



March 2022

# EXPLORING HEALTH DISPARITIES IN SAN DIEGO COUNTY BY SOCIOECONOMIC STATUS (SES)

*A Report to Identify Opportunities to Achieve Health Equity*



This page was intentionally left blank.

# Exploring Health Disparities in San Diego County by Socioeconomic Status

**County of San Diego  
Health and Human Services Agency  
Public Health Services**

*March 2022*

**For additional information, contact:**

Community Health Statistics Unit  
3851 Rosecrans St.  
San Diego, CA 92110  
(619) 692-6667  
[www.SDHealthStatistics.com](http://www.SDHealthStatistics.com)



# Exploring Health Disparities in San Diego County by Socioeconomic Status

**Suggested Citation:** County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. (2022). *Exploring Health Disparities in San Diego County by Socioeconomic Status*. Retrieved MM/DD/YY from [www.SDHealthStatistics.com](http://www.SDHealthStatistics.com).


# FOREWORD

Health equity is an important and timely topic. The COVID-19 pandemic has brought to light some of the health disparities that exist in San Diego County. Differences in health status and health outcomes exist between groups. These differences or disparities often result from social determinants of health, including social circumstances, environmental exposures, and behavioral factors, as well as access to adequate health care. Together, these factors impact the health and well-being of San Diegans differently. To achieve health equity, these disparities must be identified, and the root causes determined. It is only through understanding the unique challenges each group faces, that solutions can be identified and implemented. When all San Diegans have the opportunity and resources to achieve good health, then we will have health equity.

For over 20 years, the Public Health Services department, in the County of San Diego Health and Human Services Agency, has been tracking population health data by age, gender, geography, race/ethnicity, and, more recently, by socioeconomic status. This health disparities report series is an update to reports published in 2016 and has been expanded to include indicators of well-being in addition to disease burden. Please go to [www.SDHealthStatistics.com](http://www.SDHealthStatistics.com), to find the most recent health and well-being data available.

This *Exploring Health Disparities in San Diego County* report contains data through the lens of *socioeconomic status*. Substantial differences in health indicators and health-related behaviors exist within the different socioeconomic groups. Communities in the lowest socioeconomic group had a higher burden of poor health outcomes. These communities had higher rates of chronic disease, sexually transmitted infections, assault, motor vehicle injuries, self-inflicted injuries, and alcohol and substance use disorders, as well as higher rates of teen births and childhood disorders. Communities in the highest socioeconomic group had the highest burden of female breast cancer and prostate cancer.

It is only through working together that these disparities can be understood and addressed. I welcome you to join us on this essential journey so that all San Diegans can Live Well.

  
**Wilma J. Wooten, M.D., M.P.H.**  
Public Health Officer  
Public Health Services

# Table of Contents

Introduction and Demographics.....	1
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Non-Communicable (Chronic) Disease .....	13
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Communicable Disease .....	23
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Injury .....	31
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Behavioral Health .....	40
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Maternal & Child Health .....	50
Lowest SES	
Low SES	
Middle SES	
High SES	
Highest SES	
Summary .....	58
Actions to support <i>Live Well San Diego</i> .....	59
Appendix. Methodology.....	60
References .....	62

# Introduction

*Health equity is achieved when “every person has the opportunity to ‘attain his or her full health potential’ and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances.”<sup>1</sup>*

## What is Health Equity?

Health equity is achieved when “every person has the opportunity to ‘attain his or her full health potential’ and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances.”<sup>1</sup>

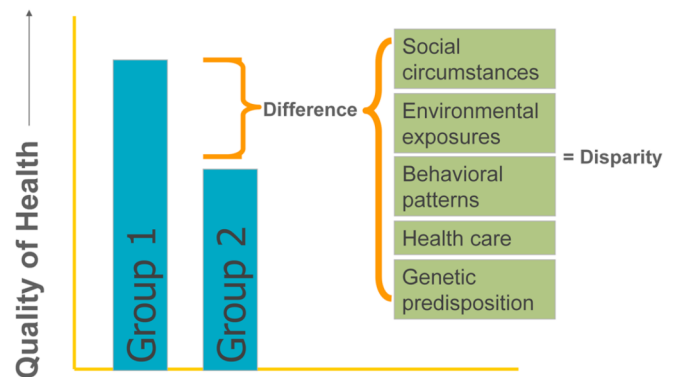
There are many factors that affect the ability to achieve health equity, including the circumstances in which people are born, grow, live, work, and age, as well as the systems in place to deal with illness, which are known as social determinants of health.<sup>2</sup> Social determinants of health can include income, education, employment status, transportation, housing, access to health care services, and exposure to pollution.<sup>3</sup> These, in turn, influence safety and adequacy of housing, air and water quality, crime rates, behavioral health, and access to preventive health care.<sup>4</sup>

Although most San Diego County residents strive to be healthy, differences in health status and health outcomes exist between groups. These differences often result in poorer health outcomes for some groups in the population. These differences are termed health disparities. The Centers for Disease Control and Prevention (CDC) define health disparities as “differences in the incidence and prevalence of health conditions and health status between groups.”<sup>5</sup> Many health disparities affect groups based on age, gender, place of residence, race and ethnicity, and socioeconomic status.

In addition to these factors, groups negatively affected by health disparities tend to have less

access to healthy food, education, safe neighborhoods, freedom from discrimination, and adequate housing that would further support positive health outcomes.<sup>5</sup> Health inequities are health disparities that may result from systematic or unequal distribution of positive resources.<sup>5</sup>

**Figure 1** Measuring Health Disparities



Adapted from Gomes and McGuire, 2001

The health of a community is not simply the presence or absence of disease; rather, it is an interaction of several factors. In order to describe health disparities in San Diego County, a variety of measures are used, considered together as lifestyle behaviors, socioeconomic status, healthcare access and utilization, and morbidity and mortality.

## Lifestyle Behaviors

Lifestyle behaviors are actions taken by individuals to attain or maintain good health and to prevent illness and injury. The risk of non-communicable (chronic) disease can be reduced by engaging in behaviors such as eating a healthy diet, getting regular physical activity, and avoiding tobacco use and alcohol or substance abuse. In a motor vehicle crash, injury can be avoided or lessened by wearing seatbelts while in a motor vehicle and wearing helmets while on a bicycle. Early prenatal care is an example of an action that can be taken to reduce or avoid poor maternal and child health outcomes. The risk of communicable disease can be greatly reduced by getting all recommended vaccinations throughout the lifetime. Lifestyle behaviors are often the result of socioeconomic status, as well as healthcare access and

utilization, and in turn, have an impact on morbidity and mortality.<sup>8</sup>

Much of the lifestyle behavior information compiled about San Diego County residents comes from local, state, and national health surveys. In this report, lifestyle behavior information was obtained from the 2011-2017 California Health Interview Survey (CHIS) and the 2014-2018 Behavioral Risk Factor Surveillance System (BRFSS).

### Socioeconomic Status

Socioeconomic status, including the circumstances in which one lives and works, greatly affects health. Low socioeconomic status is related to poor health outcomes and can be measured by median family or household income, percent of households living below the Federal Poverty Level, unemployment rates, availability of transportation, educational attainment, and linguistic barriers.<sup>6</sup> The association between these factors is cumulative and influences the health status of an individual over a lifetime.<sup>6</sup> For example, low educational attainment is associated with unemployment and low income, which are associated with poor housing and lack of transportation. Together, the indicators used to define socioeconomic status comprise many of the social determinants of health and directly affect healthcare access and utilization, morbidity and mortality rates, as well as personal lifestyle behaviors.

### Healthcare Access and Utilization

Healthcare service access and utilization are closely aligned with socioeconomic status and are major factors in individual and community health. The unemployment decrease in San Diego from 11.3% in 2010 to 5.9% in 2017 meant a subsequent decrease in the number of uninsured county

residents.<sup>11</sup> In reverse, this situation negatively impacts both the immediate and future health of these residents. Research indicates that chronically ill patients without insurance are less likely to visit health professionals for treatment and medical advice. Uninsured patients are more likely to delay medical care and use emergency departments as usual sources of care.<sup>7</sup> Lack of health insurance is also associated with reduced access to preventive care services, increasing poor health outcomes, particularly among young adults and racial and ethnic minorities.<sup>7</sup>

### Morbidity and Mortality Indicators

Rates of death and medical encounter can be measured and used to describe the impact of non-communicable (chronic) disease, communicable disease, maternal and child health, injury, and behavioral health conditions on the community. For example, while asthma death rates are relatively low compared to other non-communicable (chronic) diseases, asthma-related emergency department (ED) discharges and hospitalizations are high, especially in certain groups of the population. High rates of asthma ED discharge and hospitalization might indicate higher rates of uncontrolled asthma and, thus, lower access to and utilization of appropriate preventive and treatment services. They might also relate to poor air quality and greater exposure to environmental hazards. By using morbidity and mortality indicators to identify health disparities, efforts can be made to address the underlying factors contributing to these differences in health outcomes.

## The Social Determinants of Health

According to the Centers for Disease Control and Prevention (CDC), Social Determinants of Health (SDOH) are “conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes.”<sup>1</sup> Often times these circumstances are influenced by things such as socioeconomic status, policies and systems, social norms, power, or resources which can affect, positively or negatively, one’s health status. Research suggests that SDOH account for between 30-55% of health outcomes.<sup>2</sup> Thus, health inequities can be mitigated, eliminated or avoided by ameliorating these circumstances that lead to poor health. Examples of such SDOH include:



<sup>1</sup><https://www.cdc.gov/socialdeterminants/about.html>

<sup>2</sup>[https://www.who.int/health-topics/social-determinants-of-health#tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab_1)

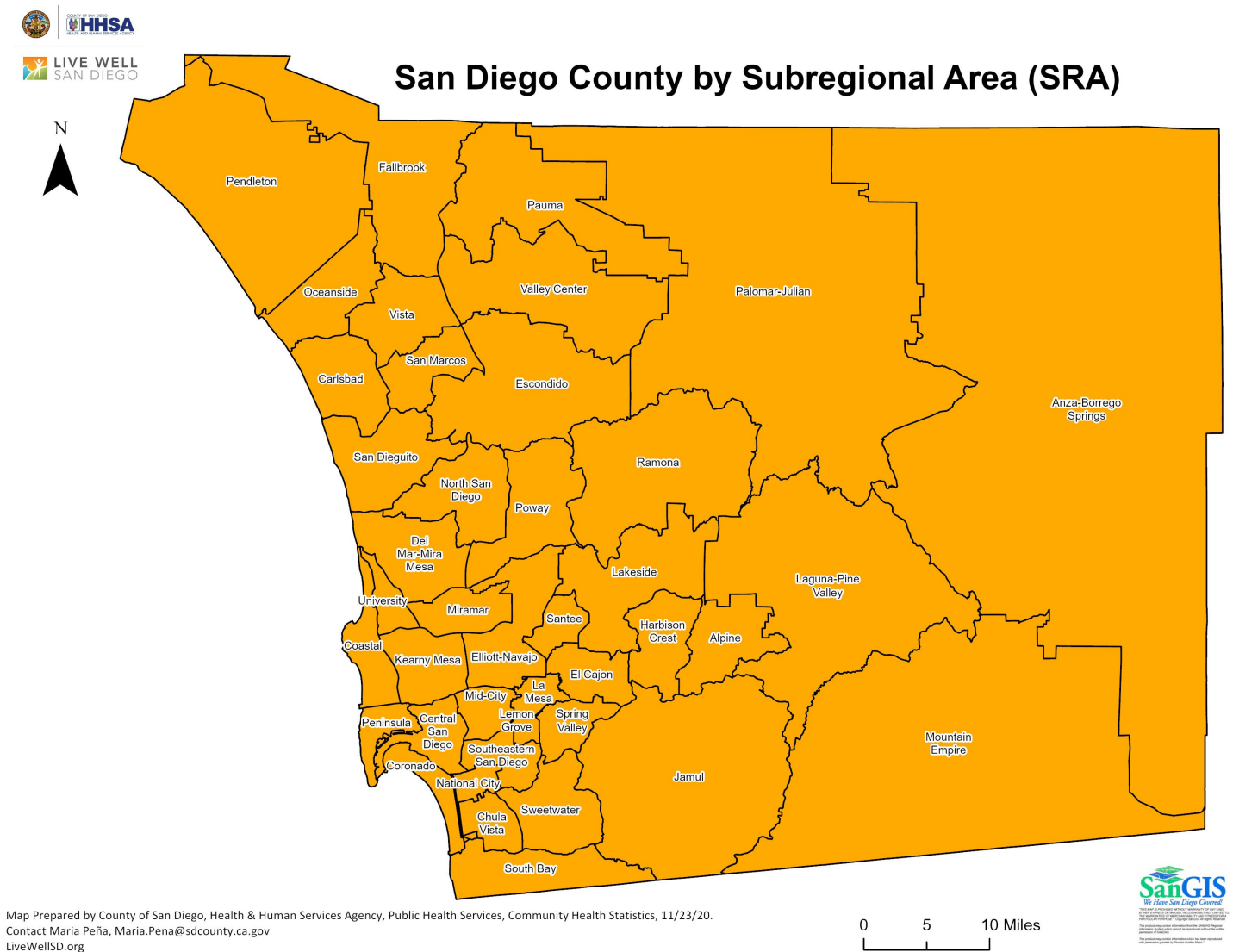
## Geographic Areas Assessed in this Report

### SANDAG Subregional Areas (SRAs)

San Diego Association of Governments (SANDAG) develops annual demographic estimates and long range forecasts in addition to maintaining census data files. Data is available by county, Subregional Area (SRA), zip code, and census tract.

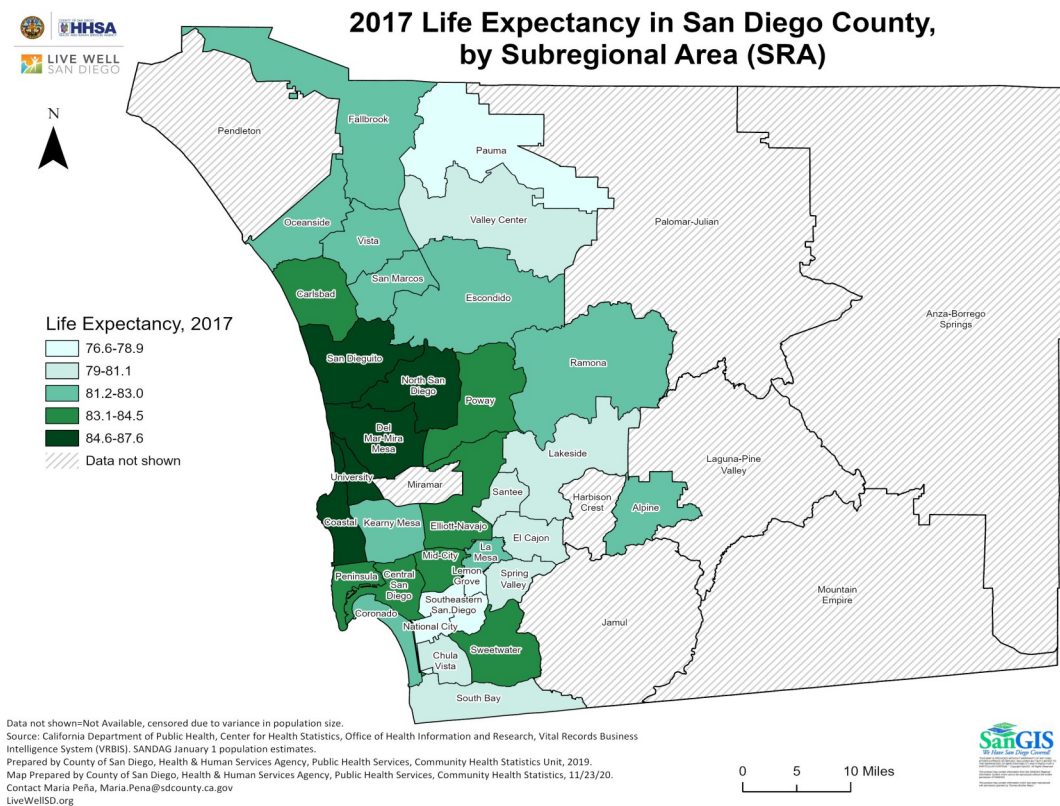
San Diego County has 41 SRAs, which are aggregations of census tracts. While the boundaries of many geographical areas, such as cities, change over time, SRA boundaries have remained essentially the same since their formation which allows for meaningful comparisons of time series information because identical areas are being compared. While SRAs are composed of census tracts, they are defined by SANDAG, not the Census Bureau.<sup>18</sup>

Figure 2



## Live Well San Diego and Health Equity

### Figure 3



## What is *Live Well San Diego*?

*Live Well San Diego* is a regional vision adopted by the San Diego County Board of Supervisors in 2010 that aligns the efforts of County government, community partners and individuals to help create healthy, safe, and thriving San Diego county communities. The vision includes three components. Building Better Health, adopted on July 13, 2010, focuses on improving the health of residents and supporting healthy choices; Living Safely, adopted on October 9, 2012, focuses on protecting residents from crime and abuse, making neighborhoods safe, and supporting resilient communities; and, Thriving, adopted on October 21, 2014, focuses on cultivating opportunities for all people to grow, connect and enjoy the highest quality of life.

