

2022

Border Health Status Report to the Legislature



Gavin Newsom

Governor
State of California

Mark Ghaly, MD, MPH

Secretary
Health and Human Services Agency

Tomás J. Aragón, MD, DrPH

Director and State Public Health Officer
California Department of Public Health



This page is intentionally left blank.

Authors

This report was prepared by the following staff in the California Department of Public Health Office of Binational Border Health

Crystal Mejia

Blake Rowan

Theodore Efthymeou

Esmeralda Iniguez-Stevens

Claudia Rubio

April Fernandez

Acknowledgements

The California Department of Public Health, Office of Binational Border Health recognizes and appreciates the contributions and cooperation of the following agencies and individuals in producing the report:

Pennan Barry
California Department of
Public Health Tuberculosis
Control Branch

Charsey Cole Porse
California Department of
Public Health Coronavirus
Science Branch

Jenny Flood
California Department of
Public Health Tuberculosis
Control Branch

Varsha Hampole
California Department of
Public Health Tuberculosis
Control Branch

Cora Hoover
California Department of
Public Health Immunization
Branch

Seema Jain
California Department of
Public Health Coronavirus
Science Branch

Beth Moran
California Department of
Public Health STD Control
Branch

Alyssa Nguyen
California Department of
Public Health Coronavirus
Science Branch

Adam Readhead
California Department of Public
Health Tuberculosis Control
Branch

Kyle Rizzo
California Department of Public
Health Immunization Branch

Robert Snyder
California Department of Public
Health STD Control Branch

Nannie Song
California Department of Public
Health Office of AIDS

Lauren Stockman
California Department of
Public Health Immunization
Branch

Office of Binational Border Health Advisory Group Members:

Rebecca Alcantar
Covered California

Jim Arriola
MediExel Health Plan

Dianne Ciro
San Diego State University, School
of Social Work

Daniela Flores
Imperial Valley Equity & Justice
Coalition

Alvaro Garza
California Conference of Local
Health Officers

Jeremiah Garza
Los Angeles County Department
of Public Health

Barbara Jimenez
County of San Diego Health and
Human Services Agency

Rosyo Ramirez
Imperial County Public Health
Department

Paula Kriner
Imperial County Public Health
Department

Konane Martinez
California State University,
San Marcos

Ana Ortiz Ilizaliturri
Scripps Chula Vista

Norah Schwartz
Colegio de la Frontera Norte

Judith Shaplin
San Ysidro Health



Table of Contents

Authors	3
Acknowledgements	4
Table of Contents	5
Index of Figures	6
Introduction	8
Demographics	9
Obesity	13
Diabetes	15
Suicide	17
Tuberculosis	19
Sexually Transmitted Infections	21
HIV/AIDS	26
Vaccine Preventable Diseases	30
COVID-19	32
Conclusion.....	34
References	37

Number	Index of Figures	Page
1.1	Race and Ethnicity Distribution by Region, Border Region Compared to California, 2021	9
1.2	Percent Unemployed, Border Region Compared to California, 2021	10
1.3	Percent Below 200% the Federal Poverty Level, Border Region Compared to California, 2021	10
1.4	Percent Below 200% the Federal Poverty Level by Race/Ethnicity, Border Region Compared to California, 2021	11
1.5	Education Level Distribution, Border Region Compared to California, 2021	11
1.6	Percent of College Graduates by Race/Ethnicity, Border Region Compared to California, 2021	12
2.1	Percent Overweight and Obese, Border Region Compared to California, 2021	13
2.2	Percent Obese by Race/Ethnicity, Border Region Compared to California, 2021	14
2.3	Percent Obese by Sex, Border Region Compared to California, 2021	14
3.1	Percent Ever Diagnosed with Diabetes, Border Region Compared to California, 2021	15
3.2	Percent Ever Diagnosed with Diabetes by Race/Ethnicity, Border Region Compared to California, 2021	16
3.3	Percent Ever Diagnosed with Diabetes by Sex, Border Region Compared to California, 2021	16
4.1	Suicide Mortality Rate, Border Region Compared to California, 2021	17
4.2	Suicide Mortality Rate by Race/Ethnicity, Border Region Compared to California, 2021	18
4.3	Suicide Mortality Rate by Sex, Border Region Compared to California, 2021	18
5.1	Rate of Tuberculosis, Border Region Compared to California, 2021	19
5.2	Rate of Tuberculosis by Race/Ethnicity, Border Region Compared to California, 2021	20
6.1	Rate of Sexually Transmitted Infections, Border Region Compared to California, 2021	21
6.2	Rate of Gonorrhea, Border Region Compared to California, 2021	22
6.3	Rate of Gonorrhea by Race/Ethnicity, Border Region Compared to California, 2021	22
6.4	Rate of Gonorrhea by Sex, Border Region Compared to California, 2021	23
6.5	Rate of Primary and Secondary Syphilis, Border Region Compared to California, 2021	23

6.6	Rate of Primary and Secondary Syphilis by Race/Ethnicity, Border Region Compared to California, 2021	24
6.7	Rate of Primary and Secondary Syphilis by Sex, Border Region Compared to California, 2021	24
6.8	Rate of Congenital Syphilis, Border Region Compared to California, 2021	25
6.9	Rate of Congenital Syphilis by Race/Ethnicity, Border Region Compared to California, 2021	25
7.1	Rate of New HIV Cases, Border Region Compared to California, 2021	26
7.2	Rate of Diagnosed Persons Living with HIV/AIDS, Border Region Compared to California, 2021	27
7.3	Rate of New HIV Cases by Race/Ethnicity, Border Region Compared to California, 2021	27
7.4	Rate of Diagnosed Persons Living with HIV/AIDS by Race/Ethnicity, Border Region Compared to California, 2021	28
7.5	Proportion of Gender Among New HIV Cases, Border Region Compared to California, 2021	28
7.6	Proportion of Gender Among Diagnosed Persons Living with HIV/AIDS, Border Region Compared to California, 2021	29
8.1	Rate of Pertussis, Border Region Compared to California, 2021	30
8.2	Rate of Pertussis by Race/Ethnicity, Border Region Compared to California, 2021	31
8.3	Rate of Pertussis by Sex, Border Region Compared to California, 2021	31
9.1	Rate of COVID-19, Border Region Compared to California, 2021	32
9.2	Rate of COVID-19 by Race/Ethnicity, Border Region Compared to California, 2021	33
9.3	Rate of COVID-19 by Sex, Border Region Compared to California, 2021	33

Introduction

The California border region is a unique and dynamic region, spanning 62 miles (100 km) on the north side of the U.S. - Mexico border. When compared to the rest of California, the southern border region's uniqueness is characterized by marked differences in economy, geography, demographics, and disease burden. As such, it is important that the dynamics of public health issues in this region are well understood and considered in disease prevention and control activities. Therefore, the goal of this report is to shed light on those differences by providing data pertinent to the border region on a selected number of topics of interest. The report includes demographic information and health indicators for obesity, diabetes, suicide, tuberculosis (TB), sexually transmitted infections (STIs), HIV/AIDS, select vaccine-preventable diseases, and COVID-19 in California's southern border region (i.e., San Diego and Imperial Counties). Data about these selected diseases and conditions are presented within the context of parallel statewide estimates (i.e., CA southern border vs. California). This comparison is important to help elucidate health disparities within the border region in comparison to those of the entire state.

Sources such as the Healthy Border 2020 and Healthy People 2030 were consulted for guidance related to important health indicators in the California border region. The Healthy Border 2020 is a binational initiative developed by the U.S.-Mexico Border Health Commission to address priority binational health concerns. The Healthy People 2030 is a 10-year U.S. national initiative that establishes priority public health topics to improve health and well-being of the population. Health indicators used for this current report are also based on interviews conducted with key informants as well as results obtained from surveys conducted with border health stakeholders. Reports from previous years also highlighted indicators based on results from border health key-informant interviews as well as results obtained from a survey conducted among border health stakeholders. With the exception of COVID-19, indicators presented in the 2022 Border Health Status Report (2022 BHSR) to the Legislature have remained constant since the 2016-2017 report to facilitate identification of trends.

Data used in this report includes a variety of sources including government and academic sources. Population data were obtained from the State of California, Department of Finance (DOF). Unemployment data was obtained from the Bureau of Labor Statistics (BLS), the main fact-finding organization in labor economics and statistics of the United States (U.S.) government. Race/ethnicity, income, education, obesity, and diabetes data were obtained from the 2021 California Health Interview Survey (CHIS). CHIS is the nation's largest state health survey and an important source of data for various health indicators

presented by ethnic and racial groups. CHIS is conducted by the University of California Los Angeles, Center for Health Policy Research in collaboration with the California Department of Public Health (CDPH). Communicable disease data were obtained directly from the CDPH TB Control Branch, Sexually Transmitted Diseases Control Branch, Office of AIDS, Immunization Branch, and Coronavirus Science Branch. When available, the number of cases and the rate (i.e., the number of cases divided by the population) are presented. For CHIS data, percent of cases is provided, given that data obtained represents a randomly selected subgroup of the population and total numbers are not provided.

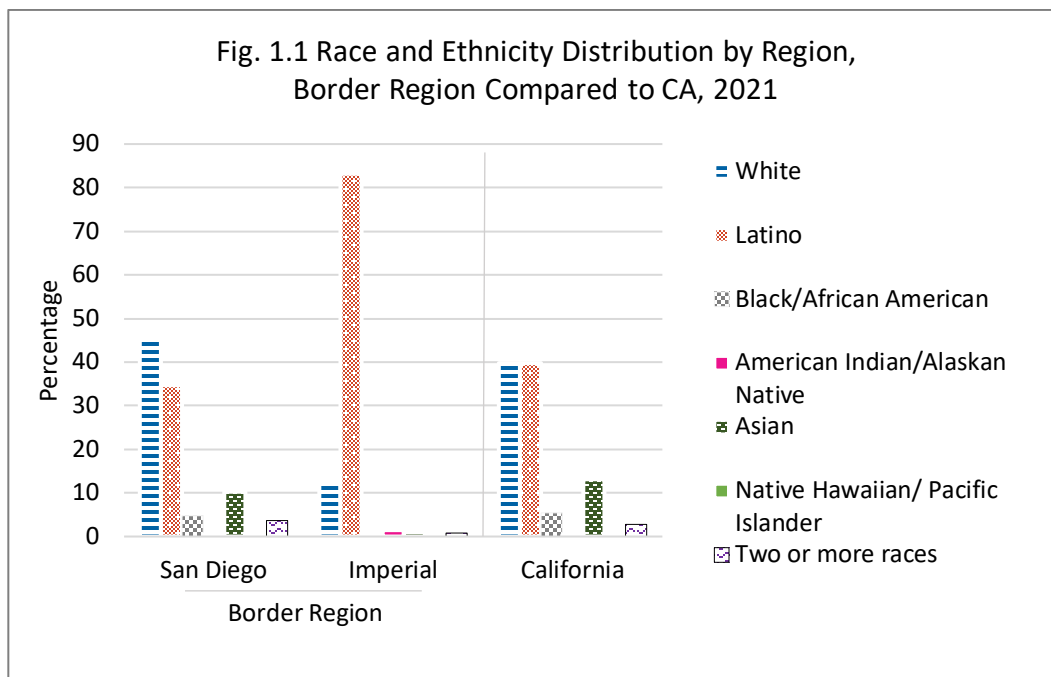
Throughout this report, data primarily from Latino and White racial groups and data from other races are included when their rates or proportions were higher than the two main groups referenced. Latino refers to the population of Latino/Hispanic ethnicity of any race. The term Latino will be used for race/ethnicity instead of Latino/Hispanic. Therefore, White in this report refers to the White, non-Hispanic population.

The “2022 Border Health Status Report to the Legislature” prepared by the CDPH Office of Binational Border Health (OBBH) provides a summary of important health indicators for border communities in California but is not a fully comprehensive report of all health issues in this region. Rather, the report provides a general overview of the health status of the population living in the California border region.

Demographics

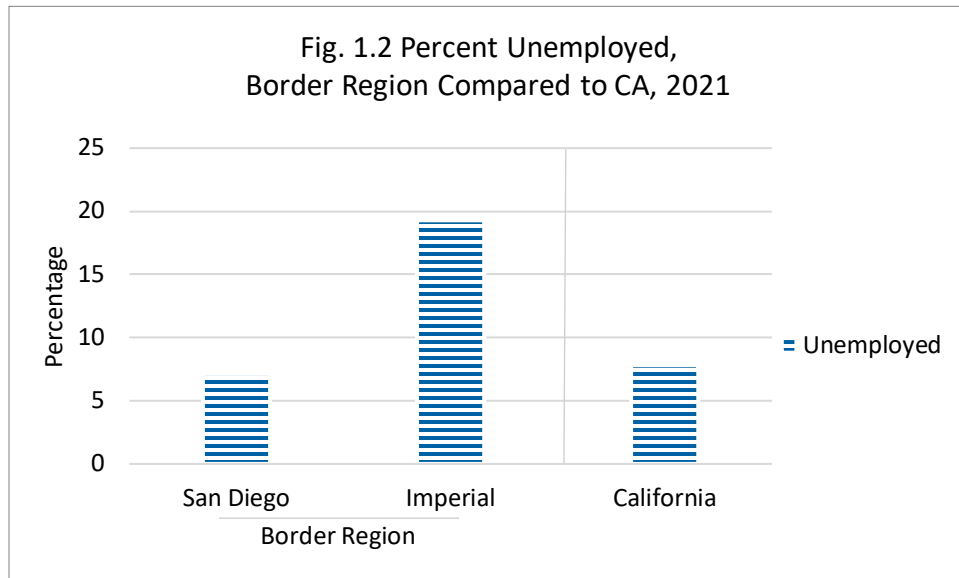
The population of the border region of California, composed of San Diego and Imperial counties, slightly grew in the last five years (2016 to 2022). During this period, San Diego County's population decreased by 0.1%, while Imperial County's population increased by 2.9%, this in comparison with a statewide decrease of 0.2%. In 2022, the California DOF projected there were 3,466,635 individuals living in the border region, most of whom were living in San Diego County (n=3,287,306) and a smaller number in Imperial County (n=179,329) (DOF, 2021).

