2014 - 2018

Suicide Deaths in Orange County, California

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About this Report

Intentional self-harm and suicide continue to be a leading cause of death across the United States, the state of California, and Orange County.[1,2,3] Since 1999, national suicide rates increased not only as an aggregate, but also among males, females, and all race and ethnic groups measured.[4] In reaction to these increases, the Centers for Disease Control and Prevention recommended local governments continue with the identification and support of those at risk.[5] This report represents the County of Orange's continuous surveillance of suicide deaths to assist in targeting resources to those in need. Summarized within are the demographic and geographic trends in suicide deaths of Orange County residents from the years 2014 through 2018.

This report analyzed data for suicide deaths in Orange County residents. Data for this study were sourced from the State of California's Department of Public Health (CDPH) Death Statistical Master File (DSMF) and Vital Records Business Intelligence System (VRBIS) from the corresponding years. Cases were selected based on International Classification of Disease version 10 (ICD-10) final cause of death codes between X60-84 (Intentional self-harm) and Y87.0 (Sequelae of intentional self-harm), as well as any other cases of differing final diagnosis that were identified as a suicide death by the coroner or medical doctor on the death certificate. The other coroner-identified suicides include causes of death listed as unspecified (R99), and hypernatremia - from self-starvation (E87).

This report serves as a continuation of prior reports released by the OC Health Care Agency, specifically

Suicide Deaths in Orange County, 2009-2011[6] released in 2014 and Self-Inflicted Injury & Suicide in Orange County, 2005-2007[7] released in 2009. Suicide attempts and intentional self-injury are also an important component in understanding and preventing suicide deaths.[8,9] This report includes an analysis of suicide deaths only.

Population data in this report is from Claritas Inc., (a market research company), unless otherwise specified. Unadjusted and age-specific suicide death rates are reported as labeled. For figures and tables reporting age-adjusted rates, adjustments were calculated according to the United States (US) population standardization for the year 2000. Also, this report is an aggregate of five years-worth of data to increase the statistical power for this analysis.

Executive Summary

In the five-year period between 2014 and 2018, there were 1,648 reported suicide deaths of Orange County residents, including residents who died outside Orange County whose death was reported to the County. This translates to an average annual suicide rate of 10.3 deaths per 100,000 residents, and approximately 330 suicides per year during these five years. The majority of suicide deaths were due to hanging/strangulation/suffocation, self-inflicted gunshot wounds, or self-poisoning (typically with medications).

Those affected most by suicide deaths fell into the following categories: those who were identified demographically as Non-Hispanic White (hereafter referred to as White), male, and middle-aged to older adult. With some exceptions, many of the cities on the coastal areas of Orange County were most affected by suicide deaths compared to their inland neighbors. These cities also tended to have the highest populations of Whites and adults 55 years and older.

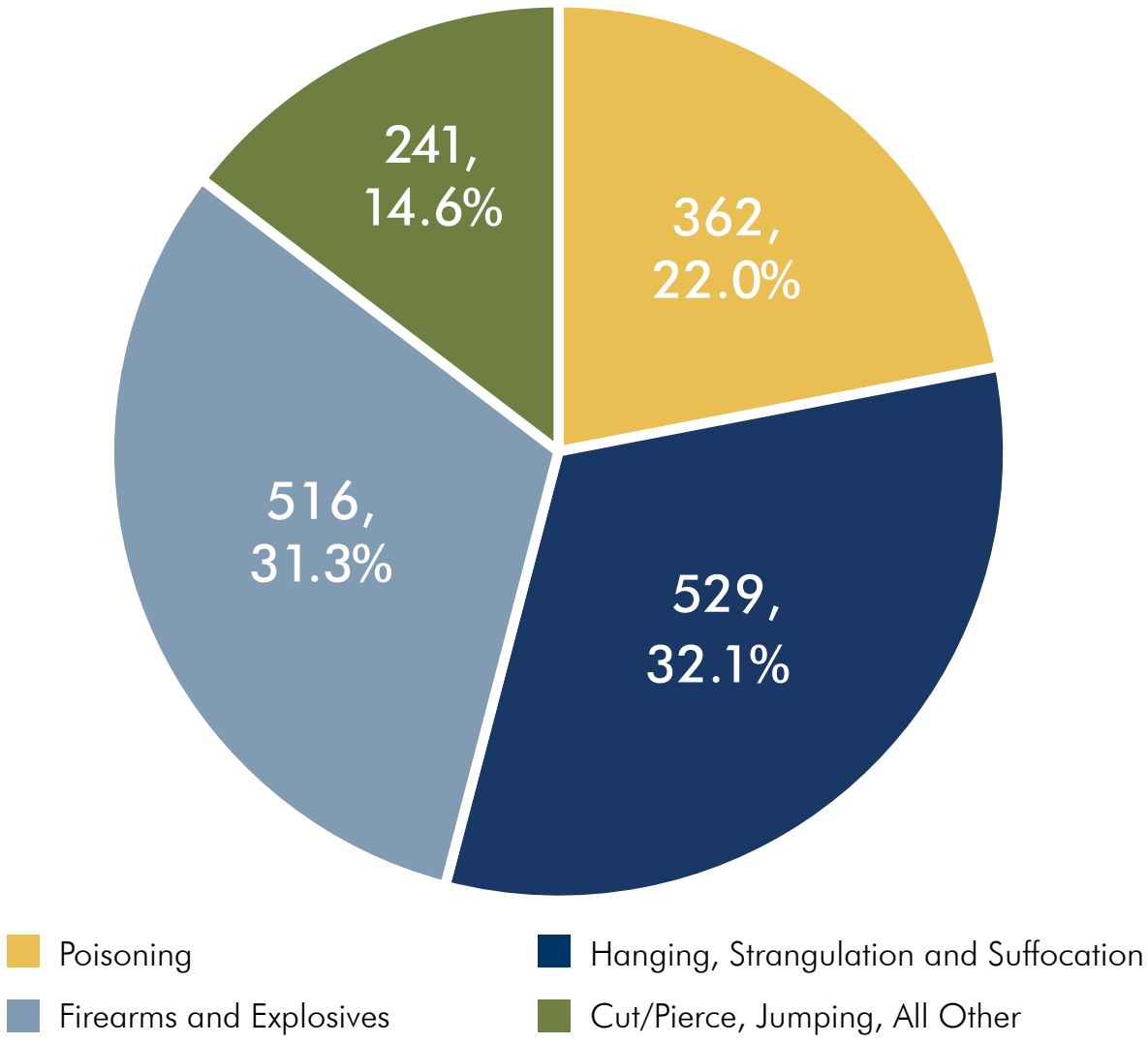
Orange County reached an all-time high (in the 21st century) of 10.8 suicide deaths per 100,000 in 2018 (369 suicides total for the year).* Orange County historically tends to have lower rates of suicide compared to the state and the nation. In fact, Orange County has never exceeded national rates of suicide deaths for the past two decades.

* *Rate is age-adjusted according to US population standardization for the year 2000.*

Means of Death

The means of suicide death is depicted in **Figure 1** based on the final cause of death by ICD-10 code. In total, suicide by hanging, strangulation, or suffocation was the most common means of death, as nearly one out of every three suicide deaths was attributable to this method (n=529, 32.1%) during the five-year period. As the second-most common method, death by firearm discharge closely approached the number who died by hanging/suffocation, accounting for 31.3% of suicides in the county (n=516). This is the first reporting period where hanging/suffocation suicide deaths surpassed suicide deaths resulting from firearms in Orange County (6, 7). Death from poisoning followed as the third-most common method, at 22.0% (n=362). Other means of death, which include cutting, jumping, and drowning, among others, represented the remaining 14.6% of suicide deaths (n=241; further details found in table in **Appendix A**.).

Figure 1 Suicides by Means of Death, 2014-2018



Source: CDPH DSMF/VRBIS, 2014-2018

Demographic Characteristics

AGE GROUP

Suicide deaths affected middle-aged and older adult residents of Orange County more frequently compared to adolescents and younger adults (**Table 1**). In particular, those 85 years and older had the highest age-specific rate of 19.5 deaths per 100,000, almost double the county rate of suicide death at 10.3 deaths per 100,000. Middle-aged persons, 45 to 54 years (n=319) and 55 to 64 years (n=324) had the highest total number of suicide deaths during this five-year period.