**Live Well San Diego and Health Equity**

*Live Well San Diego* identifies 10 indicators to measure the collective impact of these efforts and the work of partners over the long term to create a San Diego County where all residents are healthy, safe, and thriving. Life expectancy, or the average number of years a person can expect to live at birth, is a key measure of health equity and is additionally one of the 10 indicators identified in the *Live Well San Diego* vision. In San Diego County, life expectancy varies by gender, race/ethnicity, and geography.

Overall, the life expectancy in San Diego County was 82.5 years in 2017.<sup>9</sup> On average, females lived about four and a half years longer than males. Compared to other racial and ethnic groups, Asian residents had the highest life expectancy at 86.5 years, while Black residents had the lowest (77.2 years).<sup>9</sup> Geographically, residents in the Coastal SRA in the North Central Region had the highest life expectancy (87.6 years), while residents in the Lemon Grove SRA in the East Region had the lowest life expectancy of 76.6 years.<sup>9</sup> Activities, programs, and policies in the *Live Well San Diego* vision work to positively influence life expectancy and increase health equity among San Diego County residents.

## Health Equity in San Diego County: Socioeconomic Status (SES)

*Exploring Health Disparities in San Diego County by Socioeconomic Status (SES)* is a document prepared by the Division of Public Health Services in the County of San Diego Health and Human Services Agency. The report identifies health disparities among San Diego County residents. The information in this report is meant to be used to identify disparities and serve as a starting point in developing solutions that will help close the gap in existing disparities.

This report supports the *Live Well San Diego* regional vision, identifying health disparities and inequities that are critical in developing prevention and intervention measures, ultimately leading to a healthier San Diego. This document is designed for local agencies, organizations, groups, services, and individuals who have an interest in improving the health of county residents.

Health outcome data were compiled from the County Community Health Statistics Unit's San Diego County Community Profiles document. Specifically, death, hospitalization, in-patient treatment, skilled nursing facility (SNF)/intermediate care, physical rehabilitation, emergency department discharge (ED) rates for various health outcomes were analyzed to identify health disparities within San Diego County's populations.

In addition to identifying health disparities, demographic information and lifestyle/behavioral data on each group was provided to highlight some of the potential contributing factors to these health outcomes.

Lastly, prevention strategies, as well as links to related websites, are provided for further information on non-communicable (chronic) disease, communicable disease, injury, behavioral health, and maternal and child health.

For further resources, including local health and demographic information, please go to [www.sdhealthstatistics.com](http://www.sdhealthstatistics.com).



# HEALTH EQUITY IN SAN DIEGO COUNTY:

## SES Health Disparities

### Introduction to Socioeconomic Health Disparities:

In this report, socioeconomic status is discussed using the 41 subregional areas (SRAs) defined by the San Diego Association of Governments (SANDAG). Based on median household income, these areas were grouped into five major community groups: lowest, low, middle, high, and highest socioeconomic status (SES). The communities included in these groupings, and select characteristics of each group are shown in the table on page 7.

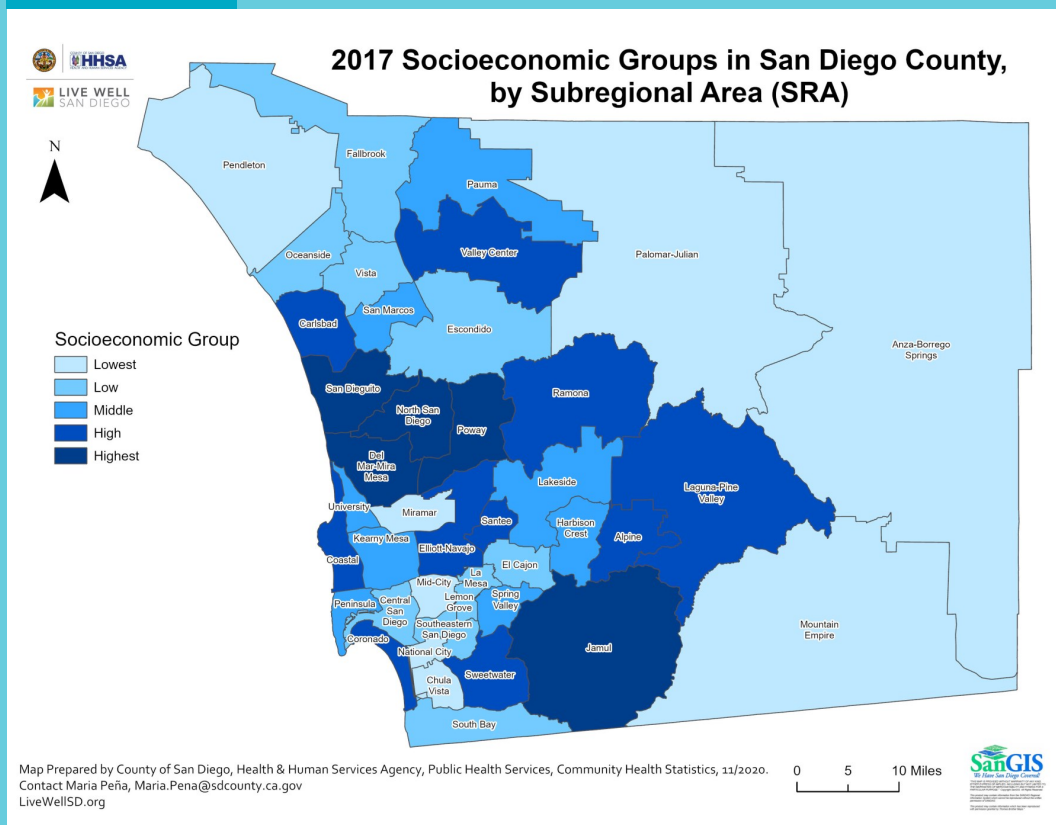
Substantial differences in health indicators and health-related behaviors exist in the different socioeconomic groups in San Diego County.

For example:

- Although the average life expectancy for all San Diego County residents is 82.5 years, residents in the lowest, low, and middle SES communities had an average life expectancy below the county average at 80.8, 81.0, and 81.6 years, respectively, while residents from the high and highest SES communities had an average life expectancy 83.1 and 84.3 years, greater than the county average in 2017.<sup>9</sup>

A series of health indicators and related health behaviors are presented in the following sections, which aim to describe the most important health concerns facing the SRAs in each socioeconomic group in San Diego County.

**Figure 4**



Income Group and Corresponding Communities	Population as a Percent of Total San Diego County Population	Median Household Income	Percent 16 and Older Unemployed	Percent with Less than a High School Diploma	Percent Below 100% of Federal Poverty Level	Percent Without Health Insurance Coverage
<b>Lowest</b> Anza-Borrego Springs Chula Vista Mid-City Miramar Mountain Empire National City Palomar-Julian Pendleton	12.7%	\$45,251.50	8.3%	24.4%	21.4%	14.5%
<b>Low</b> Central San Diego El Cajon Escondido Fallbrook La Mesa Lemon Grove Oceanside South Bay Southeastern San Diego Vista	36.2%	\$62,240.78	7.7%	18.7%	16.5%	13.5%
<b>Middle</b> Harbison Crest Kearny Mesa Lakeside Pauma Peninsula San Marcos Spring Valley University	17.4%	\$74,904.31	6.4%	9.5%	12.9%	9.5%
<b>High</b> Alpine Carlsbad Coastal Coronado Elliott-Navajo Laguna-Pine Valley Ramona Santee Sweetwater Valley Center	18.6%	\$92,079.80	5.6%	6.8%	8.1%	7.0%
<b>Highest</b> Del Mar-Mira Mesa Jamul North San Diego Poway San Dieguito	15.1%	\$112,550.43	5.2%	4.9%	6.3%	5.0%

Source: 1. San Diego Association of Governments (SANDAG), Current Population Estimates, accessed November 2020.  
2. U.S. Census Bureau, American Community Survey, 2013-2017 5-Year Estimates, accessed November 2020.

# Demographics

## Lowest SES

In 2017, there were 422,020 residents living in the lowest socioeconomic status (SES) communities, which represented 12.7% of residents in San Diego County.<sup>10</sup> These communities included Anza-Borrego Springs, Chula Vista, Mid-City, Miramar, Mountain Empire, National City, Palomar-Julian, and Pendleton SRAs.

Hispanics made up a majority of residents in the lowest SES group at 50% in 2017, followed by Whites (29%), Asian/Pacific Islanders (11%), and then Blacks (7%).<sup>10</sup>

The median household income of residents within the lowest SES group was \$45,251.<sup>12</sup>

Between 2013 and 2017:

Nearly one-third (31%) of residents in the lowest SES communities attended some college or received an associate's degree. The lowest SES group had the lowest proportion of residents earning a graduate or professional degree (7%) compared to all other SES groups.<sup>12</sup>

Compared to all other SES groups, the lowest SES group had the highest percentage of unemployed residents at 8.3%.<sup>12</sup>

The lowest SES had the lowest median household income compared to all other SES groups, earning a median of \$45,251.<sup>12</sup>

The lowest SES group had the lowest percentage of residents with health insurance compared to all other SES groups. The percentage of residents with health insurance among the lowest SES communities was 85.5%.<sup>12</sup>



Nearly half of residents (49.2%) living in the lowest SES group were living below 200% of the federal poverty level, which was higher than any other SES group in San Diego County.<sup>12</sup>

The lowest SES group had the highest percentage of households with cash public assistance income (4%) and food stamps/SNAP benefits (14%) compared to all other SES groups.\*<sup>12</sup>

Nearly one-third (31%) of residents in the lowest SES communities attended some college or received an associate's degree.<sup>12</sup>

\*Note: Public assistance benefits are not mutually exclusive. Households may be receiving more than one type of income and/or public assistance benefit.

# Demographics

## Low SES

In 2017, the low socioeconomic status (SES) group had the largest number of residents compared to all other SES communities at 1,201,265 residents, which represented 36.2% of residents in San Diego County.<sup>10</sup> The low SES communities included Central San Diego, El Cajon, Escondido, Fallbrook, La Mesa, Lemon Grove, Oceanside, South Bay, Southeastern San Diego, and Vista SRAs.

Hispanics made up a majority of residents in low SES group at 43% in 2017, followed by Whites (40%), Asian/Pacific Islanders (8%) and Blacks (6%).<sup>10</sup>

Between 2013 and 2017:

The low SES group had a median household income of \$62,240.<sup>12</sup>

The median household income of residents among the low SES group was \$62,240.<sup>12</sup>

A majority of residents in the low SES group attended some college or received an associate's degree (32%), followed by those earning a high school diploma or GED (22%).<sup>12</sup> Among the low SES group, there was a small proportion of residents earning a graduate or professional degree at 9%, which was the second lowest proportion of residents earning that level of education compared to all other SES groups.<sup>12</sup>

Compared to all other SES groups, the low SES group had the second highest percentage of unemployed residents at 7.7%.<sup>12</sup>

Nearly 87% of residents in the low SES group had health insurance.<sup>12</sup>

About 38% of residents in the low SES group were living below 200% of the federal poverty level.<sup>12</sup>

About 38% of residents in the low SES group were living below 200% of the federal poverty level.<sup>12</sup>

Nearly 26% of households in the low SES group had Social Security benefits, 3.6% received cash public assistance income, and 10.4% received food stamp/ SNAP benefits in the past 12 months.\*<sup>12</sup>



\*Note: Public assistance benefits are not mutually exclusive. Households may be receiving more than one type of income and/or public assistance benefit.

# Demographics

## Middle SES

In 2017, there were 576,920 residents living in the middle socioeconomic status (SES) group, which represented 17.4% of residents in San Diego County.<sup>10</sup> The middle SES communities included Harbison Crest, Kearny Mesa, Lakeside, Pauma, Peninsula, San Marcos, Spring Valley, and University SRAs.

Between 2013 and 2017:

The majority of residents in middle SES group were White (53%) followed by those who were Hispanic (27%). Black residents made up 4% of the middle SES group while Asian/Pacific Islanders made up 11%.<sup>10</sup>



Almost 91% of residents living in the middle SES group had health insurance coverage.<sup>12</sup>

Nearly one-third of residents in the middle SES group attended some college or received an associate's degree (32%), followed by those earning a bachelor's degree (24%). Among the middle SES group, there was a small proportion of residents earning less than a high school diploma at 9.5%.<sup>12</sup>

The median household income among the middle SES group was \$74,904.<sup>12</sup>

About 6% of residents in the middle SES group were unemployed.<sup>12</sup>

In the middle SES group, 29% of residents were living below 200% of the federal poverty level.<sup>12</sup>

Almost 91% of residents living in middle SES group had health insurance coverage.<sup>12</sup>

In the middle SES group, 18.2% of households had retirement income while 25.5% had Social Security benefits. Furthermore, 2% of households in the middle SES group had cash public assistance income and 5% had food stamp/SNAP benefits in the past 12 months.\*<sup>12</sup>

\*Note: Public assistance benefits are not mutually exclusive. Households may be receiving more than one type of income and/or public assistance benefit.

# Demographics

## High SES

In 2017, high socioeconomic status (SES) communities had the second largest number of residents compared to all other SES groups at 615,878 residents, which represented 18.6% of residents in San Diego County.<sup>10</sup> The high SES communities included Alpine, Carlsbad, Coastal, Coronado, Elliott-Navajo, Laguna-Pine Valley, Ramona, Santee, Sweetwater, and Valley Center SRAs.

Between 2013 and 2017:

The high SES group had the largest proportion of White residents compared to all other SES groups. Residents in the high SES group were 55% White, 28% Hispanic, 10% Asian/Pacific Islander, and 3% Black.<sup>10</sup>

Most residents in the high SES group had attended some college or received an associate's degree (31.3%) or earned a bachelor's degree (28.4%). A small proportion of residents in the high SES group had earned less than a high school education (6.8%).<sup>12</sup>

Nearly one in five (19%) of residents in high SES communities were living below 200% of the federal poverty level.<sup>12</sup>

The median household income of the high SES group was \$92,079.<sup>12</sup>

The high SES group had the second lowest percentage of unemployed residents at nearly 6% compared to all other SES groups.<sup>12</sup>

In the high SES group, 93% of residents had health insurance.<sup>12</sup>



The high SES group had the second lowest percentage of poverty compared to all other SES groups, where 19% of residents were living below 200% of the federal poverty level.<sup>12</sup>

Among the high SES group, 27.2% of households had Social Security benefits while 20.2% had retirement income. Additionally, 1.1% of households received cash public assistance income.\*<sup>12</sup>

\*Note: Public assistance benefits are not mutually exclusive. Households may be receiving more than one type of income and/or public assistance benefit.

# Demographics

## Highest SES

In 2017, there were 500,111 residents living in the highest socioeconomic status (SES) communities, which represented 15.1% of residents in San Diego County.<sup>10</sup> The highest SES communities included Del Mar-Mira Mesa, Jamul, North San Diego, Poway, and San Dieguito SRAs.

Between 2013 and 2017:

A majority of residents living in the highest SES group were White at 56%, followed by 22% Asian/Pacific Islanders, 15% Hispanics, and 2% Blacks.<sup>10</sup>

The highest SES group had the largest proportion of residents earning higher education with 33.5% earning a bachelor's degree and 26.3% earning a graduate or professional degree. Only 5% of residents in the highest SES group had less than a high school education.<sup>12</sup>

Ninety-five percent of residents in the highest SES group had health insurance.<sup>12</sup>

The median household income among the highest SES group was \$112,550.<sup>12</sup>

The highest SES group had the lowest unemployment rate of 5%.<sup>12</sup>

In the highest SES group, 23.8% of households had Social Security benefits and 2.4% had food stamp/ SNAP benefits.<sup>12</sup>



Ninety-five percent of residents in the highest SES group had health insurance.<sup>12</sup>

The highest SES group had the lowest proportion of residents living below 200% of the federal poverty level at 14.4%.<sup>\*12</sup>

\*Note: Public assistance benefits are not mutually exclusive. Households may be receiving more than one type of income and/or public assistance benefit.