The population in California, including the border region, is racially and ethnically diverse. Data from 2021, shows Whites made up the majority (45.8%) of the population in San Diego County, whereas Latinos constituted a large minority group of 34.6%. In Imperial County, most of the population was Latino (83.2%), whereas Whites accounted for 12.8%. As shown in Figure 1.1, in the State of California, Whites and Latinos made up approximately the same proportion, at 38% and 39.7% of the total population, respectively (Fig. 1.1) (CHIS, 2021).



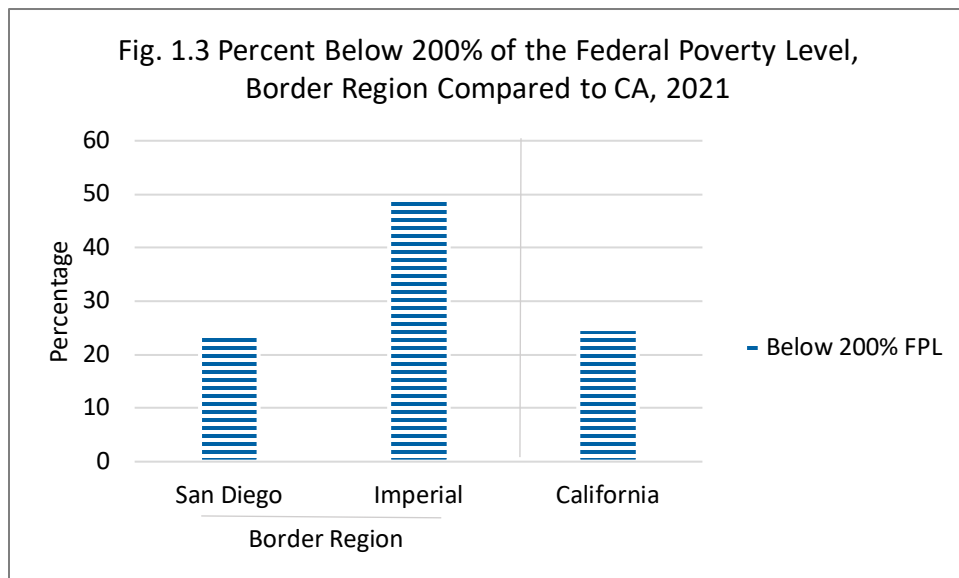
Source: California Health Interview Survey, 2021

In 2021, San Diego County reported that 7.1% of the labor force was unemployed (173,000 individuals), whereas Imperial County reported that approximately 19.3% of the labor force was unemployed (24,000 individuals) (BLS, 2021). Statewide, the unemployment rate was 7.8% (2,308,000 individuals) (Fig. 1.2) (BLS, 2021).



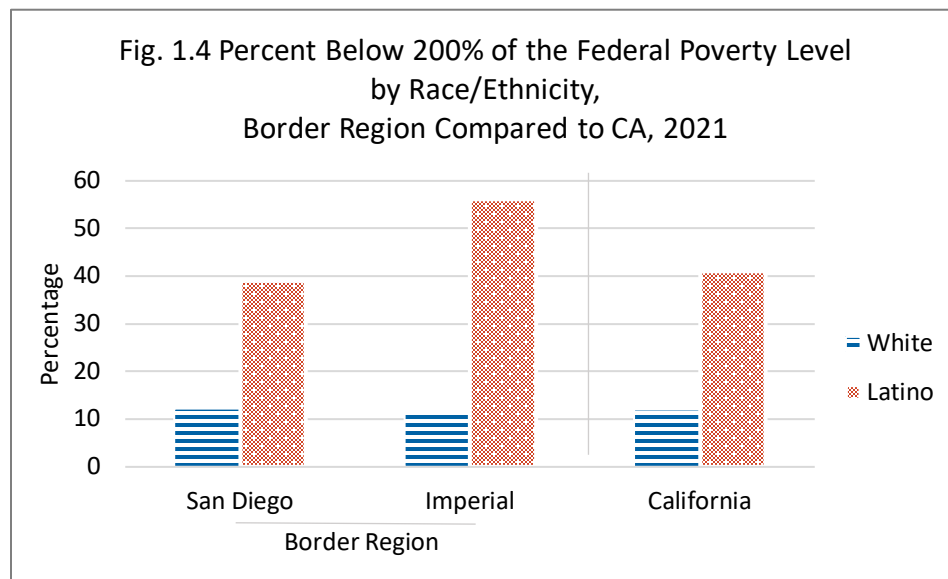
Source: Bureau of Labor Statistics, 2021

In 2021, 23.5% of San Diego County residents were living below 200% of the Federal Poverty Level (FPL), as compared with 49.1% of Imperial County residents and 30% of California residents (Fig. 1.3) (CHIS, 2021).



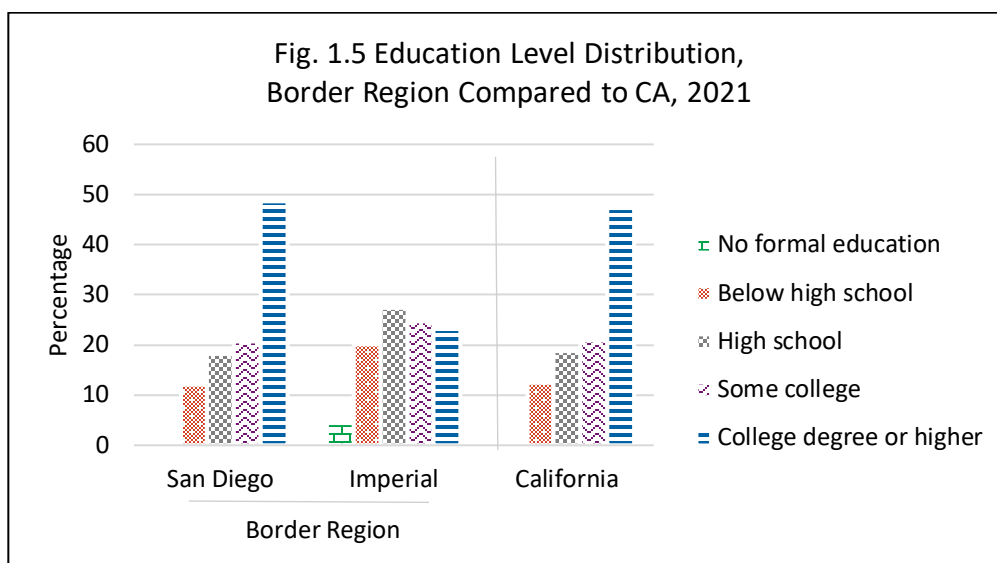
Source: California Health Interview Survey, 2021

A comparison by race/ethnicity indicated that the Latino population had a higher percent of people living below 200% of the FPL in the California border region. The same result was observed in California statewide (Fig. 1.4) (CHIS, 2021).



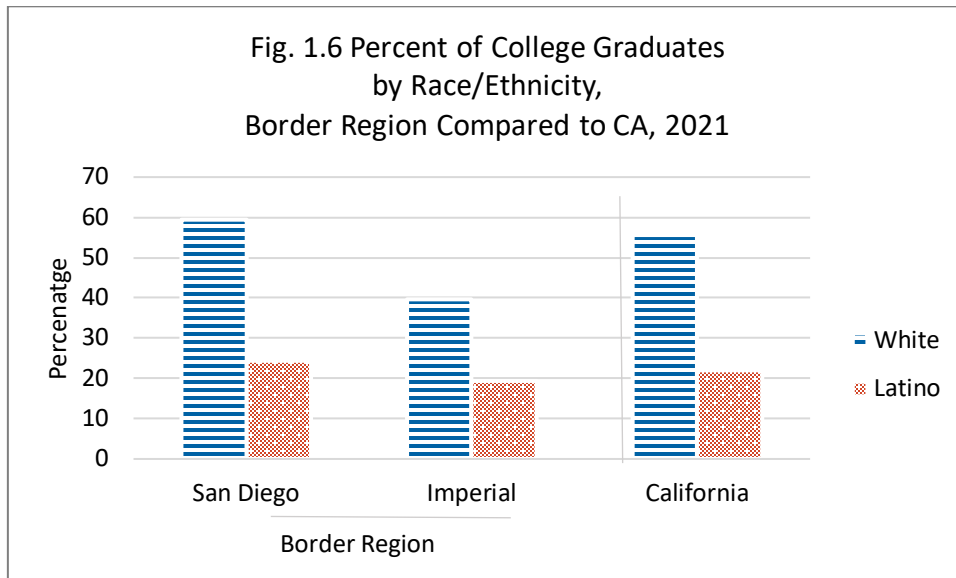
Source: California Health Interview Survey, 2021

In 2021, 48.7% of San Diego County residents had a college degree or higher, as compared with only 23.2% of Imperial County residents. Meanwhile, 20.1% of Imperial County residents had education below a high school diploma, as compared with 12.1% of San Diego County residents. Statewide, 47.4% of Californians had a college degree or higher, and 12.5% (n=318,000) had education below a high school diploma (Fig. 1.5) (CHIS, 2021).



Source: California Health Interview Survey, 2021

When the percent of college graduates was compared by race/ethnicity, the Latino population, when compared with the White population, consistently had a lower percent of college graduates both the California border region and statewide (Fig. 1.6) (CHIS, 2021).

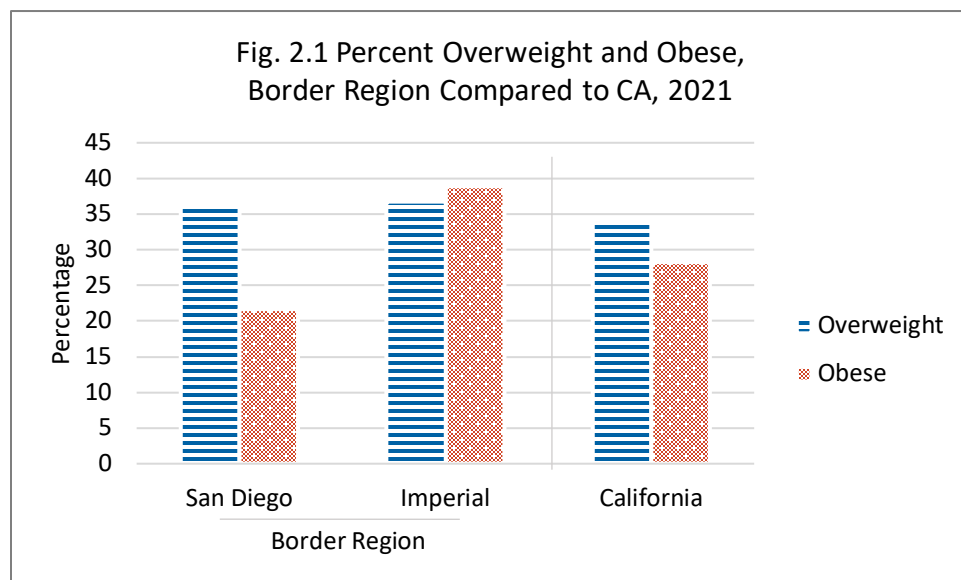


Source: California Health Interview Survey, 2021

Obesity

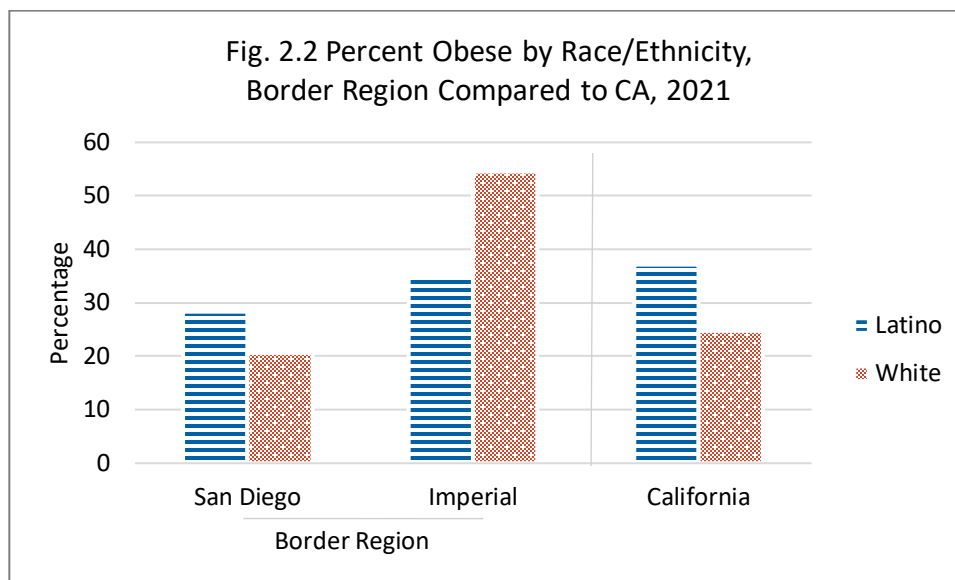
The California border region, like the rest of the state, has experienced an increase in obesity rates. Obesity is associated with various health risks including some of the leading causes of death in the United States (U.S.) and worldwide, such as diabetes, heart disease, stroke, and some types of cancer (NIH, 2013). Various behavioral, societal, and environmental factors are associated with obesity, such as caloric intake, physical inactivity, education, and genetics (Centers for Disease Control and Prevention (CDC, 2022)). The most common estimator of body fat is the body mass index (BMI). For adults, a BMI between 25 and 29.9 kg/m² is categorized as overweight, and a BMI of 30 kg/m² or above is categorized as obese (NIH, 2022).

