
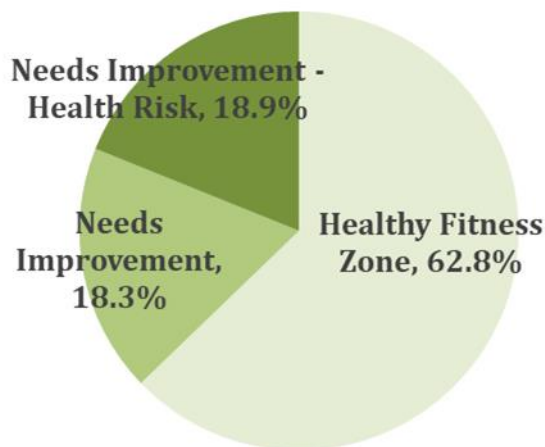


FIGURE 64: Grade 9 Body Composition Physical fitness report, 2017/18 academic year³



O B E S I T Y

Death trend: The death rate due to obesity increased 27.8% from 1.8 per 100,000 in 2008 to 2.3 in 2017. Although deaths with obesity listed as the underlying cause of death on death certificates were relatively low, obesity is a contributing factor to many leading causes of death.

Youth Body Composition: Over one-third of 9th graders in the County were either in a 'needs improvement' or 'needs improvement – health risk' category for body composition in the State Department of Physical Fitness Report for academic year 2017/18 [Figure 64].

Sources: 1. Centers for Disease Control and Prevention; 2. Vital Records Business Intelligence System; 3. 2017-18 California Department of Education Physical Fitness Report

Oral Health

Oral health affects the ability to speak, smile, eat and show emotions. It also affects self-esteem and attendance at work or school. Oral diseases, which range from cavities to gum disease to oral cancer, cause pain and disability for millions of Americans. Oral health has been linked with other chronic diseases, like diabetes and heart disease. It has also been linked with risky behaviors like using tobacco and eating or drinking foods and beverages high in sugar. Cavities (tooth decay) are one of the most common chronic disease in the United States, with 80% of people having at least one cavity by age 34. Public health strategies such as water fluoridation and school sealant programs have been proven to prevent cavities.¹

FIGURE 65: Oral Health-related emergency department visit rates per 10,000 population by age group, 2016²

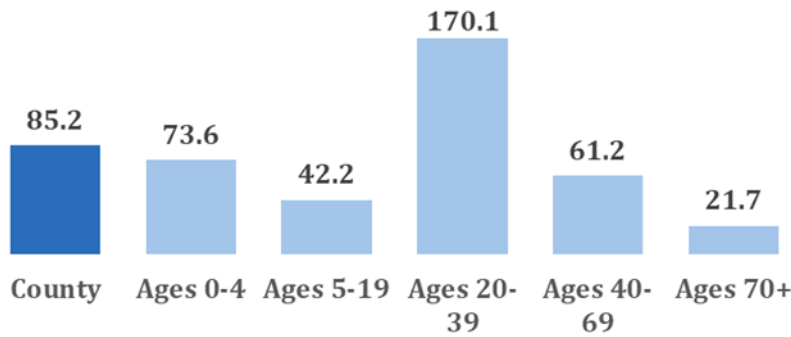
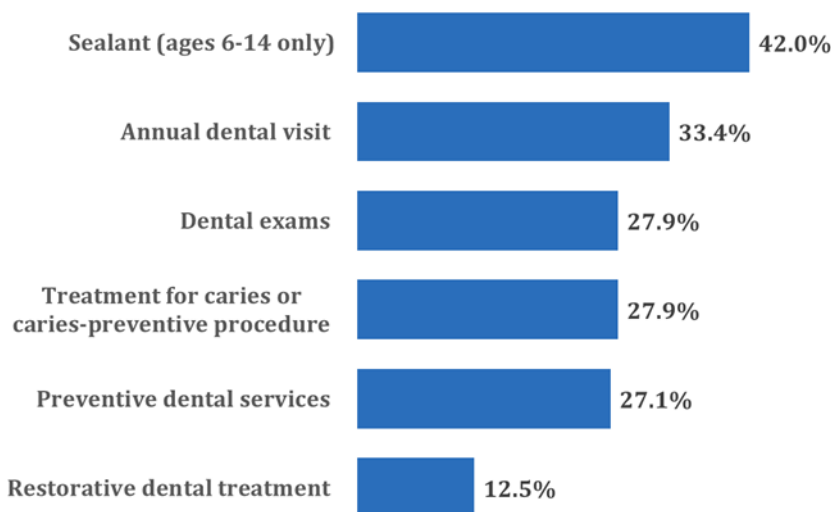


FIGURE 66: Denti-Cal dental services utilization, 2016²



ORAL HEALTH

Emergency department (ED) visit by age: The rates of ED visits varied by age group in 2016, with the highest rates among young adults age 20-39 and children age less than 5 [Figure 65].

Denti-Cal utilization: The number of County utilizers of Denti-Cal services grew from 83,352 people in 2013 to 159,860 in 2016, a 91.8% increase. Sealant (age 6-14) and annual dental visits were the most common types of services utilized in 2016 [Figure 66].

Sources: 1. Centers for Disease Control and Prevention; 2.

Tobacco Use

Tobacco use leads to disease and disability and harms nearly every organ in the body. Smoking means inhaling, exhaling, burning, or carrying any lighted or heated cigar, cigarette, or pipe, or any other lighted or heated tobacco or plant product intended for inhalation, whether natural or synthetic. Smoking includes the use of an electronic smoking device that creates an aerosol or a vapor. It causes cancers, heart disease, stroke and chronic obstructive pulmonary disease. It also increased the risk for tuberculosis and problems of the immune system. Children who are exposed to secondhand smoke are at increased risk for sudden infant death syndrome, acute respiratory infections, more severe asthma, and other health effects.

FIGURE 67: Estimated adult smoking status, 2017²

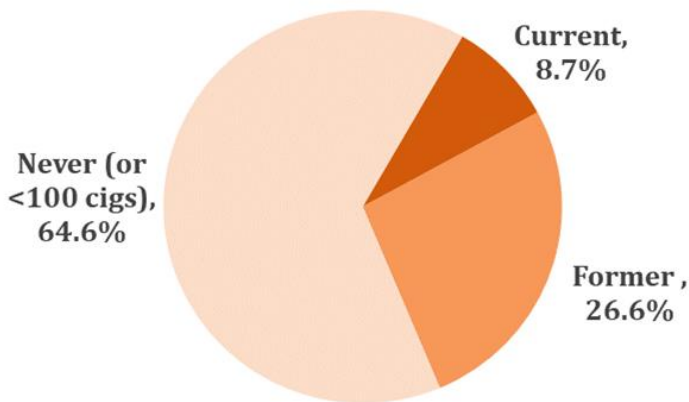
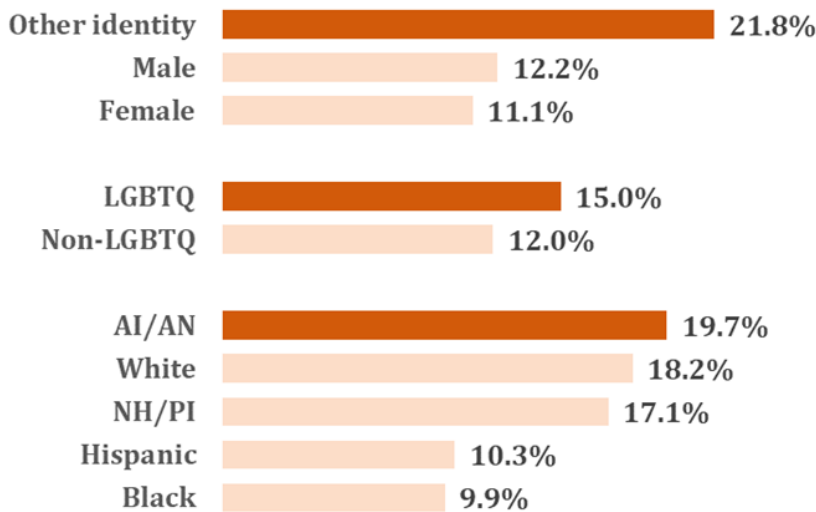


FIGURE 68: Current use of at least one tobacco product by gender, sexual orientation and race/ethnicity, California high school students, 2017-18 academic year³



Sources: 1. Centers for Disease Control and Prevention; 2. California Health Interview Survey; 3. Statewide California Student Tobacco Survey 2017-18

TOBACCO USE

Adult smoking status: Less than one in ten County adults were estimated to be current smokers in 2017 [Figure 67]. Over one quarter were estimated to be former smokers and over two thirds were estimated to be never smokers.