Table 1: Orange County Suicide Death by Age Groups and Year

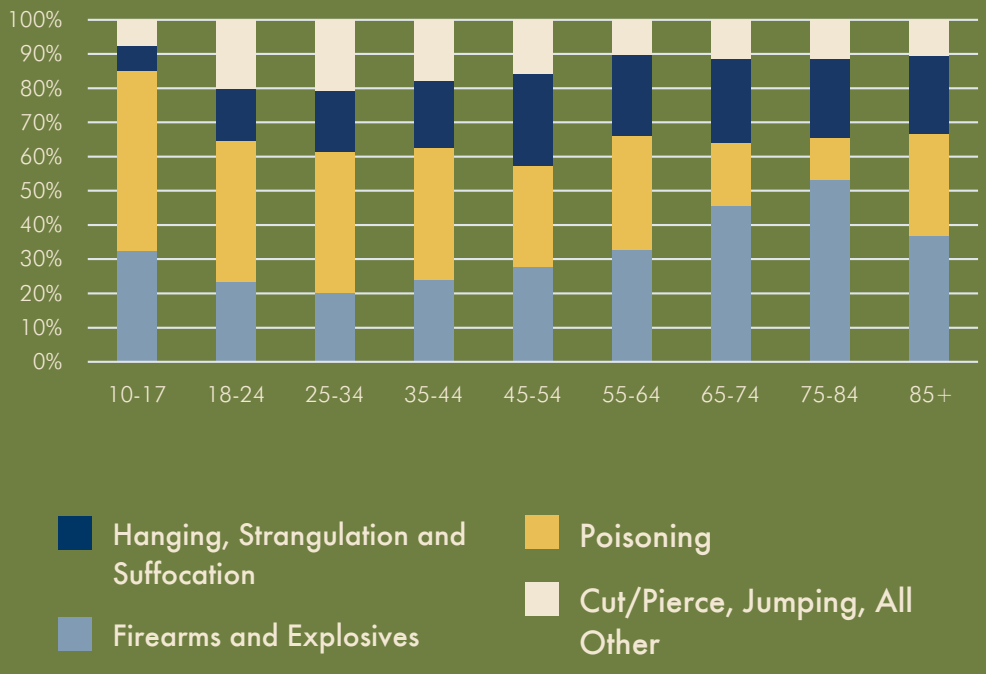
Age Group	2014	2015	2016	2017	2018	Total	Percent of Total	5-Year Avg. #	Age-Specific Rate per 100,000* (5-yr. Avg.)	95% Confidence Interval	
										Lower	Upper
10-17 years	4	7	11	8	10	**40**	2.4%	8.0	**2.3**	1.6	3.1
18-24 years	24	28	30	28	34	**144**	8.7%	28.8	**9.0**	7.5	10.5
25-34 years	50	34	40	60	54	**238**	14.4%	47.6	**10.5**	9.1	11.8
35-44 years	38	34	37	50	50	**209**	12.7%	41.8	**9.7**	8.4	11.0
45-54 years	68	57	65	62	67	**319**	19.4%	63.8	**13.8**	12.3	15.3
55-64 years	70	57	63	60	74	**324**	19.7%	64.8	**16.4**	14.6	18.2
65-74 years	46	39	38	29	43	**195**	11.8%	39.0	**15.6**	13.4	17.7
75-84 years	40	21	21	15	25	**122**	7.4%	24.4	**18.7**	15.4	22.0
85+ years	11	10	11	13	12	**57**	3.5%	11.4	**19.5**	14.4	24.5
Total	**351**	**287**	**316**	**325**	**369**	**1,648**	**100.0%**	**329.6**	**10.3**	**9.8**	**10.8**

** Population for rates based on Claritas, 2016. Age-specific rates are based on the population specific to each age group.*

Source: CDPH DSMF/VRBIS, 2014-2018

For those aged 65 years and over, the means of death was more frequently by firearm discharge (n=175, 46.8%; **Figure 2**). For those younger than 65, the means of death more frequently used was by hanging, strangulation or suffocation (n=461, 36.2%). Generally, the proportion of suicide deaths by hanging/suffocation progressively decreased with advancing age groups. Conversely, firearm suicide deaths increased in proportion with advancing age groups. Poisoning was frequently the third most prevalent means of suicide for each age group, after deaths by firearms and deaths by hanging/suffocation. The exception was among 65-84 year-olds, where poisoning was the second most common method (n=76, 24.0%).

Figure 2 **Means of Suicide Death by Age Group (yrs), 2014-2018**



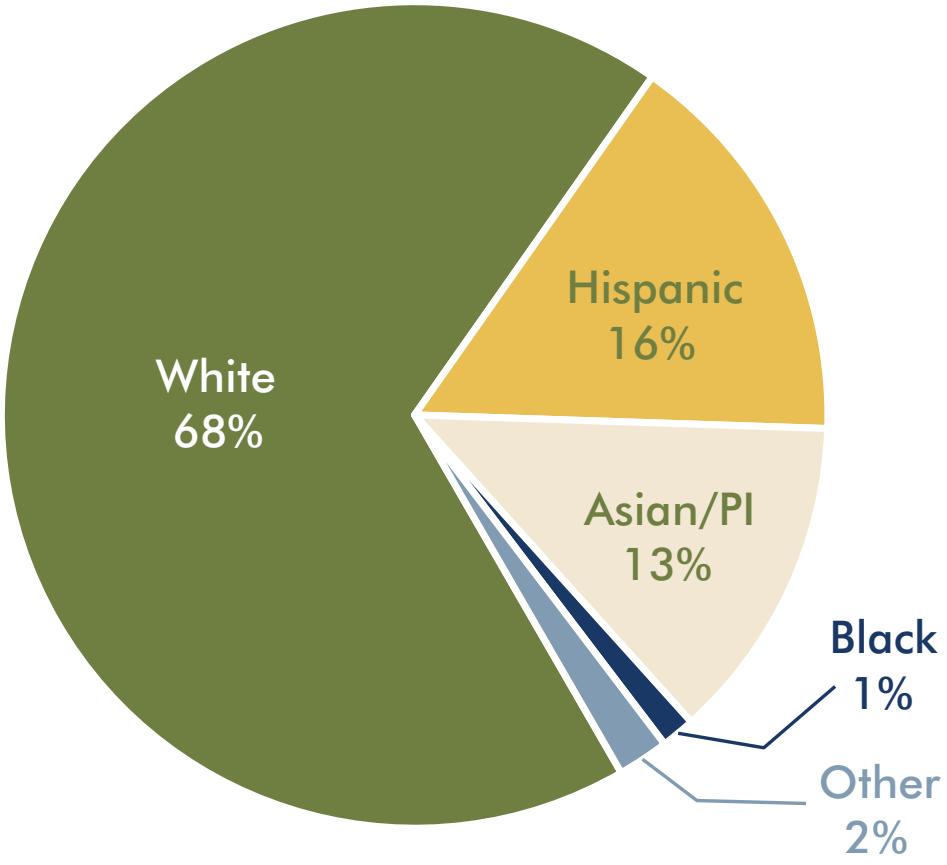
Source: CDPH DSMF/VRBIS, 2014-2018

RACE/ETHNICITY

Among the reported races and ethnicities, Whites were most affected by suicide deaths, in both total number and rate (**Figure 3**). Those identified as White accounted for two-thirds of all suicide deaths (n=1,122; 68%), while those identified as Asian and Pacific Islander or Hispanic composed approximately the remaining third (n=260, 16% for Hispanic residents, and n=211, 13% for Asian and Pacific Islander residents). Those identified as Black or Other/Unknown (including American Indian, Alaskan Native, and those identifying as two or more races) totaled 3% of suicide deaths (Black residents were 1%, n=22; Other/Unknown residents were 2%, n=33).

White residents of Orange County averaged 224 suicides per year, translating to a suicide death rate of 16.8 deaths per 100,000; the highest number and death rate compared to all other racial/ethnic groups (**Table 2**). Hispanics had the second largest average number of suicide deaths of 52 per year, but the lowest suicide death rate, at nearly five deaths per 100,000 persons, compared to other race/ethnicities. The Asian and Pacific Islander population in Orange County had a rate of 6.6 deaths per 100,000, which is less than half the rate of suicides for Whites in Orange County. While Black residents in Orange County had a higher rate of suicide death compared to all other race/ethnic groups except Whites, at 11.1 deaths per 100,000, Blacks also had the lowest average number of suicide deaths at 4.4 per year. Those identified under "Other" race/ethnicity experienced suicide at a rate of 6.7 per 100,000.

Figure 3 Percent of Suicide Deaths by Race/Ethnicity, 2014-2018



Source: CDPH DSMF/VRBIS, 2014-2018

Table 2: Orange County Suicide Deaths by Race/Ethnicity, 2014-2018

Race/Ethnicity	Total	Percent of Total	5-Year Average	Rate per 100,000* (5-yr. avg.)	95% Confidence Interval	
					Lower	Upper
White	1,122	68.1%	224.4	16.8	15.8	17.8
Hispanic	260	15.8%	52.0	4.6	4.0	5.1
Asian and Pacific Islander	211	12.8%	42.2	6.6	5.7	7.5
Black	22	1.3%	4.4	11.1	6.4	15.7
Other/Unknown	33	2.0%	6.6	6.7	4.4	9.0
TOTAL	**1,648**	**100.0%**	**329.6**	**10.3**	**9.8**	**10.8**

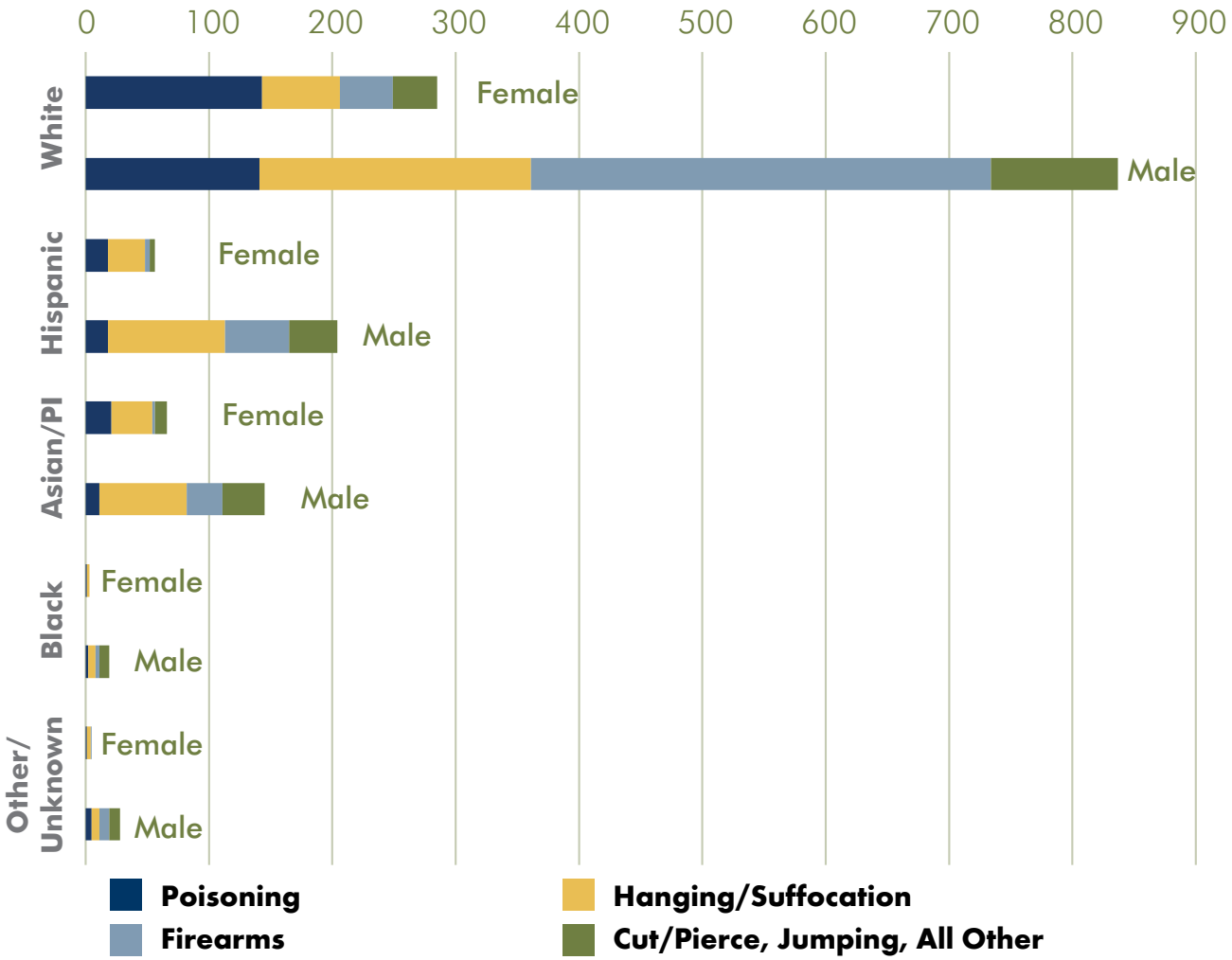
**Population for rates based on Claritas, 2016. Rate based on total population for each race/ethnicity and is not age-adjusted based on US population standardization for year 2000.*
Source: CDPH DSMF/VRBIS, 2014-2018

