CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

OFFICE OF BINATIONAL BORDER HEALTH

2015

BORDER HEALTH EPIDEMIOLOGY REPORT

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INTRODUCTION

The southern California border region, comprised of San Diego and Imperial counties, has very different characteristics in terms of health outcomes, compared to the rest of the State. Furthermore, despite their geographical proximity, there are significant differences between the two counties in terms of socioeconomic status, poverty level, unemployment, and racial/ethnic composition. In San Diego, Hispanics/Latinos comprise the largest minority, while in Imperial County Hispanics/Latinos constitute the majority of the population at 81.4%. These differences continue to have an impact on the health status of the border population and give rise to different public health challenges. The health challenges that these two counties have, both individually and as part of the California border region, will be discussed throughout this report.

The California-Baja California border is a very dynamic border, with more crossings in both directions than at any other border in the world; this situation creates even more complexity for working at the public health level. The California Department of Public Health (CDPH) Office of Binational Border Health (OBBH) is charged with maintaining excellent communication and collaboration with our counterpart Mexican state, Baja California. Knowing in advance if there are increases in cases of disease, outbreaks or epidemics across the border helps us to prepare ourselves, and if possible, provide assistance to Baja California.

The OBBH was created to help identify challenges and promote health successes that are specific to the border region and its unique population. The OBBH works in partnership with state and local agencies to develop the Border Health Epidemiology Report, which provides evidence-based information on the needs of the border community. This report summarizes, synthesizes, and analyzes data from a variety of relevant sources to provide an accurate and updated report.

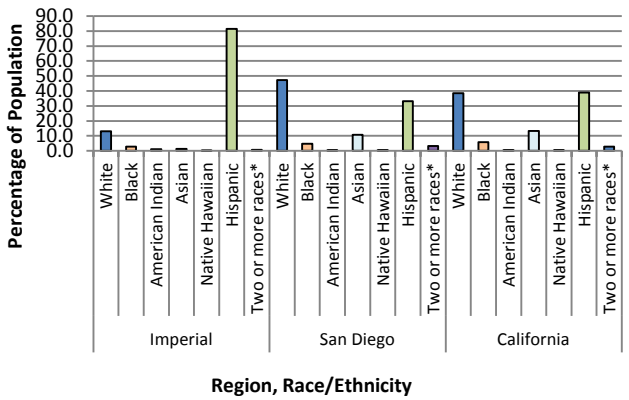
This “Border Health Epidemiology Report 2015” provides a summary of the current health status of the border region. The report was prepared by the California Department of Public Health Office of Binational Border Health. This report presents important health indicators for border communities in California but does not intend to be a fully comprehensive report of all health issues of the border; it aims to provide a general overview of the health status of the population living in the California Border region. The 2015 report covers demographics, access to healthcare, obesity, diabetes, mental health, tuberculosis, STIs, HIV/AIDS, immunizations, and vaccine preventable diseases.

DEMOGRAPHICS

Over the last decade, 2005-2015, the population of the southern border region of California, composed of San Diego and Imperial counties, experienced steady growth. During this period, Imperial County's population increased by 13.9%, which is more than 2 times the rate of increase in San Diego County and in California overall (6.2% and 5.4%, respectively). In 2015, the California Department of Finance (DOF) projected that there were 3,432,395 individuals living in the California border region, the majority of whom were living in San Diego County (n=3,244,706) and a smaller proportion in Imperial County (n=187,689) (DOF, 2016).

The population in California and along its southernmost border region is racially and ethnically diverse. In 2015, Hispanics/Latinos made up the majority (81.4%) of the population in Imperial County, while Whites made up 13.0% (DOF, 2016). In San Diego County, the majority of the population was White (47.2%), while Hispanics/Latinos constituted the largest minority group at 33.2% (DOF, 2016). In the State of California, Whites and Hispanics/Latinos made up the same proportion at 39.0% of the total population (Fig. 1.1) (DOF, 2016). From 2005 to 2015 in California, the Hispanic/Latino population increased by 17.6%, and the White population decreased by 8.7% (DOF, 2016).

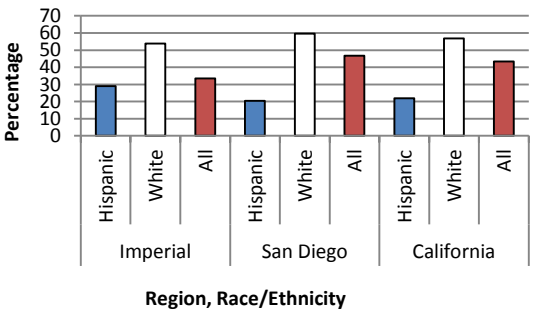
Fig. 1.1 Race/Ethnicity Distribution by Region, 2015



Source: California Department of Finance, State and County Population Projections by *Race/Ethnicity Detailed Age and Gender, 2010-2060.* Sacramento, CA

* Two or More Races (Not Hispanic or Latino)

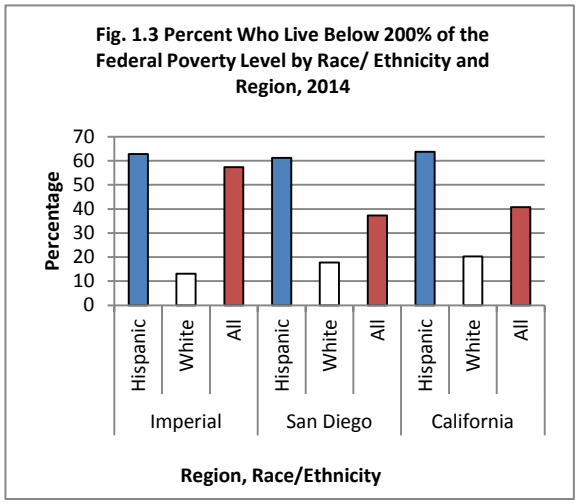
Fig. 1.2 Population Who Graduated College by Race/Ethnicity and Region, 2014



Source: California Health Interview Survey (CHIS)

The proportion of the California population that reported being able to speak English 'well' or 'very well' was 63.3% (CHIS, 2014). In each border county, a higher proportion of Whites were able to speak English "well" or "very well" compared to Hispanics/Latinos. In San Diego County, Imperial County, and California as a whole, Hispanics/Latinos were less likely to have received a college level education or higher when compared to Whites and all ethnicities combined. The percentage of Hispanics/Latinos in California who had less than a high school education (31.6%) was close to ten times greater than that of Whites (3.2%) (CHIS, 2014). In San Diego County, the disparity was greater; the percentage of Hispanics/Latinos who had less than a high school education (33.2%) was more than eleven times greater than that of Whites (2.8%) (Fig. 1.2) (CHIS, 2014). In Imperial County,

the percentage of Whites who had less than a high school degree was 18.7%, and among Hispanics/Latinos, the percentage was almost double (31.2%) (CHIS, 2014).



Source: California Health Interview Survey (CHIS)

According to the most recent data available, in 2014 more than half (57.3%) of Imperial County residents were living below 200% of the Federal Poverty Level (FPL), compared to 37.3% in San Diego County and 40.7% in California statewide (Fig. 1.3). In San Diego County, a higher percentage of the Hispanic/Latino population was living below 200% of the FPL when compared to the total population (CHIS, 2014). Across all ethnicities, there was a considerably higher percentage of the population living at or above 300% of the FPL in San Diego County (46.9%) and California (45.5%) than in Imperial County (25.4%) (CHIS, 2014). Additionally, in both border counties and California statewide, the percentage of Whites living at or above 300% of the FPL was at least three times as high as that of Hispanics/Latinos (CHIS, 2014).

By December 2015, California reported that 5.7% of the population was unemployed, while San Diego County reported a 4.7% unemployment rate. For the same year, the unemployment rate in Imperial County was 19.6%, the highest among all counties in California (LAUS, 2016).

ACCESS TO CARE

BACKGROUND

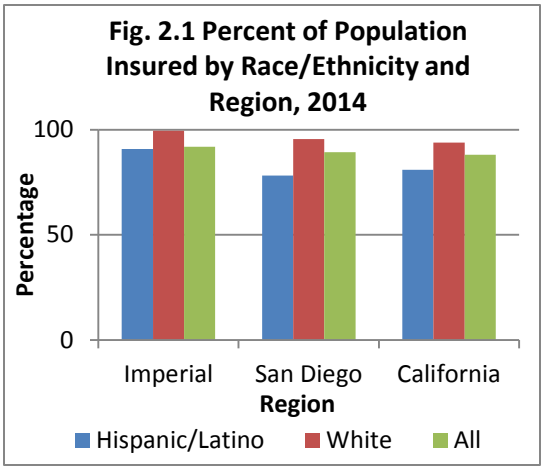
According to the Healthy People 2020 initiative, having access to health care services is defined as the ability to use personal health services in a timely manner such that the best possible health outcomes can be achieved. Having access to health care requires three key steps: gaining entry into the health care system, accessing a health care organization where services are provided, and finding a health care provider with whom the patient feels comfortable (Office of Disease Prevention and Health Promotion, 2014).

In 2013, an estimated 45 million Americans and 6.5 million Californians did not have health insurance (U.S. Census Bureau, 2013). The Patient Protection and Affordable Care Act (ACA), which was passed in 2010 and went into effect in California and the rest of the United States on January 1, 2014, was created to mitigate these problems by expanding access to health insurance. The ACA has two main mechanisms by which to increase health insurance coverage: the creation of state-based insurance exchanges and expansion of Medicaid to 138% of the Federal Poverty Level (FPL) (California Department of Health Care Services, 2016; U.S. Department of Health and Human Services, 2015). However, in 2012 the Supreme Court ruled that states could not be forced to participate in Medicaid expansion under penalty of losing their current Medicaid funding. As of January, 2016 31 states, including California, and the District of Columbia have adopted the expansion. As it currently stands, the ACA is expected to reduce the number of uninsured persons in California by at least half by 2019 (Lucia, Dietz, Jacobs, Chen, & Kominski, 2015).

ACCESS TO CARE IN THE BORDER REGION

Health Coverage and the Effect of the ACA in California and the Border Region

In 2014, after the first open enrollment period, there were nearly 3 million new MediCal enrollees and more than 1 million Californians who enrolled in private coverage through Covered California (Covered California is the place where Californians can get brand-name health insurance under the Patient Protection and Affordable Care Act). During the first open enrollment period, Imperial County reported 4,401 enrollees and San Diego County reported 121,900 enrollees; during the second open enrollment period, Imperial County reported 2,441 new enrollees, while San Diego County reported 47,950 new enrollees (Covered California, 2015).

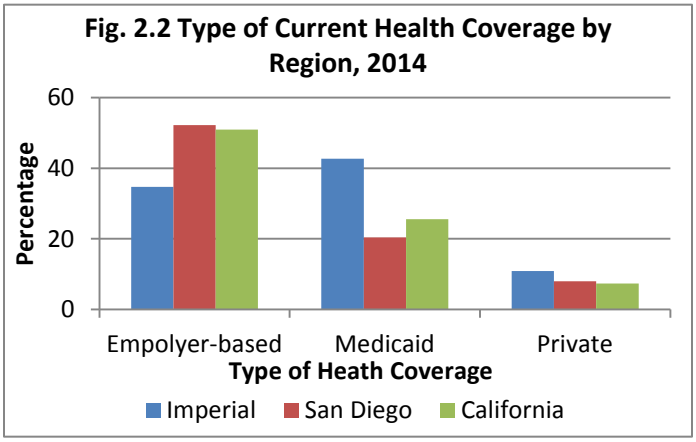


Source: California Health Interview Survey, 2014

In 2014, the most recent data available, 88.1% of California residents had some form of health insurance coverage, compared to 89.3% of San Diego residents and 91.9% of Imperial County residents. These numbers represent a slight change in trend from 2013, when both San Diego County and Imperial County reported slightly lower coverage rates than California as a whole. Despite improvement in coverage, in the border region, as in the State of California overall, fewer Hispanics/Latinos are insured compared to Whites and all ethnicities combined. In San Diego County, 78.2% of Hispanics/Latinos had health insurance compared to 95.5% of Whites and 89.3% of all ethnicities combined. The proportion of Hispanics/Latinos with health insurance in San Diego County is also less than that for Hispanics/Latinos in the State of California overall (80.9%). In Imperial County 99.4% of Whites had health insurance compared to just 90.8% of Hispanics/Latinos, though these estimates are statistically unstable (Figure 2.1) (CHIS, 2013, 2014).

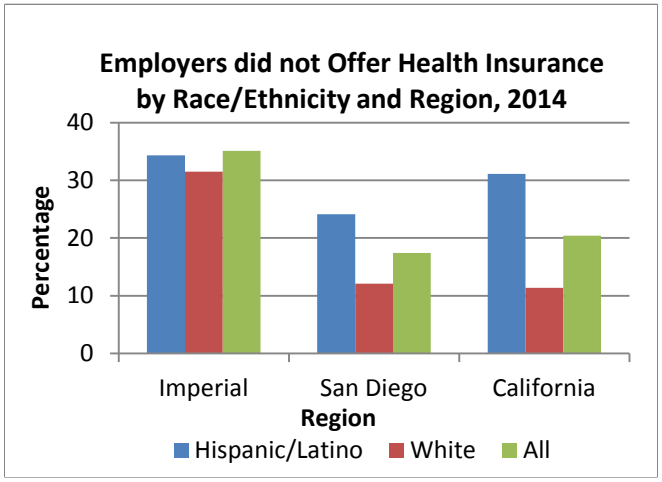
Type of Coverage

In San Diego County in 2014, as in the State of California overall, the bulk of those with health insurance were covered under employer-based plans (50.9% and 52.2% respectively), followed by Medicaid only (25.6% and 20.4% respectively). In Imperial County, however, Medicaid covered the largest proportion of people (42.7%) followed by employer-based plans (34.7%) (Fig. 2.2). A breakdown of coverage by ethnicity however, shows that Hispanics/Latinos in San Diego County and the State of California are covered by employer-based plans at notably lower proportions than Whites and all ethnicities combined. In San Diego County 39.4% of insured Hispanics/Latinos were covered under employer-based plans, compared to 58.2% of Whites and 52.2% of all ethnicities combined. Similarly in Imperial County, 34.6% of insured Hispanics/Latinos had employer-based insurance compared to 40.7% of Whites and 34.7% of all ethnicities combined. One factor contributing to lower insurance coverage among Hispanics/Latinos could be lower proportions of employer-based benefits among this population. In 2014, 24.1% of Hispanics/Latinos in San Diego County and 34.3% of Hispanics/Latinos in Imperial County were not offered health benefits by their employers, compared to just 12.1% and 31.5% of Whites respectively, though the estimate for Whites in Imperial County is statistically unstable (Fig. 2.3) (CHIS, 2014).



Source: California Health Interview Survey 2014

Additionally, in 2014 Hispanics/Latinos in the State of California and in the border regions specifically were covered under Medicaid at higher proportions than their White counterparts and all ethnicities combined. In San Diego County 38.6% of Hispanics/Latinos with insurance were covered under Medicaid compared to just 9.7% of Whites. Similarly, 45.9% of insured Hispanics/Latinos in Imperial County were covered under Medicaid compared to just



Source: California Health Interview Survey 2014

17.3% of Whites, though this estimate is statistically unstable (CHIS, 2014).

The Remaining Uninsured Population

The University of California Berkeley Center for Labor Research and Education, in conjunction with the University of California Los Angeles Center for Health Policy Research and with funding provided by the California Endowment, has developed a statistical model to estimate the impact of various elements of the ACA on individual decisions to obtain coverage, and employer decisions to offer coverage in California. The California Simulation of Insurance Markets (CalSIM) uses data from the national Medical Expenditure Panel Survey (MEPS) Household Component, the California Health Interview Survey (CHIS), firm-level wage distributions from the California Employment Development Department, and the California Employer Health Benefits Survey to make projections that are California-specific (Lucia, Dietz, Jacobs, Chen, & Kominski, 2015).

According to CalSIM projections, by 2019, when the ACA has been fully implemented, between 2.7 and 3.4 million Californians will remain uninsured. Of these, between 1.4 and 1.5 million will be undocumented immigrants who are not eligible for benefits under the ACA. It is important to note that this estimate does not take into account those undocumented immigrants granted deferred action; under California law, these are eligible for comprehensive MediCal coverage if they are income-eligible. However, while this policy will reduce the actual number of uninsured persons, undocumented immigrants are still expected to represent the largest proportion of the uninsured (Lucia, Dietz, Jacobs, Chen, & Kominski, 2015).

Of the remaining uninsured, between 550,000 and 950,000 (20.0%-28.0%, respectively) will be eligible for MediCal, and between 380,000 and 460,000 (14.0%) are expected to be eligible for subsidies through Covered California. The remaining 14.0-16.0% of the projected uninsured will be non-subsidy eligible citizens and legal immigrants. Of the total number of the projected uninsured, three-quarters are expected to be Hispanic/Latino, greater than half will be Limited English Proficient (LEP), two-thirds will live in households with incomes of 200% of the FPL, and approximately a third of all the remaining uninsured will reside in Los Angeles County (Lucia, Dietz, Jacobs, Chen, & Kominski, 2015).

OBESITY

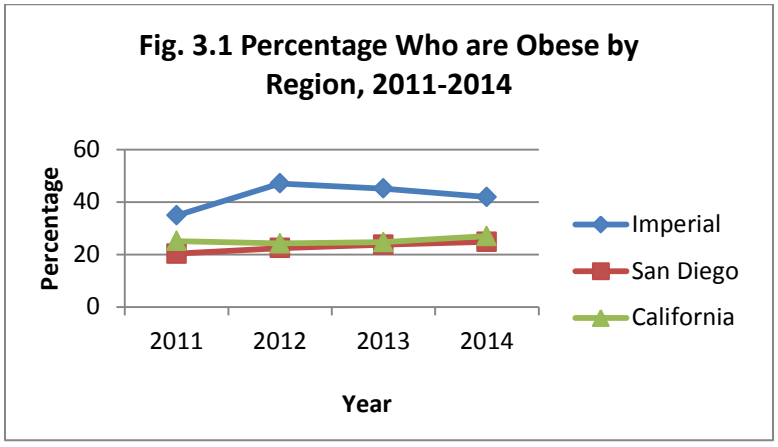
BACKGROUND

Obesity is defined as having an amount of body fat in excess of what is considered to be healthy. The most common estimator of body fat is the Body Mass Index (BMI) measure, which is a number calculated using a person's weight and height. For adults, a BMI between 25.0-29.9 or 30.0-39.9 is categorized as overweight or obese, respectively. A BMI of 40.0 or greater is classified as extreme obesity (NIH, 2012). Obesity is caused by a combination of behavioral, societal and environmental factors, such as caloric intake, physical inactivity, and education, as well as genetics (CDC, 2015).