# Non-Communicable (Chronic) Disease

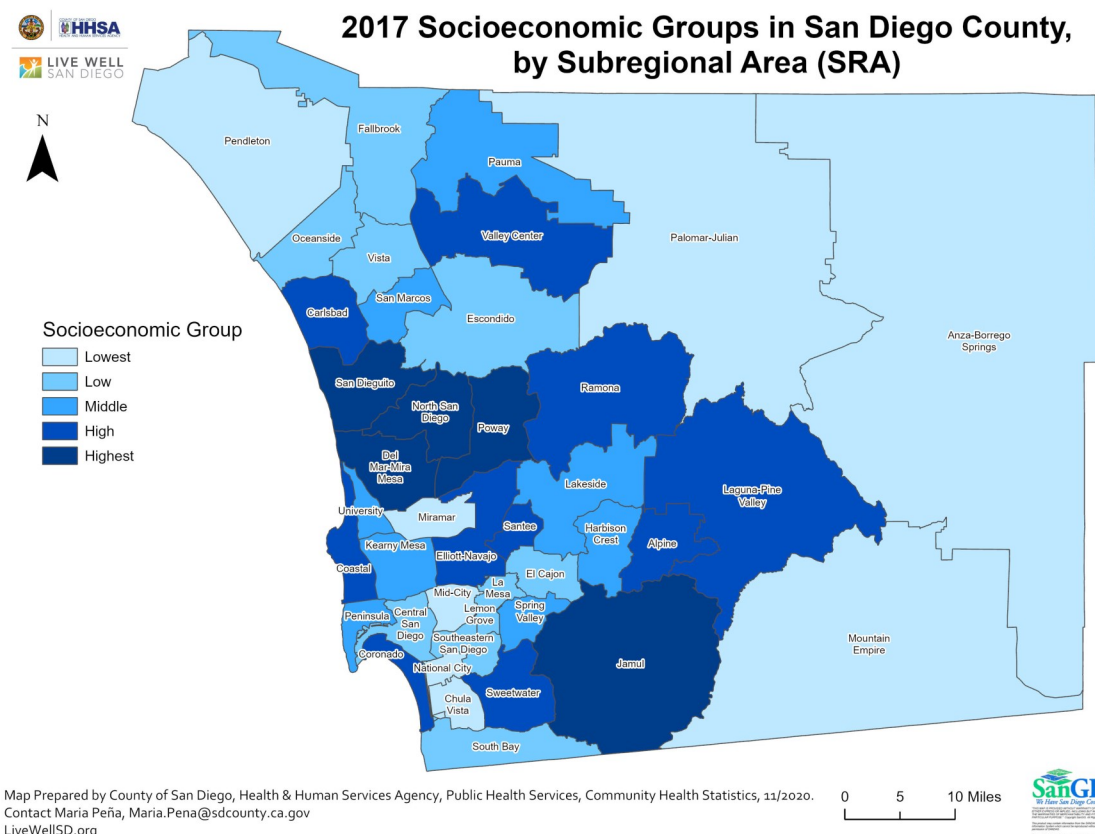
Non-communicable (chronic) diseases are conditions that affect an individual's health for one year or more, require ongoing medical attention or intervention, and may limit activities of daily living. Examples of non-communicable (chronic) disease include cancer, heart disease, and diabetes. Many non-communicable (chronic) diseases are the result of risk behaviors, such as tobacco use, poor diet, low physical activity, or excessive alcohol use.<sup>20</sup>

Socioeconomic status can affect health outcomes. Reasons for this disparity include higher income allowing an individual to make healthier choices and afford access to regular health care. Lower income individuals tend to have jobs that pay lower wages and are more susceptible to non-communicable (chronic) disease than their higher income counterparts.<sup>21</sup> Education also varies by socioeconomic status and may influence an individual's health, as more education typically allows people to earn higher income and to create wealth.<sup>21</sup> It is important to analyze medical encounter rates by socioeconomic status to identify where disparities exist and factors that may be contributing to increased rates.



# Non-Communicable (Chronic) Disease by SES in San Diego County

Figure 5



## Non-Communicable (Chronic) Disease Health Disparities in San Diego County by Socioeconomic Status (SES)

Compared to the county overall, residents of the lowest and low SES groups had higher burdens of non-communicable (chronic) disease.

### In 2017:

#### Lowest SES Group

- The burden of non-communicable (chronic) disease was highest among the lowest SES group. Specifically, the burden of asthma, coronary heart disease, chronic obstructive pulmonary diseases/chronic lower respiratory diseases, diabetes, heart failure, overall cancer, overall hypertensive diseases, and stroke were higher compared to all other SES groups in San Diego County.

#### Low SES Group

- Overall, the burden of non-communicable (chronic) disease was high among the low SES group. Specifically, the burden of kidney cancer, liver cancer, and lupus and connective tissue disorders were highest among those in the low SES group compared to all other SES groups.

#### Highest SES Group

- Overall, the highest SES group had the lowest burden of non-communicable (chronic) disease compared to all other SES groups.

# Prevent Health Disparities

---

## What You Can Do to Reduce Your Risk of Non-Communicable (Chronic) Disease and Live Well:

- Exercise at least 150 min/week
  - Avoid smoking
  - Limit alcohol consumption
  - Eat more fruits & vegetables
  - Visit your doctor for preventive check-ups
- 

## What Your Community Can Do to Reduce the Risk of Non-Communicable (Chronic) Disease and Live Well:

- Invest in safe parks and recreational facilities
  - Increase the availability and affordability of fresh produce
  - Encourage healthy behaviors
  - Adopt walkable communities
- 



*Live Well San Diego* focuses on creating an environment that encourages all San Diego County residents to live healthy, safe, and thriving lives.

# Non-Communicable (Chronic) Disease

## Lowest SES

Residents in the lowest socioeconomic status (SES) communities in San Diego County had a higher burden of non-communicable (chronic) disease compared to all other SES groups in 2017. Particularly, the lowest SES communities had a higher burden of asthma, coronary heart disease, chronic obstructive pulmonary diseases/chronic lower respiratory diseases, diabetes, heart failure, overall cancer, overall hypertensive diseases, and stroke compared to all other SES groups in San Diego County.

### Asthma

In 2017, the burden of asthma was higher among residents in the lowest SES communities than all other SES groups. Among the lowest SES communities, National City SRA had the highest ED discharge rate due to asthma at 568.9 per 100,000 residents, which was 2.1 times higher than the rate of the county overall. However, Mountain Empire SRA had the highest hospitalization rate due to asthma at 71.9 per 100,000 residents, which was 1.8 times higher than the county overall.

### Chronic Obstructive Pulmonary Diseases (COPD)/Chronic Lower Respiratory Diseases (CLRD)

In 2017, the lowest SES communities had the highest burden of chronic obstructive pulmonary disease (COPD)/chronic lower respiratory diseases (CLRD) than all other SES groups. Notably, National City SRA had the highest rates of ED discharge and death due to COPD/CLRD among the lowest SES communities with rates that were 1.9 and 1.4 times higher, respectively, than the rates of the county overall.

### Overall Hypertensive Diseases

Compared to other SES groups, the lowest SES communities had a higher burden of overall hypertensive diseases in 2017. Among the lowest SES communities, National City SRA had the highest rates of hospitalization and ED discharge due to overall hypertensive diseases, which were 2.3 and 1.6 times higher, respectively, than the county overall in 2017.

### Diabetes

In 2017, the burden of diabetes among the lowest SES communities was higher than all other SES groups. Moreover, National City SRA had the highest rates of ED discharge, hospitalization, and death due to diabetes, which were 2.5, 2, and 1.6 times higher, respectively, than the county overall.

### Heart Failure

Compared to all other SES groups, the lowest SES communities had a higher burden of heart failure in 2017. Among the lowest SES communities, National City SRA had the highest rate of hospitalization due to heart failure (503.6 per 100,000 residents) and Mountain Empire SRA had the highest rate of ED discharge due to heart failure (136.5 per 100,000 residents).



# Non-Communicable (Chronic) Disease

## Lowest SES

### Coronary Heart Disease (CHD)

Among the lowest SES communities, National City SRA had the highest rates of hospitalization and ED discharge due to coronary heart disease, which were 1.9 and 1.2 times higher, respectively, than the county overall.

### Stroke

Compared to all other SES groups, the lowest SES communities had a higher burden of stroke in 2017. Among the lowest SES communities, Mountain Empire SRA had the highest rates of hospitalization and ED discharge due to stroke, while Chula Vista SRA had the highest rate of death due to stroke in 2017.

### Overall Cancer

Compared to all other SES groups, the lowest SES group had the highest burden of overall cancer in 2017. Among the lowest SES communities, Palomar-Julian SRA had the highest rate of hospitalization due to overall cancer (362.8 per 100,000 residents), while Anza-Borrego Springs SRA had the highest rate of death due to overall cancer (271.4 per 100,000 residents) in 2017. These rates were 1.2 and 1.8 times higher than those of the county overall, respectively.

### Risk Factors and Prevention Strategies

Tobacco use, lack of physical activity, poor diet, and abuse of alcohol are leading risk factors for the development of non-communicable (chronic) disease.<sup>13</sup>

Smoking and secondhand exposure to tobacco smoke greatly increases the risk of developing asthma or triggering an asthma attack.<sup>13</sup>

Changes in modifiable risk factors such as tobacco use, lack of physical activity, and poor diet, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among the residents of San Diego County.<sup>13</sup>



# Non-Communicable (Chronic) Disease

## Low SES

Overall, low socioeconomic status (SES) communities had a higher burden of non-communicable (chronic) disease compared to all other SES groups, with the exception of the lowest SES communities. Particularly, the burden of kidney cancer, liver cancer, and lupus and connective tissue disorders were highest among the low SES group compared to all other SES groups in 2017.

### Asthma

The burden of asthma was notable among those living in low SES communities in 2017. Among low SES communities in 2017, Southeastern San Diego SRA had the highest rate of ED discharge due to asthma (615.6 per 100,000 residents), which was 2.3 times higher than the county overall. Additionally, Lemon Grove SRA had the highest rate of hospitalization due to asthma (104.7 per 100,000 residents), which was 2.6 times higher than the county overall in 2017.

### Osteoarthritis

The burden of osteoarthritis was notable in select low SES communities in 2017. Among low SES communities, La Mesa SRA had the highest hospitalization rate due to

osteoarthritis (407.9 per 100,000 residents), which was 1.5 times higher than the county overall. Lemon Grove SRA had the highest rate of ED discharge due to osteoarthritis among the low SES communities, with a rate 2 times higher than the county overall in 2017.

### Overall Hypertensive Diseases

In 2017, low SES communities had a higher burden of overall hypertensive diseases than the middle, high, and highest SES groups. The low SES community with the highest hospitalization and ED discharge rates due to overall hypertensive diseases was Southeastern San Diego SRA, where the rates were 1.9 and 1.6 times higher, respectively, than the county overall. Additionally, El Cajon SRA had the highest rate of death due to overall hypertensive diseases (35.0 per 100,000 residents) among low SES communities, which was 1.4 times higher than the county rate in 2017.

### Lupus and Connective Tissue Disorders

Low SES communities had the highest burden of lupus and connective tissue disorders compared to all other SES groups in 2017. Notably, Lemon Grove SRA had the highest rates of hospitalization and ED discharge due to lupus and connective tissue disorders which were 3.7 and 5 times higher, respectively, than the county overall in 2017.

### Kidney Cancer

Compared to other SES communities, low SES communities had a higher burden of kidney cancer in 2017. Furthermore, the low SES community with the highest rate of hospitalization due to kidney cancer was Oceanside SRA, which was 21.8 per 100,000 residents and 1.7 times higher than the county overall in 2017. However, among the low SES communities, Escondido SRA had the highest rate of death due to kidney cancer with a rate 2.1 times higher than the county overall.



# Non-Communicable (Chronic) Disease

## Low SES

### Liver Cancer

Low SES communities had the highest burden of liver cancer compared to all other SES groups in 2017. Lemon Grove SRA had the highest rates of death (30.0 per 100,000 residents) and hospitalization due to liver cancer (19.5 per 100,000 residents), which were 3.6 and 3.5 times higher, respectively, than the county overall in 2017.



### Risk Factors and Prevention Strategies

Tobacco use, lack of physical activity, poor diet, and abuse of alcohol are leading risk factors for the development of non-communicable (chronic) disease.<sup>13</sup>

Smoking and secondhand exposure to tobacco smoke greatly increases the risk of developing asthma or triggering an asthma attack.<sup>13</sup>

Changes in modifiable risk factors such as tobacco use, lack of physical activity, and poor diet, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among the residents of San Diego County.<sup>13</sup>

# Non-Communicable (Chronic) Disease

## Middle SES

In 2017, the burden of non-communicable (chronic) disease among the middle socioeconomic status (SES) communities varied by condition. However, middle SES communities had a higher burden of lung cancer compared to all other SES groups in San Diego County in 2017.

### Overall Cancer

In 2017, the burden of overall cancer was generally lower among the middle SES group compared other SES groups. However, the burden of lung cancer was notable among the middle SES.

### Lung Cancer

Compared to all other SES groups, the burden of lung cancer was higher among the middle SES group in 2017. Notably, Lakeside SRA was the middle SES community with the highest rates of death and hospitalization due to lung cancer, which were 1.9 and 2 times higher than the county rates in 2017, respectively.

### Osteoarthritis

In 2017, the middle SES group had the second highest burden of osteoarthritis compared to other SES groups. Furthermore, Pauma SRA had the highest rate of hospitalization due to osteoarthritis among middle SES communities, in which the rate was 424.8 per 100,000 residents in 2017. Additionally, Spring Valley SRA had the highest rate of ED discharge due to osteoarthritis (45.2 per 100,000 residents) among middle SES communities, which was 1.3 times higher than the county rate in 2017.

### Overall Hypertensive Diseases

In 2017, the burden of overall hypertensive diseases was notable among the middle SES group in 2017. The middle SES community of Harbison Crest SRA had the highest rates of ED discharge (274.7 per 100,000 residents) and death (43.2 per 100,000 residents) due to overall hypertensive diseases, which were 1.4 and 1.7 times higher, respectively, than the county overall in 2017.

### Risk Factors and Prevention Strategies

Tobacco use, lack of physical activity, poor diet, and abuse of alcohol are leading risk factors for the development of non-communicable (chronic) disease.<sup>13</sup>

Changes in modifiable risk factors such as tobacco use, lack of physical activity, and poor diet, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among the residents of San Diego County.<sup>13</sup>



# Non-Communicable (Chronic) Disease

## High SES

In 2017, there were particular non-communicable (chronic) conditions which presented a greater burden among the high socioeconomic status (SES) communities. Specifically, the burden of colorectal cancer, pancreatic cancer, and osteoarthritis were notable among the high SES group compared to all other SES groups.

### Overall Cancer

The burden of overall cancer was particularly high among high SES communities in 2017. Among these communities, Valley Center SRA had the highest rates of hospitalization and ED discharge due to cancer compared to all other high SES communities, while Alpine SRA had the highest death rate at 205.3 per 100,000 residents in 2017.

### Colorectal Cancer

Compared to all other SES groups, high SES communities had a slightly higher burden of colorectal cancer in 2017. Those in Alpine SRA had the highest rate of hospitalization due to colorectal cancer with a rate of 55.2 per 100,000 residents, while those in Coronado SRA had the highest death rate due to colorectal cancer at 20.4 per 100,000 residents in 2017.

### Pancreatic Cancer

High SES communities had the highest burden of pancreatic cancer compared to all other SES groups in 2017. Notably, Coronado SRA had the highest rate of hospitalization due to pancreatic cancer, which was 2.4 times higher than the county rate in 2017.

### Osteoarthritis

Overall, high SES communities had higher rates of hospitalization due to osteoarthritis compared to all other SES groups in 2017. Among the high SES communities, Laguna-Pine Valley, Alpine, and Valley Center SRAs had the highest rates of hospitalization due to osteoarthritis. Compared to the county overall in 2017, the rate of hospitalization due to osteoarthritis in Laguna-Pine Valley SRA was 2.3 times higher than the county overall.

### Risk Factors and Prevention Strategies

Tobacco use, lack of physical activity, poor diet, and abuse of alcohol are leading risk factors for the development of non-communicable (chronic) disease.<sup>13</sup>

Smoking and secondhand exposure to tobacco smoke greatly increases the risk of developing asthma or triggering an asthma attack.<sup>13</sup>

Changes in modifiable risk factors such as tobacco use, lack of physical activity, and poor diet, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among the residents of San Diego County.<sup>13</sup>



# Non-Communicable (Chronic) Disease

## Highest SES

Overall, the highest socioeconomic status (SES) group had the lowest burden of non-communicable (chronic) diseases compared to all other SES groups in 2017. However, the highest SES group had a higher burden of female breast cancer and prostate cancer than all other SES groups in 2017.

### Overall Cancer

The highest SES group had the second highest burden overall cancer in 2017. Poway SRA had a higher rate of hospitalization due to overall cancer than any other highest SES community and the county overall, with a rate of 330.9 per 100,000 residents in 2017. Among the highest SES communities, Jamul SRA had the highest rate of death due to overall cancer, with a rate 1.4 times higher than the county overall in 2017.

### Female Breast Cancer

Compared to all other SES groups, the highest SES group had a higher burden of female breast cancer in 2017. Del Mar-Mira Mesa SRA was the highest SES community with the highest rate of hospitalization due to female breast cancer (42.7 per 100,000 female residents) in 2017, with a rate 1.5 times higher than the county rate. Among the highest SES communities, North San Diego and San Dieguito SRAs had the highest rates of death due to female breast cancer, with rates 1.3 times higher than the county overall.

### Prostate Cancer

Additionally, the highest SES group had the highest burden of prostate cancer compared to all other SES groups in 2017. Among the highest SES communities, Poway SRA had the highest rate of hospitalization due to prostate cancer (67.9 per 100,000 male residents), where the rate was 1.8 times higher than the county overall in 2017. Notably, Jamul SRA had the highest rate of death due to prostate cancer (59.5 per 100,000 residents) in San Diego County, which was 3.2 higher than the county overall in 2017.

