Mortality Rates and Causes of Death Among People Experiencing Homelessness in Los Angeles County: 2014-2022

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County of Los Angeles Public Health

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Executive Summary

This is the fifth annual report on mortality among people experiencing homelessness (PEH) in Los Angeles (LA) County, with data through 2022. From 2014 to 2022 the number of annual PEH deaths increased by over three and a half times, while the annual mortality rate roughly doubled (**Figure 1**).[1] The relatively smaller size of the rate increase compared to the increase in numbers stems from the fact that the population of PEH in LA County increased by an estimated 70% from January 2015 to January 2023 (**Appendix Table A-1**).[2] While achieving health equity demands that we decrease both the number of PEH and the rate of mortality among PEH, we are particularly concerned here with the mortality rate because, in stark terms, it is a measure of how deadly it is to be homeless in LA County.

Over the past eight years, the mortality rate among PEH has increased approximately 30% faster than the total population of PEH. Nevertheless, this mortality trend has varied from year to year, and 2022 was marked by a welcomed plateauing of the all-cause mortality rate, which increased by only 2% from 2021, after a devastating increase of 56% from 2019 to 2021. This steep increase, along with the plateau that followed was driven primarily by the rate of drug overdose deaths, mostly from the synthetic opioid fentanyl. After doubling from 2019 to 2021, the overdose mortality rate among PEH held steady from 2021 to 2022 (**Figure 2**). This same period also saw a two-and-a-half-fold increase in the distribution of naloxone, an opioid overdose reversal medication, in communities most affected by fentanyl, and a near doubling of reported naloxone-induced overdose reversals.[3] These efforts likely contributed to the rapid leveling-off of the overdose mortality rate in 2022. However, the all-cause mortality rate still remained 60% higher than it was in 2019 and would need to decrease in future years in order for this initial slowing to become a positive trend (**Figure 1**).

From 2020-2022, the all-cause, overdose, and coronary heart disease (CHD) mortality rates have been higher among White PEH compared to Black and Latinx PEH (**Figures 4-6**). This may be because people of color are more likely to be homeless due to structural factors like poverty and discrimination, while White homelessness is more linked to physical and mental illness and substance use.[4] Nevertheless, Blacks were the only racial or ethnic group that saw increases in overdose and CHD mortality in 2022, with Black CHD mortality approaching that of Whites in that year. Age trends in overdose mortality suggest that the overall leveling off of the rate in 2022 was

[1] The crude annual population mortality rate is defined as the number of deaths during the year among members of the population divided by the total number of persons in the population at mid-year, times 100,000.
[2] https://www.lahsa.org/homeless-count/
[3] Data provided by the LA County Department of Health Services Overdose Education + Naloxone Distribution program.
[4] Baggett TP, Hwang SW, O'Connell JJ, et al. Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med.* 2013; 173 (3): 189-195.

driven largely by reductions in overdose mortality among PEH aged 50 and older, despite a continued increase in the overdose rate among PEH aged 18-29 and 40-49 (**Figure 9**). Notwithstanding the recent leveling off of overdose mortality among PEH, the contribution of fentanyl to these deaths continued to rise through 2022 for all racial and ethnic groups and for both males and females (**Figures 11 & 12**). In 2021 and 2022 combined, the overdose mortality rate among PEH was 40.5 times greater than the rate in the total LA County population (**Table 2**). Those deaths were largely concentrated in Downtown LA and Macarthur Park/Westlake (**Appendix Heat Map 2**).

Coronary heart disease (CHD) has been the second leading cause of death among PEH since 2017, after several years of alternating with overdose as the leading cause (**Figure 2**). Despite some volatility in the earlier years, there was a steady but more gradual increase in CHD mortality through 2020. In 2021, at the height of the COVID-19 pandemic, the CHD rate dipped among PEH, although a similar dip was seen countywide[1] as COVID-19 claimed many lives among older people who would otherwise have died from CHD. Importantly, PEH die from CHD at much younger ages than people who are housed. In 2022, the average age at death among PEH who died from CHD was 63.8. Among all LA County CHD deaths in 2022, the average age at death was 77.7. In 2021 and 2022 combined, the CHD mortality rate among PEH was 4.3 times greater than the rate in the total LA County population (**Table 2**). The highest concentration of these deaths occurred in Downtown LA, but they were spread widely across many parts of the county (**Appendix Heat Map 3**).

Transportation-related injury has been the third leading cause of death among PEH since we began tracking the data (**Figure 2**). After steadily increasing almost every year since 2014, the rate of transportation-related injury deaths saw a welcome plateau in 2022. Nevertheless, the rate remains alarmingly high. Assuming a relatively stable distribution of PEH road traffic deaths over time, one of these deaths occurred almost every other day in 2021 and 2022. (**Table 1**). 95% of those deaths were among pedestrians and cyclists (87% among pedestrians) and two-thirds of them occurred between 9pm and 9am. A potential explanation for the recent plateau in traffic-related deaths may be the increased movement of PEH into indoor settings, through programs like Project Roomkey,[2] during the COVID-19 pandemic. It remains to be seen whether PEH traffic deaths begin to decrease as newer programs, like the LA Mayor's Inside Safe program and LA County's Pathway Home

[1] Patterns in Mortality Among Los Angeles County Residents for January 1-June30 of 2019-2020, 2021, and 2022: http://www.publichealth.lacounty.gov/media/coronavirus/docs/Six_Month_Mortality_Patterns_2019_to_2022.pdf

[2] Project Roomkey was a collaborative effort by the State, County and the Los Angeles Homeless Services Authority (LAHSA) to secure hotel and motel rooms for vulnerable people experiencing homelessness during the COVID-19 pandemic.

program,[1] are implemented. In 2021 and 2022, transportation-related injury mortality among PEH was 18.3 times greater than the rate in the total LA County population (**Table 2**). These traffic injury deaths occurred all over the County. No specific areas of concentration could be identified (**Appendix Heat Map 4**).

After increasing by 50% from 2020 to 2021, the homicide rate among PEH continued to rise in 2022 to 214 per 100,000 (**Figure 2**), the highest since we began tracking the data. Two-thirds of PEH homicides in 2021 and 2022 combined were from firearms. 2021 also saw a spike in homicides in the City of LA, but those numbers began to decline slightly in 2022 and then declined considerably in 2023.[2] In 2021 and 2022 the proportions of homicides among Black and Latinx PEH deaths were two to three times greater than among White PEH deaths (**Table 1**). In those years, the homicide rate among PEH was 17.7 times greater than the rate in the total LA County population (**Table 2**).

Suicide mortality among PEH has remained relatively stable since we began tracking the data. However, from 2020 to 2022 the suicide rate almost doubled among PEH aged 18-29 years, and in 2022 18-29-year-olds experienced a higher suicide rate than any other PEH age group. With the exception of 2020 and 2021, at the peak of the COVID-19 pandemic, suicide has consistently ranked as the fifth leading cause of death among PEH in LA County (**Table 1; Figure 2**). In 2021 and 2022 combined, only 5% of PEH suicide deaths were from firearms. In those same years, the suicide rate among PEH was 8.4 times greater than the rate in the total LA County population (**Table 2**).

Finally, despite early concerns that COVID-19 would disproportionately affect LA County's unhoused population, our data indicate that this gap was much narrower than for other leading causes of death among PEH. The COVID-19 mortality rate among PEH was 1.7 times greater than the rate in the total LA County population (**Table 2**). While the other non-infectious leading causes of death among PEH stem from a more complex set of social factors for which no single remedy is available, the PEH experience with COVID-19 should remind us that the negative health impacts of homelessness can be mitigated through concerted public action. This report details the findings summarized above and then offers general conclusions and a set of action-oriented recommendations to help reduce the disproportionate burden of mortality in this vulnerable population.

[1] Inside Safe is a city-wide, voluntary, proactive housing-led strategy to bring people inside from tents and encampments, and to prevent encampments from returning. Pathway Home is a major expansion of LA County's ongoing efforts to resolve encampments countywide, including recreational vehicles, in partnership with local jurisdictions and unincorporated communities.

[2] https://www.lapdonline.org/

Introduction

As we work to address the homelessness crisis in Los Angeles (LA) County it is important to consider the impact of this crisis on the health and well-being of unhoused Angelenos. People experiencing homelessness (PEH) are much more likely than those who are housed to suffer from a variety of chronic and infectious diseases.[1] Studies have also shown that PEH die at rates two to six times higher than people who are housed.[2] In recent years, drug overdose deaths have taken a particularly large and disproportionate toll on PEH in LA County.

Using available data from the LA County Office of the Medical Examiner, the Los Angeles Homeless Services Authority (LAHSA), and the California Department of Public Health, the Los Angeles County Department of Public Health (DPH) has been monitoring annual trends in mortality rates and causes of death among PEH since 2019. From its inception, this effort was designed to inform the planning and implementation of multi-pronged strategies for preventing and reducing mortality among PEH in LA County. As we provide tailored and targeted disease control, physical and behavioral health care, and social services to unhoused Angelenos, permanent housing continues to be our best line of defense for improving the well-being of this vulnerable population. We are grateful for the tireless efforts of LAHSA and the County and City of LA as they strive to bring our unhoused neighbors indoors.

