UPDATE
Data Report:
Accidental Drug Overdose Deaths in Los Angeles County During the COVID-19 Pandemic

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Los Angeles County Department of Public Health

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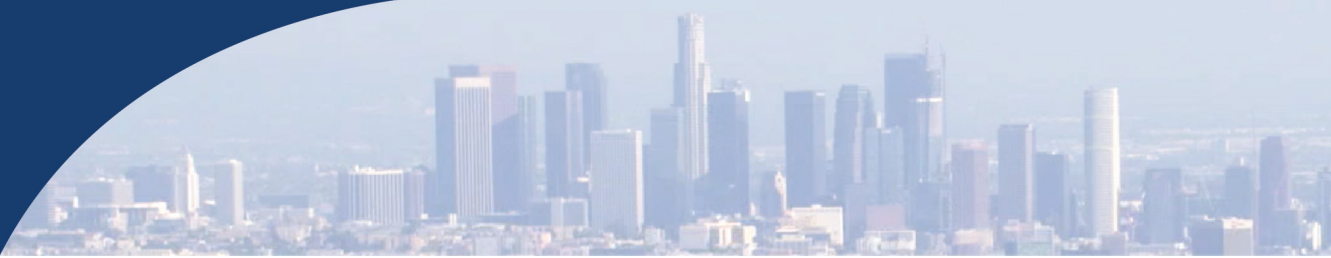
Table of Contents

Executive Summary

In January 2021, the Department of Public Health's (DPH) Division of Substance Abuse Prevention and Control (DPH-SAPC) released an analysis of local death data from the Los Angeles County Medical Examiner-Coroner to determine the impact of the pandemic on accidental drug overdose deaths up until July 2020.

This data report is an update to the initial analysis and includes findings of various analyses for the entirety of the year through December 2020. A detailed analysis (Table 1) was performed to assess the 10 months of the pandemic (March to December 2020) compared to the same period in 2019, along with 11-year trends including a time series analysis, monthly trends from January 2019 to December 2020, and mapping data to further contextualize the findings.

In total, there has been a 52% increase in accidental drug overdose deaths during the 10 months of the pandemic (March to December) compared to the same time period in 2019, with the highest accidental drug overdose death rate per 100,000 population being associated with methamphetamine and fentanyl. Aside from some categories with smaller death counts, all other data categories of gender, age groups, race/ethnicity, drug types and poverty areas demonstrated increases in accidental drug overdose death rate during the first 10 months of the pandemic.

More than three out of four (77%) drug overdose deaths occurred among males, and accidental drug overdose death rates per 100,000 population during the first 10 months of the pandemic increased by 75.2% among Asians, 68.5% among Blacks/African Americans, 55.7% among Latinx, and 42.2% among Whites. People aged 25-34 years had the highest accidental drug overdose death rate per 100,000 population, followed by those aged 45-64 years, 35-44 years, and 18-24 years. People aged 12-17 years had the largest percent increase in accidental drug overdose death rate per 100,000 population.

The findings of this data report suggest that pandemic-related increases in drug overdose deaths are a one of the many tragic outcomes of the pandemic.

Introduction

The COVID-19 pandemic is one of the deadliest tragedies of our generation. In addition to deaths directly associated with this virus, there has been growing concern about the adverse indirect impacts of COVID-19 and the influence of social isolation and other stressors (e.g., lost loved ones and jobs) on relapse and overdose among those in recovery or struggling with addiction.

To examine this concern locally, DPH-SAPC performed various analyses on accidental drug overdose death data from the Los Angeles County Medical Examiner-Coroner up until December 2020. Data beyond this period was not available due to data lag attributable to the extensive lab analysis and data processing needed for these overdose analyses. As a result, the full impact of the pandemic on drug overdoses in Los Angeles County is not captured in this data report and it is likely that the findings during the first 10 months of the pandemic will evolve.

This data report includes a review of 11-year trends of drug overdose deaths from 2010 to 2020, a time series analysis (Figures 1 – 4), a review of monthly trends from January 2019 to December 2020 from the pre- to post-pandemic period (Figures 5 – 19), and a detailed analysis by various data categories during the first ten months of the pandemic (March to December 2020) compared to the same period in 2019 (Table 1). Density maps by communities are also included to identify concentrated areas of drug overdose deaths and changes in overdose death density from the pre- to post-pandemic period across Los Angeles County (Figure 20).

Increases in drug overdoses starting in January 2018 were further analyzed via an interrupted time series analysis to better understand potential associations between this increase in overdose deaths and the pandemic as opposed to variables that existed prior to the pandemic. This analysis suggested that drug overdose deaths during the pandemic were significantly higher than anticipated without COVID-19, suggesting a positive association between COVID-19 and the rising drug overdose deaths, in particular during the first four months of the pandemic after Stay-at-Home Orders.

Text-based analyses of death certificates were performed to determine accidental drug overdose deaths and the types of drugs that contributed to those deaths. Detected drugs were classified as contributing to overdose deaths if they are listed in one of the causes of death. Drugs involved in overdose deaths are not mutually exclusive, as overdose deaths can involve more than one drug. As a result, the sum of deaths of each drug type can be more than the total number of overdose deaths.

This varied and comprehensive data analysis provides context to inform how the pandemic has impacted drug overdose deaths, in particular by examining trends in implicated drug types, gender, age groups, race and ethnicity, poverty level, and geography in Los Angeles County.

Findings

The findings in this data report are presented and organized as follows:

- 11-year drug overdose death trends and time series analysis in Los Angeles County (see Figure 1 – 4).
- Overview of findings comparing the pre-pandemic (March to December 2019) and pandemic period (March to December 2020) (see Table 1).
- Detailed analyses of each data category according to: Gender, Age Group, Race and Ethnicity, Drug Category, Area Poverty, and Geography by Supervisorial District and Service Planning Area in Los Angeles County (see Table 1 and Figures 5 – 19).
- Geographic Information Systems (GIS) mapping data of drug over death locations across the County (see Figure 20).

Longer-Term Trends in Accidental Drug Overdose Deaths in Los Angeles County

To offer longitudinal insight into local drug overdose death trends, data from the past 11 years from 2010 to 2020 was reviewed to better assess the true impact of COVID-19 on overdose deaths.

As shown in Figure 1, seven month moving averages from 2010 to 2020 indicate a slight upward trend in accidental drug overdose deaths from 2010 to 2018, at which point there was a more notable increase in drug overdose deaths.

Figure 1. Seven Month Moving Average of Accidental Drug Overdose Death, January 2010 to December 2020
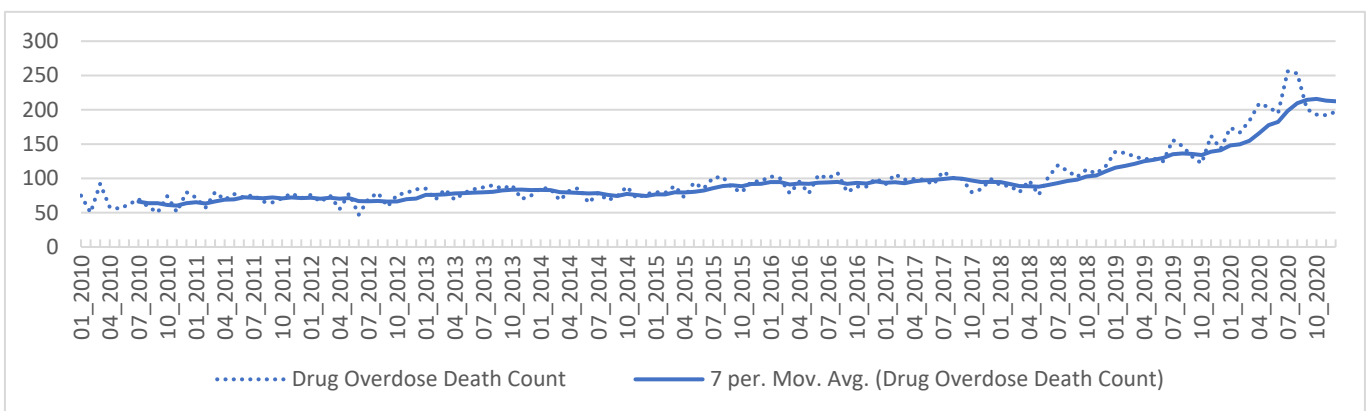
Note: *Moving averages are used to track and identify trends by reducing normal month-to-month fluctuations and minimizing the amount of "noise" in the monthly data. In this case, moving averages provide a visual representation of longer-term accidental drug-related death trends.*

An interrupted time series analysis was subsequently conducted using data from January 2018 to December 2020 to further assess this increase in drug overdose deaths. Interrupted time series analyses involve tracking a long-term period before and after an event or point of intervention to assess associations with the event or intervention. In this case, this interrupted time series analysis was used to analyze the substantive increase in accidental drug overdose deaths from the pre- to post-pandemic phase starting in March 2020. Figure 2 illustrates a significant shift and rise in the time series of accidental drug overdose deaths at the onset of the pandemic and immediately prior to local COVID-19 Stay-at-Home Orders. Comparing the projected numbers of drug overdose deaths without the COVID-19 pandemic (see gray dotted line in Figure 2) with the actual death numbers, there is a clear and significant association between COVID-19 and the substantial uptick in drug overdose deaths during this specific time period.