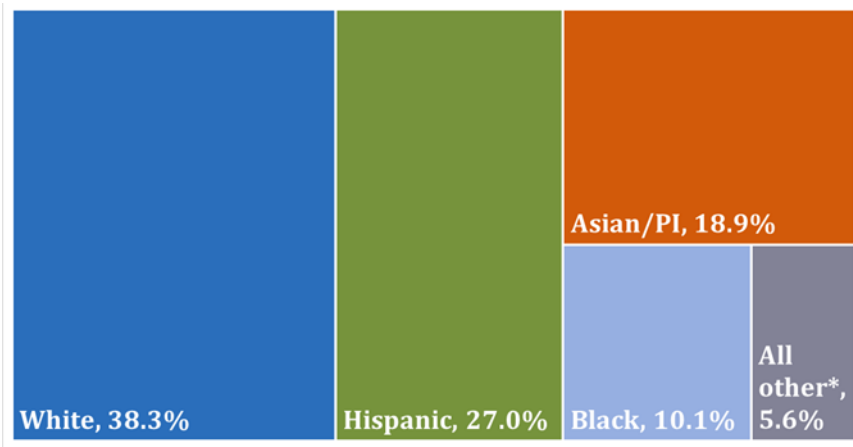
California (CA) high school tobacco use: About one in eight (12.7%) of CA high school students reported current use of at least one tobacco product in high school in the 2017/18 academic year. Gender non-binary, LGBTQ and American Indian/Alaskan Native students had the highest prevalence of tobacco use [Figure 68].

MATERNAL CHILD HEALTH

Maternal Characteristics

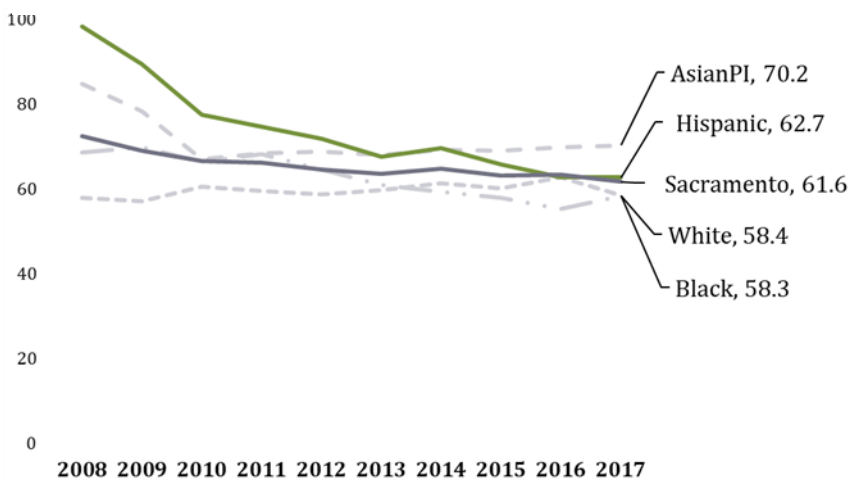
Maternal characteristics, such as maternal race/ethnicity and maternal age, are important for developing targeted public health strategies to prevent adverse birth outcomes and address disparities in maternal and child health.

FIGURE 69: Proportion of total births by maternal race/ethnicity, 2017¹



*All other includes 5.2% multi-race and 0.4% American Indian/Alaskan Native

FIGURE 70: Trend in fertility rates by select maternal race/ethnicity, 2008-2017¹



Source: 1. Vital Records Business Intelligence System

MATERNAL CHARACTERISTICS

Total births: There were a total of 19,206 babies born to Sacramento County women in 2017.

Maternal race/ethnicity: White mothers accounted for the highest proportion of these births [Figure 69].

Fertility rates: A fertility rate is the number of live births per 1,000 women age 15-44. The overall fertility rate for the County decreased by 12.5% from 75.0 in 2008 to 63.3 in 2017 [Figure 70]. The most dramatic decline in fertility rate was among Hispanics (-36.2%). Asian/Pacific Islanders had the highest fertility rate in 2017.

FIGURE 71: Proportion of births by maternal age group, 2017¹

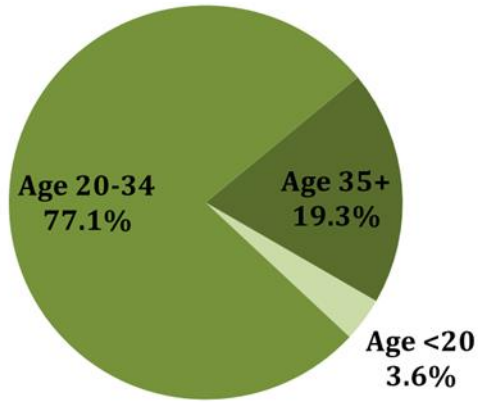


FIGURE 72: Trend in teen (age 15-19) birth rate, 2008-2017¹

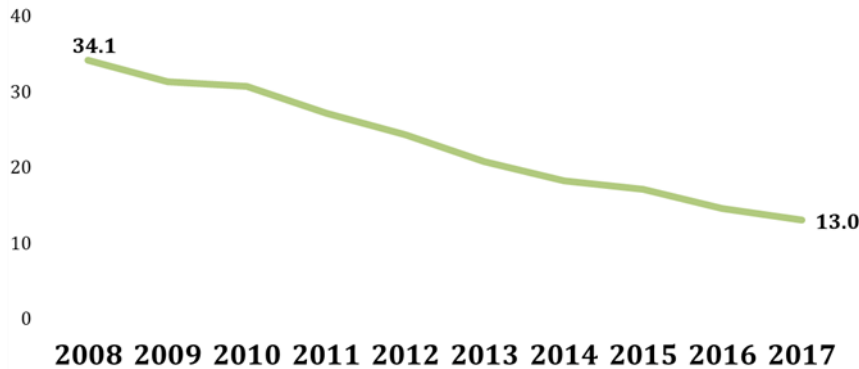
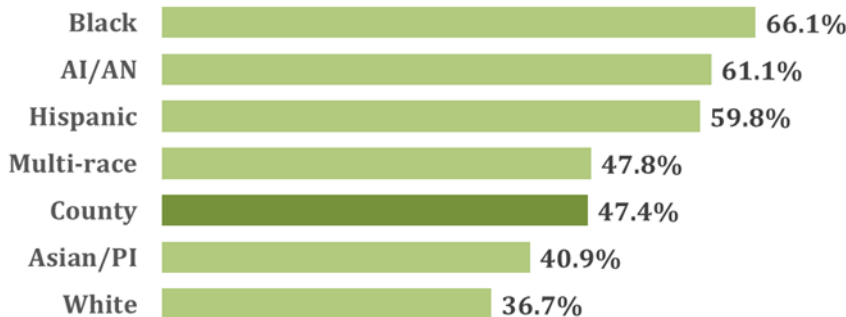


FIGURE 73: Medicaid as anticipated source of payment for delivery by maternal race/ethnicity, 2017¹



Source: 1. Vital Records Business Intelligence System

MATERNAL CHARACTERISTICS

Maternal Age: Over three quarters of births in the County in 2017 were to mothers age 20-34 [Figure 71]. About one in five were born to mothers who are considered advanced maternal age (age 35+). Less than 5% of births in the County were born to teen mothers.

Teen birth rate: The teen birth rate has steadily declined over time in the County [Figure 72]. The rate decreased by 61.9% from 34.1 births per 1,000 females age 15-19 in 2008 to 13.0 in 2017. These declines were seen for all racial/ethnic groups (data not shown).

Medicaid: Nearly half of all women in the County who gave birth in 2017 had Medicaid as an anticipated source of delivery payment [Figure 73]. Medicaid is sometimes used as a proxy for poverty. There were clear differences between White mothers and non-White mothers in terms of level of poverty using this indicator.

Prenatal Behaviors

Prenatal behaviors play a large role in the health of mother and baby. The quality, quantity and timing of prenatal care influence birth outcomes. The risk of low birth weight (LBW) is reduced for women who initiate care during the first trimester (first three months) of pregnancy. Substance use during pregnancy can also affect birth outcomes. Smoking during pregnancy doubles the risk of LBW and is a factor in 20-40% of LBW infants in the United States.¹ Prenatal behaviors are dependent upon both individual choices and the social environment; not all women have the same opportunities or ability to exert control over their prenatal situation.