Data for adults from 2021 indicated the prevalence of obesity in San Diego County to be 22%, whereas the percent of obesity in Imperial County was 39%. This level highly increased when overweight and obesity were combined; the level for San Diego County increased to 58%, and for Imperial increased to 77%. The percent of obesity in California was higher than that of San Diego County and lower than the percent of obesity of Imperial County (Fig. 2.1) (CHIS, 2021).



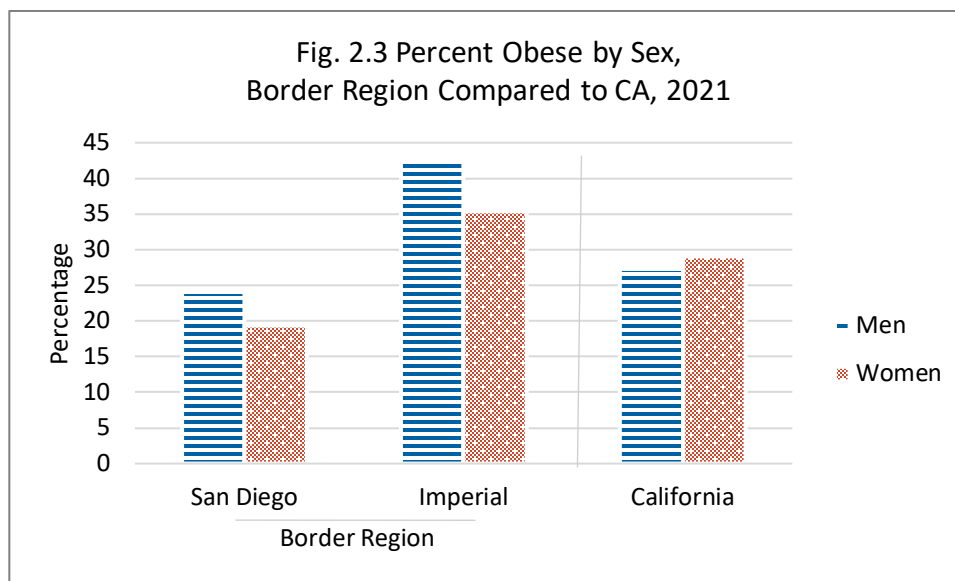
Source: California Health Interview Survey, 2021

Differences by race/ethnicity existed among obese adults in San Diego and in California in 2021. In San Diego County, 28% of the Latino population was obese, as compared with only 21% of the White population. In Imperial County, 35% of the Latino population was obese, as compared with 54.5% of the White population. Sample size for obese Whites is small and statistically unstable, so strong conclusions can't be drawn. In California statewide, 37% of the Latino population was obese, as compared with 25% of the White population (Fig. 2.2) (CHIS, 2021).



Source: California Health Interview Survey, 2021

Compared with men, women had a slightly higher rate of obesity in California. However, a more substantial difference between sexes was observed in Imperial County and San Diego County. For Imperial County, 43% of men were obese, as compared with 35% of women. In San Diego County, 24% of men were obese, as compared with 19% of women. Overall, women in San Diego County had a lower percent of obesity than those statewide, while women in Imperial County had a higher percent compared to statewide estimates (Fig. 2.3) (CHIS, 2021).

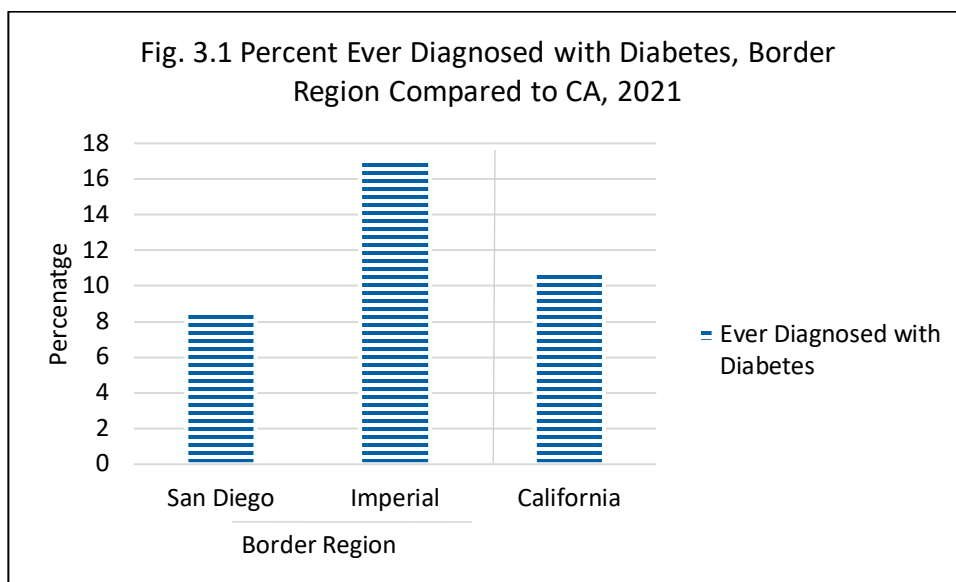


Source: California Health Interview Survey, 2021

Diabetes

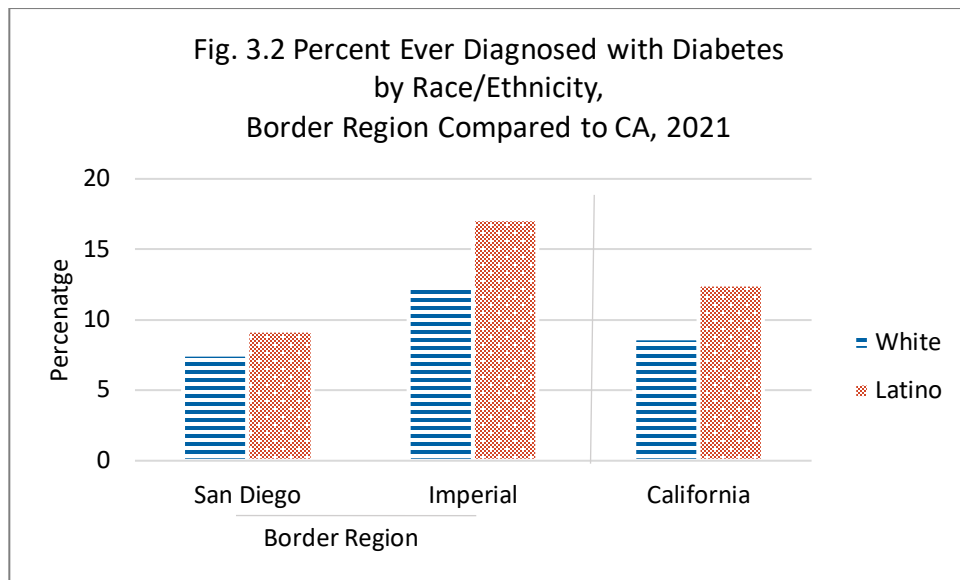
The border counties, particularly Imperial County, have among the highest diabetes rates in the State of California. Risk factors for type 2 diabetes, such as obesity and a lack of physical activity are preventable and should be the focus of diabetes primary prevention programs. In the U.S. and California, Latinos, Blacks, American Indians, and Pacific Islanders have a higher risk of type 2 diabetes (Dysted et al, 2021).

According to CHIS data from 2021, 8.5% of adults in San Diego County had ever been diagnosed with diabetes, as compared with 17% in Imperial County and 10.8% in California (CHIS, 2021) (Fig. 3.1).



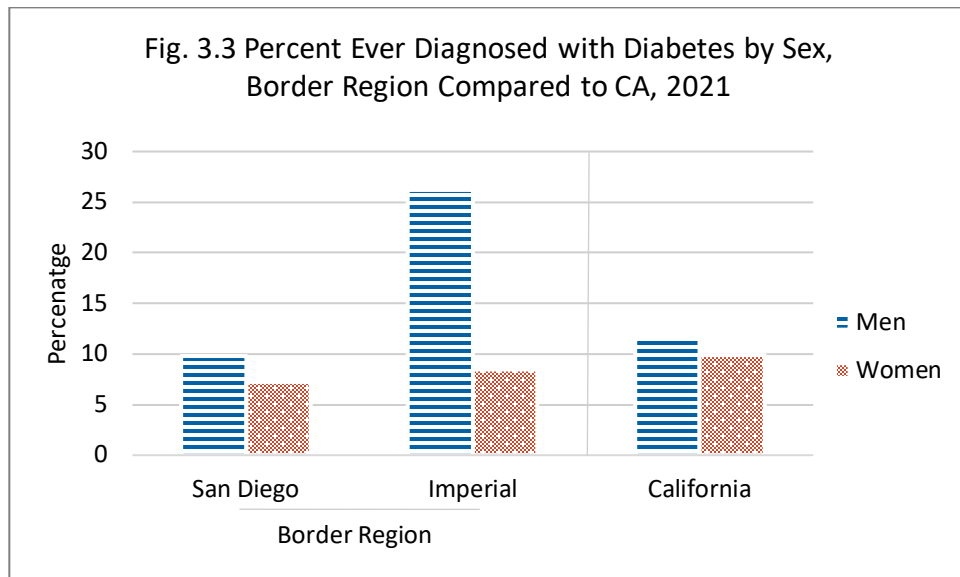
Source: California Health Interview Survey, 2021

Differences in race/ethnicity existed among adults diagnosed with diabetes in the California border region. The Latino population had a consistently higher rate of diabetes than the White population. In San Diego County, 9.2% of Latinos and 7.5% of Whites had ever been diagnosed with diabetes. Meanwhile, in Imperial County, 17.1% of Latinos and 12.5% of Whites had ever been diagnosed with diabetes. The same was true for California, where 12.5% of Latinos and 8.7% of Whites had ever been diagnosed with diabetes (Fig. 3.2) (CHIS, 2021).



Source: California Health Interview Survey, 2021

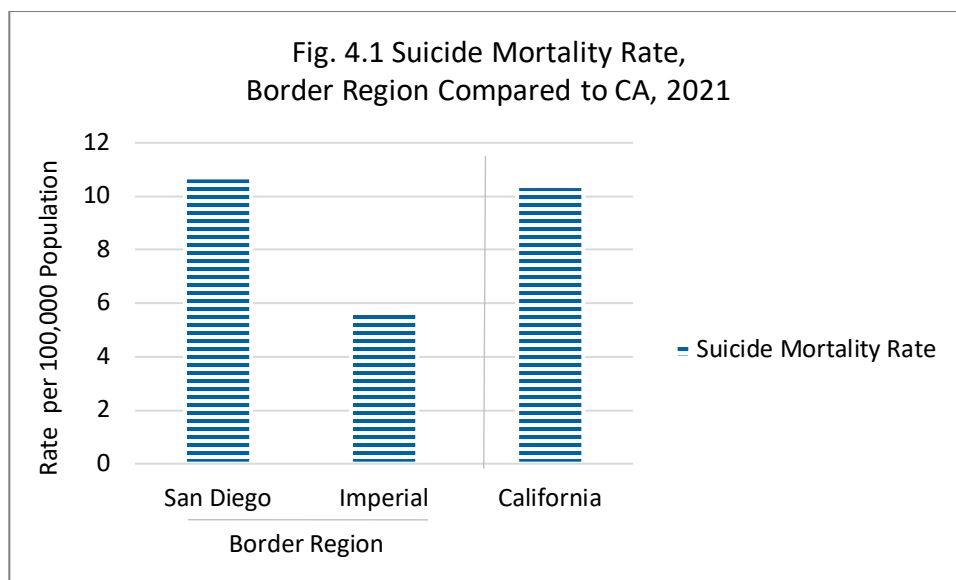
Compared to women, a higher percent of men had been diagnosed with diabetes in San Diego and in California in 2021. In San Diego County, 9.8% of men had ever been diagnosed with diabetes, as compared with 7.2% of women. Meanwhile, in Imperial County, 26.2% of men had ever been diagnosed with diabetes, as compared with 8.5% of women. In California statewide, 11.7% of men had ever been diagnosed, as compared with 9.9% of women (Fig. 3.3) (CHIS, 2021).



Source: California Health Interview Survey, 2021

Suicide

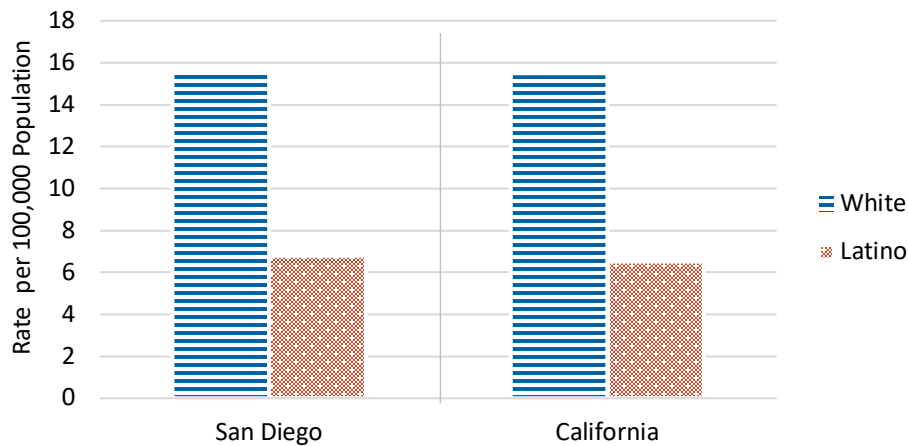
Suicide is a serious but preventable public health problem that can have lasting harmful effects on individuals, families, and communities (CDC, 2021). According to EpiCenter-California Injury Data, the rate of suicide in California was 10.4 suicides per 100,000 population in 2021 (4,147 cases). The suicide mortality rate in San Diego County was 10.7 suicides per 100,000 population (357 cases). Meanwhile, the suicide rate in Imperial County was 5.7 suicides per 100,000 population (11 cases) (Fig. 4.1) (CDPH, 2021). The border counties and California have achieved the Healthy People 2030 goal of a rate below 12.8 suicides per 100,000 population (Healthy People 2030, 2021).