Figure 2. Interrupted Time Series Analysis, January 2018 to December 2020
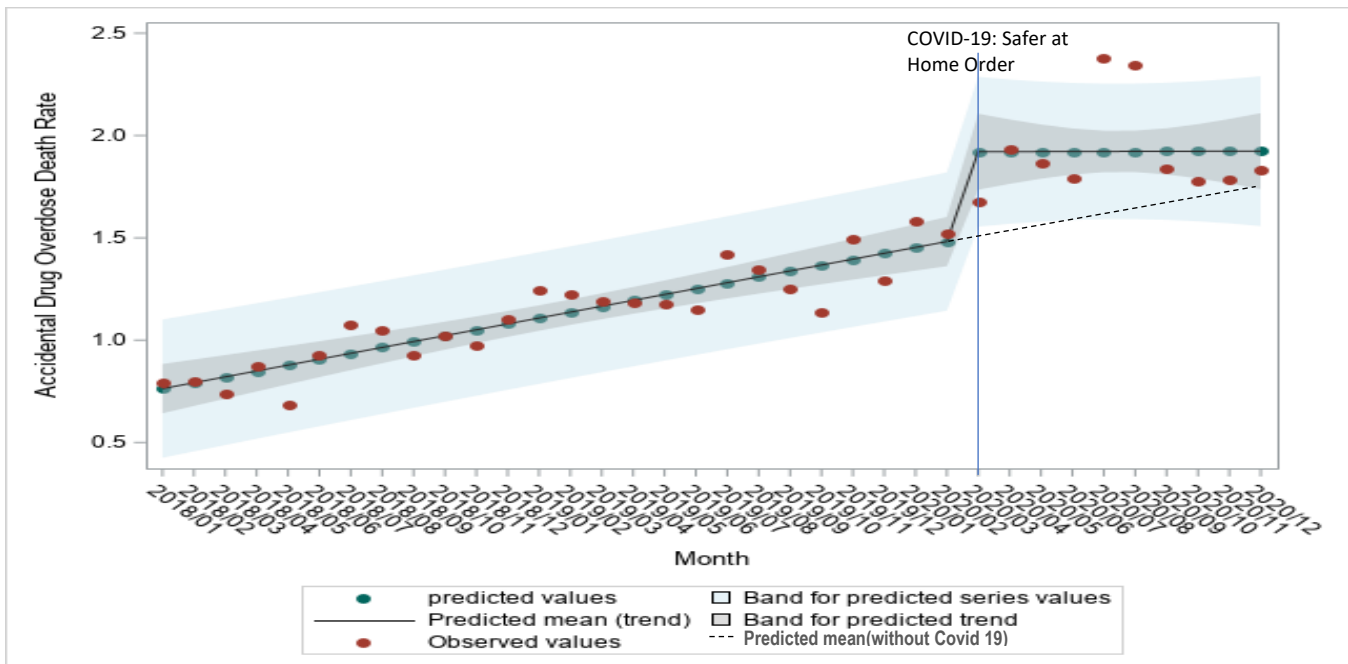

The annual numbers of accidental drug overdose deaths from 2010 to 2020 show a substantial increase in deaths in 2019 and an even greater increase in 2020 (see Figure 3). Compared to 2019, there was a 46.8% increase in drug overdose deaths in 2020 (773 more deaths in 2020 compared to 2019).

Breaking down these deaths by the two most common drug types associated with drug overdoses – methamphetamine and fentanyl, respectively – one can see that these two drugs accounted for the

majority of overdose deaths across Los Angeles County in recent years (see Figure 4). As additional context, local law enforcement agencies have anecdotally reported increased seizures of illicitly manufactured fentanyl, counterfeit pills such as opioids or sedatives that contain fentanyl, and methamphetamine in the Los Angeles region over the past several years. This collective information suggests that these substances are significant drivers of regional increases in drug overdose deaths in Los Angeles County.

Figure 3. Number of Accidental Drug Overdose Deaths by Year, 2010-2020
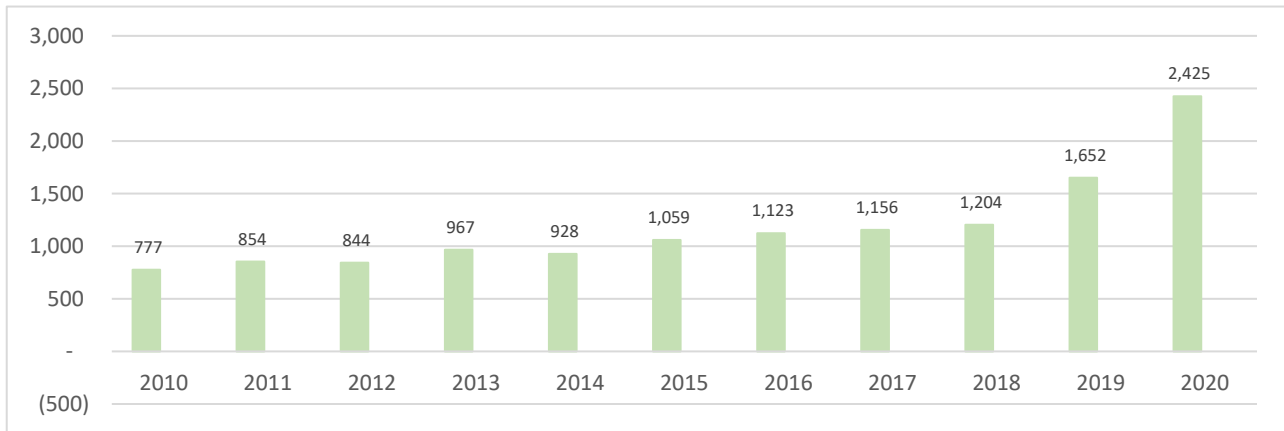
Figure 4. Number of Fentanyl, Methamphetamine, and All Opioids Overdose Deaths by Year, 2010-2020
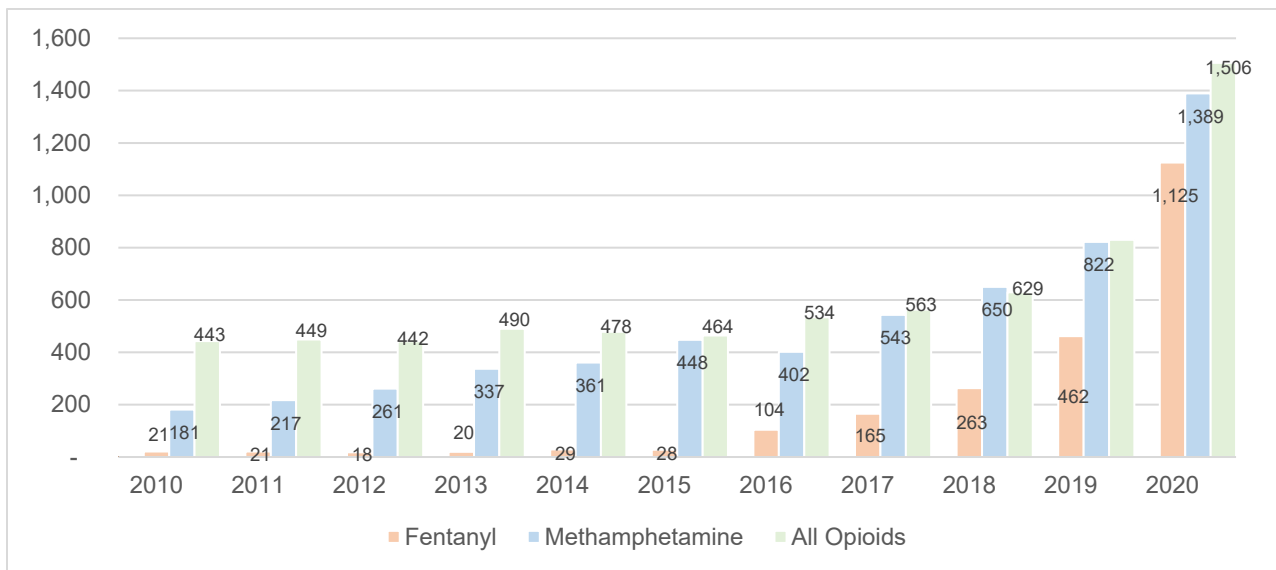
Recent Trends

Table 1 below provides an overview of the findings, comparing the same time periods from the pre-pandemic period in 2019 with the post-pandemic period in 2020, in addition to a summary of the rate changes during this timeframe.

The rates of accidental drug overdose deaths increased from the pre- to post-pandemic period in every data category. The numbers of deaths increased in every category except for among Pacific Islanders and other stimulant drug types, which were excluded from the subsequent monthly analysis due to very small numbers.

Table 1. Number and Rate of Accidental Drug Overdose Deaths from Pre-Pandemic to Pandemic Period, March to December (2019 vs. 2020)

Decedent Characteristic	2019 (March to December)		2020 (March to December)		Rate change from 2019 to 2020[6]	
	Number	Rate[5]	Number	Rate[5]	Absolute change	Relative change
All	1,376	12.6	2,084	19.2	6.6*	52.4%*
Gender						
- Male	1,088	20.1	1,614	29.9	9.7*	48.4%*
- Female	287	5.3	469	8.7	3.4*	64.7%*
Age Group (years)						
- 0 to 11[†]	4	0.3	8	0.6	0.3	100.0%
- 12 to 17	9	1.2	27	3.6	2.4*	200.0%*
- 18 to 24	125	12.2	216	21.0	8.9*	72.8%*
- 25 to 34	292	19.3	483	31.9	12.6*	65.4%*
- 35 to 44	282	19.6	423	29.4	9.8*	50.0%*
- 45 to 64	581	21.4	814	30.0	8.6*	40.1%*
- 65+	83	6.0	113	8.2	2.2	36.1%
Race/Ethnicity[1]						
- American Indian/Alaska Native[†]	7	24.7	6	25.2	0.5	2.2%
- Black/African American	251	26.1	412	44.0	17.9*	68.5%*
- Latinx/Hispanic	466	9.2	743	14.3	5.1*	55.7%*
- White	610	20.1	844	28.6	8.5*	42.2%*
- Asian	32	2.1	58	3.8	1.6*	75.2%*
- Pacific Islander[†]	4	13.6	4	15.2	1.6	11.9%

