

ORANGE COUNTY HEALTH CARE AGENCY

2022

DRUG AND ALCOHOL DEATHS AMONG YOUTHS AND YOUNG ADULTS:

The Impact of Synthetic Opioids During the Pandemic



Unprecedented Increases in Mortality Among Young OC Residents

During the COVID-19 pandemic years of 2020 and 2021, drug and alcohol-related deaths increased notably across the county. The number of deaths from drugs and alcohol among all ages increased by 32% from 2019 to 2020, and another 30% from 2020 to 2021.

However, the most dramatic changes in mortality were among youths in Orange County.

For residents ages 10-17 years, the number of deaths from drugs and alcohol increased by 800% from 2019 to 2020, and another 122% from 2020 to 2021. Although the number of deaths were relatively small compared to other age groups, the fact that this age group would normally have 0 or 1 deaths in pre-pandemic years, compared to 9 deaths (in 2020) and 20 deaths (in 2021), makes this rise in mortality a conspicuous and concerning trend.

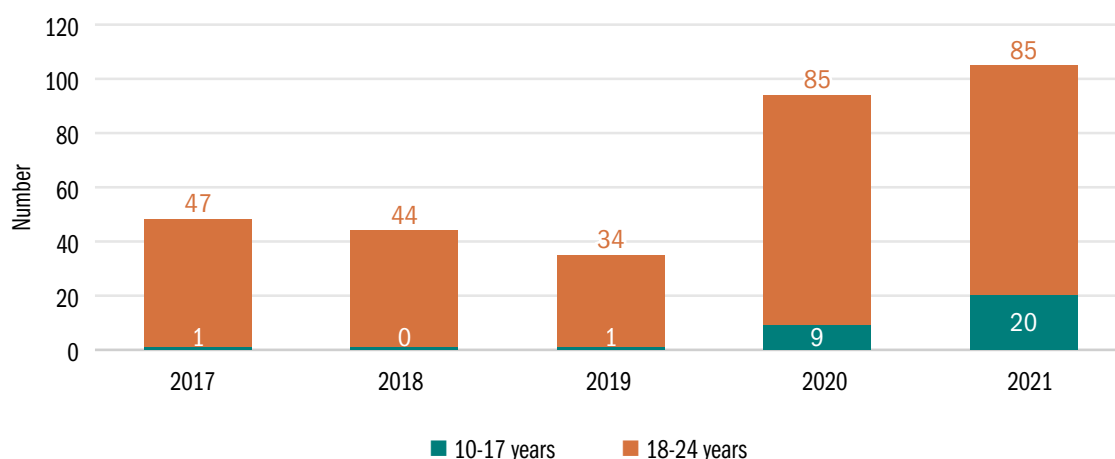
For residents ages 18 to 24 years, the number of deaths from drugs and alcohol increased by 150% from 2019 to 2020. Interestingly, the number of deaths remained constant from 2020 to 2021 in this age group.

All other age groups increased by 51% or less from 2019 to 2020 (see *Table 1 and Figure 1* for further details).

TABLE 1: NUMBER OF DEATHS FROM DRUG AND ALCOHOL-RELATED CAUSES

Age	2017	2018	2019	2020	2021	Percent Change	
						2019 to 2020	2020 to 2021
<10 years	0	2	0	1	0	na	na
10-17 years	1	0	1	9	20	800%	122%
18-24 years	47	44	34	85	85	150%	0%
25-34 years	90	98	126	190	241	51%	27%
35-44 years	99	107	126	157	286	25%	82%
45-54 years	154	160	170	207	276	22%	33%
55-64 years	194	218	195	235	288	21%	23%
65-74 years	97	88	89	114	111	28%	-3%
75-84 years	29	37	30	26	32	-13%	23%
85+ years	11	10	11	11	7	0%	-36%
Total OC Residents	722	764	782	1,035	1,346	32%	30%

FIGURE 1: DRUG AND ALCOHOL DEATHS AMONG RESIDENT YOUTHS AND YOUNG ADULTS IN ORANGE COUNTY



Drug and Alcohol Deaths Among 10–17-year-olds

Prior to 2020, deaths from drugs and alcohol among 10- to 17-year-olds were relatively sparse (no more than 1 per year between 2017 and 2019). However, by 2020 there were nine deaths from drugs or alcohol and by 2021 there were 20 deaths.