FIGURE 74: Early entry into prenatal care by select maternal race/ethnicity, 2017²

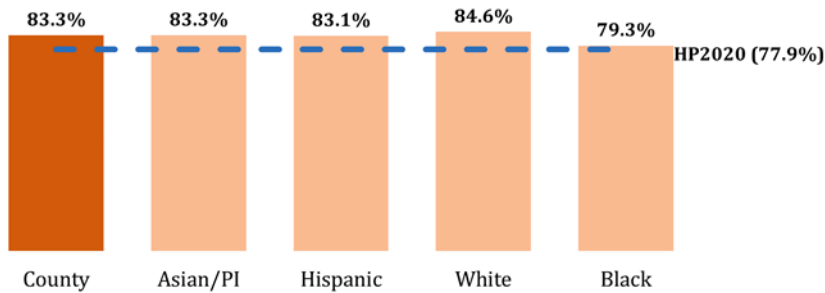
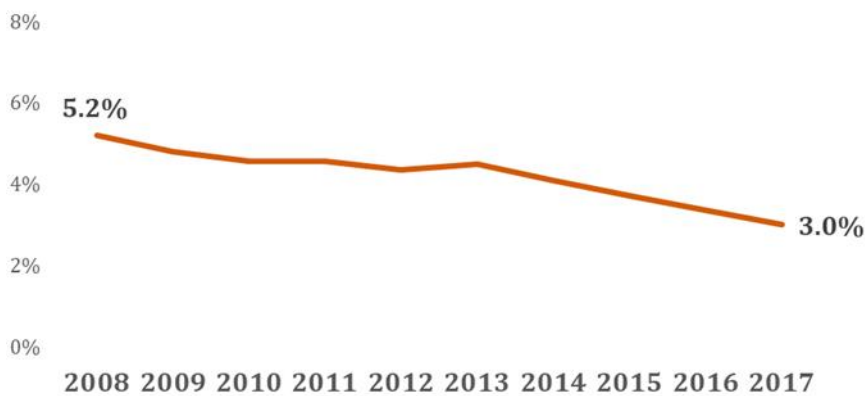


FIGURE 75: Trend in tobacco use anytime during pregnancy, 2008-2017²



PRENATAL BEHAVIORS

Early prenatal care: One healthy people 2020 (HP2020) objective is to increase the proportion of pregnant women who receive prenatal care beginning in the first trimester nationally to 77.1%. The County overall and all listed racial/ethnic group met this objective in 2017 [Figure 74].

Tobacco use during pregnancy: The proportion of women who reported any tobacco use during pregnancy decreased by 42.3% from 5.2% in 2008 to 3.0% in 2017 [Figure 75].

Sources: 1. Pregnancy Nutritional Surveillance System; 2. Vital Records Business Intelligence System.

Birth Outcomes

Healthy birth and maternal outcomes are the goal of every delivery. Preterm birth (PTB) is when a baby is born too early (before 37 weeks of pregnancy). Low birth weight (LBW) is when a baby is born less than 2,500 grams (~5.5 lbs.) and very low birth weight (VLBW) is less than 1,500 grams (~3.3 lbs.). The earlier and smaller a baby is born, the higher the risk of death or serious disability.¹ Cesarean birth is associated with higher maternal morbidity than vaginal birth. Obstetric deaths are those resulting from complications of pregnancy, and/or interventions, omissions or incorrect treatment. Maternal death has a broader definition, and includes deaths from complications of pregnancy up to 42 days after birth or end of pregnancy. Late maternal death is death of a mother up to one year after end of pregnancy, due to direct or indirect obstetric causes.²

FIGURE 76: Trend in proportion of births that are delivered preterm, 2008-2017³

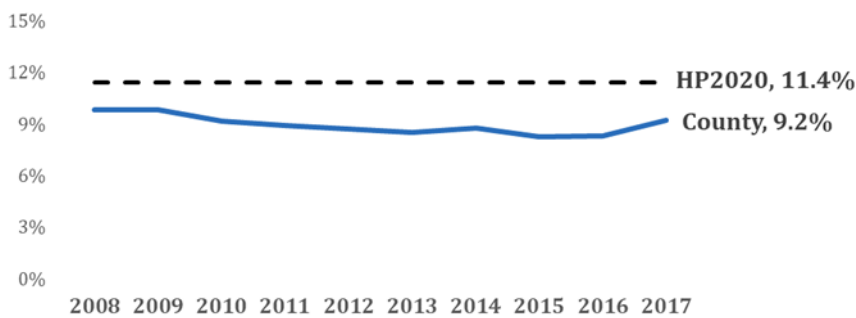
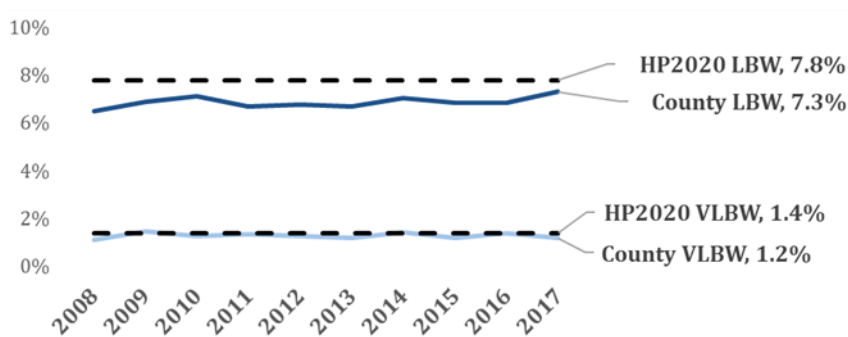


FIGURE 77: Trends in proportion of births that are low birth weight and very low birth weight, 2008-2017³



Source: 1. Centers for Disease Control and Prevention; 2. World Health Organization; 3. Vital Records Business Intelligence System

BIRTH OUTCOMES

Preterm birth: The County overall has consistently met the HP2020 target for preterm birth (PTB) of under 9.4% [Figure 76]. The proportion of births that were preterm in the County decreased from 9.8% in 2008 to a low of 8.2% in 2015, but then increased to 9.2% in 2017.

Low birth weight: The County overall has consistently met the HP2020 target for under 7.8% LBW but has been right around the HP2020 target for VLBW of under 1.4% [Figure 77]. The proportion of babies born LBW has increased by 12.3% from 6.5% in 2008 to 7.3% in 2017.

FIGURE 78: Preterm birth and low birth weight by select maternal race/ethnicity, 2017¹

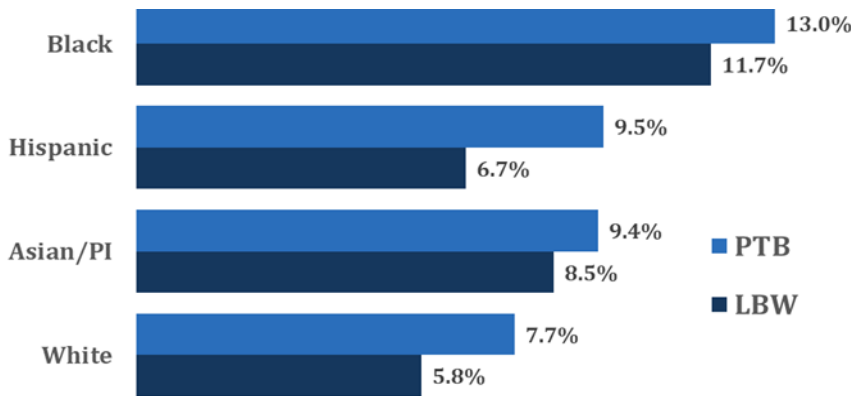
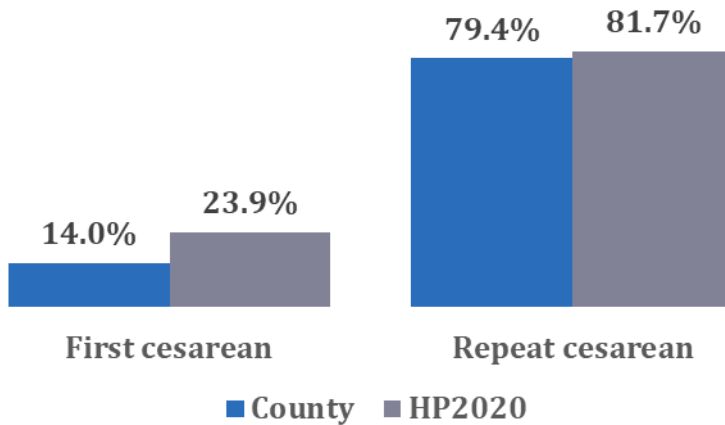
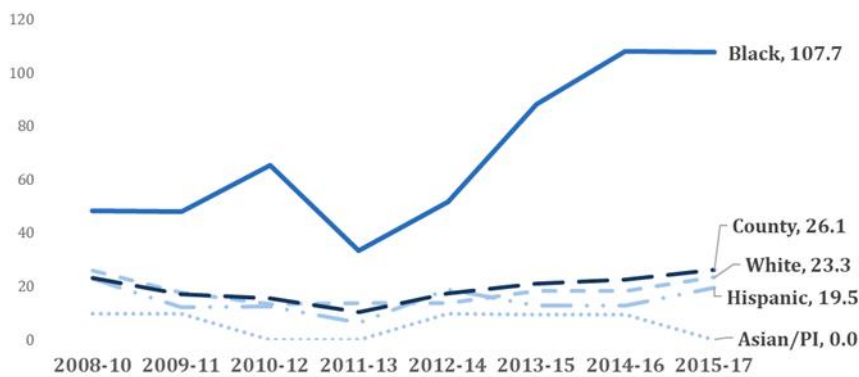


FIGURE 79: Proportion of low-risk* women with a first cesarean delivery and repeat cesarean delivery, 2017¹



*Low risk is defined as a singleton, term pregnancy with baby in the vertex position

FIGURE 80: Trend in obstetric deaths per 100,000 live births by maternal race/ethnicity, 2008-2017 three-year rolling average¹



Source: 1. Vital Records Business Intelligence System

BIRTH OUTCOMES

Disparities in PTB and LBW: There were distinct racial/ethnic disparities in PTB and LBW [Figure 78]. Black and Hispanic mothers had the highest proportion of babies born too early whereas Black and Asian/Pacific Islander mothers had the highest proportion born with LBW.