The data presented in this report are as follows:

1) Trends in all-cause crude mortality rate and number of deaths among PEH: 2014-2022 **(Figure 1)**
2) Demographic data on leading causes of deaths among PEH: 2021 and 2022 combined **(Table 1)**
3) Trends in cause-specific mortality rates for leading causes of PEH deaths: 2014-2022 **(Figure 2)**
4) Age-adjusted trends in all-cause and cause-specific PEH mortality rates, by race and ethnicity and gender: 2020-2022 **(Figures 3-8)**
5) Trends in overdose mortality rates among PEH, by age group: 2020-2022 **(Figure 9)**
6) Trends in the types of drugs involved in PEH overdose deaths: 2018-2022 **(Figure 10)**
7) Trends in fentanyl and methamphetamine involvement in overdose deaths, by race and ethnicity and gender: 2018-2022 **(Figures 11-12)**
8) Trends in overdose deaths for which only one drug type was involved: 2018-2022 **(Figure 13)**

[1] Fazel S, Geddes JR, and Kushel M. The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet*. 2014; 384: 1529-1540.

[2] Nicholas W, Greenwell L, Henwood BF, and Simon P. Using point-in-time homeless counts to monitor mortality trends among people experiencing homelessness in Los Angeles County, California, 2015-2019. *AJPH*. 2021; 111 (12): 2212-2222.

9) Comparison of all-cause and cause-specific mortality rates between PEH and the total LA County population: 2021-2022 combined **(Table 2)**
10) Size and characteristics of PEH population: 2015-2023 **(Appendix)**
11) Heat maps indicating geographic distribution of PEH deaths in LA County: 2021-2022 **(Appendix)**

After describing our methods and findings, we offer summary conclusions followed by an updated set of recommendations for action.

Methods

PEH Deaths and Population Denominators

Calculating annual homeless mortality rates requires estimates of the number of PEH who die each year and the total population of PEH each year. Most deaths among PEH are investigated by the Los Angeles County Department of Medical Examiner (ME).[1] To identify the latter, ME-investigated deaths flagged as homeless/indigent were augmented through systematic text-based analyses of remaining ME case records. Those remaining cases with emergency shelter or transitional housing facility addresses[2] in one or more address fields were added to the ME PEH death count. In addition, cases with homelessness-related key words[3] in any of the descriptive text-based fields were independently reviewed by two analysts using Department of Housing and Urban Development (HUD) homelessness criteria.[4] Cases meeting these criteria were also added to the ME PEH death count.

To identify PEH deaths not investigated by the ME, ME records were matched with California state death certificate data for LA County, and the address fields in non-matching state records were systematically searched for entries suggesting homelessness.[5] Cases identified as PEH solely based on data from state death certificates were added to the count of ME PEH deaths to arrive at a final PEH death count.

To estimate mid-year homeless population denominators for annual rate calculations, we calculated the average of two consecutive January point-in-time (PIT) homeless counts.[6] Because no PIT count was

[1] The ME investigates all violent, sudden, or unusual deaths; unattended deaths; and deaths where the deceased does not have a physician (Govt. Code, § 27491)
[2] Shelter and transitional housing addresses were obtained from the latest HUD mandated Housing Inventory Counts from the Los Angeles, Long Beach, Pasadena, and Glendale homeless services authorities, and augmented with more recent data on facilities not included in those counts.
[3] Key words included: homeless, transient, shelter, lives in van, lives in car, lives in vehicle, no fixed abode, no known residence, tent, encampment, indigent, skid row, vagrant, shed, Room Key, HomeKey, PEH, and institution.
[4] https://files.hudexchange.info/resources/documents/HomelessDefinition_RecordkeepingRequirementsandCriteria.pdf
[5] In addition to homeless key words and emergency shelter/transitional housing addresses, state death certificate address fields were also searched for location descriptions consistent with instructions provided by the state to local registrars on how to code the address field for homeless decedents.
[6] The annual PIT count is conducted by the Los Angeles Homeless Services Authority (LAHSA). For example, our estimate of the mid-year population denominator for 2019 is the average of the January 2019 and 2020 counts.

conducted in January 2021 due to the COVID-19 pandemic, we used the average of the PIT counts for 2020 and 2022 as a proxy for the 2021 count (**Appendix**).

Note: 2022 was the first year California began systematically reporting data on homelessness in state death records, following the California Department of Public Health's 2020 release of guidelines for collecting these data. All 645 LA County deaths identified as PEH on state death records in 2022 were already identified as PEH based on the methods described above, but we will continue to use this new source of data as part of our PEH death enumeration methodology.

Causes of Death

We determined causes of death based on the International Classification of Disease (ICD-10) cause of death codes in the underlying cause of death fields in the state death certificate data. These codes were captured for all ME PEH cases that matched with state death certificate data, and for additional PEH deaths identified solely from state death certificate data.

Geocoding of PEH Deaths

To explore the geographic patterning of PEH deaths in 2021 and 2022, we used ArcMap to geocode death locations from ME or state death certificate data. When someone is transported to a hospital after a traumatic event and then dies in the hospital, ME investigators try to determine the event location. When available, we geocoded the event location rather than the hospital location since event locations are more useful for prevention purposes. If a death occurred in a hospital and no event location was available (which occurred in 12% of all PEH deaths), we did not geocode the location. Based on the geocoded data, we used ArcMap to create countywide heat maps for all deaths and for the top 4 causes of death. Each map indicates the number and percentage of deaths not included because they occurred in hospitals and no event location was available.

Comparing Mortality Rates Among PEH Sub-Groups and Between PEH and the Total LA County Population

Using PEH demographic survey data collected in conjunction with the annual PIT count, we compared age-adjusted trends in all-cause and two cause-specific (overdose and coronary heart disease) PEH mortality rates by race/ethnicity and gender.[1] We included only 2020-2022 data in these trend analyses because PEH age group data for prior years did not conform to standards required for age adjustment of mortality rates. Because no PEH demographic survey was conducted in January 2021 due to the COVID-19 pandemic, we applied the average of the January 2020 and January 2022 demographic estimates to our estimate of the mid-year PEH population for 2021. The 2022 demographic estimates were applied to the 2022 population

[1] PEH Demographic estimates are available only for the Los Angeles Continuum of Care which excludes Long Beach, Glendale, and Pasadena. To produce countywide estimates, we assumed that the age, gender, and racial/ethnic makeup of the PEH populations in those three cities was the same as that of the rest of LA County. Age adjustment was performed using the following age categories: <18; 18-29; 30-39; 40-49; 50-59; 60-69; 70+.

data. The 2010 LA County population was used as the standard population for the calculation of age-adjusted mortality rates.

To compare all-cause and cause-specific mortality rates among PEH to those in the total LA County population, we calculated age and gender-adjusted mortality rate ratios (MRRs) for the combined years of 2021-2022.[1] Data on 2021-2022 LA County population demographics were obtained from Hedderson Demographic Services, and data on 2021-2022 LA County deaths were obtained from Provisional Annual Death Data Files for LA County.[2] Mortality rate ratios (MRRs) were calculated by dividing directly adjusted rates for PEH by those for the total LA County population. The 2010 LA County population was used as the standard population for age and gender adjustment.