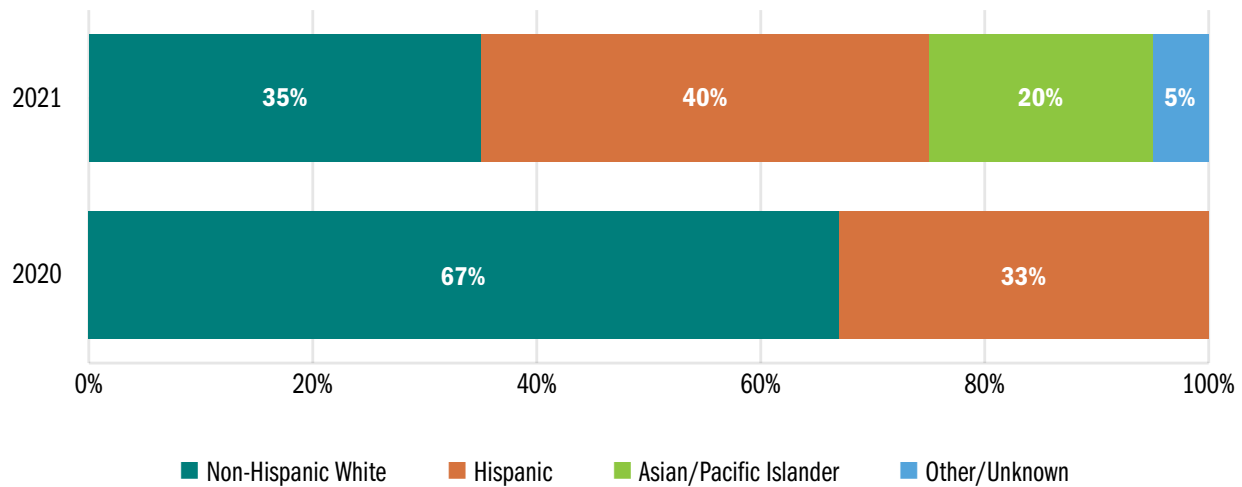
In 2020, two-thirds of the deaths were among males, and two-thirds were among non-Hispanic white youths. By 2021, the number of deaths was nearly evenly split among males and females, and the proportion of deaths to non-white youths surpassed the proportion of deaths among white youths. Specifically, 40% of deaths were among Hispanics, 20% among Asians and Pacific Islanders, and 5% among Black residents (see Table 2 and Figure 2 for further details).

TABLE 2: DRUG AND ALCOHOL DEATHS AMONG 10-17-YEAR-OLDS **2020** **2021** **2020** **2021**

Sex	Percent		Rate per 100,000 Population*	
Male	67%	55%	3.5	6.5
Female	33%	45%	1.9	5.6
Race/Ethnicity				
Non-Hispanic White	67%	35%	6.0	6.9
Hispanic	33%	40%	1.9	5.1
Asian/Pacific Islander	0%	20%	0.0	7.7
Black	0%	0%	0.0	0.0
Other/Unknown	0%	5%	0.0	6.7
Total	100%	100%	2.7	6.1
Total (number)	9	20		

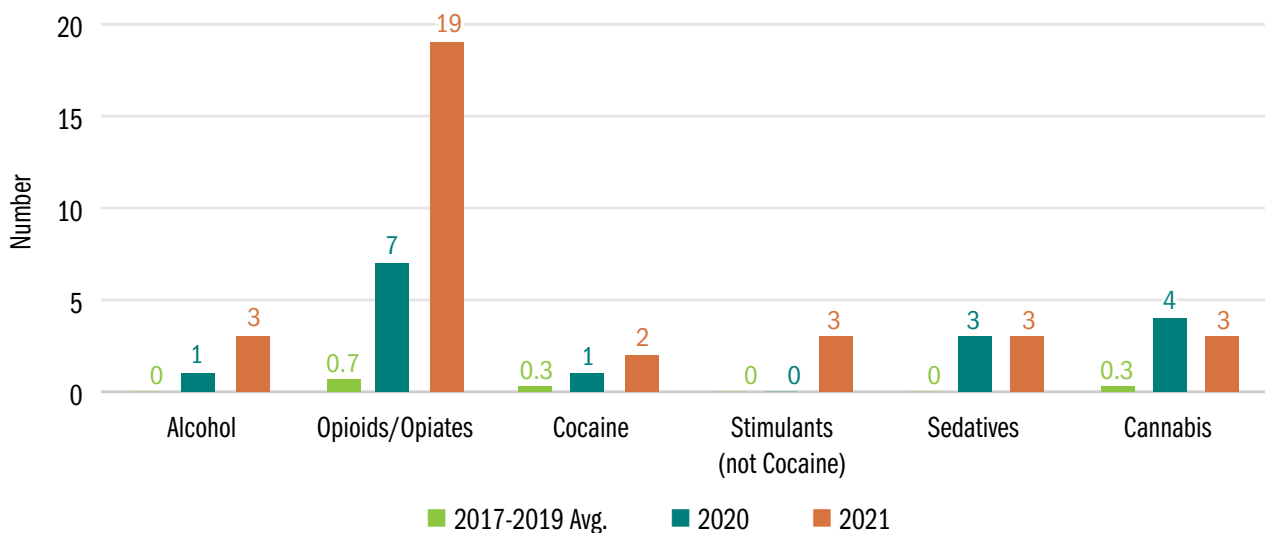
*Rates in this table (with the exception of the total for 2021) are unstable, based on counts <20