GENDER

Differences between males and females were notable with suicide deaths (**Figure 4**). Males comprised about 75% of all suicide deaths (n=1,233), and females were 25% (n=415). The means of death between males and females also differed noticeably, as males more often died by firearm discharge (n=465, 37.7%), followed by deaths by hanging/suffocation (n=398, 32.3%). Conversely, females more frequently died by poisoning (n=184, 44.3%), and few died by firearm discharge (n=50, 12.0%).

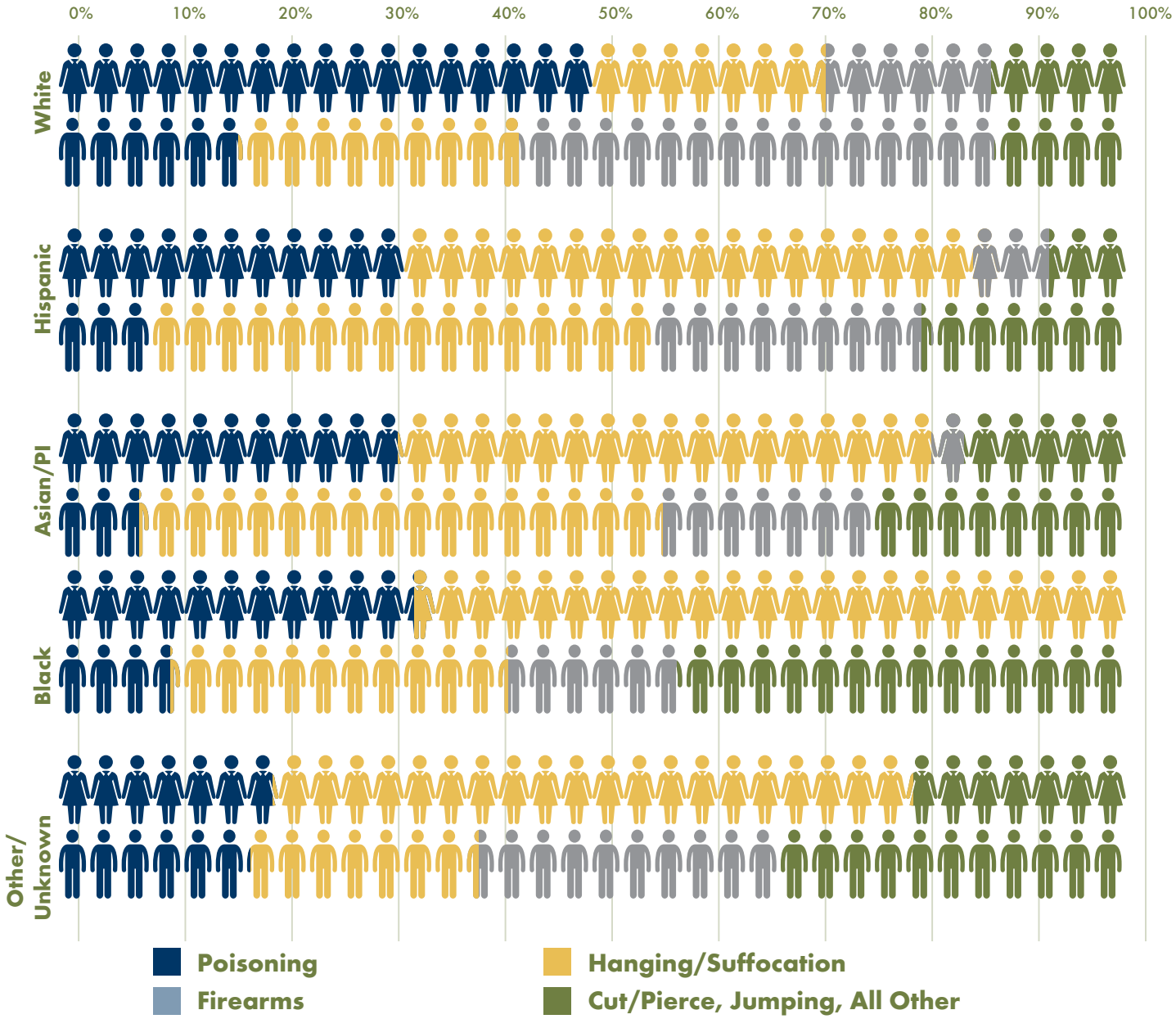
It is evident that certain subgroups, specifically White males and females, who are the majority of all suicide deaths, heavily influence the most common means of suicide death by gender. For example, White males, who accounted for 51% of all suicide deaths (n=837), more frequently died by firearm discharge (n=373, 44.6% of suicide deaths of White males). In fact, 72.4% of all suicide deaths by firearms were White males. White females, who were the second largest group of suicide deaths by race and gender at 17.3% (n=285), more frequently died by poisoning than by any other method (n=143, 50.2% of suicide deaths by White females; **Figures 4-5**).

Figure 4 **Number of Suicide Deaths by Gender, Race, and Means, Orange County 2014-2018**



Source: CDPH DSMF/VRBIS, 2014-2018

Figure 5 Percentage of Suicide Deaths by Gender, Race and Means of Death, Orange County 2014-2018



Source: CDPH DSMF/VRBIS, 2014-2018

Proportionally speaking, Non-White Orange County residents did not use firearms or poisonings as frequently as White males and females (**Figure 5**). Hispanic and Asian/Pacific Islander suicide victims most frequently died from strangulation, suffocation or hanging. For Hispanic females, 53.6% (n=30) of suicide deaths were due to this cause, followed by 32.1% (n=18) of deaths by poisoning. For female Asian/Pacific Islanders, 50.0% (n=33) of suicides were by strangulation, suffocation or hanging, followed by 32.0% (n=21) by poisoning. For Hispanic males, deaths by strangulation, suffocation or hanging accounted for 46.6% (n=95) of suicide deaths followed by suicide death by firearm discharge (25.5%, n=52). For Asian/Pacific Islander males 49.0% (n=71) of deaths were from strangulation, suffocation or hanging, followed by 20.0% of deaths by firearm discharge (n=29).

Geographic Trends

The highest rates of suicide deaths largely occurred in the coastal areas of Orange County (**Table 3)**. These areas include Seal Beach, Laguna Beach and Dana Point. Laguna Woods, an adult community in south Orange County where the percent of the population 55 years and older is 97.4% and 77.7% of the population is White, had 37.9 suicide deaths per 100,000 (n=33). Conversely, the city of Stanton had the lowest suicide rate, at 4.4 per 100,000. Unlike Laguna Woods and the other coastal cities with higher suicide rates, the population in Stanton has a much lower percentage of White residents (18.9%) and has a much lower percentage of residents ages 55 years and older (21.9%). The suicide rate of a city or census-defined place (CDP) aligned with large populations of Whites and middle-aged to older adults (55 years and older). In fact, there was a strong positive correlation between the crude suicide rates in the cities of Orange County and the percent of their population 55 years and older, and a moderate positive correlation* between the crude suicide rates in the cities and the percent of Non-Hispanic White residents (**Figure 6; additional maps in Appendix B-E**).