### Osteoarthritis

While the burden of osteoarthritis was lower than other SES groups, the highest SES communities generally had higher rates of hospitalization than the county overall in 2017. Compared to other highest SES communities, San Dieguito SRA had the highest rate of hospitalization due to osteoarthritis with a rate of 451.6 per 100,000 residents, which was 1.6 times higher than the county overall in 2017.



### Risk Factors and Prevention Strategies

Tobacco use, lack of physical activity, poor diet, and abuse of alcohol are leading risk factors for the development of non-communicable (chronic) disease.<sup>13</sup>

Changes in modifiable risk factors such as tobacco use, lack of physical activity, and poor diet, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among the residents of San Diego County.<sup>13</sup>

# Communicable Disease

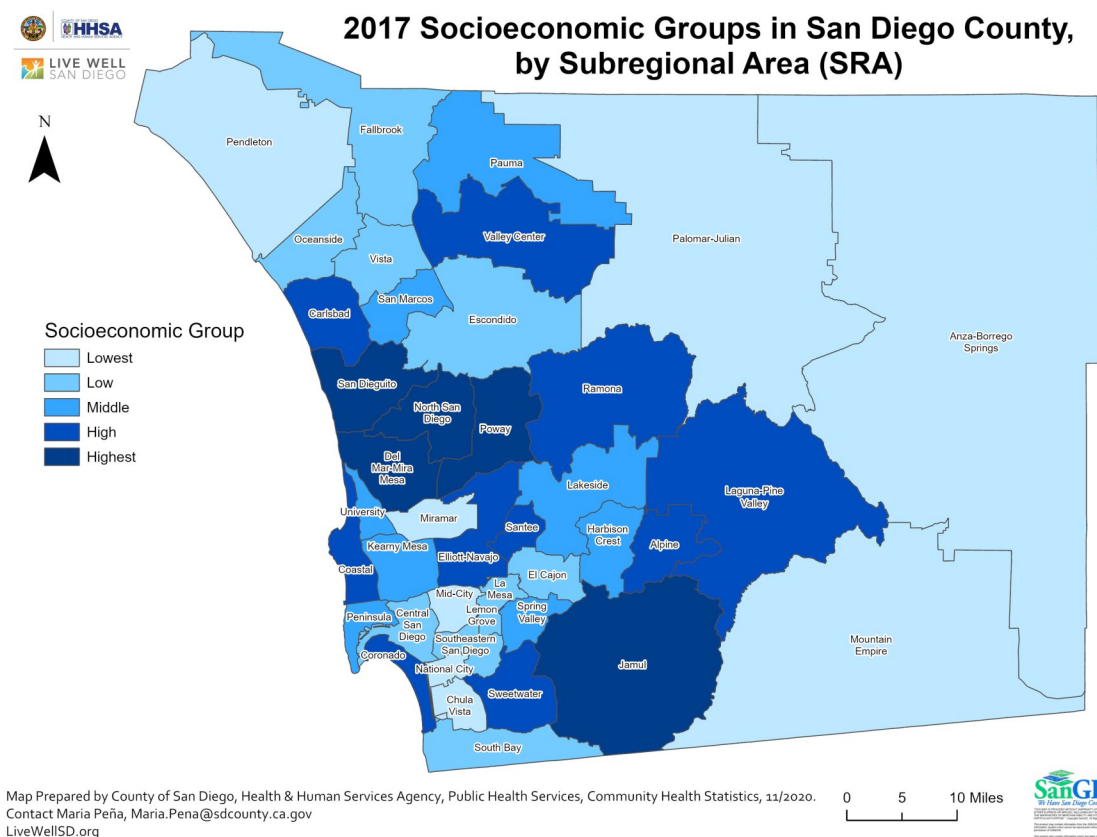
Communicable diseases are those that spread from one person to another, or from an animal to a person. Communicable diseases may be spread through the air, bodily fluids, or by touching a contaminated surface. Several communicable diseases are vaccine preventable. Good hygiene, such as proper handwashing, is also effective in slowing the spread of communicable diseases.<sup>14</sup>

Access to health care may determine whether an individual receives timely medical care in response to an infection.<sup>21</sup> Access to care may be mediated by an individual's socioeconomic status.<sup>21</sup> It is important to analyze medical encounter rates by socioeconomic status to identify where disparities exist, and factors that may be contributing to increased rates.



# Communicable Disease by SES in San Diego County

**Figure 6**



## Communicable Disease Health Disparities in San Diego County by Socioeconomic Status (SES)

Compared to the county overall, the lowest SES group had a higher burden of communicable disease in 2017.

### In 2017:

#### Lowest SES Group

- Residents in the lowest SES group had the highest burden of influenza, pneumonia, tuberculosis, and sexually transmitted infections compared to all other SES groups.

#### Highest SES Group

- Overall, the highest SES group had the lowest burden of communicable diseases in San Diego County.

# Prevent Health Disparities

---

## What You Can Do to Reduce Your Risk of Communicable Disease and Live Well:

- Get all recommended age appropriate vaccinations
  - Visit your doctor regularly
  - Get early treatment for infections, and complete entire treatment regimens
- 

## What Your Community Can Do to Reduce the Risk of Communicable Disease and Live Well:

- Encourage education about protective measures
  - Promote vaccination opportunities
  - Support public health campaigns aimed at reducing disease
- 



*Live Well San Diego* focuses on creating an environment that encourages all San Diego County residents to live healthy, safe, and thriving lives.

# Communicable Disease

## Lowest SES

Overall, the lowest socioeconomic status (SES) group had the highest burden of communicable disease compared to all other SES groups in 2017. Notably, the burden of flu/pneumonia, tuberculosis, and sexually transmitted infections were highest in the lowest SES group compared to all other SES groups.

### Influenza (Flu)/Pneumonia

Compared to all other SES groups, the lowest SES group had the highest burden of flu/pneumonia in 2017.

#### Influenza (Flu)

The burden of flu was highest in the lowest SES group compared to all other SES groups in 2017. Among the lowest SES communities, National City SRA had the highest rate of ED discharge due to flu with 456.9 discharges per 100,000 residents, which was 1.8 times higher than the county overall in 2017.

#### Pneumonia

Compared to all other SES groups, the lowest SES group had the highest burden of pneumonia in 2017. Chula Vista SRA had the highest rates of hospitalization and death due to pneumonia among the lowest SES communities in 2017. Moreover, the rate of death due to pneumonia was 1.8 times higher in the Chula Vista SRA than the county overall. Additionally, Chula Vista SRA had the highest hospitalization rate in San Diego County, which was 1.4 higher than that of the county overall.

### Tuberculosis

The burden of tuberculosis (TB) incidence was highest among the lowest SES group compared to other SES groups in 2017. Among the lowest SES communities, National City SRA had the highest incidence rate of TB, which was 3.3 times higher than the county overall in 2017.

### Chlamydia

Overall, the burden of chlamydia incidence was higher among the lowest SES group than any other SES group. Notably, Miramar and Pendleton SRAs in the lowest SES group had the highest chlamydia incidence rates in San Diego County. Miramar SRA had the highest incidence rate of chlamydia, where the incidence rate was 4.9 times higher than that of the county overall, followed by Pendleton SRA, where the rate was 2 times higher than the county overall in 2017.

### Gonorrhea

Overall, the lowest SES group had the highest burden of gonorrhea incidence compared to other SES groups in 2017. Notably, Miramar and Mid-City SRAs had the highest incidence rates of gonorrhea among the lowest SES communities. Compared to the county overall in 2017, the incidence rate of gonorrhea was 2.2 times higher in Miramar SRA and 1.9 times higher in Mid-City SRA.

### Syphilis

Overall, the burden of syphilis incidence was highest in the lowest SES group compared to other SES groups in 2017. Among the lowest SES communities, Mid-City SRA had the highest incidence rate of syphilis, which was 2.3 times higher than the county overall in 2017.

### Risk Factors and Prevention Strategies

Prevention measures against communicable diseases, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended vaccinations are key ways to reduce the burden of communicable disease among the lowest SES communities in San Diego County.<sup>14</sup>

# Communicable Disease

## Low SES

In 2017, the low socioeconomic status (SES) group had a higher burden of communicable disease compared to the middle, high, and highest SES groups.

### Chlamydia

The burden of chlamydia incidence was notable among the low SES communities in 2017. Among low SES communities, Central San Diego SRA had the highest incidence rate of chlamydia, with a rate 1.4 times higher than the county overall in 2017.

### Gonorrhea

In 2017, the burden of gonorrhea incidence was higher among residents of low SES communities compared to all other SES groups, except the lowest SES group. Among low SES communities, Central San Diego SRA had the highest incidence rate of gonorrhea, which was 3.1 times higher than the county rate in 2017.

### Influenza (Flu)/Pneumonia

The rates of ED discharge and hospitalization for flu/pneumonia were generally higher among low SES communities compared to the county overall in 2017. Among low SES communities in 2017, Southeastern San Diego SRA had the highest rate of ED discharge due to flu/pneumonia at 760 per 100,000 residents, which was 1.6 times higher than the county overall, whereas the rate of hospitalization in El Cajon SRA (222.6 per 100,000) was 1.4 times higher than the county overall.

### Tuberculosis

South Bay SRA, a low SES community, had the highest incidence rate of tuberculosis in San Diego County in 2017. Moreover, the incidence rate of tuberculosis in South Bay SRA was 3.6 times higher than that of the county overall.



### Syphilis

In 2017, the low SES group had higher burden of syphilis incidence compared to the county overall. Specifically, Central San Diego SRA had the highest incidence rate of syphilis of all the low SES communities and the county overall, with an incidence rate of syphilis 4.7 times higher than San Diego County overall in 2017.

### Risk Factors and Prevention Strategies

Prevention measures against communicable diseases, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended vaccinations are key ways to reduce the burden of communicable disease among the low SES communities in San Diego County.<sup>14</sup>

# Communicable Disease

## Middle SES

Residents of the middle socioeconomic status (SES) group had a slightly lower burden of communicable disease compared to the county overall in 2017. However, the burden of communicable disease was still higher among the high and highest SES groups. The burden of flu/pneumonia and chlamydia was notable among the middle SES communities.

### Influenza (Flu)/Pneumonia

The burden of flu/pneumonia was particularly high among the middle SES group in 2017. Harbison Crest SRA had the highest rate of ED discharge due to flu/pneumonia among the middle SES communities, with a rate 1.3 times higher than the county rate in 2017. Additionally, the hospitalization rate due to flu/pneumonia in Spring Valley SRA was also notable, with a rate 1.3 times higher than the county overall.

### Influenza (Flu)

Among middle SES communities, the rate of death due to flu in Peninsula SRA was 2.6 times higher than the county overall in 2017. Additionally, Harbison Crest SRA had the highest ED discharge and hospitalization rates due to flu than all other middle SES communities. The rates of ED discharge and hospitalization were

both 1.5 times higher than the county rate in 2017.

### Chlamydia

Among the selected communicable disease indicators, the burden of chlamydia incidence was particularly high among the middle SES group. In 2017, Spring Valley SRA had the highest incidence rate of chlamydia among the middle SES communities in 2017 (502.9 per 100,000 residents).

### Risk Factors and Prevention Strategies

Prevention measures against communicable diseases, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended vaccinations are key ways to reduce the burden of communicable disease among the middle SES communities in San Diego County.<sup>14</sup>



# Communicable Disease

## High SES

Overall, residents living in the high socioeconomic status (SES) group had a lower burden of communicable disease compared to other SES groups, except the highest SES group.

### Influenza (Flu)/Pneumonia

In 2017, the burden of flu/pneumonia in the high SES group was particularly high among the selected communicable disease indicators. Among the high SES communities, Valley Center SRA had the highest ED discharge rate due to flu/pneumonia, while Alpine SRA had the highest hospitalization rate in 2017, with rates 1.2 and 1.3 times higher than the county, respectively.

### Pneumonia

Among high SES communities in 2017, Valley Center SRA had the highest ED discharge rate due to pneumonia, with a rate 1.2 times higher than the county overall. Additionally, Alpine SRA had the highest hospitalization rate due to pneumonia in 2017, with a rate of 160.5 per 100,000 residents.

### Chlamydia

Among the selected communicable disease indicators in 2017, the burden of chlamydia incidence was particularly high in the high SES group. While lower than the rate of the county overall, Coronado SRA had the highest incidence rate of chlamydia (554.1 per 100,000 residents) compared to other high SES communities in San Diego County.

### Risk Factors and Prevention Strategies

Prevention measures against communicable diseases, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended vaccinations are key ways to reduce the burden of communicable disease among the high income communities in San Diego County.<sup>14</sup>



# Communicable Disease

## Highest SES

Overall, residents in the highest socioeconomic status (SES) group had the lowest burden of communicable disease compared to all other SES groups in 2017.

### Influenza (Flu)/Pneumonia

The burden of flu/pneumonia was lowest among the highest SES group compared to all other SES groups and the county overall. However, among the selected communicable disease indicators, the burden of flu/pneumonia was notable among the highest SES group in 2017. Jamul SRA was the highest SES community with the highest rate of ED discharge due to flu/pneumonia in 2017 (459.3 per 100,000 residents), a rate comparable to the county rate.

### Influenza (Flu)

Among the highest SES communities, Jamul SRA had the highest ED discharge rate due to flu (286.1 per 100,000 residents), while San Dieguito SRA had the highest hospitalization rate due to flu (49.4 per 100,000 residents) in 2017. Compared to the county overall, the rates were 1.1 and 1.3 times higher, respectively.

### Chlamydia

The burden of chlamydia incidence was notable among the highest SES group in 2017. Among the highest SES communities, Jamul SRA had the highest incidence rate of chlamydia (253 per 100,000 residents) in 2017.

### Risk Factors and Prevention Strategies

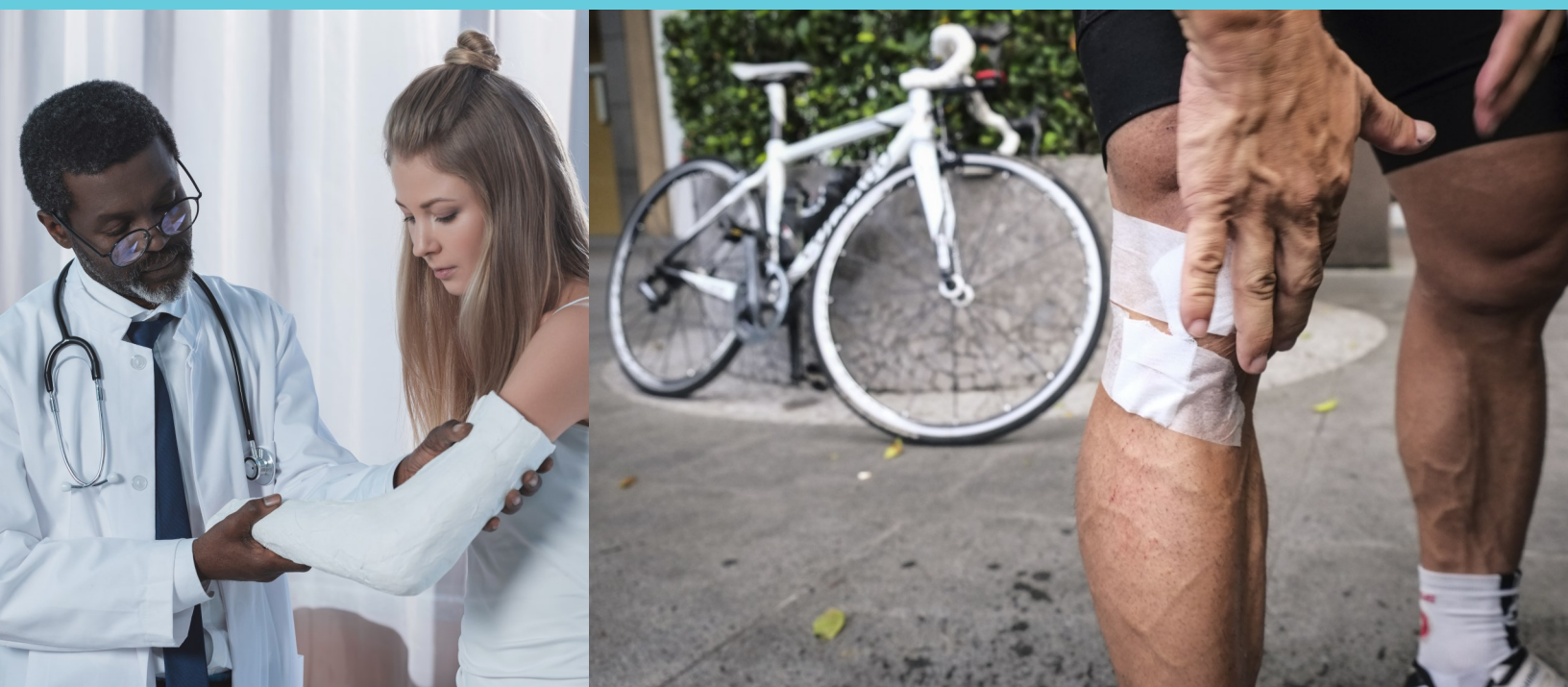
Prevention measures against communicable diseases, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended vaccinations are key ways to reduce the burden of communicable disease among the highest SES communities in San Diego County.<sup>14</sup>