FIGURE 2: DRUG AND ALCOHOL DEATHS BY RACE/ETHNICITY, 10-17-YEAR-OLDS



When looking at the type of drug and alcohol substances present at the time of death, the most frequently noted, by a large margin, were opioids/opiates. In 2020, opioids were noted in seven deaths (78% of deaths), and in 2021 that number rose to 19 (95%). Other substances present were alcohol, cannabis, sedatives, stimulus, and cocaine. None of these other (non-opioid) substances, however, was present in more than 5 deaths in a year. Note that one death can be counted towards two or more substances because multiple substances can be present at the time of death (see Figure 3 for further details).

FIGURE 3: NUMBER OF DEATHS BY SUBSTANCES PRESENT AT TIME OF DEATH, 10-17-YEAR-OLDS



Drug and Alcohol Deaths Among 18–24-year-olds

Deaths from drugs and alcohol among 18- to 24-year-olds numbered between 30 and 50 annually in the period between 2017 and 2019. By 2020, the number climbed to 85 deaths, an increase of 150%. Interestingly, unlike among 10–17-year-olds, this number did not further increase in 2021, but remained exactly at 85.

The proportion of deaths by sex was not notably impacted by the increase in mortality in 2020. The proportion of deaths among males fluctuated between just under 70% to 85%. Before 2020, the majority of drug and alcohol deaths were among non-Hispanic whites, ranging between approximately 60% and 75%. By 2020, the number of deaths among Hispanics sharply increased by 344% from 2019. Thus, the proportion of deaths shifted, with 47% among Hispanic young-adult residents, 41% non-Hispanic whites, 6% Asian/Pacific Islanders, 5% other (and unknown) and 1% Black residents. These proportions did not shift greatly between 2020 and 2021 (see *Table 3 and Figure 4 for further details*).

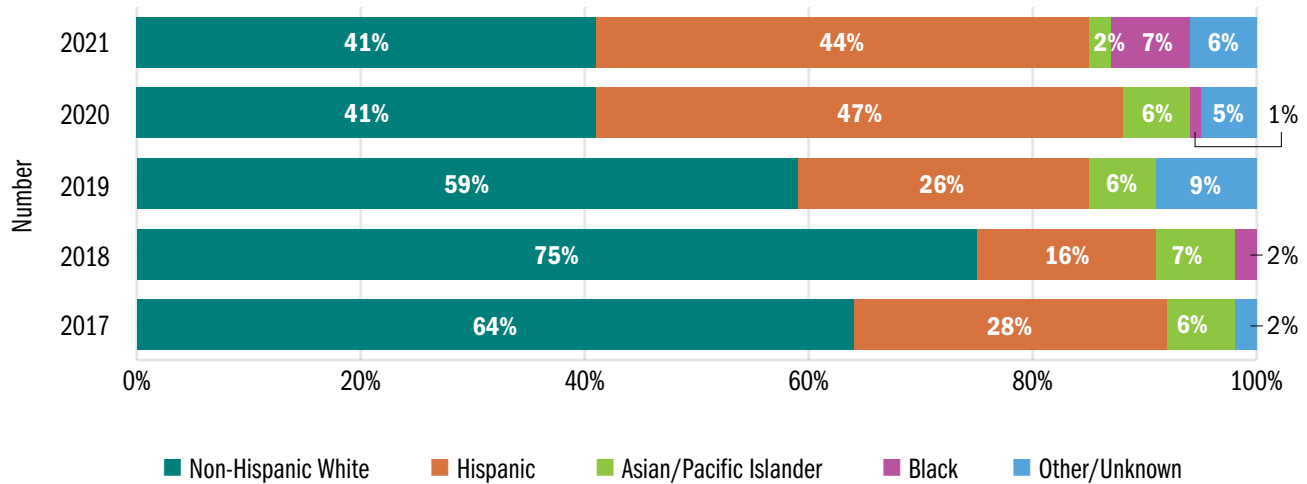
TABLE 3: DRUG AND ALCOHOL DEATHS AMONG 18-24 YEARS

	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021
Sex	Percent					Rate per 100,000 Population*				
Male	81%	68%	68%	85%	73%	21.8	17.4	13.5	42.8	37.1
Female	19%	32%	32%	15%	27%	5.5*	8.6*	6.9*	8.2*	14.6
Race/Ethnicity										
Non-Hispanic White	64%	75%	59%	41%	41%	25.9	29.1	18.0	32.2	32.7
Hispanic	28%	16%	26%	47%	44%	8.7*	4.7*	6.1*	27.5	25.4
Asian/Pacific Islander	6%	7%	6%	6%	2%	5.4*	5.5*	3.7*	9.2*	3.7*
Black	0%	2%	0%	1%	7%	0.0*	19.3*	0.0*	20.4*	124.2*
Other/Unknown	2%	0%	9%	5%	6%	7.5*	0.0*	22.3*	29.6*	36.8*
Total	100%	100%	100%	100%	100%	13.9	13.1	10.3	26.0	26.2
	47	44	34	85	85					