Cesarean delivery: The County overall met the HP2020 targets for no more than 23.9% of low risk mothers having a first cesarean delivery and no more than 81.7% of low-risk mothers with a prior cesarean having a repeat cesarean [Figure 79]. However, cesarean delivery varied drastically by delivery hospital or birthing center (data not shown).

Obstetric deaths: Obstetric deaths are those for which pregnancy and/or childbirth were the underlying cause of death. There were a total of 40 obstetric deaths in the County from 2008 to 2017, 12 (30.0%) of which were Black women. Black women have been increasingly disproportionately affected by obstetric deaths [Figure 80].

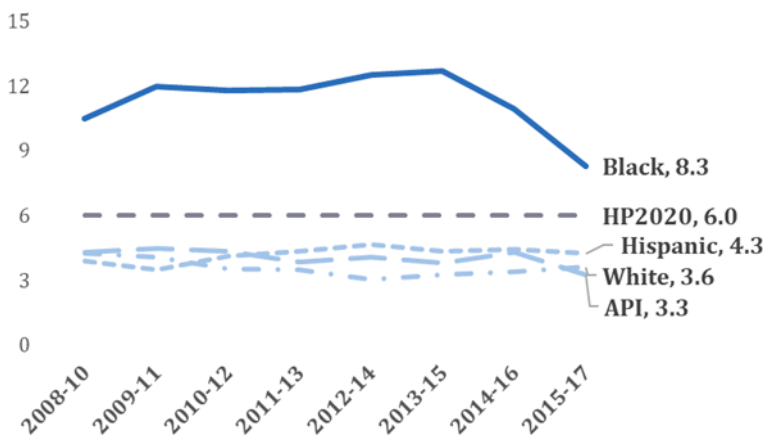
Spotlight: Disparities in Feto- Infant Mortality

Background: The County three-year rolling infant mortality rate decreased 12.7% from 5.3 per 1,000 live births in 2008-2010 to 4.7 in 2015-2017. However, Black mothers experienced persistent racial/ethnic disparities in infant mortality [Figure 81]. Black mothers, who comprise only about 10% of births in the County had a disproportionate burden of infant deaths (>20%).

Perinatal periods of risk (PPOR): [PPOR](#) is an approach to identify and prioritize prevention efforts to reduce feto-infant mortality. A guiding principal of PPOR is the relationship between feto-infant death and birth weight and age at time of death. This knowledge is used to categorize feto-infant deaths into four perinatal periods to look more specifically at the causes of excess death in one group (e.g., Black mothers) compared to a reference group (e.g., non-Black mothers). An analysis of 2012-2014 feto-infant deaths in the County found that excess feto-infant deaths to Black mothers were mainly due to a higher frequency of very low birth weight (VLBW) babies during the maternal health/prematurity period rather than birth weight-specific mortality, indicating that the excess mortality was more likely due to socioeconomic disparities of mothers that manifest in delivering VLBW rather than disparities in perinatal or medical care. Black mothers also experienced excess deaths during the infant period due to sudden unexplained infant deaths (SUID).

Community Partnerships: Sacramento County Public Health collaborates with the Child Abuse Prevention Institute’s multi-disciplinary [Child Death Review Team and Fetal Infant Mortality Review Team](#), as well as the Center at Sierra Health Foundation’s [Steering Committee on Reducing African American Child Deaths](#) to identify and prevent disparities in child deaths in the County.

FIGURE 81: Trend in infant deaths per 1,000 live births by select maternal race/ethnicity, 2008-2017 three-year rolling average



Source: 1. Vital Records Business Intelligence System

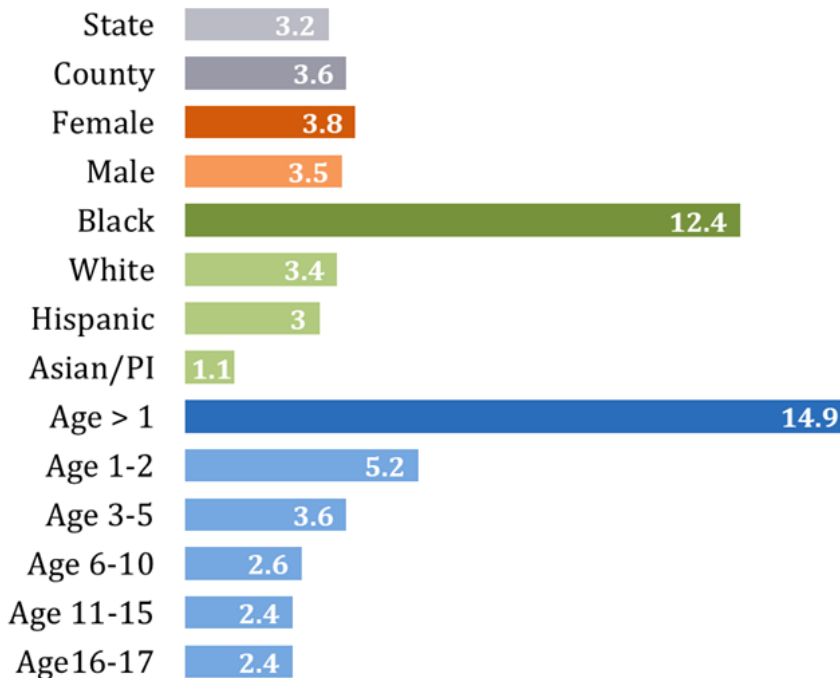
“IN ORDER TO REDUCE INFANT MORTALITY DISPARITIES IN OUR COMMUNITY, IT IS IMPERATIVE TO LOOK PAST THE USUAL SUSPECT OF CLINICAL CARE AND BEGIN FOCUSING ON THE SOCIAL DETERMINANTS OF HEALTH, WHICH DOES INCLUDE CLINICAL CARE BUT TAKES A DEEPER DIVE. ADDRESSING THIS DISPARITY IS CRITICAL FOR ALL PROGRAMS, NOT JUST MCAH, AS THE INFANT MORTALITY RATE IS AN IMPORTANT MARKER OF THE OVERALL HEALTH OF A SOCIETY.

“I AM MOST PROUD OF SCPH’S COMMITMENT TO BOTH HEALTH AND RACIAL EQUALITY WORK ADDRESSING DISPARITIES AND CREATING AN ENVIRONMENT OF EQUAL ACCESS TO QUALITY HEALTH CARE FOR ALL.” - LEESA HOOKS, PROGRAM MANAGER

Foster Care

California’s Foster Care System provides temporary out-of-home care to thousands of children because of parental neglect, abuse or exploitation. These adverse childhood experiences can negatively impact foster youth’s health. Foster parents are intended to provide a supportive and stable family for children who cannot live with their birth parents until family problems are solved. In most cases, foster parents work with social services to staff to reunite the child with their birth parents. The State requires foster homes to be licensed and have minimum personal, safety and space requirements.¹

FIGURE 82: Foster care rates per 1,000 children by select demographics, 2017²



FOSTER CARE

Foster care rates: The County had a higher foster care rate per 1,000 children compared to the State overall in 2017 [Figure 82]. Female children were slightly more likely to be placed in foster care in the County than male children. There were notable racial/ethnic disparities in foster care rates, with Black children more than 3.5 times as likely to be placed in foster care compared to their White counterparts. While children of any age can be placed in foster care, infants age less than one had the highest rates compared to other age groups.

Did you know? Foster Care Program

The Sacramento County Public Health (SCPH) [Foster Care Program](#) provides cash and Medi-Cal benefits to providers of out-of-home care for children placed into foster care by Sacramento County [Child Protective Services \(CPS\)](#) or the [Probation Department](#).

Sources: 1. California Department of Social Services; 2. California Child Welfare Indicators Project

INJURY

Homicide

Homicide is the act of one human killing another, regardless of perpetrator intent or legal category of homicide (e.g., manslaughter). Violence, including homicide, is devastating for individuals and families, and also has negative economic and social impacts on communities. Violence has increasingly been recognized as a public health problem requiring public health solutions.¹ There were 764 homicides in the County in the eight-year period from 2010 to 2017, 92 of which occurred in 2017.

