



# Adventist Health Feather River

2019 Community Health Needs Assessment





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## Executive Summary

### Adventist Health Feather River

#### Collaborating to achieve whole-person health in our communities

Adventist Health Feather River invites you to partner with us to help improve the health and wellbeing of our community. Whole-person health—optimal wellbeing in mind, body and spirit—reflects our heritage and guides our future. Adventist Health Bakersfield is part of Adventist Health, a faith-based, nonprofit health system serving more than 75 communities in California, Hawaii, Oregon and Washington. Community has always been at the center of Adventist Health’s mission—to share God’s love by providing physical, mental and spiritual healing.

The Community Health Needs Assessment is one way we put our faith-based mission into action. Every three years, we conduct this assessment with our community. The process involves input and representation from all: community organizations, providers, educators, businesses, parents, and the often marginalized—low-income, minority, elderly and other underserved populations.

We use the Community Health Needs Assessment to achieve these goals:

- Learn about the community’s most pressing health needs
- Understand the health behaviors, risk factors and social determinants that impact our community’s health
- Identify community resources and prioritize needs
- Collaborate with community partners to develop collective strategies

#### Partnering with our communities for better health

The Butte County Community Health Needs Assessment (CHNA) was completed in partnership with Butte County Public Health, Enloe Medical Center, Adventist Health Feather River Hospital, and Orchard Hospital. The most destructive wild fire in California’s history, the Camp Fire, interrupted the collaborative CHNA efforts in the Fall of 2018 through the Spring of 2019. The fire dramatically affected Butte County across a myriad of health care delivery system factors and community health determinants. The full impact this natural disaster has had on the community’s health will not be evident for some time, and the results of the current assessment do not fully address them.

#### Data Sources

The assessment drew from publically available secondary data sources, such as the U.S. Census Bureau, Centers for Disease Control and Prevention, U.S. Bureau of Labor Statistics, Center for Medicare and Medicaid Services, California Department of Vital Statistics, California Health Interview Survey, and many others. We collected data to present socioeconomic characteristics, quality of life, chronic diseases, mental health, substance use disorders, sexually transmitted infections, maternal and child health, aging and senior health, causes of death and access to care. When available, data sets are



presented in the context of California to help frame the scope of an issue, as it relates to the broader community.

For this Community Health Needs Assessment, focus groups were used to gather information and opinions from persons who represent Butte County. Twelve focus groups engaged 114 community members.

### **Prioritization process**

Significant health needs were identified from secondary data using the size of the problem (relative portion of population afflicted by the problem) and the seriousness of the problem (impact at individual, family, and community levels). To determine size or seriousness of the problem, the health need indicators that were identified in the secondary data were measured against benchmark data; specifically, county rates, state rates and/or Healthy People 2020 objectives. Indicators related to the health needs that performed poorly against one or more of these benchmarks met this criterion to be considered a health need.

The list of significant health needs informed primary data collection. The primary data collection process was designed to validate secondary data findings, identify additional community issues, solicit information on disparities among subpopulations, ascertain community assets to address needs, and discover gaps in resources. Community focus groups and stakeholder interviews were used to gather input and prioritize the significant health needs.

### **Top priorities identified in partnership with our communities**

Community stakeholders were asked to rank order the significant health needs according to highest level of importance in the community. The community health needs follow listed in priority order:

1. Access to care
2. Mental health
3. Dental health
4. Substance use and misuse
5. Chronic diseases
6. Preventive practices
7. Overweight and obesity
8. Transportation
9. General health

### **Making a difference: Results from our 2016 CHNA/CHP**

Adventist Health wants to ensure our efforts are making the necessary changes in the communities we serve. In 2016 we conducted a CHNA and Adventist Health Feather River adopted the following priority areas for our community health investments:

- Access to health care
- Chronic disease

- Substance abuse

To address these needs, the hospital accomplished the following:

#### **Access to health care**

Intervention: Adventist Health Feather River opened the Wellness Center: Center for Health, Wholeness and Hope in October 2017. It is a whole person health and wellness resource hub and education center dedicated to inspiring, supporting, promoting and improving the health and well-being of the residents of Paradise and surrounding communities. It has become a community center for education, services, programs and events. It was opened during severe hot weather to our community members as a cooling station. Non-profit community groups use the center to hold meetings, educational programs and support groups for patient populations with special needs such as cancer, COPD, grief and loss, smoking cessation, weight loss, nutrition, plant based meal preparation, diabetes prevention and ministerial association. Number of Community Members Served: 1,500.

Intervention: Adventist Health Feather River recruited and hired new physicians, advanced practitioners, and locums to provide needed access to care. This included the addition of 5 locums; 7 Allied Health Professionals; 23 Telemedicine Providers; and 36 Physicians. New clinics such as Gastroenterology and General Surgery were added. Number of Community Members Served: 7,897.

Intervention: Transportation can be a barrier to accessing health care services. Insufficient public transportation services or special transportation needs are all potential factors preventing community members from accessing care thereby delaying critical medical care. Adventist Health Feather River offered free transportation to our community members to access our rural health center. Number of Community Members Served by Clinic Van Service: 6,776. Number of Community Members Served by Merit Medi-Trans: 1,151.

Intervention: Adventist Health Feather River participated in the Health Information Exchange to improve access to care. The HIE is the mobilization of health care information electronically across community organizations. This allows for continuity and efficiency of access to care. Number of Community Members Served: 313,127.

Intervention: A common barrier to accessing health care is the cost of care and the lack of medical insurance. Often this is a matter of community members not knowing how to apply for programs that might be available to them. Patient Financial Services Application Specialists assisted eligible uninsured patients obtain insurance. Number of Community Members Served: 1,907.

#### **Chronic disease**

Intervention: Many community residents lack understanding and support for basic dietary and nutritional wellness. We addressed this need through nutritional counseling by Registered Dietitians. Number of Community Members Served: 911.

Intervention: Diabetes education and support, which includes a Diabetes Survival Camp and support group with two Lifestyle coaches trained to conduct CDC-approved diabetes prevention education. Number of Community Members Served: 1,954.

Intervention: Organize and participate in Strides for Diabetes scholarship fundraising event. Number of Community Members Served: 180.

Intervention: A Meals on Wheels program was provided for those in the community who lacked access and/or ability to meet their own nutritional needs. Number of Community Members Served: 19,853.

Intervention: Monthly Dinner with the Doctor program provided education and opportunities to dialogue with health professionals on a variety of health topics. Number of Community Members Served: 495.

Intervention: Piloted Plant Based Cooking Classes and in-depth education on nutrition. Number of Community Members Served: 544.

Intervention: Piloted Mindfulness-Based Weight Reduction Class. Number of Community Members Served: 12.

Intervention: Assisted in enrollment in the government subsidized program for Women, Infants and Children (WIC). Number of Community Members Served: 6,750.

Intervention: Participated in forming a taskforce in initiating a Blue Zones Project in Paradise. A Blue Zones Community® is an area in which citizens, schools, employers, restaurants, grocery stores, and community leaders have come together to optimize residents' longevity and well-being.

Intervention: Increased awareness of health principles and measures to improve health through Bereavement Support services, which included the annual Day of Remembrance and Light Up a Life, weekly Brunch Bunch, and grief support groups. Number of Community Members Served: 479

### **Substance Abuse**

Intervention: Offered Smoking Cessation classes to the Ridge community. Number of Community Members Served: 8.

Intervention: Hosted a Dinner with the Doctor session with Dr. Otani on opioid addiction. Dr. Otani is a physician who focuses on a holistic and integrative approach to pain management. Number of Community Members Served: 25.

Intervention: Recruited an Integrated Pain Management Doctor, to help provide additional approaches to pain management.



Intervention: Offered an Integrated Pain Management Support Group with Dr. Otani. Number of Community Members Served: 700.

Intervention: Participated in the Butte County Health Coalition Opioid taskforce.

### **Report Availability and Comments**

This report is widely available to the public on the hospital's web site, <https://www.adventisthealth.org/feather-river/about-us/community-benefit/>. Written comments on this report can be submitted to [community.benefit@ah.org](mailto:community.benefit@ah.org).

## Introduction

### Background and Purpose

Adventist Health Feather River is a 100-bed hospital located in Paradise, California. On November 8, 2018, the Camp Fire overwhelmed the town of Paradise, causing residents to flee and businesses to close, including Adventist Health Feather River hospital. While the hospital remains closed, access to health care is available at clinics located in Paradise, Chico and Corning, including a walk-in clinic in Paradise that allows patients to access primary care services without an appointment.

The passage of the Patient Protection and Affordable Care Act and California SB 697 require tax-exempt hospitals to conduct Community Health Needs Assessments (CHNA) every three years and adopt Implementation Strategies to meet the priority health needs identified through the assessment. A CHNA identifies unmet health needs in the service area, provides information to select priorities for action and target geographical areas, and serves as the basis for community benefit programs. This assessment incorporates components of primary data collection and secondary data analysis that focus on the health and social needs of the service area.

### Service Area

Adventist Health Feather River is located at 5974 Pentz Rd., Paradise, CA 95969. The service area includes four communities consisting of 6 ZIP Codes in Butte County.

**Adventist Health Feather River Service Area**

ZIP Code	Place
95926	Chico
95928	Chico
95954	Magalia
95965	Oroville
95966	Oroville
95969	Paradise

### Project Oversight

The Community Health Needs Assessment process was overseen by:

Paul Sandman, MBA, CPA

Senior Community Integration Analyst

Mission Integration

Adventist Health

### Consultants

Morrison & Company was engaged by the County of Butte to facilitate the community focus groups. Morrison was founded in 2002 to provide specialized consulting services including business planning, interim/outsourced executive assistance recruiting, leadership development, HR, and specialized grant writing services.

Biel Consulting, Inc. wrote the Community Health Needs Assessment. Biel Consulting, Inc. has extensive experience conducting hospital Community Health Needs Assessments and working with hospitals on developing, implementing, and evaluating community benefit programs.



## Data Collection Methodology

### Collaborative Process

Adventist Health Feather River participated in a collaborative process for the Community Health Needs Assessment. The collaborative is comprised of Adventist Health Feather River, Butte County Public Health, Enloe Medical Center and Orchard Hospital. These partners share a service area. The collaborative effort reduced redundancies and increased data collection efficiency.

### Secondary Data Collection

The Community Health Needs Assessment examines quantifiable aspects of health such as the prevalence of chronic disease, birth rates, and leading causes of death in Butte County. This review used secondary data sources including the U.S. Census Bureau, Centers for Disease Control and Prevention, U.S. Bureau of Labor Statistics, Center for Medicare and Medicaid Services, California Department of Vital Statistics, California Health Interview Survey, and many others.

Indicators of community health were grouped into several broad categories including:

- Socioeconomic Characteristics
- Quality of Life
- Chronic Disease
- Mental Health
- Substance Use Disorders
- Sexually Transmitted Infections
- Maternal and Child Health
- Aging and Senior Health
- Causes of Death
- Access to care

A summary table of risk factors data from the 2019 Butte County Risk Factors Survey can be found in Attachment 1.

### Primary Data Collection

For this Community Health Needs Assessment, information was obtained through community focus groups and stakeholder interviews with individuals who are leaders and/or representatives of medically underserved, low-income, and minority populations, local health or other departments or agencies that have current data or other information relevant to the health needs of the community.

#### Focus Groups

Representatives from Enloe Medical Center, Adventist Health Feather River, Orchard Hospital, and Butte County Public Health designed the focus group questions with input from the Morrison facilitator. The collaborative partners organized each focus group, collaborating with existing Butte County community organizations to host focus groups in coordination with already scheduled events or meetings. This leveraged the established relationships these groups have with the individuals they serve, facilitating

active participation by community members. Focus groups were often held at the regular meeting locations for the community organizations to best encourage public participation. Focus groups were also held at various times in the day to accommodate the schedules of participants. The focus groups ranged in size, with an average of 10 attendees per focus group.

In total, 12 focus groups reaching 114 participants were conducted representing a broad spectrum of community members. Participation was received from seniors, college students, individuals receiving mental health services, individuals participating in programs at the African American Family and Cultural Center and the Hmong Cultural Center, high-school students, physicians, general community members, veterans, individuals suffering from homelessness, and individuals from Paradise facing the aftermath of the devastating Camp Fire.

A series of questions were designed with input from representatives from Enloe Medical Center, Adventist Health Feather River, Orchard Hospital, and Butte County Public Health, as well as the Morrison facilitator. Participants were asked the questions as a group and encouraged to share their own personal experiences or anecdotal experiences observed from friends and family in accessing health care and living healthy lives.

Questions that were asked of the focus group participants included:

1. What are some of the challenges and barriers faced to access care/services?
2. What are the programs and resources in the community that are successful in helping people access needed care/services?

A list of the focus groups can be found in Attachment 2.

Analysis of the primary data occurred through a process that compared and combined responses to identify themes. The results of the primary data collection were reviewed in conjunction with the secondary data. Primary data findings were used to corroborate the secondary data-defined health needs, serving as a confirming data source. The responses are included in Attachment 3.

### **Public Comment**

In compliance with IRS regulations 501(r) for charitable hospitals, a hospital Community Health Needs Assessment (CHNA) and Implementation Strategy are to be made widely available to the public and public comment is to be solicited. The previous Community Health Needs Assessment and Implementation Strategy were made widely available to the public on the website <https://www.adventisthealth.org/feather-river/about-us/community-benefit/>. To date, no comments have been received

## Identification and Prioritization of Significant Health Needs

### Review of Primary and Secondary Data

Significant health needs were identified from secondary data using the size of the problem (relative portion of population afflicted by the problem) and the seriousness of the problem (impact at individual, family, and community levels). To determine size or seriousness of the problem, the health need indicators that were identified in the secondary data were measured against benchmark data; specifically state rates and/or Healthy People 2020 objectives. Indicators related to the health needs that performed poorly against one or more of these benchmarks met this criterion to be considered a health need.

The following significant health needs were determined:

- Access to health care
- Chronic diseases
- Dental health
- General health
- Mental health
- Overweight and obesity (to include healthy eating and physical activity)
- Preventive practices (screenings, vaccinations, injury prevention)
- Substance use and misuse
- Transportation

### Priority Health Needs

Community focus groups and stakeholder interviews were used to gather input and prioritize the significant health needs. The focus group participants were asked to rank order (possible score of 4) the health needs according to highest level of importance in the community. The total score for each significant health need was divided by the total number of responses for which data were provided, resulting in an overall average for each health need. Among the focus group participants, access to care, mental health, dental health, substance use and chronic diseases were the top five priority needs. Calculations from community stakeholders resulted in the following prioritization of the significant health needs.

Significant Health Need	Rank Order Score (Total Possible Score of 4.0)
Access to care	3.86
Mental health	3.77
Dental health	3.61
Substance use and misuse	3.53
Chronic diseases	3.51
Preventive practices	3.50
Overweight and obesity	3.44
Transportation	3.36
General health	2.88



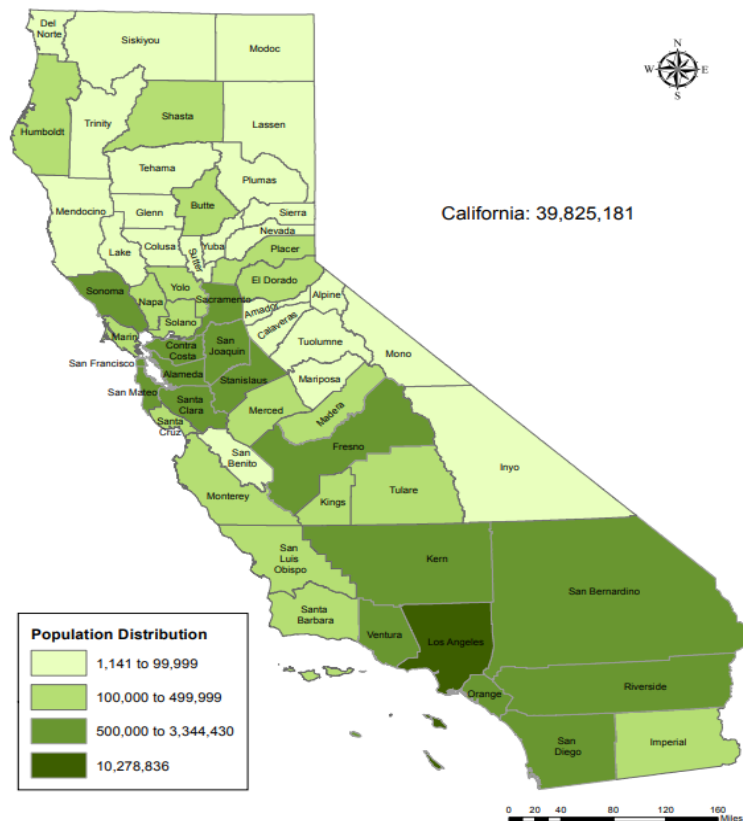
### **Resources to Address Significant Health Needs**

Community stakeholders identified community resources potentially available to address the significant health needs. The identified community resources are presented in Attachment 4.

# Community Profile

## Demographic Characteristics

### Butte County Overview



**Figure 1:** Population distribution

Source: State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year, July 1, 2010-2018. Sacramento, California, December 2018

Butte County is located in the Northern portion of the Sacramento Valley Region of North Central California and encompasses approximately 1,677 square miles, of which 1,636.5 square miles are land and 41 square miles are water. According to the 2018 California Department of Finance County Population State and County Population Estimates, California’s population is 39,825,181, and Butte County is ranked the 27th largest county with a population of 227,837 (see *Figure 1*).

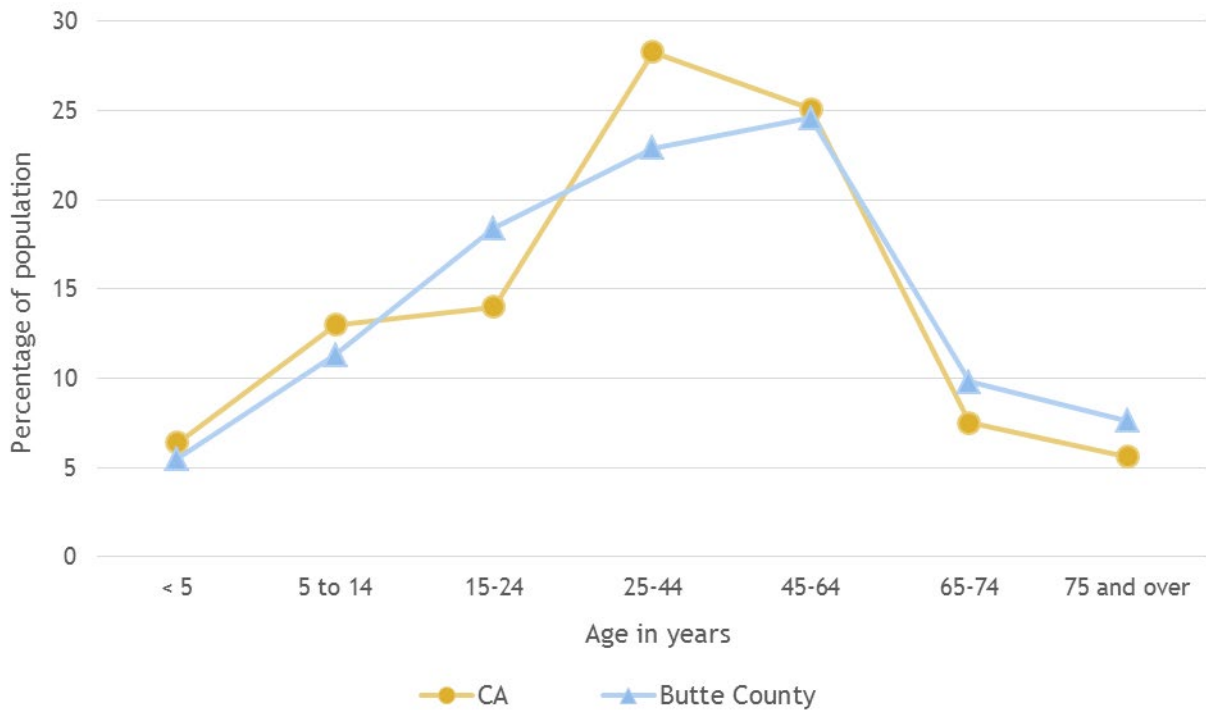
Population estimates for California have increased every year since 2010. Butte County estimates have also increased every year since 2010. California had an average estimated increase in population of 0.8% each year while Butte County’s population estimates increased by an average of 0.4% each year (see *Table 1*).

**Table 1: Population of Butte County and California, 2010-2013**

	Butte County		California	
	Number	Percent	Number	Percent
2010	220,202	-	37,334,578	-
2011	220,636	0.20%	37,678,534	0.92%
2012	221,823	0.54%	38,045,271	0.97%
2013	222,541	0.32%	38,425,695	1.00%
2014	223,978	0.65%	38,756,940	0.86%
2015	224,533	0.25%	39,076,128	0.82%
2016	225,094	0.25%	39,328,337	0.65%
2017	226,661	0.70%	39,610,556	0.72%
2018	227,837	0.52%	39,825,181	0.54%

Source: State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2018, December 2018

Age and Gender



**Figure 2: Population by age group: Butte County and California, 2013-2017**

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Table S0101

The population of Butte County is slightly older than the population of California. The median age in Butte County is 36.9 years old compared to California, which is 36.1 years old<sup>1</sup>. Butte County has a higher percentage of individuals, ages 15 to 24 years old, and seniors, over the age of 65 years old, but a lower percentage of adults, ages 25 to 64 years old, when compared to California (see *Figure-2*).

The population increase has been steady in Butte County with an increase between 2015 and 2017 of 3,883 (1.7%) people. As predicted in a growing population, many age groups had increasing numbers. Exceptions included children under age 5, which remained unchanged in population; and decreases in the number of school-age children, between the ages of 5 and 9, young teens, between the ages 10 and 14, and teens and young adults, between the ages 15 and 24 (see *Table 2*).

	2015		2017		Trend, 2015-2017
	Number	Percent	Number	Percent	
Total population	225,411		229,294		↑
Under 5 years	12,172	5.4%	12,387	5.4%	↔
5 to 9 years	15,103	6.7%	14,888	6.5%	↓
10 to 14 years	11,045	4.9%	10,780	4.7%	↓
15 to 24	41,025	18.2%	40,138	17.5%	
25 to 64	106,394	47.2%	109,678	47.9%	
65 to 84	33,586	14.9%	35,887	15.6%	
85 and over	5,635	2.5%	5,536	2.6%	

Source: U.S. Census Bureau, 2015 and 2017 American Community Survey 1-Year Estimates. Table-S0101-age and sex

In 2017, the distribution of males to females in Butte County was similar to that of California (see *Table 3*). Although there are more females than males in Butte County, men (67%) outnumber women (64.7%) among working-age adults, ages 15 to 64 years old. For seniors, ages 70 and over, there is a greater percentage of females (13%) compared to males (10.1%).

	Butte County		California	
	Number	Percent	Number	Percent
Male	113,399	49.5%	19,650,051	49.7%
Female	115,895	50.5%	19,886,602	50.3%

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates. T-S0101 - age and sex

<sup>1</sup> U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Table S0101

## Race and Ethnicity

Based on the U.S. Census Bureau there are seven major race and ethnicity categories: African American/Black, American Indian/Alaska Native, Asian, Hispanic/Latino, Native Hawaiian/Pacific Islander, White, and other. In addition, an individual may identify as belonging to two or more races, and an individual who identifies as being Hispanic/Latino may identify as belonging to any race. These race and ethnicity categories are self-determined, meaning that individuals identify their own race or ethnicity in the census. *Race* refers to groups of people who have differences and similarities in biological traits deemed by society to be socially significant, meaning that people treat other people differently because of them. For instance, while eye color is not socially significant, differences and similarities in skin color are. *Ethnicity* refers to shared cultural practices, perspectives, and distinctions that set apart one group of people from another. That is, ethnicity is a shared cultural heritage. The most common characteristics distinguishing various ethnic groups are ancestry, a sense of history, language, religion, and forms of dress. Ethnic differences are learned, not inherited.