Drug Type Analysis for Overdose Deaths

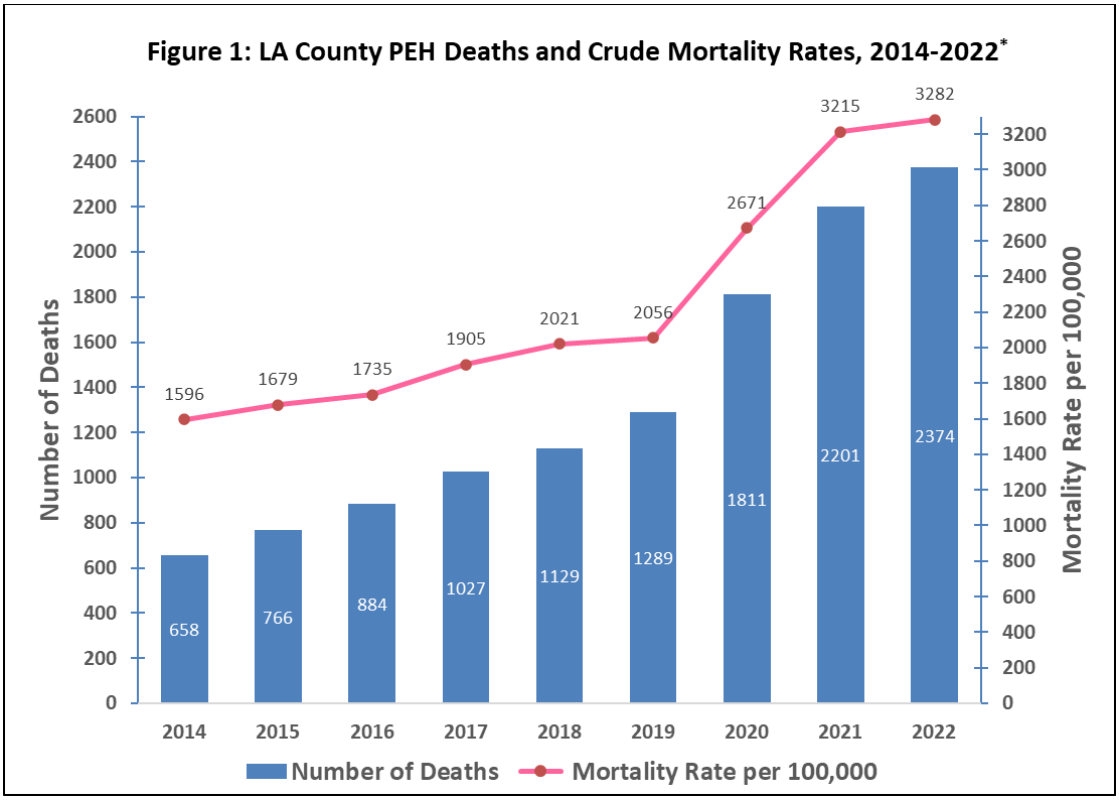
To determine the types of drugs that contributed to overdose deaths, we performed a text-based analysis of the cause of death, contributing cause of death, and description of injury fields in the state death certificate data for PEH whose ICD-10 code for underlying cause of death was drug/alcohol overdose. This analysis was based on a methodology developed and published by epidemiologists at the Food and Drug Administration and the National Center for Health Statistics.[3] Any type of drug mentioned as a primary or contributing cause of death is deemed to be a contributing factor for that death, and multiple drugs can contribute to the same death. Using this methodology, each drug type was ranked according to the percentage of deaths to which it contributed, in a mention-level analysis (i.e., in which the units were person-mentions). Drug combinations were also examined at the individual level. These analyses were performed for PEH overdose deaths from 2018-2022.

Results

Mortality Trends and Leading Causes of Death

The number of deaths among PEH increased each year from 658 in 2014 to 2,374 in 2022 (**Figure 1**). The all-cause crude mortality rate, which accounts for increases in the total homeless population over time, also increased each year, from 1,596 per 100,000 in 2014 to 3,282 per 100,000 in 2022. After steady but more gradual increases in the numbers of deaths and mortality rates from 2014 to 2019, both indicators increased precipitously in 2020 and 2021. In 2022, these indicators remained high but plateaued compared to the rapid increases over the previous two years.

[1] Gender adjustment is required due to the very different gender makeup of the PEH population compared to the general population. The LA County PEH population is typically about two-thirds male.
[2] These mortality data sets are created by the LA County Department of Public Health's Office of Health Assessment and Epidemiology based on death certificate data obtained from the California Department of Public Health. Data for 2021 and 2022 are called provisional because they do not yet include out of state deaths for LA County residents.
[3] Trinidad J, et al. Using Literal Text from the Death Certificate to Enhance Mortality Statistics: Characterizing Drug Involvement in Deaths. *National Vital Statistics Reports*. 2016; 65 (9): 1-14.



* Since there was no homeless count in 2021 due to the COVID-19 pandemic, we used the average of the 2020 and 2022 counts to approximate the 2021 PEH population for the 2021 mortality rate.

Table 1 provides demographic information on the top eight causes of death among PEH in 2021-2022 combined. Together, these eight causes accounted for 3,350 (73%) PEH deaths during those years. Alcohol and other drug (AOD) overdose was the leading cause of death among PEH in 2021-2022, accounting for 37% of all deaths. Overdose[1] was the leading cause of death among males and females; and among Whites, Latinx, and Blacks. Overdose was the leading cause of death for all age groups under 70 and was the second leading cause of death for those aged 70+. Coronary heart disease (CHD) was the second leading cause of death overall, accounting for 12% of deaths. CHD was the leading cause of death among those 70 and older, the second leading cause of death among males, and the third leading cause among females.

Transportation-related injury was the third leading cause of death overall but was the second leading cause of death among females, and the fourth leading cause of death among males and among all racial and ethnic groups except Whites. Homicide was the fourth leading cause of death. The proportion of homicide deaths was more than twice as high among males compared to females and was two to three times higher among Black and Latinx PEH compared to White PEH. Homicide was the second leading cause of death among those aged 30-39 and 40-49.

[1] Throughout this report, "overdose" refers to alcohol and other drug overdose.

COVID-19 was the fifth leading cause of death. As expected, the proportion of deaths from this cause increased with age. While the "other and missing" racial and ethnic category had the highest proportion of COVID-19 deaths, over two-thirds of these deaths were among PEH whose race and ethnicity were unknown. Suicide was the sixth leading cause of death overall but was the fourth leading cause of death among PEH aged 18-29.

Table 1: Leading causes of PEH death (2021 and 2022 combined; N=4,575 Deaths)

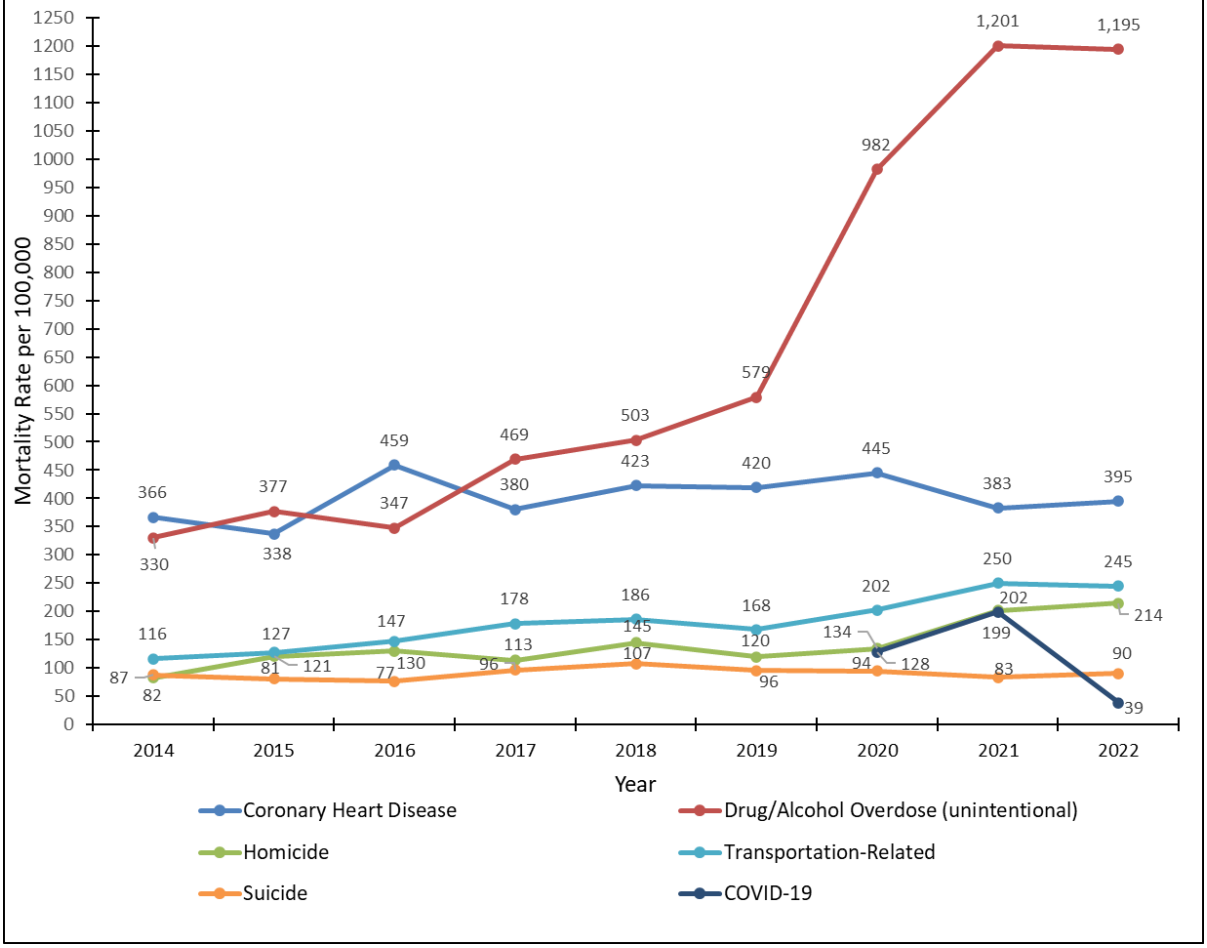
		Race/Ethnicity[1]				Gender[2]		Age Group (years)[3]					
Cause	**Total**	**Latinx**	**Black**	**White**	**Other/ Missing**	**Male**	**Female**	**18-29**	**30-39**	**40-49**	**50-59**	**60-69**	**70+**
		n(%)	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*	*n(%)*
Drug/Alcohol Overdose	1686	611	427	588	60	1379	306	192	393	382	410	269	37
	37%	35%	36%	41%	33%	37%	38%	50%	48%	44%	38%	27%	12%
Coronary Heart Disease	548	164	160	203	21	485	63	0	*	13	146	253	121
	12%	9%	13%	14%	12%	13%	8%	0%		1%	13%	26%	39%
Transportation-Related Injury[4]	348	152	80	104	12	260	88	41	81	57	79	73	15
	8%	9%	7%	7%	7%	7%	11%	11%	10%	6%	7%	7%	5%
Homicide	293	161	86	43	*	267	26	36	95	72	61	25	*
	6%	9%	7%	3%		7%	3%	9%	12%	8%	6%	3%	
COVID-19[5]	164	62	52	33	17	134	30	*	*	27	36	56	32
	4%	4%	4%	2%	9%	4%	4%			3%	3%	6%	10%
Suicide	122	58	22	38	*	99	23	27	41	22	22	*	*
	3%	3%	2%	3%		3%	3%	7%	5%	3%	2%		
Other Unintentional Injuries	98	50	17	30	*	86	12	*	21	23	22	19	*
	2%	3%	1%	2%		2%	2%		3%	3%	2%	2%	
Liver Disease	91	58	*	19	*	77	14	*	*	25	34	14	*
	2%	3%		1%		2%	2%			3%	3%	1%	
Total[6]	**4575**	**1761**	**1186**	**1446**	**182**	**3774**	**799**	**383**	**824**	**878**	**1088**	**985**	**312**