Source: EpiCenter, California Injury Data, 2021

Differences in race/ethnicity exist among adults who died by suicide in the California border region. The White population had a consistently higher rate of suicide than the Latino population. In San Diego County, Latinos had a rate of 6.8 per 100,000 (78 cases), as compared with Whites with a rate of 15.6 per 100,000 (239 cases). In California, Latinos had a rate of 6.5 per 100,000 (1,027 cases), and Whites had a rate of 15.5 per 100,000 (2,364 cases) (Fig. 4.2) (CDPH, 2020). In Imperial County, the number of cases for each race were <11, and therefore are subject to California Health and Human Services data de-identification guidelines, meaning they couldn't be displayed.

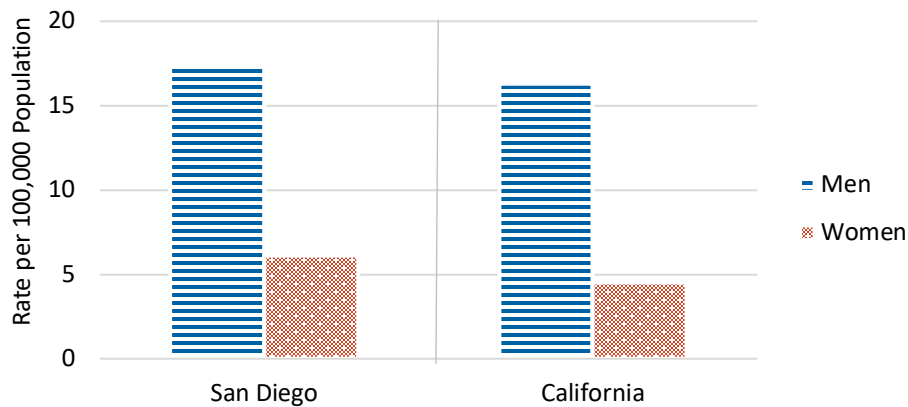
Fig. 4.2 Suicide Mortality Rate by Race/Ethnicity, Border Region Compared to CA, 2021



Source: EpiCenter, California Injury Data, 2021

Compared with women, men had a greater proportion of suicide in the border region and in California. In San Diego County, the rate of suicide in men was 17.4 per 100,000 (236 cases), as compared with 6.1 per 100,000 in women (81 cases). California had a similar trend with a suicide rate of 16.3 per 100,000 in men (3,255 cases), as compared with 4.5 per 100,000 in women (891 cases) (Fig. 4.3) (CDPH, 2021). In Imperial County, the number of cases for each sex were <11, and therefore are subject to California Health and Human Services data de-identification guidelines, meaning they couldn't be displayed.

Fig. 4.3 Suicide Mortality Rate by Sex, Border Region Compared to CA, 2021



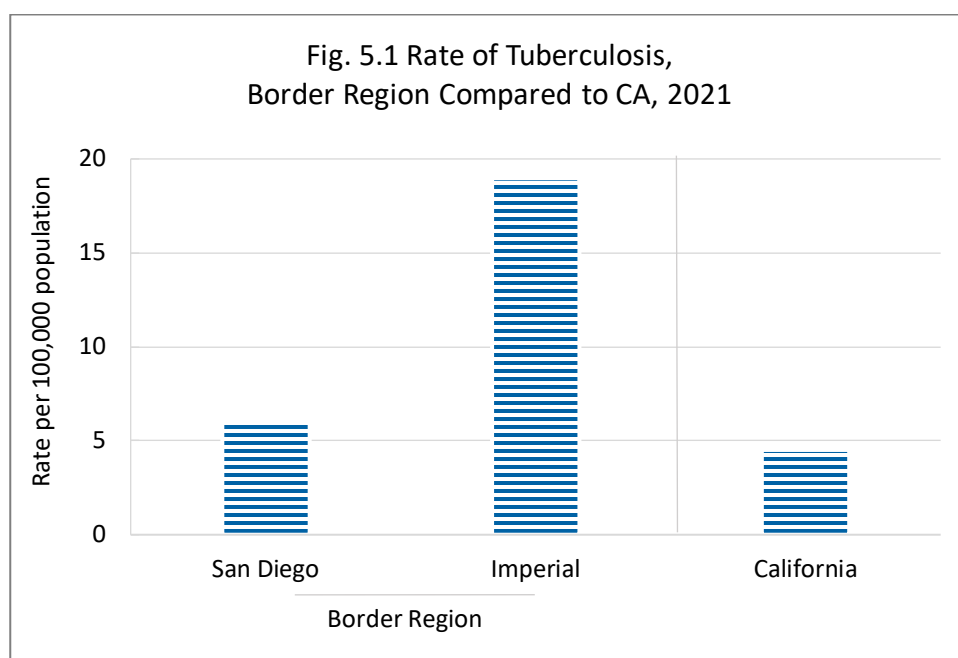
Source: EpiCenter, California Injury Data, 2021

Tuberculosis

In 2021, California reported 1,750 new TB cases, a 2.5% increase compared with 1,706 cases in 2020. California's case rate (4.5 cases per 100,000) remained higher than the national case rate (2.4 per 100,000 in 2021) (CDC, 2021). In 2021, California reported the most TB cases out of any state in the United States, accounting for 22% of all cases reported (CDC, 2021).

The majority of TB in California, approximately 86%, results from progression of latent TB infection (LTBI) to active TB. Identification and treatment of TB infection is vital to reducing the TB burden in the state. CDPH, in collaboration with local and national partners, continues to devote resources to increase testing and treating persons for TB infection, especially among high-risk groups. These efforts aim to reduce the risk of progression to TB disease, reduce health disparities, and speed progress towards TB elimination in the state (CDPH, 2023).

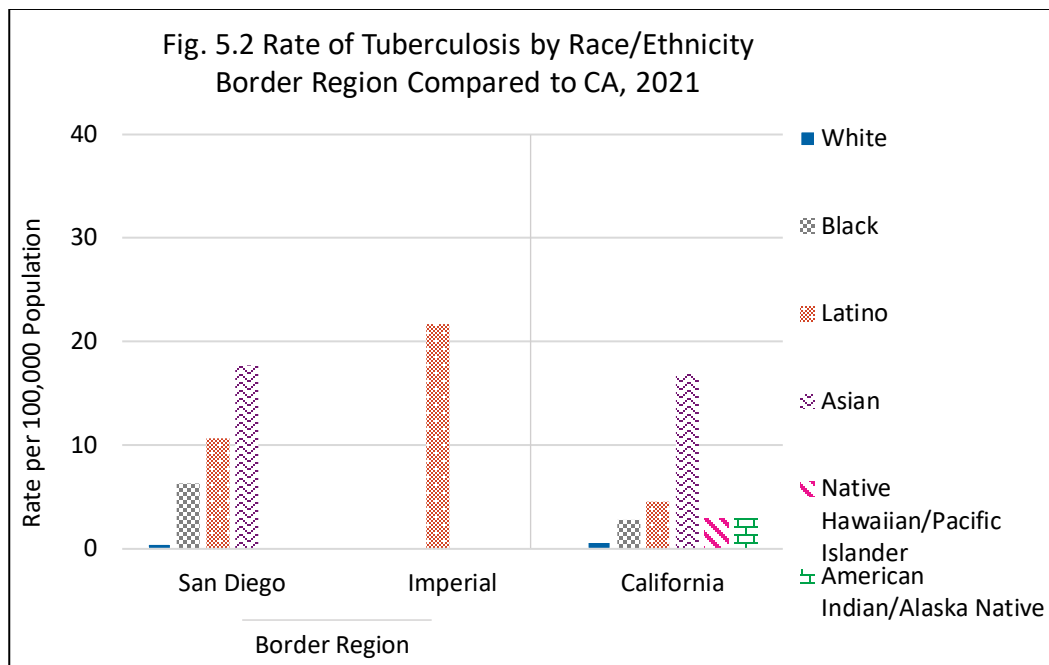
California border counties bear a substantial portion of the state's TB burden, contributing 13% of reported TB cases in 2021. During this time, Imperial County reported a case rate of 19.0 per 100,000 (34 cases). San Diego County reported a case rate of 6.1 per 100,000 (201 cases). Both counties reported a higher rate than that of California (Fig. 5.1) (CDPH, 2020).



Source: California Department of Public Health, TB Control Branch, 2021

Differences in race/ethnicity existed among cases of TB in the California border region. In San Diego County, Asian-American people had the highest rate of infection with a rate of 18 per 100,000, as compared with Latino people, with a rate of 11 per 100,000, and White people, with a rate of 0.5 per 100,000. In Imperial County, Latino people had a rate of 22 per 100,000. There is insufficient data for other sub-groups in Imperial County to be accurately represented. The race disparity persisted on the state level with Asian-American people having the highest rate, 17 per 100,000, as compared with Latino people, with a rate of 5 per 100,000, and White people, with a rate of 0.6 per 100,000.

Please note TB case rates are not shown on Figure 5.2 if the number of cases in that race/ethnicity group was less than five (Fig. 5.2) (CDPH, 2021).

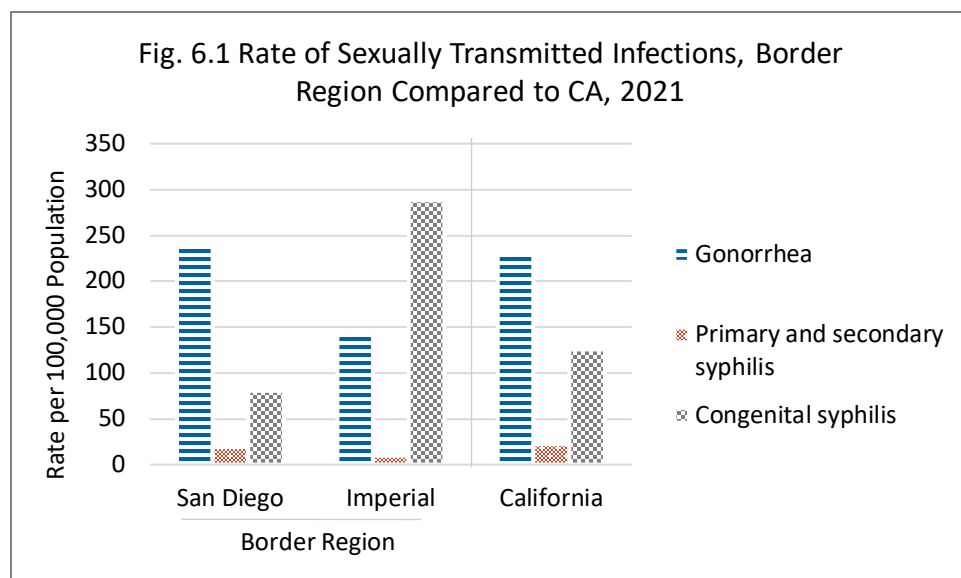


Source: California Department of Public Health, TB Control Branch, 2021

Sexually Transmitted Infections

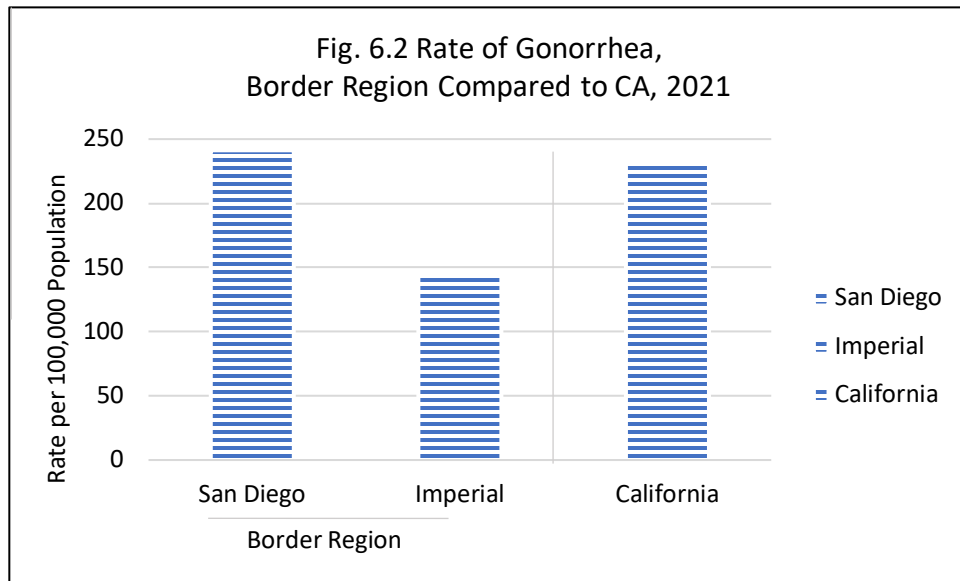
Sexually transmitted infections (STIs) represent a significant disease burden throughout California and its southern border region. In the past five years, the rates for STIs have increased in the United States and California, as well as the California border region. STIs can generally be treated and cured if diagnosed early; however, STIs often do not cause symptoms. Consequently, there is a high probability of individuals not seeking proper treatment, thus potentially leading to serious health complications. Moreover, because STIs are often asymptomatic and their identification is dependent on screening, the true burden of disease is many times greater than the actual number of reported cases (Satterwhite et al., 2013). Furthermore, some STI cases have demonstrated resistance to antibiotics, and the amount of antibiotic resistant STI cases is expected to continue to increase. This report will discuss the burden of two reportable bacterial STIs in Imperial and San Diego counties: gonorrhea and syphilis (primary, secondary, and congenital), which are among the most reported STIs in California and the U.S.

Data from 2021 are displayed below. We examine each category according to the number of cases and rates in the following graphs (Fig. 6.1) (CDPH, 2021).