Decedent Characteristic	2019 (March to December)		2020 (March to December)		Rate change from 2019 to 2020[6]	
	Number	Rate[5]	Number	Rate[5]	Absolute change	Relative change
Drug Category[2]						
Alcohol	167	1.6	279	2.6	1.0*	63.6%*
Opioids	714	6.7	1323	12.4	5.7*	85.5%*
- Heroin	296	2.8	402	3.7	1.0*	34.2%*
- Fentanyl	423	4.0	1001	9.5	5.5*	136.4%*
- Prescription Opioids (excluding fentanyl)	210	1.9	222	2.0	0	2.10%
- Other Opioid[†]	3	0.0	3	0.0	0.0	-0.0%
Sedative	92	0.9	194	1.9	1.0*	108.7%*
- Benzodiazepines	78	0.8	172	1.7	0.9*	116.4%*
- Other Sedative	14	0.1	22	0.2	0.0	41.9%
Stimulant	948	8.6	1519	13.9	5.3*	61.3%*
- Cocaine	332	3.0	446	4.0	1.0*	33.7%*
- Methamphetamine	689	6.3	1220	11.2	4.9*	78.7%*
- Other Stimulant	14	0.1	10	0.1	0.0	4.8%
Area Poverty[3]						
- < 10% area poverty	503	45.0	741	66.2	21.3*	47.3%*
- 10% to 20% area poverty	399	60.8	614	93.6	32.8*	53.9%*
- 20% to 30% area poverty	230	76.7	361	120.4	43.7*	57.0%*
- 30% to 100% area poverty	163	122.7	301	226.6	103.9*	84.7%*
Supervisorial District (SD)[4]						
- SD 1	279	12.3	445	19.5	7.2*	58.7%*
- SD 2	299	13.4	509	22.8	9.4*	70.4%*
- SD 3	290	12.9	404	18.1	5.3*	41.0%*
- SD 4	247	11.9	358	17.6	5.7*	47.5%*
- SD 5	200	10.2	321	16.2	6*	58.8%*
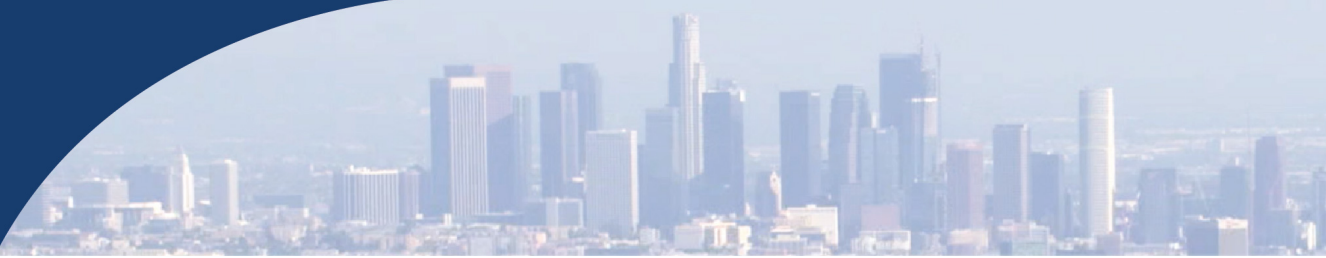
Decedent Characteristic	2019 (March to December)		2020 (March to December)		Rate change from 2019 to 2020[6]	
	Number	Rate[5]	Number	Rate[5]	Absolute change	Relative change
Service Planning Area (SPA)[4]						
- SPA 1	79	21.3	131	34.6	13.4*	62.9%*
- SPA 2	226	9.5	329	14.1	4.6*	48.4%*
- SPA 3	125	6.6	223	12.0	5.4*	82.3%*
- SPA 4	316	23.7	479	35.8	12.2*	51.3%*
- SPA 5	79	11.0	132	18.4	7.4*	67.3%*
- SPA 6	152	14.7	238	22.3	7.6*	51.9%*
- SPA 7	111	8.1	189	13.8	5.7*	70.4%*
- SPA 8	227	13.4	315	19.0	5.6*	42.1%*

Notes:
1. *Data for Latinx/Hispanic origin should be interpreted with caution; studies comparing Latinx/Hispanic origin on death certificates and on Census surveys have shown inconsistent reporting on Latinx/Hispanic ethnicity. Potential race misclassification might lead to underestimates for certain categories, primarily American Indian/Alaska Native and Asian/Pacific Islander decedents.*
2. *Drugs involved in overdose deaths are not exclusive as each overdose death often involve more than one drug. Summation of drug types will result in more than the total number of overdose deaths; Rx opioids refers to deaths that includes Rx opioids but do not mention fentanyl as one of the causes or drug name; when a death involves both Rx opioids and fentanyl as causes of death, then the death was included in the fentanyl counts.*
3. *Area Poverty reflects the percentage of households living at or below the federal poverty line. Area poverty estimates are derived from the US Census 5-year (2014-2018) American Community Survey at the census tract level.*
4. *SD/SPA were based on residential address; if residential address was missing, death location or event address was used.*
5. *Rates are age-adjusted using the direct method and the 2000 U.S. standard population, except for age-specific and area poverty crude rates. All rates are per 100,000 population.*
6. *Absolute rate change is the difference between 2019 and 2020 rates. Relative rate change is the absolute rate change divided by the 2019 rate, multiplied by 100. Non-overlapping confidence intervals based on the gamma method were used if the number of deaths was <100 in 2019 or 2020, and z-tests were used if the number of deaths was ≥100 in both 2019 and 2020.*

† The number of accidental drug overdose deaths were less than 10 and thus excluded from further analysis
** Statistically significant findings (p-value <0.05)*

Data Source: *Accidental drug overdose death data was extracted by the Los Angeles County Medical Examiner-Coroner's Office and prepared by the Health Outcomes and Data Analytics (HODA) Unit within the Los Angeles County Department of Public Health's Division of Substance Abuse Prevention and Control (SAPC).*
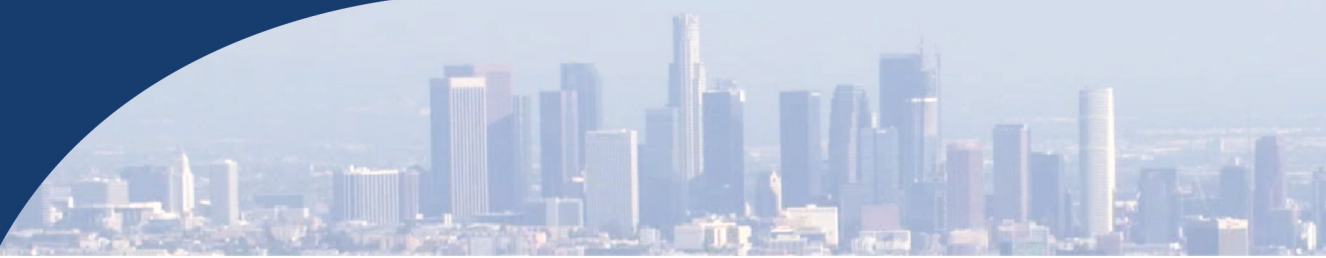
Figure 5 presents the number of accidental drug overdose deaths as a seven-day moving average from January 2019 to December 202 to compare between the pre-pandemic and post-pandemic period. As demonstrated, the seven day moving average for drug overdose deaths was consistently higher in 2020 compared to 2019.

Figure 5. Number of Accidental Drug Overdose Deaths (seven day moving average), January to December (2019 vs. 2020)
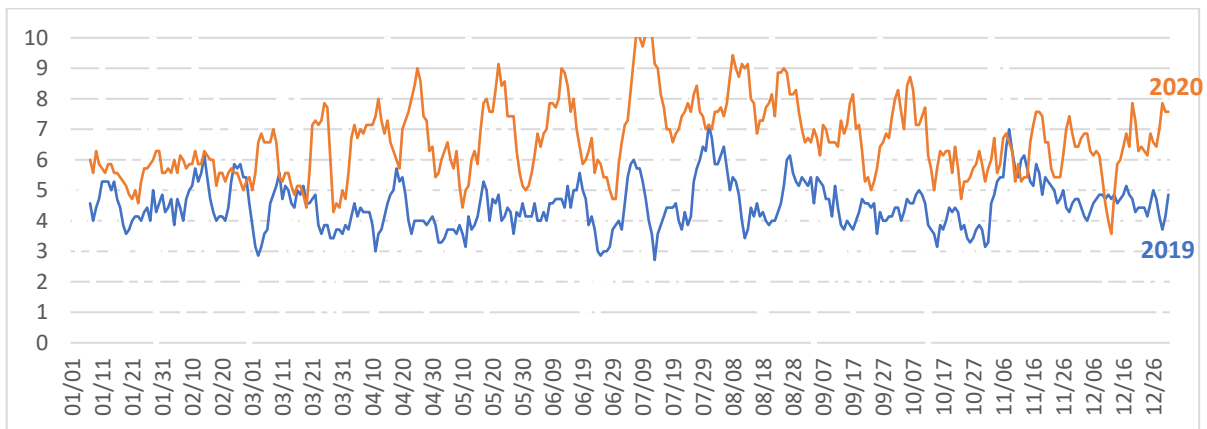

Note: Moving averages are used to track and identify trends by reducing normal day-to-day fluctuations and minimizing the amount of "noise" in the daily data. In this case, moving averages provide a visual representation of longer-term accidental drug-related death trends. Please note that the decrease in the last few days of the month of December may be due to data lag and will be updated when this data is available.

1. **Gender**

   During the first ten months of the pandemic, accidental overdose death rates per 100,000 population increased by 48.4% (from 20.1 to 29.9) among males and 64.7% (from 5.3 to 8.7) among females, compared to the same time period in 2019 (see Table 1 and Figure 6 for monthly trend).

   Figure 6. Age-Adjusted Accidental Drug Overdose Death Rate by Gender (per 100K population), January 2019 to December 2020
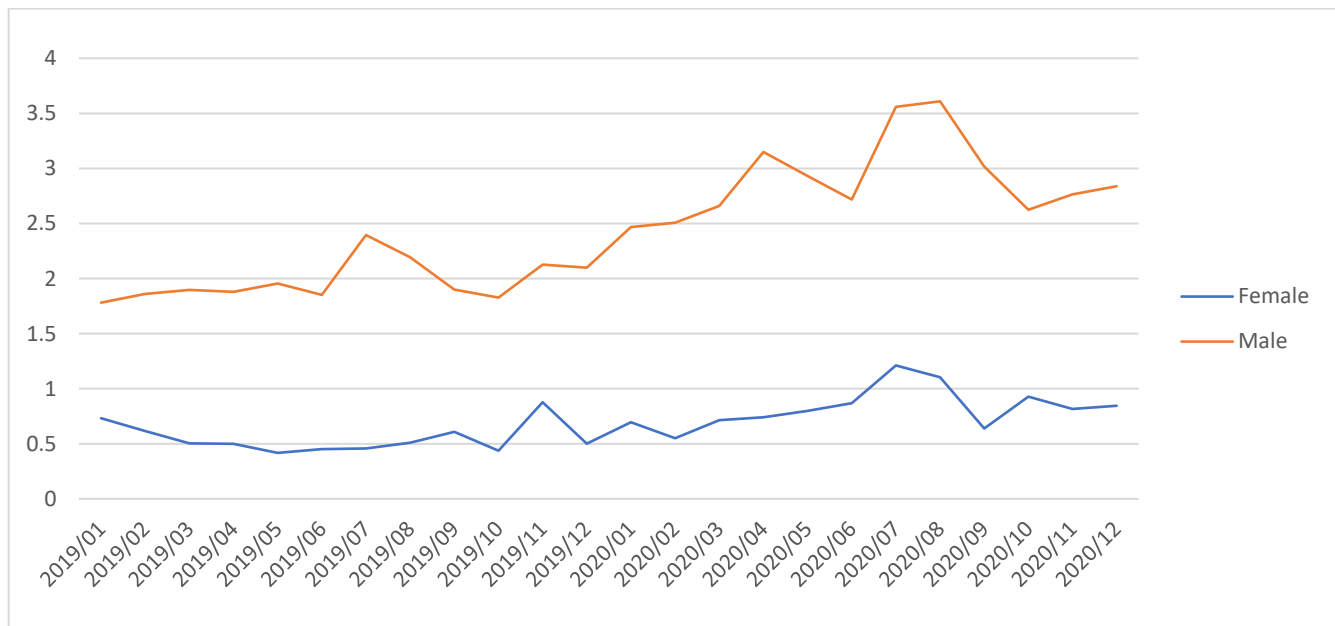
   Over three-quarters (77%) of total accidental drug overdose deaths were among males between March to December 2020 (n=1614). Meanwhile, 23% of total accidental drug overdose deaths were among females in March to December 2020 (n=469). During the same time period in 2019, 79% of deaths were among males (n=1088) and 21% among females (n=287). The number of overdose deaths among males had been increasing in 2020 up until August and then dropped substantially starting in September for the remainder of 2020 (see Table 1 and Figure 7 for monthly trend).