Butte County is primarily White (non-Hispanic/Latino), making up 72% of the population. 16.5% of the population is Hispanic/Latino, which is less than half of the total population but remains the second largest racial/ethnic group in Butte County. The third largest category is individuals who identify with two or more races, making up 5.5% of the county's population. However, racial and ethnic diversity has been increasing in Butte County. Between 2013 and 2017, there was a large increase in the American Indian/Alaska Native and Other race populations; moderate increases in the African American/Black, Asian, and Hispanic/Latino populations; and a small increase in the non-Hispanic/Latino White population. During the same time period, there was a moderate decrease in the Native Hawaiian/Pacific Islander population, as well as the population identifying as two or more races (see *Table 4*).

**Table 4: Changes in population by race and ethnicity in Butte County, 2013 and 2017**

	2013 Census		2017 Census		2013-2017 Change	
	Number	Percent	Number	Percent	Change	Percent Change
White (non-Hispanic/Latino)	164,406	74.0%	165,106	72.0%	700	0.4%
Hispanic/Latino	33,642	15.1%	37,569	16.4%	3,927	11.7%
African American/Black	3,336	1.5%	4,188	1.8%	852	25.5%
American Indian/Alaska Native	1,868	0.8%	3,346	1.5%	1,478	79.1%
Asian	9,970	4.5%	11,961	5.2%	1,991	20.0%
Native Hawaiian/Pacific Islander	321	0.1%	228	0.1%	-93	-29.0%
Other race	7,491	3.4%	11,244	4.9%	3,753	50.1%
Two or more races	13,917	6.3%	12,386	5.4%	-1,531	-11.0%
Total	222,090	100.0%	229,294	100.0%	7,204	3.2%

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates. Tables B02001; B01001H; B01001I

### Population with Limited English Proficiency

According to the U.S. Department of Health and Human Services, individuals with Limited English Proficiency face unique challenges in achieving a state of good health. These individuals may need a trained interpreter to facilitate interactions with health services personnel. They may also require documents to be translated in order to fully understand important issues related to their health or health services. In Butte County, 5.4% of community members, over the age of 5, have Limited English Proficiency, compared to 18.4% for California. 20% of the Hispanic/Latino (any race) population in Butte County have Limited English Proficiency compared to 31% for California. According to the 2017 American Community Survey, a significantly greater percentage of Butte County residents, over the age of 5, spoke only English at home compared to residents of California. In addition, a lower percentage of Butte County residents spoke Spanish at home than residents of California (see *Table 5*).

Table 5: Language other than English spoken at home				
	Butte County		California	
Language at home, ages 5 to 17 years				
English only	85.6%	185,707	55.6%	20,596,574
Spanish	9.0%	19,495	28.9%	10,698,137
Other	5.4%	11,705	15.6%	5,781,517
Language at home, ages 18 years and over				
English only	88.3%	155,805	64.4%	16,526,703
Spanish	7.1%	12,465	21.3%	5,455,874
Other	4.6%	8,171	14.3%	3,667,878

Source: 2017 American Community Survey 1-Year Estimates. Table S1601

Most people over the age of 5 in Butte County spoke only English at home (85.7%). Of these English speakers, 15.2% were between the ages of 5 and 17, 65.1% were between the ages of 18 and 64, and 19.7% were age 65 or older (see *Table 6*).

Table 6: Characteristics of people by language spoken at home, Butte County, 2013-2017			
	Total	People who speak only English at home	People who speak a language other than English at home
Total population, 5 years and over	212,825	182,365 (85.7%)	30,460, (14.3%)
5 to 17 years	15.5%	15.2%	17.6%
18 to 64 years	66.2%	65.1%	72.3%
65 years and over	18.3%	19.7%	10.1%

Source: 2013-2017 American Community Survey 5-Year Estimates. Table - S1603

## Disability Prevalence

According to the Centers for Disease Control and Prevention (CDC), the number of adults reporting a disability is expected to increase, along with the need for appropriate medical and public health services. People with disabilities face many barriers to good health. Studies show that individuals with disabilities are more likely than people without disabilities to report having poorer overall health, less access to adequate health care, limited access to health insurance, skipping medical care because of cost, and engaging in risky health behaviors including smoking and physical inactivity.

### Independent living difficulty

The percent of the population with an independent living difficulty is based on the 2013-2017 American Community Survey question asked of persons ages 15 and older: "Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping?" with response categories "yes" or "no."

### Self-care difficulty

The percentage of the population with a self-care difficulty provides a narrower measure of the need for personal assistance services, similar to having difficulty in one or more activities of daily living (ADL). It is based on questions from the 2013-2017 American Community Survey questionnaire asked in a series to person's ages 5 years and older: "Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions? Does this person have serious difficulty walking or climbing stairs? Does this person have difficulty dressing or bathing?" with response categories "yes" or "no."

In Butte County, a higher percentage of adults, between the ages of 18 and 64, have disabilities than in the state (see *Table 7*).

	Ages 18-64			Ages 65 and over		
	With an independent living difficulty	With a self-care difficulty	Total persons	With an independent living difficulty	With a self-care difficulty	Total persons
<b>Butte County</b>	5.8%	2.7%	139,388	16.1%	9.8%	37,864
<b>California</b>	3.0%	1.6%	24,335,458	17.2%	9.9%	5,052,924

Source: 2013-2017 American Community Survey 5-Year Estimates. Table S1810

## Household Characteristics

The majority of households in Butte County and the state are family households. Married-couple families make up slightly less than half of the households in Butte County. The percentage of single-parent families in Butte County is lower than in California. A notably greater percentage of Butte County residents live alone or in non-family households than in California. Nearly 13% of Butte County households include adults, ages 65 and over (see *Table 8*).



**Table 8: Household characteristics, 2013-2017**

	<b>Butte County</b>	<b>California</b>
Total households	86,167	12,888,128
Family households (families)	59.8%	68.8%
Married-couple family	43.4%	49.5%
Male householder, no wife present, family	5.1%	5.9%
Female householder, no husband present, family	11.3%	13.3%
Non family household	40.2%	31.2%
Aged 65 years and over	12.8%	9.1%
Number of grandparents responsible for own grandchildren under 18 years	2,001 of 4,298 (46.6%)	270,310 of 1,149,466 (23.5%)
Grandparents responsible who are female	61.9 %	61.7%
Grandparents responsible who are married	73.6%	71.1%

Source: 2013-2017 American Community Survey 5-Year Estimates; Tables S1101; S1201; DPO2

## Socioeconomic Characteristics

### Socioeconomic Status (SES)

SES is a measure of social and economic position. It is based on education, income, and occupation. SES greatly influences an individual's access to resources that are important for health, such as: health care access, education, safe and affordable housing, food, and recreation. Access to these resources helps facilitate health and wellbeing.

### Household Income

Household income refers to the combined income of all people living in one home. Household income includes: salaries and wages, retirement income, government assistance, and capital gains from investments such as real estate or stocks and bonds. The median household income for Butte County is lower than for California, as well as nationally (see *Table 9*).

	Median Income 2014	Median Income 2015	Median Income 2016
<b>Butte County</b>	\$43,165	\$43,444	\$44,366
<b>California</b>	\$61,489	\$61,818	\$63,783
<b>United States</b>	\$53,482	\$53,889	\$55,322

*Source: U.S. Census Bureau, 2010-2014, 2011-2015, and 2012-2016 American Community Survey 5-Year Estimates. Table DP03. - Median Income in inflation adjusted dollars for each year*

### Population in Poverty

Poverty may result in negative health consequences, including: increased risk of mortality, increased prevalence of medical conditions and disease incidence, depression, violence, and poor health behaviors. The family characteristics used to determine poverty status include: number of people within the household, number of children under age 18, and whether the head of the household is over age 65. If a household's total income is less than the poverty threshold then all of the members of the household are considered impoverished. According to the 2018 poverty guidelines, a single member household is living in poverty if they earn less than \$12,140 per year, while a household of four is living in poverty if they earn less than \$25,100<sup>2</sup>. Between 2012 and 2016, 21.3% of Butte County residents were living below the federal poverty level. Groups in Butte County that exhibited higher rates of poverty were African American/Black, Asian, Hispanic/Latino and those who had not completed high school. Poverty status details for Butte County residents by sex, race/ethnicity and educational status are displayed below (see *Tables 10 and 11*).

<sup>2</sup> <https://aspe.hhs.gov/poverty-guidelines>

**Table 10: Poverty status by gender and race, 2012-2016**

	Total	Number Below Poverty Level	Percent Below Poverty Level
<b>Gender</b>			
Male	107,995	22,614	20.9%
Female	110,444	23,842	21.6%
<b>Race/Ethnicity</b>			
African American/Black	3,187	1,181	37.1%
American Indian/Alaska Native	2,326	572	24.6%
Asian	9,435	2,922	31.0%
Native Hawaiian/Pacific Islander	440	89	20.2%
Hispanic/Latino (any race)	33,487	9,283	27.7%
Not Hispanic/Latino	160,750	29,957	18.6%
White	181,891	35,928	19.8%
<b>Total Population in Butte County</b>			
Population for whom poverty status is determined	218,439	46,457	21.3%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5 – Year Estimates. S1701

**Table 11: Poverty status by education, 2012-2016**

	Total	Below Poverty Level	
		Number	Percentage
Less than high school graduate	16,491	4,791	29.1%
High school graduate (or equivalent)	32,023	6,005	18.8%
Some college, associate's degree	56,274	8,585	15.3%
Bachelor's degree or higher	37,582	2,834	7.5%
Population 25 years and over	142,370	22,215	15.6%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5 – Year Estimates. T S1701

### *Children in Poverty*

Negative health effects are associated with poverty in all age groups, including children. Children living in poverty lack adequate access to health care and are at a greater risk of accidental injury. Between 2012 and 2016, 22.8% of children, under age 18, were living below the federal poverty level in Butte County. This was higher than in California (21.9%) and the United States (21.2%).

*Children Eligible for Free/Reduced Price Lunch*

An indirect measure of child poverty is the percentage of children enrolled in the National School Lunch Program. The program offers federally assisted meals in public and nonprofit private schools, as well as residential childcare institutions. During the 2015-2016 school year, over half of the students enrolled in Butte County public schools (56.2%) were eligible for Free or Reduced Price Lunch (see *Table 12*).

**Table 12: Children eligible for free/reduced price lunch., 2015-2016**

	Total Student Enrollment	Free/Reduced Price Lunch Eligible	
		Number	Percent
<b>Butte County</b>	31,013	17,440	56.2%
<b>California</b>	6,189,987	3,647,155	58.9%
<b>United States</b>	48,899,398	25,563,405	52.3%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey Free Lunch Data", 2015-16 v.1a

*Unemployment*

A community’s unemployment rate is a measure of economic health and is also associated with poorer health outcomes. Between 2012 and 2016, unemployment in Butte County was highest among community members that identified as African Americans/Black, American Indian/Alaska Native, and Hispanic/Latino. The unemployment percentages for these racial and ethnic groups were also higher in Butte County than throughout the state and the nation (see *Table 13*).

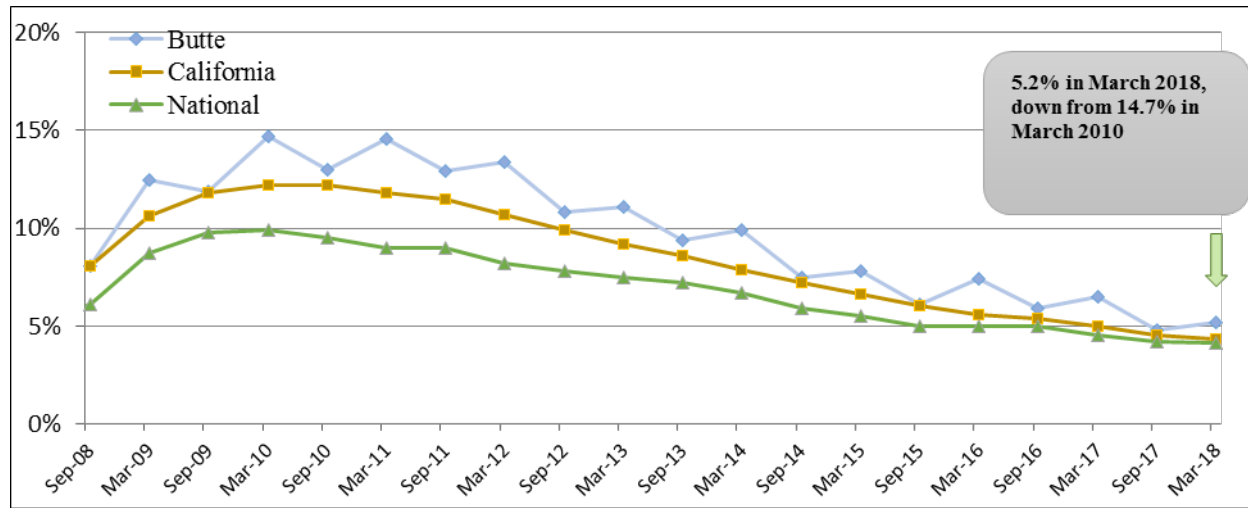
**Table 13: Unemployment by race/ethnicity, 2012-2016**

	<b>Butte County</b>	<b>California</b>	<b>United States</b>	
Overall Unemployment	10.7%	8.7%	7.4%	
African American/Black		20.3%	15.0%	13.3%
American Indian/Alaska Native		16.4%	13.8%	13.5%
Asian		8.5%	6.5%	5.7%
Hispanic/Latino (any race)		12.8%	10.0%	8.7%
Native Hawaiian/ Pacific Islander		1.2%	11.6%	10.5%
Two or More Races		12.2%	11.6%	10.9%
White		10.7%	8.2%	6.3%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates T S2031

The unemployment rate in Butte County has ranged from a peak of 14.7% in March 2010 to a low of 5.2% in March 2018. During this time period, the unemployment rate for Butte County was higher than for California. However, the unemployment rate for Butte County and the state has been dropping since it peaked in 2010 (see *Figure 3*).

**Figure 3:** Unemployment trend, 2008-2018



Source: Derived from Bureau of Labor Statistics

### Educational Attainment

Educational attainment is defined as the highest level of formal education completed (i.e., high school diploma or equivalent, bachelor's degree, graduate/professional degree). An educated workforce is an important factor for economic development. Completion of formal education is associated with higher paying jobs and access to resources that influence health such as: food, housing, transportation, health insurance, recreation, and other necessities for physical and mental wellbeing. In Butte County, 88.3% of adults, age 25 and older, have at least a high school diploma, which is higher than for California (82.1%). However, fewer adults in the County have a Bachelor's degree or higher (26.1%) compared to the state (32.0%), (see Table 14).

**Table 14:** Education attainment in population age 25 years and over, 2016

	Butte County		California	
	Number	Percent	Number	Percent
Total population 25 years and over	144,395	-	25,554,412	-
Less than 9 <sup>th</sup> grade	6,376	4.4%	2,524,636	9.9%
9 <sup>th</sup> to 12 <sup>th</sup> grade, no diploma	10,574	7.3%	2,048,327	8.0%
High school graduate or equivalent	32,775	22.7%	5,260,904	20.6%
Some college, no degree	42,887	29.7%	5,548,479	21.7%
Associate's degree	14,030	9.7%	1,995,579	7.8%
Bachelor's degree	25,225	17.5%	5,136,043	20.1%
Graduate / Professional degree	12,528	8.7%	3,040,444	11.9%
Percent High School Graduate or higher	127,445	88.3%	20981449	82.1%

Source: 2016 American Community Survey (1-year estimates). T S1501

## High School Graduation

The high school graduation rate in Butte County has declined slightly in the past few years, but has remained marginally higher than for the state of California (see *Table 15*).

	Average Freshman Base Enrollment	Estimated Number of Diplomas Issued	On-Time Graduation %
<b>Butte County</b>	2,477	2,076	83.8%
<b>California</b>	493,795	408,124	82.7%

Source: California Department of Education (CDE) DataQuest: Retrieved August 23, 2018, from: <https://dq.cde.ca.gov/dataquest/>

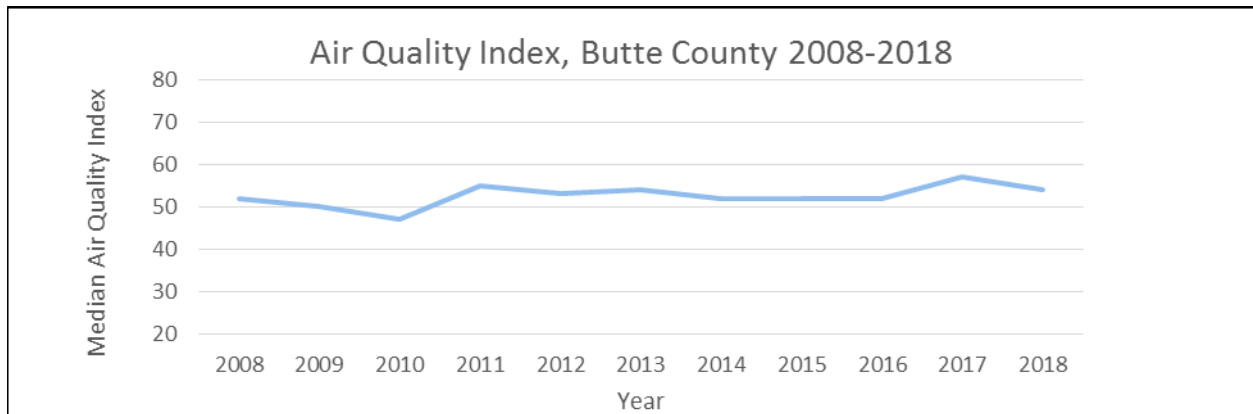
## Quality of Life

Quality of life is considered by the National Center for Chronic Disease Prevention and Health Promotion to be “a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life”. It is the general well-being of individuals and societies. The physical environment influences quality of life and affects physical and mental health. These factors are connected with levels of community engagement.

### Air Quality and Pollution

Outdoor air quality in Butte County is monitored hourly by measuring pollutants of fine particles in the air and average ozone levels. This reporting method, called the air quality index (AQI), was developed by the U.S. Environmental Protection Agency (EPA). An AQI score between 0 and 50 indicates good air quality, between 51 and 100 indicates moderate air quality, and scores of 151 and greater indicate unhealthy air quality. Air Quality can be affected by pollution emitted from stationary sources such as: factories, power plants, and smelters; dry cleaners and degreasing operations; mobile sources such as cars, buses, planes, trucks, and trains; and naturally occurring sources such as windblown dust, and volcanic eruptions. From 2008 to 2018, Butte County had good to moderately unhealthy annual median air quality scores (see *Figure 4*).

**Figure 4:** Median Air Quality Index (AQI) by year, 2008-2018

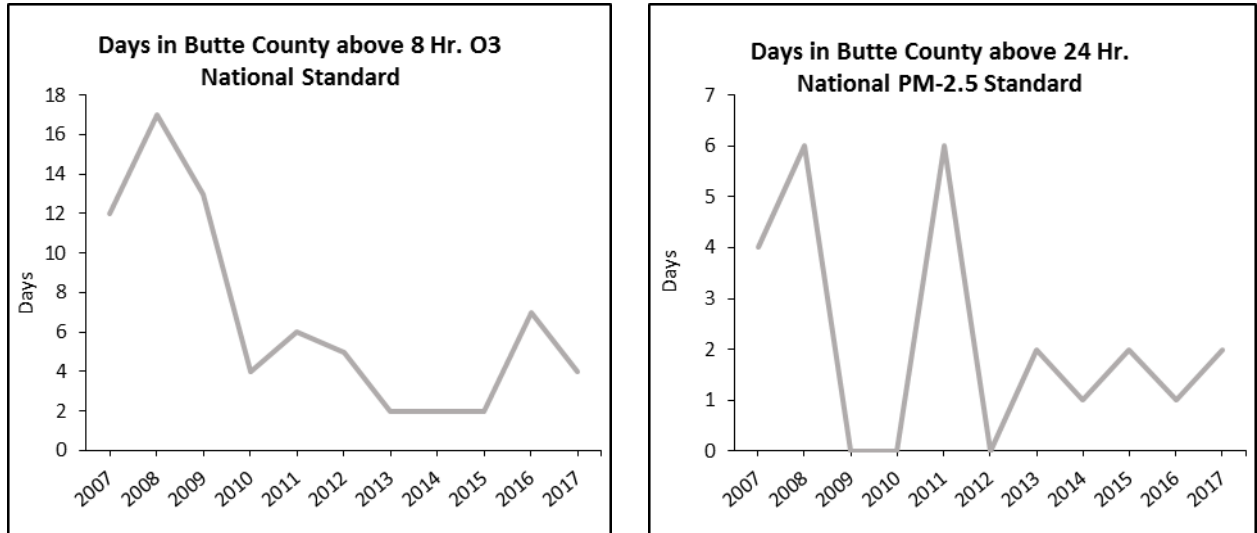


Source: The U.S. Environmental Protection Agency (EPA) (<https://www.epa.gov/outdoor-air-quality-data/air-quality-index-report>)

Two contaminants are ozone (O<sub>3</sub>) and particulate matter smaller than 2.5 micrometers (PM-2.5). The number of days per year that Butte County has exceeded the National averages for these contaminants has shown an decreasing trend from 2007 to 2017. However, there was high degree of variation in air quality over this time period (see *Figure 5*).



**Figure 5:** Days in Butte County above California State Standards for Ozone (O3), and National Standards for Particulate Matter 2.5 micrometers or smaller (PM-2.5), 2007-2014



Source: California Air Resource Board, retrieved October 15, 2018 from: <https://www.arb.ca.gov/adam/trends/trends2.php>  
<https://www.arb.ca.gov/adam/topfour/topfourdisplay.php>

### Transportation

People who live close to public transportation are less likely to drive and may have increased physical activity, reducing their risk for chronic disease and obesity<sup>3</sup>. Access to public transportation is especially important for low-income and elderly individuals who may not have access to a motor vehicle. Most people have a daily commute to their place of work. Carpooling and use of public transportation produces less air pollution and may indicate environmental conservation. In Butte County, 75.2% of residents drive alone to work (see Table 16).

	2013	2017	Total in 2017	Change, 2013 to 2017
			Percent	
Driving Alone	65,462	71,430	75.2%	9.1%
Carpool	9,576	10,927	11.5%	14.1%
Public Transportation	1,152	831	0.9%	-27.9%
Bicycle	2,399	2,733	2.9%	13.9%
Walking	3,159	3,232	3.4%	2.3%
Motorcycle, Taxicab, other	5,952	4,660	4.9%	-21.7%
Work at Home	605	1,169	1.2%	93.2%
<b>Total</b>	<b>88,305</b>	<b>94,982</b>	<b>100.0%</b>	<b>7.6%</b>

Source: U.S. Bureau of the Census, 2013 and 2017 American Community Survey 1 Year Estimates, Table B08301

<sup>3</sup> Frank, L.D., Andresen, M., Schmid, T. (2004). Obesity relationships with community design, physical activity, and time spent in cars. Am J Prev Med 27:87-96.

## Public Safety and Crime

Population size and the rate of crime reporting to law enforcement agencies affects the overall crime rate for a community. There are two main types of crime: violent crime and property crime. Violent crime is composed of four offenses: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. Property crime consists of: burglary, larceny-theft, motor vehicle theft, and arson. Property theft differs from burglary in that it occurs without the threat of violence or use of force. In Butte County between 2013 and 2017, a significantly increasing trend was observed for violent and property crimes (see Table 17).