1 Other/missing includes Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, multiracial, refused and missing.
2 Male includes transgender male and female includes transgender female. Gender data were missing for two PEH deaths in 2021 and 2022 combined.
3 There were two deaths among PEH <18 years old from these 8 causes in 2021 and 2022 combined. Age data were missing for 92 PEH deaths in 2021 and 2022 combined
4 Includes deaths of motorists, train/bus passengers, pedestrians and cyclists. In 2021 and 2022 combined, 95% of these PEH deaths were pedestrians or cyclists.
5 This COVID-19 death count among PEH is less than what is reported in Public Health's COVID-19 dashboard because it is limited to PEH deaths with an ICD-10 code for COVID-19 as the underlying cause of death on the death certificate and only includes decedents who met the HUD definition of homelessness at the time of death according to Medical Examiner data.
6 These totals include all 2021 and 2022 deaths among PEH for each of the column headings (not just the totals from these top eight causes).
* Non-zero cells with less than 11 deaths are supressed per state death data reporting rules.

Figure 2 shows annual trends in cause-specific crude mortality rates among PEH from 2014-22 for the top five causes of death. These cause-specific trends indicate that the overall trend in **Figure 1** has been driven largely by the overdose mortality rate, which doubled between 2019 and 2021 and then plateaued in 2022. After a gradual upward trend in CHD mortality from 366 per 100,000 in 2014 to 445 per 100,00 in 2020, the CHD mortality rate decreased in 2021—during the height of the COVID-19 pandemic—and then increased slightly in 2022 to 395 per 100,000. The transportation-related injury mortality rate plateaued in 2022 after increasing steadily from 2014 to 2021. The homicide mortality continued to climb, reaching 214 per 100,000 in 2022, the highest rate since these trends have been monitored. The COVID-19 mortality rate peaked in 2021 when it was the fifth leading cause of death among PEH. In 2022, COVID-19 mortality decreased substantially such that it was no longer among the top 10 causes of death among PEH that year. Suicide mortality has remained relatively stable over time. However, from 2020 to 2022 the suicide rate almost doubled

among PEH aged 18-29, and in 2022 this was the age group with the highest suicide rate (not shown).

Figure 2: Cause-Specific Mortality Rates Among LA County PEH, 2014 -2022*



* COVID-19 entered the top five causes in 2020 but by 2022 it had fallen out of the top ten. Since there was no homeless count in 2021 due to the COVID-19 pandemic, we used the average of the 2020 and 2022 counts to approximate the 2021 PEH population for all 2021 mortality rates.

Heat Maps of PEH Deaths in LA County

The heat maps in the **Appendix** show the geographic distribution of PEH death in LA County in 2021 and 2022. **Map 1** shows the distribution of deaths from all causes. The highest concentration of deaths occurred in Downtown LA and Macarthur Park/Westlake (red and orange areas). Additional concentrations (yellow areas) occurred in South LA, East LA/Boyle Heights, Koreatown, and Hollywood; West LA, Santa Monica and Venice; Long Beach; and portions of the San Fernando Valley. **Map 2** shows the distribution of overdose deaths, which were most concentrated in Downtown LA and Macarthur Park/Westlake (red, orange, and yellow areas). About 25% of all

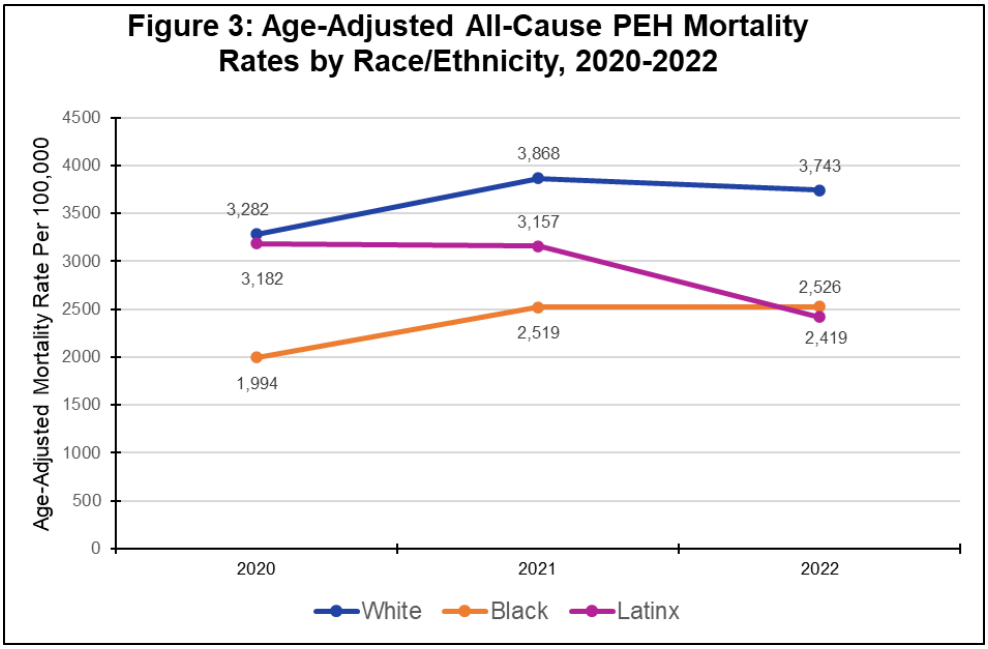
overdose deaths occurred in these areas. **Map 3** shows the distribution of CHD deaths. The highest concentration of CHD deaths (red and orange areas) occurred in Downtown LA, although additional concentrations (yellow areas) were spread out quite broadly across many parts of the county. Transportation-related deaths had no discernable areas of concentration and were spread quite widely across the county (not shown).

Trends in Age-Adjusted PEH Mortality Rates, by Race/Ethnicity and Gender[1]

Race/Ethnicity

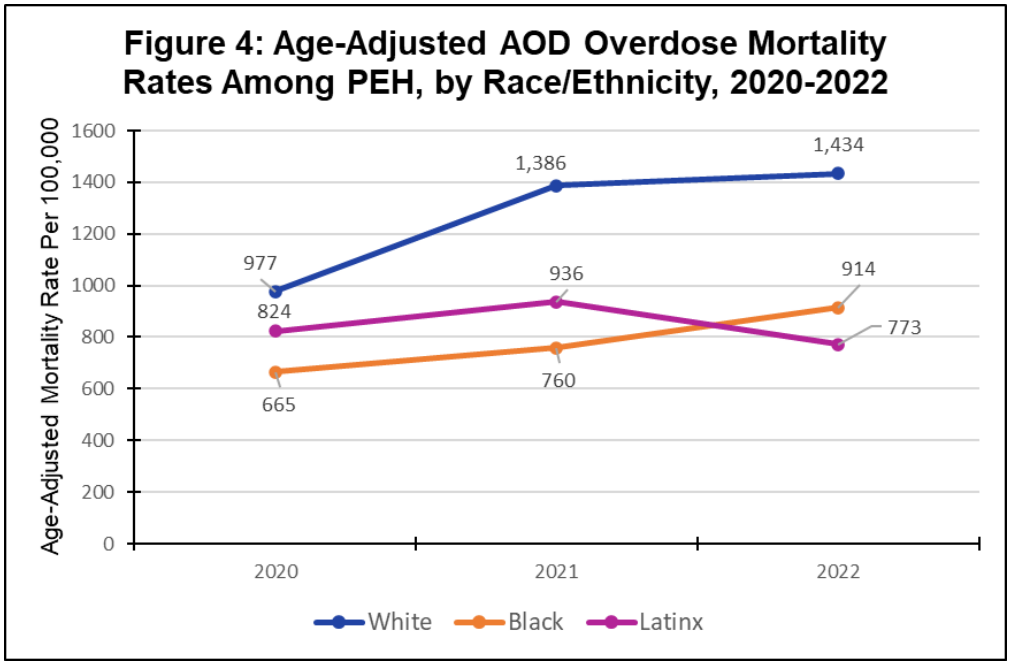
Figures 3-5 show trends in age-adjusted all-cause and cause-specific mortality rates among PEH by race/ethnicity.[2] Among White and Black PEH, all-cause mortality rates increased by 18% and 26%, respectively, from 2020 to 2021 and then remained relatively stable from 2021 to 2022. The all-cause mortality rate was consistently higher among White PEH, although the gap narrowed slightly across the three-year period. Among Latinx PEH the all-cause mortality rate remained relatively stable from 2020 to 2021 and then decreased by 23% from 2021 to 2022 (**Figure 3**).