Figure 7. Number of Accidental Drug Overdose Deaths by Gender, January 2019 to December 2020
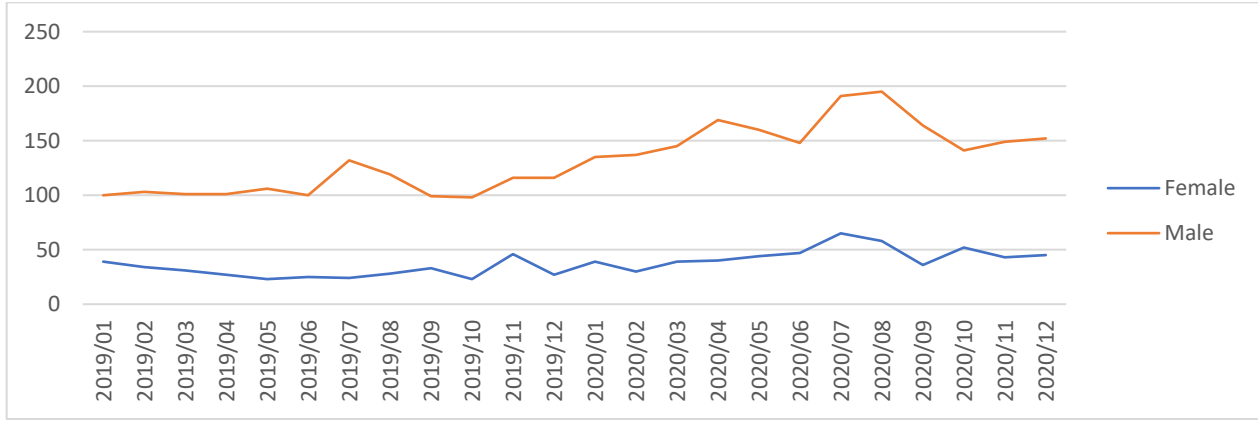
2. Age Group

During the first ten months of the pandemic, the accidental drug overdose death rate per 100,000 population was highest among people aged 25-34 years (31.9), followed by those aged 45-64 years (30.0), 35-44 years (29.4), and 18-24 years (21.0) (see Figure 8).

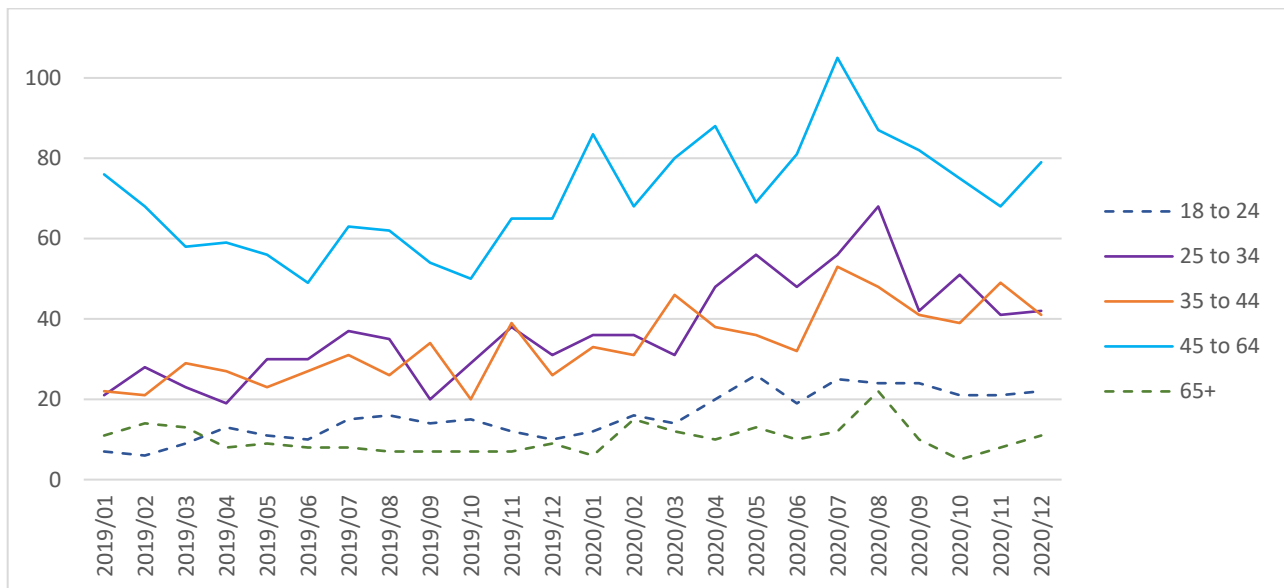*Figure 8. Accidental Drug Overdose Death Rate (per 100K population) by Age Group, January 2019 to December 2020*
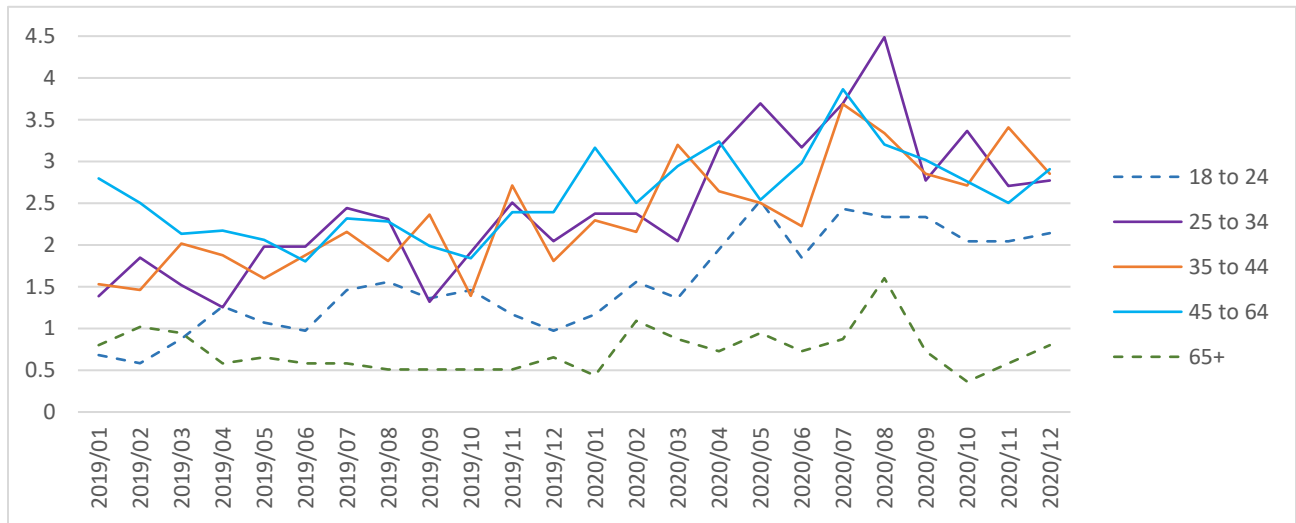
Note: *The majority of monthly death counts used to calculate age-specific rates were 20 or less and statistically unstable. Rate should be interpreted with caution. Age groups 0-11 and 12-17 were not included due to very small numbers (<10).*

The number of deaths were highest among 45-64 (n=814), followed by those aged 25-34 (n=483), aged 35-44 (n=423), aged 18-24 (n=216), aged 65+ (n=113), aged 12-17 (n=27), and aged 0-11 (n=8) group. Compared to the same period in 2019, the accidental drug overdose death rate per 100,000 population increased by 200% (from 1.2 to 3.6) among people aged 12-17 years, 100% (from 0.3 to 0.6) among the 0-11 age group, 73% (from 12.2 to 21.0) among the 18-24 age group, 65% (from 19.3 to 31.9) among the 25-34 age group, 50% (from 19.6 to 29.4) among the 35-44 age group, 40% (from 21.4 to 30.0) among the 45-64 age group, and 36% (from 6.0 to 8.2) among the 65+ age group (see Table 1).

The number of accidental drug overdose deaths peaked in July 2020 among those aged 35-44 and 45-64 and in August 2020 among those aged 25-34 and 65+ (see Figure 9 for monthly trend).

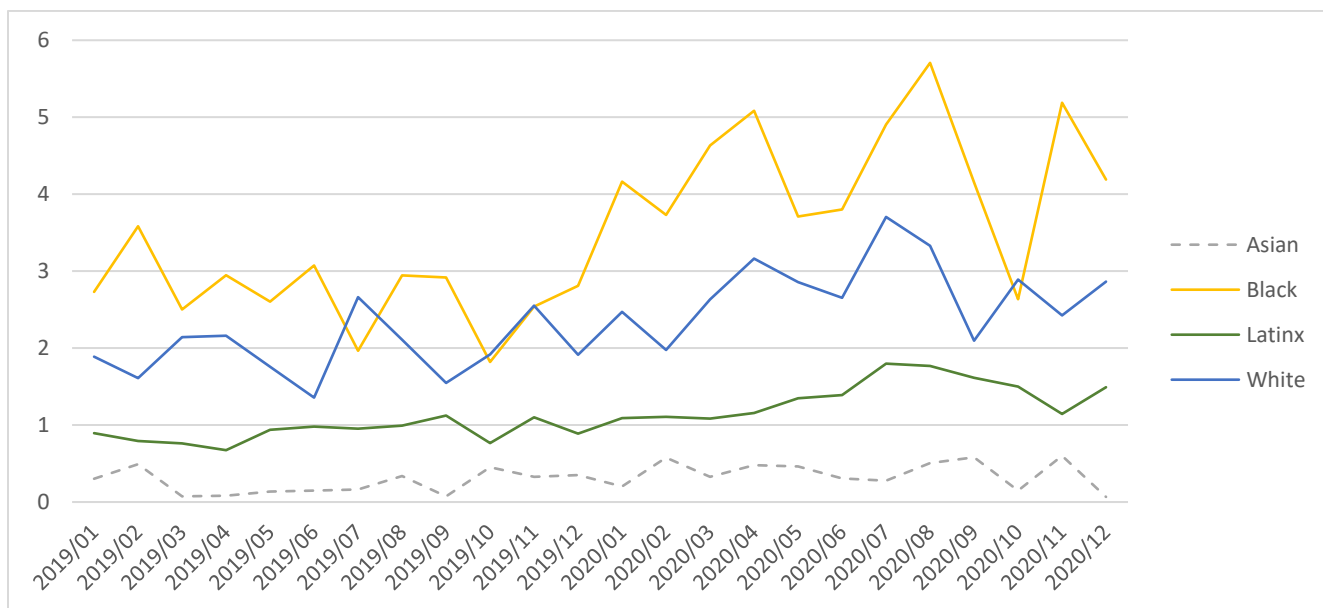*Figure 9. Number of Accidental Drug Overdose Deaths by Age Group, January 2019 to December 2020*

3. **Race & Ethnicity**

While the total number of accidental drug overdose deaths was highest among Whites during most of the pandemic in 2020, Blacks/African Americans had the highest accidental drug overdose death rate per 100,000 population (44.0), followed by Whites (28.6), American Indians/Alaska Natives (25.2), Pacific Islanders (15.2), Latinx (14.3) and Asians (3.8). American Indians/Alaska Natives and Pacific Islanders were excluded from further analysis due to very small numbers.