Table 3: Suicides by City and Census-Defined Places by Descending Order of Rate, 2014-2018

City	Number 2014-2018	5-Year Average	2016 Population**	Rate*** per 100,000 (5-yr. avg.)	95% Confidence Interval	
					Lower	Upper
Laguna Woods	33	6.6	17,402	37.9	25.0	50.9
Seal Beach	31	6.2	25,146	24.7	16.0	33.3
Laguna Beach	25	5.0	25,134	19.9	12.1	27.7
Dana Point	28	5.6	34,391	16.3	10.3	22.3
Huntington Beach	151	30.2	199,578	15.1	12.7	17.5
San Clemente	54	10.8	76,097	14.2	10.4	18.0
Lake Forest	52	10.4	73,496	14.2	10.3	18.0
Laguna Hills	20	4.0	29,480	13.6	7.6	19.5
San Juan Capistrano	25	5.0	38,535	13.0	7.9	18.1
Laguna Niguel	42	8.4	65,952	12.7	8.9	16.6
Newport Beach	57	11.4	89,839	12.7	9.4	16.0
Cypress	31	6.2	49,734	12.5	8.1	16.9
Costa Mesa	70	14.0	116,895	12.0	9.2	14.8
North Tustin****	15	3.0	25,724	11.7***	5.8	17.6
Mission Viejo	55	11.0	96,133	11.4	8.4	14.5
Orange	79	15.8	149,184	10.6	8.3	12.9
Rancho Santa Margarita	24	4.8	46,128	10.4	6.2	14.6

Table 3: Suicides by City and Census-Defined Places by Descending Order of Rate, 2014-2018 (Continued from page 12)

City	Number 2014-2018	5-Year Average	2016 Population**	Rate*** per 100,000 (5-yr. avg.)	95% Confidence Interval	
					Lower	Upper
ORANGE COUNTY	**1,648**	**329.6**	**3,207,767**	**10.3**	**9.8**	**10.8**
Aliso Viejo	27	5.4	52,740	10.2	6.4	14.1
Villa Park	3	0.6	5,973	10.0*	-1.3	21.4
Brea	21	4.2	42,007	10.0	5.7	14.3
Los Alamitos/Rossmoor*	11	2.2	22,664	9.7***	4.0	15.4
Garden Grove	87	17.4	181,835	9.6	7.6	11.6
Irvine	117	23.4	248,048	9.4	7.7	11.1
Fountain Valley	27	5.4	58,056	9.3	5.8	12.8
Yorba Linda	33	6.6	71,437	9.2	6.1	12.4
Santa Ana	138	27.6	315,501	8.7	7.3	10.2
Fullerton	61	12.2	142,884	8.5	6.4	10.7
Tustin	36	7.2	85,489	8.4	5.7	11.2
Westminster	39	7.8	94,260	8.3	5.7	10.9
Buena Park	34	6.8	83,248	8.2	5.4	10.9
Anaheim	147	29.4	376,204	7.8	6.6	9.1
La Habra	26	5.2	70,227	7.4	4.6	10.3
La Palma	6	1.2	16,479	7.3***	1.5	13.1
Placentia	19	3.8	53,912	7.0***	3.9	10.2
Midway City****	3	0.6	8,810	6.8***	-0.9	14.5
Coto de Caza****	5	1.0	14,845	6.7***	0.8	12.6
Ladera Ranch****	9	1.8	30,514	5.9***	2.0	9.8
Stanton	7	1.4	31,591	4.4***	1.1	7.7

* *Rossmoor is an unincorporated CDP, while neighboring Los Alamitos is an incorporated city.*

** *City populations were based on Claritas Data, 2016, with the exception of Coto de Caza, which was from American Community Survey, 5-year estimates, 2016.*

*** *Rate based on total populaton for city and is not age-adjusted based on US population standardization for year 2000. Rates based on fewer than 20 cases are unstable and should be interpreted with caution.*

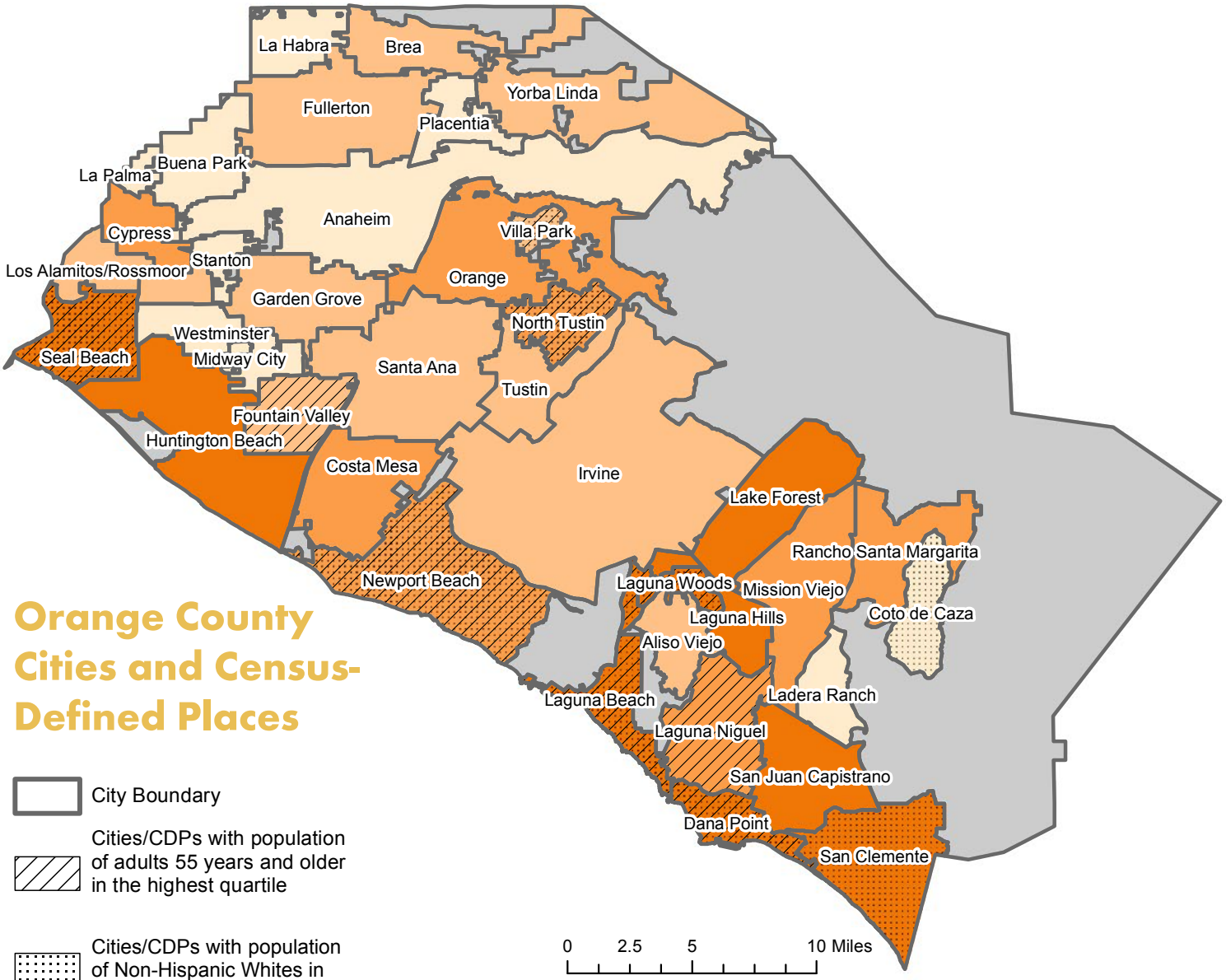
**** *Census-Defined Place (CDP)*

Source: CDPH DSMF/VRBIS, 2014-2018

Figure 6

Five-Year Average Suicide Rate by City

includes highest quartiles for Non-Hispanic Whites and population 55 years and older



Orange County Cities and Census-Defined Places

City Boundary

Cities/CDPs with population of adults 55 years and older in the highest quartile

Cities/CDPs with population of Non-Hispanic Whites in the highest quartile

Unadjusted Suicide Rate per 100,000 population

- <8.4
- 8.4 - 10.3
- 10.4 - 12.7 *(Range exceeds Orange County average suicide rate of 10.3)*
- >12.7
- Unincorporated/No Data

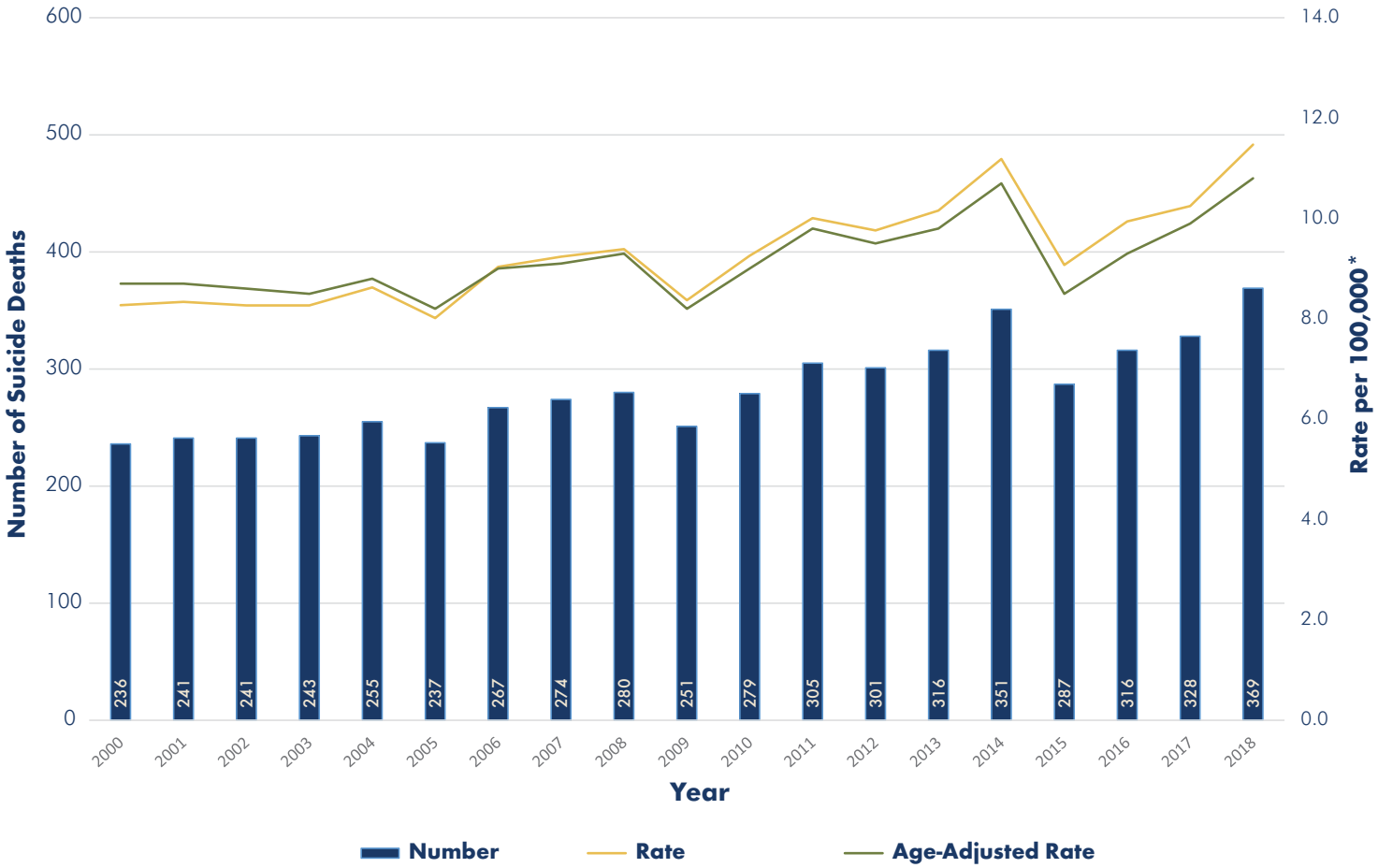
Source: CDPH DSMF/VRBIS, 2014-2018; American Community Survey 5-year Estimates, 2016; Claritas, 2016.