Being overweight or obese is associated with increased risk of several serious adverse health outcomes in adults, including, but not limited to, coronary heart disease (CHD), type 2 diabetes, high blood pressure, stroke, diverse types of cancer, and poor reproductive health in women (CDC, 2015). Approximately 79 million adults (about one third of the population) in the United States are obese with a BMI of 30 or greater (Ogden, Carroll, Kit, & Flegal, 2014).

OBESITY IN THE CALIFORNIA BORDER REGION

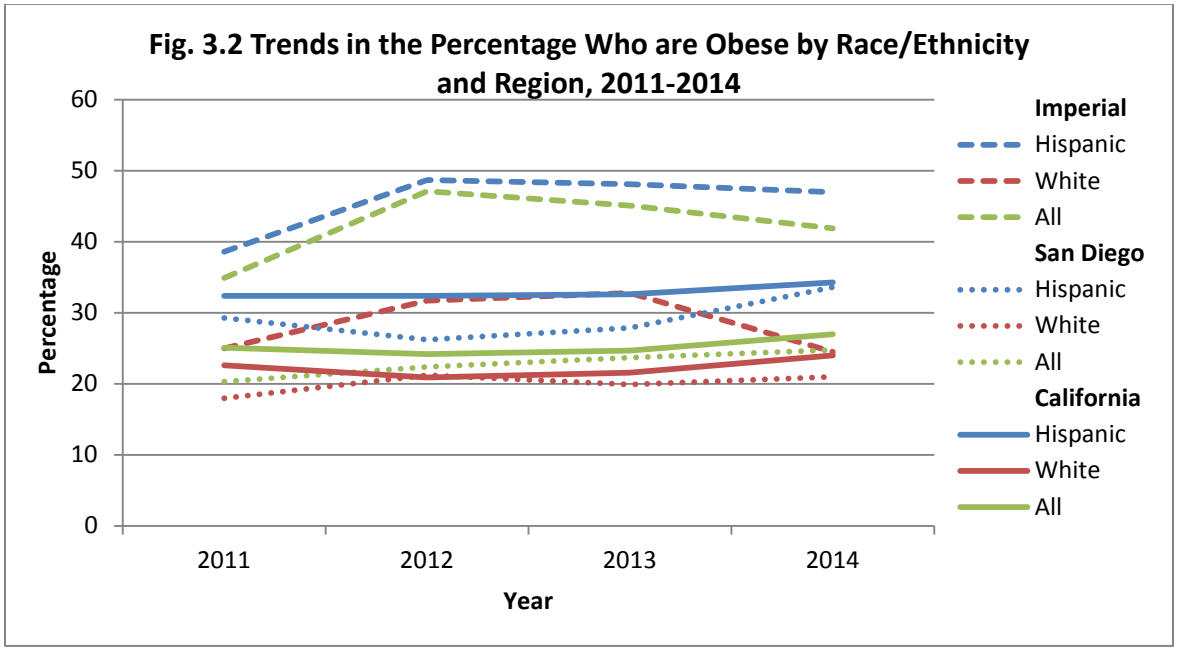
According to the most recent data available, in 2014, 41.9% of adults in Imperial County were obese. In comparison, San Diego County reported a lower percentage of adult obesity with 24.8%. Although San Diego County and the whole State of California (27.0%) met the 2020 Healthy People (HP) goal for obesity (less than 30.5% of the population), Imperial County reported more than 1.5 times the percentage of San Diego and did not meet the HP 2020 target. Furthermore, Imperial County had one of the highest obesity rates in the whole State of California. This percent nearly doubled when overweight and obesity were combined (Fig 3.1).



Source: California Health Interview Survey (CHIS), 2011, 2012, 2013, 2014

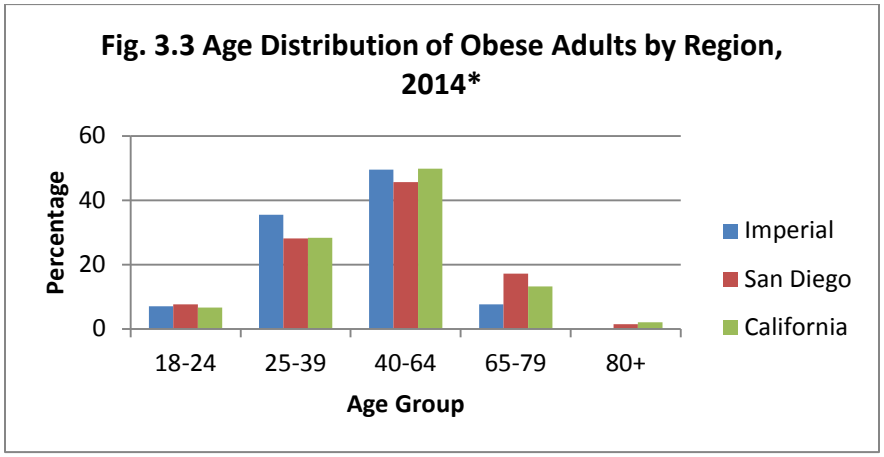
Additionally, differences regarding race/ethnicity, socioeconomic factors, and age exist in the California border region. The Hispanic/Latino population has had a consistently higher percentage of obesity when compared with the White population and all other populations combined. In 2014, in Imperial County, 47.0% of Hispanics/Latinos were obese, nearly double

the percentage of Whites (24.5%), although those results were statistically unstable (CHIS, 2014). This trend was similar in adults in San Diego County and the whole State of California (Fig. 3.2).



Source: California Health Interview Survey (CHIS), 2011-2014

In 2014, the data on obesity among Hispanic/Latino and White teens in San Diego County was statistically unstable, and there was no current data on obesity among teens in Imperial County. Regarding the Federal Poverty Level (FPL), in 2014, socioeconomic disparities between the two border counties were as follows: in Imperial County, 61.3% of adults with obesity lived below 200% of the FPL, in comparison with San Diego County, where 41.6% of adults with obesity lived below 200% of the FPL. Age makes a difference in the prevalence of obesity in the California border counties and throughout the State of California. In Imperial County, San Diego County and the entire State of California, obese adults were at least six times more likely to belong to the 40-to-64-year-old age group than to the 18-to-24-year-old age group (Fig. 3.3).



Source: California Health Interview Survey (CHIS), 2014
**of those who are obese adults, what is the age distribution*

STATE OBESITY INDICATORS AND TARGET GOALS FOR PREVENTION

The California state target goals are based on the CDC evidence-based target areas for obesity prevention. These targets include: increased consumption of fruits and vegetables, increased physical activity, increased breastfeeding (initiation, duration, and exclusivity), decreased consumption of high energy dense foods, and decreased television viewing time. This report includes current measures for some target indicators, when available.

Breastfeeding has been shown to have a protective effect against becoming overweight or obese. The American Academy of Pediatrics recommends that babies be breastfed exclusively for about six months and continue to be breastfed for a year or longer with complementary foods (CDPH, 2014). According to the Women, Infant and Children (WIC) Association and the University of California Davis Human Lactation Center, in 2014 Imperial County reported that 93.2% of women had ever breastfed, and 28.4% had exclusively breastfed. Imperial County ranked 50th in the state for exclusive breastfeeding. During the same period of time, in San Diego County, 95.9% of women reported any breastfeeding, while 77.7% reported exclusive breastfeeding. San Diego County ranked 22nd when compared to the rest of the state for exclusive breastfeeding. In comparison, in 2014 the whole State of California reported that 93.5% of women reported any breastfeeding and 66.6% reported exclusive breastfeeding (WIC, 2015).

Sugary-drink consumption has been linked to obesity increase in the United States. More people are consuming more sugary drinks and the size for these types of drinks has also been increasing. A regular 20-ounce soda contains 15 to 18 teaspoons of sugar and upward of 240 calories. These calories are considered empty calories with no nutritional value. Furthermore, consuming sugary drinks does not signal satiety, causing people to desire to eat more food (Harvard School of Public Health, 2015). The border counties, specifically, have also been experiencing this increase in sugary drink consumption. In Imperial County, 55.7% of the adult population reported consuming soda at least once a week; Hispanic/Latinos had a slightly higher proportion of soda consumption (61.1%), which is higher than in San Diego County and California overall. In San Diego County, 38.2% of the population reported consuming soda at least once a week, and 57.0% of Hispanics/Latinos, specifically, reported drinking soda at least once a week (CHIS, 2014).

Fast food is very popular among children and adolescents. Among children up to 11 years old in Imperial County, 77.9% reported eating fast food at least once in the past week. In San Diego County the proportion was less with 60.4%, and the proportion in the whole State of California was between the two at 70.2%. Teens reported eating more fast food compared to children. In Imperial County 85.8% of teens reported eating fast food at least once in the past week compared to 68.1% and 75.9% of teens in San Diego and the whole State of California respectively (CHIS, 2014). However, the estimates for Imperial County were statistically unstable.

In the California Border Region, several programs are in place that target obesity prevention and health promotion; different programs exist for San Diego and Imperial counties. In the City of Chula Vista (County of San Diego), the school district has a comprehensive approach to improve nutrition and physical activity opportunities in schools, which involves leaders, teachers and families. From 2010 to 2014 there was a 17.0% decrease in the number of obese students in the school district, which is the equivalent of 1,400 children (County of San Diego, 2015). Project Our Choice, Being Healthy (*Nuestra Opción, Ser Saludables*) in Imperial County, is

designed to prevent and control obesity among the young and vulnerable population living in a border, rural community. The Our Choice project aims to modify harmful behaviors, policies, systems and environments to increase the consumption of water, fruits and vegetables, and to promote physical activity and quality of sleep (Ayala, 2015).

DIABETES

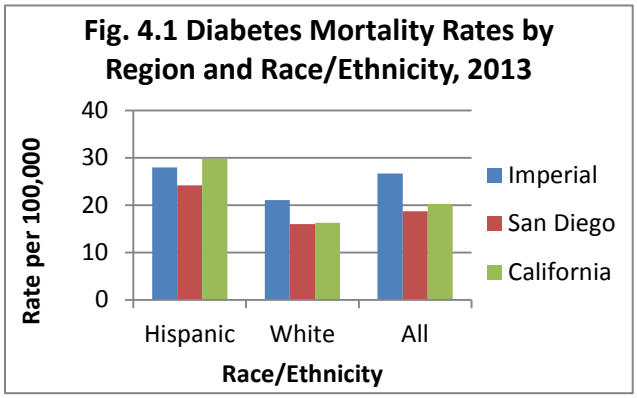
BACKGROUND

Diabetes is a disease characterized by abnormally high levels of blood glucose as a result of abnormal pancreatic function; the pancreas is either not producing enough insulin or is not producing any at all. There are two types of diabetes: type 1 and type 2. Type 1 diabetes is an autoimmune disease in which the body does not produce the hormone insulin. Type 2 diabetes is the most common and accounts for 90-95% of all diabetes cases in the United States (CDC, 2015).

Some of the risk factors for type 2 diabetes include physical inactivity, older age, obesity, family history of diabetes, prior history of gestational diabetes (diabetes during pregnancy), and race/ethnicity. African Americans/Blacks, Hispanics/Latinos, American Indians and Pacific Islanders are at particularly high risk for type 2 diabetes. Some studies have found that diabetes can be delayed and possibly prevented by losing a small amount of weight (5-7% of the total body weight) through 30 minutes of physical activity 5 days a week and healthier eating. Diabetes can cause serious health complications such as blindness, lower extremity amputations, kidney failure, and heart disease (CDC, 2015).

DIABETES IN THE CALIFORNIA BORDER REGION

In 2014, the most recent data available, 8.9% of adult respondents in California reported having ever been diagnosed with diabetes; this proportion is similar to that reported in 2013 (8.7%), but represents a steady increase from 8.3% in 2012 (CHIS, 2014). Conversely, in 2014, in San Diego County 6.8% of adult respondents reported having ever been diagnosed, which represents a decrease from 8.5% in 2013. In Imperial County, the proportion of those who reported having ever been diagnosed with diabetes decreased from 20.6% in 2013 to 15.9% in 2014. However, it is important to note that despite this decrease, the prevalence of diabetes in Imperial County is still notably higher than that of San Diego County and the State of California as a whole (CHIS, 2014).



Source: California Department of Public Health Center for Health Statistics and Informatics, age-adjusted rate

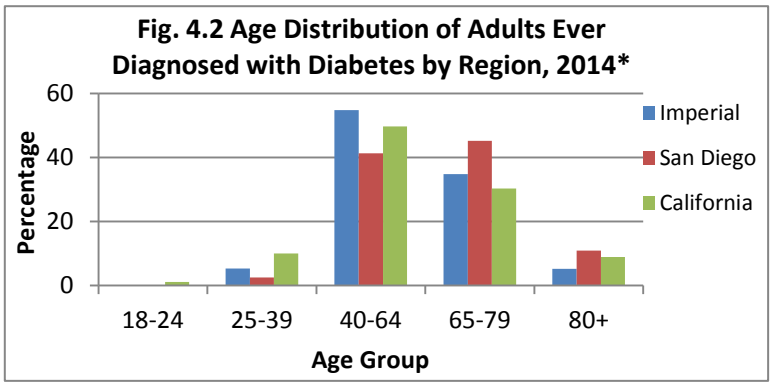
The breakdown of diabetes prevalence by ethnicity revealed a difference in trend between the State of California as a whole and the border region in 2014. In the State of California, 7.7% of Whites reported having been diagnosed with diabetes, compared to 10.0% of Hispanics/Latinos and 8.9% of all ethnicities combined. These estimates are similar to those reported in 2013 when more Hispanics/Latinos (11.6%) reported having ever been diagnosed with diabetes than Whites (6.6%) and all ethnicities combined (8.7%). Along the border region, Hispanics/Latinos reported having been diagnosed with diabetes at higher proportions than those of all ethnicities combined. In San Diego County, 8.0% of Hispanics/Latinos reported

having ever been diagnosed with diabetes in 2014, compared to 6.3% of Whites and 6.8% of all ethnicities combined. Similarly in Imperial County, 18.4% of Hispanics/Latinos reported ever being diagnosed with diabetes in 2014, compared to 15.9% of all ethnicities, though the percentage for Hispanics/Latinos is statistically unstable.

Hispanics/Latinos along the border region and the State of California overall also have higher diabetes-related mortality rates than Whites and all ethnicities combined, even after adjusting for age. In the State of California in 2013, the most recent data available, the diabetes mortality rate for Hispanics/Latinos was 29.8 per 100,000, compared to 16.3 for Whites and 20.3 for all ethnicities combined (Fig. 4.1).

In San Diego County during the same year, the mortality rate for Hispanics/Latinos was 24.2 per 100,000, compared to 16.0 for Whites and 18.7 for all ethnicities combined. Similar trends were observed in Imperial County, where the mortality rate for Hispanics/Latinos was 28.0, compared to 21.1 for Whites and 26.7 for all ethnicities combined. This disparity among ethnicities was also true in 2012, though ethnicity-specific rates have fluctuated slightly since then (Fig. 4.1).

Data from 2014, the most recent available, showed that in the State of California and Imperial County, the 40-64 age group represented the highest proportion of adults ever diagnosed with diabetes, followed by the 65-79 age group. In California, 49.7% of adults diagnosed with diabetes were between 40 and 64 years of age. In comparison, 30.3% of adults diagnosed with diabetes were 65-79 years of age, and 10.0% of adults diagnosed with diabetes were between 25 and 39 years of age. In San Diego County, 41.3% of adults diagnosed with diabetes were between 40 and 64 years of age. In comparison, 45.2% of adults diagnosed with diabetes were between 65 and 79 years of age, and 2.5% of adults diagnosed with diabetes were 25-39 years of age (Fig. 4.2).



Source: California Health Interview Survey, 2014
**Of those adults who have ever been diagnosed with diabetes, what is the age distribution*

MENTAL HEALTH

BACKGROUND

Mental health is defined as the state of emotional, psychological, and social well-being, and it is one of the key components of overall health as defined by the World Health Organization (WHO). Mental health is of integral importance at all life-stages as it greatly influences how a person relates and interacts with others, makes decisions, and copes with stress and daily life. In addition, mental health and physical health are closely interrelated; mental illnesses such as depression and anxiety adversely affect a person's ability to engage in health-promoting behaviors, and mental disorders are important risk factors for other diseases. Mental health and substance abuse disorders account for 23.0% of all years of life lost due to disability worldwide (WHO, 2016).

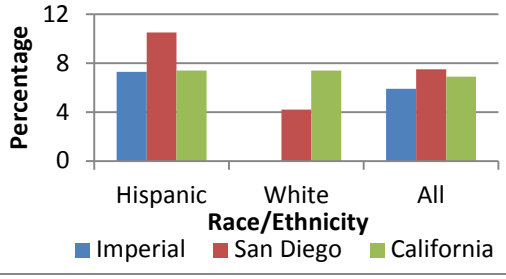
Mental illnesses are not uncommon and can be caused by a variety of different factors including, but not limited to, family history and other biological factors, trauma, and stress. In fact, according to the National Institute of Mental Health, 1 in 17 adults has a seriously debilitating mental illness in any given year (Kessler et al., 2005). Certain mental illnesses, such as depression and anxiety, are also impacted by known social determinants of health, such as income, education, and geographical area of residence (WHO, 2014).

MENTAL HEALTH IN THE CALIFORNIA BORDER REGION

Life Impairment Due to Emotions

In 2014, the most current data available, the California Health Interview Survey (CHIS) project collected data on perceived social and family life impairment due to emotions in the past 12 months. Respondents were asked if their emotions interfered "a lot, some or not at all" with their social lives and then again with their family lives. Those who responded "a lot" were classified as having severe social or family life impairment.