*Unstable rates, based on counts <20



FIGURE 4: DRUG AND ALCOHOL DEATHS BY RACE/ETHNICITY, 18-24-YEAR-OLDS



When looking at the types of drug and alcohol substances present at the time of death among 18–24-year-olds, the most frequently noted were opioids/opiates, much like among the younger age group. Between 2017 and 2019, opioids were present in approximately 80% to 90% of drug and alcohol-related deaths. Similarly, in 2020, opioids were noted in 89% of deaths, rising to 94% in 2021. The presence of sedatives and stimulants were also common, with 37% of deaths in 2020 involving sedatives, and 26% involving stimulants in that same year. By 2021, the proportion of sedatives in drug and alcohol deaths fell to 21%, while stimulants remained somewhat constant, at 27%. Other drugs and substances, including cocaine, cannabis, and alcohol, were each present in approximately 25% of deaths or fewer for both 2020 and 2021 (see Figure 5 and Table 4 for further details).

FIGURE 5: NUMBER OF DEATHS BY SUBSTANCES PRESENT AT TIME OF DEATH, 18-24-YEAR-OLDS

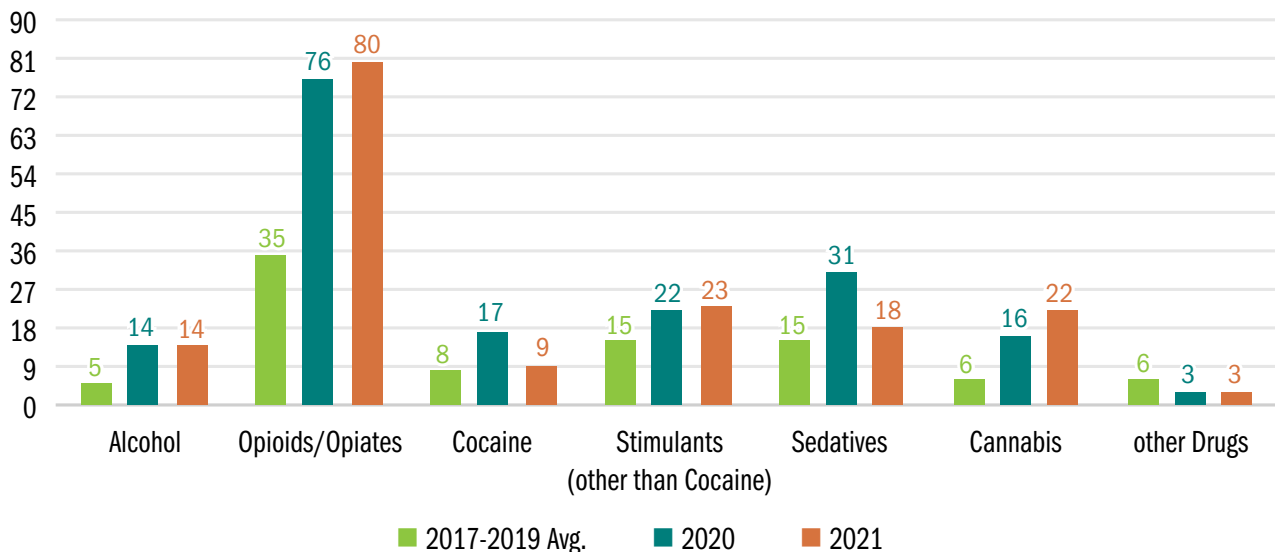


TABLE 4: PERCENTAGE OF DEATHS BY SUBSTANCES* PRESENT AT TIME OF DEATH AMONG 18–24-YEAR-OLDS

Substance	2017	2018	2019	2020	2021
Alcohol (Any)	14.9%	6.8%	17.6%	16.5%	16.5%
Opioids/Opiates	80.9%	90.9%	79.4%	89.4%	94.1%
Cocaine	21.3%	18.2%	17.6%	20.0%	10.6%
Stimulants (other than Cocaine)	40.4%	34.1%	29.4%	25.9%	27.1%
Hallucinogens	0.0%	0.0%	0.0%	0.0%	1.2%
Sedatives	46.8%	34.1%	26.5%	36.5%	21.2%
Cannabis	8.5%	18.2%	20.6%	18.8%	25.9%
Other Drugs	14.9%	13.6%	11.8%	3.5%	3.5%