With respect to statistically significant findings and compared to the same period in 2019, the accidental drug overdose death rate per 100,000 population increased most significantly for Asians and Blacks/African Americans. Accidental drug overdose death rates per 100,000 population increased by 75.2% from 2.1 to 3.8 among Asians, 68.5% from 26.1 to 44.0 among Blacks/African Americans, 55.7% from 9.2 to 14.3 among Latinx, and 42.2% from 20.1 to 28.6 among Whites (see Table 1 and Figure 10 for monthly trend).

Figure 10. Age-Adjusted Accidental Drug Overdose Death Rate (per 100K population) by Race/Ethnicity, January 2019 to December 2020


Note: *The majority of monthly death counts used to calculate age-adjusted rates were 20 or less and statistically unstable. Rate should be interpreted with caution. Other races were not included due to very small numbers.*

During the first ten months of the pandemic, the highest number of accidental drug overdose deaths occurred among Whites (n=844), followed by Latinx (n=743), Blacks/African Americans (n=412), Asians (n=58), American Indians/Alaska Natives (n=6), and Pacific Islanders (n=4) (see Table 1 and Figure 11 for monthly trend).

Figure 11. Number of Accidental Drug Overdose Deaths by Race/Ethnicity, January 2019 to December 2020
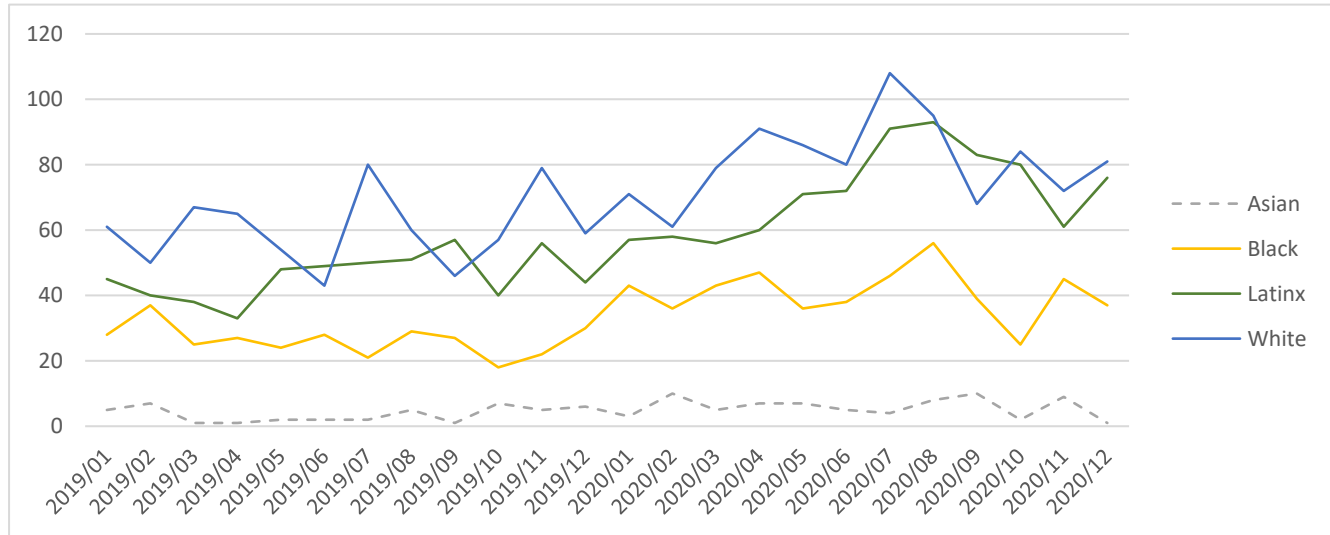

4. **Drug Type**

From March to December 2020, methamphetamine was associated with the highest accidental drug overdose death rate per 100,000 population (11.2), followed by fentanyl (9.5), cocaine (4.0), heroin (3.7), alcohol (2.6), and prescription (Rx) opioids (2.0) (see Table 1 and Figure 12).

Compared to the same period in 2019, fentanyl overdose deaths increased by 136.6%, (from 423 to 1001; see Figure 13) and fentanyl-related death rates increased by 136.4% (from 4.0 to 9.5) per 100,000 population.

Meanwhile, methamphetamine overdose deaths increased by 77.1% (from 689 to 1220; see Figure 9) and methamphetamine-related death rates increased by 78.7% (from 6.3 to 11.2) per 100,000 population (see Table 1 and Figures 12 and 13 for monthly trend).

The data trend clearly demonstrates that methamphetamine and fentanyl are the top two drug types implicated in the majority of accidental drug overdose deaths. Furthermore, the methamphetamine overdose death trend closely mirrors that of fentanyl, raising the concern that these deaths may be due to methamphetamine tainted with fentanyl.

Figure 12. Age-Adjusted Accidental Drug Overdose Death Rate by Drug Category (per 100K population), January 2019 to December 2020
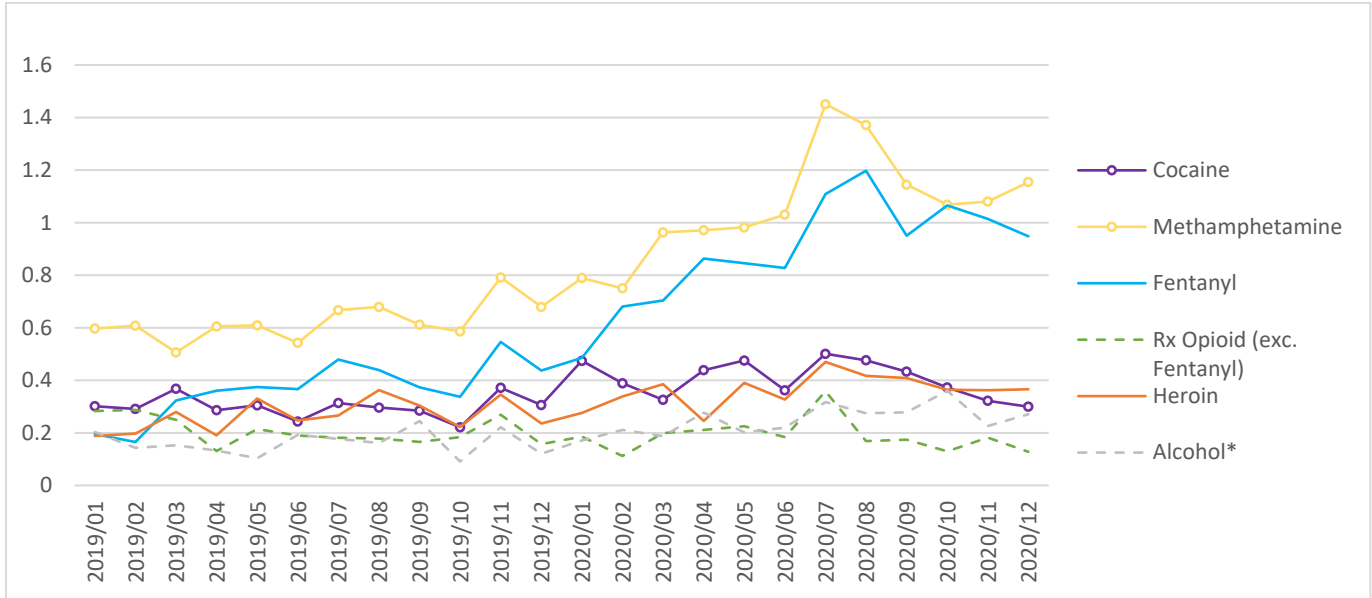
Note: *The majority of monthly death counts used to calculate age-adjusted rates were 20 or less and statistically unstable. Rate should be interpreted with caution.


Figure 13. Number of Accidental Drug Overdose Deaths by Drug Category, January 2019 to December 2020
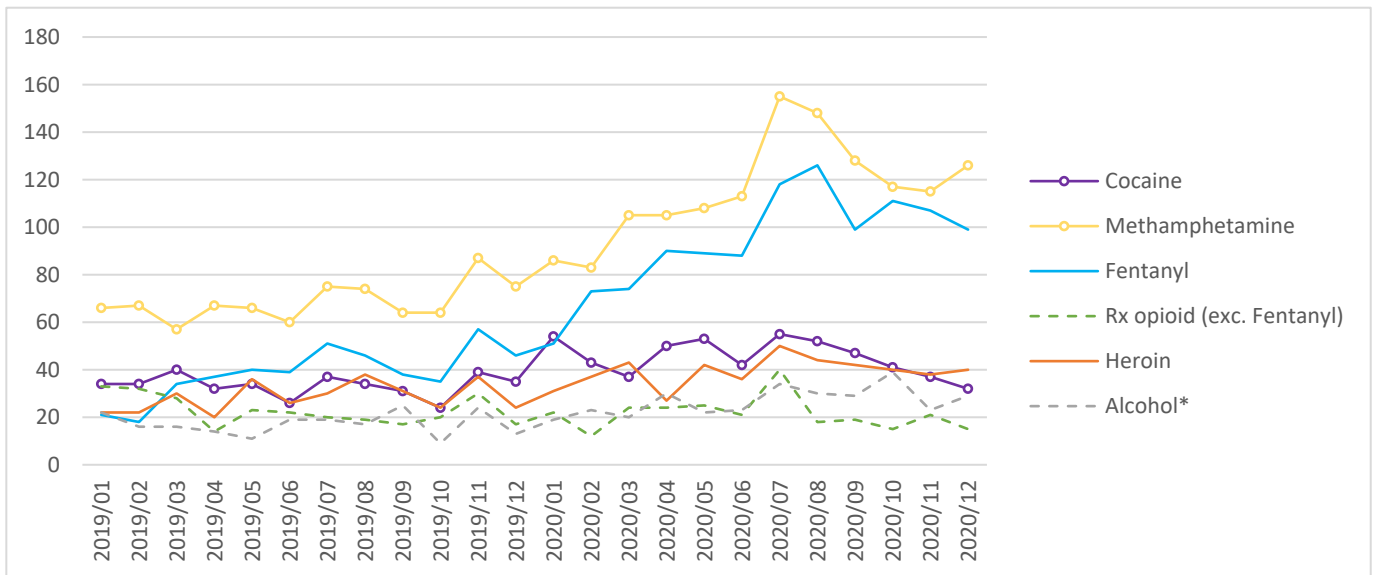
5. **Area Poverty**

During the first ten months of the pandemic, areas with 30% or more of households living in poverty had the highest death rate per 100,000 population (226.6), followed by areas with 20% to 30% of households living in poverty (120.4), areas with 10% to 20% of households living in poverty (93.6), and areas with less than 10% of households living in poverty (66.2). Compared to the same period in 2019, accidental drug overdose death rates per 100,000 population increased by 85% (from 122.7 to 226.6) in areas with 30% or more households living in poverty, 57% (from 76.7 to 120.4) in areas with 20% to 30% of households living in poverty, 54% (from 60.8 to 93.6) in areas with 10% to 20% of households living in poverty, and 47% from (45.0 to 66.2) in areas with less than 10% of households living in poverty (see Table 1 and Figure 14 for monthly trend).