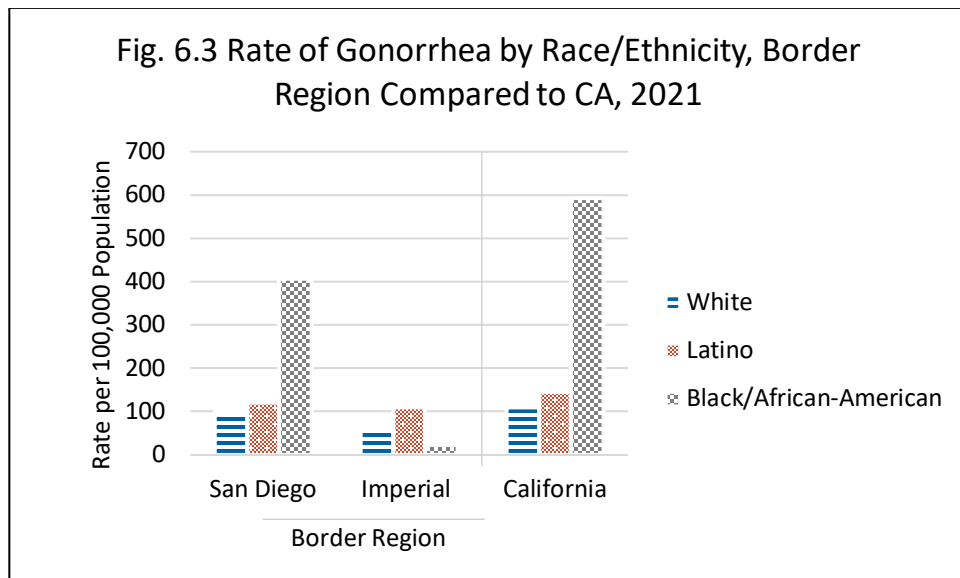
Source: California Department of Public Health, STD Control Branch, 2021

In San Diego County, the rate for gonorrhea was 241 per 100,000 (7,934 cases); meanwhile, in Imperial County, it was 143.5 per 100,000 (254 cases). The rate in California, (231 per 100,000 (90,890)) was lower slightly lower than San Diego but higher than Imperial (Fig. 6.2) (CDPH, 2021).



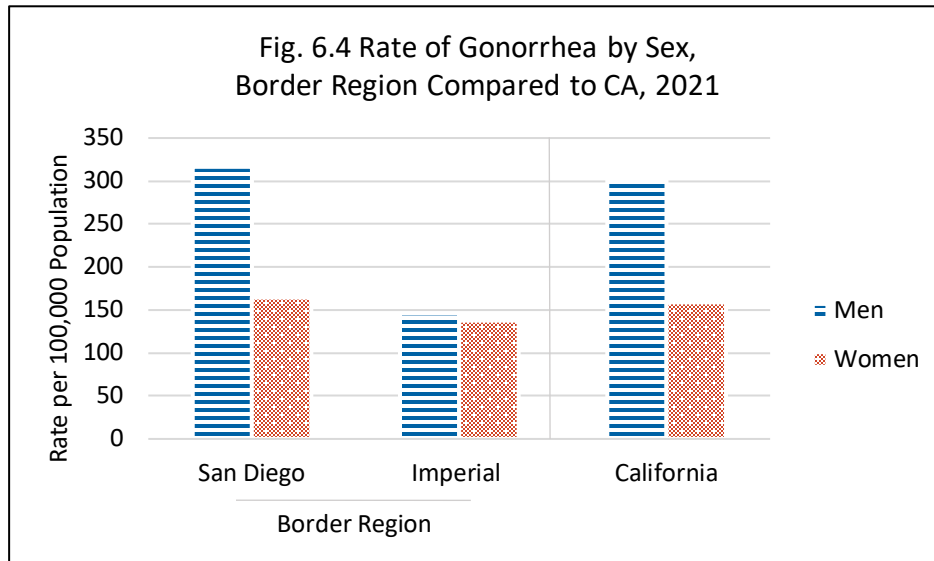
Source: California Department of Public Health, STD Control Branch, 2021

In 2021, the Black population in San Diego County and California had higher rates of gonorrhea than the White and Latino populations. In San Diego County, Blacks had a rate of 406.5 per 100,000 (645 cases) and in California had a rate of 592 per 100,000 (13,389 cases). The White population in Imperial County had a higher rate of gonorrhea than the Latino population (Fig. 6.3) (CDPH, 2021).



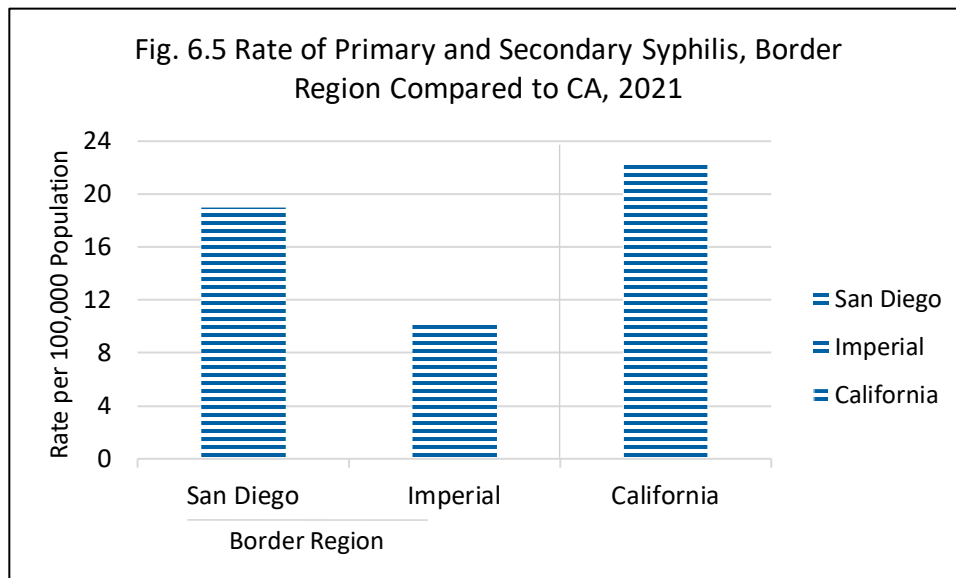
Source: California Department of Public Health, STD Control Branch, 2021

Compared with women during 2021, men had a higher rate of gonorrhea in San Diego County, California, and Imperial County. In San Diego County, the rate was 316.5 per 100,000 (5,247 cases) among men and 165 per 100,000 (2,684 cases) among women; in Imperial County, the rate was 146 per 100,000 (131 cases) among men and 138 per 100,000 (120 cases) among women. In California, the rate was 302 per 100,000 (59,306 cases) among men and 158 per 100,000 (31,248 cases) among women (Fig. 6.4) (CDPH, 2021).



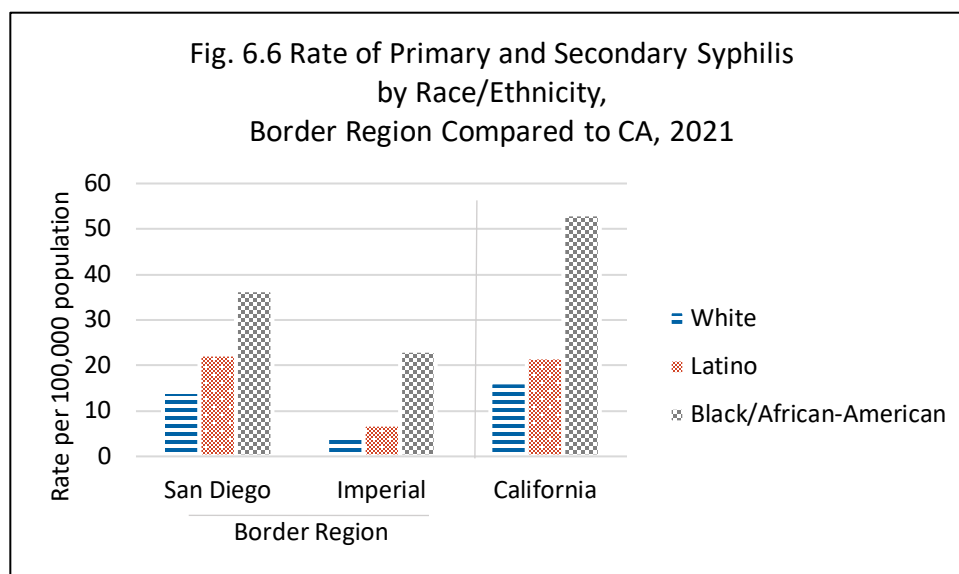
Source: California Department of Public Health, STD Control Branch, 2021

During 2021, the rate of primary and secondary syphilis in San Diego County was 19 per 100,000 (624 cases). Imperial County had a rate of 10 per 100,000 (18 cases), and California had a rate of 22 per 100,000 (8,770 cases) (Fig. 6.5) (CDPH, 2021).



Source: California Department of Public Health, STD Control Branch, 2021

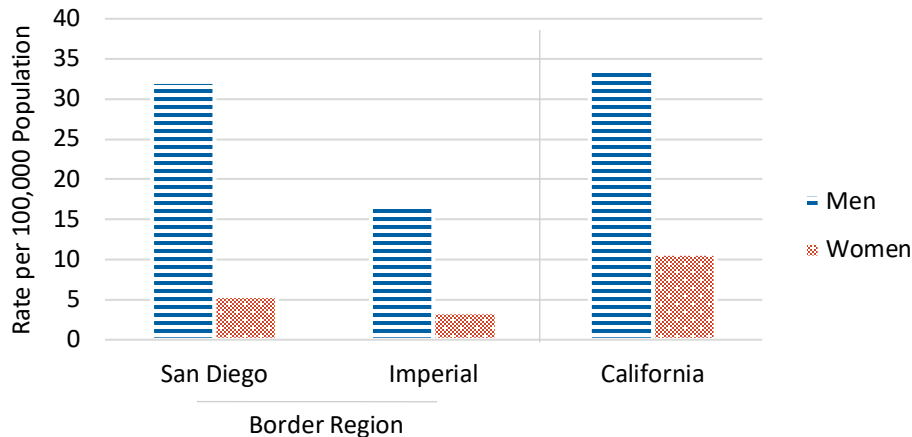
Rates of primary and secondary syphilis in San Diego County and California were higher in Blacks than those among the White and Latino populations. In 2021, in San Diego County, Blacks had a rate of 37 per 100,000 (58 cases), Latinos had a rate of 22 per 100,000 (253 cases), and Whites had a rate of 14 per 100,000 (213 cases). In Imperial County, the rate for Latinos was 7 per 100,000. There was not a statistically significant number of reported cases of primary and secondary syphilis among Blacks and Whites in Imperial County. As compared with the rate in California of 53 per 100,000 (1,206 cases) among Blacks, the rate for Latinos was 22 per 100,000 (3,393 cases), and for Whites was 16 per 100,000 (2,447 cases) (Fig. 6.6) (CDPH, 2021).



Source: California Department of Public Health, STD Control Branch, 2021

During 2021, men had a higher rate than women of primary and secondary syphilis in the border region and California. In San Diego County, the rate among men was 32 per 100,000 (532 cases), and the rate among women was 5.5 per 100,000 (89 cases). In Imperial County, the rate among men was 17 per 100,000 (15 cases), and that among women was 3 per 100,000 (3 cases). In California, the rate among men was 34 per 100,000 (6,651 cases) and the rate among women was 11 per 100,000 (2,102 cases) (Fig. 6.7) (CDPH, 2021).

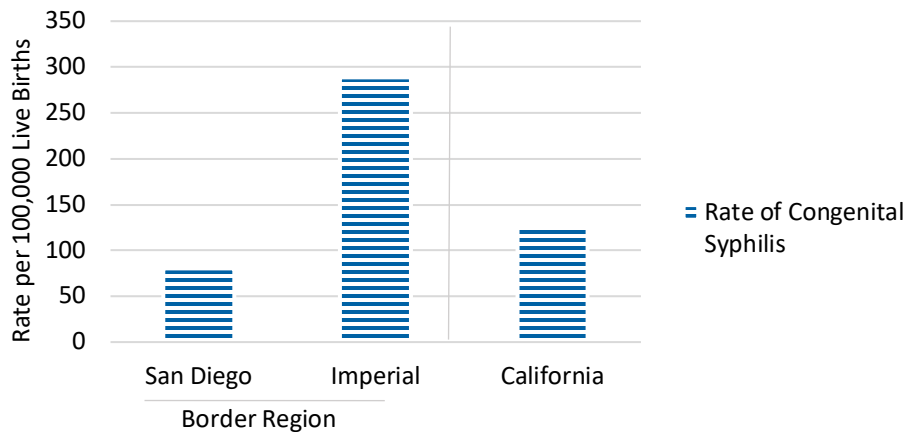
Fig. 6.7 Rate of Primary and Secondary Syphilis by Sex, Border Region Compared to CA, 2021



Source: California Department of Public Health, STD Control Branch, 2021

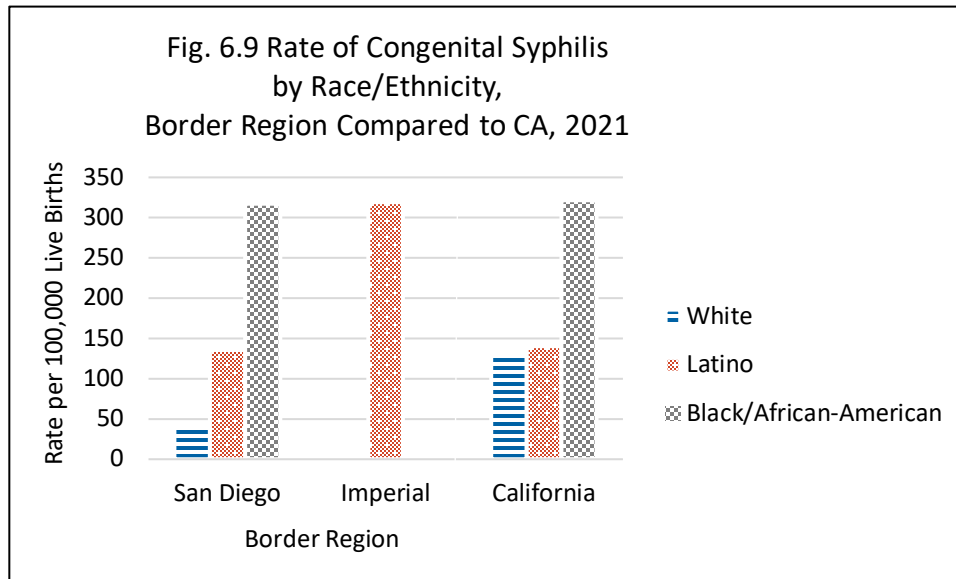
The rates for congenital syphilis in the California border region and in California have been increasing in the past five years. In 2021, the rate was 80.5 per 100,000 live births (30 cases) in San Diego County. Imperial County had a rate of 288.5 per 100,000 (7 cases). California had a rate of 126 per 100,000 (528 cases) (Fig. 6.8) (CDPH, 2021). The rates in San Diego County, Imperial County, and California were greater than the Healthy People 2030 goal of fewer than 33.9 new cases per 100,000 live births for congenital syphilis (Healthy People 2030, 2021).