Figure 3: Age-Adjusted All-Cause PEH Mortality Rates by Race/Ethnicity, 2020-2022

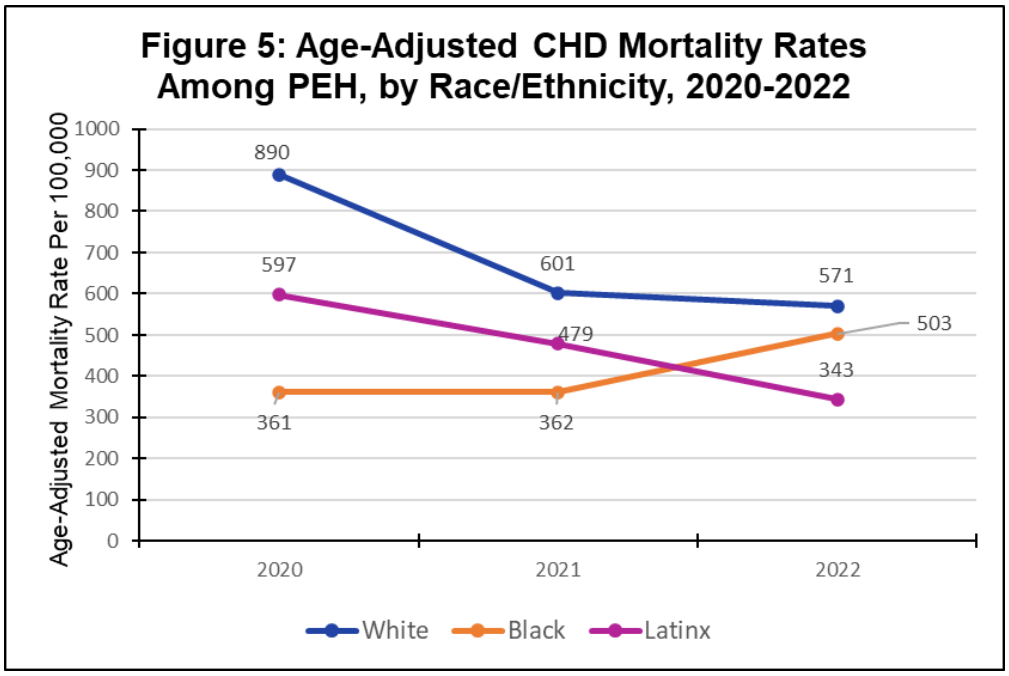


[1] In this section, increases or decreases in subgroup rates or gaps between subgroup rates that are <5% are reported as stable. Those that are >=5% but <10% are reported as slight trends. Those that are >=10% are reported as percentages.
[2] American Indians/Alaska Natives, Asians, and Native Hawaiians/Pacific Islanders are not included in these graphs due to very small numbers of deaths in these groups. Since there was no homeless count or demographic survey in 2021, we applied the average of the 2020 and 2022 demographic estimates to our estimate of the mid-year PEH population for 2021.

The overdose mortality rate for White PEH increased by 42% from 2020 to 2021 and then remained relatively stable from 2021 to 2022. The overdose rate for White PEH was higher than the rates for Black and Latinx PEH across all three years. The White-Black gap increased by 67% and the White-Latinx gap more than tripled. Overdose mortality rates increased by 14% among both Black and Latinx PEH from 2020 to 2021, but from 2021 to 2022 the rate increased by 20% for Black PEH while it decreased by 17% for Latinx PEH (**Figure 4**).



Among White and Latinx PEH, the CHD mortality rate decreased substantially from 2020 to 2022. Among Black PEH, the CHD mortality rate remained stable from 2020 to 2021 and then increased by 39% from 2021 to 2022. Across all three years, the CHD mortality rate among White PEH was higher than the rates for Latinx and Black PEH, although the White-Black CHD mortality gap decreased six-fold across the three years while the White-Latinx gap decreased by only 22% (**Figure 5**).



Gender

Figures 6-8 show trends in age-adjusted all-cause and cause-specific mortality rates among PEH by gender.[1] The all-cause mortality rate was higher among males than females across all three years, and this gender gap tripled from 2020 to 2022. In 2022 the rate for males was more than twice as high as the rate for females. While the all-cause mortality rate decreased by 35% among women across all three years, the rate for men increased by 17% from 2020 to 2021 and then decreased slightly from 2021 to 2022 (**Figure 6**).

The overdose mortality rate was higher among males than females across all three years, and this gap doubled from 2020 to 2022. In 2022 the rate for males was more than twice as high as the rate for females. While the overdose mortality rate decreased slightly across the three years for females, the rate for males increased by 31% (**Figure 7**).

The CHD mortality rate was higher among males than females across all three years, and this gap also doubled from 2020 to 2022. In 2022 the rate for males was more than twice as high as the rate for females. While the CHD mortality rate decreased by 51% across the three years for females, the rate for males decreased by 15% from 2020 to 2021 and then increased slightly from 2021 to 2022 (**Figure 8**).

[1] Since there was no homeless count or demographic survey in 2021, we applied the average of the 2020 and 2022 demographic estimates to our estimate of the mid-year PEH population for 2021.

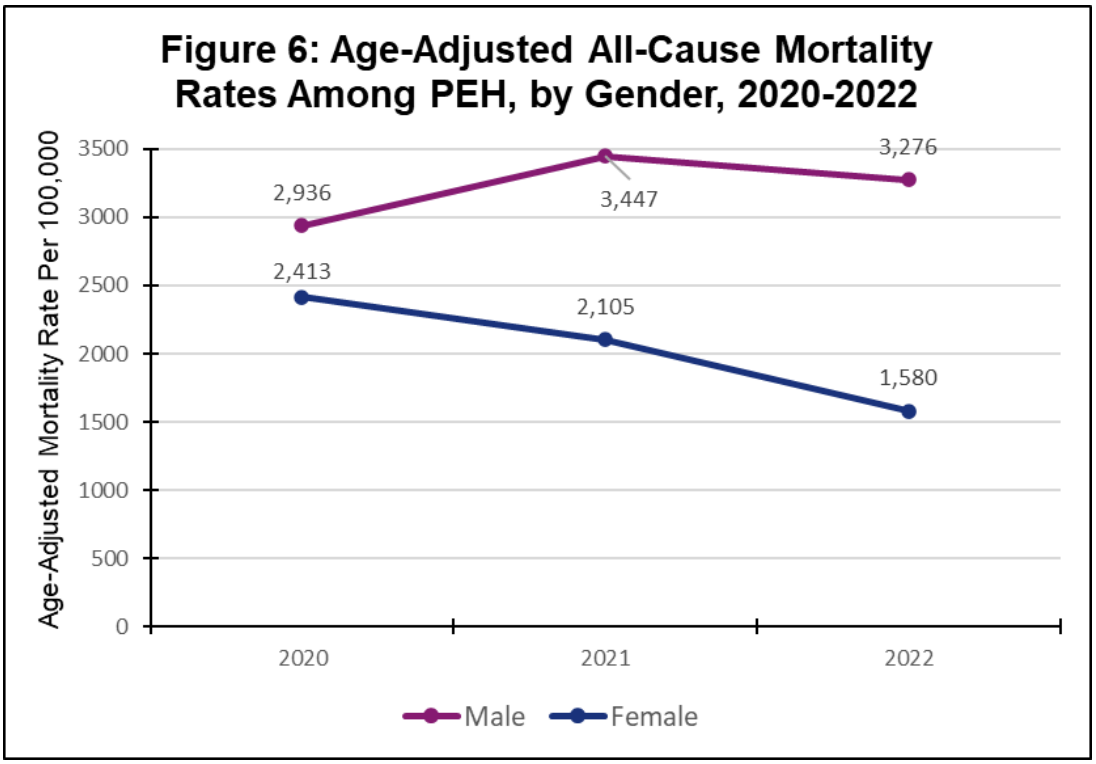


Figure 6: Age-Adjusted All-Cause Mortality Rates Among PEH, by Gender, 2020-2022
Age-Adjusted Mortality Rate Per 100,000
3500
3000
2500
2000
1500
1000
500
0
2,936
3,447
3,276
2,413
2,105
1,580
2020
2021
2022
Male
Female