Figure 14. Accidental Drug Overdose Death Rate by Area Poverty (per 100K household), January 2019 to December 2020
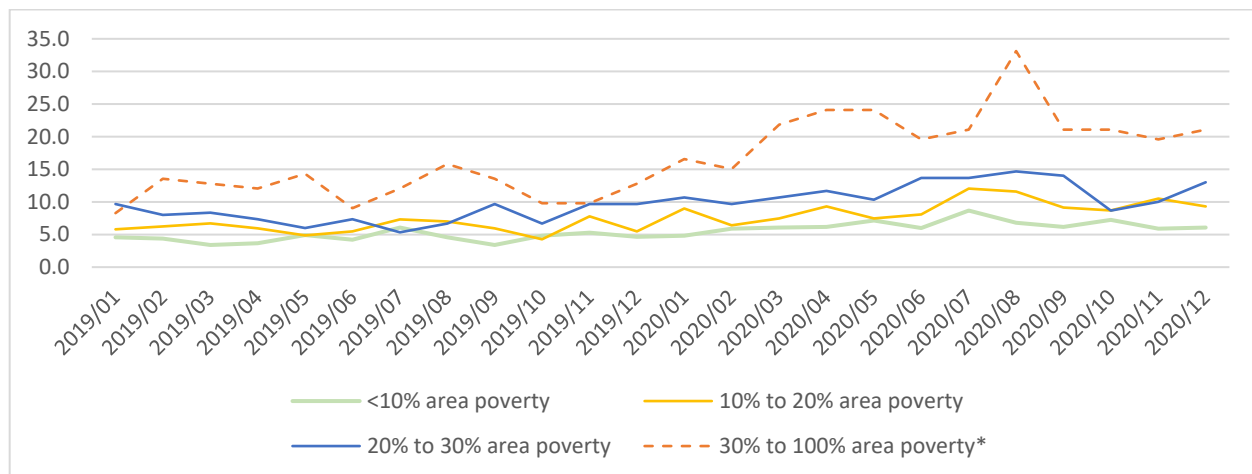

Note: *The majority of monthly death counts used to calculate crude rates were 20 or less and statistically unstable. Rate should be interpreted with caution.*

As shown in Figure 15, higher rates of area poverty were associated with higher accidental drug overdose death rates per 100,000 population. The impact of this trend was greater during the pandemic period and the opposite association was found for overall drug overdose death numbers. In other words, lower rates of area poverty were associated with higher numbers of total drug overdose deaths. This may be due to potential interactions among residents density, poverty areas, lethality of drug types used, health disparities that may have led to greater access to prescription opioids in more affluent areas and subsequent increases in use of counterfeit pills once prescription opioids could no longer be obtained, in addition to higher densities of Blacks/African Americans and Latinx – who as highlighted

above have experienced higher accidental drug overdose death rates during the pandemic – in higher poverty areas.

Figure 15. Number of Accidental Drug Overdose Death by Area Poverty, January 2019 to December 2020
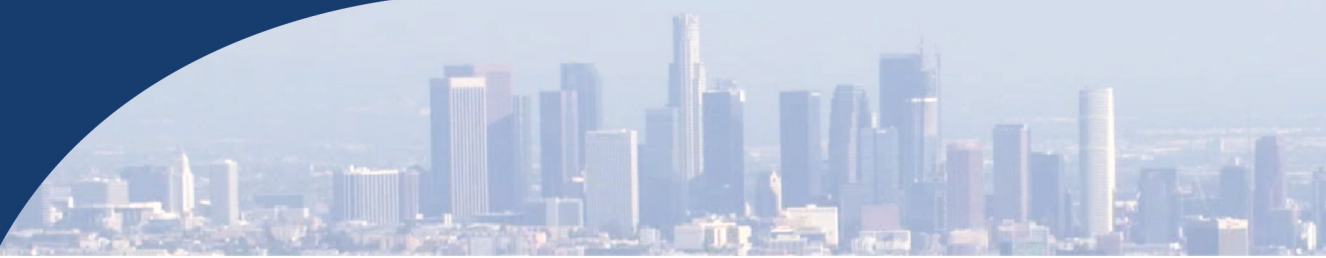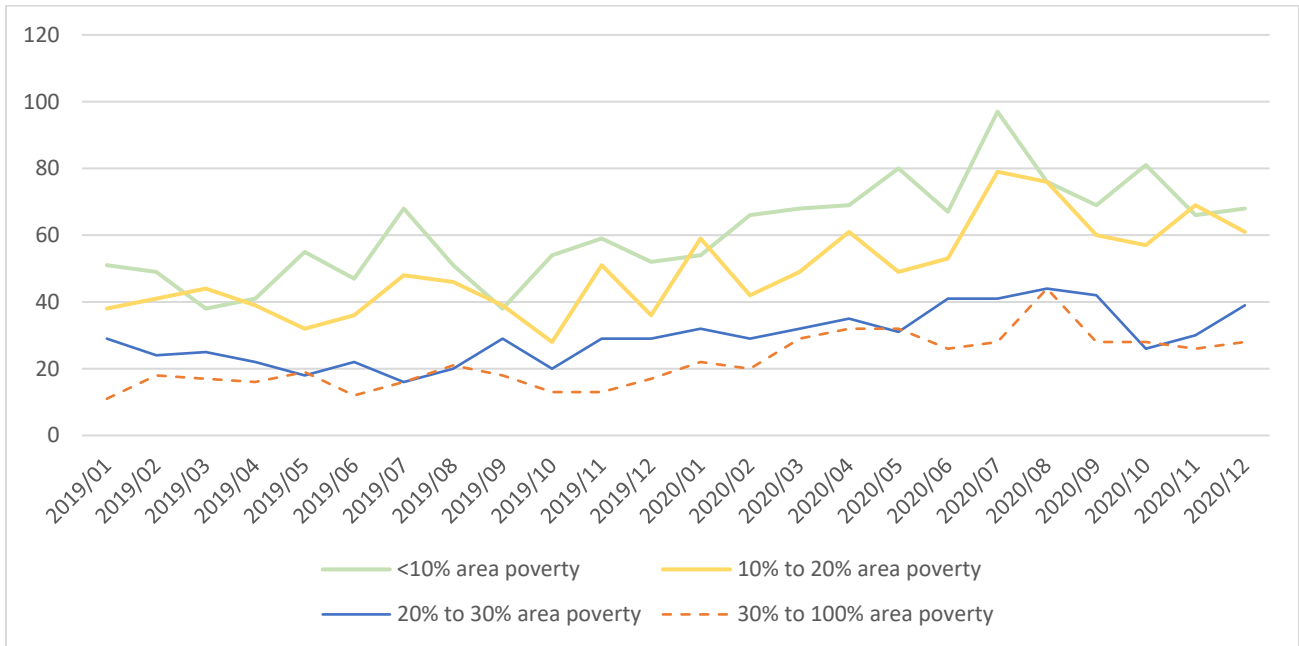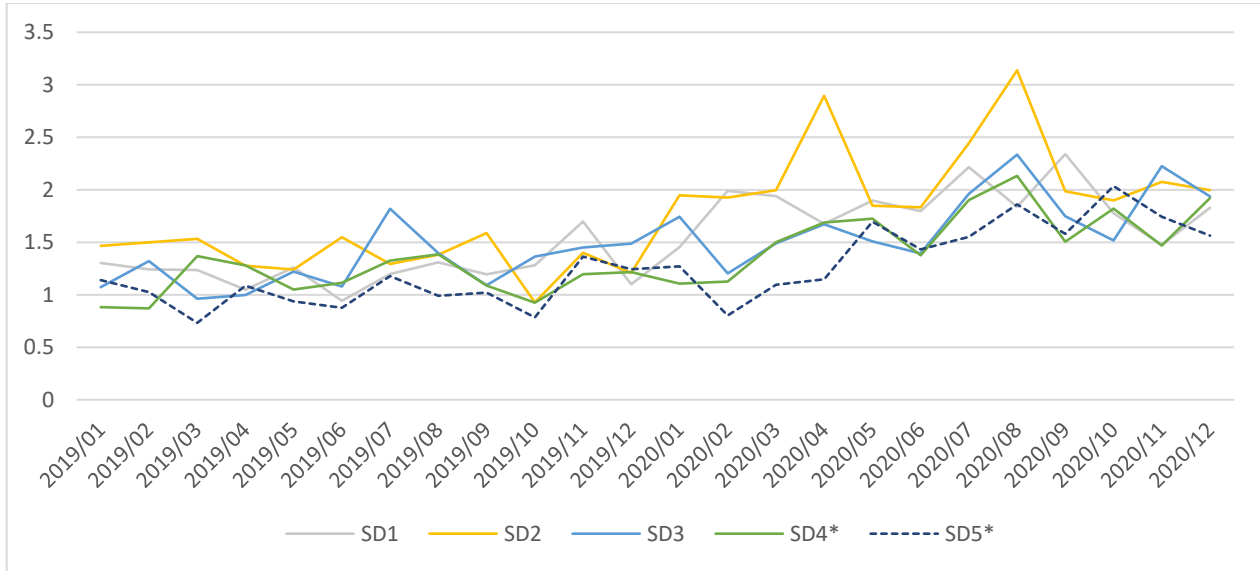

6. **Supervisorial District (SD)**

During the first ten months of the pandemic, the accidental drug overdose death rates per 100,000 population in SDs were as follows (from highest to lowest): SD 2 (22.8), SD 1 (19.5), SD 3 (18.1), SD 4 (17.6), and SD 5 (16.2). Notably, accidental drug overdose death rates in SD 2 peaked in August 2020, dropped significantly in September and remained relatively stable thereafter throughout 2020 (see Table 1 and Figure 16 for monthly trend).