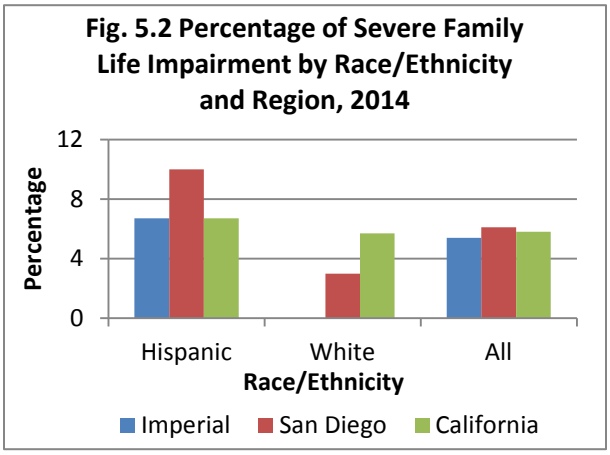
Fig. 5.1 Percentage of Severe Social Life Impairment by Race/Ethnicity and Region, 2014



Source: California Health Interview Survey, 2014

During that time period, 86.9% of California respondents reported experiencing no social life impairment in the last 12 months; similarly, 85.6% and 90.3% of respondents reported experiencing no social life impairment in San Diego County and Imperial County respectively, even though the results from Imperial County were statistically unstable. However, when examining the breakdown by ethnicity, fewer Hispanics/Latinos in San Diego County reported no social life impairment than their White counterparts, while the opposite was the case in Imperial County. In Imperial County 77.6% of Whites reported no social life impairment in the past year compared to 92.1% of Hispanics/Latinos, though data for both ethnicities was statistically unstable. In San Diego County, 89.0% of White respondents reported no social life impairment in the past year

compared to 81.6% of Hispanics/Latinos. Among those who did report social life impairment, 10.5% of Hispanics/Latinos in San Diego County reported “severe” social life impairment in the past 12 months compared to 4.2% of Whites. In the State of California overall, the same proportion of Whites and Hispanics/Latinos reported “severe” social life impairment (7.4%) (Fig 5.1) (CHIS, 2014).

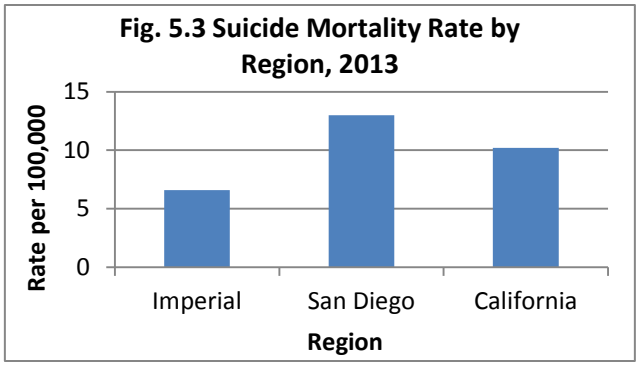


Source: California Health Interview Survey, 2014

The most current CHIS data available measuring family life impairment in the past 12 months (2014) shows similar trends. In California, 86.6% of respondents reported no family life impairment in the past year, similarly 85.2% and 90.5% in San Diego County and Imperial County respectively reported no family life impairment (though results from Imperial were statistically unstable). Again, when examining the breakdown by ethnicity, fewer Hispanics/Latinos in San Diego County reported no family life impairment due to emotions, whereas more Hispanics/Latinos reported no impairment in Imperial County than Whites. In San Diego County, 88.8% of Whites reported no impairment, compared to 81.7% of Hispanics/Latinos. In Imperial County, 78.5% of White respondents reported no impairment, compared to 92.2% of Hispanics/Latinos, though this data was statistically unstable. In San Diego County, 10.0% of Hispanics/Latinos reported “severe” family life impairment in the past 12 months due to emotions compared to 3.0% of Whites. In California overall, there was no major difference in reports of severe impairment among Hispanics/Latinos (6.7%), Whites (5.7%), and all ethnicities combined (5.8%), although Hispanics/Latinos reported a somewhat higher percent (Fig. 5.2) (CHIS, 2012).

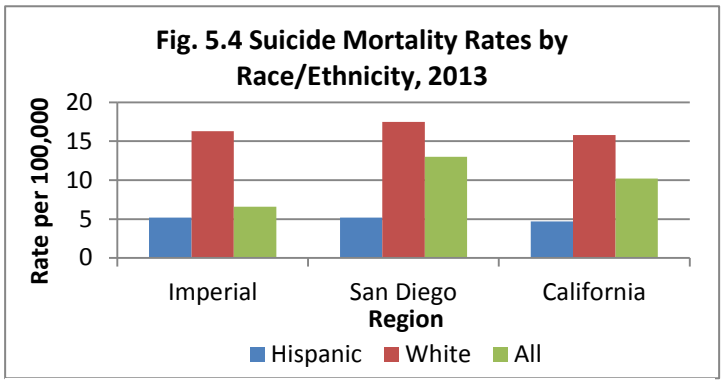
Suicide

According to the most current data available (2014), 7.8% of respondents in California reported having seriously considered committing suicide in the previous 12 months, compared to 9.4% and 2.2% of respondents in San Diego County and Imperial County respectively, though Imperial County data was statistically unstable. In California and the border counties, more Whites reported seriously considering suicide compared to Hispanics/Latinos and all ethnicities combined.



Source: California Department of Public Health Center for Health Statistics and Informatics, age-adjusted rate from Race/ Ethnicity table

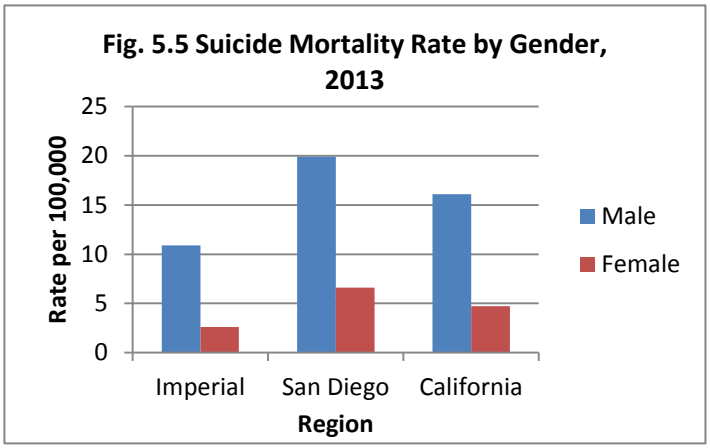
In the State of California, 9.4% of Whites, compared to just 6.5% of Hispanics/Latinos, seriously considered committing suicide. Similarly, in San Diego County, 9.0% of Whites seriously considered suicide compared to 6.5% of Hispanics/Latinos, although the results for Hispanics/Latinos were statistically unstable (CHIS, 2014).



Source: California Department of Public Health Center for Health Statistics and Informatics, age-adjusted rate from Race/ Ethnicity table

The all-ethnicity suicide mortality rate in California in 2013, which are the most recent data available, was 10.2 per 100,000. This rate has remained relatively stable since 2011, when it was 10.4 per 100,000. In San Diego County the suicide mortality rate was 13.0 in 2013, which represents an increase from 11.9 in 2011. Conversely, the suicide rate in Imperial County decreased from 10.0 in 2011 to 6.6 per 100,000, in 2013 (Fig. 5.3). The ethnic breakdown of suicide mortality in California and the border counties shows that though suicide rates for Hispanics/Latinos and Whites have remained stable in San Diego County and California overall, rates for Whites are significantly higher than those for Hispanics/Latinos and all ethnicities combined. In the State of California in 2013, the suicide rate was 15.8 for Whites, compared to 4.7 for Hispanics/Latinos. Similarly in San Diego County, the suicide mortality rate for Whites was 17.5, compared to 5.2 for Hispanics/Latinos. In Imperial County, the suicide mortality rate for Whites declined from 26.4 in 2011 to 16.3 in 2013. Still, this rate is notably higher than the rate of 5.2 for Hispanics/Latinos, which also decreased from 6.8 in 2011 (Fig.5.4).

A breakdown of suicide mortality by gender for 2013, the most current data available, showed that males across all geographic areas of interest had higher rates (16.1 in California, 19.9 and 10.9 in San Diego and Imperial counties respectively) than females (4.7 in California; 6.6 and 2.6 in San Diego and Imperial counties respectively). White males had the highest suicide rates overall (24.1 in California and 26.1 and 18.7 in San Diego and Imperial counties respectively), while Hispanic/Latino women had the lowest suicide rates overall (1.5 in California; 2.4 and 1.1 in San Diego and Imperial counties respectively) (Fig. 5.5) (CDPH, 2013).



Source: California Department of Public Health Center for Health Statistics and Informatics

Data from the border region shows that, in San Diego County, Hispanics/Latinos report more family and social life impairment due to emotional stress than their White counterparts. These findings support those of other studies which identify Hispanics/Latinos as a population at high-risk for depression, anxiety, and substance abuse (NAMI, 2006). Despite this, in the border region and the State of California overall, Hispanics/Latinos have had significantly lower rates of suicide than their White counterparts and all ethnicities combined. This discrepancy may be partially explained by the idea of family cohesion as a protective factor for acculturation stress experienced by many immigrant and minority families, though this protective effect has been observed to be diminished among U.S. born and long-term residents compared to recent Hispanic/Latino immigrants (NAMI, 2006; Singh et al., 2011).

TUBERCULOSIS

BACKGROUND

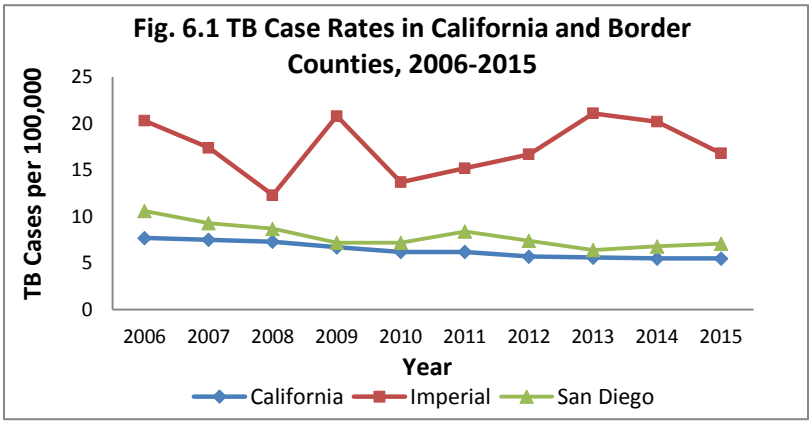
Tuberculosis (TB) is caused by the bacterium *Mycobacterium tuberculosis*, a bacterium that usually attacks the lungs, but can attack other regions of the body such as the lymph nodes, spine, and brain. If not treated properly or early enough, TB can be fatal. TB is spread through the air when a person with active TB coughs, sneezes, or speaks. Often the immune system is able to keep the bacteria from growing, and the only sign of infection is a positive TB skin test or blood test. Persons with latent TB infection cannot transmit TB to others. TB infection can progress to TB disease weeks or years after infection. Progression to TB disease is more likely among persons with weakened immune systems, such as those with HIV, end stage renal disease, diabetes or those taking immunosuppressive medications (WHO, 2016).

Tuberculosis is a top infectious disease killer worldwide. In 2014, 9.6 million fell ill with TB and 1.5 million died from the disease (WHO, 2016). Progress toward TB elimination in California is likely to be hastened by strong collaborations with national and international health partners, especially Mexico, to strengthen locating, testing, and treating those at highest risk for TB.

STATUS IN THE BORDER REGION

TB Burden

California reported 2,137 incident TB cases in 2015, a 0.1% increase from 2,134 cases in 2014. The TB case rate has remained at 5.5 cases per 100,000 in 2014 and 2015. California's case rate remains consistently higher than the national case rate with California reporting the most TB cases in the United States. However, in examining a ten year period from 2006 to 2015, California has reported a 23.0% decrease in TB cases (2,776 to 2,137) and a 29.0% decrease in TB case rate (7.7 per 100,000 to 5.5 per 100,000). Even so, the recent declines in TB cases have been small (Fig. 6.1).



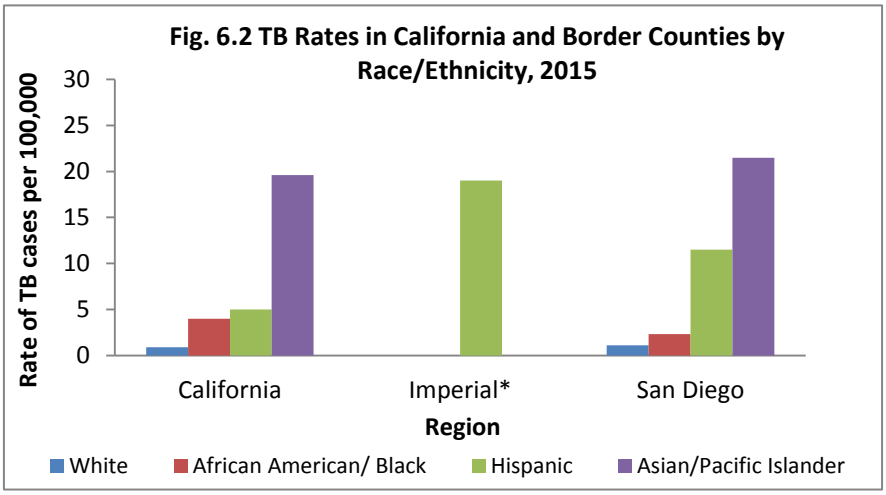
Source: California Department of Public Health Tuberculosis Branch

California border counties are major contributors to the state's TB burden, representing more than 12.0% of TB cases reported in the state in 2015. During the same year Imperial County reported a case rate of 16.8 per 100,000 (n=31), the highest rate among all California counties. However, this was a decrease from a case rate of 20.2 per 100,000 (n=37) in 2014. San Diego County reported a case rate of 7.1 per 100,000 (n=234) in 2015. This was an increase from 6.8

per 100,000 (n=220) in 2014. Both counties report a higher rate than the state average (Figure 6.1).

Demographic Information

A large proportion of TB cases reported in California during 2011-2015 were of Hispanic/Latino ethnicity (36.0%). In the same time period, Imperial and San Diego counties reported a larger proportion of Hispanic/Latino TB cases than the state average (91.0% and 53.0% respectively).



Source: California Department of Public Health Tuberculosis Branch
**There were no TB cases reported among African Americans/Blacks and one case each reported among Whites and Asians. Rates not calculated due to small numbers.*

In California and the border counties, the TB case rate among Hispanics/Latinos was higher than among Whites (Fig. 6.2). During 2015, the TB case rate among Hispanics/Latinos was nearly 5.6 times that of Whites in California. In San Diego County, the Hispanic/Latino rate was 10.5 times that of Whites. However, Asians and Pacific Islanders continue to have the highest TB case rate in California and San Diego. Nearly all TB cases in Imperial County occurred among Hispanic/Latino persons (n=29). There were no reported TB cases among black persons, and one case reported each among the White and Asian groups in Imperial County (Fig. 6.2).

The majority of TB cases in California during 2011-2015 were foreign-born (78.0%). The most common birth country was Mexico, which accounted for 22.0% of all California TB cases. Border counties reported a higher percentage of Mexican-born cases than the state average: 54.0% of all Imperial County TB cases and 31.0% of all San Diego County TB cases were born in Mexico. However, Mexican-born cases are not confined to border regions. During this time period, Los Angeles County alone reported 32.0% of California's Mexican-born TB cases, the largest contribution by a local health jurisdiction (CDPH, 2016).

Risk Factors

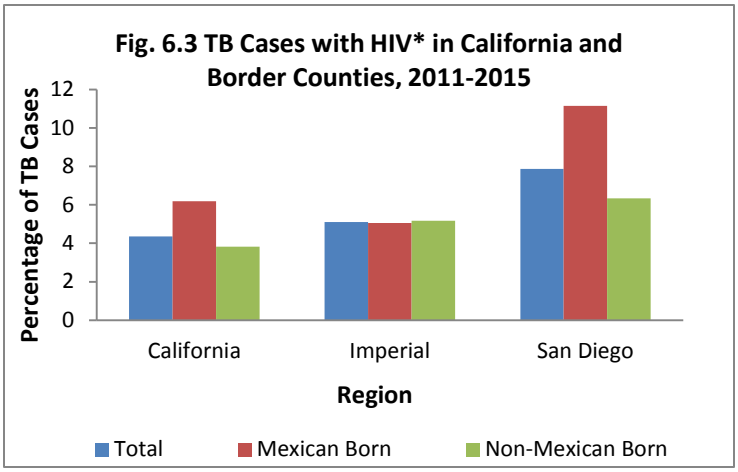
During 2011-2015, 5.0% of California TB cases were reported as being homeless. Approximately 9.0% of all TB cases and 7.0% of Mexican-born TB cases were reported as homeless in Imperial County. In San Diego County, 8.0% of all cases and 8.0% of Mexican-born cases were reported as homeless. During the same time period, 3.0% of California TB cases were diagnosed in a correctional facility. These facilities include federal and state prisons, local jails, juvenile correctional facilities, and Immigration and Customs Enforcement (ICE) detention centers. In the border counties, a higher proportion of TB cases, and Mexican-born TB cases in particular, were diagnosed in a correctional facility. In Imperial County, 15.0% of all TB cases and 16.0% of Mexican-born TB cases were diagnosed in a correctional facility. Of the Mexican-born diagnosed in a correctional facility, 50.0% were in ICE custody. In San Diego County, 9.0% of all TB cases and 15.0% of Mexican-born TB cases were diagnosed in a correctional facility. Of the Mexican-born cases diagnosed in a correctional facility, 63.0% were in ICE custody.

During 2011-2015, TB cases in the border counties were more likely to have reported substance abuse (defined as one or more of the following: injecting drug use, non-injecting drug use or excess alcohol use in the year prior to TB diagnosis) compared to cases statewide. California reported 12.0% of TB cases as having a history of substance abuse, while in Imperial County 23.0% of TB cases and in San Diego County 19.0% of TB cases had a history of substance abuse (CHPH, 2016).

Co-morbidities: Diabetes and HIV/AIDS

Approximately 24.0% of all TB cases in California, 21.0% of cases in Imperial County and 22.0% of cases in San Diego County reported having diabetes during 2011-2015. In all three regions, Mexican-born TB cases were slightly more likely than other TB cases to report diabetes (32.0% in California, 26.0% in Imperial County, and 27.0% in San Diego County). Identifying TB patients with diabetes is important because persons with both diseases may be at increased risk of death during TB treatment, or of relapse of TB following treatment (CDPH, 2016).

Among cases with known HIV status, 4.0% of California TB cases were reported as HIV-infected from 2011 to 2015. In Imperial County, 5.0% of TB cases were co-infected with TB and HIV, and in San Diego County nearly 8.0% were co-infected. Mexican-born TB cases in California and in San Diego County were more likely to be co-infected than other TB cases, but the same was not true in Imperial County (Figure 6.3). Knowledge of HIV status is important for appropriate diagnosis of TB and enables appropriate treatment of both TB and HIV. Treating HIV and TB improves outcomes of co-infected patients (Fig. 6.3).