Fig. 6.8 Rate of Congenital Syphilis, Border Region Compared to CA, 2021



Source: California Department of Public Health, STD Control Branch, 2021

In a comparison by race/ethnicity, the rates of congenital syphilis were higher among Blacks than Latinos and Whites in San Diego County and California. There were no reported cases among Blacks or Whites in Imperial County (Fig. 6.9) (CDPH, 2021).

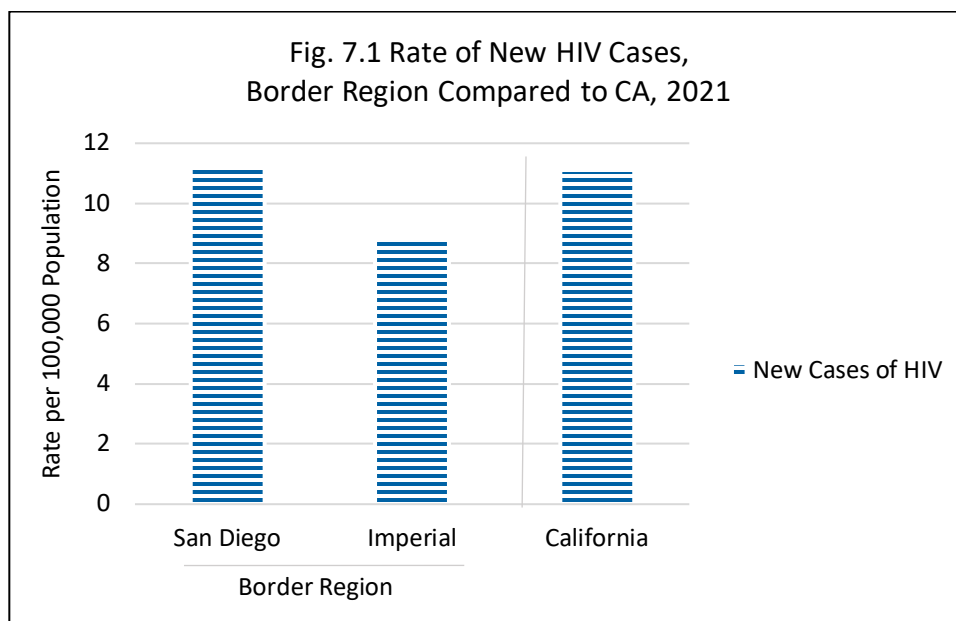


Source: California Department of Public Health, STD Control Branch, 2021

HIV/AIDS

During 2021, both border counties and California had a similar rate of new HIV cases. In this chapter, two types of data are presented: new (incident) HIV cases for 2021, and total number of individuals living with HIV up to the end of 2021.

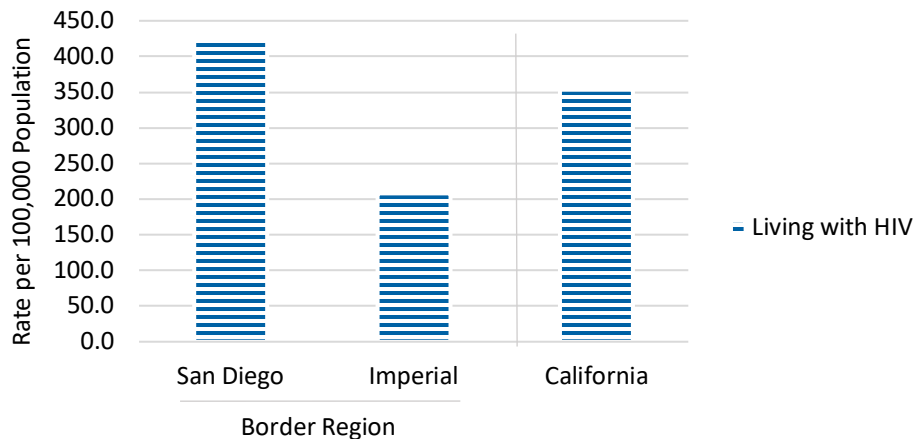
Data from 2021 indicate that the rate for new cases of HIV was 11 per 100,000 (379 cases) among adults in San Diego County; meanwhile, in Imperial County, the rate was 9 per 100,000 (17 cases), as compared with the California rate of 11 per 100,000 (4,444 cases) (Fig. 7.1) (CDPH, 2021).



Source: California Department of Public Health, Office of AIDS, 2021

The rate of cases living with HIV in San Diego County was 423 per 100,000 (14,133 cases) and in Imperial County was 208 per 100,000 (399 cases). California had a rate of 353 per 100,000 (141,001 cases) living with HIV (Fig. 7.2) (CDPH, 2021).

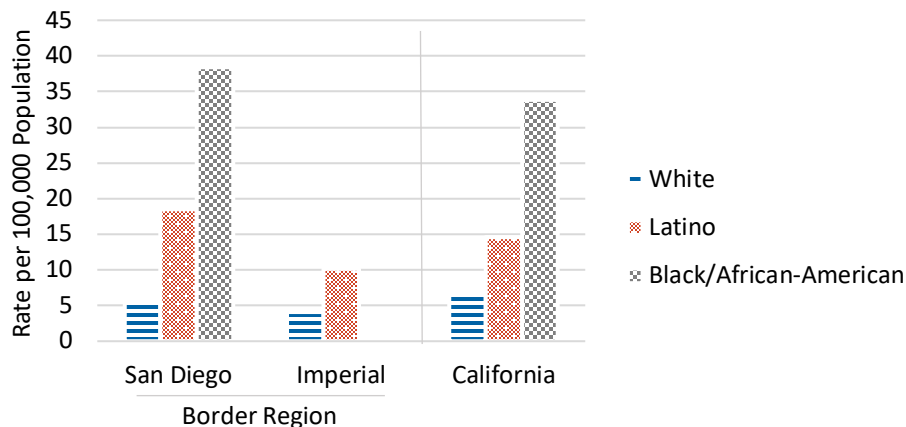
Fig. 7.2 Rate of Diagnosed Persons Living with HIV/AIDS, Border Region Compared to CA, 2021



Source: California Department of Public Health, Office of AIDS, 2021

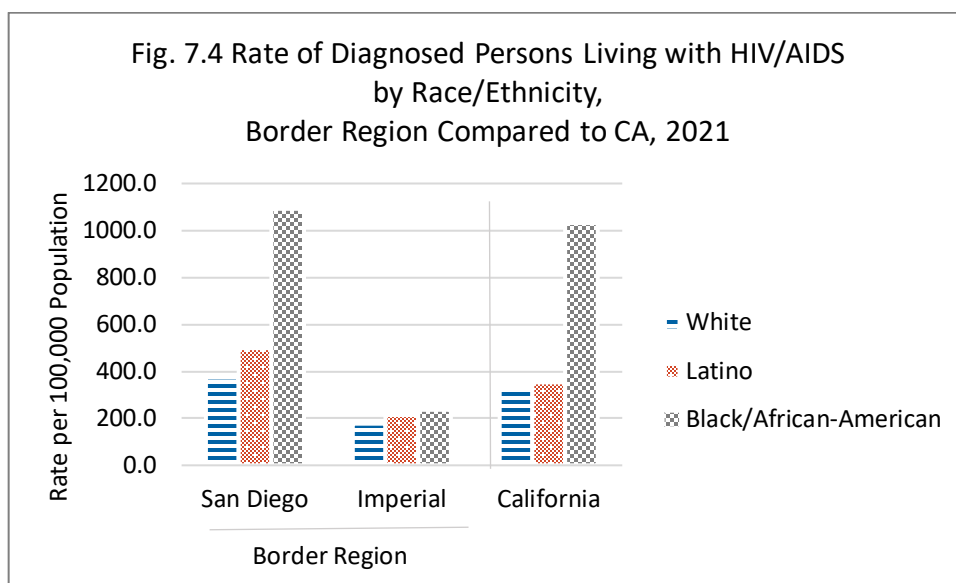
Differences in race/ethnicity existed among new cases of HIV in the California border region. In San Diego County, Blacks had a rate of 38 per 100,000 (62 cases), as compared with Latinos, with a rate of 18.5 per 100,000 (213 cases), and Whites, with a rate of 5.5 per 100,000 (84 cases). In Imperial County, the Latino population had a rate of 10 per 100,000 (16 cases). There were no new cases reported in the Black population in Imperial County, while the White population had a rate of 4.1 per 100,000. In California, the race/ethnicity disparity persisted: Blacks had a rate of 34 per 100,000 (777 cases), Latinos had a rate of 15 per 100,000 (2,307 cases), and Whites had a rate of 6.6 per 100,000 (1,009 cases) (Fig. 7.3) (CDPH, 2021).

Fig. 7.3 Rate of New HIV Cases by Race/Ethnicity, Border Region Compared to CA, 2021



Source: California Department of Public Health, Office of AIDS, 2021

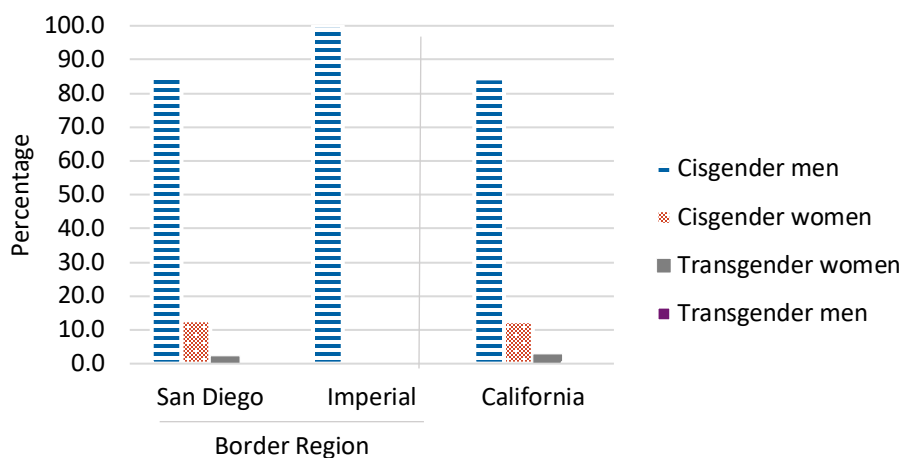
Differences in race/ethnicity existed among cases living with HIV in the California border region. In San Diego County, Blacks had a rate of 1,092 per 100,000 (1,762 cases), as compared with Latinos, with a rate of 499 per 100,000 (5,736 cases), and Whites, with a rate of 373 per 100,000 (5,724 cases). In Imperial County, Latinos had a rate of 215 per 100,000 (338 cases), as compared with Blacks which had a rate of 236.4 per 100,000 (11 cases), and Whites, with 177.5 per 100,000 (43 cases). In California, the Black population had the highest rate of 1032 per 100,000 (23,683 cases), as compared with Whites, with 327 per 100,000 (49,740 cases), and Latinos had a rate of 352 per 100,000 (55,629 cases) (Fig. 7.4) (CDPH, 2021).



Source: California Department of Public Health, Office of AIDS, 2021

In 2021, cisgender men had a greater proportion than cisgender women of new cases of HIV in the border region and California. In San Diego County, 85% of new cases were among cisgender men (321 cases) and 13% were among cisgender women (48 cases). In Imperial County, 100% of new cases of HIV were among cisgender men (17 cases). In California, 84.5% of new cases were among cisgender men (3,753 cases) and 12% were among cisgender women (552 cases). In the border region, there were fewer than 10 new cases of HIV among transgender women; in California, there were 125 new cases in the transgender women population, which represented approximately 2.8% of the total cases (Fig. 7.5) (CDPH, 2021).