Suicide Trends

From 2000 to 2018, the suicide death rate per 100,000 population increased by 25% in Orange County, from 8.7 (n=236) to 10.8 (n=369). There have been some fluctuations over the years, as noted in **Figure 7**. Most notably between 2014 and 2015, the rate of suicide death decreased by 21%, from 10.7 down to 8.5 per 100,000. Preceding that precipitous fall was a period of increase between 2009 to 2011, where the rate of suicide death rose by 20%, from 8.2 per 100,000 to 9.8 per 100,000.

Most recently, Orange County is experiencing an even sharper rise in the rate of suicide death; a 27% increase from 8.5 per 100,000 in 2015 to 10.8 per 100,000 in 2018. The underlying cause(s) of these year to year variations in the number of cases is not known, but suicide in the US is often referred to as the disease of despair (e.g., economic and social declines;[10] and studies have connected it to other forms of violence, such as bullying, sexual violence or child abuse.).[11]

Figure 7 Orange County Suicide Deaths, 2000-2018



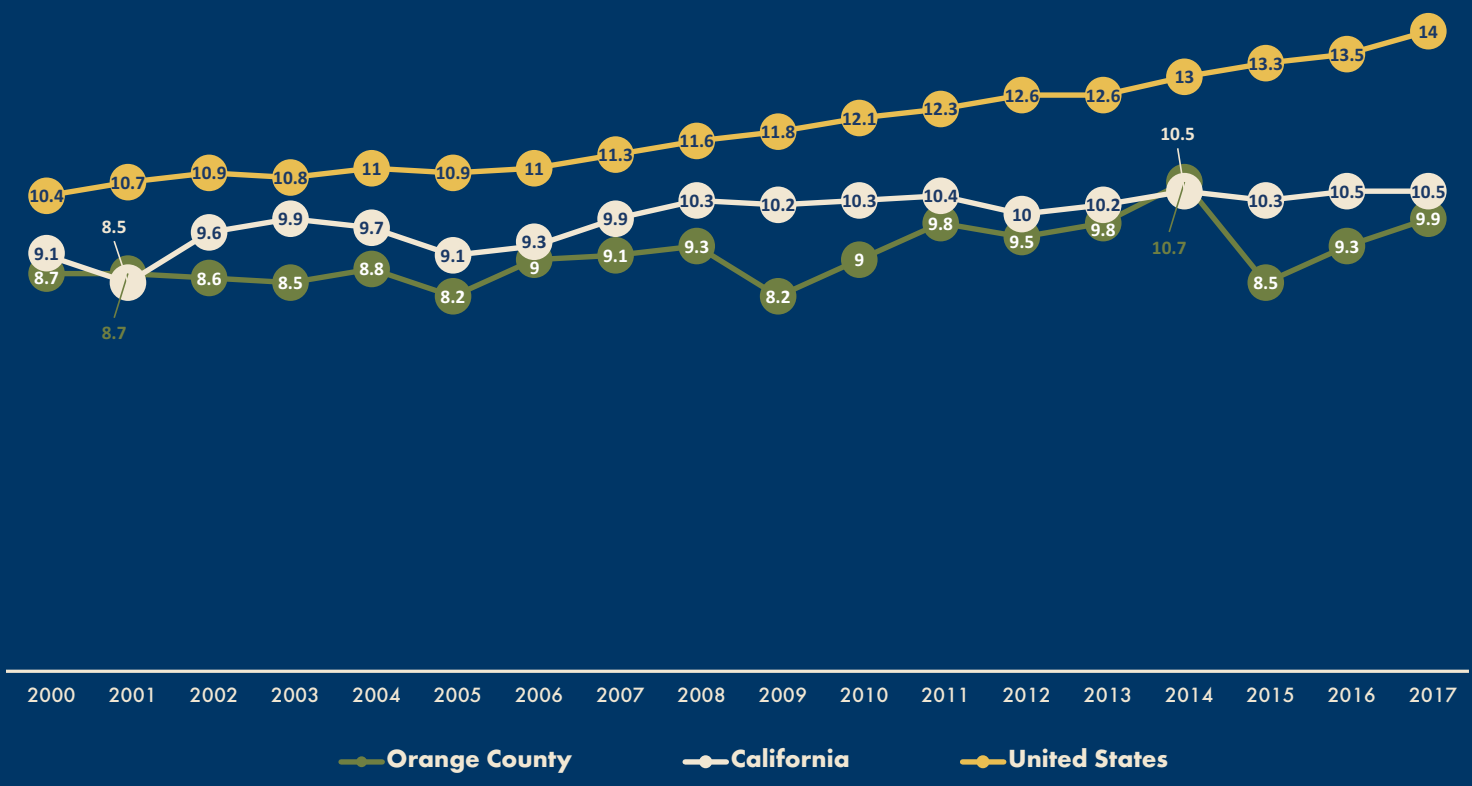
Rates for Orange County based on population data from CA Dept. of Finance P3 2010-2060 file, downloaded Aug. 2018 (years 2010-2017) and Sept. 2019 (year 2018); and from Vintage Bridged-Race Postcensal Population Estimates, U.S. Census Bureau (years 2000-2009).

**The rate in Figure 7 depicted by yellow line represents the number of deaths by the total Orange County population. The age-adjusted rate, depicted in green, accounts for annual differences in the population by age group by standardizing the rates based on the US population in 2000.*

Source: CDPH DSMF/VRBIS, 2000-2018.

Orange County is ahead in reporting data for the year 2018. In order to compare to the US and California, the following statistics and figures include only up to year 2017, which is the most current year of data available for the state and the nation. California and the US also experienced an overall increase in suicide death rates since the year 2000, however, their percent increase was larger. For California, the suicide death rate per 100,000 population increased by 15%, from 9.1 to 10.5. The US increase in suicide rate was a dramatic 35%, from 10.4 per 100,000 in 2000 to 14.0 per 100,000 in 2017 (**Figure 8**). Historically, Orange County recorded lower age-adjusted rates of suicide deaths compared to the nation and the state, increasing by 14% during this same period. However, from 2017 to 2018, the rate increased in Orange County by 9%, and it remains to be seen how the US and California will compare. Moreover, due to the relatively small number of cases, Orange County's rate tends to fluctuate more than that of the state of California or the nation.

Figure 8 Suicide Deaths, Age-Adjusted Rate* per 100,000, 2000-2017



Rates for Orange County based on population data from CA Dept. of Finance P3 2010-2060 file, downloaded Aug. 2018, for years 2010-2017 and downloaded Sept. 2019 for year 2018; and from Vintage Bridged-Race Postcensal Population Estimates, U.S. Census Bureau for years 2000-2009.

** The age-adjusted rates accounts for annual differences in the population by age group by standardizing the rates based on the US population in 2000.*

Source: CDPH DSMF/VRBIS, 2000-2017; CDC WONDER, 2000-2017.

Conclusion

While the suicide rate in Orange County has increased since 2000, it has not matched the increases observed for California and the nation through the year 2017. The most at-risk demographic groups in Orange County were predominantly White, male, middle-aged and older adults. Geographically, the cities most affected by higher suicide rates generally have larger populations fitting this demographic profile (55 years and older and White), usually coastal cities, compared to their inland neighbors. The method for suicide death differed greatly by age group, race/ethnicity, and gender. Most notably, adults 65 years and older more commonly died by firearms, while adolescents and younger adults more often died by methods relating to hanging/suffocation. Whites and males also more commonly used firearms, while Non-Whites and females tended to use other means of suicide. The period between 2014 and 2018, however, was the first reporting period since 2005 where suicide deaths by hanging/strangulation exceeded suicide deaths by firearms.

Suicide Prevention Efforts in Orange County

The OC Health Care Agency (HCA) funds and/or contributes funding to a broad spectrum of behavioral health services, including prevention, early intervention, outpatient treatment, residential treatment, crisis and navigation services. Together these services make up a system of care that promotes help-seeking behaviors, strengthens protective factors and resiliency for individuals and families, increases access to the most appropriate level of care, and supports recovery for all. Ultimately, these services strive to prevent untreated mental illness and substance use disorders, including the devastating consequences of these untreated conditions, such as suicide. Within this system of care are mental health services that specifically focus on suicide prevention, intervention and postvention.

Prevention Services

Prevention Services include campaigns, such as **Know the Signs**, and in Spanish, **Reconozca Las Senales**. These campaigns educate the public about the early warning signs of suicide, how to start a conversation when you are concerned about a loved one, and the resources that are available to help. Another prevention program is the **Directing Change Program and Film Contest**, which encourages youth and young adults

to learn about suicide and how to help a friend, through the creation of a short film. Furthermore, suicide prevention services include training, such as **SafeTALK**, which provides suicide alertness training, using the TALK steps: Tell, Ask, Listen and Keep Safe. A little training can make a big difference to increase a person's confidence to engage someone at risk.

