



March 2022

EXPLORING HEALTH DISPARITIES IN SAN DIEGO COUNTY BY AGE

A Report to Identify Opportunities to Achieve Health Equity



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Exploring Health Disparities in San Diego County by Age

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

March 2022

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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, 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 *age*. The type of disease or injury changes throughout the lifespan. Children ages 0-14 suffered the highest overall burden of asthma, attention deficit disorders, drowning, and childhood disorders. Those 15-24 years old had the highest overall burden of sexually transmitted disease, substance use disorders, certain mental health disorders, and motor vehicle related injuries. Those 25-44 had the highest burden of most mental health disorders and substance use disorders, particularly opioids. Those 45-64 had the highest burden of alcohol related disorders and poisoning. Mothers 45 years and older had the highest percentage of preterm births and low and very low birth weight newborns. Seniors, aged 65+, had the highest burden of most chronic diseases, pneumonia and influenza, Alzheimer's disease, and related dementias, falls, hip fractures, and heat-related illness.

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

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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.”¹

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.”¹

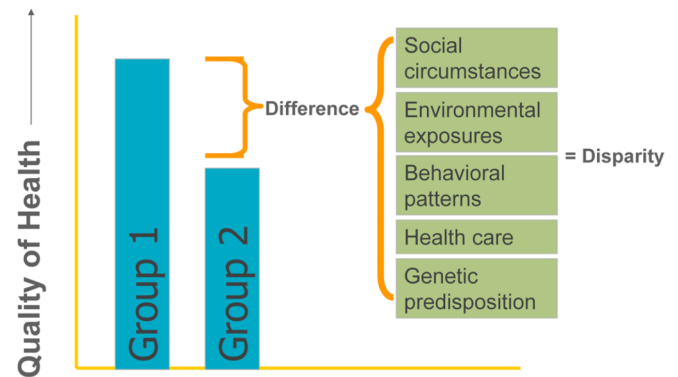
There are many factors that affect the ability to achieve health equity, including the circumstances in which people are born, grow, live, work, and age, as well as the systems in place to deal with illness, which are known as social determinants of health.² Social determinants of health can include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

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.”⁵ 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.⁵ Health inequities are health disparities that may result from systematic or unequal distribution of positive resources.⁵

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.⁸

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.⁶ The association between these factors is cumulative and influences the health status of an individual over a lifetime.⁶ 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.¹² 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.⁷ 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.⁷

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.”¹ 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.² Thus, health inequities can be mitigated, eliminated or avoided by ameliorating these circumstances that lead to poor health. Examples of such SDOH include:



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

²<https://www.who.int/health-topics/social-determinants-of-health#tab=1>

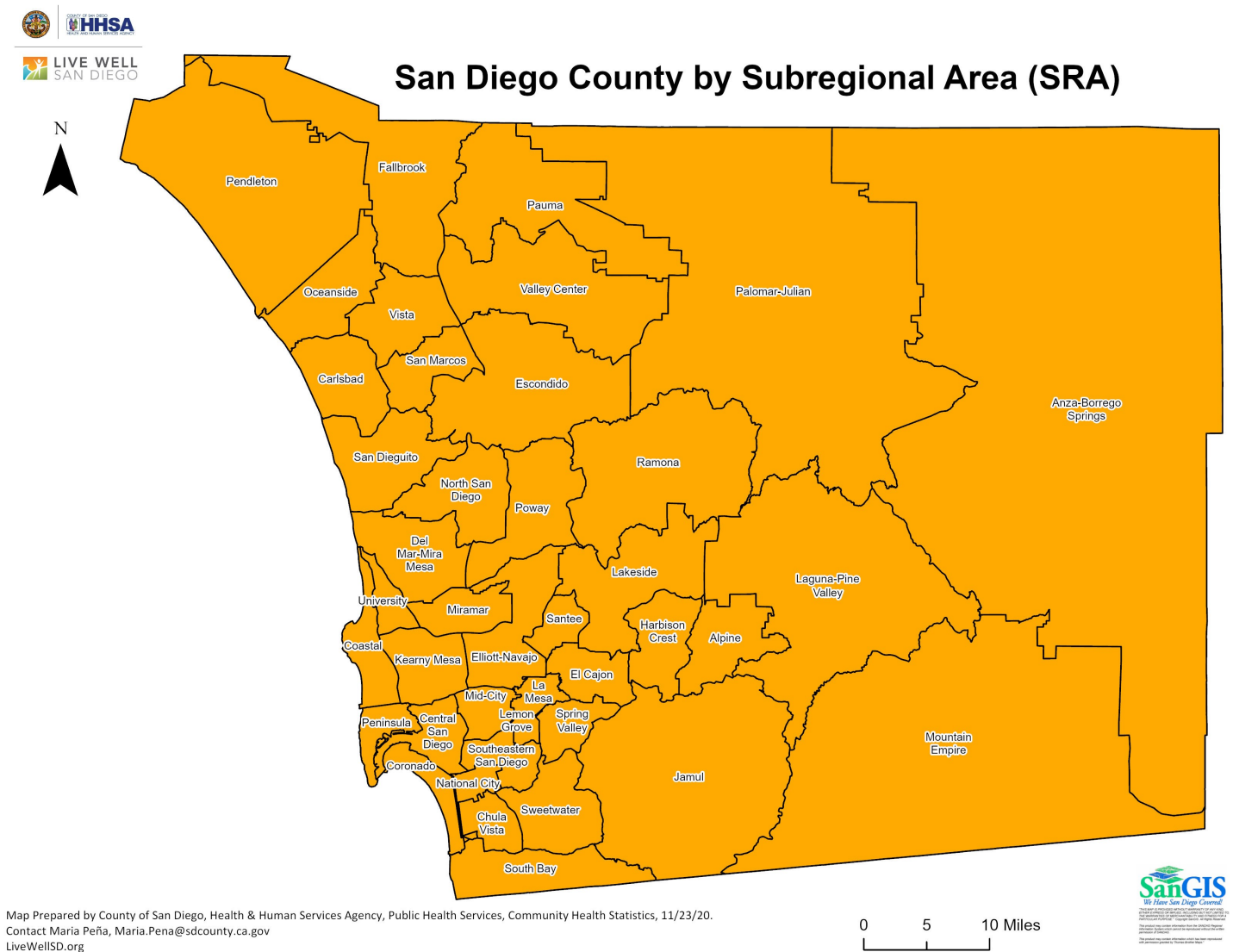
Geographic Areas Assessed in this Report

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.

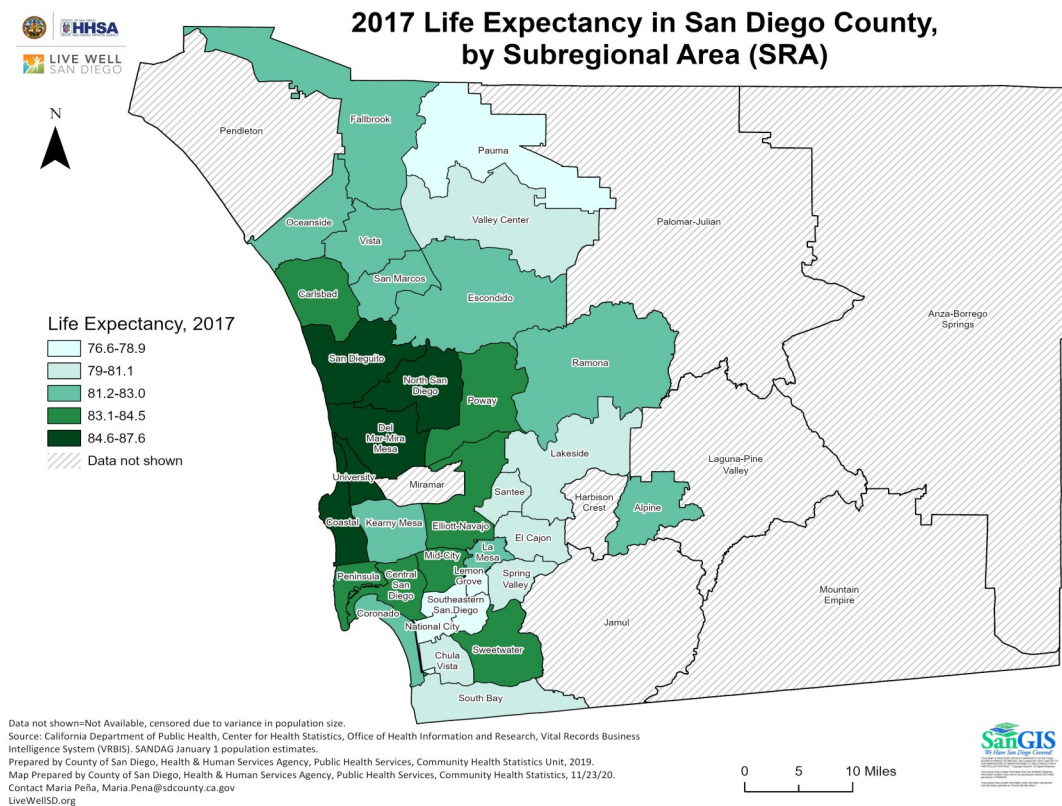
San Diego County has 41 SRAs, which are aggregations of census tracts. While the boundaries of many geographical areas, such as cities, change over time, SRA boundaries have remained essentially the same since their formation which allows for meaningful comparisons of time series information because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

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 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 2017.⁹ 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).⁹ 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.⁹ 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: Age

Exploring Health Disparities in San Diego County by Age 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 by identifying health disparities and inequities that 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, and emergency department (ED) discharge 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, maternal and child health, injury, and behavioral health. For further resources, including local health and demographic information, please visit www.sdhealthstatistics.com.



HEALTH EQUITY IN SAN DIEGO COUNTY:

Age Health Disparities



Introduction to Age Health Disparities

In San Diego County in 2017, 20% of the population were 0-14 years old, 14.9% were 15-24 years old, 26.6% were 25-44 years old, 24.6% were 45-64 years old, and 14% were 65 years and older.¹⁰ The life expectancy for a San Diego County resident in 2017 was 82.5 years.⁹

In 2017, in San Diego County:

- Overall, the burden of non-communicable (chronic) diseases were higher among 45-64 year olds and those 65 years and older compared to the county overall.
- Overall, among communicable diseases, the burden of sexually transmitted diseases were higher among 15-24 year olds and 25-44 year olds compared to the county overall.
- Overall, the burden of poor behavioral health outcomes and injuries were higher among 15-24 year olds and 25-44 year olds compared to the county overall.
- Overall, mothers 45 years and older and 25-44 years olds had higher percentages and a higher burden of poor maternal and child health indicators compared to other age groups in San Diego County.

Overall, health outcomes impacted San Diego County residents differently by age. A series of health indicators and related lifestyle behaviors are presented throughout the report, which aim to describe the most important health concerns facing residents of different age groups in San Diego County.

Demographics

0-14 years

In 2017, there were 663,411 children aged 0-14 years living in San Diego County, comprising 20% of San Diego County's population.¹⁰ By 2030, the population of 0-14 year olds is expected to increase in number by 8%.¹¹

In 2017, 20% of San Diego County's population was aged 0-14 years old.¹⁰

Nealy one-third (32%) of children aged 0-14 years lived below 200% of the federal poverty level (FPL) in 2017.¹³

Of the population between 3 and 14 years old in 2017, 89% were enrolled in school.¹²

In 2017, 81% of 0-14 year olds in San Diego County were reported by their parents to be in excellent or very good health, while 19% were in good, fair, or poor health.¹³ In the same year, approximately 67% of 0-14 year olds saw a medical doctor two or more times during the past year. One in nine children under 15 years old had visited an emergency room in the past year.¹³

An estimated 98% of 0-14 year olds had health insurance in 2017.*¹³

In 2017, nearly one-third of children aged 0-14 years lived below 200% of the federal poverty level (FPL).¹³

Overall, among children aged 0-14 years, rates of non-communicable (chronic) diseases, communicable diseases, poor behavioral health outcomes, and

injuries were lower compared to the county overall. However, poor maternal and child health outcomes such as congenital anomalies and childhood disorders were higher among 0-14 year olds compared to the county overall. A series of health indicators and related health behaviors are presented later on in the report that aim to describe some of the most important health concerns faced by children aged 0-14 years in San Diego County.

*Statistically unstable estimates. However, the percentage is similar to another source with a similar age group.



Demographics

15-24 years

In 2017, there were 492,466 San Diego County teenagers and young adults aged 15-24 years.¹⁰ By the year 2030, the number of San Diegans in this age group is expected to remain relatively stable.¹¹ This age group accounts for 15% of San Diego County residents, representing a subset of the population with unique health concerns and behaviors.¹⁰

In 2017, 15% of San Diego County's population was aged 15-24 years.¹⁰

In 2017, 40% of adults aged 18-24 years reported they had an annual household income of \$50,000 or less and 24% reported an annual household income above \$100,000.¹³ In the same year, 40% of residents aged 15-24 years lived below 200% of the federal poverty level (FPL).¹³

In 2017, 98% of 15-17 year olds and just over half, or 52%, of 18-24 year olds were enrolled in school.¹² Among adults aged 18-24 years, 42% had a high school education or less, 47% had some college education or an associate's degree, and 11% had a bachelor's degree or higher.¹²

In 2017, 64% of San Diego County residents aged 15-24 years reported they were in excellent or very good health, 28% reported good health, and 8%* were in poor or fair health.¹³

In 2017, one in five teenagers and young adults aged 15-24 reported visiting an emergency room in the past 12 months.¹³

In 2017, an estimated 88% of teenagers and young adults aged 15-24 had health insurance.*¹³

Overall, rates of poor behavioral health outcomes and injuries were higher among 15-24 year olds compared to the county overall. Additionally, of the communicable diseases, sexually transmitted diseases were higher among teens and young adults compared to the county overall. Among 15-24 year olds, childhood disorders were higher compared to the county overall. A series of health indicators and related health behaviors are presented later on in the report that aim to describe some of the most important health concerns faced by teens and young adults aged 15-24 years in San Diego County.

*Statistically unstable estimates. However, the percentage is similar to another source with a similar age group.



Demographics

25-44 years

In 2017, there were nearly 882,046 San Diego County residents ages 25-44 years, comprising 27% of San Diego County's population.¹⁰ By 2030, the number of 25-44 year olds in the county is expected to increase by 16% to more than one million.¹¹

In 2017, 27% of San Diego County's population was aged 25-44 years.¹⁰

In 2017, 37% of adults aged 25-44 reported they had an annual household income of \$50,000 or less, nearly 31% had a household income between \$50,001 to \$100,000 and 33% reported an annual household income above \$100,000.¹³ In the same year, 27% of residents aged 25-44 years lived below 200% of the federal poverty level (FPL).¹³

In 2017, 27% of adults aged 25-44 years had a high school education or less, 32% had some college education or an associate's degree, and 41% had a bachelor's degree or higher.¹²

In 2017, 59% of San Diego County residents aged 25-44 years reported they were in excellent or very good health and 27% reported being in good health.¹³ Eighty percent of adults aged 25-44 years had at least one doctor's visit in the past year in 2017.¹³ One in four adults aged 25-44 years visited an emergency room in the past 12 months.¹³

One in four adults aged 25-44 years visited an emergency room in the past 12 months.¹³



Overall, 89% of adults aged 25-44 years reported having health insurance in 2017.¹³

Overall, poor behavioral health outcomes and injuries were higher among 25-44 year olds compared to the county overall. Additionally, of the communicable diseases, sexually transmitted diseases were higher among 25-44 year olds compared to the county overall. Alternatively, rates of non-communicable (chronic) were lower for this age group compared to the county overall. A series of health indicators and related health behaviors are presented later on in the report that aim to describe some of the most important health concerns faced by 25-44 year olds in San Diego County.