FIGURE 83: Homicide rates per 100,000 by select victim race/ethnicity, 2010-2017²

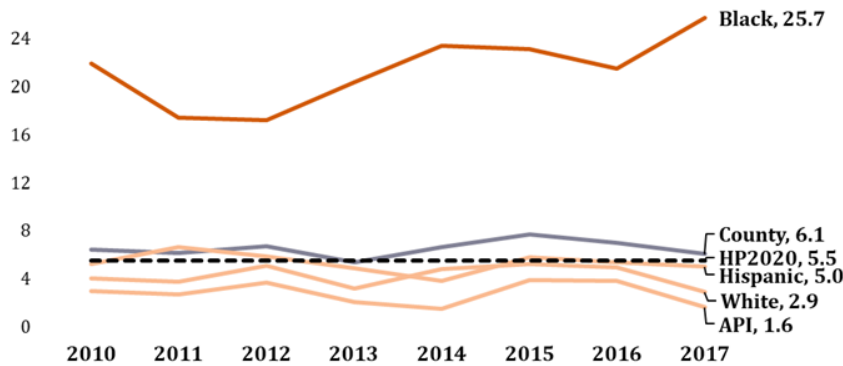


FIGURE 84: Homicides and homicide rates per 100,000 by victim age group, 2015-2017²

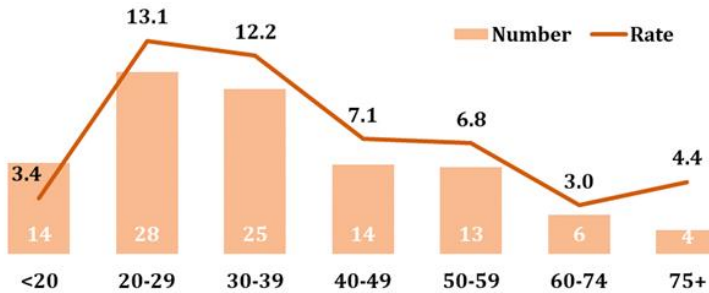


TABLE 9: Homicides by mechanism and victim's sex, 2010-2017²

Mechanism	Female	Male	Total
Firearms	49.0%	70.3%	66.2%
Sharp object	15.2%	10.2%	11.1%
Suffocation/hanging	6.9%	1.1%	2.2%
Other	29.0%	18.4%	20.4%

Sources: 1. Centers for Disease Control and Prevention; 2. Vital Records Business Intelligence System

HOMICIDE

Racial/ethnicity: There were large and persistent racial/ethnic disparities in rates of homicide in the County, with Blacks being much more likely than non-Blacks to be victims of homicide [Figure 83]. In 2017, the homicide rate for Blacks was more than four times the County rate overall and nearly nine times that of Whites.

Age group: Young adults age 20-29 had the highest number and rate of homicide victimhood [Figure 84].

Mechanism and sex: Firearms were the most common mechanism of homicide in 2017 in the County, especially among male victims [Table 9].

Substance use

Substance use can result in fatal and non-fatal overdoses. Drug overdoses occur when an individual consumes enough of a drug (whether it is prescription, illicit or over-the-counter) to cause harmful effects. An effective public health response includes education on risks and encourages harm reduction practices. Substance use disorders are treatable diseases, yet stigma about substance use disorders contribute to the evolving epidemic.¹

FIGURE 85: Substance use emergency department visit rates per 10,000 population by sex, 2016²

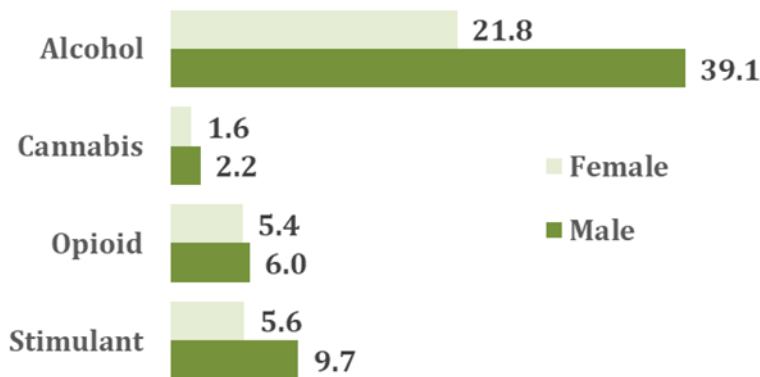
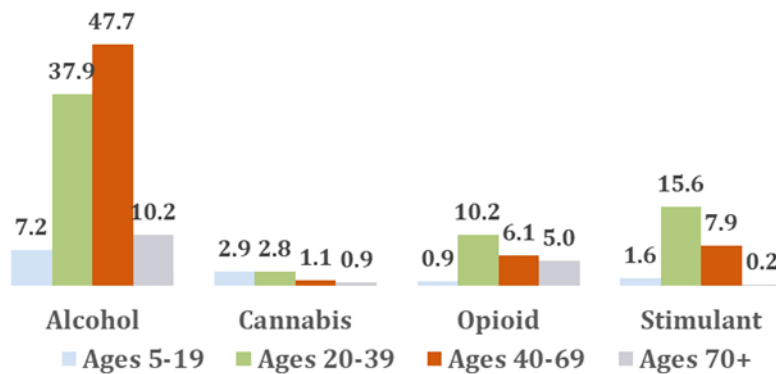


FIGURE 86: Substance use emergency department visits per 10,000 by age group, 2016²



Sources: 1. Centers for Disease Control and Prevention, California Department of Public Health Overdose Surveillance Dashboard

SUBSTANCE USE

Emergency department (ED) visit rates: Alcohol resulted in the largest substance use-related ED visit rates per 10,000 population in the County in 2016, followed by stimulant use, opioids and then cannabis [Figure 85]. For all listed substances, males had higher ED visit rates compared to females. ED visits rates for different substances varied by age group [Figure 86]. Adults age 40-69 had the highest rates for alcohol, whereas young adults age 20-39 had the highest ED visit rates for stimulants and opioids. Youth ages 5-19 had the highest rates of ED visits for cannabis. Intentional ingestion could not be separated from accidental ingestion.

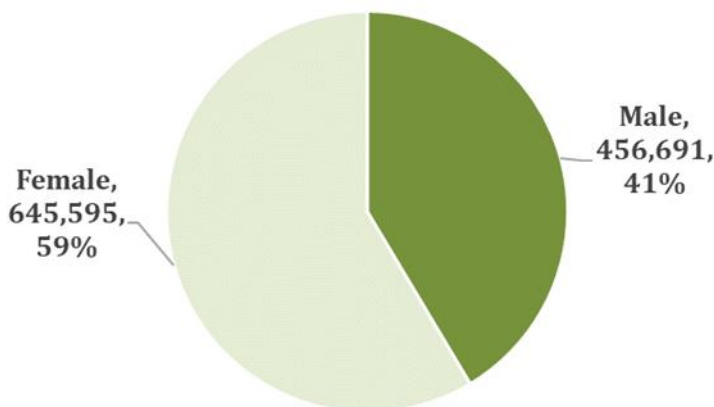
FIGURE 87: Age-adjusted opioid-related overdose death rates per 100,000 population, County vs. State, 2010-2017¹



TABLE 10: Age-adjusted opioid-related overdose death rates and opioid-related hospitalizations per 100,000 population by select race/ethnicity, 2017¹

	Death	Hospitalization
Black	5.3	18.7
White	4.6	17.6
Hispanic	3.7	5.3

FIGURE 88: Opioid prescriptions by sex, 2017¹



Source: 1. California Department of Public Health Overdose Surveillance Dashboard

SUBSTANCE USE

Opioid overdose trends: The County rate of opioid overdose deaths fluctuated greatly over time with a peak in 2013 [Figure 87]. Opioid death rates may be influenced by localized clusters, toxicology testing and provider death certificate reporting.

Opioids and race/ethnicity: Blacks had the highest rate of opioid overdose death and hospitalization in the County in 2017, followed by Whites then Hispanics. Other racial/ethnic groups are not displayed due to small numbers.

Opioid prescriptions by sex: There were over one million opioid prescriptions written to County residents in 2017, with females receiving about three fifths of these prescriptions [Figure 88].

Spotlight: Fentanyl Overdose Cluster Associated with Counterfeit Norco Tablets

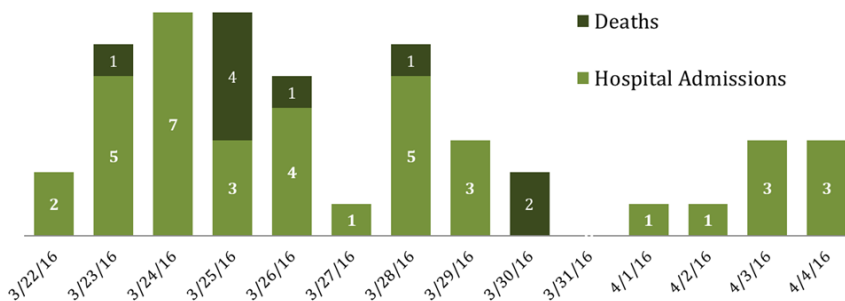
Background: Fentanyl is a potent synthetic opioid approved for medical treatment of severe pain. Prescription fentanyl can be diverted for misuse, but most cases of fentanyl-related injury and death are linked to illegally made fentanyl. It is sold through illegal drug markets for its heroin-like effect, often mixed with heroin or cocaine as a combination product, with or without the user’s knowledge.¹ Overdoses are not reportable to local public health departments in California.