Intervention Services

Intervention Services include the **National Suicide Prevention Lifeline**, which is a 24/7 toll-free suicide prevention hotline/chat/text service available to any Orange County resident experiencing a crisis or suicidal thoughts. Another intervention service is the **HCA's Crisis Assessment Team** (CAT), which provides 24-hour mobile response services to any individual of any age, including children and youth, who is experiencing a psychiatric emergency, including threats of self-harm. Services include mental health evaluation, crisis intervention, family support/education and community referrals. Furthermore, the **Crisis Response Network Program** coordinates and manages a roster of trained crisis responders who are ready to mobilize and assist schools and the community in times of emergency or threat.

Postvention Services

Postvention Services, such as the **Survivor's Support Services**, provide support after a suicide attempt or a suicide death has occurred. Services include individual and family suicide bereavement counseling, supports groups for teens and adults, and suicide prevention training.

Additional Services

Beyond these efforts, the HCA funds prevention programs that use a variety of strategies to further mitigate the risk of suicide and other harmful behaviors, including: bullying/cyberbullying and substance use disorders. For example, school-based classroom mental health wellness curriculum develops healthy coping skills in students and educates them about unhealthy behaviors. In addition, family strengthening programs support effective parenting and improve family communication. Furthermore, a continuum of telephone support includes the Orange County **WarmLine**, which provides telephone-based support, with extended nighttime and weekend hours to anyone struggling with mental health or substance use issues. The WarmLine works closely with the Suicide Prevention Lifeline to ensure the most appropriate level of support to callers.

On March 12, 2019, the Orange County Board of Supervisors (Board) allocated $600,000 in funding to create a coordinated suicide prevention effort countywide to raise awareness and increase access to services through Be Well OC for a greater collective impact in reducing suicides. As a result, a Be Well OC Suicide Prevention Leadership Committee has been established through this public/private partnership with representation from Board offices, HCA staff and other agencies, schools, hospitals, faith-based organizations and community-based organizations. This committee has been meeting monthly to discuss suicide prevention priorities for Orange County in addition to aligning and expanding current suicide prevention efforts.

Through community stakeholder involvement, Be Well OC has been involved in a variety of community efforts to get the word out about mental health and suicide prevention awareness. These efforts include monthly suicide prevention forums happening throughout the county on the second Saturday of the month, community ambassadors promoting suicide awareness during Suicide Prevention Week, the development and promotion of newly created public service announcements films, and a large-scale community event, Cultivating Hope in the Community, that occurred in September 2019. Through these and other efforts, it is our hope that we together as a community can eliminate preventable deaths and suffering. To contact or learn more about the programs mentioned above, please see the Resources information.

Resources

National Suicide Prevention Lifeline

Phone: (800) 273-TALK (800) 273-8255
Crisis Chat: www.didihirsch.org/chat
Crisis Text for deaf and hard-of-hearing: text HEARME to 839863
The National Suicide Prevention Lifeline provides 24-hour, immediate, confidential over-the-phone suicide prevention services to anyone who is in crisis or experiencing suicidal thoughts. The line is also available to support those concerned about others who may be at-risk.

OC WarmLine

Phone: (877) 910-WARM (877) 910-9276
Website: www.namioc.org
The WarmLine provides telephone-based, non-crisis support for anyone struggling with mental health and/or substance use issues.

OC Links

Phone: (855) OC-LINKS (855) 625-4657
Website: www.ochealthinfo.com/oclinks
OC Links is an information and referral phone and online chat service to help navigate the Behavioral Health Services (BHS) system within the OC Health Care Agency for the County of Orange.

Crisis Assessment Team (CAT)

Phone: (866) 830-6011
Children's CAT Website: www.ochealthinfo.com/bhs/about/cys/crisis_services
Adult CAT Website: www.ochealthinfo.com/bhs/about/aoabh/catpert
The Crisis Assessment Team assists individuals of all ages who are having a psychiatric emergency, are at psychiatric risk, as well as anyone needing psychiatric hospitalization. In addition, CAT members provide information and referrals for family members to community support services.

Survivor Support Services

Phone: (714) 547-0885
Website: www.didihirsch.org/suicide-prevention/survivor-support-services-orange-county
The Survivor Support Services program provides support for those who have lost a loved one to suicide and those who have survived a suicide attempt. The program educates the community on suicide prevention and intervention. These services include crisis support bereavement groups.

Know the Signs

Website: www.suicideispreventable.org
Spanish Website: www.elsuicidioesprevenible.org
Learn about more signs of suicide, the words to use to voice concern to those who may be thinking of suicide, and how to get help at www.suicideispreventable.org.

Directing Change Program and Film Contest

Website: www.directingchange.org
Engages young adults to learn about the warning signs for suicide, the importance of mental health, and how to help a friend, through the creation of short films. These films are used in schools and communities to raise awareness and start conversations about these topics. To view films, visit the website above.

Be Well OC

Website: www.bewelloc.org
Be Well OC is a community of caregivers in Orange County coming together in common purpose. Organizations from public, private, academic, faith and others are uniting to positively impact the mental health and wellbeing of all in Orange County. Suicide Prevention is an area of focus within this countywide effort.

Appendix A Orange County Suicide Deaths by International Clas

ICD-10	Final Cause of Death	2014
X60-X69	**Poisoning**	**86**
X60	By other non-opioid drugs (includes NSAIDS, salicylates)	1
X61	By antiepileptic, sedatives-hypnotic, antiparkinsonian, psychotropic drugs	16
X62	By narcotic and psychodysleptics (hallucinogenic) drugs	10
X63	By other drugs acting on autonomic nervous system	0
X64	By other and/or unspecified drugs (includes anaesthetics and therapeutic gases)	47
X65	By alcoholic substances	0
X66	By organic solvents and halogenated hydrocarbons (includes petroleum derivatives)	1
X67	By other gases and their vapors (includes carbon monoxide and gas exhaust)	10
X69	By other unspecified chemicals and noxious substances (includes glues, acids, and poisonous organic materials)	1
X70	**Hanging, Strangulation and Suffocation**	**108**
X72-X75	**Firearms and Explosives**	**112**
X72	By handgun discharge	76
X73	By rifle, shotgun and larger firearm discharge	17
X74	By other unspecified firearm discharge	18
X75	By explosive material	1
X78-X79	**Cutting/Piercing/Blunt Force**	**14**
X78	By sharp object	13
X79	By blunt object	1
X80-X81	**Jumping**	**20**
X80	By jumping from high place	14
X81	By jumping or lying before moving object	6
E87.0, R99, X71, X76, X82-84, X87	**Other or Unspecified**	**11**
R99, E87.0	Ill-defined, unknown, other cause of mortality*	0
X71	By drowning or submersion	2
X76	By exposure to smoke, fire and flames	1
X82	By crashing motor vehicle	4
X83	By other specified means (includes crashing aircraft and electrocution)	1
X84	By unspecified means	1
Y87.0	Sequelae of self-harm	2
	TOTAL	**351**

* *Coroner identified manner of death as suicide, despite ICD-10 code not specific to suicide. The final cause of death diagnoses for these cases were hyperosmolality and hypernatremia [due to self-starvation] (E87.0), and ill-defined or unknown cause (R99).*

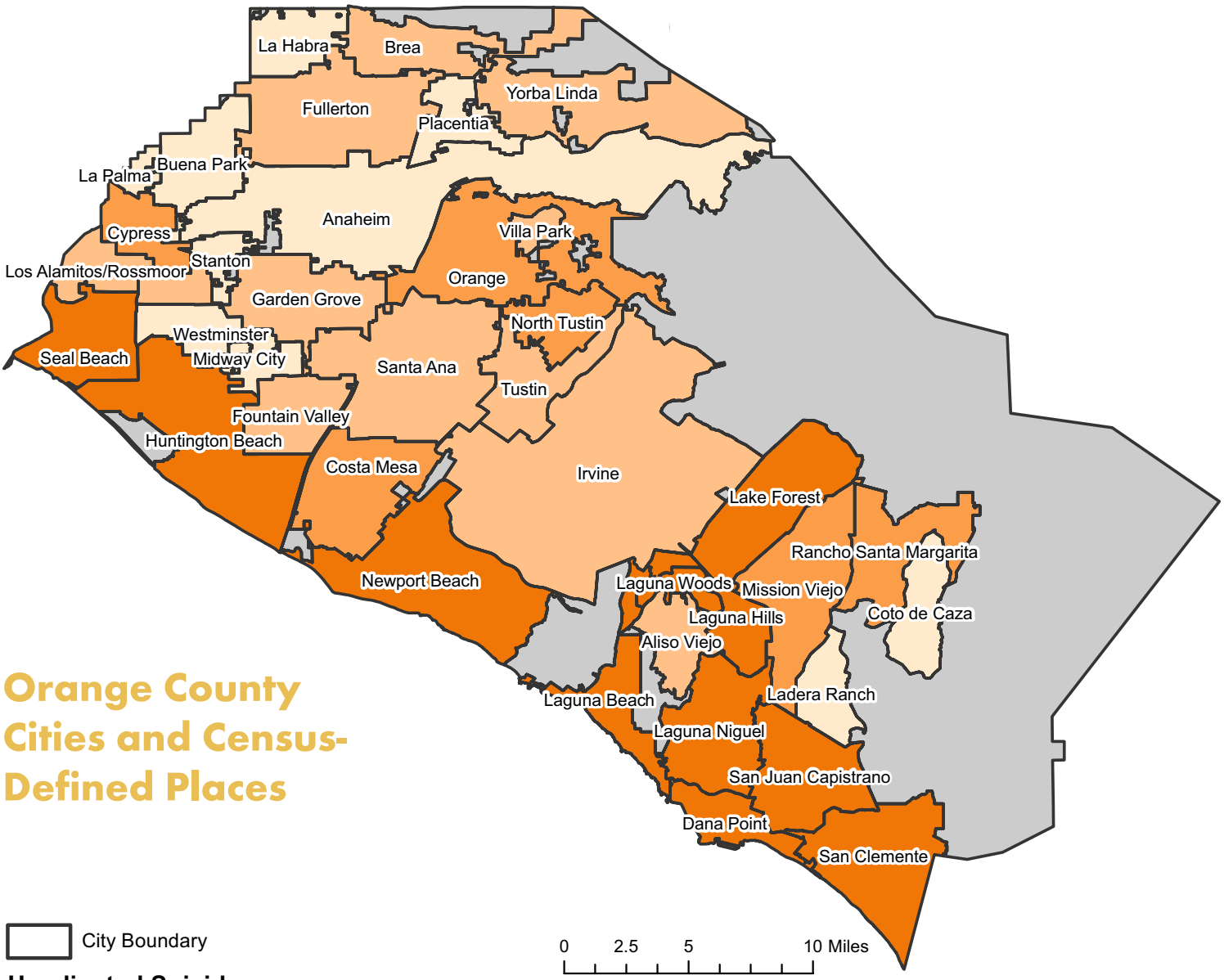
ssification of Disease (ICD) - 10 Code and Year