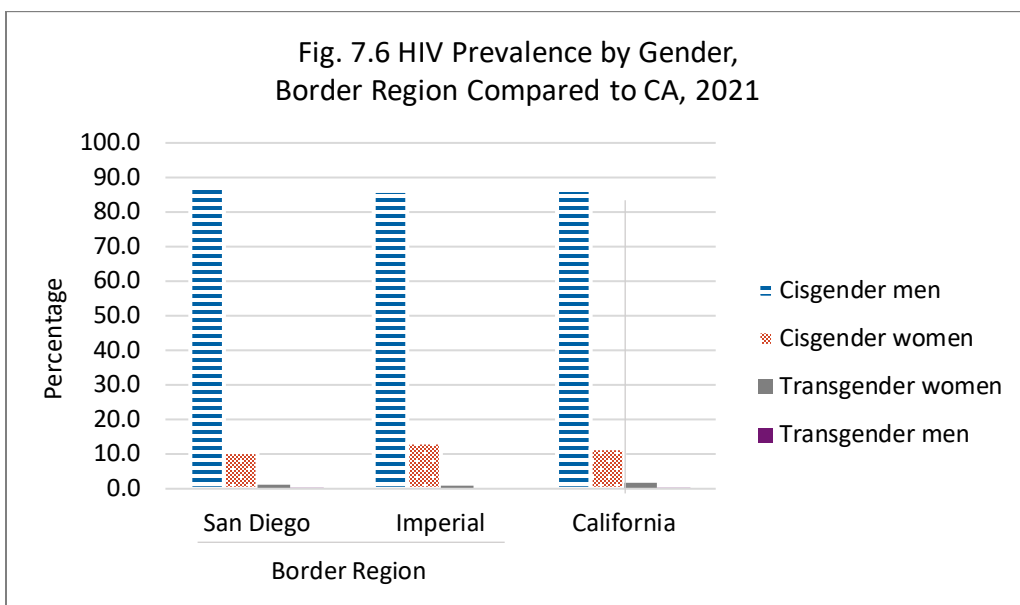
Fig. 7.5 Proportion by Gender Among New HIV Cases, Border Region Compared to CA, 2021



Source: California Department of Public Health, Office of AIDS, 2021

In 2021, cisgender men had a greater proportion than cisgender women of cases living with HIV in the border region and in California. In San Diego County, 88% of cases living with HIV were among cisgender men (12,455 cases) and 10.5% were among cisgender women (1,484 cases). In Imperial County, 86% of cases living with HIV were among cisgender men (343 cases) and 13% were among cisgender women (53 cases). As compared with the findings for California, where 86.5% of cases living with HIV was among the cisgender men population (122,021 cases). For the transgender women population, the proportion was less than 2% of the cases for the California border region and California (Fig. 7.6) (CDPH, 2021).

Fig. 7.6 HIV Prevalence by Gender, Border Region Compared to CA, 2021



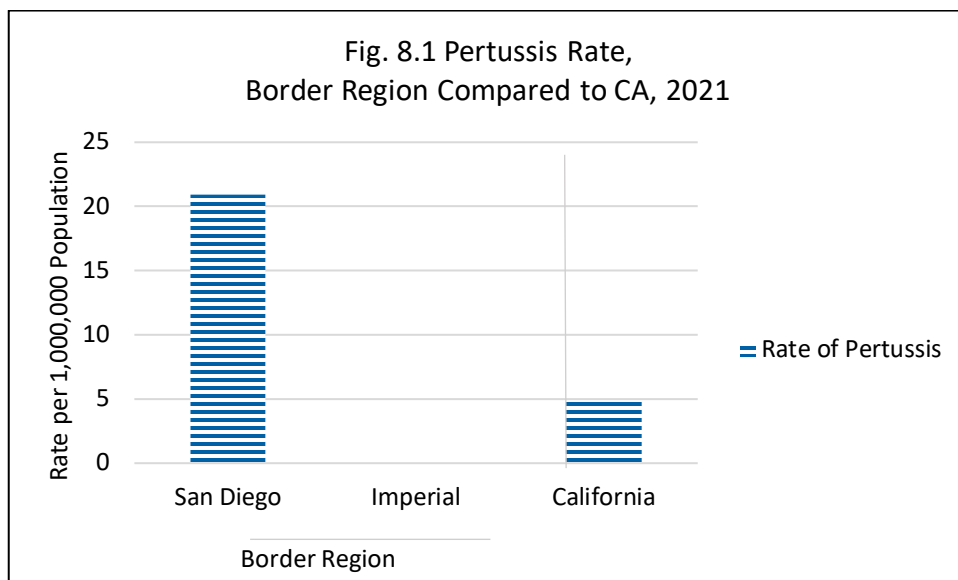
Source: California Department of Public Health, Office of AIDS, 2021

Vaccine Preventable Diseases

In the California border region, maintaining high rates of vaccination is vital to provide better control of communicable diseases, given the dynamic population mobility characteristic of the region. Immunization is one of the best ways to prevent dangerous or even potentially lethal infectious diseases. Vaccines have prevented millions of deaths worldwide. California has experienced two major outbreaks of pertussis within the past fifteen years (2010 and 2014), which resulted in hospitalizations and infant deaths. In 2014, there was a large measles outbreak in California associated with a theme park. Measles is a highly preventable disease but continues to affect many Americans today. These highly contagious yet preventable diseases are still prevalent in the U.S. and continue to remain on the radar of health departments. This report will discuss the burden of these two vaccine-preventable diseases (pertussis and measles) in the border region and California.

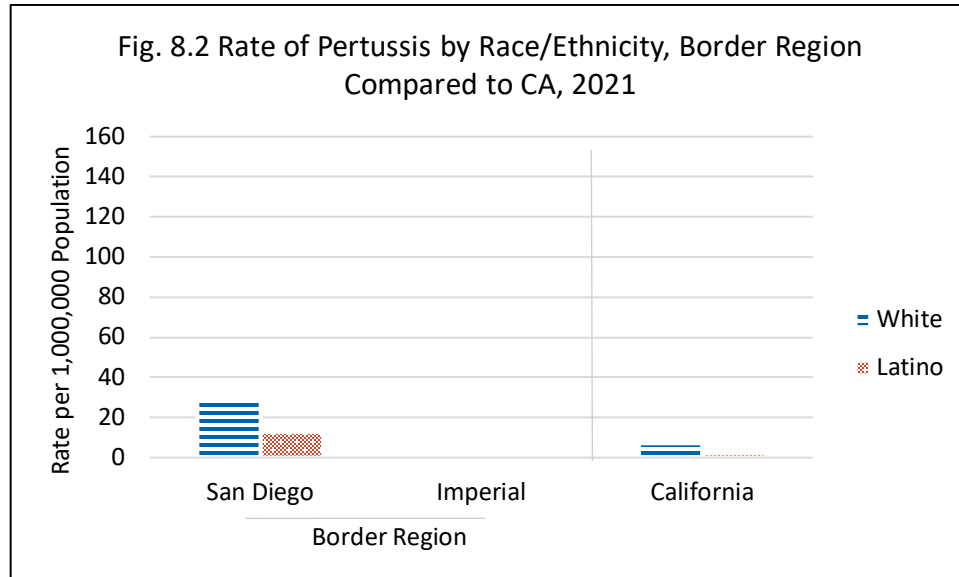
In 2021 in San Diego County, the pertussis rate was 20.9 per 1,000,000* (70 cases) and Imperial County had no cases. In California the pertussis rate was 4.8 per 1,000,000 (193 cases) (Fig. 8.1) (CDPH, 2021).

*The rate for vaccine-preventable disease was calculated per 1,000,000 population.



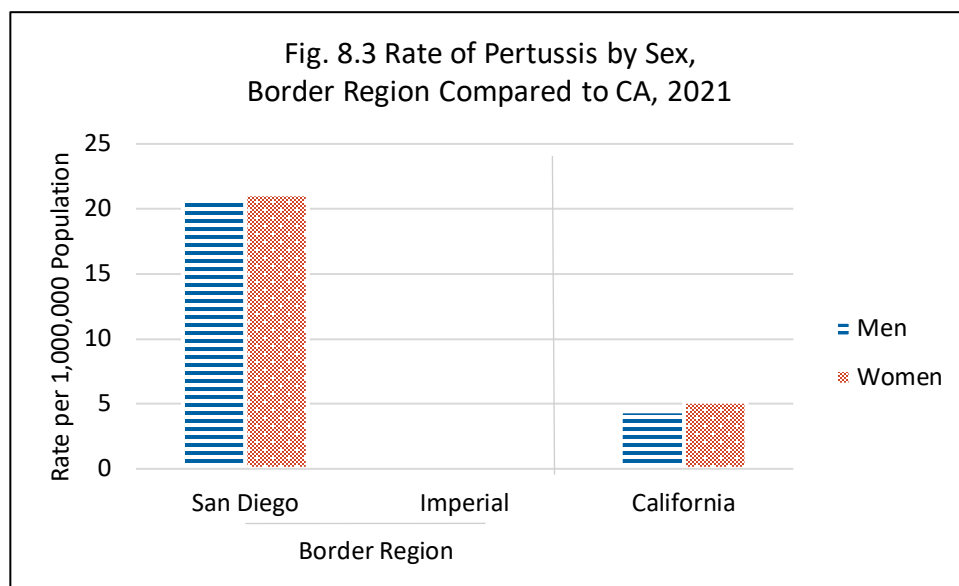
Source: California Department of Public Health, Immunization Branch, 2021

A comparison by race/ethnicity indicated that in San Diego County, the rate of pertussis for Whites was 29.9 per 1,000,000 (43 cases); for Latinos, the rate was 13 per 1,000,000 (15 cases). Imperial county did not report any cases. In comparison with the border region, California had a rate of 6.9 per 1,000,000 among Whites (96 cases) and 2.4 per 1,000,000 among Latinos (38 cases) (Fig. 8.2) (CDPH, 2021).



Source: California Department of Public Health, Immunization Branch, 2021

In a comparison by sex, the rates were similar for men and women; in California, men had a rate of 4.4 per 1,000,000 (88 cases); for women, the rate was 5.2 per 1,000,000 (105 cases). Imperial county did not report any cases. In San Diego County, the rate for men was 20.8 per 1,000,000 (35 cases); and that for women was 21.1 per 1,000,000 (35 cases) (Fig. 8.3) (CDPH, 2021).



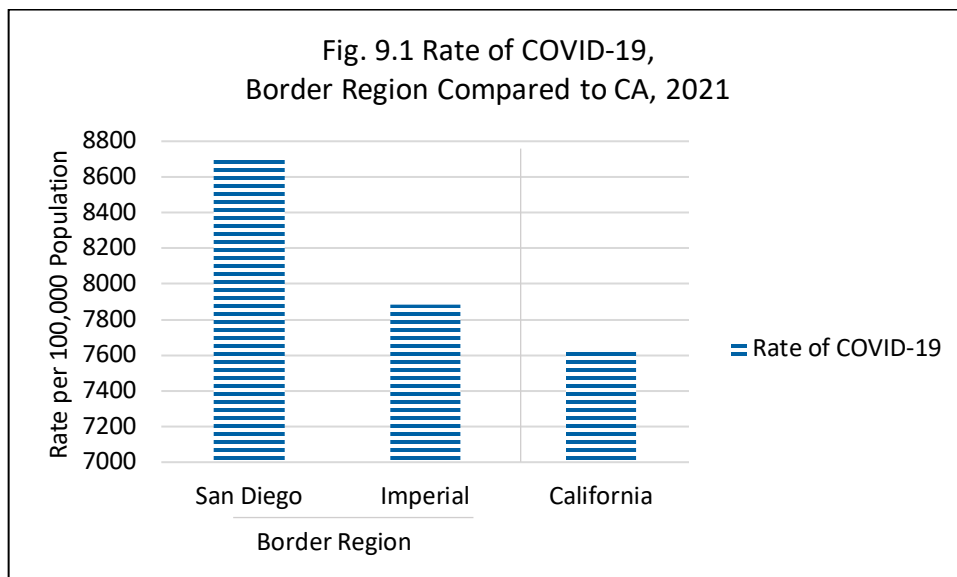
Source: California Department of Public Health, Immunization Branch, 2021

In 2021, there were no cases of measles in San Diego County, Imperial County, and California (CDPH, 2021). No graphs are shown for rates of measles given there were no measles cases reported.

COVID-19

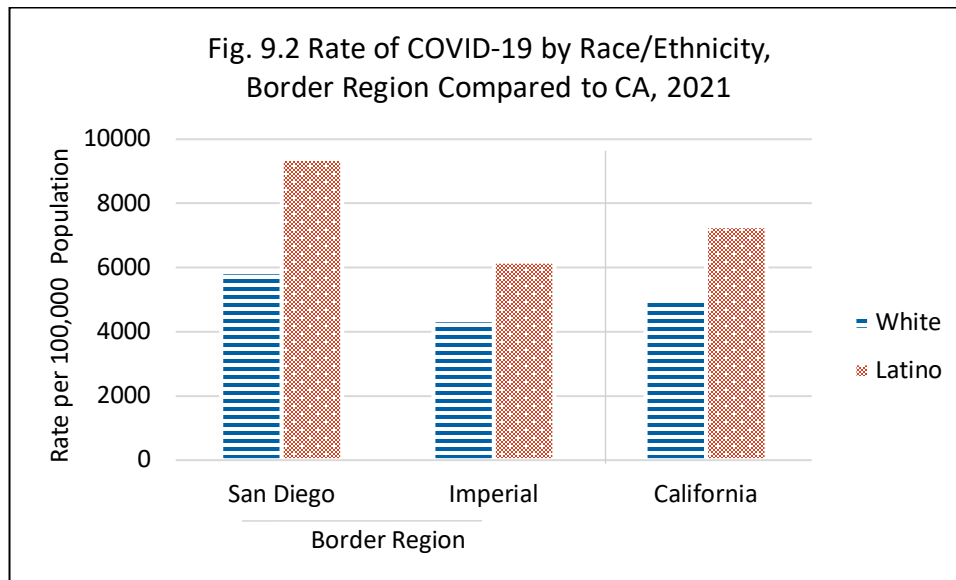
In 2020, the virus responsible for coronavirus disease 19 (COVID-19) spread worldwide resulting in a pandemic of unprecedented proportions. Through the end of 2022, the ongoing COVID-19 pandemic had resulted in over 732 million cases globally (WHO, 2023). COVID-19 causes respiratory symptoms which can be mild for some, but severe for others. Older adults and those with certain underlying medical conditions are most at risk. The virus has also disproportionately affected racial and ethnic minority groups, highlighting the role that social determinant of health play in the spread and burden of this disease. COVID-19 can affect most body systems including heart, lung, kidney, skin, and brain functions and in some cases can lead to long-term effects. Early in the pandemic, public health measures such as lockdowns, facial coverings, and physical distancing were key to controlling the virus. Emergency use authorization for the first COVID-19 vaccine was granted in December 2020 by the Food and Drug Administration (FDA). Vaccines against COVID-19 are safe and effective, and at the time of writing, are now approved for use in adults and children 6 months and older in the U.S. This report will discuss the burden of COVID-19 in the border region and California in 2021.