Cluster detection: An astute worker at the California Poison Control Center and a local hospital poison control specialist notified SCPH of an unusual number of recent overdoses on March 24 and 25, 2016. Out of an abundance of caution, SCPH sent out an alert on March 25 to providers notifying them of the Health Officer’s decision to temporarily make drug overdoses reportable to SCPH. SCPH also sent out notifications to the local Coroner, law enforcement agencies, treatment centers and other partners, and published a press release regarding possible contaminated Norco tablets.

Investigation: SCPH obtained suspected overdose patient medical records, labs and coroner reports, and conducted patient interviews. Most cases reported only taking one or two tablets, and none expressed suicidal ideation. They represented various demographic backgrounds and mixed motivation (self-medication for pain vs. recreational use). The Drug Enforcement Agency (DEA), Sacramento District Office began a concurrent legal investigation on March 28.

Outcomes: Toxicology analysis of the ‘Norco’ tablets obtained from victims revealed that they contained fentanyl instead of hydrocodone and acetaminophen. The victims were likely unaware that the counterfeit ‘Norco’ tablets contained fentanyl. There were a total of 52 cases associated with this cluster [Figure 89], including 12 deaths and 11 non-fatal intensive care unit hospitalizations. The DEA investigation was ongoing after the SCPH investigation ended and resulted in convictions.

FIGURE 89: Fentanyl overdoses due to counterfeit Norco tablets, March to April 2016



“OUR HOPE WAS TO GET THE WORD OUT ABOUT THE RISKS SO THAT IT WOULD STOP OR AT LEAST PEOPLE COULD TAKE HARM REDUCTION STEPS TO PREVENT FURTHER OVERDOSES AND DEATHS.” - DR. MELODY LAW, ASSISTANT HEALTH OFFICER

DR. LAW IS AN ADDICTION MEDICINE SPECIALIST WHO CONDUCTED PATIENT INTERVIEWS IN THIS INVESTIGATION.

Suicide

Suicide is a serious public health problem that can have long-lasting harmful effects on individuals, families and communities. The causes of suicide are complex and determined by multiple factors. Suicide prevention focuses on promoting resilience and reducing risk factors. Risk factors for suicide include previous suicide attempts, history of depression or mental illness, alcohol and drug misuse, physical illness, and feelings of isolation.¹ There were a total of 1,596 suicide deaths in Sacramento County during the eight-year period from 2010 to 2017.

FIGURE 90: Suicide rates per 100,000 by select race/ethnicity, 2010-2017²

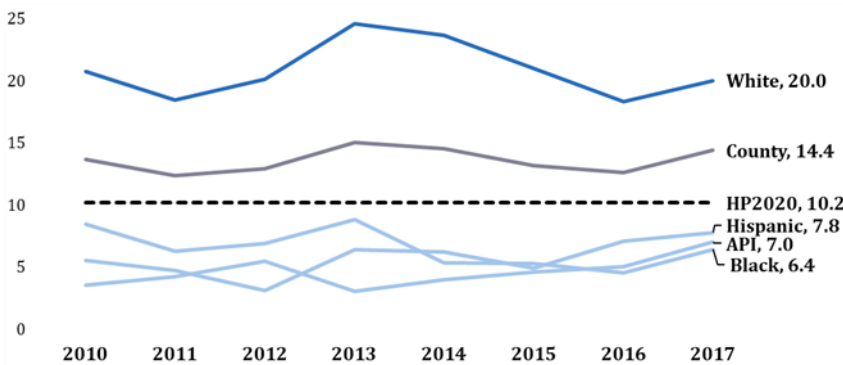


FIGURE 91: Suicides and suicide rates per 100,000 by age group 2010-2017²

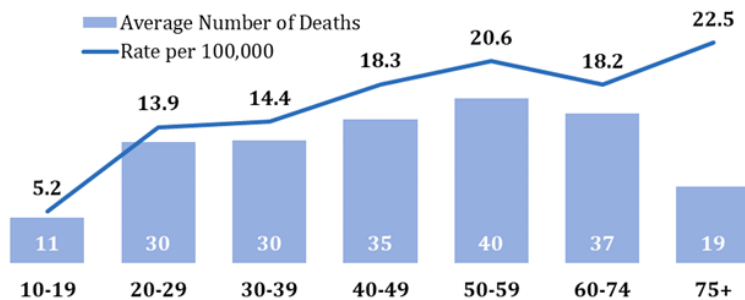


TABLE 10: Suicide deaths by mechanism and sex, 2010-2017²

Mechanism	Female	Male	Total
Firearms	14.8%	45.7%	38.1%
Suffocation/Hanging	28.2%	30.5%	29.9%
Poisoning	42.2%	11.6%	19.1%
Other	14.8%	12.2%	12.8%

Sources: 1. Centers for Disease Control and Prevention; 2. Vital Records Business Intelligence System

SUICIDE

Race/ethnicity: Whites consistently had the highest rates of suicide compared to all other racial/ethnic groups from 2010 to 2017 [Figure 90].

Age group: Suicides disproportionately affected older adults in the County in 2017 with the highest rates among those age 75 and older [Figure 91]. The highest number of suicide deaths were among age group 50-59.

Mechanism and sex: The mechanism of suicide varied by sex in the County, with males most likely using firearms and females most likely using poisoning [Table 10].

Traffic collisions

Traffic collisions are a public health concerns and motor vehicle crashes cause over 100 deaths in the United States daily. Traffic collision injuries and deaths are preventable, with proven safety strategies that drivers, passengers, cyclists and pedestrians can use to stay safe on the road. Many factors including improper seat belt use, impaired driving, distracted driving among other contribute to traffic collision injuries and deaths.¹

FIGURE 92: Total traffic collisions, 2008-2017²

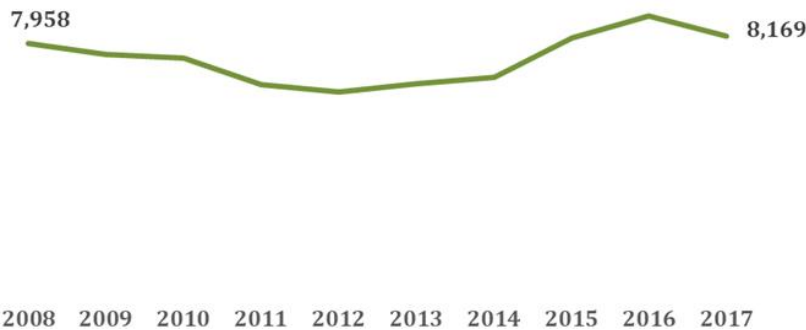


FIGURE 93: Fatal traffic collisions, 2008-2017²

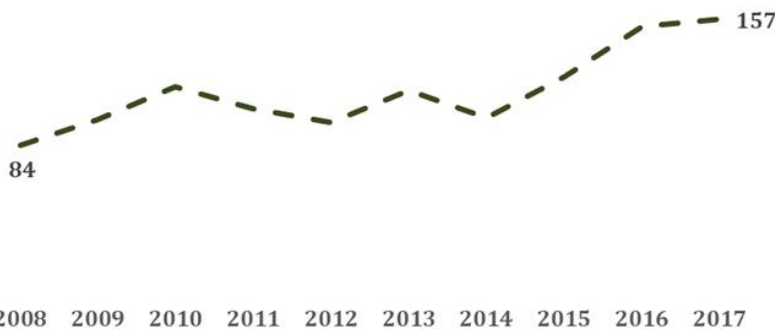
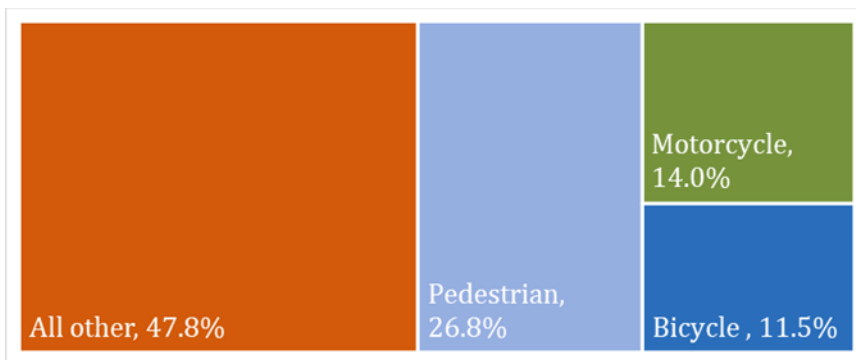


FIGURE 94: Fatal traffic collisions by collision type, 2017²



Sources: 1. Centers for Disease Control and Prevention; 2. Transportation Information Management System

TRAFFIC COLLISIONS

There were a total of 74,608 traffic collisions in the County in the ten-year period from 2008 to 2017, 1,153 (1.5%) of which were fatal.