2015	2016	2017	2018	TOTAL	5-Year Average	Percent of Total
74	**79**	**58**	**65**	**362**	**72.4**	**22.0%**
3	1	1	3	9	1.8	0.5%
7	7	8	10	48	9.6	2.9%
7	2	7	4	30	6	1.8%
1	1	0	1	3	0.6	0.2%
40	51	30	35	203	40.6	12.3%
0	1	1	0	2	0.4	0.1%
0	1	0	3	5	1	0.3%
14	14	11	7	56	11.2	3.4%
2	1	0	2	6	1.2	0.4%
81	**82**	**110**	**148**	**529**	**105.8**	**32.1%**
92	**102**	**107**	**103**	**516**	**103.2**	**31.3%**
68	77	77	82	380	76	23.1%
11	14	16	10	68	13.6	4.1%
13	11	14	11	67	13.4	4.1%
0	0	0	0	1	0.2	0.1%
9	**9**	**10**	**14**	**56**	**11.2**	**3.4%**
9	9	10	14	55	11	3.3%
0	0	0	0	1	0.2	0.1%
24	**30**	**28**	**30**	**132**	**26.4**	**8.0%**
15	21	20	18	88	17.6	5.3%
9	9	8	12	44	8.8	2.7%
7	**14**	**12**	**9**	**53**	**10.6**	**3.2%**
0	2	0	0	2	0.4	0.1%
3	7	6	3	21	4.2	1.3%
2	1	1	6	11	2.2	0.7%
2	3	2	0	11	2.2	0.7%
0	0	0	0	1	0.2	0.1%
0	1	2	0	4	0.8	0.2%
0	0	1	0	3	0.6	0.2%
287	**316**	**325**	**369**	**1,648**	**329.6**	**100.0%**

Source: CDPH DSMF/VRBIS, 2014-2018

Appendix B

Five-Year Average Suicide Rate by City and Census-Defined Places



Orange County Cities and Census-Defined Places

City Boundary

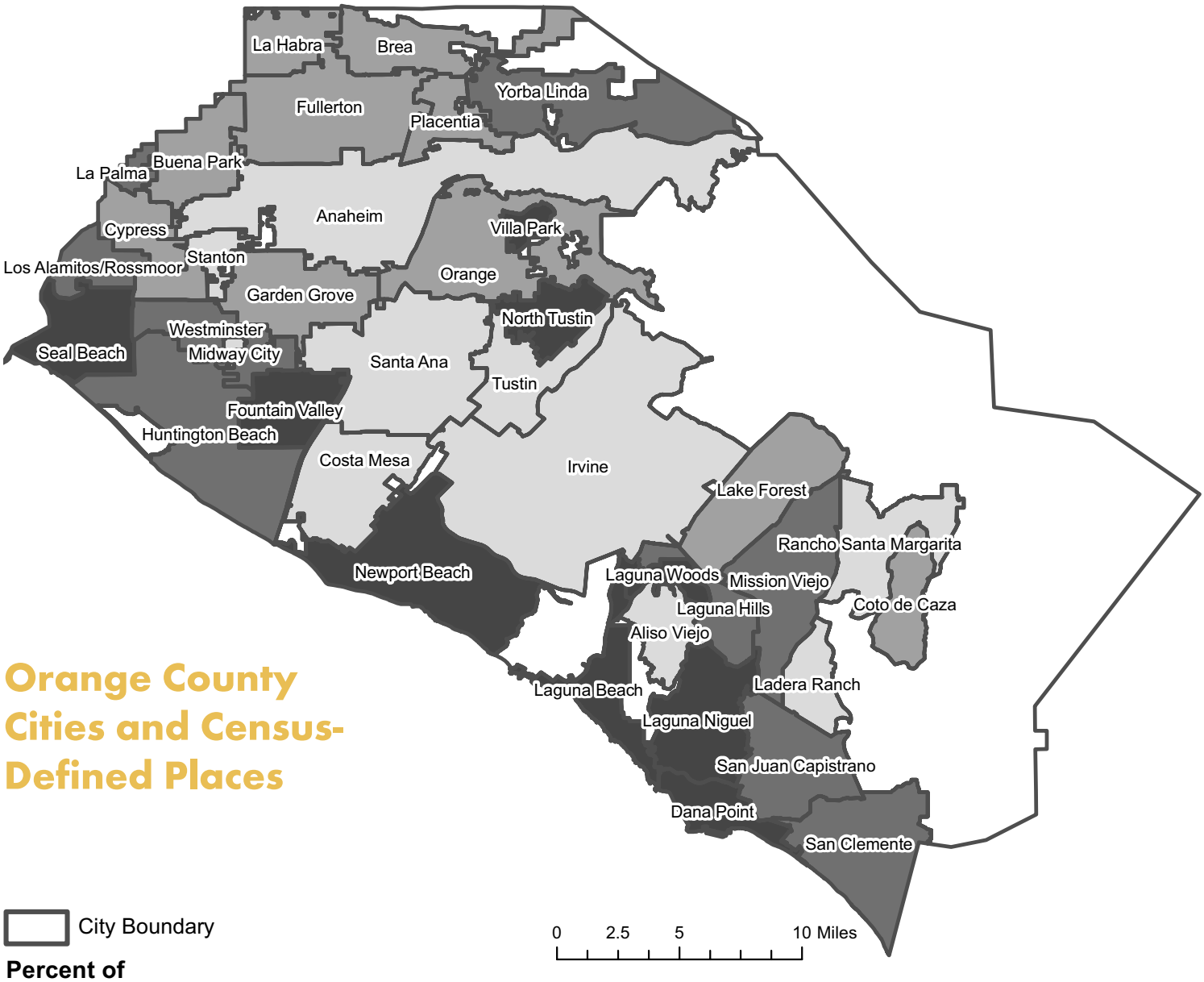
Unadjusted Suicide Rate per 100,000 population

- <8.4
- 8.4 - 10.3
- 10.4 - 12.6 *(Range exceeds Orange County average suicide rate at 10.3)*
- >12.6
- Unincorporated/No Data

Source: CDPH DSMF/VRBIS, 2014-2018

Appendix C

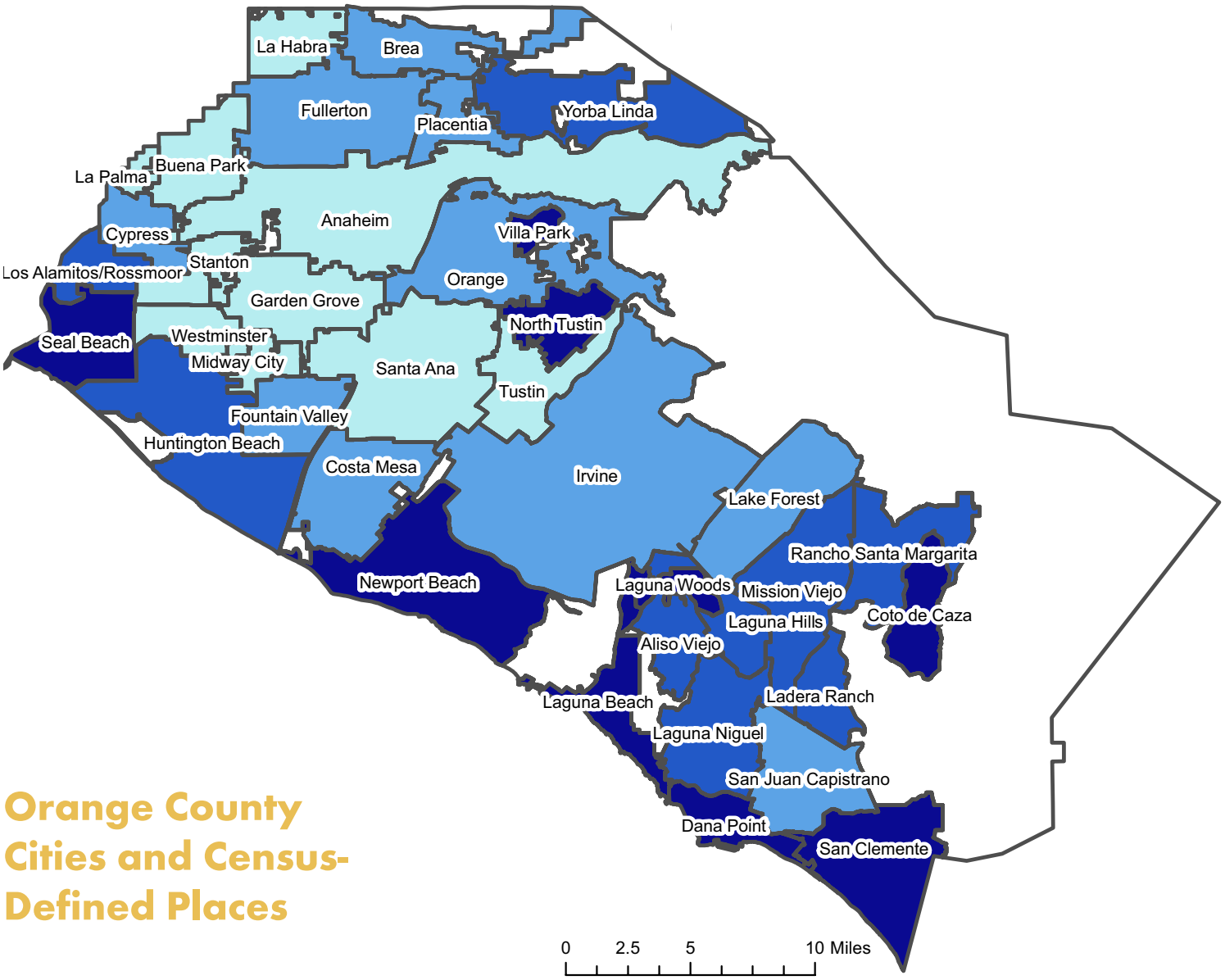
Percent of Population 55 Years and Older by City and Census-Defined Places