Total accidental drug overdose death numbers followed the same trend as the death rates by SD (see Figure 17 for monthly trend).

Compared to the same period in 2019, accidental drug overdose death rates per 100,000 population increased by 70.4% (from 13.4 to 22.8) in SD 2, 58.8% (from 10.2 to 16.2) in SD 5, 58.7% (from 12.3 to 19.5) in SD 1, 47.5% (from 11.9 to 17.6) in SD 4, and 41.0% (from 12.9 to 18.1) in SD 3.
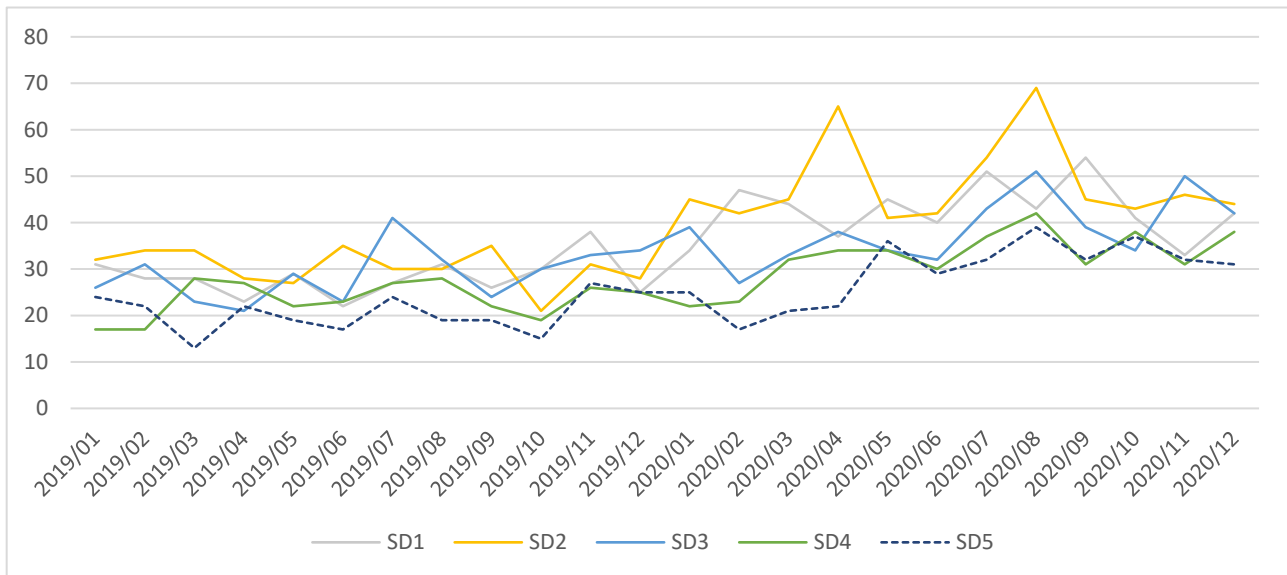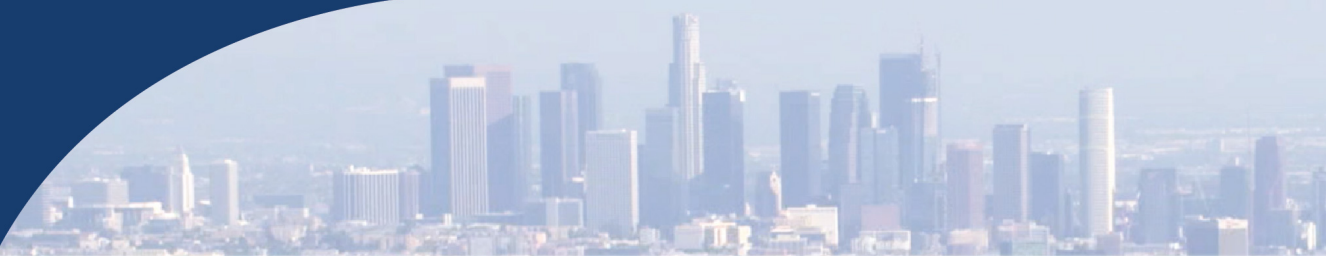
Figure 16. Age-Adjusted Accidental Drug Overdose Death Rate (per 100K population) by Supervisorial District, January 2019 to December 2020

Note: *Some of the monthly death counts used to calculate age-adjusted rates were 20 or less and statistically unstable. Rate should be interpreted with caution.*

Figure 17. Number of Accidental Drug Deaths by Supervisorial District, January 2019 to December 2020

7. **Service Planning Area (SPA)**

During the first ten months of the pandemic, the accidental drug overdose death rates per 100,000 population in SPAs were as follows (from highest to lowest): SPA 4 (35.8), SPA 1 (34.6), SPA 6 (22.3), SPA 8 (19.0), SPA 5 (18.4), SPA 2 (14.1), SPA 7 (13.8), and SPA 3 (12.0) (see Table 1 and Figure 18 for monthly trend).

Figure 18. Age-Adjusted Accidental Drug Overdose Death Rate (per 100K population) by SPA, January 2019 to December 2020
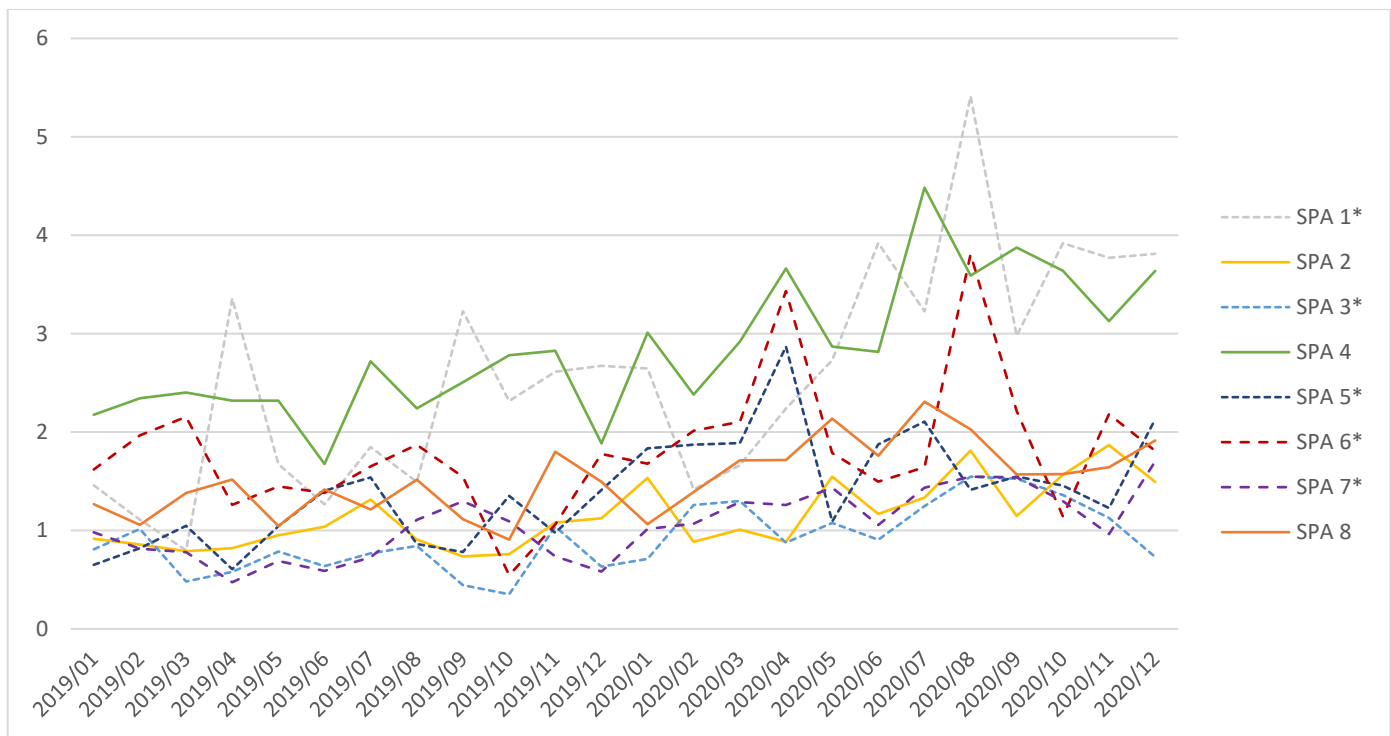
Note: *The majority of monthly death counts used to calculate age-adjusted rates were 20 or less and statistically unstable. Rate should be interpreted with caution.*

Compared to the same time period in 2019, the SPA's with the highest increase in accidental drug overdose death rates per 100,000 population were: SPA 3 (82.3%), SPA 7 (70.4%), SPA 5 (67.3%), SPA 1 (62.9%), SPA 6 (51.9%), SPA 4 (51.3%), SPA 2 (48.4%), and SPA 8 (42.1%).