# Injury

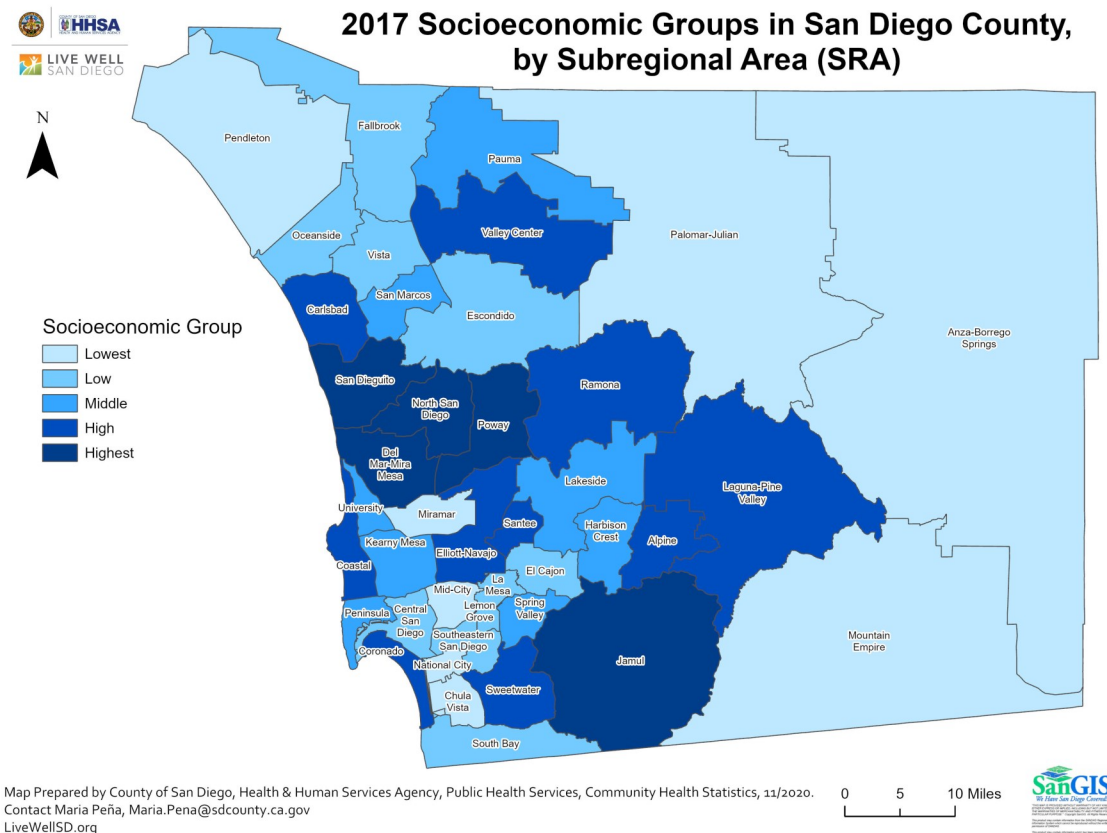
Injury is bodily harm that occurs as a result of severe exposure to an external force, substance, or submersion. Injuries may be the result of a fall, a motor vehicle collision, violence, or drowning.<sup>22</sup>

Socioeconomic status may influence where an individual resides. Built environment, such as the presence of safe, walkable streets, may reduce the risk of injury. Crime rates vary by neighborhood, due to economic environment and a host of other factors.<sup>21</sup> It is important to analyze medical encounter rates by socioeconomic status to identify where disparities exist, and factors that may be contributing to increased rates.



# Injury by SES in San Diego County

**Figure 7**



## Injury Health Disparities in San Diego County by Socioeconomic Status (SES)

Compared to the county overall, the lowest and low SES groups had a higher burden of injury.

### In 2017:

#### Lowest SES Group

- Overall, residents in the lowest SES group had the highest burden of injury compared to all other SES groups.

#### Low SES Group

- Compared to all other SES groups, the burden of self-inflicted injuries (except suicide) was highest among the low SES group.

#### High SES Group

- Overall, the burden of motor vehicle injuries and suicide was higher among the high SES group compared to San Diego County in 2017.

#### Highest SES Group

- Compared to all other SES groups, the highest SES group generally had the lowest burden of injury.

# Prevent Health Disparities

---

## What You Can Do to Reduce Your Risk of Injury and Live Well:

- Be aware of your surroundings
  - Never drink and drive
  - Always wear your seatbelt
  - Always wear your helmet while on a bike or skateboard
- 

## What Your Community Can Do to Reduce the Risk of Injury and Live Well:

- Invest in walkable sidewalks and safe roads
  - Invest in drug and alcohol treatment programs
  - Make safety a priority through education
- 



*Live Well San Diego* focuses on creating an environment that encourages all San Diego County residents to live healthy, safe, and thriving lives.

# Injury

## Lowest SES

In 2017, residents in the lowest socioeconomic status (SES) group had the highest burden of injuries compared to all other SES groups. Particularly, the burden of assault, motor vehicle injuries, poisoning, and self-inflicted injuries were highest among the lowest SES group in 2017.

### Motor Vehicle Injuries

In 2017, the rates of death, ED discharge, and hospitalization due to motor vehicle injuries were higher among the lowest SES group than the other SES groups and the county overall. Among the lowest SES communities, Mountain Empire SRA had the highest rates of hospitalization and ED discharge due to motor vehicle injuries, which were 3.9 and 2 times higher, respectively, than the county rates. Additionally, Miramar SRA had the highest rate of death due to motor vehicle injuries with a rate of 79.8 per 100,000 residents in 2017, which was 10.3 times higher than the county overall. The rate of death due to motor vehicle injuries in Mountain Empire SRA was also nearly 8 times higher than the county overall in 2017.

### Poisoning

The burden of poisoning was higher in the lowest SES group than any other SES group in 2017. Among the lowest SES communities, Mountain Empire SRA had the highest rates of ED discharge and hospitalization due to poisoning which were 1.4 and 2 times higher than the county overall, respectively, in 2017.

### Assault\*

The lowest SES communities had the highest burden of assault in 2017. The lowest SES community of Mountain Empire SRA had the highest rate of hospitalization due to assault in San Diego County, with a rate that was 2.5 times higher than the county overall in 2017. Among the lowest SES communities, Mid-City SRA had the highest rate of ED discharge due to assault, which was 1.6 times higher than the county overall. Notably, Mid-City SRA had a higher rate of death due to assault than any other SRA and the county overall.

### Self-Inflicted Injuries and Suicide

Among the lowest SES group, those living in Mountain Empire SRA had the highest rate of ED discharge due to self-inflicted injuries, which was 227.2 per 100,000 residents in 2017. Mid-City SRA was the lowest SES community with the highest rate of hospitalization due to self-inflicted injuries, with a rate 1.2 times higher than the county rate in 2017.

### Risk Factors and Prevention Strategies

Failure to use protective equipment and active restraints, lack of supervision of children during play and other activities, and not being aware of safety hazards increase the risk of an injury.<sup>15</sup>

Of the major causes of disability and death, injuries are among the most preventable. Often, modifiable behaviors such as the use of protective equipment and active restraints, addressing and working to eliminate bullying, as well as awareness, reduce the likelihood of injury.<sup>15</sup>

\*Assault includes homicide, neglect, abandonment, and maltreatment.



# Injury

## Low SES

Overall, the burden of injuries was higher among the low socioeconomic status (SES) group compared to the middle, high, and highest SES groups in 2017. Particularly, the burden of firearm-related injury and motor vehicle injuries to pedestrians were highest among the low SES group compared to all other SES groups in 2017. Among this SES group, the burden of assault was also particularly high.

### Assault\*

The low SES group had a higher burden of assault compared to the middle, high, and highest SES groups in 2017. Among low SES communities, Central San Diego SRA had the highest rates of ED discharge, hospitalization, and death due to assault, which were 2, 2.3, and 1.5 times higher, respectively, than the county rates in 2017.

### Motor Vehicle Injuries

The low SES group had a higher burden of motor vehicle injuries compared to the county overall in 2017. Among low SES communities, Southeastern San Diego SRA had the highest rates of ED discharge and death due to motor vehicle injuries, which were each 1.7 times higher than the county rates in 2017.

### Motor Vehicle Injuries to Pedestrians

The low SES communities of Southeastern San Diego and Central San Diego SRAs had the highest rates of ED discharge due to motor vehicle pedestrian injuries than any other SRA in San Diego County and the county overall in 2017.

### Firearm-Related Injuries

In 2017, the low SES group had the highest burden of firearm-related injuries compared to all other SES groups in 2017. Among low SES communities, Southeastern San Diego and South Bay SRAs had the highest rates of ED discharge and hospitalization due to firearm-related injuries. Compared to the county overall

in 2017, the hospitalization rate due to firearm-related injuries was 4 times higher in South Bay SRA and 3 times higher in Southeastern San Diego SRA. Additionally, the rates of ED discharge due to firearm-related injuries in Southeastern San Diego and South Bay SRAs were 2.8 and 2.1 times higher, respectively, than the county overall.

### Falls

In 2017, the rate of ED discharge due to falls was highest among low SES communities compared to all other SES groups and the county overall. In San Diego County, the low SES community of Lemon Grove SRA had the highest ED discharge rate due to falls, with a rate 1.4 times higher than the county overall.

### Self-Inflicted Injuries

Compared to all other SES groups, the rate of ED discharge due to self-inflicted injuries was highest among low SES communities in 2017. The low SES communities of Lemon Grove and El Cajon SRAs had ED discharge rates due to self-inflicted injuries that were each 1.9 times higher than the county overall. Furthermore, among the low SES communities in 2017, El Cajon SRA had the highest rate of hospitalization due to self-inflicted injuries, with a rate 1.7 times higher than the county overall.

### Risk Factors and Prevention Strategies

Failure to use protective equipment and active restraints, lack of supervision of children during play and other activities, and not being aware of safety hazards increase the risk of an injury.<sup>15</sup>

Of the major causes of disability and death, injuries are among the most preventable. Often, modifiable behaviors such as the use of protective equipment and active restraints, addressing and working to eliminate bullying, as well as awareness, reduce the likelihood of injury.<sup>15</sup>

\*Assault includes homicide, neglect, abandonment, and maltreatment.

# Injury

## Middle SES

Overall, the burden of assault, falls, motor vehicle injuries, poisoning, and self-inflicted injuries and suicide among middle socioeconomic status (SES) communities was notable in 2017.

### Assault\*

The rates of ED discharge due to assault were notable among the middle SES communities in 2017. The middle SES community with the highest rate of ED discharge due to assault was Harbison Crest SRA with a rate of 318.4 per 100,000 residents, which was 1.4 times higher than the county overall in 2017. Additionally, the middle SES community with the highest rate of hospitalization due to assault was Spring Valley SRA at 43 per 100,000 residents in 2017, which was 1.7 times higher than the county overall.

### Motor Vehicle Injuries

The burden of motor vehicle injuries was higher among middle SES communities than the low, high, and highest SES groups in 2017. The middle SES community with the highest ED discharge and hospitalization rates due to motor vehicle injuries was Harbison Crest SRA, with rates 1.5 and 1.8 times higher, respectively, than the county overall in 2017.

### Falls

Among the middle SES communities, Harbison Crest SRA had the highest rates of ED discharge (2,404.9 per 100,000 residents) and hospitalization (479.9 per 100,000 residents) due to falls in 2017, both higher rates than the county overall.

### Poisoning

Among the middle SES communities, Lakeside SRA had the highest rates of ED discharge and death due to poisoning in 2017. Additionally, Spring Valley and Lakeside SRAs had the highest rates of

hospitalization due to poisoning, which were each 1.6 times higher than the county rate in 2017.

### Self-Inflicted Injuries and Suicide

The burden of self-inflicted injuries was particularly high among the middle SES group in 2017. Among the middle SES communities, Harbison Crest SRA had the highest rates of ED discharge and hospitalization due to self-inflicted injuries in 2017, with rates that were 1.8 and 2.1 times higher, respectively, than the county overall. Additionally, Lakeside SRA had the highest rate of suicide among the middle SES communities, with a rate that was 1.7 times higher than the county in 2017.

### Risk Factors and Prevention Strategies

Failure to use protective equipment and active restraints, lack of supervision of children during play and other activities, and not being aware of safety hazards increase the risk of an injury.<sup>15</sup>

Of the major causes of disability and death, injuries are among the most preventable. Often, modifiable behaviors such as the use of protective equipment and active restraints, addressing and working to eliminate bullying, as well as awareness, reduce the likelihood of injury.<sup>15</sup>



\*Assault includes homicide, neglect, abandonment, and maltreatment.

# Injury

## High SES

In 2017, the burden of several types of injuries were notable in the high in the high socioeconomic status (SES) group. Specifically, the burden of falls and hip fractures were highest among the high SES group in 2017. Overall, the burden of motor vehicle injuries and suicide was higher among high SES communities compared to San Diego County in 2017.

### Falls

The rates of hospitalization due to falls were high among high SES communities in 2017. Among high SES communities, Laguna-Pine Valley SRA, followed by Alpine SRA, had the highest rates of hospitalization due to falls in 2017, with rates 1.6 and 1.4 times higher than the county overall. Additionally, Valley Center SRA was the high SES community with the highest rates of ED discharge due to falls.

### Hip Fracture

Compared to other SES groups, the high SES group had the highest rates of ED discharge and hospitalization due to hip fracture in 2017. In San Diego County, the high SES community of Laguna-Pine Valley SRA had the highest rate of hospitalization due to hip fracture with a rate of 175.8 per 100,000 residents, which was 2.4 times higher than the county overall in 2017. Alpine SRA had a higher ED discharge rate due to hip fracture than any other SRA in San Diego County, with a rate 2.5 times higher than the county overall. Furthermore, Coronado SRA had the highest rate of skilled nursing facility/intermediate care due to hip fractures (57.1 per 100,000 residents) which was 22 times higher than the county rate in 2017.

### Self-Inflicted Injuries and Suicide

Overall, residents of high SES communities had the highest rate of suicide compared to the county overall in 2017. Among the high SES communities, the rate of suicide was 3 times higher in Alpine SRA, while

it was 2.3 times higher among Valley Center SRA residents compared to the county overall in 2017. Additionally, the rates of ED discharge and hospitalization due to self-inflicted injuries were 1.9 and 1.6 times higher in Santee SRA than the county overall.

### Motor Vehicle Injuries

The high SES group had a higher burden of motor vehicle injuries than the county overall in 2017. Among high SES communities, Laguna-Pine Valley SRA had the highest hospitalization rate due to motor vehicle injuries, with a rate 2.6 times higher than the county overall in 2017. Furthermore, the rate of death due to motor vehicle injuries in Ramona SRA (16.5 per 100,000 residents) was 2.1 times higher than the county overall.

### Poisoning

Among high SES communities, Valley Center SRA had the highest rates of ED discharge and hospitalization due to poisoning which were 1.4 and 2.1 times higher, respectively, than the county in 2017.

Risk  
and



Factors

# Injury

## High SES

### Prevention Strategies

Failure to use protective equipment and active restraints, lack of supervision of children during play and other activities, and not being aware of safety hazards increase the risk of an injury.<sup>15</sup>

Of the major causes of disability and death, injuries are among the most preventable. Often, modifiable behaviors such as the use of protective equipment and active restraints, addressing and working to eliminate bullying, as well as awareness, reduce the likelihood of injury.<sup>15</sup>



# Injury

## Highest SES

The highest socioeconomic status (SES) communities had the lowest burden of injuries compared to all other SES groups in 2017. The types of injuries with the highest burden among the highest SES group were falls and motor vehicle injuries

### Falls

Among the highest SES communities in 2017, San Dieguito SRA had the highest rates of ED discharge, hospitalization, and death due to falls. The hospitalization and death rates in San Dieguito SRA were also 1.1 and 1.4 times higher, respectively, than the county overall.

### Motor Vehicle Injuries

While the burden was lowest compared to all other SES groups, the burden of motor vehicle injuries was notable among the highest SES communities in 2017. Among the highest SES communities, Jamul SRA had the highest ED discharge and hospitalization rates due to motor vehicle injuries. The rates of ED discharge and hospitalization due to motor vehicle injuries in the Jamul SRA were 1.3 and 1.7 times higher, respectively, than the county overall in 2017.