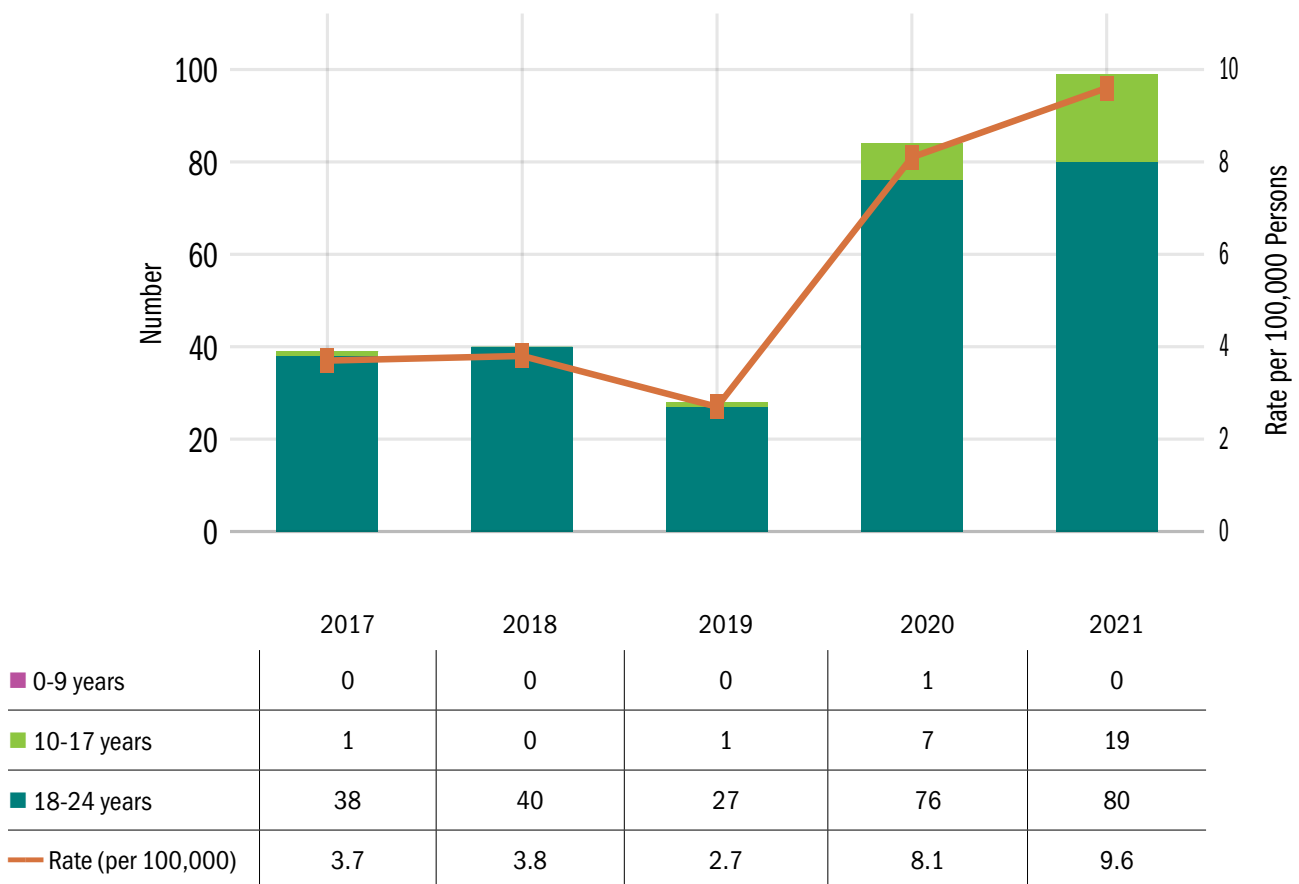
*Includes effects from substances, specifically physical disease from alcohol
 Percentages in table are from the total number of drug related deaths to 18–24-year-olds in the year and may not add to 100%



Opioid-Related Overdose Deaths

Prior to 2020, there was a stable or decreasing trend in opioid-related overdose deaths among youth (under 18 years of age) and young adults (18-24 years of age). However, 2020 marked a sharp increase in opioid-related overdose deaths among youth and young adults with 2021 continuing the pattern (Fig. 6). The group of 10-17 years of age saw a 1,800% increase in opioid-related overdose deaths from 2017 (n=1) to 2021 (n=19 deaths). Historically, the opioid-related overdose deaths in this age group hovered around 1. Opioid-related overdose deaths in the 18-24 years of age group jumped 110% from 38 deaths in 2017 to 80 deaths in 2021. The opioid-related overdose death rate in youth and young adults increased over 2.5 times in the span of five years.

FIGURE 6: OPIOID-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG ADULTS (2017-2021)



An overwhelming majority of opioid-related overdose deaths among youth and young adults were accidental. The calendar year 2021 demonstrated the highest number of opioid-related overdose deaths for individuals under 25 (n=99) in this time frame and, strikingly, 99% were accidental (n=98) and 1% was intentional (n = 1; Table 5).