Demographics

45-64 years

In 2017, there were 814,458 San Diego County residents aged 45-64 years, comprising 25% of the county's population.¹⁰ By 2030, the number of 45-64 year olds in the county is expected to remain relatively stable at nearly 818,000 residents.¹¹

In 2017, 25% of San Diego County's population was aged 45-64 years.¹⁰

In 2017, 36% of adults aged 45-64 years reported they had an annual household income \$50,000 or less, 26% reported a household income between \$50,001 to \$100,000, and 38% reported a household income above \$100,000.¹³ In the same year, 27% of residents aged 45-64 years lived below 200% of the federal poverty level (FPL).¹²

Among residents aged 45-64 years, 33% had a high school education or less, 30% had some college education or an associate's degree, and 37% had a bachelor's degree or higher.¹²

In 2017, 54% of San Diego County residents aged 45-64 years reported they were in excellent or very good health, 29% were in good health, and 17% were in fair or poor health.¹³

In 2017, 86% of adults aged 45-64 years had at least one doctor's visit and 19% visited the emergency room in the past 12 months.¹³

In 2017, 93% of residents aged 45-64 years had health insurance.*¹³

Overall, rates of communicable diseases, poor behavioral outcomes, and injuries were lower among 45-64 year olds compared to the county overall. However, rates of non-communicable (chronic) diseases were higher compared to the county overall, and percentages of poor maternal and child health outcomes were higher compared to mothers of other age groups. A series of health indicators and related health behaviors are presented later on in the report that aim to describe some of the most important health concerns faced by 45-64 year olds in San Diego County.

*Statistically unstable estimates. However, the percentage is similar to another source with the same age group.



Demographics

65 years and over

In 2017, there were 463,811 residents aged 65 years and older in San Diego County, representing 14% of the San Diego County population.¹⁰ By 2030, the older population is estimated to increase by 48% to over 688,000.¹¹

In 2017, 45% of senior residents aged 65 years and older reported they had an annual household income of \$50,000 or less, 38% had an annual household income between \$50,001 to \$100,000 and 17% had an annual household income above \$100,000.¹³ In the same year, 26% of residents aged 65 years and older lived below 200% of the federal poverty level (FPL).¹³



Among residents aged 65 and older, 35% had a high school education or less, 28% had some college education or an associate's degree, and 37% had a bachelor's degree or higher.¹²

In 2017, 51% of San Diego County residents aged 65 years and older reported they were in excellent or very good health, 31% were in good health, and 18% were in fair or poor health.¹³

Nearly 95% of residents aged 65 years and older had at least one doctor's visit and 20% reported visiting an emergency room in the past 12 months in 2017.¹³

In 2017, 32% of adults 65 and older had Medicare coverage only; 14% had direct-purchase and Medicare coverage; 14% had employer-based and Medicare coverage; 13% had Medicare, Medicaid, or means-tested public coverage; and 20% had other health insurance coverage combinations.¹²

An estimated 99% of seniors 65 years and older had health insurance in 2017.*¹³

Nearly 95% of residents aged 65 years and older had at least one doctor's visit and 20% reported visiting an emergency room in the past 12 months in 2017.¹³

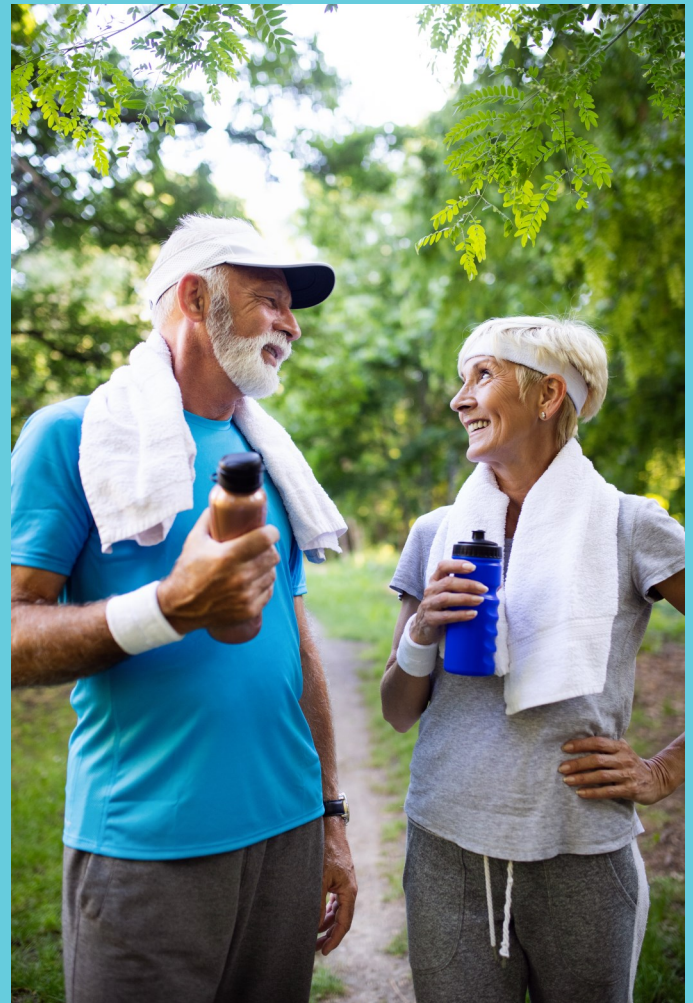
Overall, rates of non-communicable (chronic) diseases and communicable diseases were higher among those 65 and older compared to the county overall. Alternatively, rates of poor behavioral health outcomes and injuries were lower compared to the county overall. A series of health indicators and related health behaviors are presented later on in the report that aim to describe some of the most important health concerns faced by residents 65 years and older in San Diego County.

*Statistically unstable estimates. However, the percentage is similar to another source with the same age group.

Non-Communicable (Chronic) Diseases

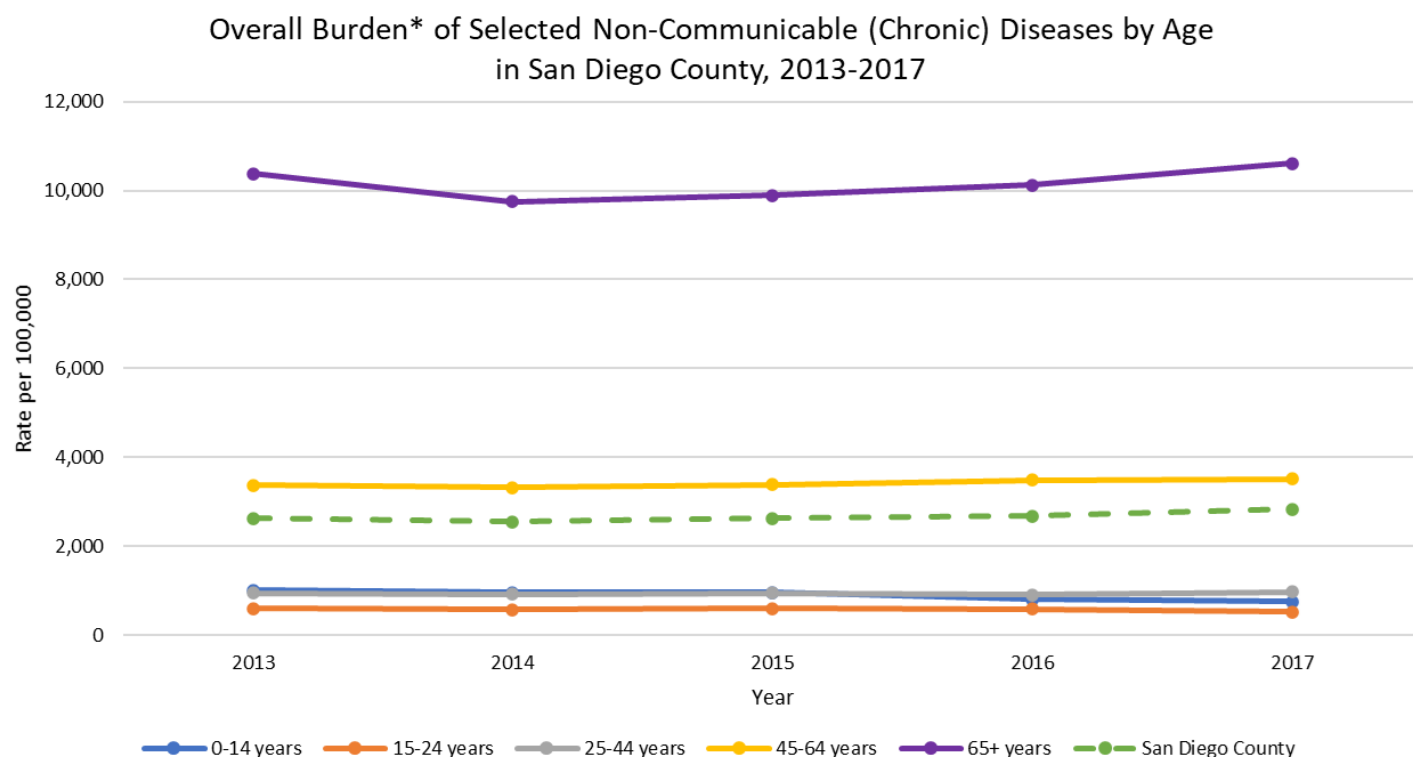
Non-communicable (chronic) diseases are conditions that affect an individual's health for one year or more, require ongoing medical attention or intervention, and may limit activities of daily living. Examples of chronic disease include cancer, heart disease, and diabetes. Many chronic diseases are the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

Chronic conditions are linked to health behaviors, which are established at younger ages and result in disease at older ages.²¹ The prevalence of chronic disease increases with age. Many older adults have multiple chronic conditions.²² It is important to analyze medical encounter rates by age to identify where disparities exist and factors that may be contributing to increased rates.



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

Figure 4



Source: California Department of Public Health, 2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS). California Office of Statewide Health Planning & Development (OSHPD), Patient Discharge Data & Emergency Department Data, 2013-2017. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics Unit, 2020.

*Overall burden includes Death, ED Discharge, Hospitalization, In-Patient Treatment, Skilled Nursing Facility (SNF)/ Intermediate Care, and Physical Rehabilitation for the following chronic health conditions: Asthma, Coronary Heart Disease (CHD), Chronic Obstructive Pulmonary Disease/Chronic Lower Respiratory Diseases, Diabetes, Lupus and Connective Tissue Disorders, Osteoarthritis, Osteoporosis, Overall Cancer, Overall Hypertensive Diseases, Rheumatoid Arthritis, and Stroke.

San Diego County In San Diego County overall, the burden of selected non-communicable (chronic) diseases increased every year from 2014-2017.

0-14 years old In 2017, the burden of selected non-communicable (chronic) diseases decreased between 2013 to 2017 among children 14 years old and younger in San Diego County.

15-24 years old The burden of selected non-communicable (chronic) diseases among teens and young adults aged 15-24 in San Diego County decreased between 2013 and 2017. In 2017, those aged 15-24 had the lowest burden of non-communicable (chronic) disease.

25-44 years old There was an increase in the overall burden of selected non-communicable (chronic) health conditions between 2013 to 2017 among adults aged 25-44 years in San Diego County.

45-64 years old Among adults aged 45-64 years, the burden of selected non-communicable (chronic) diseases decreased between 2013-2014, but increased every year from 2014-2017 in San Diego County.

65 and older In 2017, adults aged 65 and older had the highest burden of selected non-communicable (chronic) diseases compared to other age groups in San Diego County. Among those 65 and older in San Diego County, the overall burden of selected non-communicable (chronic) health conditions decreased between 2013 and 2014, but increased every year from 2014-2017.

Prevent Age Health Disparities

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

- Exercise at least 60 min/day
 - Avoid tobacco and secondary smoke
 - Avoid 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
 - Adopt walkable communities
 - Adopt smoke-free multi dwelling housing facilities
-



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

0-14 years

Overall, the burden of non-communicable (chronic) diseases were lower among children aged 0-14 years compared to the county overall. However, children aged 0-14 had higher ED discharge and hospitalization rates due to asthma than the county overall and diabetes and leukemia were other notable non-communicable (chronic) diseases affecting children in San Diego County.

Asthma

In 2017, children aged 0-14 years had the highest ED discharge and hospitalization rates due to asthma in San Diego County compared to any other age group. Notably, the rates of hospitalization and ED discharge were 2.6 and 1.9 times higher, respectively, among children aged 0-14 compared to the county overall. Children aged 0-14 years living in Central Region had the highest rates of hospitalization and ED discharge due to asthma compared to children aged 0-14 living in other regions of the county.

In 2017, children aged 0-14 years had the highest ED discharge and hospitalization rates due to asthma in San Diego County compared to any other age group.

Diabetes

In 2017, 0-14 year olds had the lowest diabetes hospitalization and ED discharge rates in San Diego County. However, diabetes is a rapidly growing problem due to increasing rates of childhood obesity. Rates of diabetes hospitalization and ED discharge among children aged 0-14 years were highest among those living in East Region.

Leukemia

Overall, the burden of leukemia among children aged 0-14 was lower than the county overall, however, the

ED discharge rate due to leukemia was 1.2 times higher among children aged 0-14 years compared to the county overall. Among children aged 0-14, North Inland Region had the highest rate of hospitalization due to leukemia compared to other regions.

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.¹⁴

In 2017, 38% of children aged 5-11 years engaged in 3 days or less of physical activity that lasted at least one hour in the past week.¹³

Among children and adolescents 0-14 years old, 8% did not visit a park, playground, or open space in the past month.*¹³

In 2017, 74% of children ate less than 5 servings of fruits and vegetables daily.¹³

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 San Diego County children aged 0-14 years.¹⁴



*Pooled CHIS data from 2014-2017 for statistical stability.

Non-Communicable (Chronic) Disease

15-24 years

Overall, the burden of non-communicable (chronic) diseases was lower among teens and young adults aged 15-24 years compared to the county overall. However, asthma and diabetes were notable non-communicable (chronic) diseases affecting residents aged 15-24 years in San Diego County.

Asthma

In 2017, the rate of hospitalization and ED discharge due to asthma were lower among those aged 15-24 years compared to the county overall. However, the rate of ED discharge due to asthma among 15-24 year olds was particularly high at 221.1 per 100,000 residents. Teens and young adults aged 15-24 years living in Central Region had the highest ED discharge and hospitalization rates due to asthma compared to teens and young adults of the same age in any other region.



Diabetes

In San Diego County, the burden of diabetes among 15-24 year olds was lower than the county overall in 2017. Teens and young adults aged 15-24 years living in East Region had the highest rates of hospitalization and ED discharge due to diabetes compared to teens and young adults aged 15-24 years in any other region.



Risk Factor 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.¹⁴

Among adults aged 18-24 years, 7% were current smokers.*¹³

Among teens aged 15-17 years, 37% did not visit a park or other open space in the past month.*¹³ In 2017, 31% of adults aged 18-24 engaged in two or less days of physical activity that lasted at least 20 minutes at a time.¹³

Among San Diego County adults, 4% of those aged 18-24 years binge drank in the past 30 days.**¹⁹

Changes in modifiable risk factors such as tobacco use, lack of physical activity, poor diet, and abuse of alcohol, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among San Diego County residents aged 15-24 years.¹⁴

*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled BRFSS data from 2014-2018 for statistical stability.

Non-Communicable (Chronic) Disease

25-44 years

Overall, the burden of non-communicable (chronic) diseases was lower among residents aged 25-44 years compared to the county overall. In spite of overall lower rates of non-communicable (chronic) disease, the burden of lupus and connective tissue disorders was higher among 25-44 year olds compared to the county overall. Other notable non-communicable (chronic) diseases among this age group include asthma and diabetes.

Asthma

Rates of asthma ED discharge and hospitalization were lower among residents aged 25-44 years compared to the county overall in 2017. Compared to other regions, Central Region had the highest ED discharge rate due to asthma among those aged 25-44 years compared to those living in other regions. Among those aged 25-44 years, East Region had the highest hospitalization rate due to asthma compared to those in other regions.

Those aged 25-44 years had the highest ED discharge rate due to lupus and connective tissue disorders in San Diego County compared to other age groups.