Source: California Department of Public Health Tuberculosis Branch
**Percent of TB cases with HIV among those with HIV status reported*

Drug Resistance

Drug resistance is a concern nationally and internationally. During 2011-2015, initial resistance to isoniazid (INH), a key first-line anti-TB drug, occurred in about 8.0% of California and San Diego County TB cases. Resistance to INH occurred in nearly 5% of Imperial County TB cases. Multidrug-resistant (MDR) TB is defined as resistance to two first-line TB drugs: isoniazid and rifampin. MDR TB is more difficult to treat than drug-sensitive TB, often requiring 24 months of treatment with drugs that are costly and may cause serious complications for the patient. In California, 1.3% of TB cases tested for drug resistance were determined to be MDR TB during 2011-2015. In San Diego County, 1.2% of cases were MDR TB. Imperial County reported one case of MDR TB during this time period (CDPH, 2016).

Outcomes

According to the most recent data available, during 2011-2013, 84.0% of California TB cases that started on anti-TB therapy completed prescribed treatment for TB. Treatment completion for

Mexican-born TB cases was 85.0%. Less than 4.0% of Mexican-born TB cases moved prior to completing treatment which was comparable to all California cases. This was a drop from 6.0% in the prior reporting period (2010-2012). San Diego County reported higher completion rates than the State of California with 89.0% of all TB cases completing treatment, while 85.0% of Mexican-born TB cases completed treatment. The percentage of Mexican-born TB cases that moved was 6.0% compared to 4.0% of all San Diego County TB cases. In Imperial County, 70.0% of all TB cases were reported to have completed treatment. This is a 10.0% increase from the prior reporting period. Imperial County had a high proportion of cases, 16.0%, that moved prior to treatment completion compared to the State as a whole. However, this dropped from 21.0% from the prior reporting period. Of the Mexican-born TB cases in Imperial County, 76.0% completed treatment (CDPH, 2016).

During 2011-2013, 9.6% of California TB cases died with TB. Of those, 77.0% died while on TB treatment and 23.0% died before being diagnosed or treated for TB. In San Diego County, 7.7% of cases died with TB. Of those, 81.0% died while on treatment and 19.0% died before being diagnosed or treated for TB. Similar to California, 9.5% of Imperial County cases died with TB. However, of those, 56.0% died while on treatment and 44.0% died prior to diagnosis or treatment (CDPH, 2016).

Mycobacterium bovis Surveillance

Mycobacterium bovis is a relatively uncommon source of TB disease, often caused by ingestion of contaminated, unpasteurized dairy products. In 2015, TBCB implemented surveillance to determine whether patients identified with the disease caused by *M. bovis* had consumed unpasteurized dairy products made outside the U.S. There were 51 cases that had genotyping results indicating *M. bovis* infection in California in 2015. Nearly 35.0% of *M. bovis* cases were in San Diego County. Another 31% were reported in the Los Angeles Jurisdiction. There were no *M. bovis* cases reported in Imperial County. On the basis of 40 completed surveys, 53.0% reported eating raw dairy products made outside the U.S. Of these, 86.0% reported that the raw dairy products were from Mexico (CDPH, 2016).

CureTB

The San Diego County TB Control Branch operates CureTB, a binational referral system for patients with tuberculosis who cross the border during care. CureTB was developed in 1997 to improve the continuity of care for TB patients traveling between the United States and Mexico. In 2013, CureTB officially expanded their services to include referrals to Central America and other parts of Latin America. Referrals are accepted for suspect and verified active cases, contacts to infectious cases, and source case finding investigations. The CureTB staff is bilingual, bicultural, and familiar with the healthcare systems and TB standards of care of the countries with which they work.

In 2015, the TB Control Branch (TBCB) initiated collaboration with CureTB to obtain confirmation of treatment outcomes on patients referred to this organization upon moving to Mexico or other countries in Latin America. To date, TBCB has received outcomes data for the years 2011-2013. This collaboration has contributed to the improved percentages in treatment completion among California's Mexican-born TB cases. As of March 2016, CureTB transitioned to an operational partnership between the CDC's Division of Global Migration and Quarantine and the County of San Diego. Referrals are accepted for suspect and verified active cases, contacts to infectious cases, and source case finding investigations (CDPH, 2016).

SEXUALLY TRANSMITTED INFECTIONS

BACKGROUND

Sexually Transmitted Infections (STIs) are a group of infections transmitted mainly or exclusively by sexual activity. There are more than two dozen of these infections caused by bacteria, viruses, and parasitic organisms, including HIV (Holmes, et al. 2007).

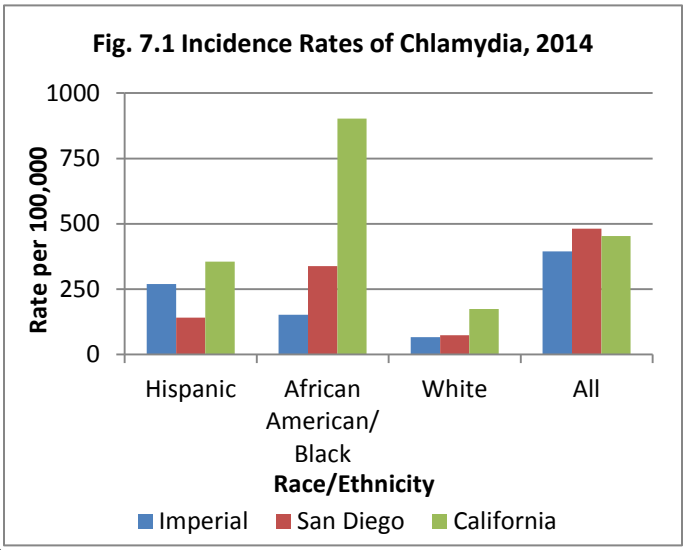
Large numbers of combined reported cases make STIs the most commonly reported communicable diseases in California. STIs can generally be treated and cured if diagnosed early. However, STIs oftentimes do not cause symptoms. Due to this, there is a high probability of individuals not seeking proper treatment, which can lead to serious health complications (Institute of Medicine, 1997). Furthermore, because STIs are often asymptomatic and therefore depending on screening, the true burden of disease is many times greater than the actual number of reported cases (Satterwhite, et al., 2013). This report will discuss the burden of three reportable bacterial sexually transmitted infections in Imperial and San Diego counties: chlamydia, gonorrhea, and syphilis (primary & secondary, and congenital), which are among the most commonly reportable-reported STIs in California and the United States.

CHLAMYDIA BACKGROUND

Sexually transmitted chlamydia infection is caused by the bacterium *Chlamydia trachomatis*. Approximately 30% of the cases can be asymptomatic but have the potential to cause several complications (Nelson, 2001). If left untreated, approximately 30% of women will develop pelvic inflammatory disease (PID) (Nelson, 2001), which is a major cause of infertility, ectopic pregnancy, and chronic pain as well as neonatal ophthalmia and pneumonia. In the United States and in California, chlamydia is among the most prevalent of all reportable STIs. In 2014, a total of 174,557 cases were reported, which represents a rate of 453.4 per 100,000 (CDPH, 2015b).

CHLAMYDIA IN THE CALIFORNIA BORDER REGION

In 2014, the most current data available, chlamydia rates were higher in San Diego County (481.7 per 100,000) than in Imperial County (394.5 per 100,000). In the border region and the State of California, Hispanics/Latinos and African American/Blacks had higher rates when compared to Whites. In San Diego County and California, African American/Blacks had the highest rates (338.1 and 902.3 per 100,000 respectively) but in Imperial County, Hispanics/Latinos had the highest rate among all races (269.3 per 100,000) (Fig. 7.1). In 2014, San Diego County ranked number 11 and Imperial County 16 for



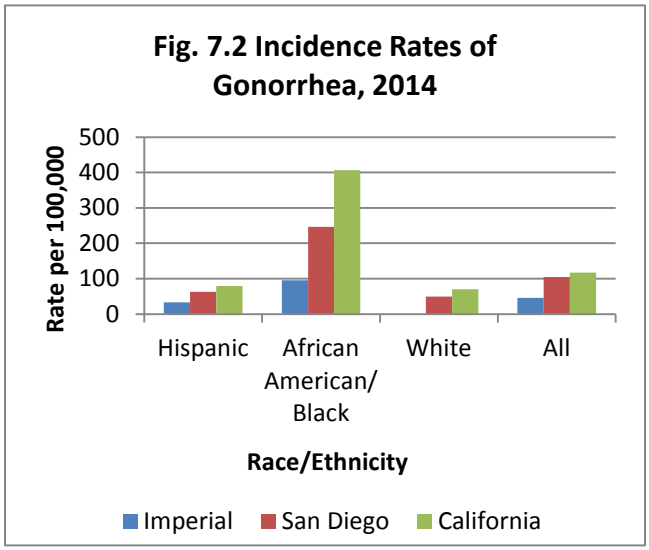
Incidence Rate of Chlamydia by region and race/ethnicity (2014).
Source: California Department of Public Health Sexually Transmitted Diseases Control Branch

the highest number of chlamydia cases compared to all other counties in California (CDPH, 2015). For the same year, San Diego County's African American/Black females had the highest infection rate (398.6 per 100,000), which was more than five times higher than that of White females (73.6 per 100,000). Meanwhile, Hispanic/Latino females had a rate of 177.7 per 100,000. Imperial County had a similarly high rate of chlamydia infection among African American/Black females compared to White females (431.7 per 100,000 compared to 103.8, respectively), and an even higher rate in Hispanic/Latino females (445.5 per 100,000) compared to San Diego County (CDPH, 2015).

GONORRHEA BACKGROUND

Gonorrhea is a bacterial sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae*. Transmission can occur via oral, vaginal, and rectal sex. It can also be transmitted from an untreated mother to her baby during childbirth (CDC, 2015; Nelson, 2001). Often gonorrhea is asymptomatic and detectable only through screening (CDC, 2015). Untreated gonococcal infection is associated with adverse reproductive health consequences in both females and males, such as pelvic inflammatory disease for females and urethritis for males, and can lead to more severe complications such as infertility. In addition, infections in pregnant females can lead to serious perinatal complications. Infected individuals may also be at higher risk of contracting HIV upon exposure (CDC, 2012f). The emergence of drug-resistant strains has resulted in recommended treatment regimens in the US, including California, such that it is critical that gonorrhea infection be treated appropriately with dual therapy and in a timely manner (CDC, STD Treatment Guidelines, 2015).

GONORRHEA IN THE CALIFORNIA BORDER REGION



Source: California Department of Public Health Sexually Transmitted Diseases Control Branch

Gonorrhea is currently the second most common reportable communicable disease in California. Rates for gonorrhea declined between 2007 and 2009 in both California and the United States. However, gonorrhea rates in California have increased since 2010. In 2014 California received a total of 44,974 reports of gonorrhea cases, which constitutes a rate of 116.8 cases per 100,000 (CDPH, 2015b).

In 2014, the most current data available, Imperial County had a rate of 46.0 per 100,000. In San Diego, the rate was 104.7 cases per 100,000. In 2014, throughout the state of California and in San Diego and Imperial Counties, the African American/Black population had higher gonorrhea rates than their White and Hispanic/Latino counterparts.

In Imperial County, African American/Black females were infected at a rate of 323.8 per 100,000 and African American/Black males had a rate of 46.9 per 100,000. Hispanic/Latino females and males had similar case rates of 32.5 and 34.3, respectively, per 100,000. In 2014, there were no

reported gonorrhea cases among white females and males in Imperial County. The age groups most affected with gonorrhea in Imperial County for females were 15-19 and 20-24 and for males, 20-24 and 25-29 years of age (CDPH, 2016).

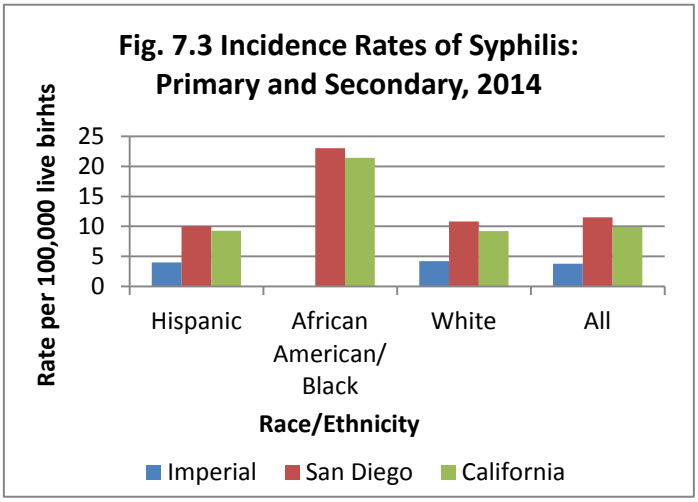
Similarly, in San Diego County, both African American/Black females and males had higher infection rates when compared with other racial/ethnic groups (161.1 and 314.1 per 100,000 respectively). Hispanic/Latino females were infected at a rate of 32.0 compared to Hispanic/Latino males at 94.7 per 100,000. In San Diego County, the highest gonorrhea rates among females were in the age groups of 15-19, 20-24, and 25-29, and among males in the age groups of 15-19, 20-24, 25-29, 30-34, and 35-44 (CDPH, 2016).

PRIMARY AND SECONDARY SYPHILIS BACKGROUND

Primary and Secondary Syphilis is a systemic sexually transmitted infection caused by the bacterium *Treponema pallidum*. Syphilis can be transmitted through direct contact with a syphilis sore (chancre). Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Sores also can occur on the lips and in the mouth. Transmission of the organism occurs during vaginal, anal, or oral sex. Pregnant women with the disease can pass it to the fetus (CDC, 2015b). Genital sores (chancres) caused by syphilis make it easier to transmit and acquire HIV infection sexually. There is an estimated two- to five-fold increased risk of acquiring HIV if exposed when syphilis is present (CDC, 2015b). Screening at-risk persons for syphilis is important given the availability of effective treatments and the duration of latent stages after symptom disappearance (CDPH, 2012b).

PRIMARY AND SECONDARY SYPHILIS IN THE CALIFORNIA BORDER REGION

In 2014, the most current data available, Imperial County had a rate of 3.8 per 100,000, which was lower than that of San Diego County and the State of California. San Diego County's rate has increased since 2009; in 2014 the rate for San Diego County was 11.5 per 100,000, which was higher compared to the California statewide rate (9.9 per 100,000), which has increased as well. In San Diego County, 94.9% of the cases are among males, and 44.5% of the cases are among Whites. Males aged 20-44 were most affected (CDPH, 2016).



Source: California Department of Public Health Sexually Transmitted Diseases Control Branch

CONGENITAL SYPHILIS BACKGROUND

Congenital Syphilis is transmitted from the mother to her baby during pregnancy and preventable with access to prenatal care, appropriate timely treatment, and follow-up. All pregnant women should be tested for syphilis at the first prenatal visit, again in the third trimester (28 to 32 weeks gestation), and at delivery in women with high risk for syphilis (CDC, STD Treatment Guidelines, 2015). Syphilis infection during pregnancy increases the risk for stillbirth and giving birth to a baby who dies shortly after birth. After birth, if an infected baby is

not treated immediately, he or she can develop seizures, deafness, developmental delay and death (Holmes, et al. 2007)

CONGENITAL SYPHILIS IN THE CALIFORNIA BORDER REGION

The rates for congenital syphilis in California decreased in 2011 and 2012, increased nearly twofold in 2013, and nearly doubled again in 2014. Before 2011 the rates in San Diego and Imperial counties were higher than statewide rates for California. In 2013, however, the statewide rate increased to almost double that of San Diego County (11.1 and 6.9 per 100,000 live births respectively). In 2014, Imperial County had a higher rate of congenital syphilis than both San Diego County and the State of California overall (30.6, 15.7, and 19.6 per 100,000 live births, respectively). Imperial County did not have any cases of congenital syphilis between 2011 and 2013, but did have one case in 2014 (CDPH, 2016).

HIV/AIDS

BACKGROUND

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) has been, and continues to be, the cause of many deaths worldwide and one of the greatest public health challenges of the last decades.

In 2008, the case definitions for HIV infection and AIDS were revised into a single case definition that is based on three clinical categories (Stage I, II, and III) with Stage I as the asymptomatic acute or primary HIV infection stage (CD4 count >499 cells/μL), Stage II as a symptomatic HIV infection stage (CD4 count from 200 to 499 cells/μL), and Stage III as AIDS (CD4 count <200 cells/μL) (Schneider, 2008). AIDS is considered a syndrome that is not characterized by a specific set of symptoms, but rather a variety of clinical manifestations caused by opportunistic infections due to lack of immune support. Among the most common are tuberculosis, *Pneumocystis carinii* pneumonia, cryptococcal meningitis, oropharyngeal and esophageal candidiasis, herpes, Kaposi's sarcoma, and other opportunistic infections. Once a person has been classified as having Stage III HIV disease (AIDS), for surveillance purposes they are always classified as Stage III (AIDS), even after their health improves due to antiretroviral therapy (CDPH, 2016).

The routes of transmission for HIV include: sexual contact (heterosexual, homosexual, and bisexual), perinatal (during pregnancy, birth or breastfeeding), and parenteral (sharing paraphernalia for injecting drugs) (Stine, 2013). After initial HIV infection, about 50-70% of people develop flu-like symptoms while others have no symptoms at all. Unless tested early for HIV, HIV positive individuals run the risk of unknowingly transmitting HIV to another person and having worsening symptoms leading to Stage III infection (AIDS).

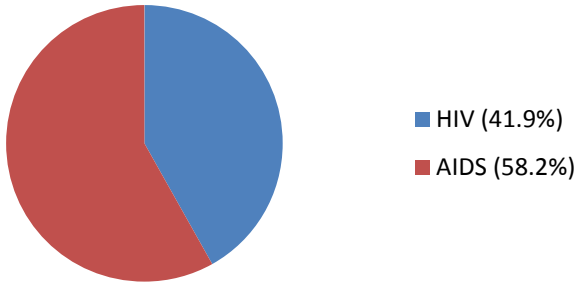
The only way to confirm HIV status is by getting tested. People who are unknowingly infected with HIV can live long periods of time without ever showing symptoms or knowing they are infected. The CDC recommends that everyone between the ages of 13 and 64 get tested at least once. However, if a person is at increased risk they should be tested at least once a year (CDC, 2015).