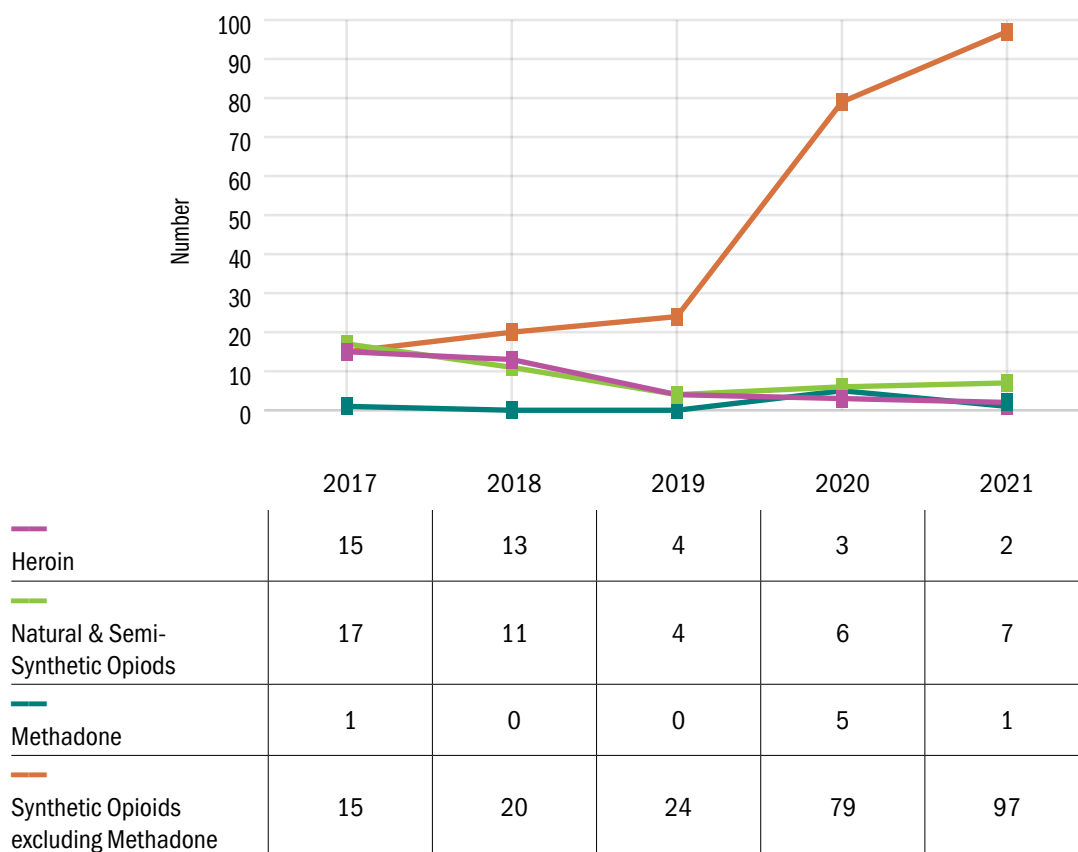
TABLE 5: INTENT OF OPIOID-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG ADULTS (2017-2021)

	2017	2018	2019	2020	2021	TOTAL
Accidental	94.9%	97.5%	92.9%	92.9%	99.0%	95.9%
Intentional	5.1%	0.0%	3.6%	3.6%	1.0%	2.4%
Undetermined	0.0%	2.5%	3.6%	3.6%	0.0%	1.7%

Due to rounding some percentages may add up to slightly more than 100.0%.

Figure 8 presents the types of opioids involved in opioid-related overdose deaths among youth and young adults. Heroin and natural/semi-synthetic opioids demonstrated a decreasing trend from 2017 (n=15 and 17, respectively) to 2021 (n=2 and 7, respectively) and methadone was relatively stable with the exception of 2020. However, synthetic opioids (excluding methadone) saw nearly a 550% jump from 2017 (n=15) to 2021 (n=97) with the sharpest increase in 2020 (n=79).