	2013	2014	2015	2016	2017
<b>Violent Crimes</b>	<b>285.3</b>	<b>303.8</b>	<b>346.9</b>	<b>352.0</b>	<b>406.8</b>
Homicide	5.9	4.9	3.1	1.8	3.1
Forcible Rape	34.2	32.7	50.8	57.9	68.0
Robbery	66.6	66.8	65.5	61.5	63.2
Aggravated Assault	177.3	198.1	225.6	229.5	260.2
<b>Property Crimes</b>	<b>2800.8</b>	<b>2971.7</b>	<b>3363.1</b>	<b>3255.8</b>	<b>3215.5</b>
Burglary	758.4	747.1	846.7	782.0	706.3
Motor Vehicle Theft	403.3	340.6	422.2	454.9	415.6
Total Larceny-Theft	1639.2	1884.0	2094.2	2018.9	2093.6
Larceny-Theft over \$400	515.3	590.7	700.4	675.9	663.9
Larceny-Theft under \$400	1123.8	1293.4	1393.8	1342.9	1429.8
Arson	24.8	39.0	91.0	94.9	76.9

Source: California Attorney General's Office – <http://stats.doj.ca.gov>. Sacramento, California, May 2018

## Food Affordability

Food security is defined as having enough to eat and the ability to purchase or obtain healthy food in socially acceptable ways<sup>4</sup>. Eating a healthy diet plays a significant role in preventing obesity, cardiovascular disease, and type II diabetes. An unhealthy diet can impair intellectual performance and has been linked to more frequent school absences and poorer educational achievement for children<sup>5</sup>.

In 2016, 17% of people in Butte County experienced food insecurity, and 79% met income eligibility for Federal Nutrition Assistance (e.g. less than 200% of the federal poverty level). This indicates that normal eating patterns in Butte County were likely disrupted because households could not afford enough food

<sup>4</sup> Anderson, S.A. (1990). Core indicators of nutritional state for difficult to sample populations. *The Journal of Nutrition*, 120(11), 1555-1600.

<sup>5</sup> Agricultural Research Service. Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010. Washington, DC: Department of Agriculture and United States Department of Health and Human Services; May 2010. Retrieved from: <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/DGAC/Report/2010DGACReport-camera-ready-Jan11-11.pdf>

or lacked access to resources (see *Table 18*).

<b>Table 18: Food Insecurity, 2016</b>			
	Experiencing Food Insecurity	Eligible for Federal Nutrition Assistance (SNAP, WIC, School Lunch, CSFP, TEFAP)	Food Insecure Persons
	Percent of Population		Estimated Number
<b>Butte County</b>	17.0%	79.0%	38,000
<b>California</b>	11.7%	77.0%	4,574,710

Source: Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. *Map the Meal Gap 2016: Food Insecurity and Child Food Insecurity Estimates at the County Level*. Feeding America, 2016. Retrieved October 18, 2018 from: <http://map.feedingamerica.org/county/2016/overall/california>

### Supplemental Nutrition Assistance Program (SNAP)

The Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) is the Nation's largest domestic food and nutrition assistance program for low-income Americans. Although it is a federal aid program, benefits are distributed by each U.S. state's Division of Social Services or Children and Family Services based on household income criteria.

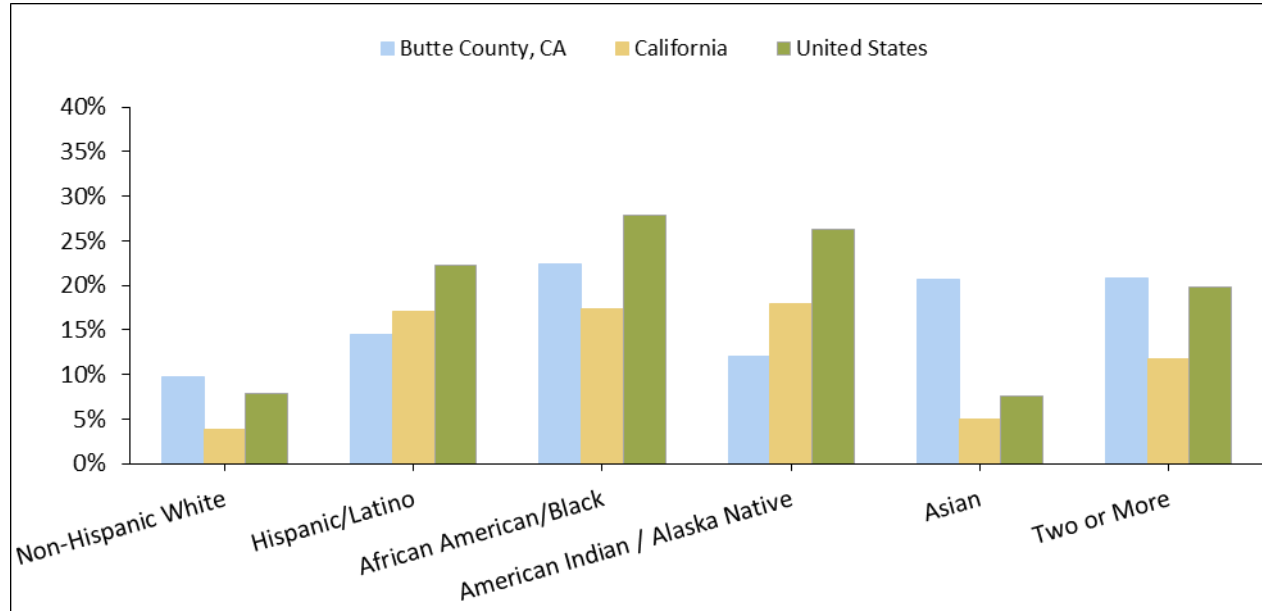
Over half of the eligible population in Butte County and California participate in SNAP/CalFresh. California and Butte County were similar in the rate of eligibility, but the rate of eligible non-participants was higher in Butte County (41.8%) than in the state (37%) (see *Table 19*).

<b>Table 19: Food stamp program - SNAP/CalFresh</b>				
	<b>Butte County (2013)</b>		<b>California (2012)</b>	
	Number	Percent	Number	Percent
Total Income Eligible Individuals	51,492	-	7,017,486	-
Eligible Non-Participating	21,523	41.8%	2,596,470	37.0%
Participating Individuals (Feb, 2016)	32,004	62.2%	4,354,475	62.1%

Source: California Food Policy Advocates, 2016. Retrieved May 20, 2016 from: <http://cfpa.net/county-profiles>

The percent of African American/Black, Asian, Non-Hispanic White, and Two or More Races populations receiving SNAP benefits in Butte County exceeded the statewide average. The African American/Black population had the highest percent followed by Asian and Two or More Races. This indicates that food is less affordable for these populations since they are spending more of their total income toward food purchases (see *Figure 6*). Of note, the difference between the percentage of the Asian populations in Butte County and in California receiving SNAP was greater than for any other race or ethnicity. This was also true when compared nationally, and may illustrate a socioeconomic disparity affecting the Asian population of Butte County. The percent of American Indian/Alaska Native and Hispanic/Latino receiving SNAP benefits was lower in Butte County than the statewide and national averages.

**Figure 6:** Percent of households receiving Supplemental Nutrition Assistance Program (SNAP) benefits by race/ethnicity



Source: US Census Bureau, American Community Survey. 2012-16. Source geography: Tract

#### Accessibility to Grocery Stores

Grocery stores are defined as supermarkets and small stores that primarily sell canned and frozen foods, fresh fruits and vegetables, fresh and prepared meats, fish, and poultry. This definition excludes convenience stores, supercenters and warehouse club stores that sell food. Accessibility to grocery stores in Butte County is similar to California and the nation (see *Table 20*).

**Table 20:** Number of grocery stores per 100,000 persons, 2016

	Total Population	Establishments	
		Number	Rate per 100,000 Persons
<b>Butte County</b>	220,000	45	20.45
<b>California</b>	37,253,956	7,874	21.14
<b>United States</b>	308,745,538	65,399	21.18

Source: US Census Bureau, County Business Patterns. Additional data analysis by CARES. 2016. Source geography: ZCTA

#### Access to Nutritious Food

According to the National Center for Chronic Disease Prevention and Health Promotion, “lack of access to healthier foods may make it more difficult for neighborhood residents to maintain a nutritious diet that supports normal weight and optimal health”<sup>6</sup>. Low food access is defined as living more than one half mile from the nearest supermarket, supercenter, or large grocery store. Increased accessibility to

<sup>6</sup> State Initiatives Supporting Healthier Food Retail: An Overview of the National Landscape. Retrieved from: [http://www.cdc.gov/obesity/downloads/Healthier\\_Food\\_Retail.pdf](http://www.cdc.gov/obesity/downloads/Healthier_Food_Retail.pdf)

retail food vendors makes healthier foods more available, improves diet and may lead to a reduction in obesity rates.

A food desert is defined as a low-income area where a substantial number of residents have low access to food. In Butte County, nearly half of the population (49.9%) live in census tracts designated as food deserts, which is higher than the state and nation. 19% of the population has low food access, which is higher than in California (see *Table 21*).

<b>Table 21: Percent of the population living in a food desert and living with low food access, 2015</b>			
	Total Population	Living in Food Desert Census Tracts	Living with Low Food Access
	Percent		
<b>Butte County</b>	220,000	49.9%	19.1%
<b>California</b>	37,253,956	27.4%	13.4%
<b>United States</b>	308,745,538	42.1%	22.4%

*Source: US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas. 2015. Source geography: Tract*

### Homelessness

Every two years, the Butte Countywide Homeless Continuum of Care conducts a one-day, point-in-time (PIT) census and survey of those experiencing homelessness. In 2017, it was estimated that there were over 1,983 homeless persons (adults, accompanied youth, and unaccompanied youth combined) residing in Butte County, which represented a 76.0 % increase from the previous 2015 estimate (see *Table 22*).

<b>Table 22: Butte County homeless population estimates, 2011, 2013, 2015 and 2017</b>				
	2011	2013	2015	2017
<b>Chico</b>	1,043 (58.9%)	804 (51.8%)	571 (50.7%)	1096 (55.3%)
<b>Gridley</b>	97 (5.5%)	65 (4.2%)	36(3.2%)	28 (1.4%)
<b>Oroville</b>	545 (30.8%)	579 (37.3%)	390 (34.6%)	713 (36.0%)
<b>Paradise</b>	71 (4.0%)	89 (5.7%)	49 (4.3%)	120 (6.1%)
<b>Other</b>	16 (0.9%)	16 (1.0%)	81 (7.2%)	26 (1.3%)
<b>Total</b>	1,772	1,553	1,127	1,983

*Source: Butte Countywide Homeless Continuum of Care 2011, 2013, 2015 and 2017 Homeless Survey Reports*

While the survey results demonstrate a considerable increase, it is important to acknowledge that the PIT methodology is complex, with myriad of strategies and factors that can significantly influence the

number of surveys gathered and the final count. As such, the variance in the count from year to year may be in part attributable to changes in methodology as well as changes in the homeless population<sup>7</sup>.

### *Health Inequity for the Homeless Population*

In contrast to the general population, people experiencing homelessness are at elevated risk for communicable disease, chronic illness, and being victims of violence. They are more likely to experience poor mental health and to develop substance use disorders. It is estimated that the mortality rate for homeless persons may be up to nine times greater than for the general population<sup>8</sup>.

Individuals who experience chronic homelessness are at significantly elevated risk for infections (including human immunodeficiency virus (HIV)), traumatic injuries, drug overdoses, violence, death due to exposure to extreme heat or cold, and death related to chronic alcoholism. They are also much more likely than housed persons to use the emergency department for health care needs and to be admitted to the hospital; much less likely to have a usual source of health care; and have longer hospitalizations for the same illnesses as housed persons.

Additionally, individuals experiencing chronic homelessness in the United States have life spans more than twenty years lower than the general population. A multitude of factors contributes to premature death among persons experiencing homelessness, including several types of illnesses and injuries. According to the Centers for Disease Control and Prevention (CDC), the top five leading causes of death in the United States are heart disease, cancer, chronic lower respiratory diseases, unintentional injuries, and stroke. The leading causes of death for individuals experiencing homelessness are drug overdoses, HIV, and common chronic diseases such as heart disease and cancer. People experiencing homelessness are also up to six times more likely to become ill. Diseases that are significantly more common among the homeless population include heart disease, cancer, liver disease, kidney disease, serious skin infections, HIV/AIDS, pneumonia, and tuberculosis <sup>9</sup>(see *Figure 7*).

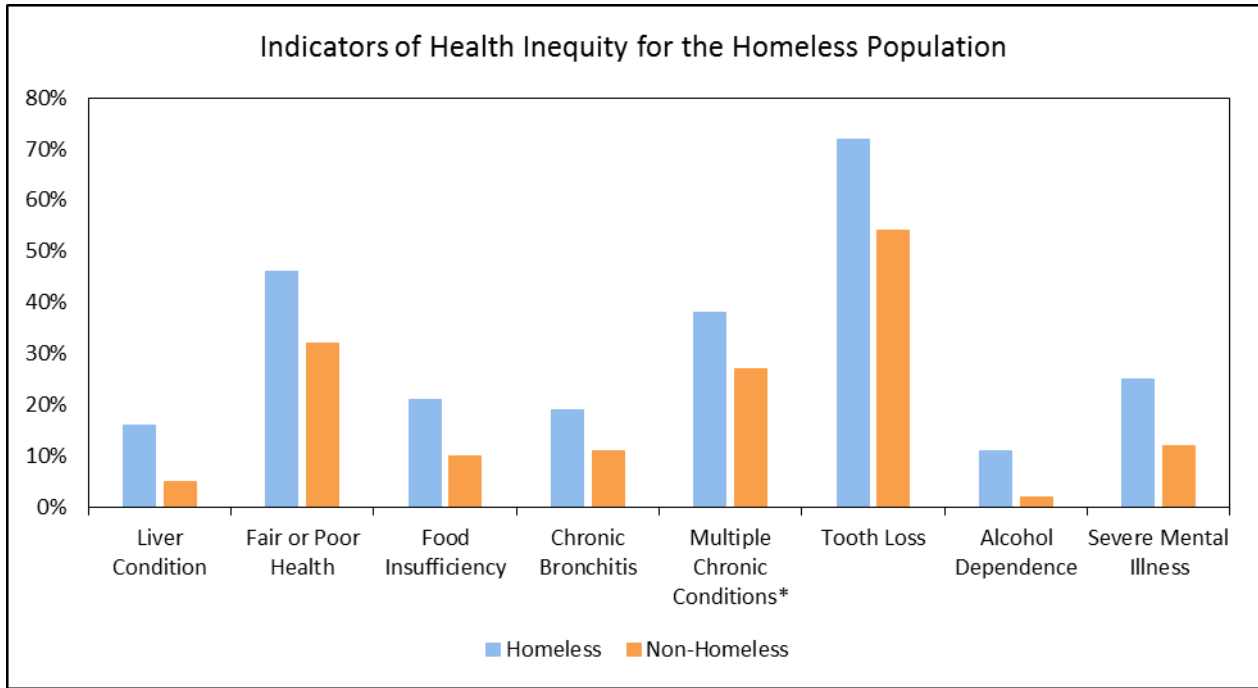
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<sup>7</sup> Butte Countywide Homeless Continuum of Care 2017 Point in Time Debrief Report. Retrieved October 19, 2018 from: <http://www.buttehomelesscoc.com/point-in-time.html>

<sup>8</sup> <http://www.cdc.gov/features/homelessness/> retrieved September 2, 2016.

<sup>9</sup> National Academies of Sciences, Engineering, and Medicine. 2018. Permanent Supportive Housing: Evaluating the Evidence for Improving Health Outcomes Among People Experiencing Chronic Homelessness. Washington, DC: The National Academies Press. doi: 10.17226/25133

**Figure 7:** Health status of homeless and non-homeless health center users



Source: Fact Sheet, *Homelessness & Health: What’s the Connection?* National Health Care for the Homeless Council, June, 2011. \* - Includes two or more of the following: hypertension, diabetes, asthma, emphysema, chronic bronchitis, heart problems, stroke, liver condition, weak/failing kidneys, cancer, and HIV/AIDS

The most recent Homeless Point-in-Time Census and Survey (January 2017), indicated that of the 1,658 adults who completed the survey, the following “disabling conditions” were self-reported (see Table - 23). A physical disability was reported by 29% of the survey respondents, and 17% reported a chronic health condition. Mental illness was reported by 30% of respondents, while 9% said they had a developmental disability.

Disability	Percent Countywide
Mental Health Condition	30%
Physical Condition	29%
Post-Traumatic Stress Disorder	24%
Drug Use	24%
Alcohol Abuse	17%
Developmental Disability	9%
Traumatic Brain Injury	7%
HIV/AIDS	1%

Source: *Butte County Homeless Point-in-Time Census and Survey, January 2017*



Of the Butte County survey respondents, there were nearly twice as many homeless males (62.5%) as females (36.8%). These findings are consistent with national estimates of gender frequencies among homeless populations (see *Table 24*).

**Table 24: Butte County population experiencing homelessness by gender in selected cities, 2017**

City or Township	Gender				Total
	Male	Female	Transgender	Unknown	
<b>Chico</b>	685 (62.6%)	401 (36.6%)	4 (0.4%)	5 (0.5%)	1095
<b>Gridley</b>	17 (60.7%)	11 (39.3%)	0 (0.0%)	0 (0.0%)	28
<b>Oroville</b>	452 (63.4%)	259 (36.2%)	2 (0.3%)	0 (0.0%)	713
<b>Paradise</b>	70 (58.3%)	47 (39.2%)	0 (0.0%)	3 (2.5%)	120
<b>Other</b>	14 (53.8%)	11 (42.3%)	1 (3.8%)	0 (0.0%)	26
<b>Total</b>	1238 (62.5%)	729 (36.8%)	7 (0.4%)	8 (0.4%)	1982

*Source: Butte Countywide Homeless Continuum of Care 2017 Homeless Survey Report*

In Butte County, about one quarter of point in time survey respondents attributed becoming homeless to either having no income, experiencing a family crisis, or financial difficulties. Other factors included mental illness, eviction, incarceration, a medical disability, domestic violence or intimate partner abuse. The top barriers to overcoming homelessness identified by respondents included affordable housing, money for rent or a deposit, finding employment, poor or no credit, difficulty managing mental health, and substance use (see *Table 25*).

**Table 25: Factors attributing to becoming homeless and barriers to overcoming homelessness reported by Butte County Point-in-Time census and survey respondents**

Factor Attributing to Homelessness	Percent of Respondents	Barrier to Overcoming Homelessness	Percent of Respondents
Family Crisis	26%	No Income of Any Kind	28%
Financial Difficulties	23%	Affordable Housing	42%
Mental Health Disorder	13%	No Money for Rent of a Deposit	36%
Eviction	11%	Finding Employment	30%
Incarceration	10%	Poor or No Credit	27%
Medical Disability	9%	Managing Mental Health	15%
Domestic Violence or Partner Abuse	7%	Substance Use	13%

*Source: Butte County Homeless Point-in-Time Census and Survey, January 2017*

## Veterans

Veterans are defined as men and women who have served in the military (even for a short time), but are not currently serving or on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard; or who served in the U.S. Merchant Marines during World War II. The majority of military veterans residing in Butte County are White males, and 78.6% are 55 years of age or older (see *Table 26*).

**Table 26: Military veteran population and non-veteran population, 2012-2016**

	Butte County Population Estimates		
	Total	Veterans	Non-Veterans
Civilian Population, 18 Years and Older	178,288	15,757	162,531
<b>Sex</b>			
Male	49.0%	92.2%	44.9%
Female	51.0%	7.8%	55.1%
<b>Age</b>			
18 to 34 years	34.4%	6.4%	37.1%
35 to 54 years	27.6%	15.0%	28.8%
55 to 64 years	16.7%	19.8%	16.3%
65 to 74 years	11.9%	31.1%	10.0%
75 years and over	9.5%	27.7%	7.7%
<b>Race and Hispanic/Latino Origin</b>			
White	85.4%	93.4%	84.6%
Hispanic/Latino	13.2%	5.7%	13.9%
African American/Black	1.5%	0.8%	1.5%
American Indian/Alaska Native	1.1%	1.1%	1.1%
Asian	4.0%	0.7%	4.3%
Native Hawaiian/Pacific Islander	0.2%	0.0%	0.2%
Two or more races	4.4%	3.1%	4.6%
Some other race	3.4%	0.8%	3.6%
<b>Median Income in the Past 12 Months</b>			
Civilian pop. 18 years and over with income	\$21,368	\$32,385	\$20,392

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates: Table S2101

## Chronic Diseases

In the United States, chronic non-communicable health conditions are the top driver of health care costs. A quarter of adults and three quarters of seniors in the U.S. have multiple chronic conditions, which increases the complexity, severity, and the cost of their care<sup>10</sup>. The Center for Medicare and Medicaid Services (CMS) is the largest third party payer of medical expenses in the U.S. CMS tracks data for 17 chronic conditions among its Medicare beneficiaries, as these account for the majority of CMS spending on health care<sup>11,12</sup>. In Butte county, high blood pressure and high blood cholesterol are the most prevalent conditions among Medicare beneficiaries (see *Table 27*).

**Table -27: Prevalence in Medicare services beneficiaries, 2015**

	Butte County	California	United States
Hypertension	50.5%	49.6%	55.0%
Hyperlipidemia	43.8%	41.5%	44.6%
Arthritis (Osteoarthritis and Rheumatoid)	26.8%	27.6%	30.0%
Diabetes	23.2%	25.3%	26.5%
Ischemic Heart Disease	20.1%	23.6%	26.5%
Chronic Kidney Disease	19.0%	17.9%	18.1%
Depression	17.3%	14.3%	16.7%
COPD	13.7%	8.9%	11.2%
Heart Failure	10.9%	12.9%	13.5%
Asthma	9.7%	7.5%	8.2%
Alzheimer's Disease and Related Dementia	8.3%	9.3%	9.9%
Atrial Fibrillation	8.3%	7.3%	8.1%
Cancer	7.5%	7.5%	7.8%
Osteoporosis	5.2%	6.7%	6.0%
Stroke	3.9%	3.7%	4.0%
Schizophrenia/Other Psychotic Disorders	3.1%	3.4%	3.7%
Hepatitis (Chronic Viral B & C)	1.6%	1.3%	0.8%
Autism Spectrum Disorders	0.2%	0.2%	0.2%
HIV/AIDS	0.2%	0.5%	0.4%

Source: Derived from *Chronic Conditions among Medicare Beneficiaries, Chartbook, 2015*. [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CC\\_Main.html](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CC_Main.html), retrieved October 22, 2018

<sup>10</sup> Goodman, et al. (2014). IOM and DHHS Meeting on Making Clinical Practice Guidelines Appropriate for Patients with Multiple Chronic Conditions. *Annals of Family Medicine*, 12(3): 256–259.

<sup>11</sup> Anderson, G. (2010). *Chronic care: making the case for ongoing care*. Princeton, NJ: Robert Wood Johnson Foundation.

<sup>12</sup> Bauer, U.E., Briss, P.A., Goodman, R.A., & Bowman, B.A., (2014). Prevention of chronic disease in the 21st century: elimination of the leading preventable causes of premature death and disability in the USA. *Lancet*, 384 (9937):45-52.

## Obesity

Obesity is one of the most concerning national health issues. In the last 30 years, national obesity rates have doubled in adults and tripled in children. In Butte County, over 60.0% of adults are overweight or obese. In Butte County, there is some variation in the obesity rate across race and ethnicity. For example, individuals identifying as Hispanic/Latino tend to have lower overweight and obesity rates than those identifying as White in the county (see *Table 28*).