### Risk Factors and Prevention Strategies

Failure to use protective equipment and active restraints, lack of supervision of children during play and other activities, and not being aware of safety hazards increase the risk of an injury.<sup>15</sup>

Of the major causes of disability and death, injuries are among the most preventable. Often, modifiable behaviors such as the use of protective equipment and active restraints, addressing and working to eliminate bullying, as well as awareness, reduce the likelihood of injury.<sup>15</sup>



# Behavioral Health

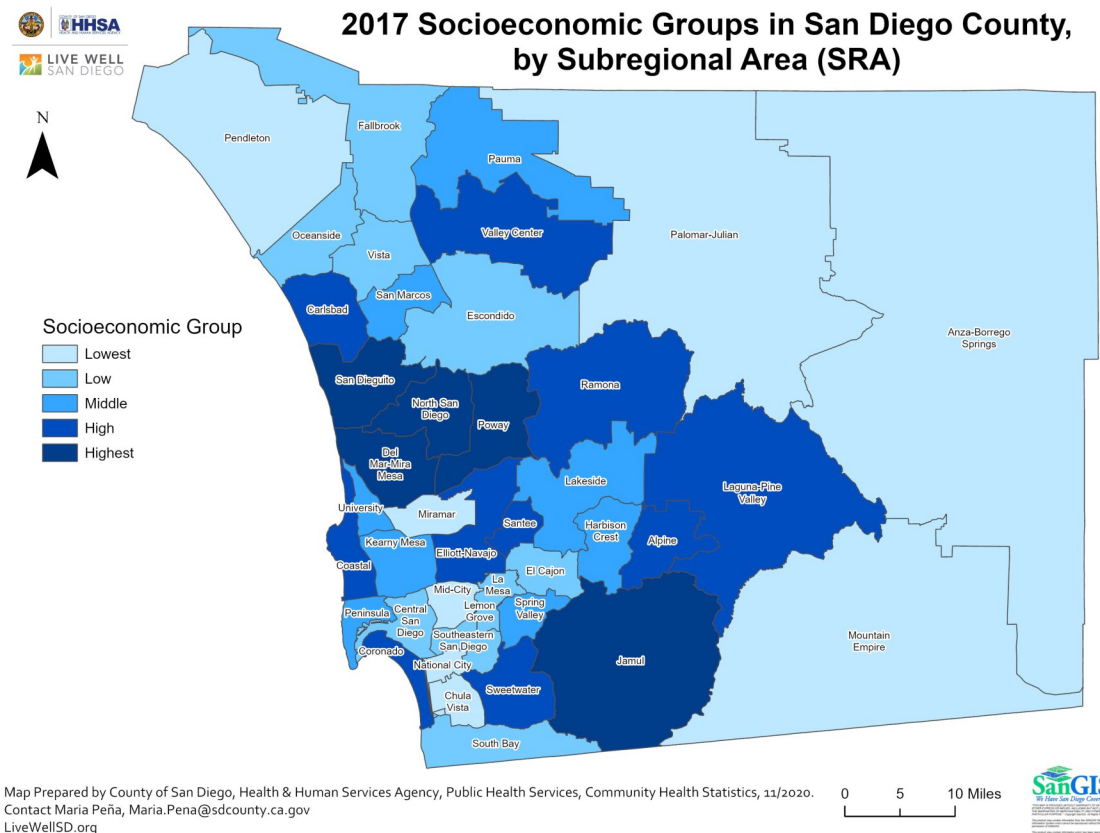
Behavioral health conditions may affect a person's thinking, feeling, behavior, or mood. Behavioral health conditions may be affected by an individual's genetics and lifestyle. Environment, stress, and traumatic life events may also make an individual more likely to develop behavioral health conditions.<sup>23</sup>

Socioeconomic status and behavioral health conditions have a two-way relationship. The presence of a behavioral health condition may lead to reduced socioeconomic status and employment. Reduced income increases an individual's risk of falling into poverty, which also increases the risk of developing a behavioral health condition. Childhood experiences differ by socioeconomic status, and may affect an individual's risk of developing a behavioral health condition.<sup>24</sup> It is important to analyze medical encounter rates by socioeconomic status to identify where disparities exist, and factors that may be contributing to increased rates.



# Behavioral Health by SES in San Diego County

**Figure 8**



## Behavioral Health Disparities in San Diego County by Socioeconomic Status (SES)

Compared to the county overall, the lowest SES group had the highest burden of behavioral health outcomes.

### In 2017:

#### Lowest SES Group

- The burden of alcohol and substance-related disorders were highest among the lowest SES group compared to all other SES groups.

#### Low SES Group

- The burden of adjustment disorders, mood disorders, and schizophrenia and other psychotic disorders were highest among the low SES group compared to all other SES groups.

#### Highest SES Group

- Overall, the highest SES group had the lowest burden of poor behavioral health outcomes compared to all other SES groups.

# Prevent Health Disparities

---

## What You Can Do to Reduce Your Risk of Poor Behavioral Health Outcomes and Live Well:

- Seek help for an emotional, behavioral health, or alcohol/drug use problem
  - Seek out healthy activities to reduce stress, and stay socially connected, such as exercising or volunteering
- 

## What Your Community Can Do to Reduce the Risk of Poor Behavioral Health Outcomes and Live Well:

- Educate residents about the warning signs of behavioral health issues
  - Foster environments that reduce the stigma associated with behavioral health issues
- 



*Live Well San Diego* focuses on creating an environment that encourages all San Diego County residents to live healthy, safe, and thriving lives.

# Behavioral Health

## Lowest SES

Overall, the lowest socioeconomic status (SES) group had the highest burden of poor behavioral health outcomes compared to the all other SES groups in 2017. Particularly, the burden of alcohol-related disorders and substance-related disorders were highest among the lowest SES group compared to all other SES groups in 2017.

### Alcohol-Related Disorders

The burden of alcohol-related disorders was highest among the lowest SES communities compared to all other SES groups. Among the lowest SES communities, Mountain Empire SRA had the highest rates of hospitalization, in-patient treatment, and ED discharge due to alcohol-related disorders in 2017, which were 2.6, 2.4, and 1.4 times higher than the county overall.

### Substance-Related Disorders

The lowest SES group had the highest burden of substance-related disorders in 2017. Among the lowest SES communities, those living in Mid-City SRA had the highest rates of ED discharge and hospitalization due to substance-related disorders, with rates 1.4 and 1.3 times higher, respectively, than the county overall in 2017.

### Cannabis-Related Disorders

The burden of cannabis-related disorders was highest among the lowest SES groups compared to all other SES groups in 2017. National City SRA was the lowest SES community with the highest ED discharge rate due to cannabis-related disorders, which was 1.8 times higher than the county rate.

### Amphetamines and Other Stimulant-Related Disorders

In 2017, the burden of amphetamines and other stimulant-related disorders was highest among the lowest SES communities compared to all other SES groups. Mountain Empire SRA was the lowest SES community with the highest rate of ED discharge due to amphetamines and other stimulant-related disorders, with a rate 1.9 times higher than the county overall.

### Schizophrenia and Other Psychotic Disorders

After the low SES group, the lowest SES group had the second highest burden of schizophrenia and other psychotic disorders in 2017. Among the lowest SES communities, National City SRA had the highest rate of in-patient treatment due to schizophrenia and other psychotic disorders, which was 2.6 times higher than the county overall. Palomar-Julian SRA had the highest rate of ED discharge due to schizophrenia and other psychotic disorders in 2017 among the lowest SES group, with a rate 1.3 times higher than the county overall.

### Personality Disorders

Although the rates of ED discharge due to personality disorders were fairly low across San Diego County, the lowest SES communities had the highest rates of ED discharge due to personality disorders compared to the county overall. Among the lowest SES communities in 2017, Mid-City SRA had the highest rate of ED discharge due to personality disorders (6.4 per 100,000), which was 2.2 times higher than the county overall in 2017.



# Behavioral Health

## Lowest SES

### Mood Disorders

The burden of mood disorders, including depression and bipolar disorder, was higher than any other behavioral health condition assessed among the lowest SES group in 2017. Among the lowest SES communities in San Diego County, Mountain Empire SRA had the highest rate of in-patient treatment due to mood disorders in 2017, which was 1.6 times higher than the county overall. Additionally, among the lowest SES communities, Mid-City SRA had the highest rates of ED discharge and hospitalization due to mood disorders, which were 1.1 and 1.7 times higher, respectively, than the county overall in 2017.

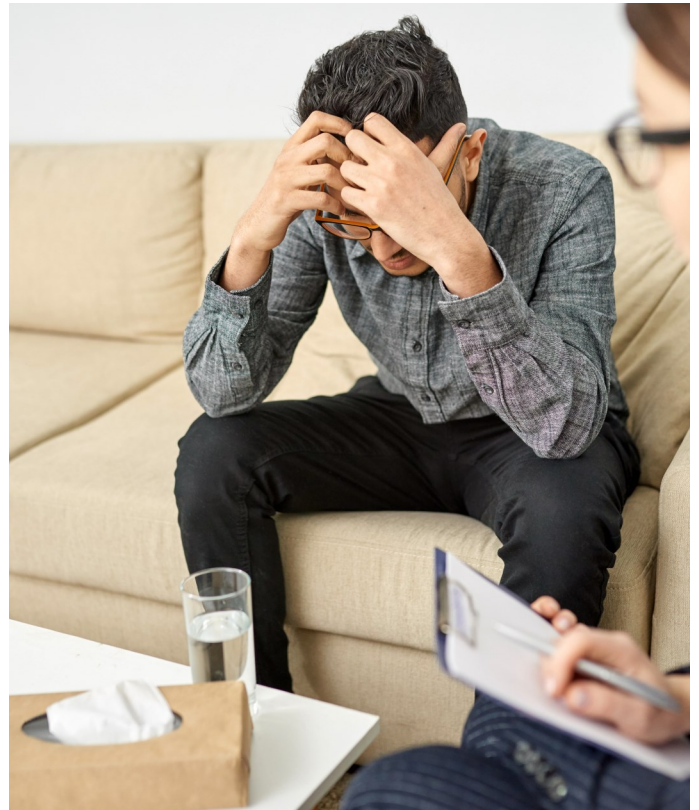
### Depression

Among the lowest SES communities, those living in Mountain Empire SRA had an in-patient treatment rate due to depression 1.5 times higher than the county overall in 2017. Additionally, Chula Vista SRA had a 1.7 times higher rate of hospitalization due to depression compared to the county overall.

### Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.<sup>16</sup>

Seeking help for an emotional/behavioral health or alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.<sup>16</sup>



# Behavioral Health

## Low SES

In 2017, the burden of adjustment disorders, mood disorders, and schizophrenia and other psychotic disorders were highest among the low socioeconomic status (SES) group compared to all other SES groups.

### Mood Disorders

The burden of mood disorders, including depression and bipolar disorder, was higher among low SES communities than any other SES group and the county overall. Among low SES communities, Central San Diego SRA had the highest rates of in-patient treatment and ED discharge due to mood disorders, which were 1.4 and 1.9 times higher, respectively, than the county overall in 2017.

### Depression

Those living in Oceanside SRA had a rate of ED discharge due to depression 1.8 times higher than the county overall. Additionally, those living in La Mesa SRA had an in-patient treatment discharge rate due to depression that was 1.4 times higher than the county overall in 2017.

### Adjustment Disorders

Although the rates of discharge from in-patient treatment and the ED due to adjustment disorders were fairly low across San Diego County, the low SES group had higher rates compared to other groups in 2017. Furthermore, among the low SES communities, Southeastern San Diego SRA had the highest rate of ED discharge due to adjustment disorders, with a rate 2.2 times higher than the county overall.



### Schizophrenia and Other Psychotic Disorders

Overall, low SES communities had the highest burden of schizophrenia and other psychotic disorders compared to all other communities as well as the county overall in 2017. Among the low SES communities, Southeastern San Diego and Central San Diego SRAs had the highest rates of in-patient treatment and ED discharge due to schizophrenia and other psychotic disorders, which were 2.7 and 2.1 times higher, respectively, than the county overall in 2017.

### Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.<sup>16</sup>

Seeking help for an emotional/behavioral health or alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.<sup>16</sup>

# Behavioral Health

## Middle SES

Overall, the burden of attention deficit disorder (ADD) and other conduct disorders, depression, impulse disorders, and post-traumatic stress disorder (PTSD) were notable among the middle socioeconomic status (SES) group in 2017.

### Mood Disorders

Among the middle SES group, the rates of discharge from in-patient treatment and the ED due to mood disorders, including depression and bipolar disease, were particularly high. Among the middle SES communities, Lakeside SRA had the highest rates of in-patient treatment due to mood disorders, with a rate 1.5 times higher than the county overall in 2017. Additionally, Harbison Crest SRA was the middle SES community with the highest rate of ED discharge due to mood disorders (218.5 per 100,000 residents), which was 1.2 times higher than the county overall in 2017.

### Depression

Among middle SES communities, Harbison Crest SRA had the highest rates of in-patient treatment and ED discharge due to depression in 2017, which were 1.4 and 1.1 times higher, respectively, than the county overall.

### Post-Traumatic Stress Disorder (PTSD)

Although rates of discharge from in-patient treatment and the ED due to post-traumatic stress disorder (PTSD) were low across all SES groups and San Diego County, the middle SES group had a higher rate of discharge from in-patient treatment facilities for PTSD than all other SES groups in 2017. Furthermore, San Marcos SRA had the highest rate of in-patient treatment discharge due to PTSD which was 5.7 per 100,000 residents in 2017, a rate 2.4 times higher than the county overall.



### Anxiety

The rates of ED discharges due to anxiety were notable among the middle SES communities in 2017. Spring Valley SRA was the middle SES community with the highest rate of ED discharge due to anxiety in 2017, where the rate was 1.2 times higher than that of the county overall. However, Peninsula SRA had a 2.1 times higher rate of in-patient treatment discharge and Lakeside SRA had a 2.6 times higher rate of hospitalization due to anxiety in 2017 compared to the county overall.

### Impulse Disorders

Although the burden of impulse disorders was fairly low across San Diego County, the middle SES communities had a higher burden of impulse disorders than all other SES groups in 2017. Among the middle SES communities, Spring Valley SRA had the highest rates of discharge from in-patient treatment and the ED, which were 3.2 and 2 times higher than the county overall, respectively.

# Behavioral Health

## Middle SES

### Attention Deficit Disorder (ADD) and Other Conduct Disorders

The rates of ED discharge due to ADD and other conduct disorders were generally low in San Diego County. However, the middle SES community of Spring Valley SRA had the highest rate of ED discharge due to ADD and other conduct disorders (55.5 per 100,000 residents) than any other SRA in San Diego County. Moreover, the rate of ED discharge due to ADD and other conduct disorders in Spring Valley SRA was 2.3 times higher than that of the county overall in 2017.

### Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.<sup>16</sup>

Seeking help for an emotional/behavioral health or alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.<sup>16</sup>



# Behavioral Health

## High SES

In 2017, the burden of Alzheimer's disease and related dementias, anxiety, benzodiazepine and other sedative-related disorders, and opioid-related disorders were highest among the high socioeconomic status (SES) group compared to all other SES groups in 2017.

### Alzheimer's Disease and Related Dementias (ADRD)

Compared to all other SES groups in 2017, high SES communities had the highest burden of Alzheimer's disease and related dementias (ADRD). The high SES community of Coronado SRA had the highest rate of death due to ADRD in 2017, which was 1.7 times higher than the county's rate. Among the high SES communities, Alpine SRA had the highest ED discharge rate due to ADRD in 2017, which was 1.9 times higher than the county overall.

### Substance-Related Disorders

Among high SES communities, the rate of in-patient treatment discharges due to substance-related disorders was notable in 2017. Specifically, the rate of in-patient treatment discharge due to substance-related disorders in Laguna-Pine Valley SRA was 6.6 times higher than the county overall.

### Benzodiazepine and Other Sedative-Related Disorders

Compared to all other SES groups, the high SES group had a higher burden of benzodiazepine and other sedative-related disorders in 2017. Among the high SES communities, Alpine SRA had the highest rate of ED discharge due to benzodiazepines and other sedative-related disorders which was 1.7 times higher than the county rate in 2017.

### Opioid-Related Disorders

Compared to all other SES groups, the high SES group had a higher burden of opioid-related disorders in 2017. Among the high SES communities, Laguna-Pine

Valley SRA had the highest rate of in-patient treatment discharge (165.7 per 100,000 residents) and Santee SRA had the highest rate of ED discharge (64.9 per 100,000 residents) due to opioid-related disorders in 2017. These rates were 10.1 and 1.5 times higher, respectively, than the county rate.

### Anxiety

Among high SES communities, the burden of anxiety was high in 2017. Moreover, Valley Center SRA had the highest rate of ED discharge due to anxiety compared to other high SES communities with a rate of 272.3 per 100,000 residents in 2017.

### Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.<sup>16</sup>

Seeking help for an emotional/behavioral health or alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.<sup>16</sup>



# Behavioral Health

## Highest SES

Overall, residents in the highest socioeconomic status (SES) group had the lowest burden of poor behavioral health outcomes than any other SES group and the county overall. Among this SES group, the burden of mood disorders, depression, anxiety, and alcohol-related disorders were notable in 2017.

### Mood Disorders

Among the selected behavioral health conditions, mood disorders, including depression and bipolar disease, had the highest burden among the highest SES group in 2017. Jamul SRA was the highest SES community with the highest rate of in-patient treatment discharge due to mood disorders with a rate of 254.3 per 100,000 residents in 2017.

### Depression

Among the highest SES communities, Jamul SRA had the highest rate of in-patient treatment due to depression (206.5 per 100,000 residents) in 2017.