The HIV virus is a retrovirus that has a high replication rate. The use of antiretrovirals is designed to interfere with viral replication at different stages of the process. While there is treatment for HIV that can reduce viral load to undetectable levels, there currently is not a cure for AIDS (CDC, 2015). The life expectancy of people infected with HIV has increased substantially, to near normal, since the widespread adoption of the use of antiretrovirals. Given the effectiveness of treatment, early testing and treatment has become a priority in improving the health conditions of individuals infected with HIV and preventing further transmission of HIV (CDPH, 2016).

HIV/AIDS STATUS IN THE BORDER REGION

In 2014, the total number of people who had been diagnosed and were living with HIV infection in California was 126,718. Among those living with HIV infection, 41.3% were classified as AIDS (Stage III) cases and 58.8% were HIV (non-AIDS, Stage I or II) cases. For the same year, California border counties (Imperial and San Diego) had 13,112 individuals diagnosed and living with HIV infection; of these, 58.2% were classified as AIDS and 41.9% as HIV (non-AIDS) cases (Fig. 8.1). In the California border counties during 2014, 498 persons were newly diagnosed with HIV (CDPH, 2016).

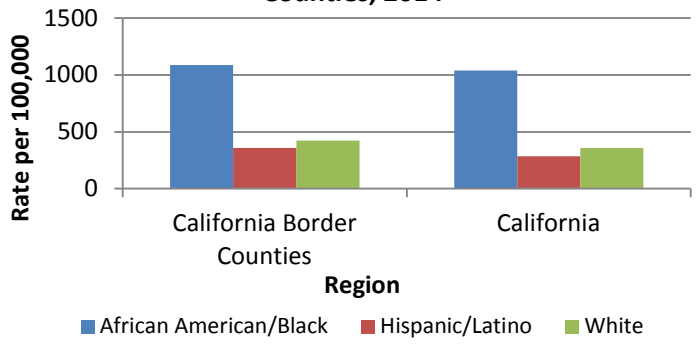
Fig. 8.1 Diagnosed Persons Living with HIV/AIDS by Current HIV Status in CA Border Counties, 2014



Source: California Department of Public Health, Office of AIDS, 2016

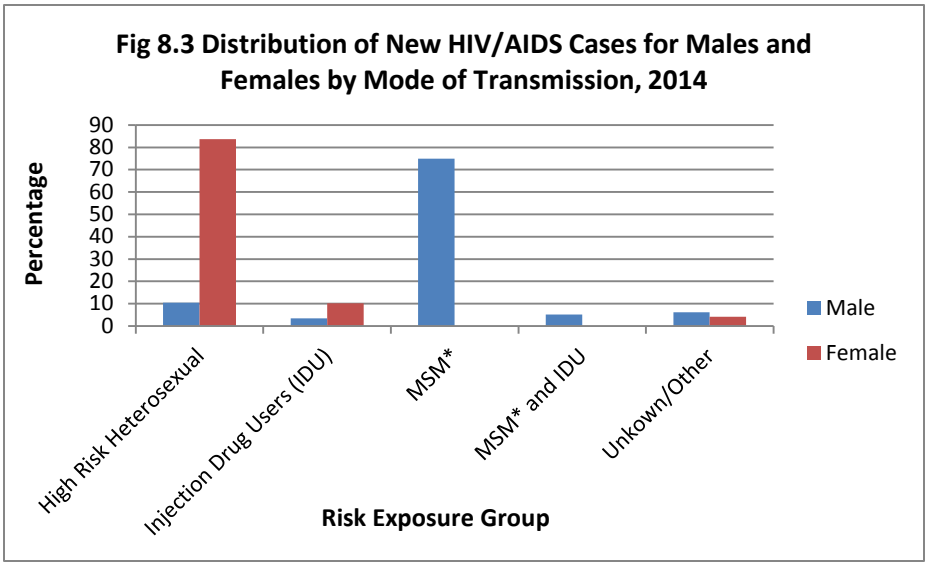
In California and California border counties during 2014, the African-American/Black population represented the most affected race/ethnicity with the highest rate of persons living with HIV/AIDS (1,039.4 and 1,087.3 per 100,000 respectively) when compared to the Hispanic/Latino and White populations (Figure 8.2). The rate of HIV/AIDS for Hispanics/Latinos living in border counties was 359.1 per 100,000 (n= 4,402), while for Whites it was 423.7 per 100,000 (n= 6,430). Similarly, from 2012 to 2014, African-American/Blacks had the highest rates of new HIV/AIDS diagnoses in California border counties each year compared to Hispanics/Latinos and Whites. At the end of 2014, the majority (89.3%, n= 11,712) of people living with HIV/AIDS in California border counties were male, whereas females represented 10.0% (n= 1,306) of living cases and transgender persons represented 0.7% (n= 94) of living cases. California and California border counties have similar percentages of persons living with HIV when compared across gender groups. For new cases of HIV/AIDS in the border counties in 2014, the gender distribution is very similar to that for living cases, with males representing 88.8% and women representing 9.8% of new cases (CDPH, 2016).

Fig. 8.2 Rates of Diagnosed Persons Living with HIV/AIDS by Race/Ethnicity in CA and Border Counties, 2014



Source: California Department of Public Health, Office of AIDS, 2016

In Imperial and San Diego Counties, 60.0% of new HIV/AIDS diagnoses in 2014 were among people between the ages of 20 and 39 years, and 82.1% were between the ages of 20 and 49 years. Among sex at birth, males and females accounted for 88.7% (N=442) and 9.84% (N=49) of new diagnoses, respectively. Among new male cases, 78.2% (N=346) were among men who have sex with men (MSM) and injection drug user (MSM/IDU) (with MSM accounting for 95.7% of this proportion). Among new female cases, the predominant risk exposure was high-risk heterosexual contact, 83.7% (N=41). (Fig. 8.3) (CDPH, 2016).



Source: California Department of Public Health, Office of AIDS, 2016
*MSM=Men who have sex with men

IMMUNIZATION AND VACCINE PREVENTABLE DISEASES

BACKGROUND

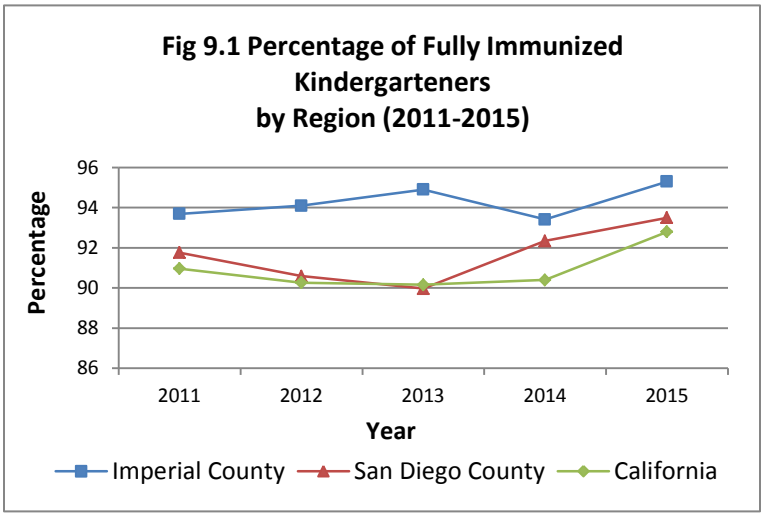
Immunizations are one of the best ways to prevent dangerous or even potentially lethal infectious diseases. Thanks to vaccines, millions of deaths have been avoided worldwide. In the United States, the rate of vaccination is consistently high, which provides better control of communicable diseases.

Vaccines work by creating antibodies against specific diseases to increase immunity. They also help create group immunity, known as herd immunity, which occurs when the number of persons vaccinated is high enough within a population that spread of the disease can be prevented though not every member of the population is immunized (Fine, 2011). This type of immunity is particularly important to protect small children that cannot yet be vaccinated, the elderly population, and immune-compromised individuals.

In the United States, childhood immunizations include protection against: Hib (hemophilus influenza type B), PCV (pneumococcal disease), RV (rotavirus), DTaP (diphtheria, tetanus, and pertussis), polio, MMR (measles, mumps, and rubella), hepatitis B, hepatitis A, poliomyelitis, seasonal influenza and varicella. In California, it is required for all children entering kindergarten and elementary school to provide vaccination proof for the following diseases: diphtheria, hepatitis B, measles, mumps, rubella, pertussis, poliomyelitis, tetanus, and varicella. Vaccines are one of the greatest public health achievements. As a result of immunizations, several dangerous and potentially lethal diseases are continuously averted. Immunizations also protect from severe forms of disabilities and save the public health sector from high expenses derived from these diseases.

IMMUNIZATION IN THE BORDER REGION

Over a four-year period (2011-2015), the proportion of vaccination coverage with all required immunizations among children four to six years of age in California and its border counties have remained close to or above 90.0%. In 2015, California reported that 92.8% of all school-age children entering kindergarten had all required immunizations, compared to Imperial County (95.3%) and San Diego County (93.5%) (Fig. 9.1). Healthy People's 2020 target for required immunizations for children entering kindergarten is 95.0% per vaccine. For the same period of time, in Imperial County and San Diego County, 96.0% and 94.0% of the children received four or more doses of DTaP respectively; 97.0% in Imperial County and 95.0% in San Diego County received three or more doses of polio. In Imperial and San Diego counties, 97.0% and 95.0% of



Source: California Department of Public Health Immunization Branch

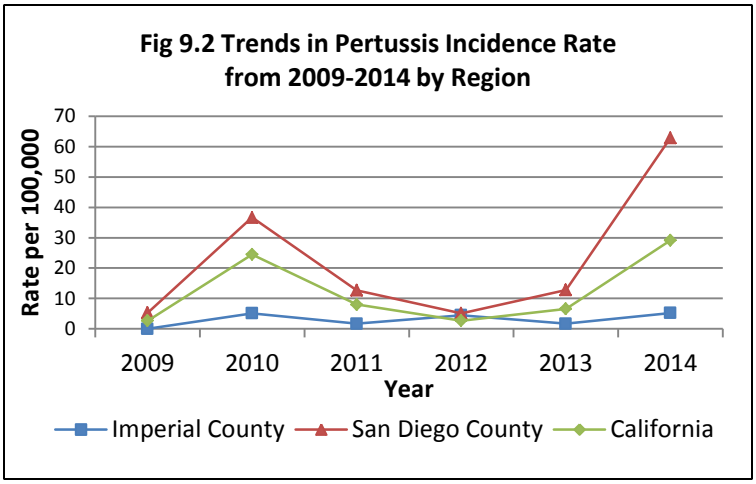
children, respectively, received a second dose of MMR. Additionally, 98.0% in Imperial County and 95.0% in San Diego County received three or more doses of hepatitis B, and 99.0% received one or more doses of varicella in Imperial County, compared to 96.0% in San Diego County (CDPH, 2016).

VACCINE PREVENTABLE DISEASES IN THE CALIFORNIA BORDER REGION

In 2014, according to the most recent data available from the CDPH-Immunization Branch, Imperial County reported one acute hepatitis B case (0.6 per 100,000) and 10 pertussis cases (5.5 per 100,000), while San Diego County reported 14 hepatitis A cases (0.44 per 100,000), seven acute hepatitis B cases (0.2 per 100,000), nine meningococcal disease cases (0.3 per 100,000), 2019 pertussis cases (62.9 per 100,000), and two varicella hospitalizations. In addition, six measles cases were reported in San Diego County in 2014 (CDPH, 2016).

Pertussis Surveillance in the California Border Region

In 2010, California experienced its worst outbreak of pertussis in more than 50 years, with more than 9,100 confirmed cases (rate of 24.6 per 100,000) and 10 infant deaths (CDPH, 2010). In 2014, there were 29.1 cases of pertussis per 100,000 in California, which represents an increased rate since the 2010 outbreak. In 2014, there were 62.9 cases of pertussis per 100,000 in San Diego County, which is higher than the California statewide rate. In comparison, in 2014 Imperial County had a rate of 5.5 cases per 100,000 (Fig. 9.2).



Source: California Department of Public Health Immunization Branch

Tdap Immunization on Students entering 7th grade in the California Border Region

To protect California's youth, new legislation was passed in 2010 requiring Tdap vaccination for all California students. Under the new law, all 7-12 grade students were required to provide documentation of receiving the Tdap vaccine prior to the beginning of the school year (CDPH, 2010). In 2015, California had 97.8% of students with Tdap vaccination upon entry to seventh grade. Similarly, San Diego had 97.5% students with Tdap vaccination and Imperial County had 99.3% (CDPH, 2016).

Measles Surveillance in the California Border Region

A total of 75 measles cases with disease onset during 2014 were reported statewide. Of the 75 cases, six measles cases were reported in San Diego County. In December 2014, a large measles outbreak started in California among people who visited or worked at Disneyland, spreading throughout California and to at least half a dozen other states. Fourteen patients with disease onset in December 2014 are presumed to be associated with the Disneyland outbreak (CDPH, 2016).

Of the total 14 confirmed cases, two were from San Diego County. The outbreak was declared over as of April 17, 2015 (CDPH, 2015). Imperial County did not report any cases for the same period of time (CDPH, Immunization Branch, 2014). For measles prevention, children must receive at least two doses of MMR (Measles, Mumps and Rubella) vaccine; the first dose is given at 12 months and the second one is given before children begin kindergarten (CDPH, 2015). Two doses of the measles vaccine are more than 97.0% effective in preventing the disease (CDPH, 2016).

CONCLUSION

This report covered selected topics of border health such as, demographics, access to healthcare, obesity, diabetes, mental health, tuberculosis, STIs, HIV/AIDS, immunizations, and vaccine preventable diseases. The proximity between California and Baja California creates a complex and dynamic space where infectious diseases can easily cross borders. Furthermore, cultural characteristics, attitudes, and beliefs also impact the health of the population, particularly among Hispanics/Latinos living in the California border region.

The size of the population of the California border region continues to experience growth. In Imperial County, Hispanics/Latinos make up the majority of the population, while in San Diego they are the largest minority. The Hispanic/Latino population in the California border region is less likely to "speak English well", have graduated from college, and more likely to live at or below 200% of the FPL. In addition, Hispanics/Latinos in the border region and in the State of California as a whole have the lowest rates of health insurance coverage compared to Whites and all ethnicities combined.

Important indicators that help assess the health of the community are chronic diseases, which include obesity and diabetes. As of 2014, 24.8% of adults in San Diego County and 41.9% of adults in Imperial County were obese; while both San Diego County and the State of California as a whole met the HP2020 target for obesity, Imperial County did not and has one of the highest rates of obesity in the entire state. This highlights the importance of health promotion programs and the creation of policies and laws that modify the environment for promoting better health behaviors. Similarly, diabetes is a significant and growing problem in the region, where 6.8% of adults in San Diego County and 15.9% of adults in Imperial County reported having been diagnosed with diabetes in 2014. In terms of mental health, data from the border region shows that Hispanics/Latinos report more family and social life impairment due to emotional stress than their White counterparts in San Diego, data for Imperial County is reported as unstable. Despite this, in the border region and the State of California overall, Hispanic/Latinos have had significantly lower rates of suicide than their White counterparts and all ethnicities combined.

Infectious diseases, like tuberculosis, STIs, HIV/AIDS, and vaccine-preventable-diseases continue to be a significant challenge in the California border region. In 2014, Imperial County saw a decrease in TB case rates while San Diego experienced a slight increase compared to 2013 rates. In California and the border counties, the rate of TB was higher among Hispanics/Latinos than Whites. A large proportion of TB cases in California and the border counties were among people of Mexican origin. TB cases in the border counties had higher frequency of characteristics such as homelessness, diagnosed in a correctional facility, substance abuse and medical co-morbidities such as HIV/AIDS compared to the state. Continued collaboration with health partners in Mexico and public health interventions aimed at reducing TB among the Mexican-born are needed in order to effectively control TB and other infectious diseases in California. According to the CDPH Office of AIDS, in 2014, California border counties had 13,112 total persons living with HIV infection (58.2% classified as AIDS and 41.9% as HIV cases). The vast majority of the population living with HIV/AIDS in the border region is male, and sexual contact continues to be the main mode of transmission (MSM and heterosexual).

The OBBH mission is to increase the communication and collaboration in the California Border region with the focus of improving health in the region. Over the past years OBBH has

collaborated with partners to address priority issues mentioned in this report. Some examples of collaborative projects include: Binational symposiums on childhood obesity and HIV/AIDS, binational health summit to form workgroups to address HIV/AIDS, mental health, obesity, and TB. Additionally, binational epidemiology meetings on monitoring, notification, surveillance and reporting of infectious diseases are other examples of collaboration. Finally, OBBH is the co-lead for the Binational Consortium of the Californias, a mechanism developed for public, private, and academic entities that work on border health issues to work together to optimize the health in the border region.

Differences in health outcomes have highlighted key health needs of the region and have helped to identify resources and services for California residents. The California Department of Public Health, Office of Binational Border Health (OBBH) develops this report to inform the stakeholders and public health colleagues on the health needs of the California border region and to assist in the education of public health professionals. This information is important to enable a more focused approach to address the needs of the region. For more information about health issues that affect California's border region, visit the Office of Binational Border Health's website at www.cdph.ca.gov/programs/cobbh.

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Appendix A- Technical Notes

Information for many health indicators in this report was obtained from the California Health Interview Survey (CHIS), using the interactive Web-based tool “AskCHIS”. CHIS is the largest state health survey and one of the largest health surveys in the United States. The CHIS data are self-reported by respondents on the survey. Therefore, the data may be subject to error, such as from respondent failure to recall information. Participation is voluntary; persons who refused to participate may be different from those who were interviewed. Details on response rates and other survey information can be obtained at the CHIS website.

The Border Health Epidemiology Report 2015 aims to report only the most accurate and most recent data available. In some cases, estimates from the California Interview Survey (CHIS) labeled as “unstable” are reported if no other legitimate data sources exist. CHIS labels any estimate as “unstable” if the coefficient of variation (CV) is greater than 30%. The CV refers to the percentage of variation in the mean; a CV of greater than 30% indicates that if the estimation were to be performed multiple times, the resulting mean value might vary from the original estimate by more than 30%. Although less variation is typically preferable, these estimates are included to ensure that the BHSR is presenting the most complete overview possible of the health status of the border region; failure to include this data would result in the exclusion of certain populations and entire geographic areas of the border region where data is scarce.