Diabetes

Compared to the county overall, rates of hospitalization and ED discharge due to diabetes were lower among residents aged 25-44 years living in 2017. However, rates of hospitalization and ED discharge differed considerably among residents in various regions of the county. Central Region had the highest rate of ED discharge due to diabetes, while East Region had the highest rate of hospitalization due to diabetes compared to those living in other regions.



Lupus and Connective Tissue Disorders

Adults aged 25-44 years had the highest ED discharge rate due to lupus and connective tissue disorders in San Diego County compared to other age groups. The ED discharge rate due to lupus and connective tissue disorder was 1.5 times higher among those aged 25-44 years compared to the county overall. Among those aged 25-44 years, North Coastal and Central Regions had the highest ED discharge rates due to lupus and connective tissue disorders compared to 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.¹⁴

Among adults aged 18-24 years, 14% were current smokers.*¹³

In 2017, 30% of adults were physically active 2 or less days at least 20 minutes at a time.¹³ Additionally, 63% of adults in San Diego aged 25-44 years did not regularly walk for transportation, fun, or exercise.¹³

Non-Communicable (Chronic) Disease

25-44 years

Among San Diego County adults aged 25-44 years, 8% binge drank in the past 30 days.**¹⁹

Changes in modifiable risk factors such as tobacco use, lack of physical activity, poor diet, and abuse of alcohol, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among San Diego County residents aged 25-44 years.¹⁴



*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled BRFSS data from 2014-2018 for statistical stability.

Non-Communicable (Chronic) Disease

45-64 years

Overall, the burden of non-communicable (chronic) diseases was higher among residents aged 45-64 years compared to the county overall. Notably, the burden of diabetes, chronic obstructive pulmonary disease (COPD)/chronic lower respiratory disease (CLRD), coronary heart disease (CHD), and overall hypertensive diseases were higher among adults aged 45-64 years compared to the county overall in 2017. Further, the burden of many cancers, including cancers of prostate, colon (colorectal cancer), female reproductive cancer, and female breast cancer, were higher among San Diego county residents aged 45-64 years compared to the county overall.

Overall Cancer

Residents aged 45-64 years had a higher burden of overall cancer compared to San Diego County in 2017. Notable cancers among this age group include female reproductive cancer, female breast cancer, prostate cancer, and colorectal cancer.

Female Reproductive Cancer

In 2017, rates of death, hospitalization, and ED discharge due to female reproductive cancer were 1.5, 1.9, and 2.3 times higher among females aged 45-64 years compared to females in the county overall, respectively. South Region had the highest rates of hospitalization and death due to female reproductive cancer among those aged 45-64 years compared to other regions.

Female Breast Cancer

Hospitalization, ED discharge, and death rates due to female breast cancer were 2, 2.1, and 1.4 times higher among those aged 45-64 years compared to the county overall in 2017. Among females aged 45-64 years, the hospitalization rate due to female breast cancer was highest in North Coastal Region, while the death rate was highest in North Inland Region compared to females aged 45-64 years other regions.



Prostate Cancer

Among those 45-64 years old in 2017, the rate of hospitalization due to prostate cancer was 2 times higher compared to males in the county overall. Hospitalization due to prostate cancer among those 45-64 years old was highest in North Central Region compared to other regions.

Colorectal Cancer

In 2017, hospitalization, ED discharge, and death rates due to colorectal cancer were 1.5, 1.7, and 1.1 times higher, respectively, among 45-64 year olds compared to the county overall. Among residents aged 45-64 years, the colorectal cancer hospitalization rate was highest in Central Region and the death rate was highest in North Coastal Region compared to other regions.

Overall Hypertensive Diseases

ED discharge and hospitalization rates due to overall hypertensive diseases were respectively 1.5 and 1.1 times higher among those aged 45-64 years compared to the county overall. Among 45-64 year olds, ED discharge and hospitalization rates due to overall hypertensive diseases were highest in Central Region while the death rate was highest in South Region compared to other regions in the county.

Non-Communicable (Chronic) Disease

45-64 years

Diabetes

In 2017, ED discharge, hospitalization, and skilled nursing facility/intermediate care rates due to diabetes were 1.7, 1.6, and 1.4 times higher, respectively, among residents aged 45-64 years compared to the county overall. Among those aged 45-64 years, Central Region had the highest hospitalization and ED discharge rates due to diabetes and East Region had the highest death rate due to diabetes compared to other regions in the county.

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

In 2017, ED discharge and hospitalization rates due to chronic obstructive pulmonary disease (COPD) or chronic lower respiratory diseases (CLRD) were 1.5 and 1.2 times higher, respectively, among those aged 45-64 years compared to the county overall. Among those aged 45-64 years, Central Region had the highest ED discharge and death rates due to COPD/CLRD compared to other regions. Further, the rate of hospitalization due to COPD/CLRD was highest in East Region among this age group, compared to those of the same age living in other regions.

Coronary Heart Disease (CHD)

ED discharge and hospitalization rates due to coronary heart disease (CHD) were both 1.5 times higher among 45-64 year olds compared to the county overall. Among 45-64 year olds, the hospitalization rate due to CHD was highest in South Region, the ED discharge rate was highest in East Region, and the death rate was highest in Central Region compared to other regions in the county.



Risk Factor 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.¹⁴

Among adults aged 45-64 years, 13% were current smokers.*¹³

In 2017, 39% of adults aged 45-64 years were physically active 2 or less days at least 20 minutes at a time.¹³ Additionally, 61% of adults in San Diego aged 25-44 years did not regularly walk for transportation, fun, or exercise.¹³

Among San Diego County adults, 4% of those aged 45-64 years binge drank in the past 30 days.**¹⁹

Changes in modifiable risk factors such as tobacco use, lack of physical activity, poor diet, and abuse of alcohol, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among San Diego County residents aged 45-64 years.¹⁴

*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled BRFSS data from 2014-2018 for statistical stability.

Non-Communicable (Chronic) Disease

65 years and over

Overall, the burden of non-communicable (chronic) diseases was higher among residents aged 65 years and older compared to the county overall. In San Diego County, those aged 65 and older had the highest burden of stroke, coronary heart disease (CHD), overall hypertensive diseases, osteoarthritis, chronic obstructive pulmonary disease (COPD)/chronic lower respiratory diseases (CLRD), diabetes, and lupus and connective tissue disorders. Additionally, residents 65 years and older had the highest burden of overall cancers, including cancers of the bladder, lung, pancreas, colon (colorectal cancer), liver, kidney, thyroid, and brain, as well as leukemia, non-Hodgkin's lymphoma, and both melanoma and non-melanoma of the skin.

Overall Hypertensive Diseases

Residents aged 65 and older had the highest burden of overall hypertensive diseases in San Diego County compared to other age groups. Rates of ED discharge, hospitalization, death, and skilled nursing facility/intermediate care discharge due to overall hypertensive diseases were 3.6, 5, 6.1, and 6.6 times higher among those aged 65 and older compared to the county overall, respectively. South Region had the



highest hospitalization, ED discharge, and death rates due to overall hypertensive diseases among those aged 65 and older compared to other regions.

Overall Cancer

Among residents aged 65 years and older, the rates of hospitalization, ED discharge, death, and skilled nursing facility/intermediate care discharge due to overall cancer were 3.3, 3.7, 5.2, and 5.6 times higher than the county overall, respectively.

Prostate Cancer

Among males aged 65 years and older, death, ED discharge, and hospitalization rates due to prostate cancer were 7.5, 6.1, 4.1 times higher compared to the males in the county overall, respectively, in 2017. Among males aged 65 years and older, South Region had the highest death rate and North Coastal Region had the highest hospitalization rate due to prostate cancer compared males in other regions.



Non-Communicable (Chronic) Disease

65 years and over

Female Reproductive Cancer

Among females ages 65 and over in 2017, the rates of death, hospitalization, and ED discharge due to female reproductive cancer were 3.7, 2.5, and 1.4 times higher compared to the county overall, respectively. Among females ages 65 and older, East Region had the highest hospitalization rate and South Region had the highest death rate due to female reproductive cancer compared to other regions.

Female Breast Cancer

Among females aged 65 and older in 2017, death, ED discharge, and hospitalization rates due to female breast cancer were 3.8, 2.1, and 1.9 times higher compared to females in the county overall. The rate of death for female breast cancer was highest in East Region, while the hospitalization rate was highest in North Coastal Region compared to any other region among females 65 and older.

Lung Cancer

Death, hospitalization, ED discharge, and skilled nursing facility/intermediate care rates due to lung cancer were 6, 4.9, 5.6, and 7.1 times higher, respectively, among those aged 65 years and older compared to females in the county overall in 2017. East Region had the highest death, hospitalization, and ED discharge rates due to lung cancer among those aged 65 years and older compared to other regions in the county.

Colorectal Cancer

In 2017, death, hospitalization, and ED discharge rates due to colorectal cancer were 5, 3.9, and 3.1 times higher, respectively, among those aged 65 and older compared to the county overall. South Region had the highest hospitalization and death rates due to colorectal cancer among the older population compared to other regions in the county.

Stroke

Overall, the burden of stroke was highest among those aged 65 years and older in San Diego County compared to other age groups. In 2017, rates of hospitalization, ED discharge, death, physical rehabilitation, and skilled nursing facility/intermediate care due to stroke were 4.8, 5, 6.5, 4.2, and 5.3 times higher among those aged 65 years and older compared to the county overall, respectively. Among those aged 65 years and older, hospitalization, ED discharge, and death rates due to stroke were highest in South Region compared to other regions in the county. Physical rehabilitation due to stroke was highest in North Coastal Region among those aged 65 years and older compared to other regions in the county.

Coronary Heart Disease (CHD)

The burden of coronary heart disease (CHD) was higher among those aged 65 and older compared to other age groups and the county overall in 2017. Notably, rates of death, skilled nursing facility/intermediate care discharge, and physical rehabilitation discharge due to CHD were 6, 6.7, and 5.2 times higher among residents aged 65 years and older than the county overall, respectively. South Region had the highest rates of hospitalization and death due to CHD among the older population compared to other regions. The ED discharge rate due to CHD was highest in North Inland Region among those aged 65 and older compared to other regions.



Non-Communicable (Chronic) Disease

65 years and over



Osteoarthritis

Residents aged 65 years and older had the highest burden of osteoarthritis in San Diego County. Specifically, the rates of ED discharge, hospitalization, and physical rehabilitation due to osteoarthritis were 3.5, 4.5, and 6.3 times higher among senior residents compared to the county overall, respectively, in 2017. Those 65 and older living in North Coastal Region had the highest hospitalization rate and those living in South Region had the highest ED discharge rate due to osteoarthritis compared to other regions.

Chronic Obstructive Pulmonary Disease (COPD)/ Chronic Lower Respiratory Disease (CLRD)

Residents aged 65 years and older had the highest ED rates of death, hospitalizations, ED discharge, skilled nursing facility intermediate care, and physical rehabilitation for chronic obstructive pulmonary disease (COPD)/ chronic lower respiratory diseases (CLRD) compared to any other age group in San Diego County in 2017. Notably, the rates of death, skilled

nursing facility/intermediate care, and physical rehabilitation among residents 65 years and older were 6.5, 6.5, and 6.3 times higher, respectively, than the county overall. Further, compared to the county overall, residents 65 years and older were 4.8 times more likely to be hospitalized and 3.1 times more likely to be discharged from the ED due to COPD/CLRD than the county overall. Among those 65 and older, South Region had the highest ED discharge and hospitalization rates and East Region had the highest death rate due to COPD/CLRD compared to other regions.

Diabetes

Residents aged 65 and older had the highest burden of diabetes in San Diego County in 2017. Specifically, the rates of death, hospitalization, and ED discharge due to diabetes among those 65 and older were 5.5, 2.3, and 2.2 times higher, respectively, than San Diego County overall. Seniors aged 65 years and older in South Region had the highest ED discharge, hospitalization, and death rates due to diabetes compared to other regions.

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.¹⁴

Among adults aged 65 and older, 6% were current smokers.*¹³

In 2017, 36% of adults aged 65 and older were physically active 2 or less days at least 20 minutes at a time. Additionally, 63% of San Diego adults aged 25-44 years did not regularly walk for transportation, fun, or exercise.¹³

Changes in modifiable risk factors such as tobacco use, lack of physical activity, poor diet, and abuse of alcohol, as well as increased access to and utilization of medical services, are key ways to reduce the burden of non-communicable (chronic) disease among San Diego County adults aged 65 years and older.¹⁴

*Pooled CHIS data from 2014-2017 for statistical stability.

Communicable Diseases

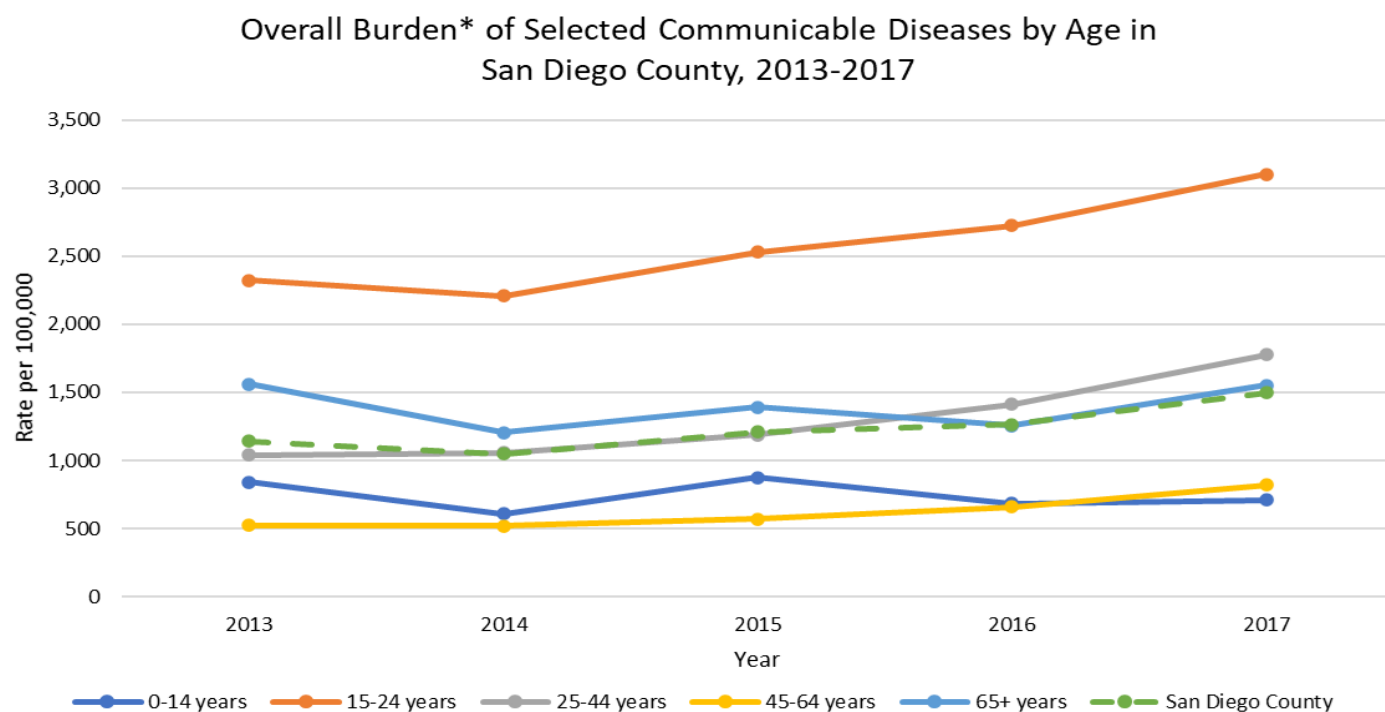
Communicable diseases are those that spread from one person to another, or from an animal to a person. Communicable diseases may be spread through the air, bodily fluids, or by touching a contaminated surface. Several communicable diseases are vaccine preventable. Good hygiene, such as proper handwashing, is also effective in slowing the spread of communicable diseases.²³

Severity of communicable disease is relatively low in childhood for most infections, and increases with age. Older adults are more likely to experience more severe disease as the result of an infection.²⁴ It is important to analyze medical encounter rates by age to identify where disparities exist and factors that may be contributing to increased rates.