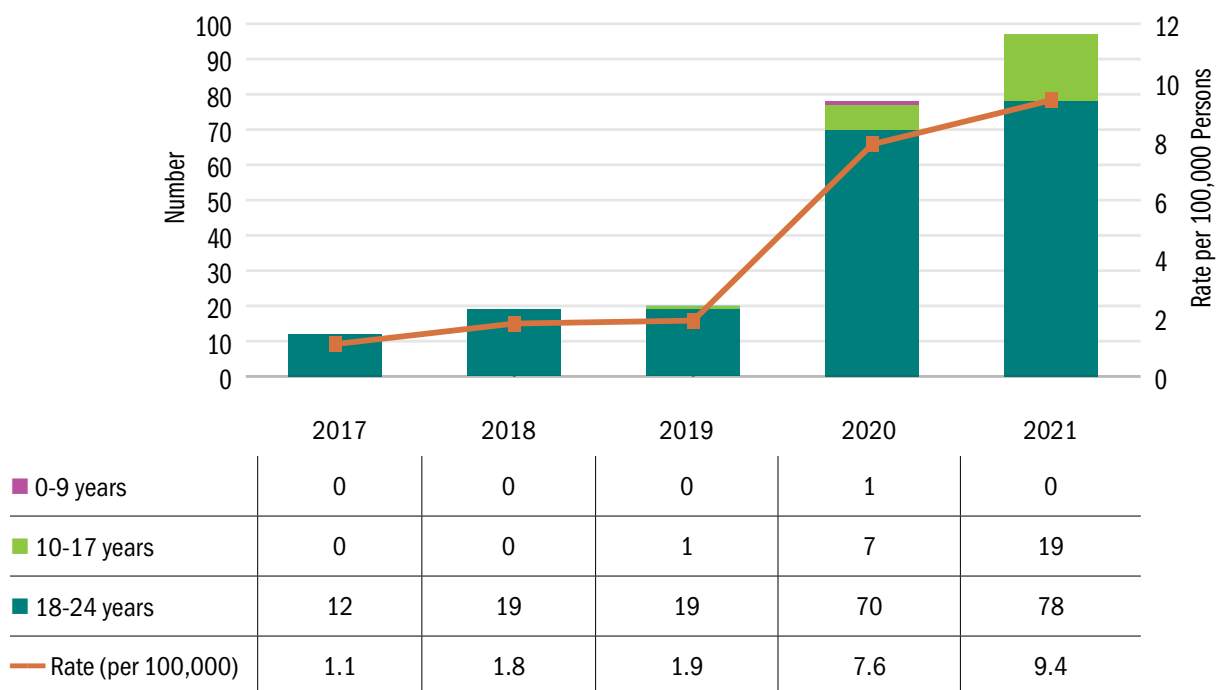
FIGURE 8: TYPES OF OPIOIDS INVOLVED IN OPIOID-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG ADULTS (2017-2021)*



*Does not sum to total; More than one type of opioid may be involved prior to overdose

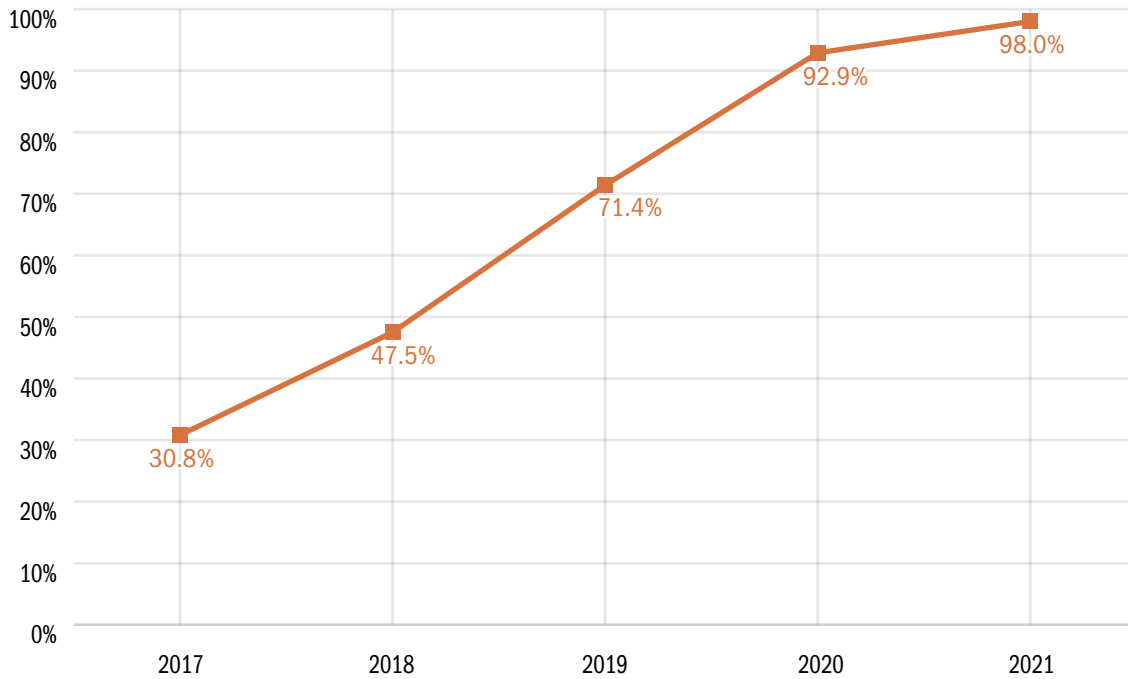
A major area of concern is with the analysis of fentanyl-involved overdose deaths among youth and young adults (Fig. 9). Fentanyl was nonexistent among overdose deaths in youth under 18 years of age until 2019. Youth in the 10-17 year age group saw a rise in fentanyl-involved overdose deaths from 0 deaths in 2017 to 19 deaths in 2021 and even 1 death occurring in 2020 for the under 10 age group. Young adults experienced a 550% increase in fentanyl-involved overdose deaths from 2017 (n=12) to 2021 (n=78). The overall rate for fentanyl-involved overdose deaths rose 8.5-fold within the 5-year timeframe from 1.1 per 100,000 persons to 9.4 per 100,000 persons.