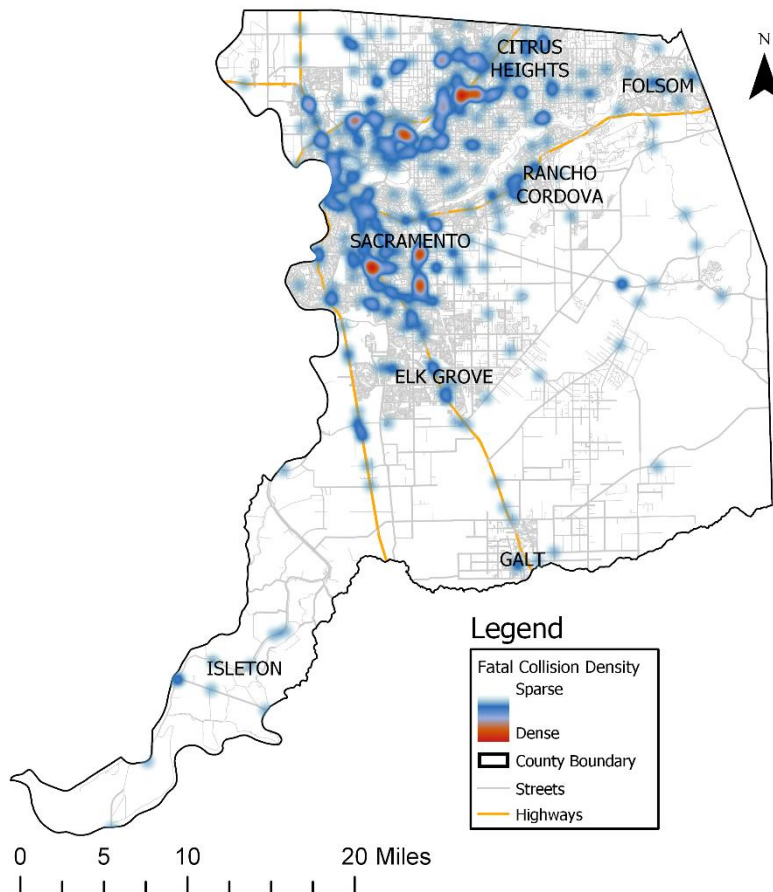
Trends: The total number of traffic collisions increased slightly (+2.7%) in the County from 7,958 collisions in 2008 to 8,169 collisions in 2017 [Figure 92]. However, fatal traffic collisions increased by an alarming 86.9% from 84 in 2008 to 157 in 2017 [Figure 93].

Fatal collisions by type: Over half of fatal traffic collisions in the County in 2017 involved pedestrians, motorcycles or bicycles [Figure 94].

TABLE 11: Traffic collisions by location, 2008-2017¹

Location	Total collisions	Fatal collisions
Unincorporated	31,491 (42.2%)	583 (50.6%)
Sacramento	29,579 (39.6%)	396 (34.3%)
Elk Grove	4,531 (6.1%)	62 (5.4%)
Citrus Heights	3,139 (4.2%)	34 (2.9%)
Rancho Cordova	2,769 (3.7%)	40 (3.5%)
Folsom	2,617 (3.5%)	31 (2.7%)
Other	482 (0.6%)	7 (0.6%)

FIGURE 95: Heat map of fatal traffic collisions, 2015-2017¹



Source: 1. Transportation Information Management System

TRAFFIC COLLISIONS

Location: Unincorporated areas of the County had the highest number of total traffic collisions and fatal collisions from 2008 to 2017 [Table 11]. The most populated city, the City of Sacramento, had the second highest number of total and fatal traffic collisions. Figure 94 shows a heat map of fatal traffic collisions in the County from 2015 to 2017, with hotspots in the East-Central and Northern parts of the County [Figure 95]. The red areas of the map indicate the highest concentrations of fatal traffic collisions in the County during the three-year time period.

MORTALITY

Mortality (i.e., death) data provide a valuable measure for assessing community health status. They provide a snapshot of a community’s health problems, patterns and trends over time. Mortality data can be used to help inform public health plans and policies to prevent or reduce premature death, improve quality of life, and address health inequities.

FIGURE 96: Overall age-adjusted death rates per 10,000 population by race/ethnicity, 2008-2017¹

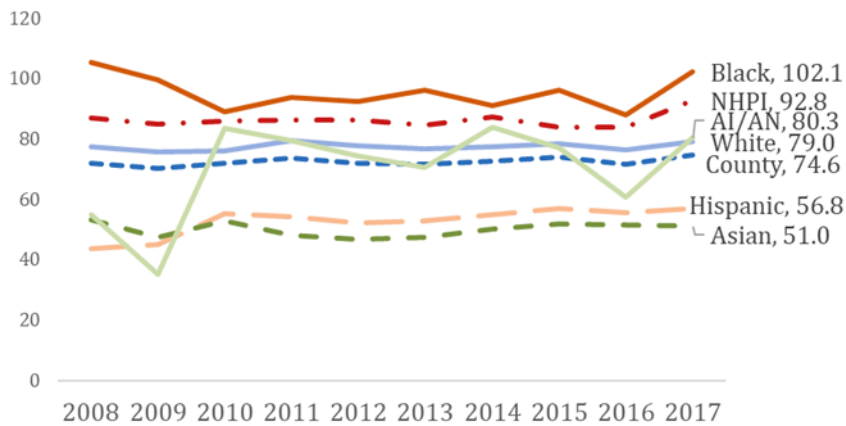
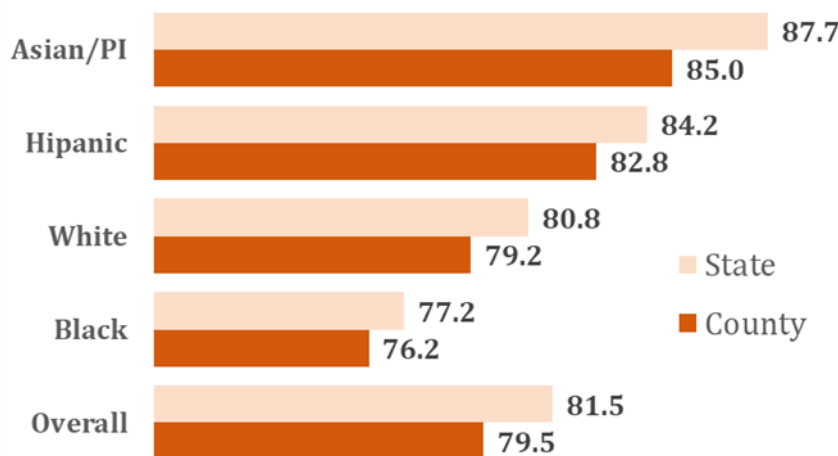


FIGURE 97: Estimated life expectancy by select race/ethnicity, State vs. County, 2015²



Sources: 1. Vital Records Business Intelligence System; 2. CDC Wonder

MORTALITY

Trends in death rates:

Age-adjusted death rates are death rates that control for the effects of differences in population age distributions. The age-adjusted County death rate remained relatively stable from 2008 to 2017, with a 2017 rate of 74.6 per 10,000 population [Figure 96]. Blacks consistently had the highest age-adjusted death rates whereas Asians consistently had the lowest. The American Indian/Alaskan Native death rates should be interpreted with caution due smaller, unstable numbers.

Life expectancy: Life expectancy refers to the number of years a person can expect to live. Life expectancy in Sacramento County were lower than the State by about 2 years overall in 2015 [Figure 97]. Life expectancy varied by racial/ethnic group, with the longest life expectancy among Asian/Pis and the shortest among Blacks.

TABLE 12: Top 10 leading causes of death by sex, 2017¹

Rank	Female	Male
1	Cancer	Cancer
2	Heart disease	Heart disease
3	Alzheimer's disease	Accidents
4	Stroke	Alzheimer's disease
5	Chronic lower respiratory disease	Stroke
6	Accidents	Chronic lower respiratory disease
7	Diabetes	Diabetes
8	Hypertension	Hypertension
9	Influenza & pneumonia	Influenza & pneumonia
10	Liver disease	Suicide

TABLE 13: Top 5 leading causes of premature death (age <75) and years of life lost, 2017¹

Rank	Cause of premature death	Years of potential life lost
1	Cancer	18,930
2	Accidents	15,883
3	Heart disease	12,430
4	Suicide	6,123
5	Homicide	3,681

TABLE 14: Top 3 leading causes of death by age group, 2017¹

Age group	Cause #1	Cause #2	Cause #3
1-14	Accidents	Homicide	Suicide
15-24	Accidents	Suicide	Homicide
25-44	Accidents	Cancer	Suicide
45-64	Cancer	Heart disease	Accidents
65-74	Cancer	Heart disease	Chronic lower respiratory disease
75+	Heart disease	Cancer	Alzheimer's disease

Source: 1. Vital Records Business Intelligence System

MORTALITY

Leading causes of death:

The leading causes of death in the County in 2017 varied by sex [Table 12]. Cancer and heart disease were in the top two for females and males. Alzheimer's was the third leading cause for females, whereas accidents were third for males. Suicide made the top ten for males (#10) but did not make the top 10 for females.