<b>Table 28: Adults, ages 19 and older, who are overweight or obese by race/ethnicity, 2012-2016</b>		
	<b>Butte County</b>	<b>California</b>
Total	60.3%	61.5%
White	60.2%	61.5%
African American/Black	77.7%*	72.8%
Asian	42.2%*	42.7%
American Indian/Alaska Native	54.7%*	76.5%
Two or more races	58.0%*	58.7%
Hispanic/Latino	54.1%	72.6%

Source: California Health Interview Survey, 2012 – 2016 (pooled). \*Statistically unstable: an unstable cell has not met the criteria for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance

Obese youth are at higher risk for: cardiovascular diseases (such as high cholesterol or high blood pressure); bone and joint problems; sleep apnea; and social and psychological problems such as stigmatization and poor self-esteem. In Butte County, 22% of youth, between the ages of 12 and 17, are considered overweight or obese (see *Table 29*).

<b>Table 29: Teens, ages 12 to 17, who are overweight or obese by race/ethnicity, 2012-2016</b>		
19 Year Olds Overweight/Obese <sup>iii</sup>	<b>Butte County</b>	<b>California</b>
Total	22.4%*	34.0%
White	25.4%*	25.7%
African American/Black	-	38.9%
Asian	-	18.6%*
American Indian/Alaska Native	48.2%*	38.3%*
Two or more races	50.0%*	33.4%*
Hispanic/Latino	-	42.2%

Source: California Health Interview Survey, 2012 – 2016 (pooled)

\*Statistically unstable: an unstable cell has not met the criteria for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance.

The health impacts of obesity can be exacerbated by a lack of physical activity. In Butte County, 18.4% of adults, ages 20 years and older, reported having no physical activity (see *Table 30*).

<b>Table 30: Adults with no leisure-time physical activity, age adjusted rate, 2013</b>			
	Age 20+	No Leisure Time Physical Activity	No Leisure Time Physical Activity
	Population		Percent Population
<b>Butte County</b>	169,103	32,310	18.4%
<b>California</b>	28,069,071	5,448,741	21.4%
<b>United States</b>	233,630,523	56,230,453	25.4%

*Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Diabetes Atlas: 2013, Source geography: County; U.S. Census Bureau, 2013 American Community Survey (ACS) 1 – Year Estimates Table B01001. <https://www.cdc.gov/diabetes/atlas/obesityrisk/atlas.html>*

Since 1996, California Education Code (EC) Section 60800 requires that each local educational agency (LEA) administer a state-designated physical fitness test (PFT) to all students in grades five, seven, and nine. The test designated for this purpose by the State Board of Education is the FitnessGram®. It provides criterion-referenced standards to evaluate fitness that represent the minimum levels of fitness known to be associated with health and physical characteristics that offer protection against disease resulting from physical inactivity. Achievement of the fitness standards is based on a score falling in the Healthy Fitness Zone (HFZ) representing six fitness areas. In Butte County, 33.4% of 9th graders achieved the HFZ fitness standards. Slightly more than a third of Multiracial students, White students, and Asian students met the standards. However, less than a third of African American/Black students, American Indian/Alaska Native, and Hispanic Latino students met the standards (see *Table 31*).

<b>Table -31: Fitness standards in 5<sup>th</sup>, 7<sup>th</sup>, and 9<sup>th</sup> graders by race/ethnicity, 2017</b>						
Students Meeting All Six Fitness Standards*	5 <sup>th</sup> Grade		7 <sup>th</sup> Grade		9 <sup>th</sup> Grade	
	Butte County	California	Butte County	California	Butte County	California
All Races	24.7%	24.9%	32.7%	31.4%	33.4%	34.8%
African American/Black	-	21.8%	-	27.1%	32.8%	28.6%
American Indian/Alaska Native	-	21.8%	26.7%	26.8%	29.6%	27.9%
Asian American	20.3%	34.2%	37.7%	43.2%	34.1%	49.2%
Filipino	-	30.0%	-	38.5%	-	42.2%
Hispanic/Latino	23.0%	18.1%	23.4%	24.5%	27.8%	28.0%
Multiracial	23.2%	32.6%	28.7%	39.2%	36.5%	39.2%
Native Hawaiian/Pacific Islander	-	21.6%	-	24.5%	-	26.3%
White	27.1%	36.0%	37.5%	41.1%	35.4%	44.8%

*Source: California Department of Education, Physical Fitness Testing Research Files, 2017, as cited on kidsdata.org; retrieved March 14, 2019, from: <https://www.kidsdata.org/topic/310/fitnessstandards/> \*Sample Size Too Small for Reliable Estimate*

## Diabetes

Diabetes (mellitus) is a group of chronic diseases characterized by high blood glucose levels resulting from defects in insulin production, insulin action, or both. It is associated with high morbidity and mortality rate. 7.4% of the adult population in Butte County has been diagnosed with some form of diabetes, and 23.5% of seniors, ages 65 and over, being diagnosed (see *Table 32*. These rates are similar to rates for California and are consistent with national trends, as the rate of adults diagnosed with diabetes has been rapidly increasing, with the highest percentage of new cases occurring in adults age 55 and over<sup>13</sup>.

<b>Table 32: Adults ever diagnosed with diabetes, 2014-2016</b>			
	Total Population	Population Diagnosed with Diabetes	
	Estimate	Estimate	Percent
<b>Adult Population</b>			
<b>Butte County</b>	176,000	13,000	7.4%
<b>California</b>	29,004,00	2,685,000	9.3%
<b>Population, Age 65 or Older</b>			
<b>Butte County</b>	33,000	8,000	23.5%
<b>California</b>	5,049,000	1,082,000	21.4%

Source: California Health Interview Survey, 2014-2016

Cases of diabetes during pregnancy include both pre-existing and gestational diabetes. Gestational diabetes is defined as diabetes first diagnosed during pregnancy in which a woman's glucose tolerance may return to normal after delivery; however, her risk for developing diabetes remains high. According to the 2012-2016 CHIS, the rate of gestational diabetes during pregnancy in Butte County is lower (4.1%) than for California (5.2%).

## Cancer

Cancer is the leading cause of death in Butte County. Early detection is key to the effective treatment of many cancers and can be lifesaving. In addition, the cost of treating cancer is significantly lower if detected early. Between 2011 and 2015, the average number of people at risk for cancer annually in Butte County was 222,564. Over this time period, a total of 6,241 cases of invasive cancer were diagnosed, with an average of 1,248 people diagnosed per year<sup>14</sup>. The age-adjusted rate for all cancers in Butte County was 452.44 cases per 100,000 people, which was notably higher than for the state of California (395.2 per 100,000 people) (see *Table 33*).

<sup>13</sup> <http://www.cdc.gov/diabetes/statistics/age/fig1.htm>

<sup>14</sup> Age-Adjusted Invasive Cancer Incidence Rates by County in California, 2011 - 2015. Based on Jan 2018 data. Excludes cases reported by the Department of Veterans Affairs. California Cancer Registry. Cancer-Rates.info. Retrieved Oct 29, 2018, from <http://cancer-rates.info/ca/>

**Table 33: All cancer incidence rates, 2011-2015**

	2011	2012	2013	2014	2015	5 Year Average
<b>Population at Risk</b>	220,019	221,205	222,154	224,033	225,411	222,564
<b>Total Cases</b>	1289	1275	1203	1260	1214	1248.2
<b>Butte County Age-Adjusted Rate</b>	486.0	470.2	437.3	447.8	424.6	452.4
<b>California Age-Adjusted Rate</b>	409.5	400.2	394.1	390.7	384.0	395.2

Sources: California Department of Public Health. Data accessed October 25, 2018. Note: All rates are per 100,000. Rates are age-adjusted to the 2000 U.S. Standard Population. Retrieved October 25, 2018, from: <https://www.cancer-rates.info/ca/>

### Breast Cancer Incidence

The incidence rate of breast cancer in Butte County between 2011-2015 ranked as the 2<sup>nd</sup> highest rate among all 58 counties in California. Between 2011 and 2015, the average number of women at risk for breast cancer annually in Butte County was 112,383. Over this time period, a total of 923 cases of invasive breast cancer were diagnosed, with an average of 185 people diagnosed per year. The age-adjusted rate for incidence of female breast cancer in Butte County was 131.5 per 100,000 persons, which was higher than the state (120.6 per 100,000 persons) (see *Table -34*).

**Table 34: Female breast cancer incidence rates, 2011-2015**

	2011	2012	2013	2014	2015	5 Year Average
<b>Population at Risk</b>	111,042	111,654	112,166	113,188	113,867	112,383
<b>Total Cases</b>	204	175	177	183	184	184.6
<b>Butte County Age-Adjusted Rate</b>	152.1	122.9	126.7	127.2	129.9	131.5
<b>California Age-Adjusted Rate</b>	122.1	121.2	121.2	118.9	119.8	120.6

Sources: California Department of Public Health. Data accessed October 29, 2018. Based on January 2018 Extract. Note: All rates are per 100,000. Rates are age-adjusted to the 2000 U.S. Standard Population. Retrieved October 29, 2018 from <https://www.cancer-rates.info/ca/>

### Prostate Cancer Incidence

Prostate cancer is one of the most commonly diagnosed cancers in men, and the second leading cause of cancer related male deaths after skin cancer. Between 2011 and 2015, the average number of men at risk for prostate cancer annually in Butte County was 110,181. Over this time period, 719 cases of invasive prostate cancer were diagnosed, with an average of 144 people diagnosed per year. The age-adjusted rate for incidence of male prostate cancer in Butte County was 103.8 per 100,000 persons, which was higher than for the state (97.1 per 100,000 persons) (see *Table 35*).



**Table 35: Prostate cancer incidence rates, 2011-2015**

	2011	2012	2013	2014	2015	5 Year Average
<b>Population at Risk</b>	108,977	109,551	109,988	110,845	111,544	110,181
<b>Total Cases</b>	172	126	158	129	134	143.8
<b>Butte County Age-Adjusted Rate</b>	130.5	97.9	111.7	88.5	93.3	103.8
<b>California Age-Adjusted Rate</b>	121.9	101.9	96.3	84.5	84.4	97.1

Source: California Department of Public Health. Data accessed October 29, 2018. Based on January 2018 Extract. Note: All rates are per 100,000. Rates are age-adjusted to the 2000 U.S. Standard Population. Retrieved October 29, 2018 from <https://www.cancer-rates.info/ca/>

## Asthma

In Butte County, 15% of adults have been diagnosed with asthma. Among Whites, 16.6% of adults have been diagnosed with asthma (see Table 36)

**Table 36: Adults ever diagnosed with asthma, 2013-2016**

	Hispanic/Latino	White	African American/Black	American-Indian/Alaska Native	Asian	Native Hawaiian/Pacific Islander	Two or More Races	All
<b>Butte County</b>	11.7*	16.6%	-	-	-	-	39.9*	15.0%
<b>California</b>	12.2%	15.8%	20.5%	20.4%	11.6%	10.9*	26.3%	14.5%

Source: 2013 – 2016 (pooled) California Health Interview Survey. \*Statistically unstable: an unstable cell has not met the criteria for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance. (hyphen) = Estimate is less than 500 people.

In Butte County, the asthma-related hospitalization rate for children, from birth to four years old, is 14 hospitalizations per 10,000 residents. For Butte County children, ages 5 and 17, the rate of asthma-related hospitalizations is 5.4 hospitalizations per 10,000 residents (see Table 37).

**Table 37: Age-adjusted asthma hospitalizations rates per 10,000 persons, 2016**

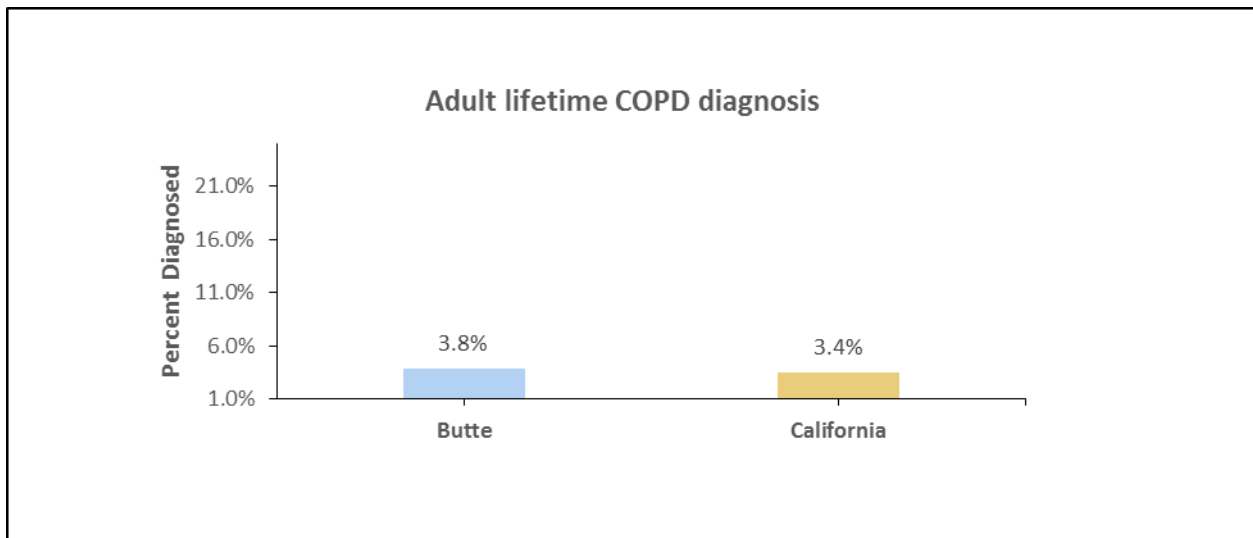
	Butte County	California
0-4 Years	14.0	16.9
5-17 Years	5.4	6.7
All Ages (Children and Adults)	4.0	4.8

Source: Data Sources: Patient Discharge Database from the Office of Statewide Health Planning and Development (OSHPD). Retrieved November 1, 2018 from <http://www.cehtp.org/page/asthma/results>

### Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) is the third leading cause of death in the United States. It is a progressive disease and its symptoms frequently worsen across time<sup>15</sup>. 3.8% of the adult population in Butte County have been diagnosed with COPD, including chronic bronchitis and emphysema (see *Figure 8*).

**Figure 8:** Percent of adults, 18 and over, diagnosed with COPD



Source: Derived from *Estimated Prevalence and Incidence of Lung Disease: American Lung Association: Epidemiology and Statistics Unit Research and Health Education, May 2014*. Retrieved November 2, 2018 from: <https://www.lung.org/our-initiatives/research/monitoring-trends-in-lung-disease/estimated-prevalence-and-incidence-of-lung-disease/>

### Cardiovascular Disease

Cardiovascular diseases are diseases of the heart and the blood vessels throughout the body, including the blood vessels of the brain. In Butte County, 4.9% of the total population is living with heart disease, which is lower than for the state (6.4%) (see *Table 38*).

Table 38: Adults diagnosed with coronary heart disease or angina			
	Ages 18+	Adults with Heart Disease	
	Population	Number	Percent
<b>Butte County</b>	176,000	9,000	4.9%
<b>California</b>	29,236,000	1,875,000	6.4%

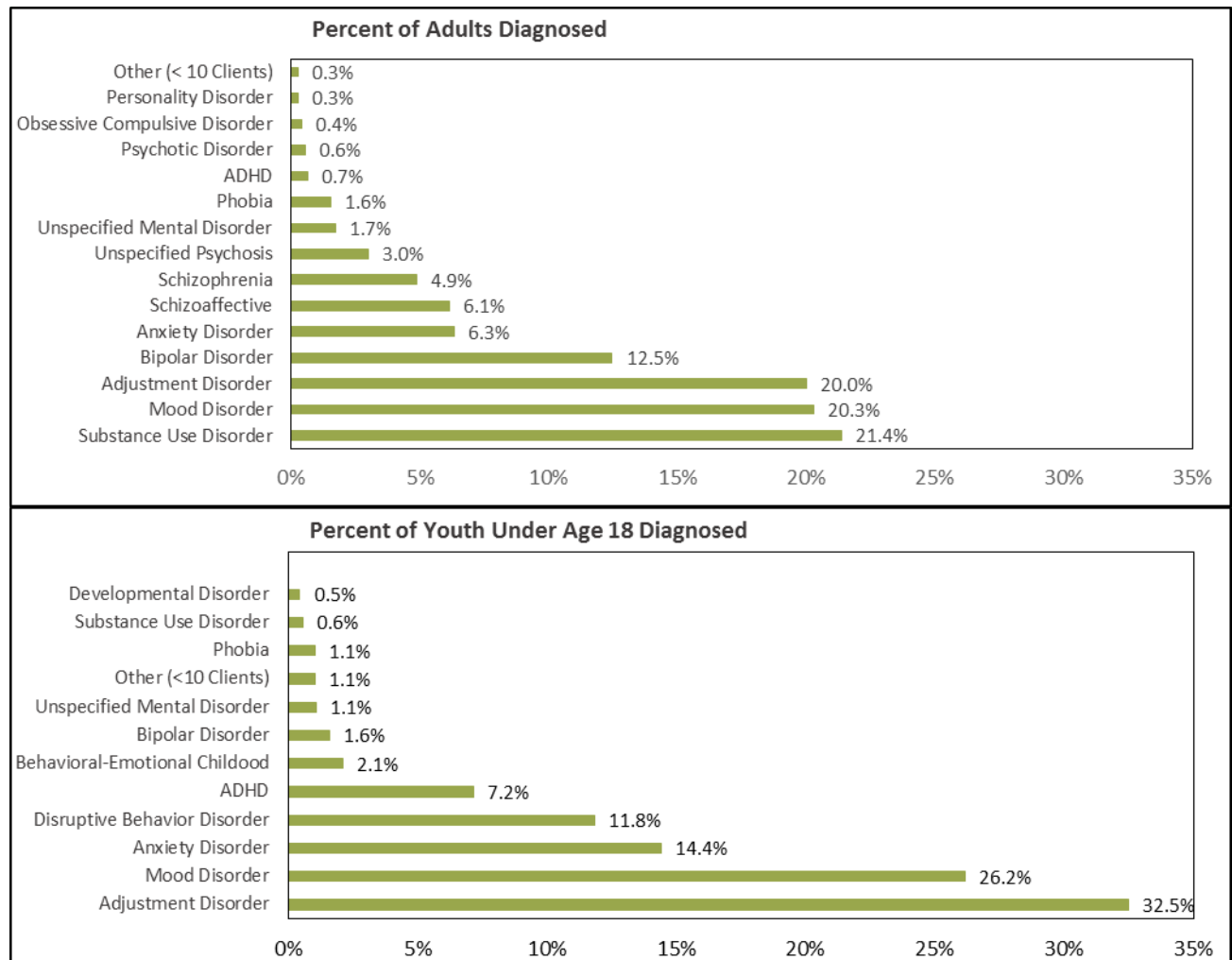
Source: *California Health Interview Study, 2015-2016*

<sup>15</sup> <http://www.nhlbi.nih.gov/health/health-topics/topics/copd>

## Mental Health

The World Health Organization defines mental health as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community”. In 2018, the leading mental health diagnoses for adults receiving care through the BCDBH (Butte County Department of Behavioral Health) were substance use disorders. Other leading diagnoses in adults were mood disorders (such as depression), adjustment disorders (poor coping in response to stressful events), bipolar disorder, and anxiety disorders. Adjustment disorders were the leading diagnosis for youth, under age 18, in Butte County, followed by mood disorders, anxiety disorders, disruptive behavior disorder, and attention deficit hyperactivity disorder (ADHD), (see *Figure 9*).

**Figure 9:** Mental health disorders for adults and youth, under age 18, presenting at BCDBH, 2017-2018



Source: Butte County Behavioral Health Systems Performance Data Report Fiscal Year, 2017-2018

## Suicide

Suicide is the tenth leading cause of death in the nation, and has increased steadily over the last decade<sup>16</sup>. Suicide rates in rural areas tend to be higher than in urban settings. It is likely that the number of suicides reported each year is lower than the actual number that occurs due to the negative social stigma associated with committing suicide. Between 2014 and 2016, there was an average of 41 deaths attributed to suicide per year in Butte County. The age-adjusted death rate for suicide in Butte County is 18.1 per 100,000 persons, which is higher than the Healthy People 2020 objective (see *Table 39*).

**Table 39: Suicide, three-year average, rates per 100,000 persons, 2014-2016**

	2013 Population	2014-2016 Deaths (3-Year Average)	Crude Death Rate	Age-Adjusted Death Rate
<b>Butte County</b>	224,363	41.0	18.3	18.1
<b>California</b>	39,059,809	4,187.0	10.7	10.4
<b>Healthy People 2020 Objective</b>	-	-	-	10.2

Source: California Department of Public Health, 2014-2016 Death Statistical Master Files

Males are significantly more likely to commit suicide, but females are more likely to report attempting suicide<sup>17</sup>. In Butte County, the suicide rate among men is approximately four times as high as for women. However, men and women in Butte County have higher suicide rates than in the state and the United States (see *Table 40*).

**Table 40: Age-adjusted suicide rates, by gender, per 100,000 persons, 2012-2016**

	Male Suicide Rate	Female Suicide Rate
<b>Butte County</b>	27.9	7.4
<b>California</b>	16.4	4.7
<b>United States</b>	20.8	5.8

Source: Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2012-16. Source geography: County. Retrieved November 6, 2018 from: <https://wonder.cdc.gov/>

Additional risk factors for suicide include: a family history of suicide or past suicide attempts, mental or physical illness, substance misuse, stressful life events, and incarceration. According to the data collected by the California Vital Statistics Death Files and California Office of Statewide Health Planning and Development (OSHPD), poisoning is the most common form of intentional, self-inflicted, non-fatal injury resulting in hospitalization. Of all reported suicides, firearms were the most common method used, followed by hanging/suffocation and poisoning (see *Table 41*).