Communicable Disease by Age in San Diego County

Figure 5



Source: California Department of Public Health, 2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS). California Office of Statewide Health Planning & Development (OSHPD), Patient Discharge Data & Emergency Department Data, 2013-2017. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics Unit, 2020.

*Overall burden includes Death, ED Discharge, Hospitalization, In-Patient Treatment, Skilled Nursing Facility (SNF)/Intermediate Care, and Physical Rehabilitation for Flu/Pneumonia and incidence of the following communicable health conditions: Chlamydia, Gonorrhea, Syphilis, and Tuberculosis.

San Diego County In San Diego County overall, there was a steady increase in the burden of selected communicable diseases from 2014 to 2017.

0-14 years old Among children aged 0-14 years in San Diego County, the burden of selected communicable diseases fluctuated every year from 2013-2017. In 2017, children aged 0-14 years had the lowest burden of communicable disease compared to all other age groups.

15-24 years old In 2017, teens and young adults aged 15-24 years had the highest burden of selected communicable diseases compared to all other age groups in San Diego County. The burden of selected communicable diseases increased every year from 2014-2017 among teens and young adults in San Diego County.

25-44 years old Among adults aged 25-44 years in San Diego County, the burden of selected communicable diseases increased every year from 2013-2017. In 2017, adults aged 25-44 had a higher burden of communicable disease compared to the county overall.

45-64 years old The burden of selected communicable diseases-increased every year from 2014-2017 among adults aged 45-64 years in San Diego County. In 2017, adults aged 45-64 had a lower burden of communicable disease compared to the county overall.

65 and older From 2013 to 2017, the burden of selected communicable diseases remained relatively stable among adults 65 and older in San Diego County.

Prevent Age 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 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

0-14 years

Overall, the burden of communicable disease was lower among children aged 0-14 years compared to the county overall. However, rates of pneumonia, influenza (flu), and flu/pneumonia were higher among children aged 0-14 years than the county overall in 2017.

Influenza (Flu)/Pneumonia

In 2017, the ED discharge rate due to flu/pneumonia was 1.3 times higher than the county overall among 0-14 year olds. However, rates of hospitalization due to flu/pneumonia were notably lower among this age group than the county overall. Compared to children aged 0-14 years in other regions, children 0-14 years old in South Region had the highest rate of ED discharge due to flu/pneumonia. Children 0-14 years old in East Region had the highest rate of hospitalization due to flu/pneumonia compared to children in other regions of the county.

Pneumonia

In 2017, the ED discharge rate due to pneumonia was 1.3 times higher than the county overall among 0-14 year olds. However, rates of hospitalization due to pneumonia were notably lower among children compared to the county overall. Compared to children aged 0-14 years in other regions, children in South Region had the highest rates of ED discharge due to pneumonia. Children aged 0-14 years in East Region had the highest rate of hospitalization due to pneumonia compared to children of the same age in other regions of the county.

Influenza (Flu)

Similar to pneumonia, the ED discharge rate due to the flu was higher among 0-14 year olds than the countywide rate in 2017. The ED discharge rate due to the flu among 0-14 year olds was 1.2 times higher compared to the county overall. As with pneumonia, those living in South Region also had the highest ED discharge rate due to the flu compared to children



age 0-14 years living in other regions of the county. Children aged 0-14 years in Central Region had the highest rate of hospitalization due to the flu compared to children of the same age in other regions of the county.

Risk Factors and Prevention Strategies

Prevention measures against communicable diseases, such as frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended age appropriate vaccinations are key ways to reduce the burden of communicable disease among San Diego County children aged 0-14 years.¹⁵

Communicable Disease

15-24 years

Overall, the burden of communicable diseases was lower among teens and young adults aged 15-24 years compared to the county overall, except for sexually transmitted diseases. Incidence rates of chlamydia and gonorrhea were higher among 15-24 year olds compared to the county overall.

Chlamydia

In 2017, teens and young adults aged 15-24 years had the highest incidence rate of chlamydia compared to other age groups in San Diego County and the county overall. Specifically, the incidence rate of chlamydia among 15-24 year olds was 3.7 times higher than the incidence rate of chlamydia in the county overall. Residents aged 15-24 years living in Central Region had the highest incidence rate of chlamydia compared to those in other regions of the county.

Gonorrhea

In 2017, those aged 15-24 years had the highest incidence rate of gonorrhea compared to other age groups in San Diego County. The incidence rate of gonorrhea was 2.2 times higher among teens and young adults aged 15-24 years compared to the county overall. Residents aged 15-24 years residing in Central Region had the highest incidence rate of gonorrhea.

Risk Factor and Prevention Strategies

Prevention measures against communicable diseases, such as increased condom usage, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended age appropriate vaccinations are key ways to reduce the burden of communicable disease among San Diego County teens and young adults aged 15-24 years.¹⁵



Communicable Disease

25-44 years

Overall, the burden of communicable diseases was lower among residents aged 25-44 compared to the county. However, the incidence rates for syphilis, gonorrhea, and chlamydia were notably higher among adults aged 25-44 years compared to the county overall.

Syphilis

In 2017, the incidence rate of syphilis among residents aged 25-44 year olds was 2.1 times higher compared to the county overall. Adults aged 25-44 years living in Central Region had the highest incidence rate of syphilis compared to those in other regions of the county.

Gonorrhea

The incidence rate of gonorrhea was 2 times higher among adults aged 25-44 years compared to the county overall. Among 25-44 year olds, Central Region had the highest incidence rate of gonorrhea compared to other regions in the county.

Chlamydia

The incidence rate of chlamydia among 25-44 year olds was 1.5 times higher compared to the county overall. Among 25-44 year olds, Central Region had the highest incidence rate of chlamydia compared to other regions in the county.

Risk Factor and Prevention Strategies

Prevention measures against communicable diseases, such as increased condom usage, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended age appropriate vaccinations are key ways to reduce the burden of communicable disease among San Diego County adults residents aged 25-44 years.¹⁵



Communicable Disease

45-64 years

Overall, the burden of communicable diseases was lower among adult residents aged 45-64 years compared to the county overall. However, incidence rates of tuberculosis and syphilis were notably higher among those aged 45-64 years compared to the county overall.

Tuberculosis

In 2017, the incidence rate of tuberculosis (TB) was 1.5 times higher among those 45-64 years old compared to the county overall. Among those 45-64 years of age, South Region had the highest incidence rate of TB compared to other regions in the county.

Syphilis

The incidence rate of syphilis was 1.1 times higher among those 45-64 years old compared to the county overall. Among those 45-64 years of age, Central Region had the highest incidence rate of syphilis compared to other regions in the county.



Risk Factor and Prevention Strategies

Prevention measures against communicable diseases, such as increased condom usage, frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended age appropriate vaccinations are key ways to reduce the burden of communicable disease among San Diego County adults residents aged 45-64 years.¹⁵

Communicable Disease

65 years and over

Overall, the burden of communicable diseases was higher among residents aged 65 years and older compared to the county. Specifically, the burden of pneumonia, urinary tract infections, flu, and tuberculosis were higher among older adults compared to the county overall.

Influenza (Flu)/Pneumonia

In 2017, those aged 65 years and older had the highest ED discharge and hospitalization rates due to the flu/pneumonia compared to other age groups in San Diego County. Skilled nursing facility/intermediate care, death, hospitalization, and ED discharge rates due to flu/pneumonia were respectively 6.9, 6.3, 4.3, and 1.6 times higher among senior residents aged 65 years and older compared to the county overall. Among those aged 65 years and older, South Region had the highest death, hospitalization, and ED discharge rates due to the flu/pneumonia compared to other regions in the county.

Pneumonia

In 2017, the burden of pneumonia was higher among adults aged 65 years and older compared to the county overall. Additionally, hospitalization, ED discharge, and death due to pneumonia were higher among this age group compared to the county overall in 2017. Among adults aged 65 years and older, the



The burden of urinary tract infection (UTI) was highest among those age 65 and older compared to other age groups in the county.

rates of ED discharge, hospitalization, death were respectively 1.9, 4.1, and 6.4 times higher compared to the overall county. South Region had the highest death, hospitalization, and ED discharge rates due to pneumonia among older adults aged 65 years and older compared to other regions in the county.

Urinary Tract Infections

The burden of urinary tract infection (UTI) was highest among those age 65 and older compared to other age groups in the county. Additionally, the rates of death, hospitalization, ED discharge, and skilled nursing facility/intermediate care due to UTIs were 6.5, 4.6, 2, and 6.6 times higher, respectively, among those aged 65 and older compared to the county overall. ED discharge and hospitalization rates due to UTIs were highest in South Region among adults aged 65 and older compared to other regions in the county. The death rate was highest among those living in North Inland Region compared to those 65 and older living in other regions.

Tuberculosis

The incidence rate of tuberculosis (TB) among those 65 years and older in San Diego County was 12.51 per 100,000 residents. The incidence rate of TB was highest among residents aged 65 years and older compared to other age groups in the county. Further, the incidence rate of TB was 1.8 times higher among older adults aged 65 years and older compared to the county overall. Among adults aged 65 years and older, South Region had the highest incidence rate of tuberculosis compared to other regions in the county.

Communicable Disease

65 years and over

Risk Factors and Prevention Strategies

Adults aged 65 years and older are more likely to suffer from a variety of non-communicable (chronic) disease which make them more vulnerable to communicable disease. Prevention measures against communicable diseases, such as frequent testing, seeking early treatment, completing treatment regimens, and staying current with recommended age appropriate vaccinations are key ways to reduce the burden of communicable disease among San Diego County residents aged 65 years and older.¹⁵



Injury

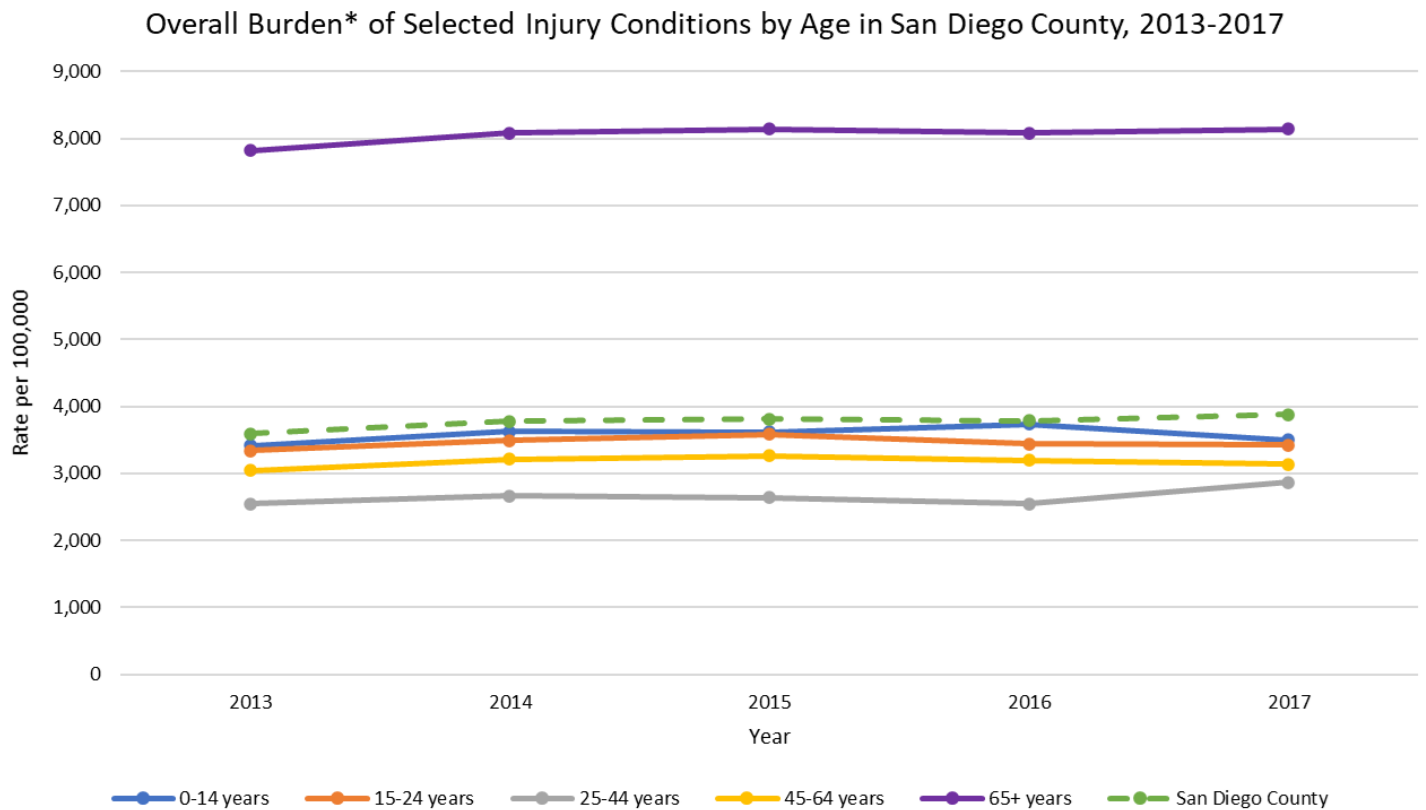
Injury is bodily harm that occurs as a result of severe exposure to an external force, substance, or submersion. Injuries may be the result of a fall, a motor vehicle collision, violence, or drowning.²⁵

While individuals of all ages are affected by injury, children and older adults are at higher risk of sustaining an injury that requires medical attention. Children are likely to suffer falls, injuries from motor vehicle accidents, drowning and suffocation. Older adults are susceptible to injuries as a result of falls, and may suffer more adverse health consequences as a result.²⁶ It is important to analyze medical encounter rates by age to identify where disparities exist and factors that may be contributing to increased rates.



Injury by Age in San Diego County

Figure 6



Source: California Department of Public Health, 2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS). California Office of Statewide Health Planning & Development (OSHPD), Patient Discharge Data & Emergency Department Data, 2013-2017.

Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics Unit, 2020.

*Overall burden includes Death, ED Discharge, Hospitalization, In-Patient Treatment, Skilled Nursing Facility (SNF)/Intermediate Care, and Physical Rehabilitation for the following injury conditions: Assault/Homicide, Drowning, Falls, Firearm-Related Injuries, Hip Fractures, Motor Vehicle Injuries, Pedestrian injuries, not Motor Vehicle, Poisoning, and Self-Inflicted Injuries/Suicide.

San Diego County In 2017, the burden of selected injury conditions increased slightly from 2013 in San Diego County overall.

0-14 years old In 2017, the burden of selected injury conditions remained relatively stable from 2013, among children aged 0-14 years in San Diego County.

15-24 years old Among teens and young adults aged 15-24 years in San Diego County, the burden of selected injury conditions increased from 2013-2015, but decreased from 2015-2017.

25-44 years old The burden of selected injury conditions decreased slightly from 2014-2016, but increased from 2016-2017 among adults aged 25-44 years in San Diego County.

45-64 years old In 2017, the burden of selected injury conditions remained relatively stable from 2013, among adults aged 45-64 years in San Diego County.

65 and older In 2017, adults 65 years and older had the highest burden of selected injury conditions compared to other age groups in San Diego County.

Prevent Age Health Disparities

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

- Be aware of your surroundings
 - Never ride with anyone under the influence of alcohol
 - 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

0-14 years

The burden due to injury was lower among children aged 0-14 years compared to the county overall. However, the burden of drowning and falls were notably higher among this age group compared to the county overall.