### Anxiety

Although the highest SES communities had the lowest burden of anxiety in 2017 compared to the other groups, the burden of anxiety was notably high among the selected behavioral health conditions for this SES group. Among the highest SES communities, Jamul SRA had the highest rate of ED discharge due to anxiety in 2017, with a rate of 220.7 per 100,000 residents, which was lower than the county overall.

### Alcohol-Related Disorders

In 2017, the burden of alcohol-related disorders in the highest SES group was lower than the county overall. San Dieguito SRA had the highest rate of ED discharge due to alcohol-related disorders, but this rate was lower than the county overall in 2017. Among the highest SES communities, Jamul SRA had the highest rate of hospitalization due to alcohol-related disorders, which was 1.3 times higher than the county rate in 2017.

### Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.<sup>16</sup>

Seeking help for an emotional/behavioral health or alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.<sup>16</sup>



# Maternal and Child Health

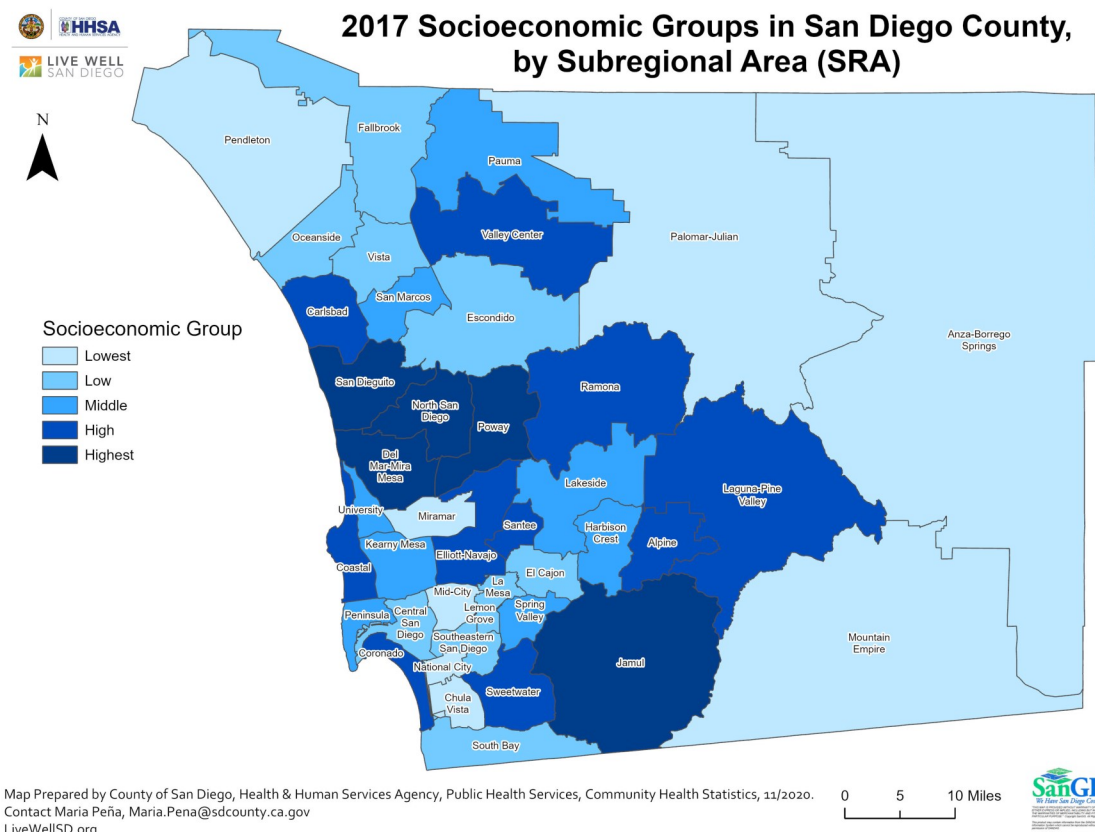
Maternal and child health focus on health issues of women, infants, and children.<sup>17</sup> Conditions falling into this category include low birth weight among newborns and infant mortality. Also discussed are utilization of prenatal care, preterm births, and births to teenage mothers.

Infant and child health are affected by a myriad of factors, including access to quality education, and socioeconomic status. The physical and mental health of the caregiver may also play a role. Access to health care and poverty levels differ by socioeconomic status, leading to disparities in maternal and child health outcomes.<sup>17</sup>



# Maternal & Child Health by SES in San Diego County

Figure 8



## Maternal and Child Health Disparities in San Diego County by Socioeconomic Status (SES)

### In 2017:

#### Lowest SES Group

- Overall, the lowest SES communities had a lower percentage of births with early prenatal care and a higher burden of childhood disorders.

#### Low SES Group

- Overall, the lowest SES communities had a higher percentage of preterm births.

#### Middle SES Group

- Overall, the burden of congenital anomalies, fetal mortality, and infant mortality were higher among the middle SES communities.

#### High SES Group

- Overall, the burden of autism spectrum disorder and percentages of low birth weight and very low birth weight were higher among the high SES group.

#### Highest SES Group

- Overall, the highest SES communities had the lowest burden of poor maternal and child and health outcomes.

# Prevent Health Disparities

---

## What You Can Do to Reduce Your Risk of Poor Maternal & Child Health Outcomes and Live Well:

- Seek early prenatal care
  - Eat a balanced diet
  - Avoid smoking, alcohol consumption, or using drugs while pregnant
  - Engage in physical activity
- 

## What Your Community Can Do to Reduce the Risk of Poor Maternal & Child Health Outcomes and Live Well:

- Encourage early prenatal care
  - Develop lactation policies
  - Provide affordable daycare options
  - Encourage enrollment in nutrition assistance programs for eligible mothers and children
- 



*Live Well San Diego* focuses on creating an environment that encourages all San Diego County residents to live healthy, safe, and thriving lives.

# Maternal & Child Health

## Lowest SES

In 2017, residents in the lowest socioeconomic status (SES) group experienced disproportionate effects of maternal and child health outcomes compared to other SES groups in San Diego County. The burden of childhood disorders and the percentage of teen births were highest among those in the lowest SES group compared to all other SES groups in 2017.

### Childhood Disorders

Compared to all other SES groups, the lowest SES communities had the highest burden of childhood disorders in San Diego County in 2017. Among the lowest SES communities, Mid-City SRA had the highest ED discharge rate due to childhood disorders (8.5 per 100,000 residents), which was 2.2 times higher than the county rate in 2017.

### Preterm Births<sup>‡</sup>

Although the percentage of preterm births in San Diego County was fairly low across all SES groups, Chula Vista SRA had a higher percentage of preterm births (9.5% of newborns) in 2017 than any of the other lowest SES communities.

### Teen Births<sup>§</sup>

The average percentage of teen births to mothers aged 15 to 17 was highest among the lowest SES group. Specifically, the percentage was 1.8 times higher in National City SRA compared to the county overall in 2017.

### Early Prenatal Care<sup>†</sup>

The lowest SES communities generally had lower percentages of mothers receiving early prenatal care compared to all other SES groups in 2017. Among the lowest SES communities, Mountain Empire SRA had the lowest percentages of mothers receiving early prenatal care (61.9%) in 2017.

### Infant Mortality\*

The lowest SES group had the second highest infant mortality rate compared to the other SES groups in 2017. Among the lowest SES communities, Chula Vista SRA had the highest infant mortality rate with 6.8 infant deaths per 1,000 live births in 2017, which was 1.7 times higher than the county overall.

### Risk Factors and Prevention Strategies

Maternal and child health outcomes are influenced by several factors including age, race and ethnicity, socioeconomic status, and a mother's health. Specifically, lack of prenatal care, poor nutrition, alcohol and tobacco use, and lack of physical activity are major lifestyle risk factors for adverse maternal and child health outcomes.<sup>17</sup>

The health of mothers, infants, and children are key indicators of the health of a community overall. Their health outcomes often reflect the health of future generations, as well as emerging public health concerns. Therefore, engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.<sup>17</sup>



<sup>‡</sup> Preterm birth refers to birth prior to 37 completed weeks of gestation.

<sup>§</sup> Teen Birth Percentage: proportion of teen (15-17yrs) births.

<sup>†</sup> Early prenatal care is defined here as care beginning during 1st trimester of pregnancy. This does not account for frequency of care.

\* Infant Mortality Rate: infant deaths (under one year of age) per 1,000 live births, by geography.

# Maternal & Child Health

## Low SES

In 2017, the burden of developmental disorders and percentage of preterm births were higher among those living in the low socioeconomic status (SES) communities compared to all other communities in 2017.

### Developmental Disorders

Compared to all other SES groups, the burden of developmental disorders was highest among the low SES group in San Diego County in 2017. Among low SES communities, El Cajon SRA had the highest rate of ED discharge due to developmental disorders, which was 2.7 times higher than the county rate in 2017.

### Preterm Births<sup>‡</sup>

Low SES communities had the highest overall percentage of preterm births compared to all other SES groups in 2017. Among the low SES communities, Lemon Grove SRA had the highest percentage of preterm births in 2017.

### Fetal Mortality<sup>\*\*</sup>

The rate of fetal mortality among low SES communities was highest in the South Bay SRA, in which the fetal mortality rate was 1.5 times higher than the county rate in 2017.

### Infant Mortality<sup>\*</sup>

Compared to all other SES groups and San Diego County, the low SES group had a lower burden of infant mortality in 2017. However, El Cajon SRA had an infant mortality rate 1.2 times higher than the county overall.

### Early Prenatal Care<sup>†</sup>

Among the low SES communities, the percentage of mothers receiving early prenatal care was lowest in Fallbrook SRA, where 77.8% of mothers received early prenatal care in 2017.



### Teen Births<sup>§</sup>

The low SES community with the highest percentage of teen births among mothers aged 15 to 17 was Southeastern San Diego SRA, in which the percentage was 2 times higher than the county's in 2017.

### Risk Factors and Prevention Strategies

Maternal and child health outcomes are influenced by several factors including age, race and ethnicity, socioeconomic status, and a mother's health. Specifically, lack of prenatal care, poor nutrition, alcohol and tobacco use, and lack of physical activity are major lifestyle risk factors for adverse maternal and child health outcomes.<sup>17</sup>

The health of mothers, infants, and children are key indicators of the health of a community overall. Their health outcomes often reflect the health of future generations, as well as emerging public health concerns. Therefore, engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.<sup>17</sup>

<sup>‡</sup> Preterm birth refers to birth prior to 37 completed weeks of gestation.

<sup>\*\*</sup> Fetal Mortality Rate: the fetal deaths (at least 20 complete weeks of gestation) per 1,000 live births and fetal deaths, by geography.

<sup>\*</sup> Infant Mortality Rate: infant deaths (under one year of age) per 1,000 live births, by geography.

<sup>†</sup> Early prenatal care is defined here as care beginning during 1st trimester of pregnancy. This does not account for frequency of care.

<sup>§</sup> Teen Birth Percentage: proportion of teen (15-17yrs) births.

# Maternal & Child Health

## Middle SES

In 2017, the burden of congenital anomalies, fetal deaths, and infant deaths were notable among those living in the middle socioeconomic status (SES) communities in 2017.

### Infant Mortality\*

Compared to all other SES groups, overall, the burden of infant mortality in 2017 was highest among the middle SES group in San Diego County. Among the middle SES communities, Kearny Mesa SRA had the highest infant mortality rate, which was 1.3 times higher than the county rate in 2017.

### Early Prenatal Care<sup>†</sup>

The middle SES community with the lowest percentage of mothers receiving early prenatal care was Pauma SRA in which 77.7% of mothers received early prenatal care in 2017.

### Fetal Mortality\*\*

Compared to all other SES groups, the middle SES group had the highest fetal mortality rate in 2017. The middle SES community with the highest fetal mortality rate was Spring Valley SRA, with a rate 2.2 times higher than the county rate in 2017.

### Congenital Anomalies

Compared to all other SES groups, the middle SES group had the highest burden of congenital anomalies in 2017. Among middle SES communities, Harbison Crest SRA had the highest rate of hospitalization and Lakeside SRA had the highest rate of ED discharge due to congenital anomalies in 2017, which were 1.5 and 1.2 times higher, respectively, than the county overall in 2017.

### Teen Births<sup>§</sup>

Among middle SES communities, San Marcos SRA had the highest percentage of teen births among mothers aged 15 to 17, which was 1.8 times higher than the county in 2017.

### Risk Factors and Prevention Strategies

Maternal and child health outcomes are influenced by several factors including age, race/ethnicity, socioeconomic status, and a mother's health. Specifically, lack of prenatal care, poor nutrition, alcohol and tobacco use, and lack of physical activity are major lifestyle risk factors for adverse maternal and child health outcomes.<sup>17</sup>

The health of mothers, infants, and children are key indicators of the health of a community overall. Their health outcomes often reflect the health of future generations, as well as emerging public health concerns. Therefore, engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.<sup>17</sup>

\*\* Fetal Mortality Rate: the fetal deaths (at least 20 complete weeks of gestation) per 1,000 live births and fetal deaths, by geography.

\* Infant Mortality Rate: infant deaths (under one year of age) per 1,000 live births, by geography.

† Early prenatal care is defined here as care beginning during 1st trimester of pregnancy. This does not account for frequency of care.

§ Teen Birth Percentage: proportion of teen (15-17yrs) births.

# Maternal & Child Health

## High SES

While the burden of poor maternal and child health outcomes was lower among the high socioeconomic status (SES) group, several conditions still disproportionately affected residents living in the high SES communities in 2017. The burden of autism spectrum disorder and percentages of low birth weight and very low birth weight were higher among the high SES group compared to all other SES groups in 2017.

### Autism Spectrum Disorder

Compared to all other SES groups, the high SES group had the highest burden of autism spectrum disorder in 2017. Among high SES communities, Elliott-Navajo SRA had the highest rate of ED discharge due to autism spectrum disorder in 2017, which was nearly 3 times higher than the county rate.

### Early Prenatal Care<sup>†</sup>

The percentage of early prenatal care was higher in the high SES group compared to most SES groups, with the exception of the highest SES group. Laguna-Pine Valley SRA was the high SES community with the lowest percentage of mothers receiving early prenatal care at 80.1% in 2017.

### Low Birth Weight<sup>^</sup>

Compared to all other SES groups, the high SES group had the highest percentage of low birth weight newborns in 2017. Among high SES communities, Laguna-Pine Valley SRA had the highest percentage of low birth weight newborns at 13.3% in 2017.

### Very Low Birth Weight<sup>~</sup>

Compared to all other SES groups, the high SES group had the highest percentage of very low birth weight newborns in 2017. Among high SES communities, Elliott-Navajo SRA had the highest percentage of very low birth weight newborns at 1.5% in 2017.

### Risk Factors and Prevention Strategies

Maternal and child health outcomes are influenced by several factors including age, race/ethnicity, socioeconomic status, and a mother's health. Specifically, lack of prenatal care, poor nutrition, alcohol and tobacco use, and lack of physical activity are major lifestyle risk factors for adverse maternal and child health outcomes.<sup>17</sup>

The health of mothers, infants, and children are key indicators of the health of a community overall. Their health outcomes often reflect the health of future generations, as well as emerging public health concerns. Therefore, engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.<sup>17</sup>



<sup>†</sup> Early prenatal care is defined here as care beginning during 1st trimester of pregnancy. This does not account for frequency of care.

<sup>^</sup> Low birth weight refers to birth weight less than 2,500 g (approximately 5 lbs., 8 oz.).

<sup>~</sup> Very Low birth weight refers to birth weight less than 1,500 g (approximately 3 lbs., 5 oz.).

# Maternal & Child Health

## Highest SES

The highest socioeconomic status (SES) group had a lower burden of poor maternal and child health outcomes compared to all other SES groups in 2017. Residents in the highest SES group had the lowest burden of teen births, fetal mortality, percentages of low birth weight and very low birth weight, and preterm births compared to all other communities in 2017.

### Early Prenatal Care<sup>†</sup>

Compared to all other SES communities, the highest SES communities had the highest overall percentage of mothers receiving early prenatal care in 2017. The highest SES community with the highest percentage of mothers receiving early prenatal care in 2017 was North San Diego SRA in which nearly 94% of mothers had received early prenatal care. Additionally, the highest SES community with the lowest percentage of mothers receiving early prenatal care was Jamul SRA at 84.4% in 2017.

### Low Birth Weight<sup>^</sup> and Very Low Birth Weight<sup>~</sup>

The highest SES group had the lowest rates of newborns with low birth weight and very low birth weight compared to all other SES groups in 2017. Among the highest SES communities, San Dieguito SRA had the highest percentage of newborns with low birth weight at 7%, whereas Poway SRA was the highest SES community with the highest percentage of newborns with very low birth weight at 1.2% in 2017.

### Infant Mortality\* and Fetal Mortality\*\*

Compared to all other SES groups, the highest SES communities had lower fetal and infant mortality rates in 2017.



### Risk Factors and Prevention Strategies

Maternal and child health outcomes are influenced by several factors including age, race and ethnicity, socioeconomic status, and a mother's health. Specifically, lack of prenatal care, poor nutrition, alcohol and tobacco use, and lack of physical activity are major lifestyle risk factors for adverse maternal and child health outcomes.<sup>17</sup>

The health of mothers, infants, and children are key indicators of the health of a community overall. Their health outcomes often reflect the health of future generations, as well as emerging public health concerns. Therefore, engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.<sup>17</sup>

<sup>†</sup> Early prenatal care is defined here as care beginning during 1st trimester of pregnancy. This does not account for frequency of care.