<sup>16</sup> [https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67\\_05.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf) ; <https://www.cdc.gov/vitalsigns/pdf/vs-0618-suicide-H.pdf>

<sup>17</sup> Centers for Disease Control and Prevention. (2014). Suicide prevention. Retrieved from: [http://www.cdc.gov/ViolencePrevention/pub/youth\\_suicide.html](http://www.cdc.gov/ViolencePrevention/pub/youth_suicide.html)

**Table 41:** Five-year suicide and nonfatal self-inflicted injury hospitalizations and emergency room visits<sup>1</sup> by method

	Death Attributed to Suicide, 2012 – 2016		Self-Inflicted Injury Resulting in Hospitalization		Self-Inflicted Injury Resulting in Emergency Department Visit	
	Number	Percent	Number	Percent	Number	Percent
Cut/Pierce	8	4.1%	74	9.1%	549	38.6%
Firearm	103	52.6%	8	1.0%	4	0.3%
Hanging/Suffocation	53	27.0%	6	0.7%	27	1.9%
Jump	3	1.5%	9	1.1%	2	0.1%
Poisoning	21	10.7%	699	85.7%	763	53.7%
Other	8	4.1%	20	2.5%	97	6.8%
<b>Total</b>	<b>196</b>	<b>100.0%</b>	<b>816</b>	<b>100.0%</b>	<b>1,422</b>	<b>100.0%</b>

Source: California Vital Statistics Death Files and California Office of Statewide Health Planning and Development, Patient Data. Report generated from <http://epicenter.cdph.ca.gov> on: June 1, 2016. California Department of Public Health, Safe and Active Communities Branch.  
<sup>1</sup>Self-inflicted nonfatal injuries include many that are not necessarily "attempted suicides" (e.g., cut/pierce injuries and low-dose poisonings)

### Veterans Mental Health

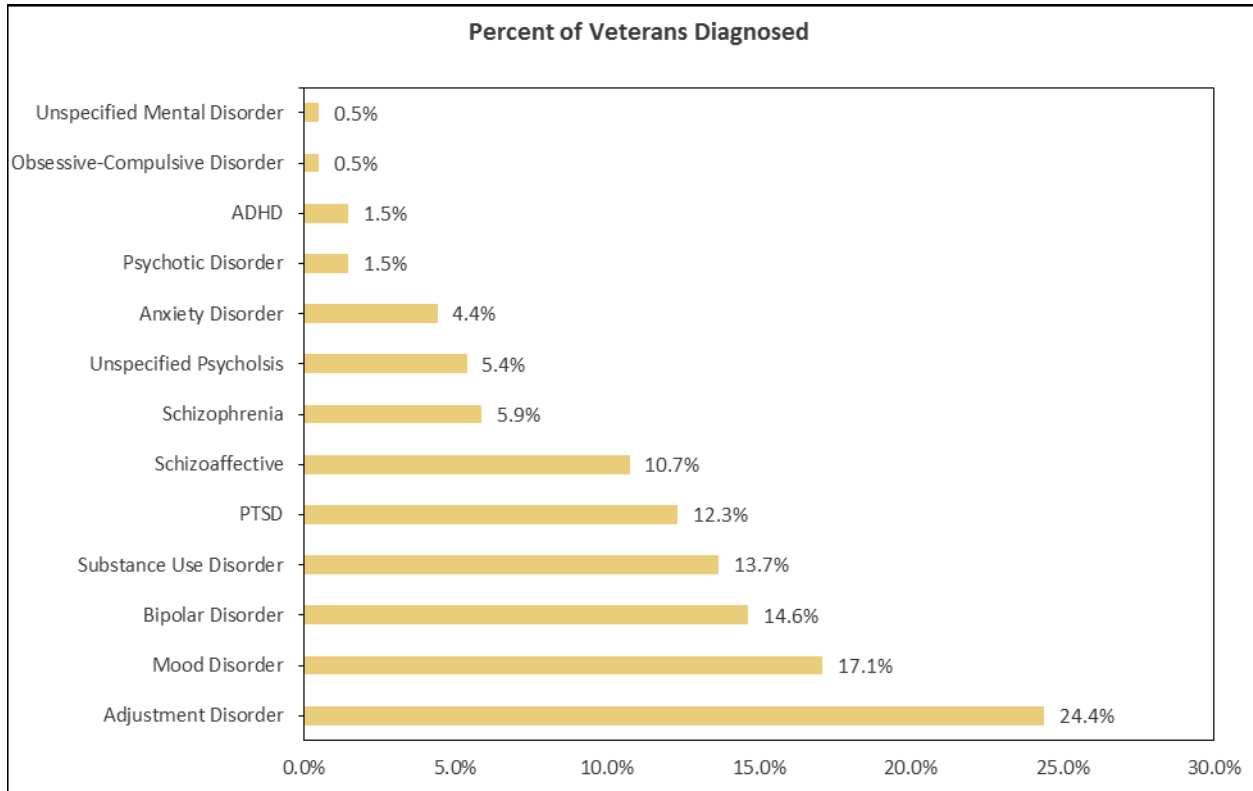
Men and women who have served in the U.S. military are at a higher risk than the general population for specific mental health issues. In 2018, the leading mental health diagnosis for veterans seeking care at the Butte County Department of Behavioral Health were adjustment disorders, followed by mood disorders such as depression, bipolar disorder, and post-traumatic stress disorder (see *Figure 10*). These are also the some of the leading mental health diagnoses among veterans nationally<sup>18,19</sup>. Roughly seventeen percent of patients identifying as veterans while seeking care at the Butte County Department of Behavioral Health indicated they were homeless at the time of treatment. This is higher than the percent of adults seeking treatment overall that indicated they were homeless (8.8%), and is of particular concern as homeless veterans have been shown to be at a significantly higher risk of developing a substance use disorder<sup>20</sup>.

<sup>18</sup> Trivedi, R. B., et al. (2015). Prevalence, Comorbidity, and Prognosis of Mental Health Among US Veterans. American journal of public health, 105(12), 2564-9. DOI: 10.2105/AJPH.2015.302836

<sup>19</sup> <http://www.samhsa.gov/veterans-military-families>

<sup>20</sup> <http://www.samhsa.gov/data/sites/default/files/spot121-homeless-veterans-2014.pdf>

**Figure 10: Mental health disorders for veterans presenting at BCDBH, 2017-2018**



Source: Butte County Behavioral Health Systems Performance Data Report Fiscal Year 2017-2018.

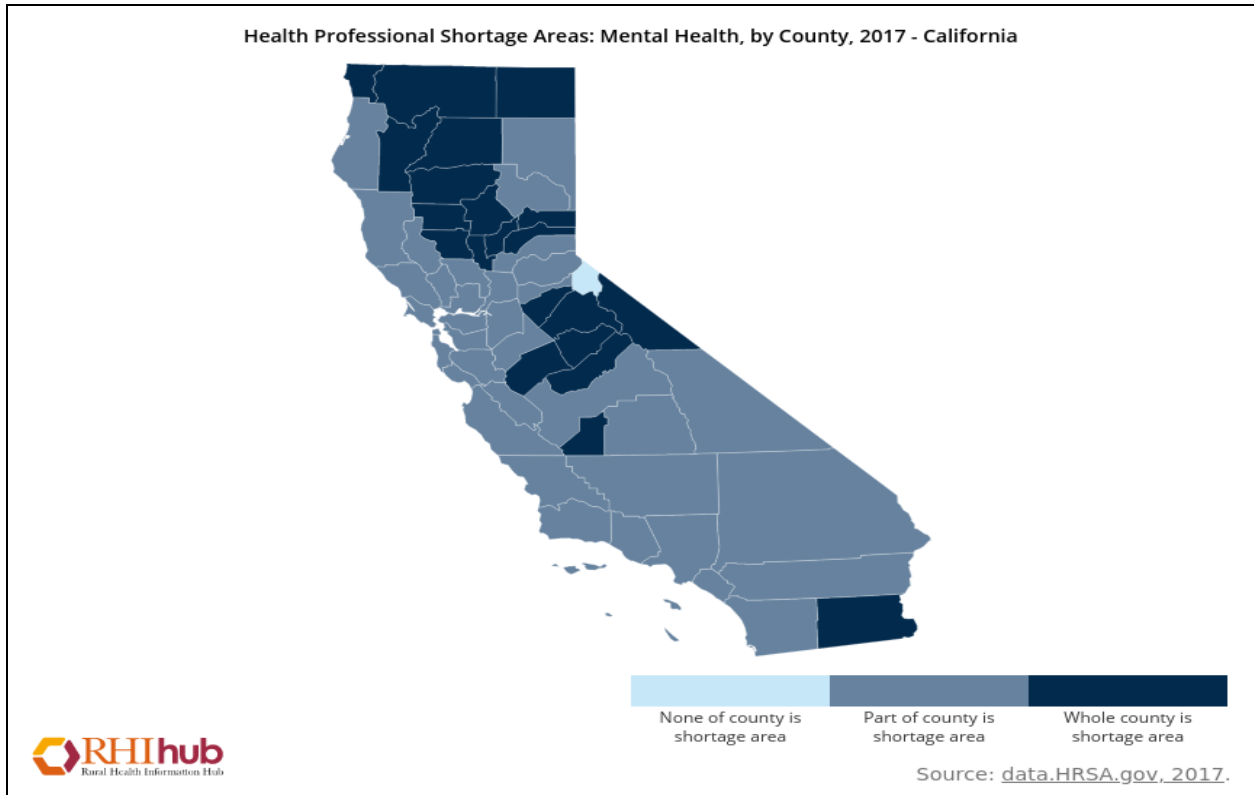
### Mental Health Professionals Shortage Areas

Health Professional Shortage Areas (HPSAs) as defined by the Health Resources and Services Administration (HRSA) are areas with a lack of access to health care due to excessive distance, overutilization or access barriers<sup>21</sup>. HRSA has determined that all of Butte County meets Mental Health Shortage Area criteria (see *Figure 11*)<sup>22</sup>.

<sup>21</sup> U.S. Department of Health and Human Services. (2018). HPSA Designation Criteria. Health Resources and Services Administration. Retrieved January 3, 2019 from: <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/designationcriteria.html>

<sup>22</sup> <https://www.ruralhealthinfo.org/charts/7?state=CA>

**Figure 11:** Mental Health Professional Shortage Areas (HPSA), 2017



Source: Rural Health Information Hub, Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). Retrieved January 3, 2019 from: <https://www.ruralhealthinfo.org/charts>

## Substance Use Disorders

The American Society of Addiction Medicine defines addiction as “a primary, chronic disease of brain reward, motivation, memory and related circuitry” adding that “dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors”<sup>23</sup>.

### Alcohol Misuse

Alcohol misuse describes alcohol consumption that puts individuals at increased risk for adverse health and social consequences. It is defined as excess daily consumption of more than 4 drinks per day for men or more than 3 drinks per day for women; or excess total weekly consumption of more than 14 drinks per week for men or more than 7 drinks per week for women. One of the most common forms of alcohol misuse is binge drinking. Binge drinking is defined as having had 5 or more drinks on a single occasion at least once in the past month for men, and 4 or more drinks for women<sup>24</sup>. In Butte County, 42.5% of adults, 18 and over, reported binge drinking (see *Table 42*).

<b>Table 42: Adult binge drinking in the past year, 2015</b>				
	<b>Butte County</b>		<b>California</b>	
	Population	Percentage	Population	Percentage
No binge drinking in past year	101,000	57.5%	18,986,000	65.3%
Binge drinking in past year	75,000	42.5%	10,096,000	34.7%
<b>Total</b>	<b>176,000</b>	<b>100.0%</b>	<b>29,083,000</b>	<b>100.0%</b>

Source: 2015 California Health Interview Survey

The rates of binge drinking among teenagers in Butte County is higher than rates for the state (see *Table 43*).

<b>Table 43: Percent of teens binge drinking in last 30 days by grade level, 2014 - 2016</b>				
	7th Grade	9th Grade	11th Grade	Non Traditional
<b>Butte County</b>	2%	7%	20%	40%
<b>California</b>	1%	6%	11%	-

Source: Butte: 2014 - 2016 California Healthy Kids Survey; CA: 2015 – 2017 CHKS<sup>25</sup>. Retrieved November 6, 2018 from <https://calschls.org/reports-data/>

<sup>23</sup> <http://www.asam.org/for-the-public/definition-of-addiction>

<sup>24</sup> <http://www.cdc.gov/alcohol/fact-sheets/ binge-drinking.htm>

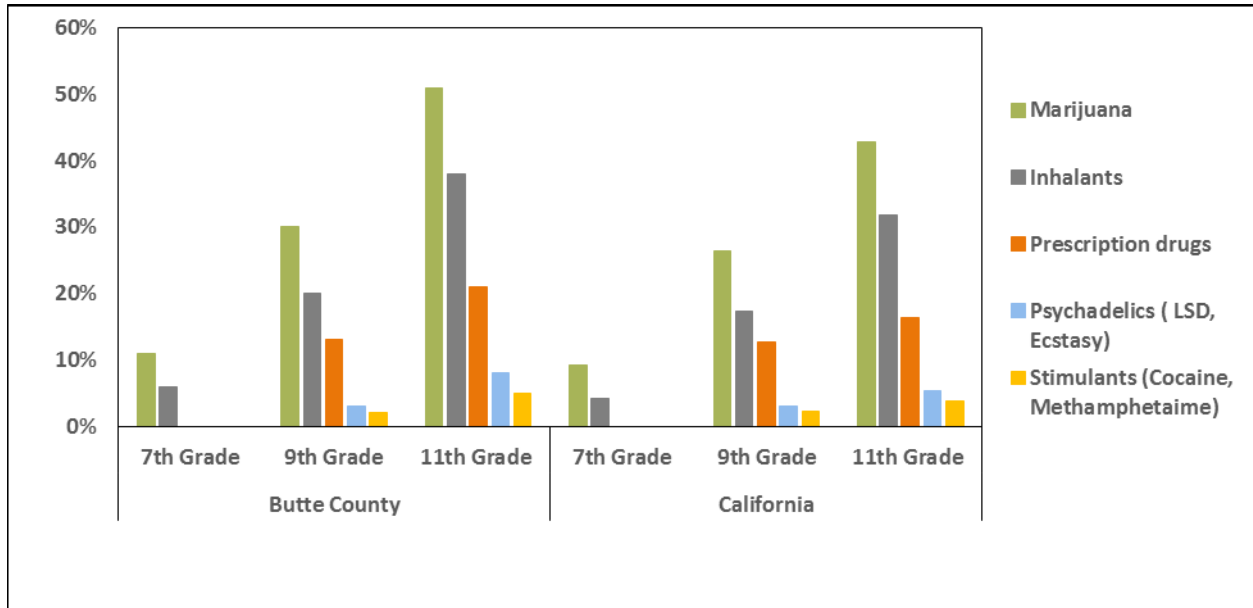
<sup>25</sup> Austin, G., Polik, J., Hanson, T., & Zheng, C. (2018). School climate, substance use, and student well-being in California, 2015-17. Results of the Sixteenth Biennial Statewide Student Survey, Grades 7, 9, and 11. San Francisco: WestEd.



### Illicit substance use

The percent of teens in Butte County who reported ever trying marijuana, inhalants, recreational use of prescription drugs (such as pain killers, diet pills, or other prescription stimulants), psychedelic drugs (such as LSD, ecstasy, or others), and illicit stimulant drugs (such as cocaine or methamphetamine) was greater for all grade levels than in California (see *Figure 12*).

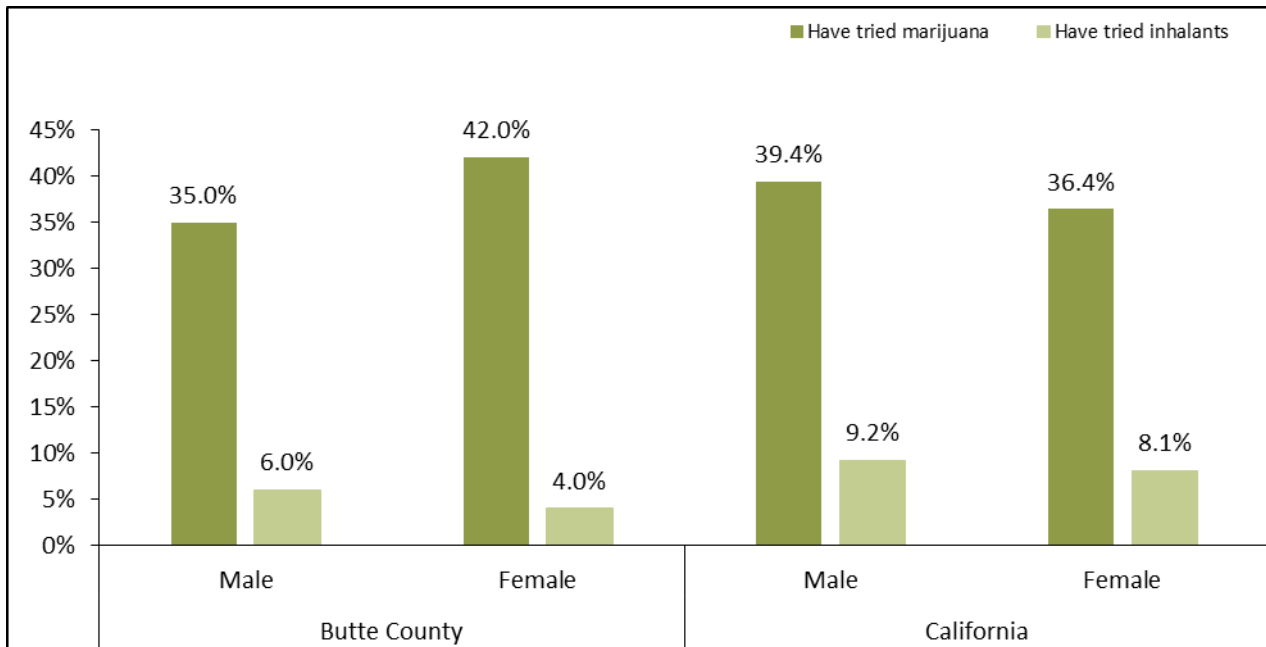
**Figure 12:** Percent of teens who have ever tried drugs in their lifetime by grade level



Source: 2014-2017 CA Healthy Kids Survey. Retrieved January 16, 2019 from: <https://calschls.org/reports-data/search-lea-reports/>

The percent of male 11<sup>th</sup> graders in Butte County who reported ever trying marijuana or inhalants was lower than in California. The percent of female teens reporting marijuana use was higher for Butte County than for the state (see *Figure 13*).

**Figure 13:** Teens who have ever tried marijuana or inhalants drugs by gender



Source: 2014 - 2015 California Healthy Kids Survey (CHKS), 11<sup>th</sup> Grade Data Displayed

### Tobacco

Smoking and tobacco use are contributing risk factors for a number of adverse health conditions including heart disease, stroke and respiratory illnesses. In Butte County, the tobacco retail density is one tobacco retailer location per 1,000 people, which is higher than for California. The percent of tobacco retailers within one thousand feet of a school is also higher for Butte County (31.4%) than the state (29.2%) (see Table 44)

	2015 Census County Population	Tobacco Retailer Count	Retailers per 1,000 Population	Retailers within 1,000 feet of a School	
	Estimate	Number	Number	Number	Percent
<b>Butte County</b>	221,578	223	1.0	70	31.4%
<b>California</b>	38,066,920	33,571	0.9	9,799	29.2%

Source: California State Board of Equalization (BOE) List of Licensed Tobacco Retailers, June, 2016  
All retailers on the BOE list are included

According to the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the percent of adults who smoke cigarettes in Butte County (14%) was higher than for California (11%). The Healthy People 2020 objective for cigarette smoking is 12% (see Table 45).

**Table 45: Current cigarette use among adults, 2016**

	Percent	Confidence Interval
<b>Butte County</b>	14%	14% - 15%
<b>California</b>	11%	10% - 12%
<b>United States</b>	17%**	-

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2016. RWJF County Health Rankings, 2018<sup>26</sup>.

\*\*Median value reported with no confidence intervals

The national Healthy People 2020 objective is a target of fewer than 12.0% of adults using tobacco products. Tobacco use among adults in Butte County is lower than the median national rate, but remains higher than for California as well as the Healthy People 2020 objective.

### e-Cigarette Use

In Butte County, the rate of high school students (grades 9 and 11) who have used an e-cigarette, at least once, is lower than state and national rates. For high school students (grades 9 and 11) who indicated having used e-cigarettes for 20 or more days in the past month, Butte County's rates are more than twice the statewide and national rates. (see Table 46).

**Table 46: Rate of e-cigarette tobacco use among youth, 2015-2017**

	Butte County <sup>1</sup>	California <sup>2,3</sup>	United States <sup>3</sup>
<b>Ever Used e-Cigarette (1 or More Times)</b>			
Grade 9	18%	23.2% <sup>3</sup>	32.7%
Grade 11	25%	31.7% <sup>3</sup>	48%
Total	-	43.9% <sup>3</sup>	42.2%
<b>Currently Uses e-Cigarette (20 or More Days During Past 30-Day Period)</b>			
Grade 9	6%	0.8% <sup>2</sup>	1.8%
Grade 11	8%	1.3% <sup>2</sup>	3.7%
Total	-	2.5% <sup>3</sup>	3.3%

<sup>1</sup> Source: Butte County. California Healthy Kids Survey, 2017-18: Main Report. San Francisco: WestEd Health & Human Development Program for the California Department of Education.

<sup>2</sup> Source: Austin, G., Polik, J., Hanson, T., & Zheng, C. (2018). School climate, substance use, and student well-being in California, 2015-17. Results of the Sixteenth Biennial Statewide Student Survey, Grades 7, 9, and 11. San Francisco: WestEd. Retrieved from [https://data.calschls.org/resources/Biennial\\_State\\_1517.pdf](https://data.calschls.org/resources/Biennial_State_1517.pdf)

<sup>3</sup> Source: US Department of Health and Human Services/Centers for Disease Control and Prevention, Youth Risk Behavior Survey, 2017. Retrieved from <https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf>

### Opioids

Over the past two decades, misuse of prescription opioids such as hydrocodone and oxycodone became one of the most serious national substance related problems. In turn, this led to an increase in illicit use of opioids including heroin and in more recent years synthetic opioids such as illicitly manufactured fentanyl (IMF) and its analogs. From 2014- 2016, Butte County ranked 54<sup>th</sup> out of 58 counties in

<sup>26</sup> University of Wisconsin Population Health Institute. County Health Rankings 2018.

California for drug-induced deaths, meaning 53 counties had a lower age-adjusted death rate. The drug-induced death rate in Butte County was 30.2 per 100,000 persons (see *Table 47*).

**Table 47: Drug-induced death rates, 2014-2016**

	Age-Adjusted Death Rates			
	Butte County	California	United States*	Healthy People 2020 Objective
3-Year Average	30.2	12.2	19.8	11.3

Source: California Department of Public Health, VRBIS Death Statistical Master File Plus 2014 – 2016 Retrieved From: Butte County's Health Status Profile For 2018 <https://www.cdph.ca.gov/Programs/CHSI/CDPH%20Document%20Library/CHSP-BUTTE.pdf>

\*CDC Drug Overdose Death Data 2016 Retrieved From: <https://www.cdc.gov/drugoverdose/data/statedeaths.html>

In 2017, Butte County had an opioid overdose death rate (7.57 per 100,000 persons) greater than that of California (5.23 per 100,000 persons). These data indicate that prescription opioids still account for the majority of opioid overdose deaths in Butte County and California, in contrast to national data indicating that synthetic opioids account for the majority of opioid related deaths nationwide (*Table 49*).

**Table -49: Death rates by class of opioid, 2017**

	Age Adjusted Drug Induced Deaths Rate, per 100,000 Persons		
	Butte County	California	United States (2016)*
All Opioids	7.57	5.23	13.3
Prescription Opioids (excluding Synthetics)	5.05	2.76	4.4
Heroin	1.31	1.70	4.9
Synthetic Opioids (excluding methadone)	1.21	1.21	6.2

Source: 2017 California Opioid Overdose Surveillance Dashboard, Acute poisoning deaths involving opioids such as prescription opioid pain relievers (i.e. hydrocodone, oxycodone, and morphine) and heroin and opium. Retrieved From: <https://discovery.cdph.ca.gov/CDIC/ODdash/>

\*Annual Surveillance Report of Drug-Related Risks and Outcomes — United States Surveillance Special Report. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. 2018. Retrieved January 9, 2019 from: <https://www.cdc.gov/drugoverdose/pdf/pubs/2018-cdc-drug-surveillance-report.pdf>

## Sexually Transmitted Infections

More than 25 diseases can be transmitted sexually. According to the Center for Disease Control and Prevention (CDC), gonorrhea, chlamydia, and syphilis are the most common sexually transmitted infections and almost half occur among young people, between the ages of 15 and 24 years.

### Chlamydia

Chlamydia is most common in adults, between the ages of 18 and 29. In 2017, the rate of reported cases in Butte County (534.3 per 100,000 persons) was lower than the state rate (552.2 per 100,000 persons) (see Table 50).

### Gonorrhea

In 2017, the rate of reported cases of gonorrhea in Butte County was 135.6 per 100,000 persons, which was lower than the state rate (190.3 per 100,000 persons) (see Table 50).

### Syphilis & Congenital Syphilis

In 2017, the rate of reported cases of syphilis in Butte County was 33.6 per 100,000 persons. The small number of congenital syphilis cases makes it difficult to draw conclusions (see Table 50).