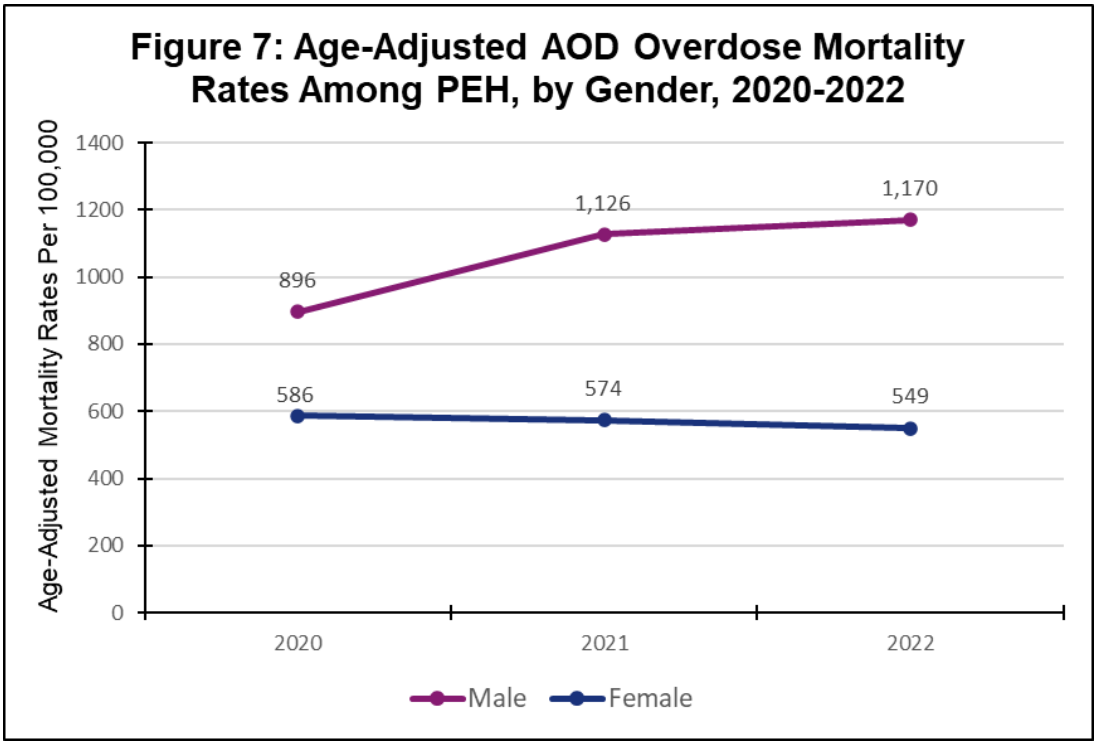


Figure 7: Age-Adjusted AOD Overdose Mortality Rates Among PEH, by Gender, 2020-2022
Age-Adjusted Mortality Rates Per 100,000
1400
1200
1000
800
600
400
200
0
896
1,126
1,170
586
574
549
2020
2021
2022
Male
Female

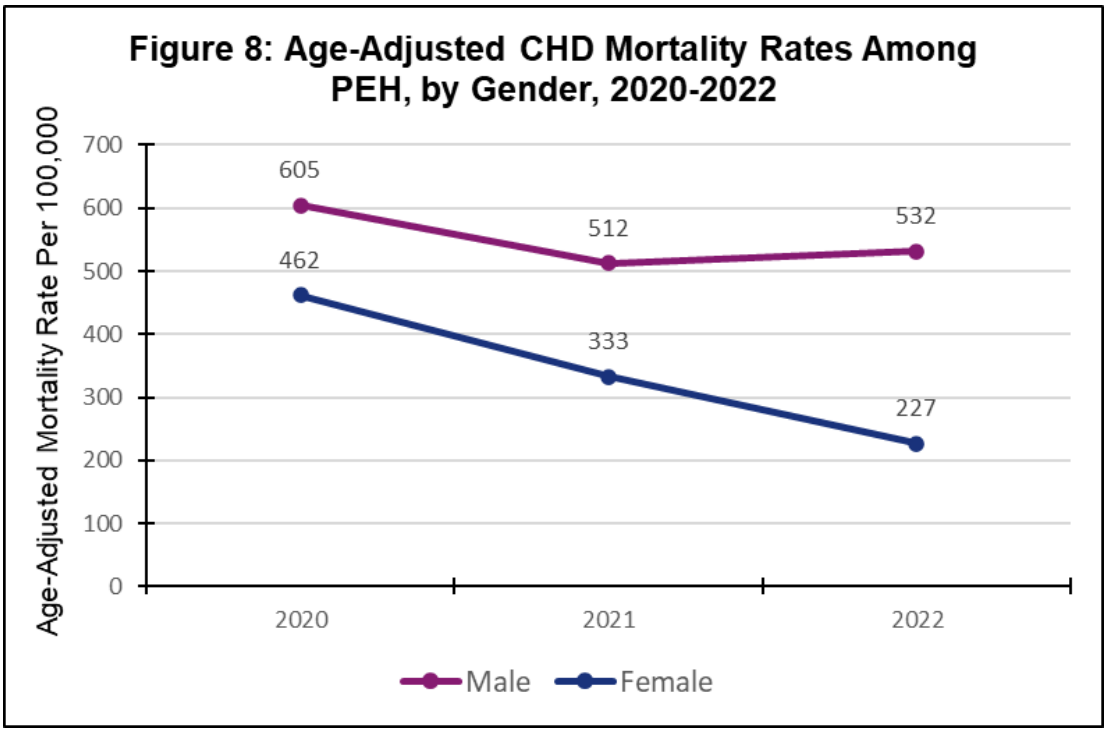
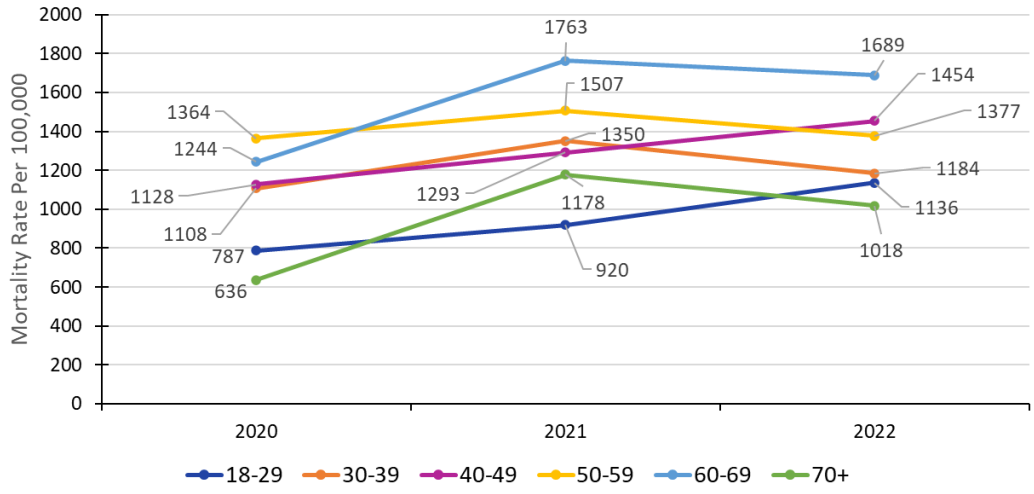


Figure 8: Age-Adjusted CHD Mortality Rates Among PEH, by Gender, 2020-2022
Age-Adjusted Mortality Rate Per 100,000
700
600
500
400
300
200
100
0
605
512
532
462
333
227
2020
2021
2022
Male
Female

Overdose Mortality Trends by Age Group

The mortality rates in **Figures 3-8** above are adjusted for the age distribution of different racial and ethnic and gender subgroups of PEH, but it is also useful to compare mortality trends by age group. **Figure 9** shows overdose mortality rates by age group from 2020 to 2022. While most of the older age groups saw increases in overdose mortality from 2020 to 2021, followed by a slight decrease from 2021 to 2022, PEH aged 18-29 and 40-49 saw increases in overdose mortality across all three years. In fact, the overdose mortality rate among those aged 18-29 increased by 44% from 2020 to 2022. In 2022 the overdose rate in the youngest group approached that of PEH aged 30-39.