<sup>^</sup> Low birth weight refers to birth weight less than 2,500 g (approximately 5 lbs., 8 oz.).

<sup>~</sup> Very Low birth weight refers to birth weight less than 1,500 g (approximately 3 lbs., 5 oz.).

\* Infant Mortality Rate: infant deaths (under one year of age) per 1,000 live births, by geography.

\*\* Fetal Mortality Rate: the fetal deaths (at least 20 complete weeks of gestation) per 1,000 live births and fetal deaths, by geography.

# SES Disparities: Summary

In this report socioeconomic status (SES) was discussed using the 41 sub-regional areas defined by the San Diego Association of Governments. Based on median household SES, these areas were divided into five major community groups— lowest, low, middle, high, and highest SES. Substantial differences in health indicators and health-related behaviors exist in the different socioeconomic groups within the county.

## In 2017:

### Lowest SES Group

Compared to all other socioeconomic groups in San Diego County, the lowest SES group had higher burden of poor health outcomes. Particularly, the lowest SES groups had a higher burden of chronic disease outcomes, sexually transmitted infections, assault, motor vehicle injuries, self-inflicted injuries, poor behavioral health outcomes including alcohol and substance-related disorders, as well as higher rates of teen births and childhood disorders in 2017.

### Low SES Group

The low SES group had a higher burden of kidney and liver cancer, lupus and connective tissue disorders, firearm-related injuries, adjustment disorders, mood disorders, schizophrenia and other psychotic disorders, developmental disorders, and preterm births compared to all other SES groups in San Diego County.

### Middle SES Group

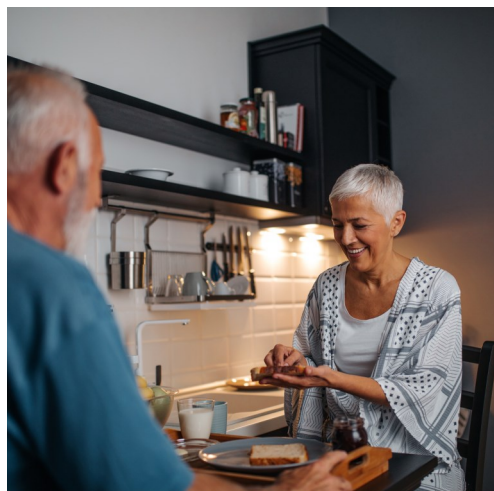
Compared to other SES groups, the middle SES group had a higher burden of lung cancer, depression, impulse disorders, post-traumatic stress disorder (PTSD), congenital anomalies, fetal mortality, and infant mortality.

### High SES Group

San Diego County residents in the high SES group had a higher burden of colorectal cancer, osteoarthritis, pancreatic cancer, falls, Alzheimer's disease and related dementias (ADRD), anxiety, benzodiazepine and other sedative-related disorders, opioid-related disorders, autism spectrum disorder, and low birth weight compared to residents in all other SES groups.

### Highest SES Group

The burden of female breast cancer and prostate cancer were highest among the highest SES group in 2017 compared to all other SES groups.



# Actions to support *Live Well San Diego*

Creating an environment that encourage residents to live healthy, safe, and thriving lives is a priority in San Diego County. *Live Well San Diego* plans to advance the health and overall well-being of all San Diegans through a collective effort that involves residents, community and faith-based organizations, businesses, schools, law enforcement, local city and tribal jurisdictions, and the County of San Diego.

*Live Well San Diego* is a framework to help achieve health equity among all residents. To learn more, visit <https://www.livewellsd.org/>.

## Non-Communicable (Chronic) Disease

Eliminating tobacco use, adopting active lifestyles, eating healthier diets, and decreasing excessive use of alcohol are key transformations that can reduce the burden of non-communicable (chronic) disease among San Diego County residents.

For more local data and statistics on noncommunicable (chronic) disease, visit the [Non-Communicable \(Chronic\) Disease Workbook](#) or the [Non-Communicable \(Chronic\) Disease Dashboard](#).

For information on non-communicable (chronic) disease, visit the County of San Diego's Community Health Statistics website at, and view the [data dashboards](#).

## Communicable Disease

Taking protective measures including vaccination and avoiding close contact with sick individuals, seeking testing and early treatment, and visiting a doctor regularly are key strategies that can reduce the burden of communicable disease among San Diegans.

For more local data and statistics on communicable disease, please go to the [Communicable Disease Workbook](#) or the [Communicable Disease Dashboard](#).

For more information on communicable disease, visit the County of San Diego's [Epidemiology and Immunization Services Branch](#).

## Maternal and Child Health

The health of mothers, infants, and children are key indicators of the health of the community overall. Health outcomes often reflect the health of future generations as well as emerging public health concerns.<sup>7</sup> Prevention measures such as increased nutrition, early prenatal care, as well as cessation of smoking, alcohol consumption, and illicit drug use are all key ways to improve maternal and child health.<sup>17</sup>

For more local data and statistics on maternal and child health, visit the [Maternal Child Health Data Workbook](#) or [Maternal Child Health Dashboard](#).

For more information on maternal and child health outcomes, visit the County of San Diego's [Maternal, Child and Family Health Services Branch](#).

## Injury

Of the major causes of disability and death, injuries are among the most preventable. Increased safety education, awareness of fall prevention strategies, and investing in safer communities are key ways to reduce the burden of injury among county residents.<sup>16</sup>

For more local data and statistics on injury, visit the [Injury Data Workbook](#) or [Injury Dashboard](#).

For more information on injury, visit the County of San Diego's [Emergency Medical Services Branch](#).

## Behavioral Health

Seeking help for an emotional, behavioral health, or alcohol/drug problem, engaging in activities to reduce stress, avoiding social isolation, and fostering environments that reduce the stigma of behavioral health issues are major prevention strategies that can help reduce poor behavioral health outcomes among San Diegans.<sup>17</sup>

For more local data and statistics on behavioral health outcomes, visit the [Behavioral Health Data Workbook](#) or [Behavioral Health Dashboard](#).

For more information on behavioral health outcomes, visit the County of San Diego's [Behavioral Health Services Division](#).

# Appendix. Methodology

*Exploring Health Disparities in San Diego County by Age* is part of series of reports exploring disparities among San Diego County residents. The goal of this report was to identify health and sociodemographic disparities which could provide local agencies, organizations, groups, services, and individuals a starting point in developing solutions to improve the health and wellbeing of the residents of San Diego County.

The series of reports can be found in the reports section of [www.sdhealthstatistics.com](http://www.sdhealthstatistics.com).

Disclaimer: It should be noted that these reports are not an update of the series of health equity reports published in March of 2016. The current iteration of reports include more indicators and health outcomes than the previous reports, which used 2011 data (2010 for two maternal child health indicators).

## Data Sources

### Health Data

Health outcome data were compiled from the County Community Health Statistics Unit's San Diego County Community Profiles document. Specifically, death, hospitalization, in-patient treatment, skilled nursing facility/intermediate care, physical rehabilitation, and emergency department discharge rates for various health outcomes were analyzed to identify health disparities within San Diego County's populations.

Emergency department and patient discharge data provided by the Office of Statewide Health Planning and Development (OSHPD) was grouped via the Healthcare Cost and Utilization Project (H-CUP) Clinical Classification Software (CCS) groupings. H-CUP is a family of healthcare databases and related software tools developed through a Federal-State-Industry partnership and sponsored by the Agency for Healthcare Research and Quality (AHRQ). Mortality data was provided by the California Department of Public Health, Center for Health Statistics, Office of Health Information and Research, Vital Records and Business Intelligence System (VRBIS). Mortality codes were grouped according to the National Center for Health Statistics (NCHS) ICD-10 Mortality Codebook 2e-

v1, 2017. Alzheimer's Disease and Related Dementias (ADRD) emergency department, patient discharge and mortality ICD-10 codes were grouped according to Alzheimer's Association [2017 Facts and Figures Report](#). Additional information on code grouping sources for health indicators, population data, and geographies are available in [Community Health Statistics Data Guide and Metadata file](#).

### Demographic Data

In addition to identifying health disparities, demographic information and lifestyle/behavioral data on each group was provided to highlight some of the potential contributing factors to these health outcomes.

#### San Diego Association of Governments (SANDAG)

The number of residents in report including any breakdowns by age, gender, and race/ethnicity as well as population forecast numbers by the same breakdowns come from SANDAG.

#### American Community Survey (ACS)

Sociodemographic and economic data from the U.S. Census Bureau's ACS was used, wherever available. 2017 1-year estimates were used except for the Geography and Socioeconomic (SES) Reports which are based on subregional area data requiring 5-year estimates (data years 2013-2017).

### Lifestyle/Behavioral Health Data

#### California Health Interview Survey (CHIS)

In lieu of socioeconomic data from ACS at the race and ethnicity levels required for the county, these type of indicators were pulled from CHIS. Where available, lifestyle and behavioral indicators such as the percent of current adult smokers and percent of residents reporting at least one doctor's visit in the past year were pulled from CHIS. Lastly, whenever possible, 2017 estimates were used; however, years may have been combined to arrive to statistically stable estimates. Note: Even combining multiple years, subdividing the population may produce unstable estimate which were noted in the text.

# Appendix. Methodology

## Definitions

**Burden of disease** includes death and discharges from the emergency department, hospital, in-patient treatment, skill nursing facility, and physical rehab facility.

## Overall Methods

The overall methods used to explore health disparities among San Diego County residents were the following:

- Death and primary discharge data from the community health profiles was used to first, look at the overall burden of chronic, communicable, injury, behavioral health outcomes, and maternal and child health outcomes in the last 5 years (2013-2017) to look at the trends among subpopulations by age, gender, and race/ethnicity. This step was not possible for the geography and SES reports due to shifting of categories from year to year.
- Subsequently, the exploration of health disparities focused on the 2017 data only. Each section attempts to highlight the conditions and death and/or medical encounters most relevant among the subgroup of the population.
- Where relevant, differences across groups are also mentioned in the text.

## Age, Gender, and Race and Ethnicity Reports

Data in the community health profiles are already produced and broken down by age, gender, and race/ethnicity. However, groupings used for the geography and socioeconomic status reports were developed with different criteria detailed below.

For the Race and Ethnicity report, Asian and Native Hawaiian/Pacific Islanders (NHPI) were combined to form a single category referred to as Asian/Pacific Islander (API) to provide a larger sample size since NHPI has a low count demographically and low representation in the medical encounter database.

In the Geography report, geography is measured using urbanicity type based on ESRI's Urbanicity Tapestry data. ESRI defines urbanicity as the "degree of population density, size of city, and location relative to a metropolitan area."<sup>11</sup> Each of the 41 subregional Areas (SRAs) of San Diego County were assigned into one of six urbanicity groups based on ESRI's tapestry data: rural, semirural, suburban periphery, metro cities, urban periphery, and principal urban centers. Few of the SRAs were 100% rural, for example. In most cases, SRAs were a combination of urbanicity types and were assigned into the urbanicity type that had the highest distribution in the SRA. Based on this criteria, San Diego County SRAs fell into one of five urbanization categories because none of the SRAs could be categorized as semirural. The following sections contain more information on the urbanicity characteristics.

## Socioeconomic Status (SES) Report

Socioeconomic Status (SES) was calculated using Median Household Income (MHI) as the proxy measure. The MHI was pulled for 2017 by subregional area (SRA) from ESRI Community Analyst. A Jenks Natural Breaks Optimization method was then applied to the data, resulting in 5 categories with the best goodness of variance fit (GVF=.96). Finally, the 41 SRAs were assigned into one of the five groups: lowest, low, middle, high, and highest income groups.

# References

1. Centers for Disease Control and Prevention. Healthy Communities Program, “Attaining Health Equity,” <http://www.cdc.gov/healthycommunitiesprogram/overview/healthequity.htm> (Accessed November 16, 2020).
2. Wooten, W. “Place Matters to Your Patient’s Health.” San Diego County Physician Magazine. April 2009.
3. U.S. Department of Health and Human Services. Healthy People 2030: Social Determinants of Health. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health> (Accessed November 16, 2020).
4. State of Georgia, Georgia Department of Community Health, Office of Health Improvement and the Minority Health Advisory Council, Georgia Health Equity Initiative, Health Disparities Report 2008: A County-Level Look at Health Outcomes for Minorities in Georgia. 1st ed. Atlanta, Georgia, 2008.
5. Centers for Disease Control and Prevention. Community Health and Health Equity Program, “Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health,” <http://www.cdc.gov/healthycommunitiesprogram/tools/pdf/SDOH-workbook.pdf> (Accessed November 16, 2020).
6. Centers for Disease Control and Prevention. Education and income—United States, 2009 and 2011. In: CDC Health Disparities and Inequalities Report—United States, 2013. MMWR 2013; 62(Suppl; November 22, 2013). Accessed November 16, 2020.
7. Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report, “Vital Signs: Health Insurance Coverage and Health Care Utilization – United States, 2006–2009 and January – March 2010,” <http://www.cdc.gov/mmwr/pdf/wk/mm59e1109.pdf> (Accessed November 16, 2020).
8. Centers for Disease Control and Prevention. Vital and Health Statistics, “Health Behaviors of Adults: United States, 2002–04,” [http://www.cdc.gov/nchs/data/series/sr\\_10/sr10\\_230.pdf](http://www.cdc.gov/nchs/data/series/sr_10/sr10_230.pdf) (Accessed November 16, 2020).
9. County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, “Life Expectancy in San Diego County, 2010–2018.” 2020. [https://www.sandiegocounty.gov/content/dam/sdc/hhsa/programs/phs/CHS/Mortality/Life Expectancy in San Diego County 2010–2018.pdf](https://www.sandiegocounty.gov/content/dam/sdc/hhsa/programs/phs/CHS/Mortality/Life%20Expectancy%20in%20San%20Diego%20County%202010-2018.pdf) (Accessed November 16, 2020).
10. San Diego Association of Governments (SANDAG). 2017 Population Estimates. Received March, 2019.
11. U.S. Census Bureau. 2010 and 2017 American Community Survey 1-Year Estimates. <https://data.census.gov/> (Accessed November 16, 2020).
12. U.S. Census Bureau. 2013–2017 American Community Survey 5-Year Estimates. <https://data.census.gov/cedsci/> (Accessed October 30, 2020).
13. Centers for Disease Control and Prevention. Chronic Disease Prevention and Health Promotion. “Chronic Diseases and Health Promotion,” <https://www.cdc.gov/chronicdisease/about/index.htm> (Accessed October 2020).
14. American Public Health Association. Communicable Disease. <https://www.apha.org/topics-and-issues/communicable-disease>. Accessed November 2020.
15. Centers for Disease Control and Prevention. Injury Prevention & Control, “Injury and Violence Prevention: A Pressing Public Health Concern,” <https://www.cdc.gov/injury/index.html> (Accessed November 17, 2020).
16. U.S. Department of Health and Human Services. Office of the Surgeon General. National Prevention Council, National Prevention Strategy. Washington, D.C., 2011. <https://www.hhs.gov/sites/default/files/disease-prevention-wellness-report.pdf> (Accessed October 2020).
17. Office of Diseases Prevention and Health Promotion. Healthy People.gov. Maternal, Infant, and Child Health. <https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health>. Accessed November 2020.
18. SANDAG info. Demystifying Geographies: Peeling Back the Layers. May 2014. [http://www.sandag.org/uploads/publicationid/publicationid\\_1853\\_17597.pdf](http://www.sandag.org/uploads/publicationid/publicationid_1853_17597.pdf) (Accessed November 16, 2020).
19. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance Survey 2017. <https://www.cdc.gov/brfss/questionnaires/index.htm> (Accessed October 2020).
20. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). About Chronic Diseases. <https://www.cdc.gov/chronicdisease/about/index.htm>. Accessed November 2020.
21. The California Endowment, Policy Link. Why Place Matters: Building a Movement for Healthy Communities. [https://www.policylink.org/sites/default/files/WHYPLACEMATTERS\\_FINAL.PDF](https://www.policylink.org/sites/default/files/WHYPLACEMATTERS_FINAL.PDF). Accessed November 2020.
22. Centers for Disease Control and Prevention. Injury Prevention and Control. Definitions for WISQARS™ Nonfatal. [https://www.cdc.gov/injury/wisqars/nonfatal\\_help/definitions.html](https://www.cdc.gov/injury/wisqars/nonfatal_help/definitions.html). Accessed November 2020.
23. National Alliance on Mental Illness. Mental Health Conditions. <https://www.nami.org/learn-more/mental-health-conditions>. Accessed November 2020.
24. World Health Organization. Social Determinants of Mental Health. [https://apps.who.int/iris/bitstream/handle/10665/112828/9789241506809\\_eng.pdf;jsessionid=6325AD05510F84761F36B674A11C8433?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/112828/9789241506809_eng.pdf;jsessionid=6325AD05510F84761F36B674A11C8433?sequence=1). Accessed November 2020.