**Table 50: STI cases and rates, per 100,000 persons, 2013-2017**

	2013	2014	2015	2016	2017
<b>Chlamydia</b>					
<b>Butte Cases</b>	926	1,082	1,131	1,289	1,210
<b>Butte Rates</b>	417.0	483.6	504.5	573.5	534.3
<b>CA Cases</b>	167,866	174,288	189,822	198,384	218,728
<b>CA Rates</b>	437.5	449.9	486.0	504.6	552.2
<b>Gonorrhea</b>					
<b>Butte Cases</b>	143	302	315	325	307
<b>Butte Rates</b>	64.4	135.0	140.5	144.6	135.6
<b>CA Cases</b>	38,343	44,915	54,205	64,633	75,372
<b>CA Rates</b>	99.9	115.9	138.8	164.4	190.3
<b>Early Syphilis (Primary, Secondary, and Early Latent)</b>					
<b>Butte Cases</b>	2	3	14	33	76
<b>Butte Rates</b>	0.9	1.3	6.2	14.7	33.6
<b>CA Cases</b>	6,446	7,257	9,405	11,213	13,719
<b>CA Rates</b>	16.8	18.7	24.1	28.5	34.6

Congenital Syphilis					
<b>Butte Cases</b>	0	0	0	2	3
<b>Butte Rates</b>	0.0	0.0	0.0	80.3	123.5
<b>CA Cases</b>	58	103	148	214	283
<b>CA Rate</b>	11.7	20.5	30.1	43.8	58.2

Source: California Department of Public Health, STD Control Branch; \*Incidence per 100,000 population, 2013-2017

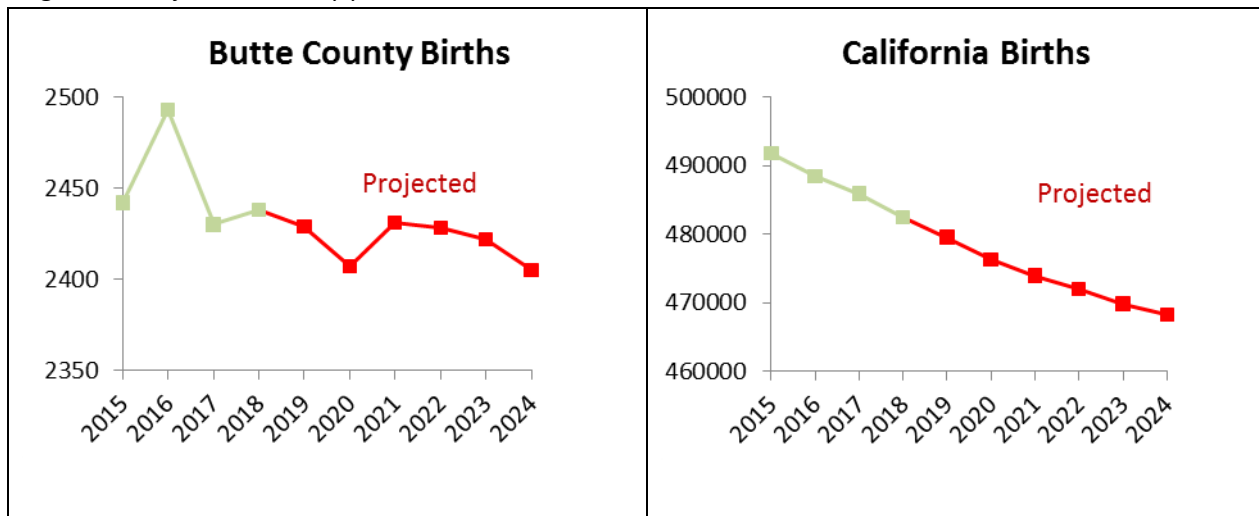
## Maternal and Child Health

Healthy birth outcomes, early identification of health conditions, and proper treatment among infants/children can prevent illness and provide positive growth experiences. The wellbeing of mothers, infants, and children helps to determine the health outcomes of future generations.

### Birth Rates

The child population in Butte County is expected to decline slightly with some variation over the next several years, while it is projected to decline steadily for the state (see *Figure 14*).

**Figure 14:** Projected births by year, 2015-2024



Source: California Department of Public Health, 2018

### Teen Pregnancy

Between 2014 and 2016, the Butte County birth rate for teens was 15.9 per 1,000 teens. The state of teen births was 17.6 per 1,000 teens (see *Table 51*).

**Table 51:** Teen birth rates, 3-Year Averages, 2014-2016

	Teens (Ages 15 -19)		
	Population	Number of Births	Rates per 1,000
<b>Butte County</b>	8,650	137.7	15.9
<b>California</b>	1,314,431	27,235	17.6

Source: California Department of Public Health 2014-2016 Birth Records

## Breastfeeding

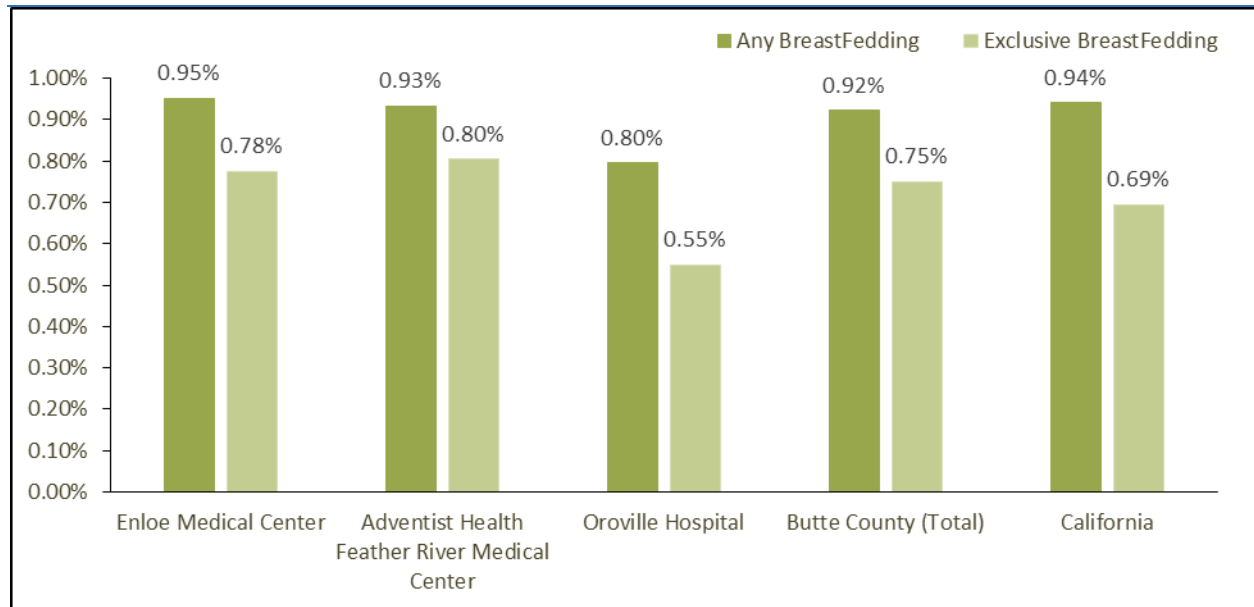
The American Academy of Pediatrics also recommends that infants be exclusively breastfed for about the first 6 months of life<sup>27</sup>. The percent of Butte County newborns exclusively fed breast milk during their birth hospitalization period has shown a decreasing trend over the past five years, from 80% in 2013, to 76% in 2017. Mothers in Butte County have been more likely to breastfeed exclusively (75.8%) during their hospitalization period than mothers in California (69.8%) (see *Table 52*).

	2013	2014	2015	2016	2017
<b>Butte County</b>	79.7%	78.2%	77.3%	75.0%	75.8%
<b>California</b>	64.8%	66.8%	68.8%	69.6%	69.8%

Source: California Dept. of Public Health, *In-Hospital Breastfeeding Initiation Data (Oct. 2018)*. Retrieved January 10, 2019 from <https://www.cdph.ca.gov/Programs/CFH/DMCAH/Breastfeeding/Pages/In-Hospital-Breastfeeding-Initiation-Data.aspx>; and <https://www.kidsdata.org/>

Butte County ranked 25<sup>th</sup> statewide for exclusive breastfeeding in hospitals among new mothers in 2016. At Adventist Health Feather River, 93% of mothers initiated breastfeeding and 80% breastfed exclusively (see *Figure 15*).

**Figure 15: In-hospital breastfeeding rates, 2016**



Source: California WIC Association, 2017. Accessed November 8, 2018 from: <http://www.calwic.org/project/charting-a-new-course-to-improve-the-quality-of-prenatal-care-hospital-breastfeeding-rate-fact-sheets/>

<sup>27</sup> <https://www.cdc.gov/breastfeeding/faq/index.htm>



### Adverse Birth Outcomes and Infant Mortality

Adverse birth outcomes include low birth weight, pre-term birth, stillborn and miscarriage after the fourth month of pregnancy. Low birth weight infants (less than 5.5 pounds) have a greater risk of dying within the first year of life. They are also at greater risk for long-term disabilities, developmental delays, learning disabilities, chronic respiratory problems, cerebral palsy, hearing and vision impairments, and autism<sup>28,29</sup>. Studies have shown that women are more likely to give birth to low birth weight babies if they are low income, have smoking habits, have had a prior adverse birth outcome, or have chronic health conditions. From 2014 to 2016, the percent of low birth weight babies in Butte County (6.1%) was lower than in the state (6.8%) (see *Table 53*). Butte County meets the Healthy People 2020 objective of 7.8% low birth weight births.

<b>Table 53: Low birth weight, 3-year averages, 2014-2016</b>				
	<b>Butte County</b>		<b>California</b>	
	Number	Percent	Number	Percent
Low Birth Weight Infants	151.0	6.1%	33,655.3	6.8%

Source: California Department of Public Health, 2018. Note: Low Birth weight is less than 2,500 grams (5.5 pounds)

Infant mortality is defined as death prior to an infant’s first birthday. In Butte County, the infant mortality rate was 4.9 per 1,000 live births, which is lower than the Healthy People 2020 objective of 6.0 deaths per 1,000 births (see *Table 54*).

<b>Table 54: Infant mortality rates by race, 3 year averages, 2013-2015</b>			
	Rate per 1,000 Live Births		
	<b>Butte County</b>	<b>California</b>	<b>National Objective</b>
All Races/Ethnicities	4.9	4.6	6.0
Hispanic/Latino	-	4.5	6.0
Multi-Race	-	6.1	6.0
African-American/Black	-	10.1	6.0
American Indian/Alaska Native	-	5.7	6.0
Asian	-	3.1	6.0
Pacific Islander	-	6.3	6.0
White	3.1	3.7	6.0

Source: California Health and Human Services Open Data Portal. Infant Mortality, Deaths per 1,000 Live Births (LGHC Indicator). (-) Rates are suppressed due to data on fewer than 10 events. Retrieved November 26, 2018 from: <https://data.chhs.ca.gov/dataset/infant-mortality-deaths-per-1000-live-births-lghc-indicator-01>

<sup>28</sup> March of Dimes. (2018). Low birth weight. Retrieved January 10, 2019 from: <https://www.marchofdimes.org/complications/low-birthweight.aspx>

<sup>29</sup> Pinto-Martin, J. A., et al. (2011). Prevalence of Autism Spectrum Disorder in adolescents born weighing <2000 grams. *Pediatrics*, 2010-2846. Retrieved from: <http://pediatrics.aappublications.org/content/early/2011/10/14/peds.2010-2846.abstract>

## Child Immunizations

Immunizations are among the most successful and cost-effective preventive health care measures. In California, a recent law (SB-277) that became effective on July 1, 2016, abolished the personal belief exemption from State statute mandated vaccines prerequisite for enrollment in public and private elementary, middle and high school schools; child care centers, day nurseries, and nursery schools. Compliance with the law became required of California students upon enrollment in the 2016 – 2017 academic school year. The law does still permit medical exemptions from statute-mandated vaccines defined as written statements by licensed physicians to the effect that physical conditions or medical circumstances of a child are such that immunization is not considered safe.

The majority of students enrolled in Butte County schools during the 2017 - 2018 academic year received all recommended immunizations. However, 6.3% of students in Butte County without permanent medical exemptions did not receive all recommended immunizations (see *Table 55*).

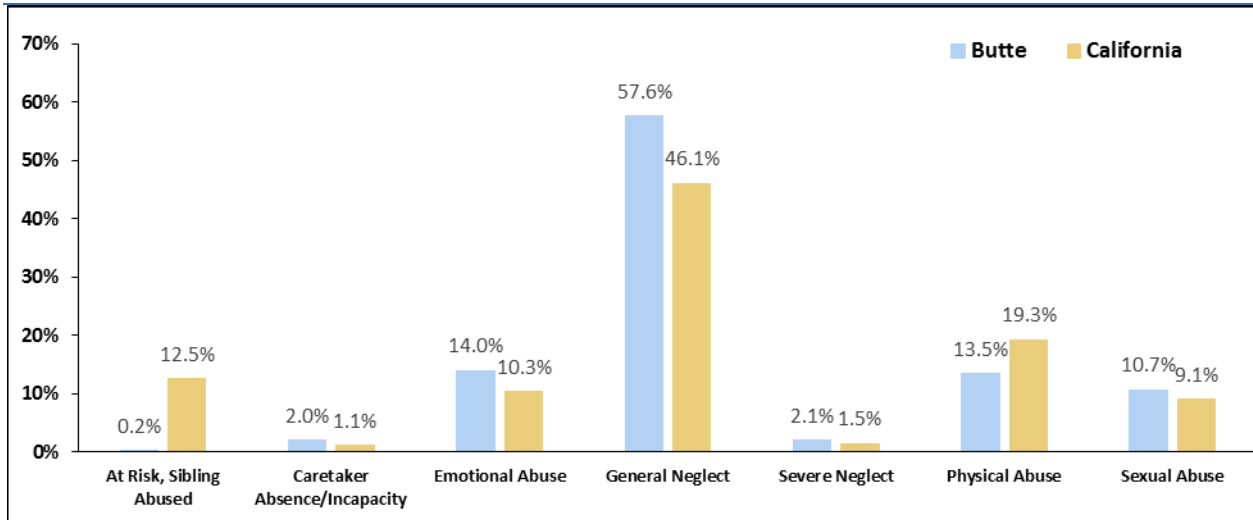
<b>Table 55: Butte County and California child care immunization assessment, 2017-2018</b>		
	<b>Butte County</b>	<b>California</b>
Number of Schools	82	10,019
Number of Students	3,062	525,186
<b>All Required Immunizations</b>	<b>93.0%</b>	<b>95.6%</b>
Conditional Entrants	3.1%	1.7%
Permanent Medical Exemptions	0.6%	0.6%
Personal Belief Exemptions	0.5%	0.4%
Others Lacking Immunizations	0.1%	0.1%
Overdue	2.6%	1.7%
4 or more doses of DTP Diphtheria and Tetanus Toxoids and Pertussis Vaccine (DTP)	96.0%	97.4%
3 or more doses of Polio Vaccine	96.9%	98.0%
1 or more doses of Combination measles-mumps-rubella vaccine (MMR)	97.6%	98.3%
1 or more doses of HIB	97.2%	98.4%
3 or more doses of vaccines containing hepatitis B (Hep B)	97.1%	97.7%
1 or more doses of Varicella vaccine (or physician-documented disease)	97.2%	98.2%

Sources: CDPH; <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/immunize.aspx>; <https://www.shotsforschool.org/k-12/reporting-data/>

## Child Abuse and Neglect

Children who are abused and/or neglected are at significantly higher risk for developing emotional, cognitive, and behavioral problems. General neglect and physical abuse were the most frequently reported types of abuse in Butte County and California (see *Figure 16*).

**Figure 16:** Child abuse/neglect reports to Child Protective Services, by type, 2017



Source: Webster, et al. (2018). California Child Welfare Indicator Project (CCWIP) Reports. Retrieved November 28, 2018, from University of California at Berkeley California Child Welfare Indicators Project website. URL: [http://cssr.berkeley.edu/ucb\\_childwelfare/Allegations.aspx](http://cssr.berkeley.edu/ucb_childwelfare/Allegations.aspx)

Adverse Childhood Experiences (ACEs) describe any traumatic experiences – in the forms of neglect, abuse, or household dysfunction – that occur during childhood and can have a significant impact on an individual’s overall health and well-being throughout their life. In Butte County, the percent of adults, over age 18, who reported having experienced one or more ACEs during their childhood was higher than that of California (see Table 56). In addition, while less than two-thirds of adults in California report having experienced one or more ACEs; more than three-quarters of adults in Butte County report having experienced one or more ACEs, making Butte County the jurisdiction with the highest rate of ACEs in the state<sup>30</sup>.

	Butte County	California
0 ACEs	23.5%	39%
1-3 ACEs	46.2%	45.1%
4 or more	30.3%	15.9%

Source: Rodriguez, D., et al. (2016). Prevalence of adverse childhood experiences by county, California Behavioral Risk Factor Surveillance System 2008 - 2013. Public Health Institute, Survey Research Group

<sup>30</sup> Center for Youth Wellness. (n.d.). Findings on Adverse Childhood Experiences in California. Retrieved December 24, 2015, from [http://acestoohigh.files.wordpress.com/2014/11/hiddencrisis\\_report\\_1014.pdf](http://acestoohigh.files.wordpress.com/2014/11/hiddencrisis_report_1014.pdf)

## Aging and Senior Health

### Falls in Older Adults

The danger and effect of falls is a major factor influencing the health and independence of California’s aging and senior population. In 2014, the rates of both fall related injuries and deaths among adults age 50 and over in Butte County were considerably higher than those of California. The rates for Butte County and California were highest for non-fatal emergency department visits, followed by non-fatal hospitalizations and death (see *Table 57*).

**Table 57: Fall related injury and death rates among seniors in Butte County, 2014 and 2016, respectively**

	Non-Fatal Emergency Department Visits (2014)		Non-Fatal Hospitalization (2014)		Deaths Due to Fall (2016)	
	Butte County	California	Butte County	California	Butte County	California
50-64	2,385.6	1,642.8	595.3	263.5	0.0	3.8
65-84	3,545.9	3,209.0	1,647.1	1,031.2	14.5	20.9
85+	10,781.3	10,198.8	6,041.7	4,422.2	377.5	155.3
Total (age 50+)	3,423.9	2,680.8	1,387.1	770.1	33.8	18.8

Source: California Department of Public Health, Safe and Active Communities Branch. Report generated from <http://epicenter.cdph.ca.gov> on: November 28, 2018. Rates are calculated per 100,000 population

### Alzheimer’s Disease and Dementia

Of particular relevance to the aging/senior population is the recent rise in the rate of dementia due to Alzheimer’s disease. Alzheimer’s is a progressive disease, meaning that the severity of symptoms increase over time. Alzheimer’s disease is the seventh leading cause of death in Butte County with an age adjusted death rate (AADR) of 51 deaths per 100,000 people, and the sixth leading cause of death in California with an AADR of 34 deaths per 100,000 people (see Causes of Death, pg. 53). Butte County ranks 55<sup>th</sup> out of California’s 58 Counties for deaths due to Alzheimer’s disease. Between 2014 and 2016, an average of 168 people in Butte County and 14,387 people in California died from Alzheimer’s disease each year (see *Table 58*).

**Table 58: Deaths attributed to Alzheimer’s disease in Butte County and California, 2014-2016**

	Butte County	California
Age Adjusted Death Rates	51.1	34.2
Crude Death Rates	75.0	36.8
Deaths (3 Year Average)	168.3	14,386.7
Population (2015)	224,363	39,059,809

Sources: California Department of Public Health, 2014-2016 Vital Records Business Intelligence System (VRBIS) Death Statistical Master Files. Retrieved November 28, 2018 from: <https://www.cdph.ca.gov/Programs/CHSI/Pages/County-Health-Status-Profiles.aspx>

## Causes of Death

All deaths that occur in Butte County are reported with detailed information including age; race/ethnicity of the deceased person; place of residence at the time of death; cause of death; and other characteristics. When comparing across geographic areas, the Age Adjusted Death Rate (AADR), is typically used to control for the influence that different age distributions might have on the frequency of causes of death.

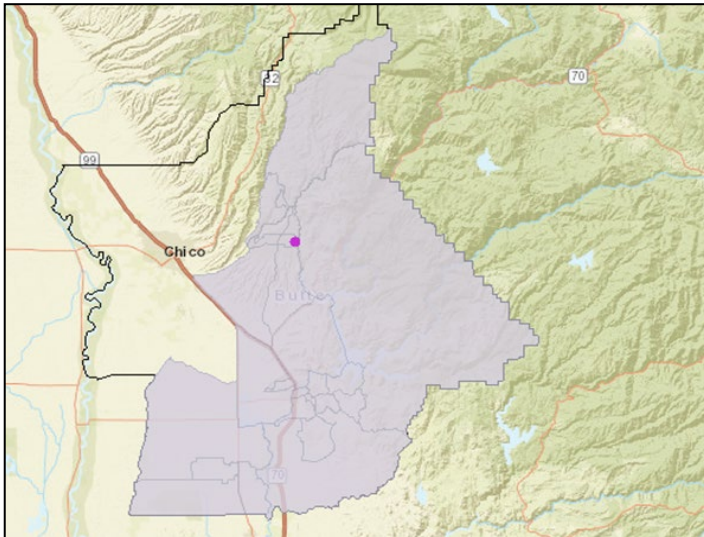
The five leading causes of death in Butte County, between 2014 and 2016, were cancer, coronary heart disease, accidents (unintentional injuries), Alzheimer’s disease, and chronic lower respiratory disease (see Table 59).

Table 59: Mortality rates, 2014-2016			
	Age-Adjusted Death Rates		
	Butte County	California Current	National Objective
All Causes	765.3	608.5	a
All Cancers	162.2	140.2	161.4
Coronary Heart Disease	85.8	89.1	103.4
Accidents (Unintentional Injuries)	63.2	30.3	36.4
Alzheimer’s Disease	51.1	34.2	a
Chronic Lower Respiratory Disease	45.8	32.1	a
Cerebrovascular Disease (Stroke)	39.3	35.3	34.8
Lung Cancer	37.7	28.9	45.5
Drug-Induced Deaths	30.2	12.2	11.3
Female Breast Cancer	21.2	19.1	20.7
Prostate Cancer	19.4	19.6	21.8
Diabetes	18.9	20.7	b
Chronic Liver Disease and Cirrhosis	18.4	12.2	8.2
Suicide	18.1	10.4	10.2
Colorectal Cancer	15.7	12.8	14.5
Influenza/Pneumonia	14.9	14.3	a
Motor Vehicle Traffic Crashes	13	8.8	12.4
Firearm-Related Deaths	11.2	7.6	9.3
Homicide	3.4*	5	5.5

Sources: California Department of Public Health, 2014-2016 Death Statistical Master Files. \*Rates are deemed unreliable based on fewer than 20 events.a. Healthy People 2020 (HP 2020) National Objective has not been established.b. National Objective is based on both underlying and contributing cause of death which requires use of multiple cause of death files. California’s data exclude multiple/contributing causes of death.

## Access to Care

Residents of rural areas often encounter barriers to health care that limit their ability to obtain the care they need. These include transportation barriers, health literacy barriers, health insurance status barriers, and increased stigma associated with conditions in rural communities, such as mental health or substance abuse<sup>31</sup>. Further, rurality has become a proxy for many social determinants of health, as rural regions tend to have residents who experience significant health disparities relative to residents of urban regions<sup>32</sup>.



Rural Health Areas in Butte County

A large portion of Butte County is identified as meeting Health Resources and Services Administration (HRSA) rural classification criteria. Areas classified as “Rural Health Areas” include locations such as Paradise, Oroville, Gridley and Palermo. The map shows Rural Health Areas in Butte County as determined by HRSA. The map demonstrates that a majority of Butte County is considered a Rural Health Area (shaded in grey).