Appendix B- Tables

Table 1.1 Percent Change in California and Border Counties by Race/Ethnicity (2005-2015)			
Population	**2005**	**2015**	**% Change**
Imperial			
Asian/Pacific Islander	3,769	2,479	-34.2%
Black	5,678	5,252	-7.5%
Hispanic	124,520	152,686	22.6%
Multi	940	1,135	20.7%
Native Amer/Alaskan	2,076	1,795	-13.5%
White	27,757	24,342	-12.3%
All	164,740	187,689	13.9%
San Diego			
Asian/Pacific Islander	296,073	368,763	24.6%
Black	148,610	155,132	4.4%
Hispanic	852,606	1,077,528	26.4%
Multi	69,597	102,713	47.6%
Native Amer/Alaskan	23,891	14,936	-37.5%
White	1,664,001	1,530,660	-8.0%
All	3,054,778	3,244,706	6.2%
California			
Asian/Pacific Islander	4,393,010	5,301,831	20.7%
Black	2,255,281	2,236,361	-0.8%
Hispanic	12,905,840	15,172,006	17.6%
Multi	779,784	1,040,869	33.5%
Native Amer/Alaskan	215,044	172,948	-19.6%
White	16,408,477	14,972,954	-8.7%
All	36,896,220	38,896,969	5.4%

Data: California Department of Finance. Race/Ethnic Population with Age and Sex Detail, 2010-2060. Sacramento, CA

[a] *Population total in July*

[b] *Pacific Islander*

[c] *Native American/Alaskan Native*

Table 1.2 Education Level Completed by Race/Ethnicity and Region (2014)										
Population	**Less Than High School**		**Graduated High School**		**Some College, Vocational School, AA/AS**		**BA/BS, MA/MS, or PhD degree, or some graduate school**		**No Formal Education**	
	%[a]	**95% CI[b]**	**%[a]**	**95% CI[b]**	**%[a]**	**95% CI[b]**	**%[a]**	**95% CI[b]**	**%[a]**	**95% CI[b]**
Imperial										
Hispanic	31.2	(18.3, 44.2)	20.5*	(7.4, 33.7)	25.2	(10.9, 39.4)	22.5*	(6.0, 39.1)	0.6*	(0.0, 1.1)
White	18.7*	(0.0, 47.9)	13.4*	(0.0, 35.1)	15.5	(0.1, 30.9)	52.5	(25.4, 79.6)	-	-
All	29.5	(18.1, 40.9)	19.1	(7.9, 30.4)	23.5	(11.3, 35.6)	27.4	(13.4, 41.5)	0.5*	(0.0, 0.9)
San Diego										
Hispanic	33.2	(27.3, 39.0)	25.0	(18.3, 31.6)	24.2	(17.5, 30.8)	16.3	(10.7, 22.0)	1.3*	(0.3, 2.4)
White	2.8*	(0.9, 4.7)	18.9	(14.0, 23.8)	27.3	(22.0, 32.6)	51.0	(45.1, 56.8)	-	-
All	12.8	(10.8, 14.9)	21.4	(17.8, 24.9)	26.7	(22.9, 30.6)	38.6	(34.8, 42.4)	0.5*	(0.1, 0.9)
California										
Hispanic	31.6	(29.5, 33.6)	29.1	(26.7, 31.6)	23.5	(21.2, 25.8)	14.3	(12.7, 15.8)	1.5	(1.1, 1.9)
White	3.2	(2.6, 3.9)	20.8	(19.4, 22.2)	28.0	(26.2, 29.7)	48.0	(46.2, 49.7)	-	-
All	15.2	(14.5, 15.9)	23.9	(23.2, 24.6)	25.2	(24.1, 26.2)	35.1	(34.1, 36.1)	0.7	(0.5, 0.8)

Data: 2014 California Health Interview Survey

[a] Percentage of those belonging to a certain racial/ethnic group, what percent are educated by educational attainment

[b] 95% Confidence Interval

**Statistically Unstable*

(-) Data Unavailable

Table 2.1 Health Insurance Coverage for All Ages by Race/Ethnicity and Region (2011-2014)								
Population	**2011**		**2012**		**2013**		**2014**	
	%[a]	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**
Imperial								
Hispanic	75.6	(66.7, 84.5)	80.3	(69.7, 90.9)	86.2	(79.2, 93.2)	90.8*	(85.4, 96.3)
White	93.9*	(81.3, 100.0)	96.8*	(92.3, 100.0)	91.1*	(80.7, 100.0)	99.4*	(98.1, 100.0)
All	79.7	(72.5, 86.9)	83.2	(74.4, 92.1)	85.8	(80.0, 91.7)	91.9	(87.3, 96.5)
San Diego								
Hispanic	80.3	(74.8, 85.8)	71.1	(66.9, 75.3)	70.3	(64.0, 76.5)	78.2	(71.8, 84.7)
White	90.7	(87.5, 93.8)	90.2	(87.2, 93.1)	93.1	(91.3, 94.8)	95.5	(93.2, 97.8)
All	86.3	(83.3, 89.2)	83.6	(81.7, 85.6)	84.7	(82.3, 87.2)	89.3	(86.8, 91.8)
California								
Hispanic	78.9	(77.7, 80.2)	77.8	(76.3, 79.2)	79.5	(77.9, 81.2)	80.9	(79.0, 82.8)
White	90.3	(89.4, 91.2)	91.7	(90.8, 92.6)	91.7	(90.8, 92.5)	93.9	(92.8, 95.0)
All	85.6	(84.8, 86.3)	85.5	(84.8, 86.2)	86.2	(85.4, 87.0)	88.1	(87.2, 88.9)

Data: 2011-2014 California Health Interview Survey

[a] *Percentage: of those belonging to a certain racial/ethnic group, what percent are insured*

[b] 95% Confidence Interval

*Statistically Unstable

Table 2.2 Percent of the Population with Employer Health Benefits by Race/Ethnicity and Region (2014)				
Population	**Accepted Health Benefits**		**Employer didn't offer health benefits**	
	%[a]	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**
Imperial				
Hispanic	41.2	(21.4, 61.0)	34.3	(14.8, 53.7)
White	57.7*	(22.4, 93.0)	31.5*	(0.0, 66.4)
All	43.5	(25.8, 61.1)	35.1	(18.7, 51.6)
San Diego				
Hispanic	45.6	(33.8, 57.5)	24.1	(13.4, 34.8)
White	58.9	(48.9, 69.0)	12.1	(7.2, 17.0)
All	55.8	(48.8, 62.8)	17.4	(13.0, 21.8)
California				
Hispanic	45.4	(41.8, 49.1)	31.1	(27.4, 34.9)
White	67.0	(63.9, 70.1)	11.4	(9.4, 13.4)
All	57.4	(55.3, 59.4)	20.4	18.6, 22.1)

Data: 2014 California Health Interview Survey

[a] Percentage: of those belonging to a certain racial/ethnic group, what percent accepted employer's insurance

[b] 95 % Confidence Interval

**Statistically Unstable*

Table 2.3 Type of Current Health Insurance Coverage by Race/Ethnicity and Region (2014)												
Population	**Medicare&Medicaid**		**Medicare Only**		**Medicaid**		**Employment, Based**		**Private**		**Public**	
	%[a]	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**
Imperial												
Hispanic	3.6*	(1.2, 6.0)	3.7*	(0.0, 10.4)	45.9	(28.2, 63.7)	34.6	(16.6, 52.6)	9.8*	(0.0, 19.6)	0.8*	(0.0, 2.5)
White	11.2*	(0.0, 31.9)	-	-	17.3*	(0.0, 45.0)	40.7	(20.2, 61.2)	16.9*	(0.0, 44.2)	-	-
All	4.5*	(1.0, 8.1)	3.1*	(0.0, 8.5)	42.7	(27.9, 57.5)	34.7	(19.6, 49.8)	10.9*	(1.6, 20.3)	0.7*	(0.0, 2.0)
San Diego												
Hispanic	6.7	(3.3, 10.2)	0.4*	(0.1, 0.7)	38.6	(30.7, 46.5)	39.4	(31.2, 47.6)	8.0*	(3.1, 13.0)	0.3*	(0.0, 0.8)
White	1.7*	(0.6, 2.8)	3.2	(1.7, 4.7)	9.7	(5.7, 13.8)	58.2	(51.8, 64.6)	8.2	(5.1, 11.3)	1.7*	(0.0, 3.5)
All	3.9	(2.6, 5.2)	1.9	(1.1, 2.7)	20.4	(16.8, 23.9)	52.2	(47.5, 57.0)	8.0	(5.6, 10.4)	2.2*	(0.5, 3.8)
California												
Hispanic	3.7	(2.9, 4.5)	0.5	(0.3, 0.8)	45.3	(42.4, 48.2)	40.6	(37.7, 43.6)	5.0	(3.9, 6.2)	1.5	(0.7, 2.3)
White	1.9	(1.5, 2.2)	2.5	(2.0, 3.1)	10.5	(9.2, 11.9)	57.6	(55.6, 59.7)	8.4	(7.0, 9.8)	0.9	(0.5, 1.2)
All	3.4	(3.0, 3.7)	1.6	(1.2, 1.9)	25.6	(24.3, 26.8)	50.9	(49.5, 52.2)	7.3	(6.4, 8.1)	1.2	(0.8, 1.6)

Data: 2014 California Health Interview Survey
a Percentage: of those that are insured and belonging to a certain racial/ethnic group, what percentage are insured under each type of coverage
b 95% Confidence Interval
**Statistically Unstable*
(-) Data Unavailable

Table 2.4 Percent of the Insured Population that is Insured through HMO[a] by Race/Ethnicity and Region (2011-2014)								
Population	**2011**		**2012**		**2013**		**2014**	
	%[b]	**95% C.I.[c]**	**%[b]**	**95% C.I.[c]**	**%[b]**	**95% C.I.[c]**	**%[b]**	**95% C.I.[c]**
Imperial								
Hispanic	45.1	(33.7, 56.5)	42.7	(25.7, 59.7)	59.3	(44.4, 74.1)	45.1	(28.9, 61.3)
White	14.2*	(0.4, 28.0)	39.5*	(15.1, 63.9)	52.9	(27.8, 78.1)	35.9*	(4.4, 67.4)
All	41.1	(32.2, 50.1)	44.5	(28.5, 60.5)	58.5	(45.8, 71.1)	44.1	(29.9, 58.3)
San Diego								
Hispanic	62.8	(53.0, 72.5)	64.6	(57.0, 72.2)	60.4	(52.5, 68.3)	74.0	(67.9, 80.0)
White	55.9	(51.0, 60.8)	56.9	(52.6, 61.3)	54.8	(49.7, 59.9)	60.1	(53.5, 66.7)
All	57.6	(53.3, 62.0)	61.4	(57.8, 65.1)	57.3	(53.4, 61.3)	64.9	(60.6, 69.1)
California								
Hispanic	60.0	(57.6, 62.4)	59.5	(57.2, 61.8)	61.9	(59.4, 64.5)	66.5	(63.5, 69.5)
White	50.5	(49.1, 51.9)	51.8	(50.1, 53.4)	52.8	(50.9, 54.7)	51.9	(49.3, 54.4)
All	56.0	(54.7, 57.3)	56.9	(55.6, 58.2)	56.9	(55.4, 58.4)	58.5	(56.8, 60.2)

Data: 2011-2014 California Health Interview Survey

[a] Health Maintenance Organization

[b] Percentage: of those belonging to a certain racial/ethnic group, what percent have an HMO plan

[c] 95 % Confidence Interval

**Statistically Unstable*

Table 3.1 Percent of Adults (Age 18+) Who Are Obese (BMI≥30) by Race/Ethnicity and Region (2011-2014)								
	2011		2012		2013		2014	
Population	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Imperial								
Hispanic	38.6	(27.4, 49.7)	48.7	(34.1, 63.3)	48.1	(33.6, 62.7)	47.0	(33.1, 60.9)
White	25.0*	(7.9, 42.1)	31.7*	(6.4, 57.0)	32.8*	(7.9, 57.7)	24.5*	(4.6, 44.4)
All	34.9	(25.4, 44.5)	47.1	(35.0, 59.1)	45.1	(31.9, 58.2)	41.9	(30.1, 53.8)
San Diego								
Hispanic	29.3	(21.7, 36.9)	26.2	(21.0, 31.4)	27.9	21.3, 34.5)	33.6	(25.9, 41.3)
White	18.0	(13.5, 22.5)	21.2	(18.1, 24.2)	19.9	(16.7, 23.1)	21.0	(16.8, 25.2)
All	20.3	(17.3, 23.3)	22.4	(19.9, 25.0)	23.7	(20.6, 26.8)	24.8	(21.3, 28.3)
California								
Hispanic	32.4	(30.4, 34.5)	32.4	(30.2, 34.5)	32.6	(30.0, 35.2)	34.3	(31.9, 36.8)
White	22.6	(21.6, 23.7)	20.9	(19.7, 22.1)	21.6	(20.1, 23.0)	24.0	(22.0, 26.1)
All	25.1	(24.2, 26.1)	24.2	(23.2, 25.2)	24.7	(23.5, 25.9)	27.0	(25.5, 28.6)

Data: 2011-2014 California Health Interview Survey

[a] *Body Mass Index*

[b] *Percentage: of those belonging to a certain racial/ethnic group, what percent are obese*

[c] *95 % Confidence Interval*

**Statistically Unstable*

Table 3.2 Percent of Adults (Age 18+) Who Are Overweight (BMI≥25.0-29.99) by Race/Ethnicity and Region (2011-2014)								
	2011		2012		2013		2014	
Population	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Imperial								
Hispanic	43.3	(31.2, 55.3)	25.8	(16.1, 35.5)	37.7	(24.8, 50.5)	35.2	(23.2, 47.2)
White	48.1	(25.5, 70.7)	45.1	(19.3, 71.0)	18.0*	(0.1, 35.9)	42.0*	(5.9, 78.2)
All	41.4	(31.3, 51.5)	28.1	(19.5, 36.7)	33.5	(22.8, 44.3)	36.2	(24.9, 47.6)
San Diego								
Hispanic	37.2	(28.8, 45.5)	42.4	(36.7, 48.2)	31.2	(23.6, 38.9)	44.3	(35.8, 52.8)
White	36.9	(31.4, 42.3)	35.9	(31.7, 40.2)	38.1	(32.9, 43.4)	34.0	(28.6, 39.4)
All	35.8	(31.9, 39.7)	36.8	(33.9, 39.6)	33.7	(30.2, 37.2)	34.6	(30.6, 38.6)
California								
Hispanic	38.1	(35.9, 40.3)	38.9	(36.8, 40.9)	39.2	(36.3, 42.1)	38.9	(36.0, 41.7)
White	35.4	(34.1, 36.8)	34.8	(33.2, 36.4)	34.5	(32.7, 36.3)	34.9	(32.8, 36.9)
All	35.2	(34.1, 36.2)	35.1	(34.1, 36.2)	36.0	(34.7, 37.3)	35.5	(34.0, 37.0)

Data: 2011-2014 California Health Interview Survey

[a] *Body Mass Index*

[b] *Percentage: of those belonging to a certain racial/ethnic group, what percent are overweight*

[c] *95 % Confidence Interval*

**Statistically Unstable*

Table 3.3 Age Distribution of Obese (BMI≥30) Adults (Age 18+) by Region (2011-2014)								
	2011		2012		2013		2014	
Population	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Imperial								
18-24	9.5*	(1.5, 17.5)	15.3*	(1.5, 29.2)	7.6*	(0.0, 16.0)	7.0*	(0.0, 16.7)
25-39	17.1*	(1.0, 33.1)	13.6*	(2.8, 24.4)	38.8	(16.8, 60.8)	35.5	(15.5, 55.5)
40-64	61.4	(43.2, 79.6)	58.8	(38.1, 79.5)	42.8	(19.6, 65.9)	49.5	(29.8, 69.2)
65-79	9.7*	(2.2, 17.2)	11.8*	(2.0, 21.6)	10.0*	(0.0, 22.1)	7.6*	(2.3, 13.0)
80+	2.4*	(0.0, 6.0)	-	-	-	-	-	-
San Diego								
18-24	8.7*	(3.3, 14.1)	11.1	(5.3, 16.9)	6.9	(3.6, 10.3)	7.6*	(2.9, 12.3)
25-39	30.3	(22.7, 37.9)	27.5	(21.1, 34.0)	27.6	(19.3, 35.9)	28.1	(18.7, 37.5)
40-64	47.8	(38.8, 56.8)	47.5	(40.8, 54.2)	48.5	(40.9, 56.1)	45.6	(36.6, 54.7)
65-79	11.2	(7.2, 15.1)	11.2	(8.1, 14.3)	13.6	(8.4, 18.8)	17.2	(9.5, 24.9)
80+	2.0*	(0.4, 3.7)	2.6	(1.5, 3.8)	3.4*	(1.3, 5.5)	1.4	(0.7, 2.2)
California								
18-24	8.0	(6.9, 9.1)	8.0	(6.6, 9.5)	7.9	(6.4, 9.4)	6.6	(5.1, 8.1)
25-39	25.2	(23.7, 26.8)	27.1	(24.7, 29.4)	27.2	(24.6, 29.7)	28.3	(25.9, 30.7)
40-64	52.0	(50.1, 53.9)	50.6	(48.3, 52.9)	50.1	(47.8, 52.4)	49.8	(47.2, 52.4)
65-79	12.6	(11.7, 13.6)	11.9	(10.8, 12.9)	12.1	(11.0, 13.2)	13.2	(11.9, 14.6)
80+	2.2	(1.8, 2.5)	2.4	(2.0, 2.8)	2.7	(2.2, 3.3)	2.0	(1.6, 2.5)

Data: 2011-2014 California Health Interview Survey

[a] *Body Mass Index*

[b] *Percentage: of those who are obese, what percent belong to a certain age group*