Falls

In 2017, the overall burden of falls was higher among children aged 0-14 years compared to the county overall. The hospitalization rate due to falls was lower among children compared to the county overall, but the ED discharge rate due to falls was higher compared to the county overall. Specifically, the ED discharge rate due to falls was 1.3 times higher among children aged 0-14 years compared to the county overall. Among children aged 0-14 years, East Region had the highest rates of ED discharge and hospitalizations due to falls compared to other regions in the county.



Drowning

In 2017, children aged 0-14 years had a higher burden of drowning compared to the county overall. Children in this age group also had the highest overall rate of drowning compared to other age groups in San Diego County. Among children aged 0-14 years, the ED discharge and hospitalization rates due to drowning were 4.2 and 3.6 times higher, respectively, than the county overall. Further, East Region had the highest rate of ED discharge due to drowning among children aged 0-14 years compared to other regions in the county.



Risk Factor 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.¹⁶

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 and child abuse, as well as awareness, reduce the likelihood of injury among children aged 0-14 years.¹⁶

Injury

15-24 years

The burden of self-inflicted injuries and suicide, firearm-related injuries, assault, motor vehicle injuries, motor vehicle-related pedestrian injuries, and poisoning were higher among teens and young adults aged 15-24 years compared to the overall county. Additionally, although the burden of injury due to fall was lower among 15-24 year olds compared to the county overall, injury due to falls were notable among teens and young adults.

Motor Vehicle Injuries

In 2017, teens and young adults aged 15-24 years had the highest overall burden of motor vehicle injuries in San Diego County compared to other age groups. Specifically, 15-24 year olds had the highest ED discharge and physical rehabilitation rates due to motor vehicle injuries in San Diego County compared to other age groups. Rates of physical rehabilitation, ED discharge, in-patient treatment, death, and hospitalization due to motor vehicle injuries were 1.7, 1.5, 1.3, 1.2, and 1.2 times higher, respectively, among residents aged 15-24 years old compared to the county overall. Among 15-24 year olds, East Region had the highest ED discharge, hospitalization, and death rates due to motor vehicle injuries compared to other regions in the county.

Assault*

In 2017, teens and young adults aged 15-24 years had the highest burden of assault in San Diego County compared to other age groups. Specifically, this age group had the highest hospitalization and in-patient treatment rates due to assault in San Diego County compared to other age groups. Among those aged 15-24 years, rates of death, ED discharge, hospitalization, and in-patient treatment due to assault were 1.5, 1.9, 1.4, and 2.2 times higher, respectively, compared to the county overall. Central Region had the highest rate of ED discharge and hospitalization rates due to assault among residents aged 15-24 years, while the in-patient treatment rate due to assault was highest in

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

Teens and young adults aged 15-24 had the highest in-patient treatment, ED discharge, and hospitalization rates due to self-inflicted injuries in San Diego County compared to other age groups.



East Region among teens and young adults compared to other regions.

Self-Inflicted Injuries and Suicide

In 2017, teens and young adults aged 15-24 years had the highest overall burden of self-inflicted injury and suicide compared to other age groups in San Diego County. Specifically, this age group had the highest in-patient treatment, ED discharge, and hospitalization rates due to self-inflicted injuries in San Diego County compared to other age groups and the county overall. Rates of in-patient treatment, ED discharge, and hospitalization were 3.1, 2.5, and 1.8 times higher, respectively, than the county overall. Among teens and young adults aged 15-24 years, ED discharge,

Injury

15-24 years

hospitalization, and death rates due to self-inflicted injuries and suicide were highest in East Region compared to other regions in the county. The in-patient treatment rate due to self-inflicted injuries was highest among teens and young adults aged 15-24 years living in South Region compared to other regions in the county.

Poisoning

In San Diego County, teens and young adults aged 15-24 years had the highest ED discharge rates due to poisoning compared to other age groups. The ED discharge rate due to poisoning was 1.2 times higher among 15-24 year olds compared to the county overall. Among teens and young adults aged 15-24 years, Central Region had the highest ED discharge rate and East Region had the highest hospitalization rate due to poisoning compared to other regions.

Motor Vehicle-Related Pedestrian Injuries

In 2017, 15-24 year olds had the highest burden of motor vehicle-related pedestrian injuries in San Diego County compared to other age groups. Specifically, teens and young adults aged 15-24 years had the highest ED discharge rate for motor vehicle-related pedestrian injuries in San Diego County compared to other age groups. Among those ages 15-24 years old, the ED discharge rate due to motor vehicle-related pedestrian injuries was 1.5 times higher and the physical rehabilitation rate due to motor vehicle-related pedestrian injuries was 2.2 times higher compared to the county overall. Central Region had the highest rate of ED discharge due to motor vehicle-related pedestrian injuries among 15-24 year olds compared to other regions in the county.



Firearm-Related Injuries

ED discharge, death, and hospitalization rates due to firearm-related injuries were 2.6, 2, and 1.8 times higher, respectively, compared to the county overall among teens and young adults age 15-24. Compared to 15-24 year olds in other regions of the county, those in Central Region had the highest rates of ED discharge and hospitalization due to firearm-related injuries.

Falls

Central Region had the highest ED discharge and hospitalization rates due to fall injuries among teens and young adults aged 15-24 years compared to other regions.

Risk Factor and Prevention Strategies

Failure to use protective equipment and active restraints, mismanagement of medication, violence, and not being aware of safety hazards increase the risk of an injury.¹⁶

Among adults aged 18-24 years, 30% reported needing help for emotional or mental health problems or use of alcohol or drugs.*¹³

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, the management of medication, violence prevention, as well as awareness, reduce the likelihood of injury.¹⁶

Injury

25-44 years

The burden of injury due to firearm-related injuries, assault, motor vehicle injuries, heat illness, and motor vehicle-related pedestrian injuries were higher among 25-44 year olds compared to the county overall. The burden of injury due to falls was lower compared to the county overall, but had a notable burden among 25-44 year olds.

Motor Vehicle Injuries

In 2017, 25-44 year olds had the highest hospitalization rate due to motor vehicle injuries in San Diego County compared to other age groups. Among 25-44 year olds, all medical outcome rates due to motor vehicle injuries were higher compared to the county overall. Specifically, skilled nursing facility/intermediate care and in-patient treatment rates due to motor vehicle injuries were 2.6 and 1.6 times higher, respectively, among 25-44 year olds compared to the county overall. Death, hospitalization, and physical rehabilitation rates due to motor vehicle injuries were each 1.3 times higher among 25-44 year olds compared to the county overall. The rate of ED discharge due to motor vehicle injuries was 1.4 times higher among 25-44 year olds compared to the county overall. ED discharge, hospitalization, and death rates were highest in East Region among 25-44 olds compared to other regions in the county.

Assault*

Among 25-44 year olds, hospitalization, ED discharge, and death rates due to assault were 1.6, 1.6, and 1.3 times higher, respectively, compared to the county overall. Among 25-44 year olds, Central Region had the highest ED discharge, hospitalization, and in-patient treatment rates due to assault compared to other regions.



In 2017, 25-44 year olds had the highest hospitalization rate due to motor vehicle injuries in San Diego County compared to other age groups.

Firearm-Related Injuries

Among 25-44 year olds, ED discharge, hospitalization, and death rates due to firearm-related injuries were each 1.6 times higher compared to the county overall. Hospitalization rates due to firearm-related injuries were highest among 25-44 year olds residing in South Region compared to other regions.

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

Injury

25-44 years

Heat Illness

The ED discharge rate due to heat illness was 1.2 times higher among 25-44 year olds compared to the county overall. Among 25-44 year olds, East Region had the highest ED discharge rate due to heat illness compared to other regions in the county.

Motor Vehicle-Related Pedestrian Injuries

In 2017, physical rehabilitation, ED discharge, and hospitalization rates due to motor vehicle-related pedestrian injuries were higher among those aged 25-44 years compared to the county overall. Central Region had the highest ED discharge and hospitalization rates due to motor vehicle-related pedestrian injuries among 25-44 year olds compared to other regions.

Falls

Among 25-44 year olds, Central Region had the highest ED discharge and hospitalization rate due to fall injuries compared to other regions.



Risk Factor and Prevention Strategies

Failure to use protective equipment and active restraints, mismanagement of medication, violence, and not being aware of safety hazards increase the risk of an injury.¹⁶

Among adults aged 25-44 years, 23% reported needing help for emotional or mental health problems or use of alcohol or drugs.*¹³

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, the management of medication, violence prevention, as well as awareness, reduce the likelihood of injury.¹⁶

*Pooled CHIS data from 2016-2017 for statistical stability.

Injury

45-64 years

Overall, injury burden was lower among adults aged 45-64 years compared to the county overall. However, the burden of poisoning, pedacycle motor vehicle collision injuries, and heat illness were notably higher among residents aged 45-64 years compared to the county overall. Similar to the younger age groups, the overall burden of fall injuries were lower compared to the county overall, but had a notable burden among 45-64 year olds.

Poisoning

In 2017, 45-64 year olds had the highest overall injury burden due to poisoning in San Diego County compared to other age groups. The rates of hospitalization and death due to a poisoning were 1.4 and 1.9 times higher, respectively, among 45-64 year olds compared to the overall county. Central Region had the highest death, hospitalization, and ED discharge rates due to poisoning among 45-64 year olds compared to other regions in the county.

Pedacycle Motor Vehicle Collision Injuries

Hospitalization and ED discharge rates due to pedacycle motor vehicle collision injuries were 1.4 and 1.1 times higher, respectively, among adults aged 45-64 years compared to the county overall. North Coastal Region had the highest hospitalization and ED discharge rates due to pedacycle motor vehicle collision injuries among 45-64 year olds compared to other regions in the county.

Heat Illness

Hospitalization due to heat illness was 1.7 times higher among adults aged 45-64 years compared to the county overall. Among 45-64 year olds, East Region had the highest ED discharge rate due to heat illness injuries compared to other regions.

Falls

Although the overall burden of falls was lower than the county overall, the in-patient treatment rate due to falls was 1.8 times higher among those aged 45-64 years compared to the county overall. Central Region had the highest ED discharge and hospitalization rates due to fall injuries among those aged 45-64 years compared to other regions.

Risk Factor and Prevention Strategies

Failure to use protective equipment and active restraints, mismanagement of medication, and not being aware of safety hazards increase the risk of an injury.¹⁶

Among adults aged 45-64 years, 19% reported needing help for emotional or mental health problems or use of alcohol or drugs.*¹³

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, the management of medication, as well as awareness, reduce the likelihood of injury.¹⁶

*Pooled CHIS data from 2016-2017 for statistical stability.

Injury

65 years and over

Residents aged 65 years and older had the highest burden of injury in 2017. The burden of injury due to hip fractures, falls, and heat illness were notably higher among this age group compared to the county overall.

Hip Fracture

In 2017, adults aged 65 and older had the highest burden of hip fracture injuries in San Diego County compared to other age groups. Specifically, the rates of hospitalization and physical rehabilitation due to hip fracture were each 6.2 times higher among adults aged 65 years and older compared to the county overall. Additionally, the rate of skilled nursing facility/intermediate care due to hip fracture was 7.1 times higher and ED discharge was 5.9 times higher among adults age 65 and older compared to the county overall. South Region had the highest hospitalization rate, while North Inland Region had the highest ED discharge rate due to hip fracture among adults aged 65 years and older compared to other regions.

Falls

In 2017, seniors aged 65 years and older in San Diego County had the highest hospitalization, physical rehabilitation, and ED discharge rates due to falls compared to other age groups. Among adults aged 65 years and older, all medical outcomes due to falls were higher compared to the county overall. The rates of hospitalization and death due to falls among those aged 65 years and older were 5 and 6 times higher, respectively, compared to the county overall. Among the senior population aged 65 years and older, ED discharge and in-patient treatment due to falls were respectively 2.5 and 2.1 times higher compared to the county overall. Additionally, skilled nursing facility/intermediate care due to falls was 6.6 times higher among adults age 65 and older compared to the county overall. Among the population 65 years and older, South Region had the highest ED discharge and skilled nursing facility/intermediate care rates due to falls, East Region had the highest hospitalization rate, and North Coastal Region had the highest death rate compared to other regions.



Injury

65 years and over

Heat Illness

Seniors aged 65 years and older had the highest burden of heat illness in San Diego County compared to other age groups. Hospitalization and ED discharge rates due to heat illness were higher among those aged 65 years and older compared to the county overall in 2017. Specifically, the rate of hospitalization was 1.9 times higher and the rate of ED discharge was 1.6 times higher among seniors aged 65 years and older compared to the county overall. East Region had the highest ED discharge rate due to heat illness compared to other regions, among those aged 65 years and older.

Seniors aged 65 years and older had the highest ED discharge rate due to heat illness injuries in San Diego County compared to other age groups.



Risk Factor and Prevention Strategies

Failure to use protective equipment and active restraints, mismanagement of medication, violence, and not being aware of safety hazards increase the risk of an injury.¹⁶

Among adults aged 65 and older, 8% reported needing help for emotional or mental health problems or use of alcohol or drugs.^{*13}

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, the management of medication, violence prevention, as well as awareness, reduce the likelihood of injury.¹⁶

*Pooled CHIS data from 2016-2017 for statistical stability.

Behavioral Health

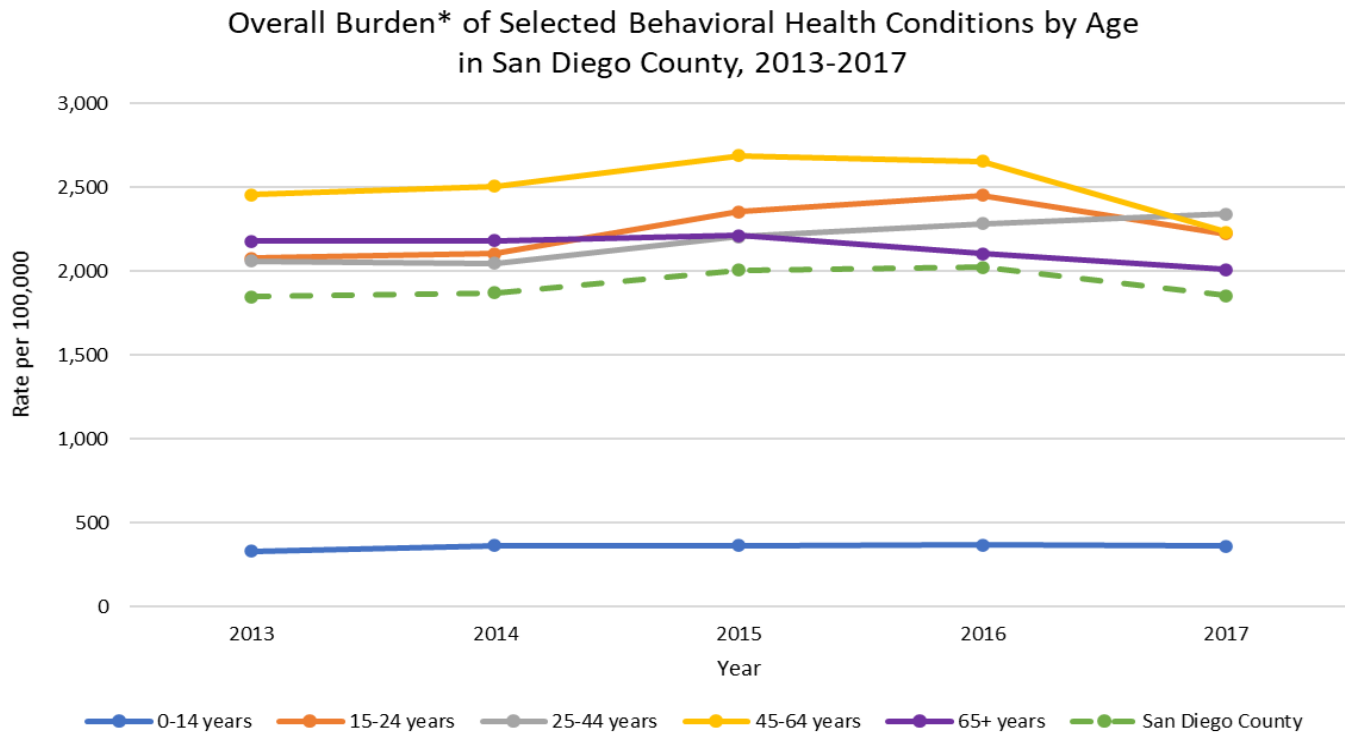
Behavioral health conditions may affect a person's thinking, feeling, behavior, or mood. Behavioral health conditions may be affected by an individual's genetics and lifestyle. Environment, stress, and traumatic life events may also make an individual more likely to develop behavioral health conditions.²⁷

Many behavioral health conditions develop in young adulthood during an individual's formative years. If left untreated, these conditions can affect an individual's ability to thrive in adulthood.²⁸ Life stressors that occur in later life, such as loss of functional ability, along with the presence of chronic conditions, may impact risk of developing a behavioral health condition.²⁹ It is important to analyze medical encounter rates by age to identify where disparities exist and factors that may be contributing to increased rates.