*Retrieved May 30, 2019, from Human Resources and Services Administration, Quick Maps – Rural Health Areas*

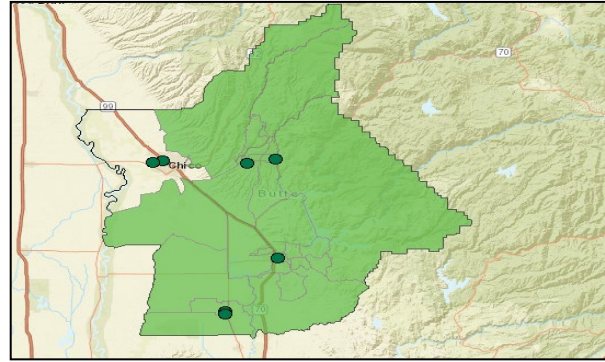
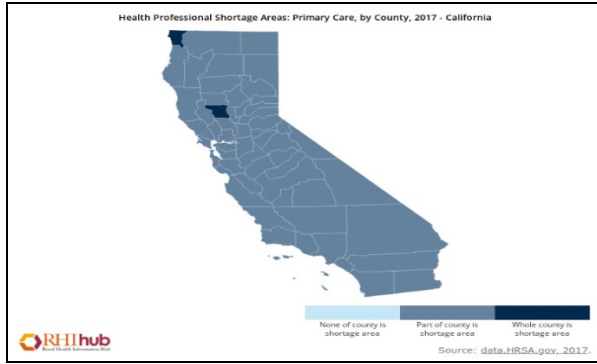
### Demand for Health Care Services Continues to Exceed Supply in Butte County

HRSA has determined that Butte County continues to have Primary Care Shortage Areas, Mental Health Shortage Areas, and Dental Care shortage areas (see Figures 17a,b – 19a,b; respectively). While only parts of the county meet Primary Care Shortage Area and Dental Care Shortage Area criteria, the entire county meets Mental Health Shortage Area criteria.

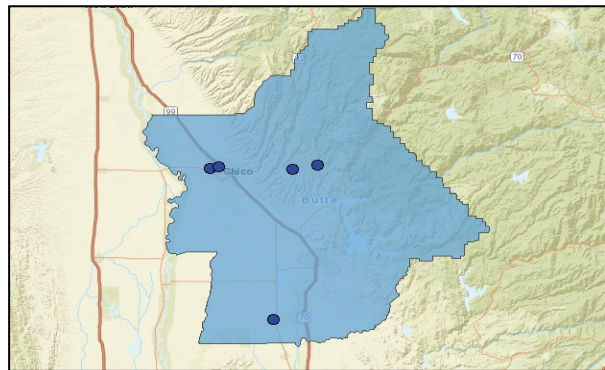
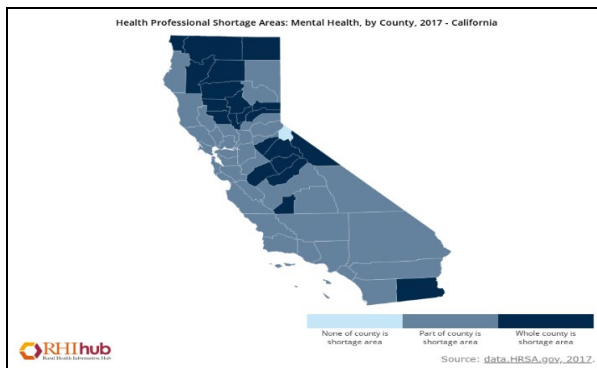
<sup>31</sup> <https://www.ruralhealthinfo.org/topics/healthcare-access>, retrieved June 3, 2019

<sup>32</sup> <https://www.ruralhealthinfo.org/topics/rural-health-disparities>, retrieved June 3, 2019

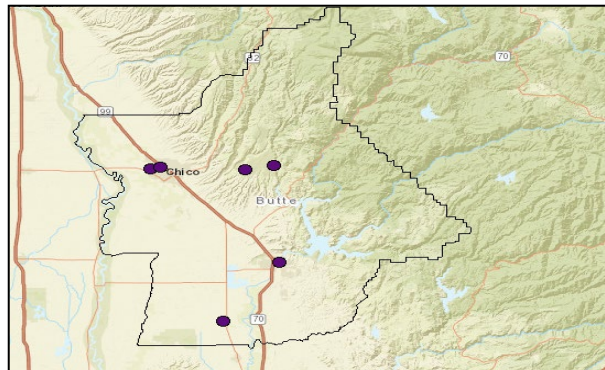
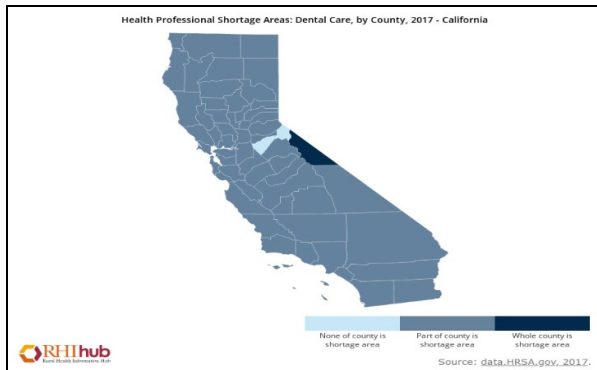




Figures 17a, 17b: Primary Care Health Professional Shortage Areas in Butte County



Figures 18a, 18b: Mental Health Professional Shortage Areas in Butte County



Figures 19a, 19b: Dental Health Professional Shortage Areas in Butte County

Figures retrieved May 23, 2019, from: <https://www.ruralhealthinfo.org/charts/?state=CA>;  
<https://data.hrsa.gov/hdw/Tools/MapToolQuick.aspx?mapName=HPSADC>

### Primary Care Physician and other Health Care Provider Shortages

A large portion of Butte County continues to meet the HRSA criteria for a Primary Care Health Professional Shortage Area (see *Figures- 17*). Further, there has been a notable decrease in Primary Care Physicians since the last assessment was conducted. From 2012 to 2016, the ratio of persons to Primary Care Physicians in Butte County increased by roughly 11%; while, for California, there was about a 2% decrease during this period, indicating that Primary Care provider ratios have worsened considerably in Butte County while they have improved marginally statewide. Likewise, in 2016 Butte County still had significantly more residents per physician than California (1660:1 and 1270:1, respectively).

However, for Butte County and California, improved ratios occurred for Other Primary Care (e.g. non-Physician Primary Care such as: Physician’s Assistants, Advanced Registered Nurse Practitioners, ect.), Dental Care providers, and Mental Health Care providers; with significant reductions in the number of residents per provider for Other Primary Care providers and Mental Health providers, and marginal reductions in the number of residents per Dental Care provider for the County and the state. In comparing Butte County ratios with the state, there remains a shorter supply per capita of Primary Care Physicians and Dental Care providers in Butte County than in the state. However, Butte County still has a better ratio of Non-Physician Primary Care Providers and Mental Health providers per capita than the state (see *Table 60*).

	Butte County			California		
	2012	2016	Percent Change	2012	2016	Percent Change
<b>Primary Care</b>	1497:1	1660:1	10.9%	1294:1	1270:1	-1.9%
<b>Other Primary Care (Non Physician)</b>	1241:1	1042:1	-16.0%	2406:1	1770:1	-26.4%
<b>Dental Care</b>	1461:1	1410:1	-3.5%	1291:1	1200:1	-7.0%
<b>Mental Health Care</b>	238:1	170:1	-28.6%	388:1	310:1	-20.1%

Source: 2012 and 2016 Area Health Resource Data File via County Health Rankings. Retrieved From: <http://www.countyhealthrankings.org/app/california/2019/rankings/butte/county/outcomes/overall/snapshot>

Medi-Cal (California’s Medicaid program) expansion under the ACA increased the number of Medi-Cal beneficiaries in Butte County by 123% between 2013 and 2015. After this initial increase in Medi-Cal enrollment, the number of Medi-Cal beneficiaries in Butte County stabilized at approximately 65,000 per year. However, from 2016 - 2018, enrollment into the California Health & Wellness (CHW) Managed Medi-Cal plan increased while enrollment into the Anthem Blue Cross (ABC) Managed Medi-Cal plan simultaneously decreased, indicating beneficiaries likely migrated from ABC to CHW over this time period, as overall enrollment was stable (see *Figure 20*).



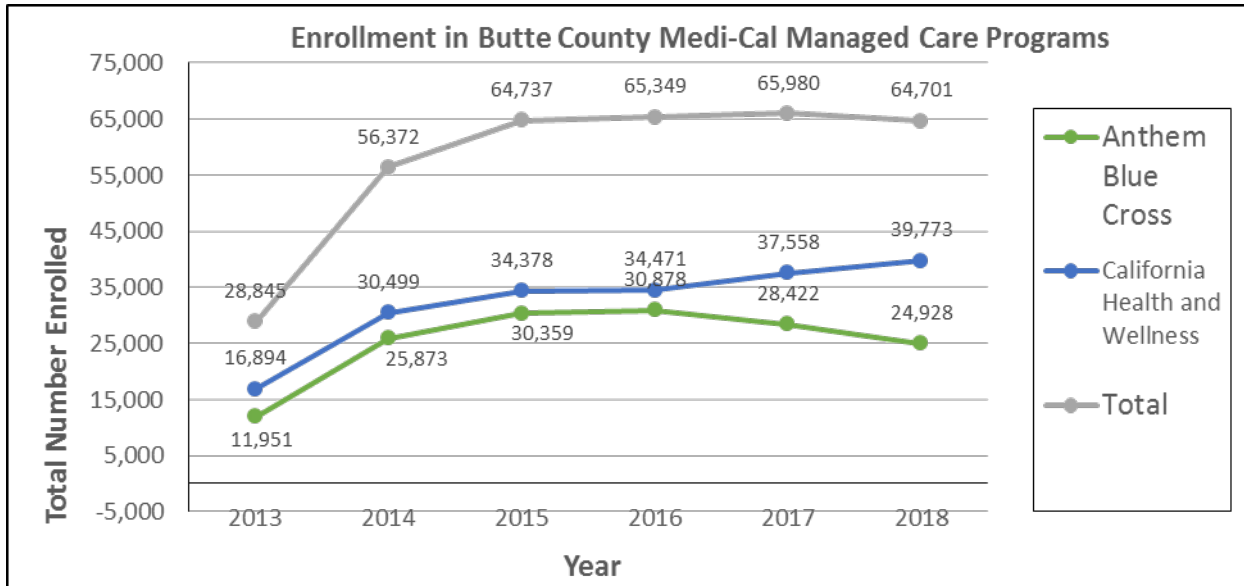


Figure 20: Medi-Cal Managed Care enrollment

Source: 2013-2018 Medi-Cal Managed Care Enrollment Reports. Retrieved May 23, 2019 from: <https://www.dhcs.ca.gov/dataandstats/reports/pages/mmcmonthyenrollment.aspx#2016>

The resultant increase in Medi-Cal and other health insurance beneficiaries under the ACA placed considerable strain on the limited capacity of practicing physicians in Butte County to accommodate new patients. The influx of newly insured patients into primary care practices have demonstrated some improvement, but have not yet been fully accommodated. The resultant deficit in access to care remains to a significant extent in Butte County, as there are still too few physicians to meet the needs of residents seeking primary and specialty care. However, the number of uninsured residents in the county have decreased significantly since the roll-out of Medi-Cal expansion and implementation of the ACA in 2014 (see Table 61).

Table 61: Type of current health insurance coverage in Butte County, 2014-2017

	2014-2017	2011-2013	Percent Point Change	Percent Change
	(pooled)			
<b>Uninsured</b>	5.0%	16.5%	-11.50%	-69.7%
<b>Medicare &amp; Medicaid</b>	3.9%*	4.0%*	-0.10%	-2.5%
<b>Medicare &amp; Others</b>	11.8%	11.8%	0.00%	0.0%
<b>Medicare only</b>	2.2%*	3.3%*	-1.10%	-33.3%
<b>Medicaid (e.g. Medi-Cal)</b>	29.0%	18.5%	10.50%	56.8%
<b>Healthy Families/CHIP</b>	-	0.5%*	-	-
<b>Employment-based</b>	41.1%	40.9%	0.20%	0.5%

<b>Privately purchased</b>	5.4%*	2.9%	2.50%	86.2%
<b>Other public</b>	1.6%*	1.8%*	-0.20%	-11.1%
<b>Total Population</b>	222,000	216,000		2.8%

Source: 2011-2017 California Health Interview Survey

\*Statistically unstable for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance. - (hyphen): Estimate is less than 500 people.

While insurance coverage clearly has improved in recent years, this has not necessarily translated to better access to care when paired with the provider shortages faced by the county. According to the California Health Interview Survey (CHIS), between 2015 and 2017, roughly 9% of Butte County residents reported difficulty accessing primary care compared to about 6% of California residents; and roughly, 17% of Butte County residents reported difficulty accessing specialty care compared to about 13% of California residents. Conversely, a significantly lower percentage of Butte County residents reported difficulty accessing primary and specialty care during this time period than in 2014; while a marginally higher percentage was reported statewide for primary and specialty care access, (see Table 62).

**Table 62: Adult population reporting difficulty finding primary and specialty care in Butte County and California, 2014, and 2015-2017 (pooled)**

	2014		2015-2017	
	Butte County	California	Butte County	California
<b>Difficulty Finding Primary Care</b>	19.8%	4.6%	8.9%	6.1%
<b>Estimated Population Experience Difficulty Finding Primary Healthcare Services</b>	34,000	1,315,000	16,000	1,801,000
<b>Estimated Total Population Needing Primary Healthcare Services</b>	174,000	28,539,000	180,000	29,310,000
<b>Difficulty Finding Needed Specialty Care</b>	29.8%	10.8%	17.3%	13.1%
<b>Estimated Population Experience Difficulty Finding Specialty Healthcare Services</b>	27,000	1,116,000	12,000	1,442,000
<b>Estimated Total Population Needing Specialty Healthcare Services</b>	92,000	10,373,000	71,000	11,004,000

Source: 2014-2017 California Health Interview Survey. Primary Care: Questions AJ133, AJ134

\*Statistically unstable for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance. - Estimate is less than 500 people.

### Medi-Cal Beneficiaries Experience Greater Barriers Accessing Primary Care in Butte County

All socioeconomic levels reported difficulty accessing primary care in Butte County compared to California. This remains considerably more pronounced in the population enrolled in Medi-Cal, which

serves as a proxy for the population living in or near poverty as living below 138% of the federal poverty level (FPL) is a the main criteria to enroll for most Medi-Cal beneficiaries.

In 2014, 42% of Medi-Cal beneficiaries who responded to the CHIS in Butte County experienced difficulty obtaining primary care, while roughly 20% of total respondents experienced difficulty. When pooled with the subsequent years data (2014-2017), this discrepancy, although considerably reduced, remains in Butte County (see *Table 63*).

**Table 63: Difficulty finding primary care by insurance type in Butte County and California, 2013 -2014; 2014-2017 (pooled)**

	2013		2014		2014 – 2017 Pooled	
	Butte County	California	Butte County	California	Butte County	California
<b>Uninsured</b>	5.3%*	5.7%	12.1%*	5.5%	3.2%*	6.8%
<b>Medicare &amp; Medicaid</b>	17.3%*	9.5%	20.9%*	4.3%	9.2%*	5.7%
<b>Medicare &amp; Others</b>	3.2%*	1.6%	8.2%*	1.6%	5.2%*	2.5%
<b>Medicare only</b>	-	3.1%*	-	7.1%*	-	5.4%
<b>Medicaid (e.g. Medi-Cal)</b>	6.8*	9.5%	41.8%	9.0%	20.2%	9.5%
<b>Healthy Families/CHIP</b>	-	-	-	-	-	-
<b>Employment-based</b>	3.4*	3.8%	18.4*	2.9%	11.5%	4.3%
<b>Privately purchased</b>	-	1.7%	-	8.4%	9.8%*	8.3%
<b>Other public</b>	89.3*	8.3%	-	4.1*	-	4.1%
<b>Total</b>	<b>5.2*</b>	<b>4.7%</b>	<b>19.8%</b>	<b>4.6%</b>	<b>11.6%</b>	<b>5.8%</b>

*Source: 2013-2017 California Health Interview Survey. Primary Care: Questions AJ133, AJ134. \*Statistically unstable for a minimum number of respondents needed AND/OR has exceeded an acceptable value for coefficient of variance. - Estimate is less than 500 people.*

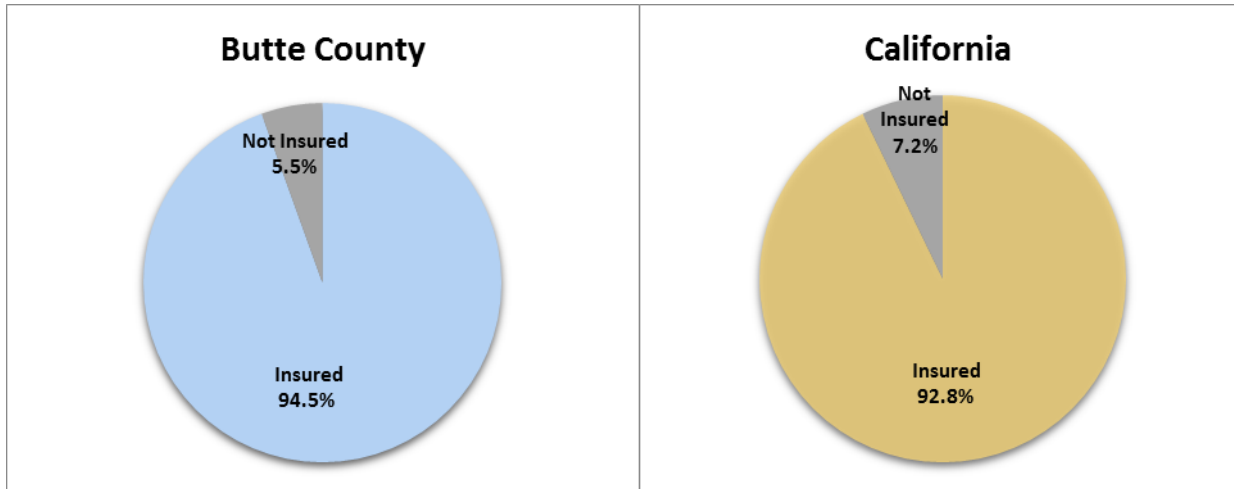
### Health Insurance Status

Health insurance is important at every age and provides access to health care including opportunities for screenings, vaccinations, and testing for chronic diseases. Having access to primary and preventive care through health insurance helps to prevent the development of health issues and provide treatment at onset. This can slow the progress of symptoms and minimize the development of chronic disease. Lack of access to health services leads to poor health outcomes and results in substantial economic costs.

Health equity is reached when all people have the opportunity to make choices that allow them to live a long, healthy life, regardless of their income, education or ethnic background. Access to high quality health care services is essential for achieving health equity. In order to improve quality of life in Butte County, residents must have access to care and be well informed about their treatment choices. People without health insurance face considerable financial barriers to high quality and appropriate medical

care. This often results in forgoing routine checkups, preventative care, and medical treatments during initial stages of disease until symptoms become more advanced and are more costly to treat.

The Healthy People 2020 objective is for 100% of people to have health insurance. In 2017, percentages of those with and without health insurance were equivalent in Butte County and California (see *Figure 21*).



**Figure 21:** Percent of people with and without health insurance coverage in 2017

Source: US Census Bureau, 2017 American Community Survey 1 -Year Estimates, Table B27001

## Attachment 1. Summary of Risk Factors

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, state-based telephone surveillance system supported by the Centers for Disease Control and Prevention (CDC). Through a series of monthly telephone interviews, states uniformly collect data on the behaviors and conditions that place adults at risk for chronic diseases, injuries, and preventable infectious diseases that are the leading causes of illness and death in the United States. The annual California surveys follow the CDC telephone survey protocol for the BRFSS. California Behavioral Risk Factor Survey (BRFS) data are collected by the Public Health Survey Research program (PHSRP) of California State University, Sacramento.

In 2019, in order to obtain an estimate of the prevalence of these behaviors and conditions in Butte County, the Butte County Public Health Department partnered with Enloe Medical Center, Adventist Health Feather River Hospital and Orchard Hospital to retain the services of Issues & Answers Network, Inc. The Butte County Behavioral Risk Factor Survey also follows the CDC protocol for the BRFSS and uses the standardized core questionnaire and modules.

For the needs of the 2019 Butte County BRFSS, the interviews were administered via telephone (via landline and cell phone) to randomly selected adults from a sample of households in the County.

- ✓ The sample of landline telephone numbers was selected using a list-assisted, random-digit-dialed methodology with disproportionate stratification based on “listedness.”
- ✓ The cell phone sample included the application of Cellular Working Identification Number Service, which identified inactive telephone numbers within the cellular RDD sample. In order to improve the efficiency of the sample further and reduce the number of out-of-scope calls, a ZIP Code matching process was also used.

The collected BRFSS data were weighted to adjust for gender, age, and race using the 2010 Butte County Census population distributions. All of the respondents who were included in the final sample were drawn from a random sample of Butte County residents. Among the calls that were attempted, there were 711 completed interviews, 184 refusals, 2,359 non-working or disconnected numbers, 6,357 no answers, 1,849 numbers that were not private residences, 2,348 numbers and/or respondents with undetermined eligibility, 61 households and/or respondents with physical or mental impairment, 66 eligible respondents selected but not interviewed, 176 households and/or eligible respondents with language barriers, 946 households with telecommunication barriers and special technological circumstances, 537 households on a do-not-call list, 498 households that were out-of-sample, 149 fax or modem lines, 5,038 answering machines, 68 pagers, 28 landline numbers in the cell phone sample, and 126 interviews that were terminated/partial completes. The American Association for Public Opinion Research (AAPOR) response rate was 18.41%. The refusal rate was 1.48%. All of the interviews were completed between April 17 and June 16, 2017, with each completed interview lasting, on average, approximately 35 minutes.

A summary of the risk factors follows with Butte County data compared with California rates. Red shading indicates an indicator where Butte County fares worse than the state, green shading indicates

an indicator where Butte County fares better than the state and no shading indicates a county rate equal or similar to the state rate.