[c] *95 % Confidence Interval*

**Statistically Unstable*

(-) Data Unavailable

Table 3.4 Age Distribution of Overweight (BMI≥25.0-29.99) Adults (Age 18+) by Region (2011-2014)								
	2011		2012		2013		2014	
Population	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Imperial								
18-24	11.7*	(2.3, 21.1)	8.0*	(0.7, 15.3)	23.8*	(6.8, 40.9)	27.0*	(9.9, 44.1)
25-39	33.4	(13.7, 53.0)	37.2	(20.5, 53.9)	23.8*	(0.0, 48.6)	25.2*	(2.8, 47.7)
40-64	47.8	(29.8, 65.7)	33.3	(17.7, 48.8)	37.9	(19.0, 56.9)	33.5*	(9.5, 57.5)
65-79	4.7*	(1.6, 7.7)	20.1*	(5.9, 34.2)	12.2*	(1.1, 23.4)	10.2*	(0.1, 20.2)
80+	2.5*	(0.1, 4.9)	-	-	2.2*	(0.1, 4.3)	4.1*	(0.0, 8.5)
San Diego								
18-24	4.7*	(1.5, 7.9)	8.7	(5.9, 11.5)	11.0	(5.8, 16.3)	8.5	(4.4, 12.5)
25-39	31.6	(23.4, 39.8)	26.7	(21.5, 31.9)	26.6	(19.7, 33.4)	27.1	(20.7, 33.6)
40-64	50.7	(43.4, 58.0)	47.7	(42.9, 52.4)	42.7	(36.8, 48.6)	40.7	(34.7, 46.8)
65-79	9.8	(7.3, 12.2)	12.9	(10.1, 15.7)	15.2	(11.7, 18.7)	15.9	(11.7, 20.1)
80+	3.3	(2.2, 4.3)	4.1	(2.8, 5.3)	4.5	(3.1, 5.9)	7.7	(4.5, 11.0)
California								
18-24	10.4	(9.5, 11.3)	10.7	(9.4, 12.1)	10.2	(9.0, 11.4)	10.0	(8.6, 11.4)
25-39	25.2	(23.8, 26.5)	27.8	(26.3, 29.2)	26.7	(24.5, 28.9)	28.1	(25.8, 30.3)
40-64	47.3	(46.0, 48.7)	44.9	(43.4, 46.4)	45.4	(43.4, 47.3)	43.4	(41.6, 45.2)
65-79	12.9	(12.2, 13.7)	12.7	(12.0, 13.4)	13.6	(12.6, 14.5)	14.2	(13.1, 15.3)
80+	4.2	(3.7, 4.6)	3.9	(3.5, 4.2)	4.1	(3.7, 4.6)	4.4	(3.6, 5.1)

Data: 2011-2014 California Health Interview Survey

[a] *Body Mass Index*

[b] *Percentage: of those who are overweight, what percent belong to a certain age group*

[c] *95 % Confidence Interval*

**Statistically Unstable*

(-) Data Unavailable

Table 4.1 Percent of Adults (Age 18+) Who Have Been Diagnosed with Diabetes by Race/Ethnicity and Region (2011- 2014)								
Population	**2011**		**2012**		**2013**		**2014**	
	%[a]	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**
Imperial								
Hispanic	7.2*	(2.8, 11.5)	4.8*	(1.1, 8.5)	24.2	(10.8, 37.6)	18.4*	(7.3, 29.5)
White	3.2*	(0.0, 7.5)	3.3*	(0.4, 6.2)	6.2*	(0.0, 14.1)	-	-
All	6.4	(3.0, 9.8)	4.4*	(1.5, 7.4)	20.6	(9.7, 31.6)	15.9	(6.9, 24.9)
San Diego								
Hispanic	6.3	(3.2, 9.4)	7.9	(5.3, 10.6)	10.5	(6.2, 14.8)	8.0	(4.3, 11.6)
White	7.7	(5.4, 10.0)	5.9	(4.5, 7.2)	7.1	(5.3, 9.0)	6.3	(4.1, 8.5)
All	8.0	(5.9, 10.0)	7.4	(6.1, 8.7)	8.5	(6.4, 10.7)	6.8	(5.3, 8.4)
California								
Hispanic	9.8	(8.8, 10.9)	9.9	(8.6, 11.2)	11.6	(9.8, 13.3)	10.0	(8.7,11.3)
White	7.4	(6.7, 8.1)	6.9	(6.2, 7.6)	6.6	(5.9, 7.3)	7.7	(6.6, 8.9)
All	8.4	(7.8, 8.9)	8.3	(7.7, 8.9)	8.7	(7.9, 9.5)	8.9	(8.1, 9.7)

Data: 2011-2014 California Health Interview Survey

[a] Percentage: of those belonging to a certain racial/ethnic group, what percent are diabetic

[b] 95 % Confidence Interval

**Statistically Unstable*

Table 4.2 Diabetes Mellitus Mortality Rates by Race/Ethnicity and Region (2011-2013)						
Population	**2011**		**2012**		**2013**	
	Number	**Rate[a]**	**Number**	**Rate[a]**	**Number**	**Rate[a]**
Imperial						
Hispanic	48	45.3	27	23.8	31	28.0
White	10	26.8	7	16.6	9	21.1
All	60	38.5	38	23.5	43	26.7
San Diego						
Hispanic	141	28.0	169	31.8	140	24.2
White	310	14.6	370	16.9	349	16.0
All	581	18.8	652	20.2	614	18.7
California						
Hispanic	2,082	29.2	2215	29.7	2338	29.8
White	3,737	16.7	3800	16.8	3733	16.3
All	7,653	20.5	7877	20.6	7998	20.3

Data: California Health Statistics and Informatics

[a] Age-Adjusted Mortality Rate per 100,000

Table 4.3 Age Distribution of Adults (Age 18+) Who Have Been Diagnosed with Diabetes by Region (2011- 2014)								
Population	**2011**		**2012**		**2013**		**2014**	
	%[a]	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**	**%[a]**	**95% C.I.[b]**
Imperial								
18-24	-	-	-	-	-	-	-	-
25-39	9.6*	(0.0, 25.1)	-	-	20.2*	(0.0, 44.3)	5.3*	(0.0, 13.5)
40-64	73.7*	(54.7, 92.7)	37.0*	(14.6, 59.4)	43.5*	(16.4, 70.7)	54.8*	(19.7, 89.8)
65-79	10.3*	(2.1, 18.5)	58.4*	(33.4, 83.5)	32.4*	(9.0, 55.8)	34.8*	(0.0, 74.5)
80+	-	-	-	-	2.6*	(0.0, 6.6)	5.2*	(0.0, 14.3)
San Diego								
18-24	10.9*	(0.0, 24.3)	3.3*	(0.0, 8.0)	0.8*	(0.0, 2.2)	-	-
25-39	16.1*	(4.7, 27.5)	6.7*	(1.8, 11.7)	3.2*	(0.6, 5.9)	2.5*	(0.0, 5.2)
40-64	43.0	(30.1, 56.0)	57.3	(48.0, 66.6)	53.8	(42.9, 64.7)	41.3	(28.9, 53.7)
65-79	23.1	(14.0, 32.3)	25.4	(18.4, 32.4)	31.6	(20.9, 42.3)	45.2	(31.4, 59.1)
80+	6.8	(3.1, 10.5)	7.3	(4.2, 10.3)	10.6	(6.3, 14.9)	10.9	(4.6, 17.2)
California								
18-24	2.3*	(0.8, 3.8)	1.3*	(0.4, 2.1)	0.9*	(0.3, 1.4)	1.1*	(0.0, 2.8)
25-39	8.2	(5.9, 10.5)	7.4	(5.3, 9.6)	7.9	(4.7, 11.1)	10.0	(6.5, 13.5)
40-64	55.3	(52.0, 58.6)	54.9	(51.4, 58.5)	53.2	(48.7, 57.7)	49.7	(45.5, 53.9)
65-79	27.0	(24.3, 29.6)	27.4	(25.0, 29.8)	29.1	(25.6, 32.6)	30.3	(27.0, 33.6)
80+	7.2	(6.1, 8.3)	9.0	(7.5, 10.5)	9.0	(7.4, 10.5)	8.9	(7.2, 10.6)

Data: 2011-2014 California Health Interview Survey

[a] Percentage: of those who are diabetic, what percent belong to a certain age group

[b] 95 % Confidence Interval

**Statistically Unstable*

(-) Data Unavailable

Table 5.1 Family Life Impairment in the Past 12 Months (2014)						
	No family life impairment		Moderate		Severe	
Population	%	95% CI	%	95% CI	%	95% CI
Imperial						
Hispanic	92.2*	(85.3, 99.1)	1.1*	(0.3, 1.9)	6.7*	(0.0, 13.6)
White	78.5*	(45.5, 100.0)	20.9*	(0.0, 53.9)	-	-
All	90.5*	(83.0, 98.0)	4.1*	(0.0, 9.4)	5.4*	(0.0, 10.9)
San Diego						
Hispanic	81.7	(74.4, 89.0)	8.3	(3.7, 13.0)	10.0	(4.3, 15.7)
White	88.8	(85.1, 92.5)	8.2	(4.7, 11.7)	3.0	(1.2, 4.8)
All	85.2	(81.7, 88.6)	8.7	(6.2, 11.2)	6.1	(3.5, 8.7)
California						
Hispanic	84.1	(82.1, 86.0)	9.2	(7.5, 11.0)	6.7	(5.5, 7.9)
White	86.6	(85.0, 88.2)	7.7	(6.4, 8.9)	5.7	(4.6, 6.9)
All	86.6	(85.7, 87.5)	7.6	(6.9, 8.3)	5.8	(5.0, 6.5)

Data: 2014 California Health Interview Survey

[a] Percentage: of those belonging to a racial/ethnic group, what percent had family life impairment

[b] 95% Confidence Intervals

**Statistically Unstable*

(-) Data Unavailable

Table 5.2 Social Life Impairment in the Past 12 Months (2014)						
	No social life impairment		Moderate		Severe	
Population	%	95% CI	%	95% CI	%	95% CI
Imperial						
Hispanic	92.1*	(85.3, 99.0)	0.6*	(0.1, 1.2)	7.3*	(0.4, 14.1)
White	77.6*	(44.6, 100.0)	21.8*	(0.0, 54.8)	-	-
All	90.3*	(82.8, 97.8)	3.8*	(0.0, 9.1)	5.9*	(0.4, 11.4)
San Diego						
Hispanic	81.6	(74.3, 89.0)	7.8*	(3.1, 12.6)	10.5	(5.1, 16.0)
White	89.0	(85.4, 92.7)	6.8	(3.8, 9.9)	4.2	(2.0, 6.4)
All	85.6	(82.3, 88.9)	6.9	(4.7, 9.0)	7.5	(4.9, 10.1)
California						
Hispanic	85.2	(83.3, 87.0)	7.4	(5.9, 8.9)	7.4	(5.9, 9.0)
White	86.7	(85.1, 88.3)	6.0	(4.8, 7.1)	7.4	(6.3, 8.4)
All	86.9	(86.0, 87.8)	6.3	(5.5, 7.0)	6.9	(6.1, 7.7)

Data: 2014 California Health Interview Survey

[a] Percentage: of those belonging to a racial/ethnic group, what percent had social life impairment

[b] 95% Confidence Intervals

**Statistically Unstable*

Table 5.3 Ever Seriously Thought About Committing Suicide in the Past 12 Months (2014)				
	Thought about committing suicide		Never thought about committing suicide	
Population	%	95% CI	%	95% CI
Imperial				
Hispanic	0.8*	(0.0, 1.8)	99.2*	(98.2, 100.0)
White	9.8*	(0.0, 27.2)	90.2*	(72.8, 100.0)
All	2.2*	(0.0, 5.0)	97.8*	(95.0, 100.0)
San Diego				
Hispanic	6.5*	(1.9, 11.0)	93.5*	(89.0, 98.1)
White	9.0	(5.5, 12.5)	91.0	(87.5, 94.5)
All	9.4	(6.3, 12.4)	90.6	(87.6, 93.7)
California				
Hispanic	6.5	(5.1, 7.8)	93.5	(92.2, 94.9)
White	9.4	(8.2, 10.6)	90.6	(89.4, 91.8)
All	7.8	(7.0, 8.6)	92.2	(91.4, 93.0)

Data: 2014 California Health Interview Survey

[a] Percentage: of those belonging to a racial/ethnic group, what percent thought of committing suicide

[b] 95% Confidence Intervals

**Statistically Unstable*

Table 5.4 Suicide Mortality Cases by Age Group (2013)†						
Population	**5-14**	**15-24**	**25-44**	**45-64**	**65-84**	**85+**
Imperial	0	2	3	5	2	0
San Diego	5	61	104	163	74	23
California	29	452	1164	1548	644	169

Data: California Department of Public Health Center for Health Statistics and Informatics
†Rates per 100,000

Table 5.5 Age-Adjusted Rate† of Suicide Mortality Cases by Age Group (2013)						
Population	**5-14**	**15-24**	**25-44**	**45-64**	**65-84**	**85+**
Imperial	0.0	6.8	6.3	12.3	11.5	0.0
San Diego	1.3	12.9	11.3	20.7	22.2	38.2
California	0.6	8.1	11.0	16.0	15.6	24.9

Data: California Department of Public Health Center for Health Statistics and Informatics

†Death rates are per 100,000 population. Age-adjusted rates are calculated using the 2000 U.S. Standard Population

Table 5.6 Suicide Mortality Cases by Gender (2013)				
Population	**Male**	**Age-Adjusted Rate†**	**Female**	**Age-Adjusted Rate†**
Imperial				
Hispanic	6	9.7	1	1.1
White	4	18.7	1	15.5
All	10	10.9	2	2.6
San Diego				
Hispanic	37	8.3	13	2.4
White	237	26.1	79	8.9
All	321	19.9	109	6.6
California				
Hispanic	554	8.0	111	1.5
White	2082	24.1	683	7.9
All	3063	16.1	943	4.7

Data: California Department of Public Health Center for Health Statistics and Informatics
†Death rates are per 100,000 population. Age-adjusted rates are calculated using the 2000 U.S. Standard Population

Table 6.1 Tuberculosis Cases and Rates by Race/Ethnicity (2015)											
Population	**White**		**Black**		**Hispanic**		**Asian/PI**		**American/Native**		**Unknown**
	Cases	**Rate***	**Cases**	**Rate***	**Cases**	**Rate***	**Cases**	**Rate***	**Cases**	**Rate***	**Cases**
California	137	0.9	98	4.0	763	5.0	1138	19.6	1	0.2	0
Imperial	1	4.1	0		29	19.0	1	33.1	0	0.0	0
San Diego	17	1.1	4	2.3	124	11.5	89	21.5	0	0.0	0

** Rate per 100,000 population*

2015 Data obtained from CDPH Tuberculosis Control Branch

Table 6.2 Tuberculosis Cases with HIV* (2011-2015)				
Population	**Non-Mexican Born**	**Mexican Born**	**Total**	**Ratio**
California	3.8	6.2	4.4	1.62
Imperial	5.2	5.1	5.1	0.98
San Diego	6.3	11.2	7.9	1.76

**Percent of TB cases with HIV among those with HIV status reported*
2015 Data obtained from CDPH Tuberculosis Control Branch

Table 7.1 Cases and Incidence Rate of Chlamydia and Gonorrhea by Region and Race/Ethnicity (2012-2014)												
Population	Chlamydia						Gonorrhea					
	2012		2013		2014		2012		2013		2014	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate*
Imperial‡												
Hispanic	487	337.3	432	297.2	399	269.3	22	15.2	33	22.7	49	33.1
African American/Black	2	38.1	4	75.9	8	152.6	1	19.1	3	56.9	5	95.4
White	29	120.3	38	159.8	16	67.0	3	12.4	0	0.0	0	0.0
All	580	323.8	595	330.5	721	394.5	35	19.5	43	23.9	84	46.0
San Diego‡												
Hispanic	3733	361.9	3855	367.0	1509	140.9	416	40.3	545	51.9	671	62.6
African American/Black	996	647.3	1079	695.0	528	338.1	251	163.1	277	178.4	385	246.5
White	2517	165.0	2509	163.7	1146	74.4	556	36.5	681	44.4	758	49.2
All	16547	521.2	16112	502.1	15644	481.7	2603	82.0	2871	89.5	3400	104.7
California[a]												
Hispanic	83564	575.5	54325	367.7	52981	355.2	11341	78.1	10328	69.9	11812	79.2
African American/Black	32872	1490.0	20405	921.4	20060	902.3	9734	441.2	7775	351.1	9044	406.8
White	38328	256.0	25107	167.8	26083	174.4	10293	68.7	8517	56.9	10479	70.1
All	169,774	448.3	167916	439.5	174557	453.4	33782	89.2	38365	100.4	44974	116.8

** Rate per 100,000 population*

‡ Data: 2012-2014 California Department of Public Health Sexually Transmitted Diseases Branch 3/10/2016

[a] Data: California Department of Public Health Sexually Transmitted Disease Branch All STDs Tables California 2014

Table 7.2 Cases and Incidence Rate of Syphilis by Region and Race/Ethnicity (2012-2014)												
Population	Syphilis: Primary and Secondary						Syphilis: Congenital					
	2012		2013		2014		2012		2013		2014	
	Cases	Rate*	Cases	Rate*	Cases	Rate*	Cases	Rate**	Cases	Rate**	Cases	Rate**
Imperial‡												
Hispanic	1	0.7	4	2.8	6	4.0	0	0.0	0	0.0	1	33.5
African American/Black	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
White	1	4.1	0	0.0	1	4.2	0	0.0	0	0.0	0	0.0
All	2	1.1	4	2.2	7	3.8	0	0.0	0	0.0	1	30.6
San Diego‡												
Hispanic	102	9.9	118	11.2	107	10.0	3	16.1	2	11.2	4	23.0
African American/Black	25	16.2	38	24.5	36	23.0	0	0.0	0	0.0	0	0.0
White	171	11.2	155	10.1	167	10.8	1	6.5	1	6.6	1	6.7
All	334	10.5	354	11.0	375	11.5	4	9.0	3	6.9	7	15.7
California[a,b,c]												
Hispanic	1276	8.6	1276	8.6	1390	9.3	15	6.1	24	9.8	42	17.0
African American/Black	494	22.3	494	22.3	475	21.4	7	26.4	8	30.0	8	29.9
White	1248	8.3	1248	8.3	1378	9.2	6	4.4	8	5.8	18	12.6
All	2977	7.9	3554	9.3	3808	9.9	30	6.0	56	11.1	100	19.6

** Rates per 100,000 population*

*** Rates per 100,000 live births*

‡ Data: 2012-2014 California Department of Public Health Sexually Transmitted Diseases Branch 3/10/2016

[a] Data: California Department of Public Health Sexually Transmitted Disease Branch All STDs Tables California 2014

Table 7.3 Incidence Rate of Congenital Syphilis per 100,000 Live Births by Region (2009-2014)						
Population	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Imperial	63.6	32.6	-	-	-	30.6
San Diego	20	29.0	4.6	9.0	6.9	15.7
California	10.4	10.0	9.6	6.0	11.1	19.6