Behavioral Health by Age in San Diego County

Figure 7



Source: California Department of Public Health, 2000-2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS). California Office of Statewide Health Planning & Development (OSHPD), Patient Discharge Data & Emergency Department Data, 2013-2017.

Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHS), Community Health Statistics Unit, 2020.

*Overall burden includes Death, ED Discharge, Hospitalization, In-Patient Treatment, Skilled Nursing Facility (SNF)/Intermediate Care, and Physical Rehabilitation for the following behavioral health conditions: ADD and Related Disorders, Alcohol-Related Disorders, Alzheimer's Disease and Related Dementias (ADRD), Anxiety, Impulse Disorders, Mood Disorders, Personality Disorders, Schizophrenia, and Substance-Related Disorders.

San Diego County In San Diego County overall there was a steady increase in the burden of selected behavioral health conditions from 2013-2016, but a decreased from 2016 to 2017.

0-14 years old In 2017, the burden of selected behavioral health conditions among San Diego County residents aged 0-14 years remained relatively stable between 2013 to 2017.

15-24 years old In 2017, those aged 15-24 years had the second highest overall burden of selected health conditions in San Diego County compared to other age groups. The overall burden of selected behavioral health conditions among San Diego County residents ages 15-24 years increased between 2013 to 2016 and decreased from 2016 to 2017.

25-44 years old In 2017, adults aged 25-44 years had the highest overall burden of selected behavioral health conditions compared to other age groups in San Diego County.

45-64 years old From 2013-2016, those aged 45-64 years had the highest overall burden of selected behavioral health conditions compared to other age groups in San Diego County. In 2017, those 45-64 years old no longer had the highest overall behavioral health burden, but the second highest along with those aged 15-24 years, compared to other age groups in San Diego County.

65 and older Among those aged 65 years and older in San Diego County, the overall burden of selected behavioral health conditions remained relatively stable from 2013 to 2015, but decreased from 2015 to 2017.

Prevent Age 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

0-14 years

Overall, the burden of behavioral health outcomes among San Diego County children aged 0-14 years were lower compared to the county in 2017. However, the burden of attention deficit disorder (ADD) and other conduct disorders and impulse disorders among children aged 0-14 years was higher compared to the county overall. Although the burden of mood disorders and depression was lower compared to the county, these behavioral health conditions were notable among children aged 0-14 years.

Attention Deficit Disorder (ADD) and Other Conduct Disorders

In 2017, children aged 0-14 years had the highest burden of attention deficit disorder (ADD) and other conduct disorders in San Diego County compared to other age groups. Specifically, children aged 0-14 years had the highest ED discharge rate due to ADD and other conduct disorders in San Diego County compared to other age groups. In-patient treatment and ED discharge rates due to ADD and other conduct disorders were 3.1 and 2.8 times higher, respectively, among children aged 0-14 years compared to the county overall. Compared to children aged 0-14 years living in other regions of the county, ED discharge rates due to ADD and other conduct disorders were highest among children in East and Central Regions.

Impulse Disorders

In 2017, children aged 0-14 years had the highest burden of impulse disorders in San Diego County compared to other age groups. Specifically, in-patient treatment and ED discharge rates due to impulse disorders were 3.3 and 1.4 times higher, respectively, among children aged 0-14 years compared to the county overall. Compared to children aged 0-14 years living in other regions of the county, ED discharge rates due to impulse disorders were highest among children in East Region, while North Inland and East Regions had the highest rates of in-patient treatment.

Mood Disorders

Among 0-14 year olds, East Region had the highest in-patient treatment rate and North Coastal Region had the highest ED discharge rate due to mood disorders compared to other regions.

Depression

Compared to other regions, East Region had the highest in-patient treatment rate and North Coastal Region had the highest ED discharge rate due to depression among children.

Risk Factor and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.¹⁷

Among adolescents 12-14, 16% reported needing help for emotional or mental health problems.*¹³

Seeking help for an emotional or behavioral health disorder, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.¹⁷



*Pooled CHS data from 2011-2017 for statistical stability.

Behavioral Health

15-24 years

Overall, the burden of behavioral health outcomes was higher among teens and young adults aged 15-24 years compared to the county overall. Specifically, the burden of substance-related disorders, including cannabis-related disorders, benzodiazepines and other sedative-related disorders, and opioid-related disorders, personality disorders, adjustment disorders, impulse disorders, mood disorders (including depression), post-traumatic stress disorder (PTSD), attention deficit disorder (ADD) and other conduct disorders, and anxiety, were all notably high among teens and young adults aged 15-24 years.

Substance-Related Disorders

In 2017, 15-24 year olds had higher rates of in-patient treatment and ED discharge due to substance-related disorders compared to the county overall. Specifically, due to substance-related disorders, the in-patient treatment rate was 2 times higher and the ED discharge rate was 1.6 times higher among teens and young adults aged 15-24 years compared to the county overall. Among 15-24 year olds, East Region had the highest ED discharge rate, North Inland Region had the highest in-patient treatment rate, and Central Region had the highest hospitalization rate due to substance-related disorders compared to other regions.

Cannabis-Related Disorders

In 2017, teens and young adults aged 15-24 years had the highest overall cannabis-related disorders burden in San Diego County compared to other age groups. Additionally, 15-24 year olds also had the highest hospitalization and ED discharge rates due to cannabis-related disorders in San Diego County compared to other age groups. Among 15-24 year olds, in-patient treatment, ED discharge, and hospitalization rates due to cannabis-related disorders were 3.8, 2.7, and 1.6 times higher, respectively, compared to the county overall. Central Region had the highest rate of ED discharge due to cannabis-related disorders compared to other regions among teens and young adults 15-24



years old.

Benzodiazepines and Other Sedative-Related Disorders

In 2017, 15-24 year olds had the highest burden of benzodiazepines and other sedative-related disorders in San Diego County compared to other age groups. Additionally, this age group also had the highest ED discharge rate due to benzodiazepines and other sedative-related disorders in San Diego County compared to other age groups. ED discharge and in-patient treatment rates due to benzodiazepines and other sedative-related disorders were 1.8 and 1.6 times higher, respectively, among teens and young adults aged 15-24 years compared to the county overall. North Inland Region had the highest ED discharge rate due to benzodiazepines and other sedative-related disorders among 15-24 year olds compared to other regions.

Behavioral Health

15-24 years

Opioid-Related Disorders

In-patient treatment and ED discharge rates due to opioid-related disorders were 2.1 and 1.2 times higher, respectively, among 15-24 year olds compared to the county overall. Compared to other regions, North Inland Region had the highest ED discharge rate and East Region had the highest in-patient treatment rate due to opioid-related disorders among teens and young adults aged 15-24 years.

Personality Disorders

In 2017, 15-24 year olds had the highest burden of personality disorders in San Diego County compared to other age groups. Additionally, teens and young adults aged 15-24 years had the highest ED discharge rate due to personality disorders compared to other age groups in San Diego County. Rates of personality disorder in-patient treatment and ED discharge were 2.4 and 2.3 times higher, respectively, among residents aged 15-24 years compared to the county overall in 2017. The rate of ED discharge due to personality disorders was highest among 15-24 year olds residing in North Central Region.

Adjustment Disorders

In 2017, the burden of adjustment disorders -was highest among 15-24 year olds compared to other age groups in San Diego County. Additionally, due to adjustment disorders, teens and young adults aged 15-24 years had the highest in-patient treatment and ED discharge rates in San Diego County compared to other age groups. Rates of in-patient treatment and ED discharge due to adjustment disorders were 2.8 and 1.9 times higher, respectively, compared to the county overall. North Coastal Region had the highest ED discharge rate and North Inland Region had the highest in-patient treatment rate due to adjustment disorders among 15-24 year olds compared to other regions.



Impulse Disorders

In 2017, teens and young adults aged 15-24 years had the highest ED discharge rate due to impulse disorders in San Diego County compared to other age groups. ED discharge and in-patient treatment rates due to impulse disorders were 2.5 and 1.4 times higher, respectively, among 15-24 year olds compared to the county overall. East Region had the highest ED discharge rate due to impulse disorders among teens and young adults aged 15-24 years compared to other regions.

Behavioral Health

15-24 years

Mood Disorders

In San Diego County, 15-24 year olds had the highest burden of mood disorder, including depression and bipolar disorder, compared to other age groups in 2017. In addition, teens and young adults 15-24 years old also had the highest in-patient treatment and ED discharge rates due to mood disorders in San Diego County compared to other age groups. In-patient treatment and ED discharge rates were 2.1 and 1.8 times higher, respectively, among 15-24 year olds compared to the county overall. East Region had the highest in-patient treatment rate and North Coastal Region had the highest ED discharge rate due to mood disorders among teens and young adults aged 15-24 years old compared to other regions.

Depression

In 2017, 15-24 year olds had the highest overall burden of depression in San Diego County compared to other age groups. Specifically, teens and young adults aged 15-24 years had in-patient treatment and ED discharge rates due to depression which were 2.1 and 1.9 times higher, respectively, than San Diego County overall. Among teens and young adults 15-24 years old, East Region had the highest in-patient treatment rate and North Coastal Region had the highest ED discharge rate due to depression compared to other regions.

Post-Traumatic Stress Disorder (PTSD)

In 2017, teens and young adults 15-24 years old had higher in-patient treatment and ED discharge rates due to post-traumatic stress disorder (PTSD) compared to the county overall. Specifically, the in-patient treatment and ED discharge rates were 2.4 and 1.3 times higher, respectively, among 15-24 year olds compared to the county overall.

*Pooled CHIS data from 2011-2017 for statistical stability.

**Pooled CHIS data from 2014-2017 for statistical stability.

***Pooled CHIS data from 2016-2017 for statistical stability.

Attention Deficit Disorder (ADD) and Other Conduct Disorders

ED discharge and in-patient treatment rates due to ADD and other conduct disorders were each 1.6 times higher among 15-24 year olds compared to the county overall in 2017. East Region had the highest ED discharge rate due to ADD and other conduct disorders among 15-24 year olds compared to other regions.

Anxiety

In 2017, teens and young adults aged 15-24 years had the highest in-patient treatment rate due to anxiety in San Diego County compared to other age groups. Compared to the county overall, in-patient treatment and ED discharge rates due to anxiety were 2 and 1.3 times higher, respectively, among 15-24 years old. Among teens and young adults aged 15-24 years, Central Region had the highest ED discharge rate and North Inland Region had the highest in-patient treatment rate due to anxiety compared to other regions.

Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.¹⁷

Among teens 15-17 years old, 21% reported needing help for emotional or mental health problems.^{**13}

Among adults aged 18-24 years, 15% likely had serious psychological distress in the past year.^{**13}

Among adults aged 18-24 years, 30% reported needing help for emotional or mental health problems or use of alcohol or drugs.^{***13}

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.¹⁷

Behavioral Health

25-44 years

Overall, the burden of behavioral health outcomes was higher among adults aged 25-44 years compared to the county. Specifically, the burden of substance-related disorders, including amphetamine and other stimulant-related disorders, opioid-related disorders, alcohol-related disorders, and cannabis-related disorders, as well as schizophrenia and other psychotic disorders, anxiety, post-traumatic stress disorder (PTSD), and mood disorders were higher among residents aged 25-44 compared to the county overall.

Substance-Related Disorders

In 2017, 25-44 year olds had the highest overall burden of substance-related disorders in San Diego County compared to other age groups. Additionally, this age group had the highest ED discharge and hospitalization rates due substance-related disorders in San Diego County compared to other age groups. The rates of ED discharge, in-patient treatment, hospitalization, and death due to substance-related disorders were 1.8, 1.5, 1.3, and 1.3 times higher, respectively, among adults aged 25-44 years compared to the county overall. Central Region had the highest rates of ED discharge and deaths due to substance-related disorders, while East Region had the highest rates of in-patient treatment and hospitalizations due to substance-related disorders compared to other regions among 25-44 year olds.

Amphetamine and Other Stimulant-Related Disorders

In 2017, the overall burden of amphetamine and other stimulant-related disorders was highest among 25-44 year olds in San Diego County compared to other age groups. Additionally, the rate of ED discharge due to amphetamine and other stimulant-related disorders was highest among 25-44 year olds in San Diego County compared to other age groups. Due to amphetamine and other stimulant-related disorders, the hospitalization rate was 1.4 times higher, the in-patient treatment rate was 1.8 times higher, and the ED discharge rate was 2.2 times higher among those aged 25-44 years compared to the



county overall. Among 25-44 year olds, Central Region had the highest rates of ED discharge and hospitalization and North Coastal Region had the highest in-patient treatment rate due to amphetamine and other stimulant-related disorders compared to other regions in the county.

In 2017, the overall rate of amphetamine and other stimulant-related disorders was highest among 25-44 year olds in San Diego County compared to other age groups.

Behavioral Health

25-44 years

Opioid-Related Disorders

In 2017, 25-44 year olds had the highest overall burden of opioid-related disorders in San Diego County compared to other age groups. Additionally, 25-44 year olds had the highest ED discharge rate due to opioid-related disorders in San Diego County compared to other age groups. Compared to the county overall, ED discharge and in-patient treatment rates due to opioid-related disorders were, respectively, 1.7 and 1.5 times higher among 25-44 year olds. East Region had the highest ED discharge, in-patient treatment, and hospitalization rates due to opioid-related disorders among 25-44 year olds compared to other regions.

Alcohol-Related Disorders

ED discharge and in-patient treatment rates due to alcohol-related disorders were each 1.3 times higher among 25-44 year olds compared to the county overall. Among 25-44 year olds, Central Region had the highest ED discharge rate, East Region had the highest hospitalization rate, and North Central Region had the highest in-patient treatment rate due to alcohol-related disorders compared to other regions.

Cannabis-Related Disorders

Among 25-44 year olds, the ED discharge rate due to cannabis-related disorders was 1.3 times higher compared to the county overall. Central Region had the highest ED discharge rate due to cannabis-related disorders compared to other regions among 25-44 year olds.

In 2017, 25-44 year olds had the highest overall burden of opioid-related disorders in San Diego County compared to other age groups.

Schizophrenia and Other Psychotic Disorders

In 2017, 25-44 year olds had the highest overall burden of schizophrenia and other psychotic disorders in San Diego County compared to other age groups. Specifically, the ED discharge and in-patient treatment rates due to schizophrenia and other psychotic disorders were 1.7 and 1.5 times higher, respectively, than the county overall. Among 25-44 year olds, Central Region had the highest ED discharge and in-patient treatment rates due to schizophrenia and other psychotic disorders compared to other regions in the county.

Anxiety

In 2017, 25-44 year olds had the highest overall burden of anxiety in San Diego County compared to other age groups. Additionally, 25-44 year olds had the highest ED discharge rate due to anxiety in San Diego County compared to other age groups, with a rate 1.6 times higher compared to the county overall. Central Region had the highest ED discharge rate due to anxiety among 25-44 year olds compared to other regions.