*Figure 19. Number of Accidental Drug Overdose Deaths by SPA, January 2019 to December 2020*
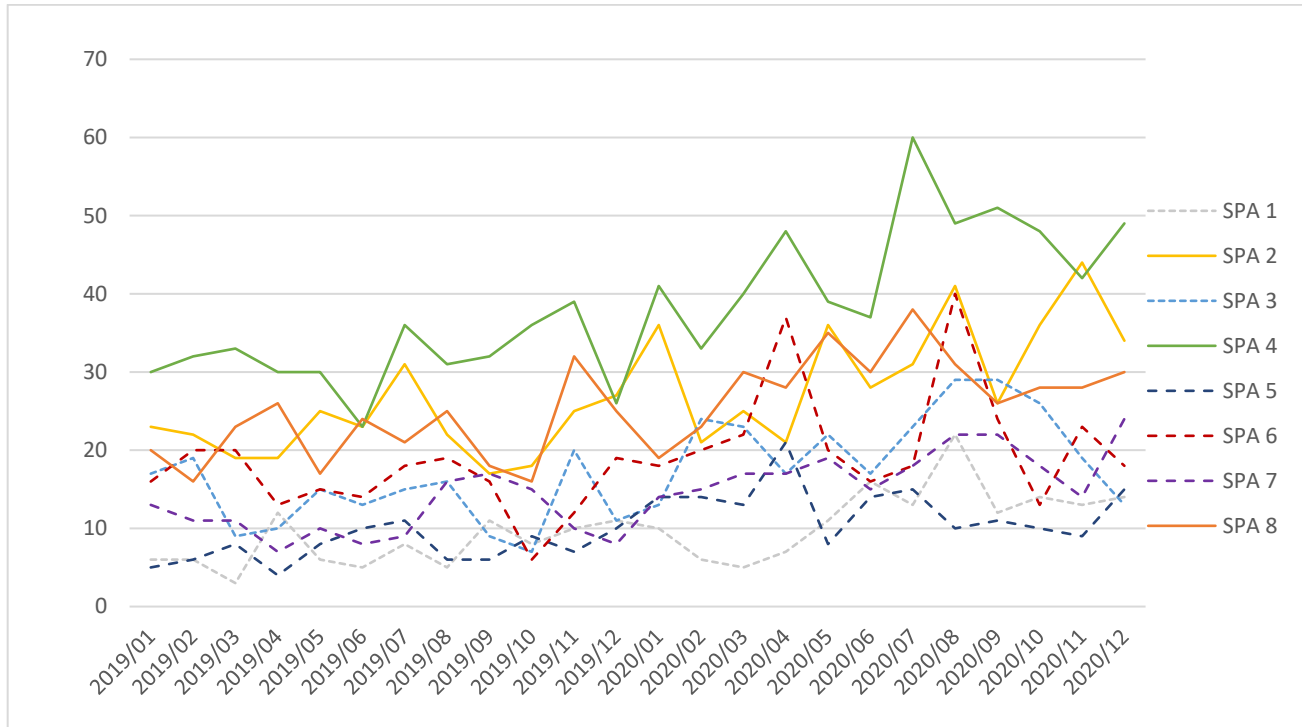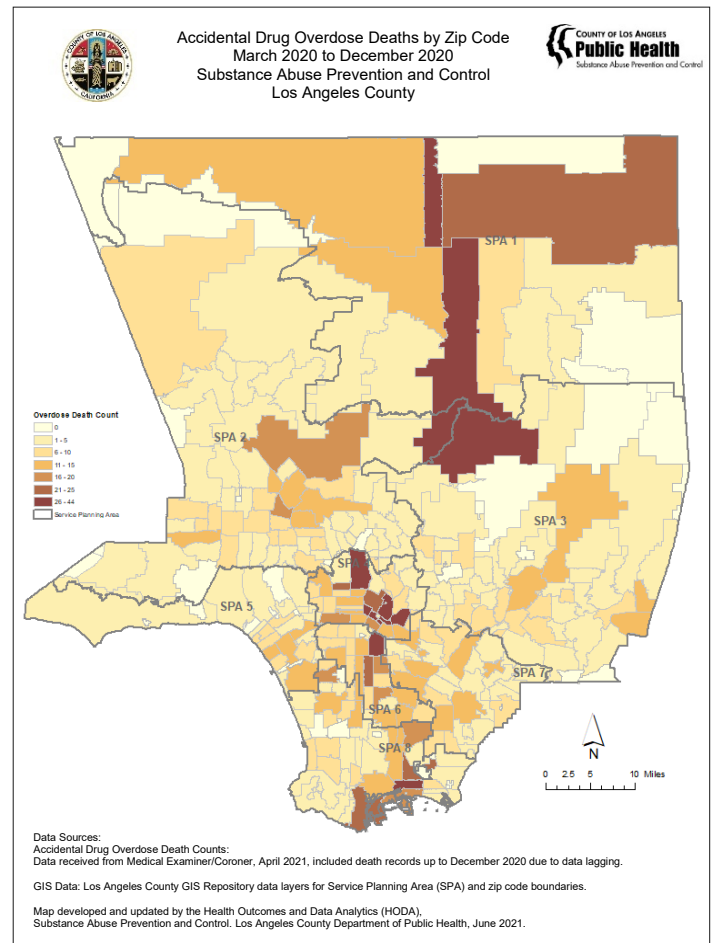
8. **Zip Code**

To supplement the analysis of COVID-19 impact on accidental drug overdose deaths by SD and SPA, drug overdose death data by zip codes were also analyzed, using residential addresses or death/event locations to examine concentrations of drug overdose deaths throughout Los Angeles County.

Findings generally demonstrated higher densities of drug overdose deaths and increased numbers during the pandemic period compared to the same period in 2019. Higher densities of deaths were identified in the Long Beach area, downtown and East Los Angeles, and along the northern and southern boundaries of North County.

Figure 20. Accidental Drug Overdose Deaths by Zip Code, March to December (2019 vs. 2020)
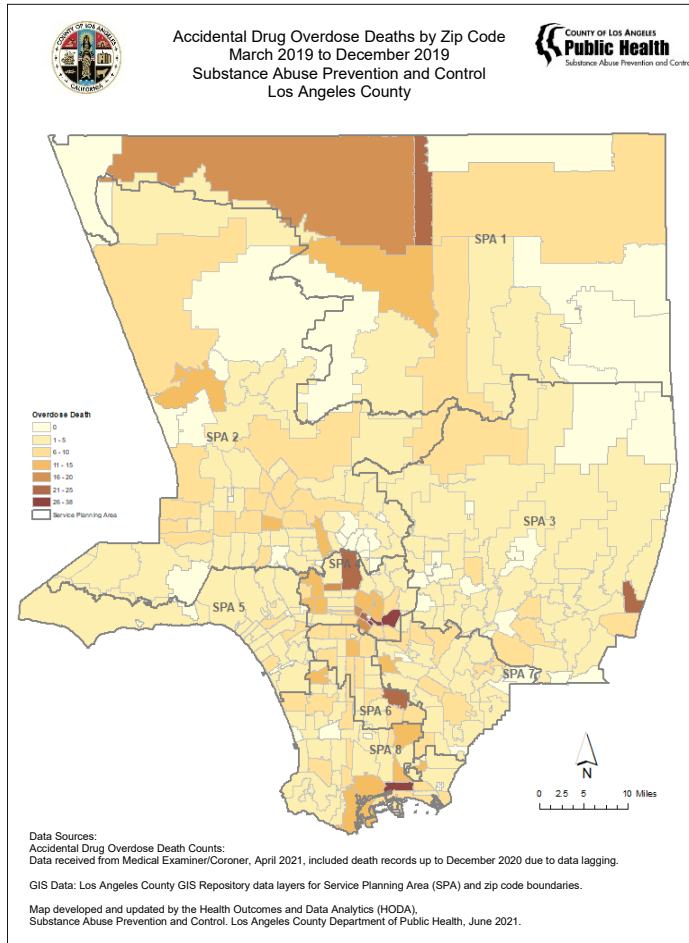
Before Pandemic (March to December 2019)

During Pandemic (March to December 2020)

Note: *Zip codes were based on residential address; if residential address was missing, death location or event address (about 10%) was used. Los Angeles County GIS Repository data layers for Service Planning Area (SPA) and zip code boundaries were used. Maps developed by the Department of Public Health's Division of Substance Abuse Prevention and Control, Health Outcomes and Data Analytics (HODA) Unit.*

Conclusion

Findings from this data report indicate that there has been a slight but steady increase in accidental drug overdose deaths in Los Angeles County over the past 11 years, with notable increases since 2018 largely due to increases in methamphetamine- and fentanyl-related deaths. The escalation in overdose deaths in 2018 exhibited a sharp surge starting in March 2020 and leveled off by September 2020. This finding suggests a clear association between an acceleration in rising drug overdose deaths and the start of the pandemic.

During the pandemic period in 2020, the vast majority (77%) of drug overdose deaths involved males, though overdose death rates among females experienced a greater degree of increase from 2019 to 2020 when compared with males. The data also revealed that middle-aged (aged 25-34) and older individuals (aged 45-64) had the highest accidental drug overdose death rate and total raw numbers of deaths, respectively. The death rate among youth aged 12-17 during pandemic were twice as high as compared to the same time of period in 2019.

In terms of drug-related deaths among racial and ethnic groups during the first ten months of the pandemic, COVID-19 appeared to contribute to greater drug overdose deaths among minority groups, particularly Blacks/African Americans and Asians. The highest accidental drug overdose death rate per 100,000 population was among Blacks/African Americans, although the total number of accidental drug overdose deaths was highest among Whites. The two populations with the highest respective increases in drug overdose death rate during the pandemic were Asians and Blacks/African Americans.

Methamphetamine and fentanyl are the first and second, respectively, most common drug types involved in accidental drug overdose deaths in Los Angeles County. When considering other opioids in addition to fentanyl such as heroin and prescription opioids, opioid-related overdose deaths slightly outnumber methamphetamine-related overdose deaths. While methamphetamine contributed to more deaths in total and also had the highest accidental drug overdose death rate per 100,000 population, fentanyl-related deaths rate increased by 136% during the first ten months of the pandemic compared to the 79% increase in methamphetamine-related deaths.

Findings also demonstrated that accidental drug overdose death rates were higher in areas with higher percentages of poverty, though the largest number of accidental drug overdose deaths occurred in areas with lower levels of poverty.

COUNTY OF LOS ANGELES
Public Health
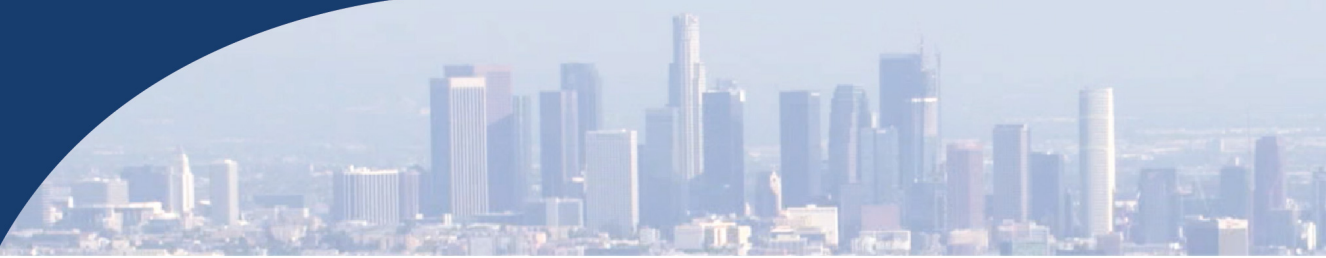
Mapping of drug overdose deaths indicated higher densities of drug overdose deaths in the Long Beach area, downtown and East Los Angeles, and along the northern and southern boundaries of North County, most notably impacting the corresponding Supervisorial Districts (2 and 4) and Service Planning Areas (1 and 4).

In summary, the findings of this data report indicate that COVID-19 has contributed to more drug overdose deaths in Los Angeles County than would otherwise be anticipated in the absence of the pandemic. The implications of the data also suggest that the greatest positive impact would likely result from interventions that target methamphetamine and fentanyl use, particularly among males, middle-aged and older adults, and Blacks/African Americans. Whether due to social disconnection and/or additional stressors related to the pandemic, it will be increasingly important to ensure that residents of Los Angeles County continue to have access to substance use prevention and recovery-oriented treatment services to mitigate the direct and indirect toll of COVID-19.