Incidence Rate of Congenital Syphilis per 100,000 live births by region, 2009-2014
Source: California Department of Public Health Sexually Transmitted Disease Control Branch

Table 8.1 Total Number of Individuals Living with Diagnosed HIV Infection in California by Gender and Race/Ethnicity (2012–2014)

Population	2012								2013								2014							
	Male		Female		TR**		Total		Male		Female		TR**		Total		Male		Female		TR**		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Black																								
HIV (non-Stage 3)	10124	9.55	2900	20.07	272	19.28	13296	10.91	10253	9.45	2938	19.92	269	18.51	13460	10.8	10219	9.27	2930	19.47	262	17.81	13411	10.58
Stage 3 (AIDS)	6607	6.23	2107	14.58	182	12.9	8896	7.3	6879	6.34	2162	14.66	190	13.08	9231	7.41	7195	6.53	2237	14.87	193	13.12	9625	7.6
Total	16731	15.78	5007	34.64	454	32.18	22192	18.2	17132	15.8	5100	34.58	459	31.59	22691	18.2	17414	15.8	5167	34.34	455	30.93	23036	18.18
Hispanic																								
HIV (non-Stage 3)	21378	20.16	2801	19.38	372	26.36	24551	20.14	21939	20.23	2846	19.3	392	26.98	25177	20.2	22234	20.18	2888	19.19	395	26.85	25517	20.14
Stage 3 (AIDS)	12775	12.05	2041	14.12	256	18.14	15072	12.36	13515	12.46	2106	14.28	263	18.1	15884	12.74	14605	13.25	2234	14.85	281	19.1	17120	13.51
Total	34153	32.2	4842	33.5	628	44.51	39623	32.5	35454	32.69	4952	33.58	655	45.08	41061	32.94	36839	33.43	5122	34.04	676	45.96	42637	33.65
Other																								
HIV (non-Stage 3)	3421	3.23	525	3.63	82	5.81	4028	3.3	3538	3.26	532	3.61	82	5.64	4152	3.33	3597	3.26	539	3.58	80	5.44	4216	3.33
Stage 3 (AIDS)	2642	2.49	392	2.71	48	3.4	3082	2.53	2790	2.57	419	2.84	54	3.72	3263	2.62	3011	2.73	432	2.87	56	3.81	3499	2.76
Total	6063	5.72	917	6.34	130	9.21	7110	5.83	6328	5.83	951	6.45	136	9.36	7415	5.95	6608	6	971	6.45	136	9.25	7715	6.09
White																								
HIV (non-Stage 3)	29684	27.99	2121	14.68	115	8.15	31920	26.18	29728	27.41	2151	14.58	113	7.78	31992	25.66	29055	26.37	2142	14.24	115	7.82	31312	24.71
Stage 3(AIDS)	19429	18.32	1566	10.84	84	5.95	21079	17.29	19810	18.27	1595	10.81	90	6.19	21495	17.24	20285	18.41	1644	10.93	89	6.05	22018	17.38
Total	49113	46.31	3687	25.51	199	14.1	52999	43.47	49538	45.68	3746	25.4	203	13.97	53487	42.91	49340	44.77	3786	25.16	204	13.87	53330	42.09
Total*	106060	100.01	14453	99.99	1411	100	121924	100	108452	100	14749	100	1453	100	124654	100	110201	100	15046	99.99	1471	100	126718	100.01

Data obtained from California Department of Public Health, Office of AIDS

Based on data reported through December 31, 2015 (allowed a minimum of 12 months reporting delay)

**Includes Black, Hispanic, White, Asians, Pacific Islanders/Native Hawaiians, Native Americans/Alaska Natives, and Multi-Race; other race/ethnicity groups are not shown separately due to small numbers.*

***Transgender*

Table 8.2 Total Number of Individuals Living with Diagnosed HIV Infection in California Border Counties by Gender and Race/Ethnicity (2012–2014)

Population	2012								2013								2014					
	Male		Female		TR*		Total		Male		Female		TR*		Total		Male		Female		TR*		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Black																								
HIV (non-Stage 3	545	4.79	137	10.78	7	8.24	689	5.41	559	4.87	136	10.51	9	10.23	704	5.48	584	4.99	137	10.49	9	9.57	730	5.57
Stage (AIDS)	757	6.65	184	14.48	11	12.94	952	7.48	748	6.52	195	15.07	11	12.5	954	7.42	763	6.51	185	14.17	14	14.89	962	7.34
Total	1302	11.45	321	25.26	18	21.18	1641	12.89	1307	11.39	331	25.58	20	22.73	1658	12.89	1347	11.5	322	24.66	23	24.47	1692	12.9
Hispanic																								
HIV (non-Stage 3	1404	12.34	186	14.63	25	29.41	1615	12.69	1467	12.78	194	14.99	21	23.86	1682	13.08	1547	13.21	207	15.85	22	23.4	1776	13.54
Stage (AIDS)	2199	19.33	290	22.82	23	27.06	2512	19.73	2260	19.69	291	22.49	26	29.55	2577	20.04	2309	19.71	290	22.21	27	28.72	2626	20.03
Total	3603	31.67	476	37.45	48	56.47	4127	32.42	3727	32.48	485	37.48	47	53.41	4259	33.12	3856	32.92	497	38.06	49	52.13	4402	33.57
Other																								
HIV (non-Stage 3	230	2.02	32	2.52	2	2.35	264	2.07	231	2.01	33	2.55	3	3.41	267	2.08	236	2.02	34	2.6	4	4.26	274	2.09
Stage (AIDS)	236	2.07	49	3.86	5	5.88	290	2.28	247	2.15	47	3.63	5	5.68	299	2.33	258	2.2	51	3.91	5	5.32	314	2.39
Total	466	4.1	81	6.37	7	8.24	554	4.35	478	4.17	80	6.18	8	9.09	566	4.4	494	4.22	85	6.51	9	9.57	588	4.48
White																								
HIV (non-Stage 3	2512	22.08	162	12.75	4	4.71	2678	21.04	2495	21.74	157	12.13	6	6.82	2658	20.67	2542	21.7	159	12.17	6	6.38	2707	20.65
Stage (AIDS)	3492	30.7	231	18.17	8	9.41	3731	29.31	3469	30.23	241	18.62	7	7.95	3717	28.91	3473	29.65	243	18.61	7	7.45	3723	28.39
Total	6004	52.78	393	30.92	12	14.12	6409	50.34	5964	51.97	398	30.76	13	14.77	6375	49.58	6015	51.36	402	30.78	13	13.83	6430	49.04

Data obtained from California Department of Public Health, Office of AIDS
California border counties include San Diego and Imperial counties
Based on data reported through December 31, 2015 (allowed a minimum of 12 months reporting delay)
**Transgender*

Table 8.3 New HIV Diagnoses in California Border Counties by Gender and Race/Ethnicity (2012-2014)																								
Population	2012								2013								2014							
	Male		Female		TR**		Total		Male		Female		TR**		Total		Male		Female		TR**		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Race/Ethnicity																								
Black	39	9.05	17	30.91	-	-	56	11.45	48	11.21	12	23.08	2	25	62	12.7	50	11.31	4	8.16	-	-	54	10.84
Hispanic	194	45.01	15	27.27	2	66.67	211	43.15	193	45.09	21	40.38	3	37.5	217	44.47	191	43.21	21	42.86	4	57.14	216	43.37
Other	27	6.26	8	14.55	1	33.33	36	7.36	31	7.24	2	3.85	-	-	33	6.76	26	5.88	7	14.29	2	28.57	35	7.03
White	171	39.68	15	27.27	-	-	186	38.04	156	36.45	17	32.69	3	37.5	176	36.07	175	39.59	17	34.69	1	14.29	193	38.76
Total*	431	100	55	100	3	100	489	100	428	100	52	100	8	100	488	100	442	100	49	100	7	100	498	100

Data obtained from California Department of Public Health, Office of AIDS
California border counties include San Diego and Imperial counties
Based on data reported through December 31, 2015 (allowed a minimum of 12 months reporting delay)
**Includes Black, Hispanic, White, Asians, Pacific Islanders/Native Hawaiians, Native Americans/Alaska Natives, and Multi-Race; other race/ethnicity groups are not shown separately due to small numbers.*
***Transgender*

Table 8.4 New HIV Diagnoses in California Border Counties by Gender and Risk Exposure (2012-2014)																								
Population	2012								2013								2014							
	Male		Female		TR**		Total		Male		Female		TR**		Total		Male		Female		TR**		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Risk/Exposure																								
High risk heterosexual	27	6.26	44	80	-	-	71	14.52	31	7.24	35	67.31	-	-	66	13.52	46	10.41	41	83.67	-	-	87	17.47
Injection drug use	20	4.64	6	10.91	-	-	26	5.32	23	5.37	6	11.54	-	-	29	5.94	15	3.39	5	10.2	-	-	20	4.02
MSM and IDU	23	5.34	-	-	1	33.33	24	4.91	13	3.04	-	-	-	-	13	2.66	23	5.2	-	-	-	-	23	4.62
Men who have sex with men	352	81.67	-	-	2	66.67	354	72.39	343	80.14	-	-	8	100	351	71.93	331	74.89	-	-	7	100	338	67.87
Perinatal	-	-	1	1.82	-	-	1	0.2	-	-	1	1.92	-	-	1	0.2	.	.	1	2.04	-	-	1	0.2
Unknown/Other	9	2.09	4	7.27	-	-	13	2.66	18	4.21	10	19.23	-	-	28	5.74	27	6.11	2	4.08	-	-	29	5.82
Total*	431	100	55	100	3	100	489	100	428	100	52	100	8	100	488	100	442	100	49	100	7	100	498	100

Data obtained from California Department of Public Health, Office of AIDS

California border counties include San Diego and Imperial counties

Based on data reported through December 31, 2015 (allowed a minimum of 12 months reporting delay)

**Includes Black, Hispanic, White, Asians, Pacific Islanders/Native Hawaiians, Native Americans/Alaska Natives, and Multi-Race; other race/ethnicity groups are not shown separately due to small numbers.*

***Transgender*

Table 8.5 New HIV Diagnoses in California Border Counties by Sex at Birth, Race/Ethnicity, Age, and Risk Exposure Group (2012-2014)						
Population	**2012**		**2013**		**2014**	
Sex at Birth	**#**	**%**	**#**	**%**	**#**	**%**
Female	55	11.25	52	10.66	49	9.84
Male	431	88.14	428	87.70	442	88.76
TR**	3	0.61	8	1.64	7	1.41
Total	489	100.00	488	100.00	498	100.00
Race/Ethnicity						
Black	56	11.45	62	12.7	54	10.84
Hispanic	211	43.15	217	44.47	216	43.37
Other	36	7.36	33	6.76	35	7.03
White	186	38.04	176	36.07	193	38.76
Total	489	100	488	100	498	100
Age						
0 - 12	1	0.2	1	0.2	1	0.2
13 - 19	8	1.64	9	1.84	6	1.2
20 - 29	165	33.74	166	34.02	167	33.53
30 - 39	131	26.79	142	29.1	132	26.51
40 - 49	104	21.27	93	19.06	110	22.09
50 - 59	63	12.88	66	13.52	64	12.85
60 and over	17	3.48	11	2.25	18	3.61
Total	489	100	488	100	498	100
Risk/Exposure						
High risk heterosexual	71	14.52	66	13.52	87	17.47
Injection drug users	26	5.32	29	5.94	20	4.02
MSM and IDU	24	4.91	13	2.66	23	4.62
Men who have sex with men	354	72.39	351	71.93	338	67.87
Perinatal	1	0.2	1	0.2	1	0.2
Unknown/Other	13	2.66	28	5.74	29	5.82
Total	489	100	488	100	498	100

Data obtained from California Department of Public Health, Office of AIDS
California border counties include San Diego and Imperial counties
Based on data reported through December 31, 2015 (allowed a minimum of 12 months reporting delay)
***Transgender*

Table 9.1 Immunization Levels for Kindergarteners by Region (2012-2015)								
Population	**2012**		**2013**		**2014**		**2015**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Total								
Imperial	2,747	100.0	2,963	100.0	3,110	100.0	3,200	100.0
San Diego	42,787	100.0	43,253	100.0	43,827	100.0	45,646	100.0
California	530,397	100.0	533,680	100.0	535,234	100.0	551,123	100.0
All*								
Imperial	2,585	94.1	2,812	94.9	2,905	93.4	3,051	95.3
San Diego	38,759	90.6	38,916	90.0	40,468	92.3	42,686	93.5
California	478,743	90.3	481,158	90.2	483,877	90.4	511,708	92.8
DTaP§								
Imperial	2,642	96.2	2,870	96.9	2,969	95.5	3,095	96.7
San Diego	39,543	92.4	39,720	91.8	41,017	93.6	43,078	94.4
California	490,637	92.5	491,985	92.2	494,450	92.4	519,114	94.2
Polio‡								
Imperial	2,651	96.5	2,881	97.2	3,002	96.5	3,112	97.3
San Diego	39,546	92.4	39,797	92.0	41,153	93.9	43,212	94.7
California	491,106	92.6	494,356	92.6	497,773	93.0	521,935	94.7
MMR ¥								
Imperial	2,625	95.6	2,853	96.3	2,960	95.2	3,094	96.7
San Diego	39,534	92.4	39,658	91.7	41,008	93.6	43,184	94.6
California	491,467	92.7	492,757	92.3	495,369	92.6	520,974	94.5
Hep B €								
Imperial	2,729	99.3	2,926	98.8	3,051	98.1	3,147	98.3
San Diego	40,472	94.6	40,549	93.8	41,639	95.0	43,360	95.0
California	504,728	95.2	505,734	94.8	507,823	94.9	527,991	95.8
Var £								
Imperial	2,695	98.1	2,926	98.8	3,049	98.0	3,155	98.6
San Diego	40,637	95.0	40,771	94.3	41,890	95.6	43,596	95.5
California	507,106	95.6	508,410	95.3	510,873	95.5	530,716	96.3

Vaccine Data was obtained from the CDPH Immunization Branch for the school years 2011-2012 to 2015-2016.

** Received all the required vaccines and doses*

§ Received 4 or more doses of the DTaP vaccine

‡ Received 3 or more doses of the Polio vaccine

¥ Received 2 doses of the MMR vaccine

€ Received 3 or more doses of the Hepatitis B vaccine

£ Received 1 dose of the varicella vaccine

Table 9.2 Kindergarten Students Vaccine and Exemption Rates by Region (2010-2015)										
Population	**2011**		**2012**		**2013**		**2014**		**2015**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Fully Immunized*										
Imperial	2,612	93.7	2,585	94.1	2,812	94.9	2,905	93.4	3,051	95.3
San Diego	39,764	91.8	38,759	90.6	38,916	90.0	40,468	92.3	42,686	93.5
California	481,533	91.0	478,743	90.3	481,158	90.2	483,877	90.4	511,708	92.8
PME**										
Imperial	1	0.0	1	0.0	2	0.1	3	0.1	5	0.2
San Diego	89	0.2	65	0.2	102	0.2	97	0.2	108	0.2
California	871	0.2	915	0.2	991	0.2	1,034	0.2	931	0.2

Vaccine Data was obtained from the CDPH Immunization Branch for the school years 2011-2012 to 2015-2016.

**The number of students who have all the recommended vaccines and doses*

***The number of students who requested a permanent medical exemption*

****The number of students who requested a personal belief exemption*

Table 9.3 7th Grade Students Vaccine and Rates by Region (2012-2015)								
Population	**2012**		**2013**		**2014**		**2015**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**
TDAP*								
Imperial	2,928	99.6	2,962	99.1	2,954	99.4	2,285	99.3
San Diego	38,786	96.4	37,843	96.4	38,697	97.3	38,881	97.5
California	495,923	97.2	474,952	96.6	478,689	97.8	485,911	97.8

Vaccine Data was obtained from the CDPH Immunization Branch for the school years 2012-2013 to 2015-2016

**The number of students who have received the TDAP vaccination*

Table 9.4 Cases and Rates of Vaccine Preventable Diseases by Region (2009-2014)										
Population	**2010**		**2011**		**2012**		**2013**		**2014**	
	#	**Rate**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**
Pertussis*										
Imperial	9	5.1	3	1.7	8	4.5	3	1.7	10	5.5
San Diego	1,140	36.7	398	12.7	162	5.1	408	12.8	2019	62.9
California	9,159	24.6	3,016	8.03	1,023	2.7	2,537	6.7	11,213	29.1
Measles**										
Imperial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Diego	5	1.6	4	1.3	0	0.0	2	0.6	6	1.9
California	27	0.7	32	0.9	8	0.2	18	0.5	75	1.9
Meningococcal*										
Imperial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
San Diego	11	0.4	4	0.1	8	0.3	15	0.5	9	0.3
California	121	0.3	110	0.3	88	0.2	111	0.3	56	0.2
Hepatitis A*										
Imperial	4	2.3	2	1.1	5	2.8	0	0.0	0	0.0
San Diego	19	0.6	12	0.4	38	1.2	40	1.3	14	0.4
California	217	0.6	161	0.4	210	0.6	255	0.7	142	0.4
Hepatitis B*										
Imperial	0	0.0	0	0.0	0	0.0	2	1.1	1	0.6
San Diego	10	0.3	19	0.6	14	0.4	9	0.3	7	0.2
California	214	0.6	155	0.4	141	0.4	139	0.4	108	0.3

Vaccine Preventable Disease Data was obtained from the CDPH Vaccine-Preventable Diseases Surveillance in California 2014 Annual Report

** Rate per 100,000*

*** Rate per 1,000,000*

Table 9.5 The Number of Cases of Vaccine Preventable Diseases by Region (2010-2014)					
Population	**2010**	**2011**	**2012**	**2013**	**2014**
Mumps					
Imperial	0	0	0	0	0
San Diego	0	1	1	2	2
California	29	43	34	30	37
Rubella					
Imperial	0	0	0	0	0
San Diego	0	0	0	0	0
California	1	0	1	0	2
Tetanus					
Imperial	0	0	0	0	1
San Diego	0	1	0	0	0
California	0	3	4	4	4
Varicella					
Imperial	1	0	1	0	0
San Diego	9	10	5	2	2
California	56	48	37	32	41
All H. Influenza					
Imperial	0	0	0	0	0
San Diego	2	3	4	1	3
California	30	42	32	46	40
HI type B					
Imperial	0	0	0	0	0
San Diego	0	1	0	0	0
California	0	1	0	0	0

Vaccine Preventable Disease Data was obtained from the CDPH Vaccine-Preventable Diseases Surveillance 2014 Annual Report