In 2021, California had a COVID-19 rate of 7,617 per 100,000 (3,056,835 cases). In the border region, San Diego County had a rate of 8,699 per 100,000 (293,192 cases), whereas in Imperial County the rate was lower at 7,885 per 100,000 (15,113 cases) (Fig. 9.1) (CDPH, 2021).



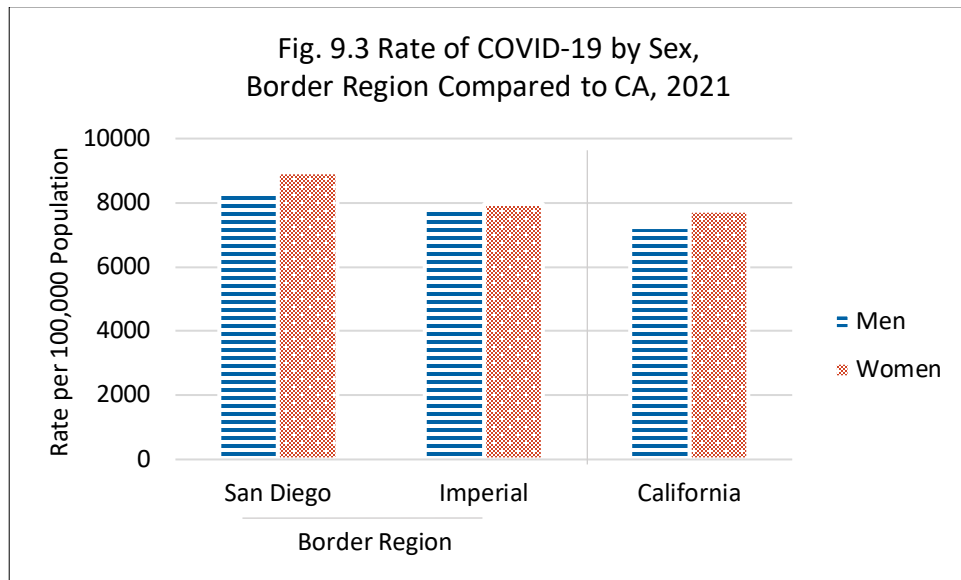
Source: California Department of Public Health, Coronavirus Science Branch, 2021

A comparison by race/ethnicity throughout the border region and California exemplifies the disproportionate risk of COVID-19 cases in the Latino population. In San Diego County, the rate of COVID-19 for the White population was 5,847 per 100,000 (88,177 cases); whereas for the Latino population, the rate was 9,380 per 100,000 (103,667 cases). In Imperial County, the rate for Latino persons was 6,197 per 100,000 (9,958 cases); for White persons, the rate was 4,353 per 100,000 (945 cases). Similarly, California had a rate of 7,291 per 100,000 among the Latino population (1,139,207 cases) and for the White population a rate of 4,993 per 100,000 (733,590 cases) (Fig. 9.2) (CDPH, 2023). For the border region and statewide, the COVID-19 rate for the Latino population was at least 2-fold the rate of the White population, underlining racial and ethnic disparities present in COVID-19.



Source: California Department of Public Health, Coronavirus Science Branch, 2021

In a comparison by sex, COVID-19 rates were similar for men and women; in California, men had a rate of 7,245 per 100,000, whereas women had a rate of 7,741 per 100,000 (1,444,892 and 1,562,852 cases, respectively). In Imperial County, the rate was 7,770 per 100,000 for men (7,489 cases) and for women was 7,971 per 100,000 (7,595 cases). In San Diego County, the rate for men was 8,313 per 100,000 (141,329 cases); and that for women was 8,955 per 100,000 (149,574 cases) (Fig. 9.3) (CDPH, 2023).



Source: California Department of Public Health, Coronavirus Science Branch, 2021

Conclusion

This Border Health Status Report to the Legislature covers key demographic and health indicators that describe the burden of disease in California's southern border counties (i.e., San Diego and Imperial). Understanding the unique challenges and specific dynamics of these communities is essential to improving the overall wellbeing of the population. Among key health topics covered in this report are obesity, diabetes, suicide, TB, STIs, HIV/AIDS, vaccine-preventable diseases, and COVID-19.

Demographic Indicators

The estimate of total population size in San Diego and Imperial Counties decreased from 2020 to 2021 (by 1.6% and 4.9% respectively). When looking at population size by race/ethnicity, in Imperial County the Latino population makes up the majority while in San Diego County they make up the largest minority group but not the majority of the population. During the same timeframe, Black and Asian populations in San Diego County decreased 0.94-fold. However, multiracial population size increased 1.19-fold. Other populations in San Diego and Imperial counties such as Native Hawaiian, Pacific Islander, and Alaska Native, populations either remained the same or had minimal differences.

Unemployment rates substantially decreased between 2020 and 2021 both in the border region and throughout the State of California. For example, the San Diego County population dropped to an unemployment rate of 7.1%, representing nearly a 0.76-fold decrease from 2020. A similar pattern was seen in Imperial County with a 19.3% unemployment rate in 2021, representing a 0.86-fold decrease. In 2021, 30% of California's population lived below 200% of the federal poverty level (FPL), which represents a 1.03-fold increase when compared to 2020. In Imperial County, 49.1% of the population was living below 200% of the FPL, representing a 1.08-fold increase from 2020. When looking at education, in San Diego County the percentage of Latino residents with a college degree decreased from 35% in 2020 to 24% in 2021 (a 0.7-fold decrease). In Imperial County, the percentage of Latino college graduates increased from 15% in 2020 to 19% in 2021 (1.31-fold increase), while the percentage of White college graduates increased from 33% in 2020 to 40% in 2021.

Health Indicators

Chronic diseases are important indicators of community health. Within this context this report focused on obesity, diabetes, and suicide. From 2020 to 2021, Imperial County saw a decrease in its overweight population from 24% to 22% (1.08-fold decrease), and an increase in its obese population from 34.4% to 39% (1.13-fold increase). From 2020 to 2021, San Diego County saw negligible changes in its overweight population, but saw a 0.89-fold decrease in its obese population from 24% to 22%. While San Diego County's proportion of overweight and obese men showed little change, there were greater changes in the proportion of overweight and obese women. Proportion of obese women dropped 0.81-fold from 24% to 19%, but the overweight women population increased 1.26-fold from 24% to 30%. A similar but less drastic phenomenon occurred in Imperial County among men. The proportion of obese men decreased 0.93-fold from 46% to 43%, but the proportion of overweight women increased from 32% to 35%. When looking at the proportion of obese women in Imperial County there was an increase from 26% to 35% (1.36-fold increase) between 2020 to 2021.

The border region also faces a significant challenge with diabetes. The proportion of the population who had ever had a diabetes diagnosis increased in San Diego County from 2020 to 2021, even while rates in Imperial County and California saw minor decreases. In San Diego, this increase was mostly seen among Whites, with a 1.36-fold increase from 5.5% to 7.5%. The increase was also seen among men who have been diagnosed with diabetes in San Diego, in this case it rose 1.29-fold from 7.6% to 9.8%.

When looking at suicide rates in 2021 along the California border, Latinos continued to have considerably lower rates of suicide than Whites, a pattern that was also noted in our previous report. In San Diego County, the suicide rate for the White population decreased from 17.5 per 100,000 in 2020 to 15.6 per 100,000 in 2021 (a 10.9% decrease). While still much lower, the suicide rate for the Latino population in San Diego County saw a 6% increase from 6.4 per 100,000 in 2020 to 6.8 per 100,000 in 2021.

Infectious diseases, such as TB, STIs, HIV/AIDS, and pertussis, continue to be a significant challenge along the California border. From 2020 to 2021, the case rate among Latinos increased by 15.7% from 3.9 per 100,000 to 4.6 per 100,000 throughout the State of California. The rate of TB remained far higher in Imperial County as compared to San Diego County and California. Imperial County had a TB rate of 19.0 per 100,000 compared to 6.1 per 100,000 in San Diego County and 4.5 per 100,000 in California. When looking at the data by race/ethnicity the Asian population accounts for a large proportion of TB cases in San Diego (868 of the 1,750 cases of TB in California).

Prevalence of STIs in California has also increased in recent years. Between 2020 and 2021, the rates of gonorrhea, primary syphilis, secondary syphilis, and congenital syphilis all increased. Most of the STI cases in California and the California border region were among men. Furthermore, when comparing by race/ethnicity, the highest rates were among Blacks. In 2020, the rate of gonorrhea was 181 per 100,000 in California, which increased to 241 per 100,000 in 2021. Rates of congenital syphilis in California and the border region

rose significantly between 2020 and 2021. California had a rate of 114 per 100,000 live births with congenital syphilis in 2020 and 126 per 100,000 in 2021 (a 10% increase). When stratified by race/ethnicity, congenital syphilis rates in California rose by 12% among Whites and 20% among Latinos between 2020 and 2021. While a 23% drop was seen for Blacks, they remain disproportionately affected. Congenital syphilis is preventable with access to prenatal care and timely treatment.

When looking at HIV, California border counties had 14,532 total individuals living with an HIV infection in 2021, up slightly from 14,307 the previous year. In addition, California border counties reported 396 new cases of HIV during the same year, up from 326 reported in the previous year. Most of the population living with HIV and individuals newly diagnosed with HIV in the border region are men. When looking at data by race/ethnicity, rates of new HIV cases increased for the Latino and Black populations in San Diego County. The Latino population increased from 14.6 per 100,000 in 2020 to 18.5 per 100,000 in 2021 (a 26.7% rate increase). The Black population increased from 25.9 per 100,000 in 2020 to 38.4 per 100,000 in 2021 (a 48.3% rate increase). However, for San Diego County and Imperial County, the highest rates for individuals living with HIV and newly diagnosed HIV cases were in the Black population. The number of new HIV cases for transgender women in California increased from 111 newly diagnosed cases in 2019 to 125 newly diagnosed cases in 2021, however, the population proportion stayed the same.

In 2021, the border region and California saw decreased rates of pertussis. There were 70 cases in San Diego County and zero cases in Imperial County in 2021. In 2020, the rate of pertussis cases for San Diego County was three times the rate of California (50.4 per 100,000 vs 14.2 per 100,000). However, in 2021, San Diego had almost four times the rate, with a 20.9 per 100,000 compared to California's 4.8 per 100,000.

COVID-19 was first identified in 2019 among hospitalized individuals with respiratory symptoms of unknown etiology. Over the past three years, COVID-19 has spread globally, causing millions of cases worldwide. To date, the U.S. has seen over 100 million cases and over a million deaths associated with COVID-19. This disease has disproportionately affected racial and ethnic minority groups throughout the U.S., including California. Underlying health inequities contributed to a higher risk of COVID-19 spread and its burden on specific populations. This gap between racial and ethnic minority groups greatly narrowed from 2020 to 2021.

In 2020, the California Latino population had almost three times the rate of COVID-19 when compared to the White population (7,516 per 100,000 for Latino compared to 2,688 for White). While in 2021, the California Latino population's rate was 7,291 per 100,000 compared 4,993 per 100,00 for the California White population. This highlights the need to address social determinants of health among racial and ethnic minorities.

Differences in health outcomes whether it be chronic or infectious diseases as shown in this report highlight key health needs of the region. This information can aid in identifying necessary resources and services for California border residents. CDPH/OBBH develops this report annually to inform and educate policymakers on the health needs of the California

border region. This information is important to enable a more focused and targeted approaches to address the specific needs of the region. Underlying population dynamics (e.g., population mobility, poverty levels) should be considered to effectively mitigate burden of disease in the border region. Further information about health issues that affect California's border region can be found on the [CDPH OBBH'S website](#).

References

- Bureau of Labor Statistics. (2021). Local Area Unemployment Statistics (LAUS). Retrieved February 21, 2023, from the [Bureau of Labor Statistics data finder website](#).
- California Department of Finance. (2021). State and County Total Population Projections by Race/Ethnicity and Detailed Age 2010-2060. Retrieved February 21, 2023, from the [State of California Department of Finance demographics website](#).
- California Department of Public Health. (2021). Coronavirus Science Branch. Received March 17, 2023.
- California Department of Public Health. (2021). EpiCenter-California Injury Data Online. Retrieved April 10, 2023, from the [CDPH EpiCenter California Injury Data Online website](#).
- California Department of Public Health. (2021). Immunization Branch. Received March 22, 2023.
- California Department of Public Health. (2021). Office of AIDS. Received April 6, 2023.
- California Department of Public Health. (2021). Sexually Transmitted Diseases Control Branch. Received March 10, 2023.
- California Department of Public Health. (2021). Tuberculosis Control Branch. Received March 25, 2023, from the [TB in California 2022 Snapshot PDF](#).
- California Health Interview Survey. (2021). AskCHIS Online. Retrieved February 21, 2023, from the [AskCHIS website](#).
- Centers for Disease Control and Prevention. (2022). Adult Obesity Causes & Consequences. Retrieved April 11, 2023, from [CDC Causes of Obesity website](#).
- Centers for Disease Control and Prevention. (2023). Diabetes Risk Factors. Retrieved March 3, 2023, from the [CDC Diabetes Risk Factors website](#).
- Centers for Disease Control and Prevention. (2022). Suicide: Prevention Strategies. Retrieved March 14, 2023, from the [CDC Suicide Prevention Strategies website](#).
- National Institutes of Health. (2013). Why Obesity Is a Health Problem. Retrieved February 22, 2023, from the [NIH website](#).
- National Institutes of Health. (2022). Overweight and Obesity – Prevention. Retrieved February 22, 2023, from the [NIH Overweight and Obesity Prevention website](#).

Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC, Su J, Xu F, Weinstock H. (2013). "Sexually transmitted infections among US women and men: prevalence and incidence estimates, 2008". Sex Transm Dis.; 40(3):187-93.

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2021). Healthy People 2030. Retrieved April 12, 2023 from the [Healthy People 2030 Objectives and Data website](#).

World Health Organization. (2023, February 28). WHO COVID-19 dashboard. World Health Organization. [WHO COVID-19 dashboard website](#).