Behavioral Health

25-44 years

Post-Traumatic Stress Disorder (PTSD)

ED discharge and in-patient treatment rates due to post-traumatic stress disorder (PTSD) were 1.8 and 1.2 times higher, respectively, among 25-44 year olds compared to the county overall. Compared to 25-44 year olds in other regions of the county, North Coastal Region had the highest rate of ED discharge at 6.5 discharges per 100,000 residents and Central Region had the highest rate of in-patient treatment at 5.9 discharges per 100,000 residents.



Mood Disorders

The ED discharge rate due to mood disorders was 1.3 times higher among 25-44 year olds compared to the county overall. Among 25-44 year olds, Central Region had the highest in-patient treatment and ED discharge rates due to mood disorders compared to other regions.



Risk Factors and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.¹⁷

Among adults aged 25-44 years, 12% likely had serious psychological distress in the past year.*¹³

Among adults aged 25-44 years, 23% reported needing help for emotional or mental health problems or use of alcohol or drugs.**¹³

Seeking help for an emotional/behavioral health or an alcohol/drug problem, exercising to reduce stress, and avoiding social isolation are major prevention strategies that can help reduce poor behavioral health outcomes.¹⁷

*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled CHIS data from 2016-2017 for statistical stability.

Behavioral Health

45-64 years

Overall the burden of behavioral health outcomes was higher among 45-64 year olds compared to the county. Specifically, the burden of alcohol-related disorders, schizophrenia and other psychotic disorders, benzodiazepine and other sedative-related disorders, amphetamine and other stimulant-related disorders, and opioid-related disorders were higher among those aged 45-64 years compared to the county overall.

Alcohol-Related Disorders

In San Diego County in 2017, 45-64 year olds had the highest burden of alcohol-related disorder compared to other age groups. Additionally, 45-64 year olds had the highest ED discharge rate due to alcohol-related disorders in San Diego County compared to other age groups at 527.2 per 100,000 residents. Specifically, the rates of skilled nursing facility/intermediate care, death, hospitalization, in-patient treatment, and ED discharge were 2.5, 2.4, 2.2, 2, and 1.7 times higher, respectively, among 45-64 year olds compared to the county overall. Among 45-64 year olds, Central Region had the highest ED discharge and death rates and East Region had the highest hospitalization and in-patient treatment rates due to alcohol-related disorders compared to other regions.

Schizophrenia and Other Psychotic Disorders

In 2017, hospitalization, in-patient treatment, and ED discharge rates due to schizophrenia and other psychotic disorders were 1.7, 1.4, and 1.3 times higher, respectively, among 45-64 year olds compared to the county overall. Among 45-64 year olds, Central Region had the highest in-patient treatment, ED discharge, and hospitalization rates due to schizophrenia and other psychotic disorders compared to other regions.

In San Diego County, 45-64 year olds had the highest burden of alcohol-related disorders compared to other age groups.



Benzodiazepine and Other Sedative-Related Disorders

Compared to the county overall, hospitalization, in-patient treatment, and ED discharge rates due to benzodiazepine and other sedative-related disorders were 1.5, 1.2, and 1.1 times higher, respectively, among 45-64 year olds in 2017. Among 45-64 year olds, North Coastal Region had the highest ED discharge rate and East Region had the highest hospitalization rate due to benzodiazepine and other sedative-related disorders compared to other regions.

Behavioral Health

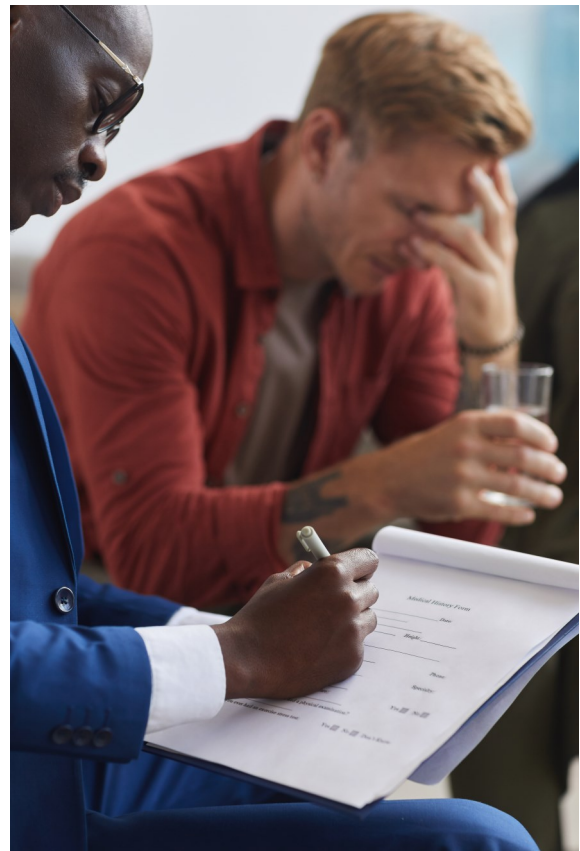
45-64 years

Amphetamine and Other Stimulant-Related Disorders

In 2017, 45-64 year olds had the highest hospitalization rate due to amphetamine and other stimulant-related disorders in San Diego County compared to other age groups. The rates of death, hospitalization, and in-patient treatment rates among 45-64 year olds were 2.9, 1.8, and 1.2 times higher, respectively, compared to the county overall. Central Region had the highest ED discharge and hospitalization rates due to amphetamine and other stimulant-related disorders compared to other regions among 45-64 year olds.

Opioid-Related Disorders

In 2017, 45-64 year olds had the highest hospitalization rate due to opioid-related disorders in San Diego County compared to other age groups. Specifically, the hospitalization rate due to opioid-related disorders among 45-64 year olds was 1.7 times higher than the rate of the county overall. Among 45-64 year olds, Central Region had the highest ED discharge and hospitalization rates and East Region had the highest in-patient treatment rates due to opioid-related disorders compared to other regions.



Risk Factor and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.¹⁷

Among adults aged 45-64 years, 7% likely had serious psychological distress in the past year.*¹³

Among adults aged 45-64 years, 19% reported needing help for emotional or mental health problems or use of alcohol or drugs.**¹³

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.¹⁷

*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled CHIS data from 2016-2017 for statistical stability.



Behavioral Health

65 years and over

The burden of poor behavioral health outcomes among residents aged 65 years and older was higher than the county overall. Notably, the burden of Alzheimer's Disease and Related Dementias (ADRD) and delirium was higher among those aged 65 years and older compared to the county. Although the burden of alcohol-related disorders, mood disorders, and anxiety were lower compared to the county, these poor behavioral outcomes had a notable burden among those aged 65 years and older.

Alzheimer's Disease and Related Dementias (ADRD)

Those aged 65 years and older had the highest burden of Alzheimer's disease and related dementias (ADRD) in San Diego County in 2017. Notably, due to ADRD, the rate of death was 7 times higher, the in-patient treatment rate was 6.7 times higher, the ED discharge rate was 6.6 times higher, and the hospitalization rate was 6.5 times higher among those aged 65 years and older compared to the county overall. Among seniors aged 65 years and older, North Inland Region had the highest death and in-patient treatment rates, while East Region had the highest ED discharge and hospitalization rates compared to other regions.

Delirium

In 2017, those 65 and older had the highest overall burden of delirium in San Diego County compared to other age groups. Additionally, residents aged 65 years and older had the highest ED discharge rate due to delirium in San Diego County compared to other age groups. Death, hospitalization, ED discharge, skilled nursing facility/intermediate care, and in-patient treatment rates due to delirium were higher among those aged 65 and older compared to the county overall. Notably, due to delirium, the rate of death was 7.1 times higher, the rate of hospitalization was 6.8 times higher, and the rate of in-patient treatment was 6.8 times higher among residents aged 65 years and older compared to the county overall. Among those



aged 65 years and older, North Inland Region had the highest death and in-patient treatment rates, East Region had the highest ED discharge rate, and South Region had the highest hospitalization rate due to delirium compared to other regions.

Alcohol-Related Disorders

Among those 65 years and older, the rate of death due to alcohol-related disorders was 1.9 times higher compared to the county overall in 2017. Compared to other regions, Central Region had the highest ED discharge, hospitalization, and death rates, and North Central Region had the highest in-patient treatment rate due to alcohol-related disorders among those aged 65 and older.

Mood Disorders

In 2017, the hospitalization rate due to mood disorders was 2.1 times higher among those aged 65 years and older compared to the county overall. Among seniors aged 65 years and older, Central Region had the highest in-patient treatment and ED discharge rate due to mood disorders compared to other regions.

Behavioral Health

65 years and over

Anxiety

Hospitalization due to anxiety was 2.1 times higher among those aged 65 years and older compared to the county overall in 2017. Central Region had the highest ED discharge rate due to anxiety among residents aged 65 years and older compared to other regions.

Risk Factor and Prevention Strategies

Risk factors for poor behavioral health outcomes include genetics, stress, experiencing a traumatic event, and social isolation.¹⁷

Among adults 65 and older, 3% likely had serious psychological distress in the past year.*¹³

Among adults aged 65 and older, 8% reported needing help for emotional or mental health problems or use of alcohol or drugs.**¹³

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.¹⁷



*Pooled CHIS data from 2014-2017 for statistical stability.

**Pooled CHIS data from 2016-2017 for statistical stability.

Maternal and Child Health

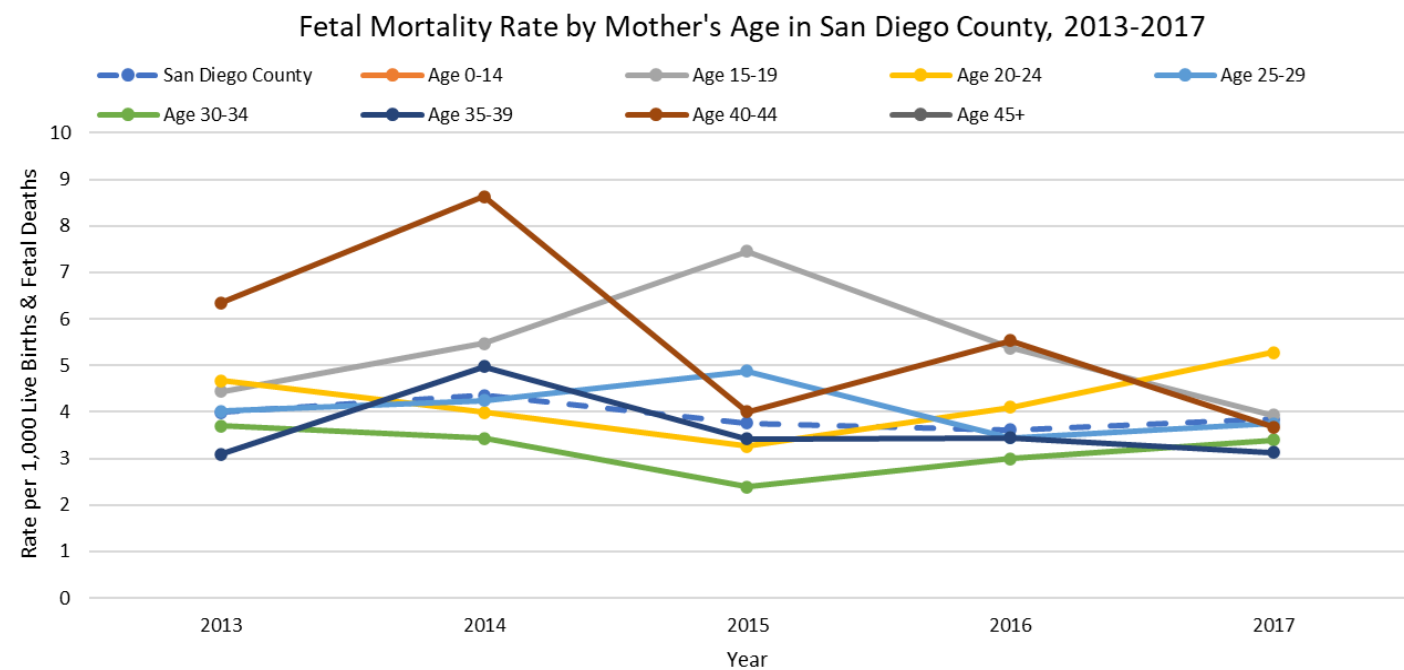
Maternal and child health focus on health issues of women, infants, and children.³⁰ Conditions falling into this category include low birth weight among newborns and infant mortality. Also discussed are utilization of prenatal care, preterm births, and births to teenaged mothers.

Maternal age can influence factors related to pregnancy and childbirth, such as access to appropriate preconception and prenatal care. Family income, health insurance coverage, and educational attainment of household members influence infant and child health.³⁰ These factors vary with maternal age. It is important to analyze medical encounter rates by age to identify where disparities exist and factors that may be contributing to increased rates.



Maternal & Child Health by Age in San Diego County

Figure 8



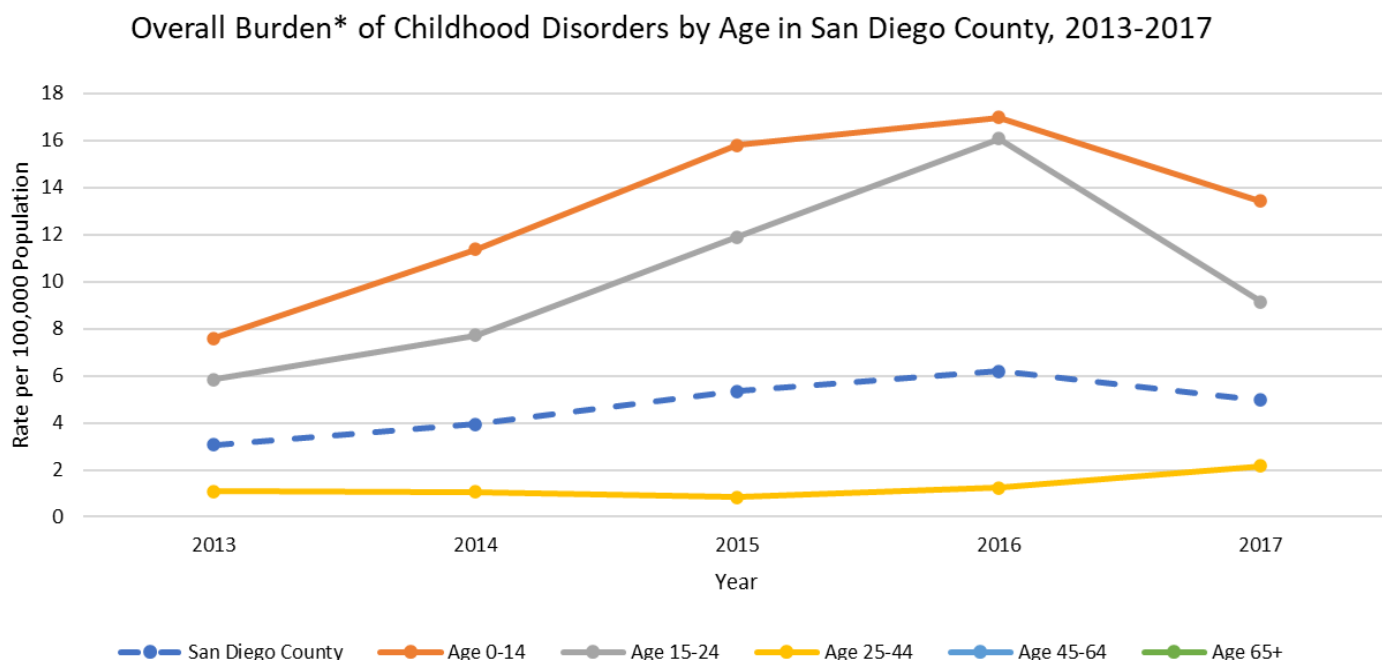
Source: State of California, Department of Public Health, Center for Health Statistics and Informatics, Birth and Fetal Death Statistical Master Files, and California Comprehensive Birth Files. County of San Diego, Health and Human Services Agency, Public Health Services, Maternal, Child and Family Health Services (MCFHS).
Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics Unit, 2020.