Source: American Community Survey, 2016

Appendix D

Percent of Non-Hispanic White Population by Cities and Census-Defined Places



Orange County Cities and Census-Defined Places

City Boundary

Percent of Non-Hispanic White population

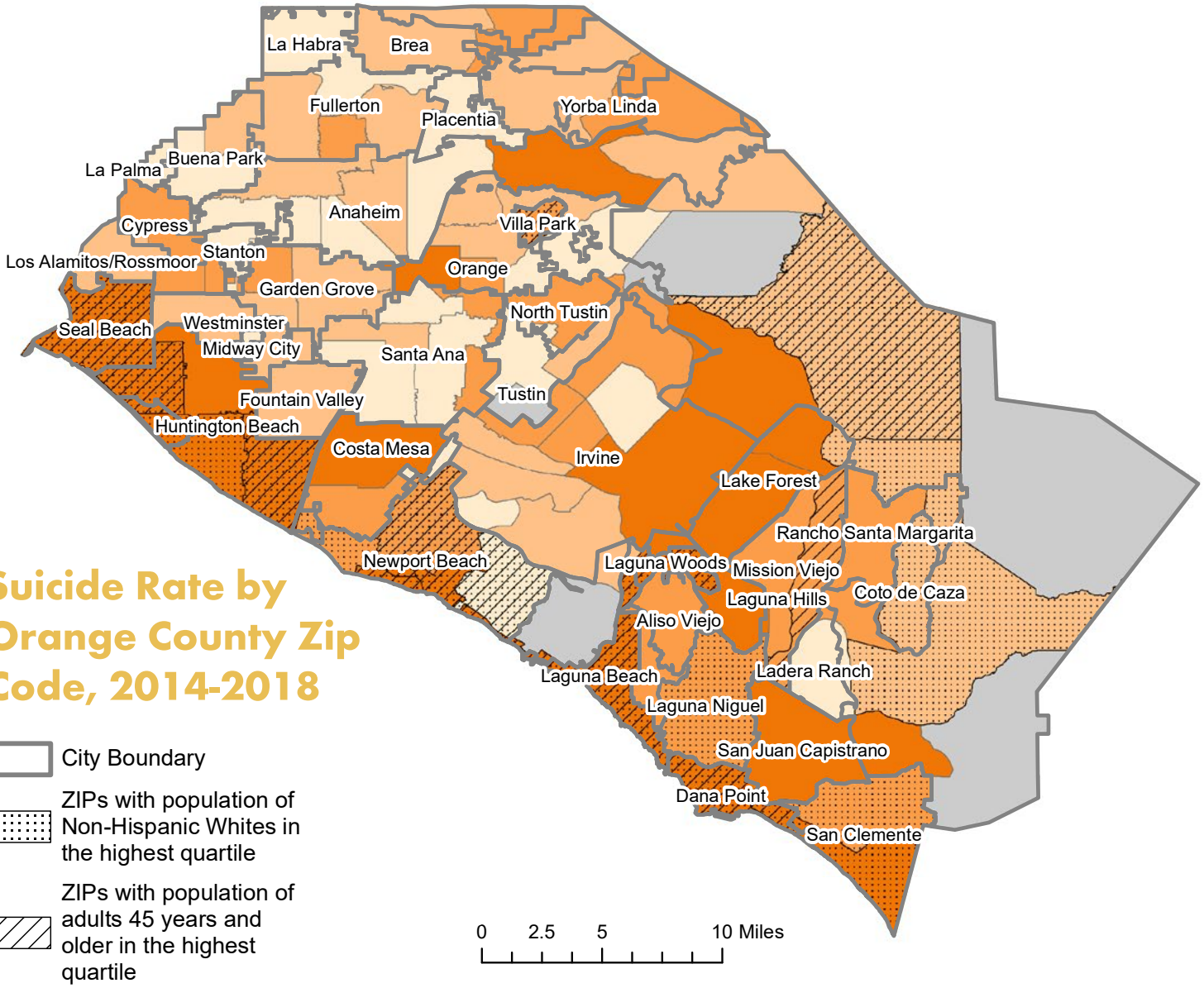
- <29.9%
- 29.9% - 57.5%
- 57.6% - 67.7%
- >67.7%

Source: American Community Survey, 2016

Appendix E

Five-Year Average Suicide Rate by ZIP Code,

includes highest quartiles for Non-Hispanic Whites and population 45 years and older



Suicide Rate by Orange County Zip Code, 2014-2018

City Boundary

ZIPs with population of Non-Hispanic Whites in the highest quartile

ZIPs with population of adults 45 years and older in the highest quartile

Unadjusted Suicide Rate per 100,000 Population

- < 38.8
- 38.8 - 49.2
- 49.3 - 63.7
- >63.7
- No/Missing Data

Source: CDPH DSMF/VRBIS, 2014-2018; American Community Survey 5-year estimates, 2016; Claritas, 2016

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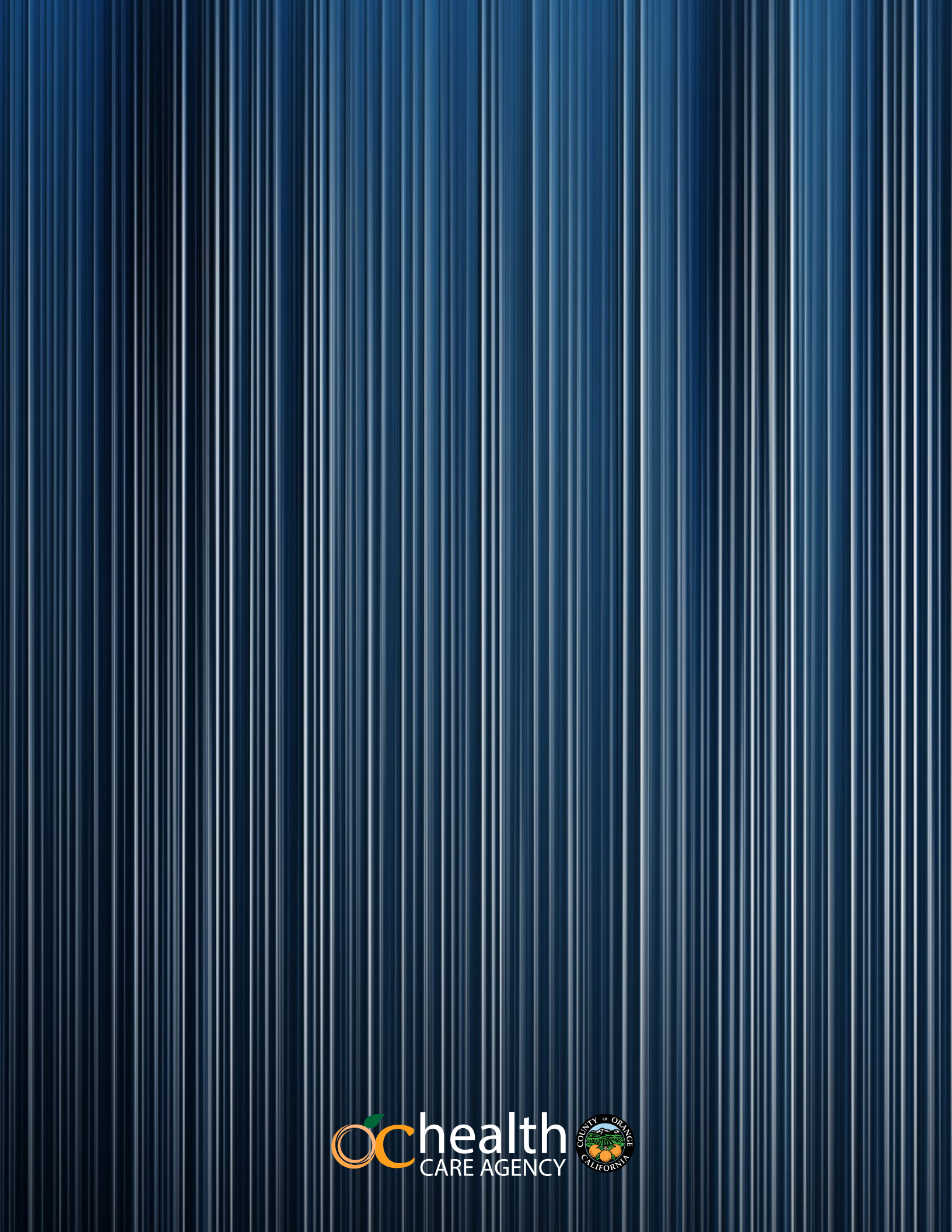
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