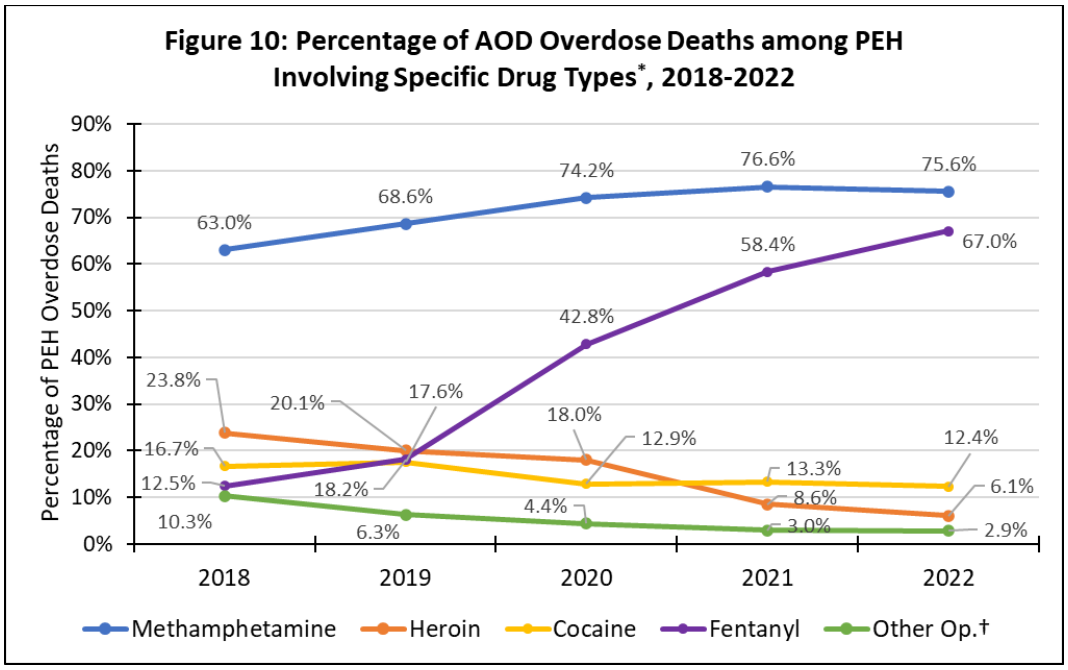
Figure 9: Trends in AOD Overdose Mortality Rates among PEH, by Age Group, 2020-22



Drug Types Involved in Overdose Deaths

Figure 10 displays trends in the specific types of drugs involved in PEH overdose deaths from 2018-2022, regardless of whether other drug types were also involved.[1] Methamphetamine was the drug involved in the greatest percentage of overdose deaths across all years. After gradually increasing from 63.0% in 2018 to 76.6% in 2021, the percentage of overdoses involving methamphetamine decreased slightly to 75.6% in 2022. The percentage of overdose deaths involving fentanyl, a powerful synthetic opioid, increased more than five-fold, from near the bottom of the list in 2018 (12.5%) to a level approaching that of methamphetamine in 2022 (67.0%). Meanwhile, the percentage of deaths involving heroin and other opioids decreased substantially over the same period.

[1] In 2022, two-thirds of PEH overdose deaths involved more than one substance.



*Percentages per year sum to more than 100% because each overdose can involve multiple drug types.
†Methadone, morphine, oxycodone, hydrocodone, oxymorphone, tramadol, codeine, opiate

Figure 11 displays trends in methamphetamine and fentanyl involvement in PEH overdose deaths by race and ethnicity. The trends in methamphetamine involvement are similar to the overall trend in **Figure 10,** although Black PEH overdose deaths were less likely to involve methamphetamine than those among White and Latinx PEH across all years. The percentage of overdose deaths involving fentanyl increased precipitously among all three of these racial and ethnic groups, with slightly higher rates of involvement in White PEH overdose deaths compared to Black and Latinx PEH overdose deaths in 2021 and 2022.

Figure 12 displays trends in methamphetamine and fentanyl involvement in PEH overdose deaths by gender. The trends in involvement of both drugs are similar to the overall trend in **Figure 10**. After 2018, when methamphetamine involvement was higher in female overdose deaths, methamphetamine involvement in male and female overdose deaths remained similar. In 2020, when fentanyl overdoses surged, the increase was greater among males, but in 2021 and 2022, fentanyl involvement in female overdose deaths reached near parity with that of male overdoses.

Figure 11: Percentage of AOD Overdose Deaths among PEH Involving Methamphetamine or Fentanyl, by Race/Ethnicity, 2018-2022

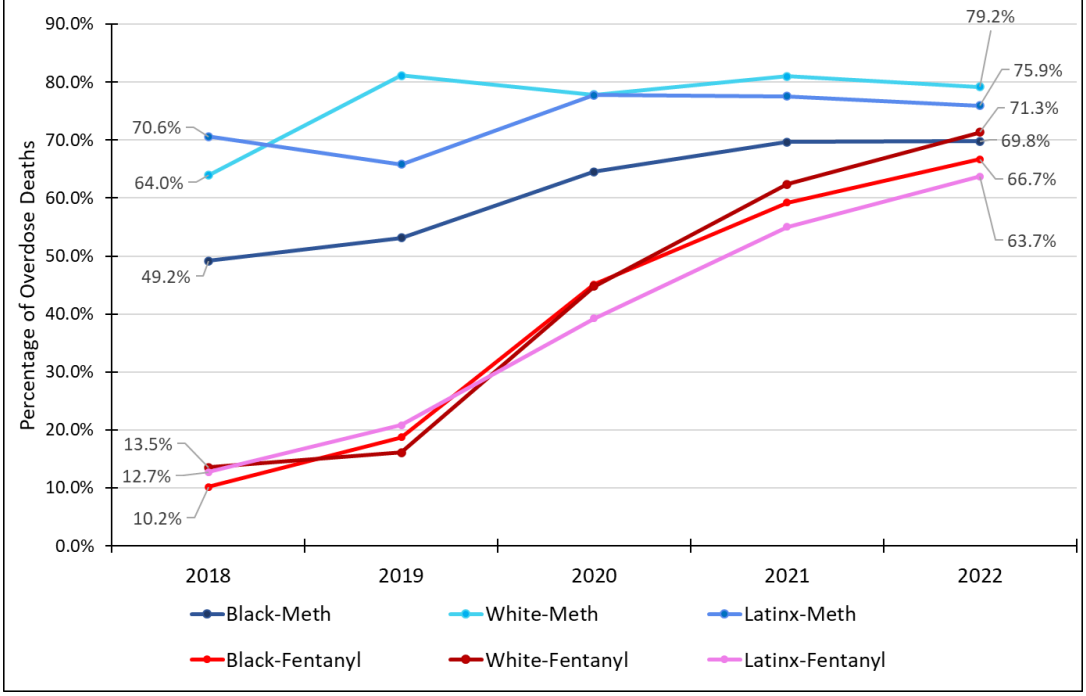
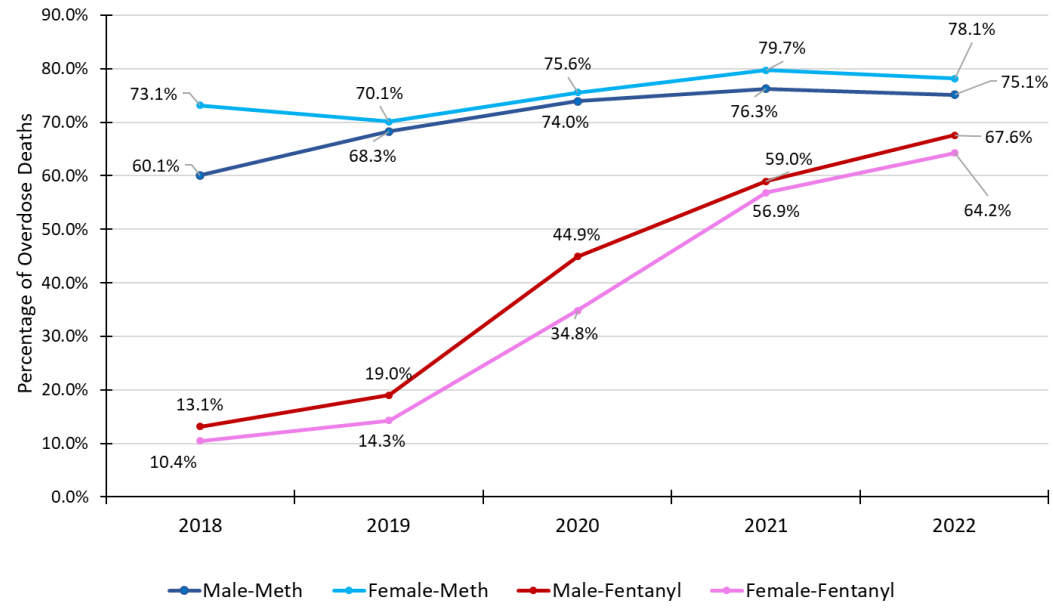
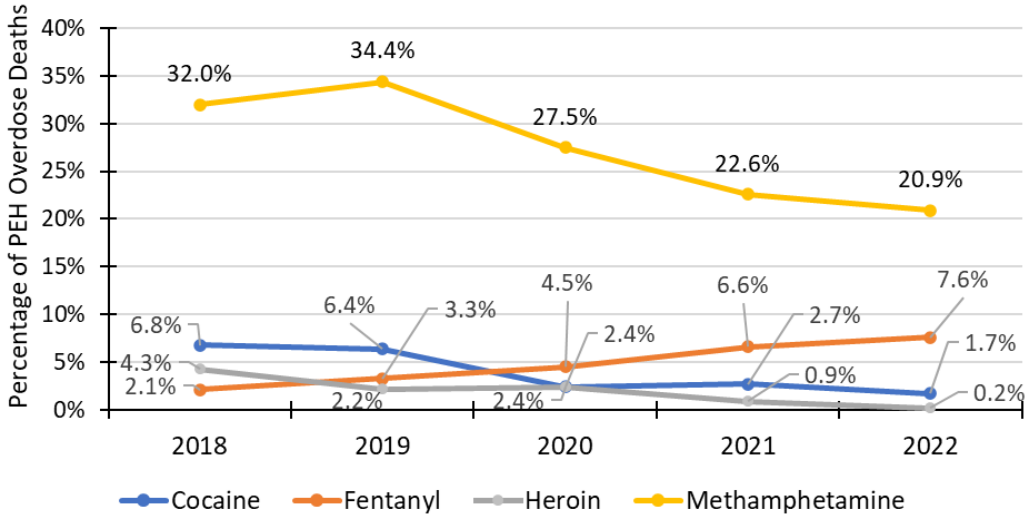