San Diego County In San Diego County overall, the fetal mortality rate fluctuated slightly from 2013 to 2017, but there was an overall decreasing trend.

Mothers 20-24 Years Old Among mothers 20-24 years old in San Diego County, the fetal mortality rate decreased from 2013-2015, but increased from 2015-2017. Overall, in 2017, this age group had the highest fetal mortality rate compared to other age groups in San Diego County.

Maternal & Child Health by Age in San Diego County

Figure 9



Source: California Department of Public Health, 2013 Death Statistical Master Files, 2014-2017 California Vital Records Business Intelligence System (VRBIS). California Office of Statewide Health Planning & Development (OSHPD), Patient Discharge Data & Emergency Department Data, 2013-2017. Prepared by County of San Diego (CoSD), Health & Human Services Agency (HHSA), Community Health Statistics Unit, 2020.

*Overall burden includes Death, ED Discharge, Hospitalization, In-Patient Treatment, Skilled Nursing Facility (SNF)/Intermediate Care, and Physical Rehabilitation.

San Diego County In San Diego County overall, the burden of childhood disorders increased every year from 2013-2016, but decreased between 2016 and 2017.

0-14 Years Old Among children 0-14 years old in San Diego County, the overall burden of childhood disorders increased every year from 2013-2016, and decreased between 2016 and 2017. Children 0-14 years old in San Diego County had the highest overall burden of childhood disorders in 2017.

15-24 Years Old The overall burden of childhood disorders increased every year from 2013 to 2016 among 15-24 year olds in San Diego County and then decreased between 2016 and 2017.

25-44 Years Old The overall burden of childhood disorders has increased every year from 2015 to 2017 among 25-44 year olds in San Diego County. Adults 25-44 years old had the lowest burden of childhood disorders in 2017.

Prevent Age Health Disparities

What You Can Do to Reduce Your Risk of Poor Maternal and 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 and 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

0-14 years

In 2017, poor child health outcomes among fetuses, infants, and newborns were highest in the Central and South Regions compared to other regions in San Diego County. Additionally, the overall burden of congenital anomalies and childhood disorders was higher among those 0-14 years old compared to the county overall.

Fetal Mortality**

In 2017, the rate of fetal mortality in San Diego County was 3.9 fetal deaths per 1,000 live births. The fetal mortality rate was highest among Central Region residents compared to the county overall, at 5.1 fetal deaths per 1,000 live births in 2017.

Infant Mortality*

In 2017, the rate of infant mortality in San Diego County was 3.6 infant deaths per 1,000 live births. South Region had the highest infant mortality rate at 4.7 infant deaths per 1,000 live births in 2017.

Preterm Births‡

In 2017, 8.4% of newborns were born preterm in San Diego County. South Region had the highest percentage of newborns born preterm compared to other regions in the county.

Low Birth Weight^

In 2017, 6.5% of newborns had a low birth weight in San Diego County. Central Region had the highest percentage of newborns with a low birth weight compared to other regions in the county.

Very Low Birth Weight~

In 2017, Central Region had the highest percentage of newborns with a very low birth weight compared to other regions in the county.



** 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.

‡ Preterm birth refers to birth prior to 37 completed weeks of gestation.

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

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

Maternal & Child Health

0-14 years

Congenital Anomalies

Those aged 0-14 years had the highest burden of congenital anomalies in San Diego County, compared to other age groups. In 2017, the rates of death, ED discharge, and hospitalization due to congenital anomalies were 2.6, 2.5, 3.4 times higher, respectively, among those aged 0-14 years compared to the county overall. Central Region had the highest hospitalization and ED discharge rates and East Region had the highest death rate due to congenital anomalies among those aged 0-14 years compared to other regions.

Childhood Disorders

In 2017, those aged 0-14 years had higher rates of ED discharge, hospitalization, and in-patient treatment compared to the county overall. Specifically, the rates of ED discharge, hospitalization, and in-patient treatment due to childhood disorders were 2.7, 3.3, and 2.2 times higher, respectively, among children 0-14 years old compared to the county overall in 2017. Central Region had the highest ED discharge rate due to childhood disorders among those aged 0-14 years compared to other regions.



Risk Factor 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.¹⁵

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. Engaging in healthy behaviors associated with favorable maternal and child health outcomes has the potential to positively impact the health of the county overall.¹⁵



Maternal & Child Health

15-24 years

In 2017, poor maternal and child health outcomes among mothers aged 15-24 years old greatly affected those residing in the East, Central, and North Central Regions in San Diego County.

Early Prenatal Care[†]

Mothers 15-19 Years Old

Among mothers aged 15-19 years in 2017, 66.8% received early prenatal care in San Diego County. Among mothers aged 15-19 years, those in East Region had the lowest percentage of mothers who received early prenatal care compared to other regions.

Mothers 20-24 Years Old

Among mothers aged 20-24 years in 2017, 80.3% received early prenatal care in San Diego County. Among mothers aged 20-24 years, Central Region had the lowest percentage who received early prenatal care compared to other regions.

Fetal Mortality^{**}

Mothers 15-19 Years Old

In 2017, the rate of fetal mortality among mothers aged 15-19 years in San Diego County was 3.9 per 1,000 live births.

Mothers 20-24 Years Old

The rate of fetal mortality among mothers aged 20-24 years in San Diego County was 5.3 per 1,000 live births. In 2017, North Coastal Region had the highest fetal mortality rate among mothers aged 20-24 years.

Preterm Births[‡]

Mothers 15-19 Years Old

In San Diego County in 2017, 7.2% of mothers aged 15-19 years had preterm births. Among mothers aged 15-19 years, North Central Region had the highest percentage of preterm births compared to other regions.

Mothers 20-24 Years Old

In San Diego County in 2017, 7.4% of mothers aged 20-24 years had preterm births. Among mothers aged 20-24 years, East Region had the highest percentage of preterm births compared to other regions.



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

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

[‡] Preterm birth refers to birth prior to 37 completed weeks of gestation.

Maternal & Child Health

15-24 years

Low Birth Weight[^]

Mothers 15-19 Years Old

In 2017, 6.3% of mothers aged 15-19 years had a newborn with a low birth weight. Among mothers aged 15-19 years, North Central Region had the highest percentage of newborns with low birth weights compared to other regions.

Mothers 20-24 Years Old

In 2017, 6% of mothers aged 20-24 years had a newborn with a low birth weight. Among mothers aged 20-24 years, Central Region had the highest percentage of newborns with low birth weights compared to other regions.

Very Low Birth Weight[~]

Mothers 20-24 Years Old

In 2017, East Region had the highest percentage of newborns with very low birth weights among mothers aged 20-24 years compared to other regions.

Teen Births[§]

In 2017, the percentage of live births to mothers aged 15-17 years was 0.73% or 297 total births, in San Diego County. Compared to other regions, the percentage of live births to mothers aged 15-17 years was highest in Central and South Regions.

Childhood Disorders

In 2017, rates of ED discharge and in-patient treatment due to childhood disorders were 2 and 2.6 times higher, respectively, among those aged 15-24 years compared to the county overall.

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.¹⁵

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.¹⁵



[^] Low birth weight refers to birth weight less than 2,500 g (approximately 5 lbs., 8 oz.).

[~] Very Low birth weight refers to birth weight less than 1,500 g (approximately 3 lbs., 5 oz.).

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

Maternal & Child Health

25-44 years

In 2017, there were regional differences for poor maternal and child health outcomes among mothers aged 25-44 years in San Diego County. Among mothers in this age group, mothers living in the Central and East Regions had the lowest percentages of mothers receiving early prenatal care compared to other regions. Additionally, among mothers aged 25-44 years, those residing in the South, Central, and East Regions had the highest preterm births and those residing in the North Central, South and North Inland Regions had the highest percentage of mothers with low birth weight newborns compared to other regions.

Early Prenatal Care[†]

Mothers 25-29 Years Old

In San Diego County in 2017, 84.4% of mothers aged 25-29 years received early prenatal care. Central Region had the lowest percentage of mothers aged 25-29 years that received early prenatal care compared to other regions.

Mothers 30-34 Years Old

Among mothers aged 30-34 years in San Diego County, 88.9% received early prenatal care in 2017. Central Region had the lowest percentage of mothers aged 30-34 years that received early prenatal care compared to other regions.

Mothers 35-39 Years Old

In San Diego County in 2017, 89.2% of mothers aged 35-39 years received early prenatal care. East Region had the lowest percentage of mothers aged 35-39 years that received early prenatal care compared to other regions.

Mothers 40-44 Years Old

Among mothers aged 40-44 years in San Diego County, 88.3% received early prenatal care in 2017. Central Region had the lowest percentage of mothers aged 40-44 years that received early prenatal care compared to other regions.

Fetal Mortality^{**}

Mothers 25-29 Years Old

In 2017, the rate of fetal mortality among mothers aged 25-29 years in San Diego County was 3.8 per 1,000 live births. Among those aged 25-29 years, North Central Region had the highest fetal mortality rate compared to other regions.

Mothers 30-34 Years Old

In 2017, the rate of fetal mortality among mothers aged 30-34 years in San Diego County was 3.4 per 1,000 live births. Among those aged 30-34 years, Central Region had the highest fetal mortality rate compared to other regions.

Mothers 35-39 and 40-44 Years Old

In San Diego County, the rate of fetal mortality among mothers aged 35-39 was 3.1 per 1,000 live births and among mothers aged 40-44 was 3.7 per 1,000 live births.



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

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

Maternal & Child Health

25-44 years

Preterm Births[‡]

Mothers 25-29 Years Old

In 2017, 7.6% of mothers aged 25-29 years had a preterm birth in San Diego County. Among mothers aged 25-29 years, South Region had the highest percentage of preterm births compared to other regions.

Mothers 30-34 Years Old

Among mothers aged 30-34 years in San Diego County, 7.9% had a preterm birth in 2017. Central Region had the highest percentage of mothers aged 30-34 years that had a preterm birth compared to other regions.

Mothers 35-39 Years Old

In San Diego County, 9.7% of mothers aged 35-39 years had a preterm birth in 2017. South Region had the highest percentage of mothers aged 35-39 years that had a preterm birth compared to other regions.

Mothers 40-44 Years Old

In 2017, 13.4% of mothers aged 40-44 years had a preterm birth in San Diego County. East Region had the highest percentage of mothers aged 40-44 years that had a preterm birth compared to other regions.



Low Birth Weight[^]

Mothers 25-29 Years Old

In 2017, 6.3% of mothers aged 25-29 years had a low birthweight newborn. Compared to other regions, North Central Region had the highest percentage of mothers aged 25-29 years that had a low birth weight newborn.

Mothers 30-34 Years Old

In San Diego County, 5.8% of mothers aged 30-34 years had a low birthweight newborn in 2017. South Region had the highest percentage of mothers aged 30-34 years that had a low birthweight newborn compared to other regions.

Mothers 35-39 Years Old

In San Diego County, 7.2% of mothers aged 35-39 years had a low birthweight newborn in 2017. Compared to other regions, South Region had the highest percentage of mothers aged 35-39 years that had a low birthweight newborn.

Mothers 40-44 Years Old

Among mothers aged 40-44 years in San Diego County, 9.9% had a low birth weight newborn in 2017. Compared to other regions, North Inland Region had the highest percentage of mothers aged 40-44 years that had a low birthweight newborn.



[‡] Preterm birth refers to birth prior to 37 completed weeks of gestation.

[^] Low birth weight refers to birth weight less than 2,500 g (approximately 5 lbs., 8 oz.).

Maternal & Child Health

25-44 years

Congenital Anomalies

Among those aged 25-44 years, East Region had the highest hospitalization rate and ED discharge rate due to congenital anomalies compared to other regions.

Risk Factor 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.¹⁵

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.¹⁵



Maternal & Child Health

45-64 years

In 2017, mothers aged 45 years and older had the highest percentage of preterm births, low birth weight newborns, and very low birth weights compared to other age groups in San Diego County. Particularly mothers aged 45 years and older in Central and North Central Regions had the highest percentage of mothers who had preterm births and low birth weight newborns and the lowest percentage who received early prenatal care.

Early Prenatal Care[†]

Mothers 45 Years and Older

In 2017, 86.3% of mothers aged 45 and older received early prenatal care in San Diego County. Among mothers aged 45 years and older, Central Region had the lowest percentage that received prenatal care compared to other regions.

Preterm Births[‡]

Mothers 45 Years and Older

In San Diego County in 2017, 26.9% of mothers aged 45 years and older had a preterm birth. Mothers aged 45 years and older had the highest percentage of preterm births compared to other age groups in San Diego County. Among mothers aged 45 years and older, Central Region had the highest percentage of preterm births compared to other regions.

In 2017, mothers aged 45 years and older had the highest percentage of preterm births as well as low and very low birth weight newborns compared to other age groups in San Diego County.



Low Birth Weight[^]

Mothers 45 Years and Older

In San Diego County, 21.8% of mothers aged 45 years and older had a low birth weight newborn in 2017. Mothers aged 45 years and older had the highest proportion of low birth weight newborns compared to other age groups in San Diego County. Among mothers aged 45 years and older, North Central Region had the highest percentage of low birth weight newborns compared to other regions.

Very Low Birth Weight[~]

Mothers 45 Years and Older

Mothers aged 45 years and older had the highest percentage of very low birth weight newborns compared to other age groups in San Diego County.

Congenital Anomalies

In 2017, East Region had the highest hospitalization rates due to congenital anomalies among those aged 45-64 years compared to other regions.

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

[‡] Preterm birth refers to birth prior to 37 completed weeks of gestation.

[^] Low birth weight refers to birth weight less than 2,500 g (approximately 5 lbs., 8 oz.).

[~] Very Low birth weight refers to birth weight less than 1,500 g (approximately 3 lbs., 5 oz.).

Maternal & Child Health

45-64 years

Developmental Disorders

The overall rate of developmental disorders among those 45-64 years old was 1.3 times higher compared to the county. In 2017, the ED discharge rate due to developmental disorders was higher among those aged 45-64 years compared to the county overall.



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.¹⁵

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.¹⁵

Age Disparities: Summary

0-14 Year Olds Children 0-14 years old had the highest overall burden of asthma, attention deficit disorder (ADD) and related conduct disorders, impulse disorders, drowning, congenital anomalies, and childhood disorders compared to other age groups in San Diego County.

15-24 Year Olds Teens and young adults aged 15-24 years, had the highest overall burden of chlamydia, gonorrhea, cannabis-related disorders, personality disorders, adjustment disorders, depression, mood disorders, benzodiazepine and other sedative-related disorders, post-traumatic stress disorder (PTSD), self-inflicted injuries, motor vehicle injuries, and motor vehicle injuries to pedestrians compared to other age groups in San Diego County. Additionally, mothers aged 20-24 had the highest rate of fetal mortality compared to mothers of other age groups.

25-44 Year Olds Adults aged 25-44 years had the highest overall burden of syphilis, schizophrenia and other psychotic disorders, anxiety, substance related disorders, including amphetamine and other stimulant-related disorders, opioid-related disorders.

45-64 Year Olds Compared to other age groups in San Diego County, those 45-64 years old had the highest overall burden of alcohol-related disorders and poisoning. Additionally, mothers aged 45 and older had the highest percentage of preterm births, low birth weight newborns, and very low birth weight newborns, compared to mothers of other age groups in San Diego County.

65 Years and Older Overall, those 65 and over had the highest burden of most chronic diseases compared to other age groups in San Diego County. Among communicable diseases, seniors aged 65 years and older had the highest burden of pneumonia, urinary tract infections, and influenza compared to other age groups. Residents 65 years and older had the highest burden of Alzheimer's disease and related dementias (ADRD) in 2017. Among injuries, those 65 and older had the highest overall burden of falls, heat illness, and hip fracture compared to other age groups in San Diego County.



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.¹⁴

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.¹⁵

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.⁷ 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.¹⁵

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.¹⁶

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.¹⁷

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

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.

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 from 2017 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."¹¹ 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.

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