FIGURE 9: FENTANYL-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG ADULTS (2017-2021)



The percentage trend of fentanyl involvement in opioid-related overdose deaths among youth and young adults shows that fentanyl has moved from being found in less than a third of opioid-related overdose deaths in 2017 to being involved in nearly all opioid-related overdose deaths (98%) in 2021.

FIGURE 10: PERCENTAGE OF FENTANYL INVOLVED IN OPIOID-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG (2017-2021)



REFERENCE TABLE: REFERENCE TABLE. OPIOID-RELATED OVERDOSE DEATHS AMONG YOUTH AND YOUNG ADULTS (2017-2021)

	2017	2018	2019	2020	2021	TOTAL
Sex						
Male	6	13	10	13	30	72
Female	33	27	18	71	69	218
Race/Ethnicity						
Non-Hispanic White	26	31	17	38	40	152
Hispanic	12	6	8	38	43	107
Asian/Pacific Islander	0	2	1	5	5	13
Black	0	1	0	1	6	8
Other	1	0	2	2	5	10
Age						
0-9 Years	0	0	0	1	0	1
10-17 Years	1	0	1	7	19	28
18-24 Years	38	40	27	76	80	261
Total Deaths	39	40	28	84	99	290
Rate (per 100,000)	3.7	3.8	2.7	8.1	9.6	

Data Source

The data used in this study are from the California Comprehensive Death File (CCDF) from the California Department of Public Health (CDPH) for 2017 through 2021. The CCDF contains multiple causes of death information. Causes of death from drugs or alcohol were defined by the criteria in the Alcohol/Drug Consequence Query defined by the Safe and Active Communities (SAC) Branch of the CDPH¹. The Opioid-related overdoses were identified using the following ICD-10 codes: T40.0 (opium), T40.1 (heroin), T40.2 (natural and semisynthetic opioids), T40.3 (methadone), T40.4 (synthetic opioids, other than methadone), and T40.6 (other and unspecified narcotics). Case data in the drug and alcohol section were restricted to drug and alcohol-related cause of deaths under the age of 25. Case data in the opioid section were restricted to opioid-related overdose deaths under the age of 25.

Population data used in rate calculations were based on the projections from the California Department of Finance.²

¹ <https://www.cdph.ca.gov/Programs/CCDC/DCDC/SACB/Pages/EpiCenter/OverviewofICD9and10codes.aspx>

² P-3: Complete State and County Projections Dataset, Vintage 2020 (7/14/2021)
<https://dof.ca.gov/forecasting/demographics/projections/>

Drug and Alcohol Deaths Among Youths and Young Adults Orange County Health Care Agency

Clayton Chau, MD, PhD, MASL, Director
Regina Chinsio-Kwong, DO, Chief Medical Officer, County Health Officer

Mental Health and Recovery Services

Veronica Kelley, DSW, LCSW, Chief
Annette Mugrditchian, LCSW, Director of Operations
Mark Lawrenz, LCSW, Division Manager
Ian Kemmer, LMFT, Director

Strategies and Special Projects -Research

Richard Chhuon, MPH, Research Analyst
Tiffany Kalaitzidis, MPH, Research Analyst
Curtis Condon, PhD, Research Manager
Jenny Qian, MA, Chief and Public Guardian

Drug and Alcohol Deaths Among Youths and Young Adults: The Impact of Synthetic Opioids During the Pandemic. Orange County Health Care Agency. Santa Ana, CA, April 29, 2022.

This report is available online at <https://ochealthinfo.com/page/opioid-overdose-death-orange-county>.

OC LINKS: Where Wellbeing Begins

Depression. Anxiety. Drug and alcohol misuse. Hopelessness. There are many conditions that can affect your ability to manage your everyday thoughts, emotions and actions, also known as your “behavioral health.” And in Orange County, there’s one place to start getting help for all of them: OC Links.



Call Now: (855) 625-4657

Chat Now: <https://www.chorusplatform.io/m/oc-links/chat>

Website: <https://ochealthinfo.com/about-hca/mental-health-and-recovery-services/navigation-help-resources/oc-links-0>



405 W. 5th St.
Santa Ana, CA 92701