Factor	Butte County	California
Perceived Health Status (fair/poor)	19.0%	17.6%*
Quality of Life: Poor physical health (14+ days)	16.0%	11.1%*
Quality of Life: Poor mental health (14+ days)	18.8%	10.6%*
Disability	20.9%	21.9%*
Health Care Access: No Health Care Coverage (age 18-64)	10.8%	12.7%*
Health Care Access: No Personal Health Care Provider	34.1%	24.5%*
Health Care Access: No Health Care Access Due to Cost	14.5%	11.8%*
Health Care Access: No Routine Checkup	30.5%	32.4%*
Chronic Health Conditions: Ever told had a heart attack	3.7%	3.1%*
Chronic Health Conditions: Ever told had angina or coronary artery disease	2.8%	2.8%*
Chronic Health Conditions: Ever told had a stroke	3.3%	2.2%*
Chronic Health Conditions: Ever told had asthma	18.3%	14.1%*
Chronic Health Conditions: Still have asthma	11.8%	7.9%*
Chronic Health Conditions: Ever told had COPD	7.1%	4.5%*
Chronic Health Conditions: Ever told you had some form of arthritis	24.1%	19.4%*
Chronic Health Conditions: Ever told had a depressive disorder	27.5%	17.3%*
Chronic Health Conditions: Ever told had kidney disease	3.0%	3.3%*
Chronic Health Conditions: Ever told had skin cancer	8.5%	5.9%*
Chronic Health Conditions: Ever told had any other types of cancer	8.4%	5.9%*
Cancer Survivorship: Survivors currently receiving cancer treatment	6.8%	12.9%**

Factor	Butte County	California
Cancer Survivorship: Survivors who participated in clinical trial	2.1%	N/A**
Cancer Survivorship: Survivors who received a survivorship care plan	76.2%^	47.6%**
Hypertension Awareness: Ever told had high blood pressure	32.2%	28.4%*
Cholesterol Awareness: Blood cholesterol not checked within last 5 years	10.8%	12.4%*
Cholesterol Awareness: Had blood cholesterol checked and told it was high	24.0%	30.8%*
Diabetes: Ever told had diabetes (excluding pregnancy-related)	7.0%	10.5%*
Tobacco Use: Current Smoker	20.6%	11.3%*
Other Tobacco Use: Have ever used chewing tobacco	28.1%	4.2%**
Other Tobacco Use: Current user of chewing tobacco	4.0%	0.6%**
Other Tobacco Use: Have ever used cigars/cigarillos	39.0%	15.2%**
Other Tobacco Use: Current user of cigars/cigarillos	4.9%	1.7%**
Other Tobacco Use: Have ever used tobacco pipe	14.8%	4.5%**
Other Tobacco Use: Current user of tobacco pipe	0.4%	0.2%**
Other Tobacco Use: Have ever used hookah water pipe	16.0%	6.3%**
Other Tobacco Use: Current user of hookah water pipe	0.0%	0.6%**
Marijuana Use: Smoked 1+ day within past 30 days	17.7%	10.5%***
Alcohol Consumption: Binge drinking	22.1%	17.6%*

Factor	Butte County	California
Alcohol Consumption: Heavy drinking	4.2%	6.3%
Alcohol Screening and Brief Intervention: Did not discuss alcohol use with a health professional at last routine checkup	22.5%	22.1%****
Alcohol Screening & Brief Intervention: Advised about harmful drinking	17.0%	24.2%****
Alcohol Screening & Brief Intervention: Advised to reduce or quit drinking	11.5%	12.5%****
Fruit Consumption (<1 time/day)	41.9%	32.5%*
Vegetable Consumption (<1 time/day)	16.8%	21.4%*
Physical Activity: No activity during past month	28.5%	20.0%*
Seatbelt Use: Do not always use seatbelt	6.7%	2.2%*
Adult Immunization: No flu shot in past year (age 65+)	47.8%	40.7%*
Adult Immunization: Never had pneumococcal vaccination (age 65+)	29.0%	23.2%*
Adult Immunization: Never had shingles/zoster vaccination	73.2%	68.9%*
HIV/AIDS: Ever had an HIV test	37.9%	40.8%*
Adverse Childhood Experience: Emotional/verbal abuse (more than once)	35.2%	34.9%*
Adverse Childhood Experience: Parental separation or divorce	37.3%	26.7%*
Adverse Childhood Experience: Substance abuse by household member	37.8%	26.1%*
Adverse Childhood Experience: Physical abuse (more than once)	21.0%	19.9%*



Factor	Butte County	California
Adverse Childhood Experience: Witness to domestic violence (more than once)	19.3%	17.5%*
Adverse Childhood Experience: Household member with mental illness	28.4%	15.0%*
Adverse Childhood Experience: Sexual abuse (ever)	13.8%	11.4%*
Adverse Childhood Experience: Incarcerated household member	14.6%	6.6%*
Intimate Partner Violence: Threatened physical (past 12 months)	4.3%	N/A
Intimate Partner Violence: Completed physical (past 12 months)	3.8%	N/A
Intimate Partner Violence: Attempted control (past 12 months)	5.1%	N/A
Intimate Partner Violence: Unwanted sex (past 12 months)	0.6%	N/A

\*Note: Based on 2017 BRFSS of California Residents

\*\*Note: Based on 2009 BRFSS of California Residents

^Items marked in red are below the statewide figures and may require the County's attention. Items marked in green indicate results above the statewide figures

^^Caution: Fewer than 30 respondents

## Attachment 2. Community Stakeholders

### Focus Groups

Date	Description of Focus Group	Number of Attendees	Location
April 9, 2019	Senior Citizens	12 total (9 females, 3 males)	Enloe Medical Center
April 15, 2019	College students	9 total (8 females, 1 male)	Enloe Conference Center
April 18, 2019	Camp Fire Long Term Recovery “Health & Wellness” Subcommittee	9 total (9 females)	Private residence in Chico, CA
April 23, 2019	Individuals receiving rehabilitation services	8 total (3 females, 5 males)	Skyway House
April 24, 2019	Hmong community	6 total (6 females)	Hmong Cultural Center of Butte County
April 29, 2019	African American community	6 total (3 females, 3 males)	African American Family and Cultural Center
May 2, 2019	High school students	~21 total (no attendance; demographic information taken)	Gridley High School
May 8, 2019	Physicians	8 total (7 males, 1 female)	Butte-Glenn Medical Society
May 14, 2019	Individuals experiencing homelessness	13 total (13 females)	Jesus Center
May 20, 2019	Recipients of mental health services	10 total (8 females, 2 males)	Iversen Wellness Recovery Center
May 22, 2019	Veterans	9 total (9 males)	Veterans Resource Center
May 28, 2019	Paradise residents	3 total (3 females)	Adventist Health Feather River

## Attachment 3. Focus Group Responses

### General Health

#### *Challenges and Barriers*

#### Exercise

- Finding time to exercise daily Lack of access to a gym
- Transitioning from an active duty service to a less forced regimen
- Cost of gym memberships
- Very few gym options and those that are available have high fees
- Bike paths and parks in Chico do not seem safe to access
- Hard to stay in shape or find the time to exercise and make healthy choices Difficult to find childcare to allow for regular exercise
- Unwillingness to exercise
- Lack of gym or outdoor recreation facilities (including sidewalks for walking) in Paradise, following Camp Fire

#### Diet

- Maintaining a healthy diet
- Healthy food options are not readily available
- Convenience of fast food options that may not be as healthy
- Lack of consumption of vegetables
- Reduction or elimination of high school nutrition classes
- Not enough community engagement to access available resources (e.g. community gardens; programs promoting nutrition)
- Time management challenges, with little time eat in the morning or choosing a fast option that may not be as healthy.
- Cost of on-campus food at California State University, Chico (CSU, Chico)
- Lack of grocery stores in Paradise, given impacts of Camp Fire
- Students not having input into the food that parents prepare Cost of healthy food options
- Accessibility to healthy food options in communities outside Chico (Gridley, Biggs, etc.)

#### Access to health care services

- Lack of health care providers in all Butte County communities
- Lack of dental care providers
- Lack of health care services for individuals without health insurance
- Lack of emergency services in Paradise
- Lack of specialists
- Lack of dental and optometry care for individuals with Medi-Cal benefits Inability to schedule timely appointments with providers
- Inability to receive glasses due to lack of coverage Costly medications

- Local primary care physicians are not taking new patients
- Patient encounter time is very short due to overloaded schedules of providers
- Lack of nursing homes, compounded by the loss of facilities in the Camp Fire
- Nursing homes are expensive and crowded
- Accessing medication is a long process requiring multiple appointments and monitoring dosage levels
- Lack of insurance coverage for alternative and complimentary health and wellness services (e.g. massage, chiropractic, acupuncture)

#### General comments

- Inadequate transportation for low-income individuals needing to access health care
- Rural nature of county; long distances for services
- Inadequate bathrooms and clean water for individuals struggling with homelessness
- School nurses are not available at times needed and provide little support
- Individuals use the emergency room to access primary care, creating overcrowding
- Access is difficult when health care providers do not speak the same language as patients
- There is a lack of education among older generations on healthy lifestyle choices

#### Facilitator observations

The lack of providers in Butte County was the dominant theme reflected across all focus groups. Another predominant challenge expressed across focus groups was access to gym facilities and/or the costs of gym memberships. The lack of nursing homes was a dominant point of conversation in the senior group, many of whom are caretakers for their elderly parents. The Camp Fire has exacerbated a lack of nursing home facilities, according to focus group participants, and several participants commented that they had to relocate their family members to nursing homes out of the area.

### **Dental Health**

#### *Challenges and Barriers*

#### Dental care providers

- Lack of dental care providers
- Lack of providers who accept Medi-Cal
- Lack of providers who accept certain private insurance
- Parental/guardian neglect of dental care
- Lack of pediatric dentists who will see children under three years old
- Lack of dentists in communities outside of Chico (Gridley, Oroville, Paradise)
- Lack of school clinics
- Six-month wait times for appointments
- Lack of Saturday or evening hours for appointments; business hour appointments make it difficult to schedule appointments and results in lost wages for patients

- Some providers enforce strict rules on cancellations, stifling future willingness to access dental care
- Lack of orthodontists/access to Orthodontic Care
- Discomfort, fear of pain
- Lack of fluoridation in water throughout Butte County
- Lack of prioritizing dental care until it is a problem

#### Insurance

- Insurance does not cover certain services
- Lack of dental insurance options
- Insurance coverage promotes pulling teeth as opposed to preventive care Difficulty finding providers to accept insurance
- Difficulty accessing services through Veterans Affairs – dental issues need to be extreme to receive services and long wait times for dental care can make issues more severe by the time treatment is received
- Dental insurance premiums are rising, creating difficulties in providing insurance options for employees
- Ampla Heath provides dental care, but extractions must be done out of county (Marysville) Difficulty scheduling appointments – long wait times for an appointment
- Medi-Cal coverage will only take a patient over 21 if it was a dental emergency.
- High cost of dental insurance
- High cost for dental care services
- Some providers require paying cash upfront to pay for services Dental care not included in regular health care benefits

#### Facilitator observations

The need for high quality dental care services in Butte County was the dominant theme reflected across all focus groups. The observation that insurance companies only cover teeth pulling (as opposed to preventive care or root canals/fillings) was repeated in several focus groups. One health care provider noted that dental care is such a challenge in Butte County that he has had to schedule teeth to be pulled before performing unrelated surgeries, due to the risk of infection from untreated dental issues.

### **Access to Health Care**

#### *Challenges and Barriers*

#### Insurance

- Type of insurance coverage can prevent individuals from accessing care they need or want
- Certain providers are unwilling to provide services to patients with Medi-Cal insurance Ineligibility for some insurance due to income restrictions
- VA insurance eligibility window – five years after getting off of active duty/honorable discharged

- Payment systems incentivize treatment in late stage/ high acuity care levels and focus on symptoms not root causes
- Individuals on a fixed income may not qualify for Medi-Cal insurance but still cannot afford services
- High costs of insurance coverage and premiums
- Gap between individuals with good insurance coverage and individuals with Medi-Cal insurance

#### Access to providers

- Lack of primary care providers
- Lack of access to mental health providers Long wait times to gain appointments
- Experiencing appointment wait-times of two months Long process of receiving care
- Multiple appointments/referrals to receive specialist services
- Trial and error to find a provider to receive needed services – need to invest a lot of personal time and money
- Takes time and effort to find a provider (especially when in a vulnerable state)
- Difficulty in awareness of which providers are accepting patients, what insurance they accept, etc.
- Lack of pediatricians Lack of specialty care Lack of specialists
- Lack of cardiologists and neurologists Difficulty accessing school nurse
- Time-consuming process to set an appointment, visit doctor, etc.
- Limited times that providers can see patients; lack of weekend or evening appointments.
- Lack of outreach to non-English speaking populations
- Lack of outreach to individuals with low technology literacy/use
- Lack of access to medications
- Lack of transparent process in providing patient care

#### Cost

- Costs of health care services vary depending on location
- Lack of medical reimbursements to doctors; restructuring of fee system (facility, technical, provider) results in higher costs to patients.
- Lack of cost-effective primary care

#### Transportation

- Butte County B-Line is not reliable
- Transportation for seniors limited – an Uber-like service catering to the needs of seniors would be effective

#### Facilitator observations

The lack of providers in Butte County was the dominant theme reflected across all focus groups. This extended to a lack of providers accepting certain insurance options as well.

## **Mental Health**

### *Challenges and Barriers*

#### Lack of providers or challenges in provider services

- Shortage of psychiatrists and counselors
- Long wait times to schedule appointments
- Lack of providers (specifically psychiatrists)
- Lack of availability in hours for California State University, Chico therapists
- Limited access to counseling
- Long wait times (difficult in times of crisis or emergency)
- Butte County Behavioral Health only provides services for moderately to severely ill
- Limited or no psychiatric help once stable and out of program
- Long process to receive care
- Difficult to find counselor for only talk therapy
- Lack of early intervention systems Lack of support groups
- Lack of reliable school psychologist
- Lack of welcoming staff at existing facilities
- Lack of availability of quality resources and programs
- Lack of family therapists in Gridley. Patients must travel out of town for access to mental health care
- Homelessness makes mental health issues difficult to treat
- Feeling that being diagnosed as a 5150 is the only way to receive services Increased post-traumatic stress disorder triggers following Camp Fire
- Lack of services for refugees/immigrants

#### Medication

- Medications are presented by providers as the only option for care
- Difficult to access non-generic medication, even with doctor referral
- Side effects of medications

#### Stigma/Awareness

- Stigma of mental health illness
  - Individual may be uncomfortable talking about experience
  - Seen as weakness
- Lack of awareness of programs and resources availability
- Individuals don't feel comfortable or connected to providers because of different demographics
- Lack of proactivity/ownership from veterans to access/use the resources available
- Individuals are reactive, rather than proactive about mental health Fragmented mental health and social services delivery system
- Lack of feeling respected by providers

- Distrust comes from fear of judgment based gender, income, race
- Lack of acceptance of mental health issues
- Lack of adequate public education on maternal health and wellness and education for expecting mothers during pregnancy
- Lack of understanding that mental health services can be accessed for preventive care and not only treatment
- Fear of loss of ability to own firearms
- Fear of punishment if services are accessed
- Need healthy ways to cope with cultural change or new environment
- Need to pry to have individuals share
- Generation gap in mental health awareness can lead to unawareness of red flag
- Prevalence of misdiagnosis – mental illness diagnosed as behavioral/medical condition Veterans may be triggered to fight or flight
- Feeling that individuals must hurt themselves or someone else before services are provided

#### Insurance and Cost

- Therapy is expensive even with insurance
- No psychiatrist in Butte County accepts Medi-Cal

#### Transportation

- Lack of transportation to facilities providing mental health services
- Ampla Health refers patients to Yuba City, with transportation from Chico posing an issue

### **Substance Use and Misuse – Drugs, Alcohol, Smoking**

#### *Challenges and Barriers*

#### Addiction/lack of understanding of addiction

- Difficult to quit smoking cigarettes
- Loneliness may drive veterans to drugs
- Life becomes unmanageable when addicted
- Addiction can lead to paranoia, anxiety, depression which makes it difficult to deal with life issues
- Fear of stigma of addiction
- Lack of understanding of addiction
- Individuals reluctant/stubborn to change
- Lack of awareness/knowledge on addiction in Butte County
- Difficulty in conveying to individuals that they have a problem until they have a life-conveying event (e.g. natural disaster)
- Access to care lies within the individual
  - Individual needs to make first step to access services
  - Individuals need to want to be helped



- Vaping is observed as a healthy alternative to smoking/drugs, but is not

#### Reporting addiction

- Prevalence of dishonesty during VA screening process because fear of being judged or punished  
Perception of addiction as a weakness
- Fear reporting addiction will affect future job endeavors
- Lack of welcoming and safe VA screening process

#### Mental health

- Opioids/alcohol addiction can be fueled by mental health issues among veterans
- Individuals may self-medicate because resources aren't readily available when wanted (long waits)
- Lack of dual diagnosis programs that address mental health and addiction issues

#### Access

- Ease of access to drugs
- Ease of access to cheap alcohol through prevalence of bars  
Drugs are marketing as glamorous in media
- Flavored tobacco is prevalent, easy to access

#### General comments

- Parents that use and/or grow marijuana in home, constant exposure of children
- Different generations have varied responses to drug acceptance
- Marijuana legalization in California has changed attitudes toward marijuana use
- Military culture has higher prevalence of drug usage as coping mechanism while on service
  - Habits carry over after off-duty too
  - Don't think about the later consequences
- Exposure to second hand smoke of cigarettes and marijuana.
- Lack of treatment options for women vs. men
- Lack of programs that advocate for women
- Addiction treatment system is broken; lack of focus on reunification; broken families/households
- School administration ambivalent to addressing drug use
- Lack of comfort in asking school officials for help in addressing addiction

### **Preventive Practices – Screening, Vaccinations, and Injury Prevention**

#### *Challenges and Barriers*

#### Lack of financial resources

- Individuals with low-incomes or those struggling with homelessness cannot access medication due to cost of copayments

- Lack of income to pay for needed vaccinations
- Obtaining second opinions from doctors is expensive
- Providers are limited in the vaccinations they can provide, as insurance will not provide reimbursements for certain vaccines

#### Lack of education/reliable information

- Anti-vaccination supporters impact willingness of individuals to seek vaccinations for themselves/children
- Poor screening and education on adult asthma
- Too much information available, which paralyzes any action on screenings/vaccinations Difficult to understand and make an informed decision so individuals choose to wait until something bad happens, rather than preventive care
- Lack of knowledge on where to get screened
- Lack of awareness of screenings needed
- No challenges for veteran, because vaccinations are required and provided Distrust of science/physicians
- Misconceptions that vaccines are part of big pharma and doctors promote vaccines for financial gain
- Prevalence of cultural barriers – some generations will rely on herbal medicine instead of physician care
- Individuals fear finding out bad news so avoid screenings
- Individuals get ill after immunizations so avoid vaccinations

### **Overweight and Obesity – Physical Activity and Healthy Eating**

#### *Challenges and Barriers*

#### Diet

- Lack of portion control
- Prevalence of fast food
- Lack of healthy food options provided by schools Parents lack of cooking/serving healthy food options
- Open high school campuses allow for more fast food consumption

#### Lack of personal motivation/time

- Lack of motivation to be healthy or maintain healthy behaviors
- More interest in phones, not enough time being active
- No time to exercise or be active
- Individuals preferring a motorized wheelchair to walking
- Lack of time as a mother with full-time work

#### Recreation programs/centers

- Lack of recreation programs/centers
- Lack of affordable gym memberships
- Lack of affordable adult recreation center
- Lack of a community pool that is available year-round Lack of availability of hours for CARD pool
- Lack of a YMCA
- Budget and programing cuts to physical education in schools Limited options for gyms in Gridley
- Lack of weight room access at high school gym; open just for sports teams.

#### Safety

- Bike paths in Chico are unsafe
- Lack of walkability of Oroville
  - Too many loose dogs
  - Dangerous neighborhoods

#### Lack of financial resources

- Cost of healthy food options
- Expensive to cook healthy
- Lack of senior discount program
- Lack of affordability of health gyms

#### General comments

- Difficult to exercise with mental illness/injuries
- Side effect of mental health medication is it stifles physical activity and promotes weight gain
- Fear that social services/benefits will be rescinded if seen as being active
- Mental illness can impact lof physical activity
- Mental illness can promote eating disorders/unhealthy eating habits
- Limited healthy food options that kids will want to eat
- High school sports are only available to skilled athletes. Sports should offer tiers or levels to allow people of all physical fitness levels to participate.

#### **Chronic Diseases –Asthma, Diabetes, Heart Disease,Stroke, Liver Disease, etc.**

##### *Challenges and Barriers*

#### Lack of providers/services

- Lack of epilepsy services/support
- Lack of diabetes services/support
  - Classes are are not well-attended
  - Availability is lacking
  - Poor location
- Lack of resources for Parkinson’s/Multiple Sclerosis

- Lack of pediatric specialty services
- Lack of specialists in Gridley
- Ampla Health no longer accepting new patients for pain management
- Long wait times to access providers
- Long process
  - Cannot see a specialist until you see primary physician
  - Have to wait a long time to get to specialist
  - Lack of availability of providers
- Lack of pain management services

#### Medication/treatment

- Difficult and expensive to receive an MRI (related to epilepsy). MRIs not covered by insurance
- Difficult process to have medication refilled
- Lack of options if medication is lost – will get response that it’s “too soon” for refill
- Expensive to receive care or medication
- Prevalence of side effects of being on multiple medications
- Dislike taking medication
- Belief that more harm than benefit will be happen
- Expensive prescription drugs

#### Lack of education/understanding

- Lack of insight of all underlying causes of chronic diseases
- Lack of understanding of disease process
  - Will understand the disease but not the causes, short/long-term effects
  - Lack of understanding/comprehension of preventive care
  - Lack of understating that some medications can help prevent certain conditions, will wait until symptoms are extreme to take action
- Lack of education on diabetes or other chronic diseases stemming from leading unhealthy lives

#### Diet

- Quality of school lunches is poor
- Difficult in shifting healthy eating behavior of older generation Lack of willingness to avoid unhealthy food options

#### General comments

- Wildfires – very toxic acute air exposure, water quality, long term risk unknown
- Treatment options are available, however individuals on Medi-Cal/Medicaid do not qualify for “good” options
- Limited access to treat because too sick or lack of transportation
- Prevalence of a providers providing a pre-diagnosis because of race/ethnicity
- Lack of exercise

- Lack of knowledge of family history of health conditions (specific comment at Hmong Cultural Center); leads to current generation not knowing complete medical history

## **Transportation**

### *Challenges and Barriers*

#### Reliability/quality

- Lack of paratransit
- Limited bus services in Paradise and Magalia
- Difficulty in elderly people traveling from Gridley, Paradise, Oroville to Chico for medical services
- Bus system
  - Does not run on Sunday
  - Long waits because times are not frequent enough
  - Lack of frequent stops
  - Bus stops are far from each other Long process to get to/from appointment Lack of trust of Uber
- Lack of services provide individuals transportation to pharmacy, to grocery shop, etc.

#### Affordability

- Expensive options for transportation Cost of gas
- Cars are expensive to have
  - Insurance rates
  - Ticket prices
  - Registration

#### Accessibility

- Lyft, Uber require technology and debit/credit card
- Lack of crosswalk on road in front of Iverson for safety Lack of cars due to life circumstances, age
- Elderly individuals may not have access to Uber/Lyft
- Elderly individuals suffer from lack of vision more frequently, impairing driving
- Lack of driver's license due to life circumstance
- Lack of driver's education programs at high school
- Individuals who do have access to paratransit/MediTrans need to schedule five days in advance
- Lack of transportation to doctor's offices

## Attachment 4. Resources to Address Significant Needs

Community stakeholders and residents identified community resources potentially available to address the identified health needs. This is not a comprehensive list of all available resources. Resources are also available at Help Central 2-1-1 Butte County <http://helpcentral.org/>.

Health Need	Community Resources
<b>Access to health care</b>	Butte 2-1-1 Butte County Public Health Department Chico Adult Center Chico State University Student Health Center Hmong Cultural Center Iverson Health Center Medi-Cal Northern Valley Indian Health Shalom Free Clinic Veterans Affairs WIC – Women, Infants & Children
<b>Chronic diseases</b>	American Heart Association American Lung Association Butte College Veteran Service Office Every Women County (breast cancer) First 5 Iversen Center Medi-Cal
<b>Dental care</b>	Butte County Public Health Department CalVet Veteran Services Kremer Dental Mobile dental unit Northern Valley Indian Health WIC Wilson Elementary School dental program
<b>Mental health</b>	African American Family & Cultural Center Butte County Behavioral Health Chico Veteran Center Daxit Program Hmong Cultural Center Iverson Center Upward Bound, CSU, Chico
<b>Overweight and obesity</b>	African American Family & Cultural Center Butte County Public Health Department CalFresh Chico Area Recreation District CSU, Chico WREC Center Food bank/food pantry

<b>Health Need</b>	<b>Community Resources</b>
	Iverson Center Supplemental Nutrition Assistance Program (SNAP) VA Healthcare
<b>Preventive practices</b>	Ampla Health Butte College Student Clinic Butte County Public Health Department Catholic Social Services Head Start Jesus Center Mothers Strong Northern Valley Indian Health Shalom Free Clinic WIC Young Lives
<b>Substance use and misuse</b>	Alcoholics Anonymous Butte County Public Health Department Chico Rescue Mission Daxit Program Iverson Center Narcotics Anonymous No Butts Skyway House Smoke Free North State Tobacco Use Prevention Education Torres Shelter Vet Center
<b>Transportation</b>	Ampla Health bus Butte 2-1-1 Enloe Flight Care Hmong Cultural Center Jesus Center Lyft Shriners Uber VA shuttles



## 2019 CHNA approval

This community health needs assessment was adopted on 10/17/19 by the Adventist Health System/West Board of Directors. The final report was made widely available on December 31, 2019.

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To request a copy, provide comments or view electronic copies of current and previous community health needs assessments or community benefit implementation strategies, please visit the Community Benefits section on our website at <https://www.adventisthealth.org/about-us/community-benefit/>