Premature deaths: Deaths under age 75 are considered premature deaths in the United States (though some use under age 65). Three of the top five causes of premature death in the County in 2017 were due to non-natural manners of death: accidents, suicide, and homicide [Table 13]. Years of potential life lost (YPLL) is another way to measure the impact of premature death.

Age group: Leading causes of death varied by age group in the County in 2017 [Table 14]. Risk of death for many chronic health conditions increase with age, and were the top causes of death in the older age groups. On the other hand, non-natural manners of death constituted a higher proportion among younger persons.

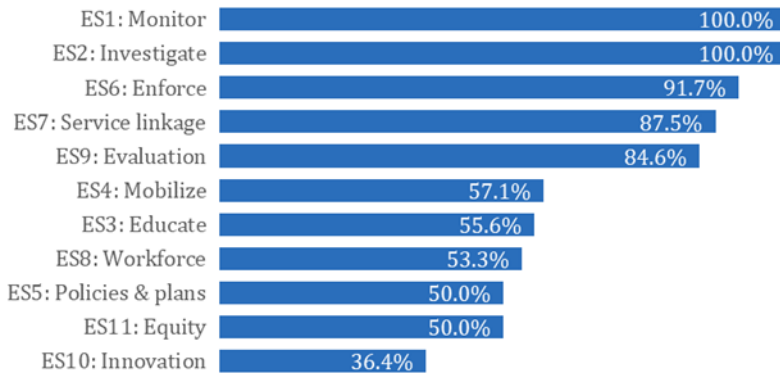
ESSENTIAL PUBLIC HEALTH SERVICES

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities. To achieve equity, the Essential Public Health Services actively promote policies, systems and overall community conditions that enable optimal health for all and seek to remove systemic and structural barriers that have resulted in health inequities.¹

TABLE 15: CDC’s original 10 Essential Public Health Services (ES), plus one additional locally-defined ES, 2016¹⁻²

10 Essential Public Health Services + 1	
ES1	Monitor health status to identify health problems
ES2	Diagnose and investigate health problems and health hazards
ES3	Inform, educate, and empower people about health issues.
ES4	Mobilize community partnerships to identify and solve health problems
ES5	Develop policies and plans that support individual and community health efforts
ES6	Enforce laws and regulations that protect public health and ensure safety
ES7	Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable
ES8	Assure a competent public health and personal care workforce
ES9	Evaluate effectiveness, accessibility, and quality of personal and population-based health services
ES10	Research for new insights and innovative solutions to health problems
ES11	Foster health equity by ensuring all people full and equal access to opportunities that enable them to lead healthy lives.

FIGURE 98: Proportion of Standards for Essential Public Health Services rated as moderate, significant or optimal , 2016²



Sources: 1. Centers for Disease Control and Prevention; 2. Sacramento County 2016 Local Public Health System Assessment

ESSENTIAL SERVICES

Local Public Health System Assessment: The public health system in the County is much larger than just SCPH alone, and includes many partners who provide services that contribute to and support the health of the public. SCPH, in coordination with Valley Vision and 27 local diverse community partner organizations collaborated to assess the local public health system in 2016. The group examined multiple measures within each of the 10 Essential Public Health Services (ES) as they existed in 2016 and evaluated the performance of the County in these areas. They also added an 11th ES relating to fostering health equity [Table 15]. Monitoring and investigating were ranked highest, whereas equity and innovation were ranked lowest [Figure 98].

COMMUNITY ASSETS

Community assets are resources that can help improve the quality of life in a community. Sacramento County has numerous community assets available to all who live, work, play and/or worship in the County. This section highlights some of the County's community assets, but is not intended to be an exhaustive list of all community assets.

- Arts and Culture
 - Sacramento County has numerous theaters, museums, nightclubs, and music venues. Information on many can be accessed [here](#).
- City Chambers of Commerce
 - There are 21 Chambers of Commerce in Sacramento County. Each one represents the interests of businesses in a geographic area or those of a cultural community. A list of Chambers of Commerce can be found [here](#).
- Farmer's markets
 - There are 24 certified farmers' markets in diverse locations around the county. A list of these farmer's markets can be found [here](#).
- Food banks
 - Numerous faith-based and non-profit organizations operate soup kitchens and food pantries across Sacramento County. Many of them also offer additional services including legal assistance, clothing etc. A list of soup kitchens can be found [here](#) and food pantries [here](#).
- Higher Education
 - Sacramento County has two large public universities and a community college district with four main campuses and several outreach locations. There are also smaller private institutions, including law schools, medical schools, and vocational schools. A list of universities, colleges and trade schools can be found [here](#).
- Historic sites / preservation
 - There are many landmarks in Sacramento that relate to the county's 19th century gold rush history. A list can be found on the State Office of Historic Preservation site [here](#).
- Libraries
 - The Sacramento Public Library system serves the county's residents in 28 locations. In addition to lending books, it offers community services including adult education, early learning, special collections, museum passes, and makerspaces. Library locations can be found [here](#).

- Public Parks
 - Sacramento County Regional Parks and local Parks Districts manage 564 parks. In addition, there are access points to the American River, community gardens, sports complexes, dog parks, and the 32-mile Jedediah Smith Memorial Trail. A list of parks can be found [here](#).
- Public Transport
 - The Sacramento Regional Transit District operates 82 bus routes and 43 miles of light rail within the County. It also offers paratransit services, door-to-door rides, and connections to the airport and nearby counties. Information on transit services can be found [here](#).
- Schools
 - K-12 students attend more than 400 public schools and 100 private schools within Sacramento County. The 13 public school districts also offer adult and continuation programs. The State Department of Education school directory can be found [here](#).
- Sports
 - The county is home to three professional sports teams: the NBA's Sacramento Kings, the USL pro soccer team Sacramento Republic FC, and the AAA Baseball team The Sacramento River Cats. There are also sports leagues for kids and adults offered by local Recreation and Park districts. More information can be found [here](#).

TECHNICAL NOTES

Data analysis and display

Data were analyzed using Statistical Analysis Software (SAS) 9.2. Maps were created in ESRI ArcGIS 10.4. All other figures were created in Microsoft Office Excel, and tables were created within Microsoft Office Word. Figures and Tables generally display data for Sacramento County residents unless otherwise specified (e.g., State statistics).

Data sources

Multiple primary and secondary data sources were used in this report. The two most frequently used in-house data sources in this report were birth and death certificate data from the California Vital Records Business Intelligence System and reportable disease conditions from the California Reportable Disease Information Exchange (CalREDIE) system. Data sources that are derived from survey data (e.g., California Health Interview Survey) are estimates that may not be representative of the entire County. Data sources are denoted throughout the report.

Rates

Rates are generally expressed in this report as the number of cases per 100,000 population, unless otherwise noted. Overall death rates are number of deaths per 10,000 population, with cause-specific deaths generally displayed per 100,000 population. Emergency department visits are expressed as number of incidents (not individuals) per 10,000. Rates are crude rates unless labeled as age-adjusted rates. Age-adjusted rates are rates that would have existed if the population under analysis had the same age distribution and the 'standard population.' The standard population used for age adjusting in this report is the United States 2000 population. Population denominators used to calculate rates were from the California Department of Finance population estimates or population projections.

Race/ethnicity data

Race and ethnicity categories used for tabulation in this report follow the Office of Management and Budget's (OMB) Standards for the Classification of Federal Data on Race and Ethnicity. Persons of Hispanic or Latino ethnicity are categorized as Hispanic/Latino regardless of race. 'Hispanic' in this report indicates Hispanic/Latino ethnicity. Non-Hispanic/non-Latino race categories include American Indian or Alaskan Native ('AI/AN'), Asian, Black or African American ('Black'), Native Hawaiian or Other Pacific Islander ('NHPI') and White. Previous standards combined the Asian and Native Hawaiian or other Pacific Islander race categories as Asian or Pacific Islander ('API'). This report uses the API category not so much for continuity with legacy data but due to frequent small numbers for health conditions of interest in the NHPI category that would lead to unstable rates and to protect individual privacy. Asian and NHPI subcategories were not explored in this report for similar reasons.

Sex, gender, and sexual orientation data

Sex designations in this report were generally based on reported sex at birth. ‘Gender’ in this report refers to a person’s reported gender identity. Data on gender identity and sexual orientation were not available for most data sources, but were included if available and robust enough to protect individual privacy (e.g., HIV data).