Figure 12: Percentage of AOD Overdose Deaths among PEH Involving Methamphetamine or Fentanyl, by Gender, 2018-2022



While overdose deaths often involve multiple drugs, it is also useful to examine trends in the percentages of overdose deaths involving only one drug. As shown in **Figure 13**, fentanyl is the only major drug whose singular involvement in overdose deaths has increased since 2018 (from 2.1% in 2018 to 7.6% in 2022). However, multi-drug use—particularly combinations including methamphetamine and fentanyl—continues to be the norm among PEH who die of overdoses. In 2022, 73.2% of all fentanyl involved deaths among PEH also involved methamphetamine, and 49.0% of all overdose deaths were from drug combinations that included fentanyl and methamphetamine. Sixty-six percent of all PEH overdose deaths in 2022 involved more than one drug.

Figure 13: Percentage of AOD Overdose Deaths among PEH for which Specific Drug Types Were the Sole Cause Listed on the Death Certificate, 2018-2022



Comparison of Mortality Rates among PEH and the Total LA County Population

Adjusting for differences in the age and gender of the homeless population compared to the total LA County population, the all-cause mortality rate for the combined years of 2021-2022 was 3.9 times greater among PEH than among the total population (**Table 2**). During these two years, PEH were 40.5 times more likely to die from an overdose, 18.3 times more likely to die from a transportation-related injury, 17.7 times more likely to die from homicide, 8.4 times more likely to die from suicide, 4.3 times more likely to die from CHD, and 1.7 times more likely to die from COVID-19 compared to the total population of LA County.

Table 2: Age- and Gender-Adjusted Mortality Rate Ratios (MRRs)*: PEH Compared to LA County Population (2021 and 2022 Combined)	
Cause of Death	**MMR**
All Causes of Death	**3.9**
Drug and Alcohol Overdose	40.5
Coronary Heart Disease	4.3
Transportation-Related Injury	18.3
Homicide	17.7
Suicide	8.4
COVID-19	1.7
*The MRR is the mortality rate among PEH divided by the mortality rate in the total LA County population	

Conclusions

In 2022, after two consecutive years of alarming increases, the mortality rate among PEH in LA County plateaued (**Figure 1**). This is good news, although it is important to temper hopes for the future, as one year does not yet constitute a trend. In our second annual homeless mortality report, which included data through 2019, we reported a promising plateau in PEH mortality after four consecutive years of increases since data became available in 2014. That plateau was short-lived and was immediately followed by a surge in mortality in 2020 and 2021. The rate of increase during this recent surge was greater than anything previously reported, so the 2022 plateau represents an even more welcome contrast to what came before. However, the mortality rate still remained 60% higher than it was in 2019 and would need to decrease in future years in order for this initial reprieve to become a positive trend.

Based on cause-specific mortality trends, it can be concluded that the recent plateau was driven largely by a leveling off of overdose mortality and a sharp decline in COVID-19 mortality (**Figure 2**). 2022 also saw a two-and-a-half-fold increase in the distribution of doses of naloxone, an opioid overdose reversal medication, in communities most affected by fentanyl overdoses, and a near doubling of reported naloxone-induced overdose reversals.[1] These efforts likely contributed to the rapid leveling-off of the overdose mortality rate that year. Age trends in overdose mortality suggest that the overall leveling of the rate was driven by reductions in overdose mortality among PEH aged 50 and older (**Figure 9**), despite continued increases among PEH aged 18-29, who comprised a smaller portion of overdoses but saw a continued increase in their overdose rate in 2022. Overdose

[1] Data provided by the LA County Department of Health Services Overdose Education + Naloxone Distribution program.

mortality among 40-to-49-year-olds also increased in 2022. Higher overdose mortality among White PEH compared to other racial and ethnic groups across all years of analysis suggests that Whites had a greater impact on the overall trend. However, despite lower overdose rates among Black PEH, Blacks were the only racial or ethnic group with a notable increase in overdose mortality in 2022 (**Figure 4**). Finally, given the stability in overdose mortality among female PEH over the last three years and their considerably lower overdose rates compared to males, it is likely that reductions in overdoses among males drove the overall plateau in overdose mortality in 2022.

Despite the recent leveling off of overdose mortality among PEH, the contribution of fentanyl to these deaths continued to rise through 2022 for all racial and ethnic groups and for both males and females (**Figures 10-12**). This suggests that the risk of fentanyl overdose is still high among PEH who use drugs. The fact that recent reductions in overdose mortality were clustered among older PEH suggests that there may now be fewer surviving fentanyl and other opioid users over 50. However, the risk of fentanyl overdose among younger PEH is still high, as is indicated by the continued rise in overdose deaths among PEH aged 18-29 and 40-49.

Coronary Heart Disease (CHD) continues to be the second leading cause of death among PEH in LA County. The decrease in CHD mortality in 2021, after an increasing trend over the previous four years, may have been due to a high competing risk from overdose and COVID-19 mortality such that older PEH who would have died of CHD instead died of these other causes that year. The fact that CHD mortality remained relatively low in 2022, despite the sharp decline in COVID-19 mortality is at least partly due to the continued reduction in CHD mortality among female PEH (**Figure 8**). From 2020-2022, CHD mortality decreased by 51% among female PEH, compared to only 12% for male PEH. This may be due to efforts targeting female PEH, such as recent work, led by the Downtown Women's Center and the Sidewalk Project, to highlight and address the specific needs of women experiencing homelessness through expanded interim and permanent housing placements, harm reduction services, and associated wellness services.[1] All-cause mortality decreased by 35% from 2020 to 2022 among female PEH, while it increased among male PEH by 12%. Further investigation of this gender difference in PEH mortality trends in warranted.

Latinx PEH saw a 43% decrease in CHD mortality from 2020 to 2022 (**Figure 5**). This coincided with a 25% increase in the proportion of Latinx individuals in the PEH population. Evidence suggests that this increase was driven largely by first time entry to homelessness among relatively healthy Latinx

[1] https://downtownwomenscenter.org/wp-content/uploads/2021/03/DV-PSH-Toolkit-2021-compressed.pdf
https://la.myneighborhooddata.org/2020/03/women-experiencing-homelessness-in-los-angeles/
https://www.thesidewalkproject.org/

individuals who suffered economic hardship during the COVID-19 pandemic. [1] This would help explain the reduction in CHD and all-cause mortality among Latinx PEH during this time period.

A more concerning CHD trend was the 39% increase in CHD mortality among Black PEH in 2022, despite a decrease in CHD mortality among White and Latinx PEH. Here, it is important to note that our PEH mortality data do not include deaths among former PEH living in permanent supportive housing (PSH). Thus, racial disparities in placement and retention in PSH—such that older White PEH with chronic health conditions are more likely to be placed and retained in PSH than their Black counterparts—would result in increased racial disparities in CHD mortality among PEH, even if the overall CHD mortality rates (i.e., regardless of housing status at time of death) were similar across the two groups. Thus, continued efforts to improve retention rates of Black people in PSH—a recommendation of the Ad Hoc Commission on Black People Experiencing Homelessness[2]—could help reduce the current Black-White disparity in PEH mortality from CHD. Improved chronic disease management among Black PEH could also help in this regard.

The plateauing of transportation-related mortality is another promising finding for 2022, particularly in light of the fact that this rate had more than doubled from 2015 to 2021, with only one reported annual decrease during that time period (from 2018 to 2019). From 2019 to 2021, the transportation-related mortality rate increased by almost 50%. A potential explanation for the 2022 plateau could be the increased movement of PEH into indoor settings, through programs like Project Roomkey,[3] during the COVID-19 pandemic. According to data from the PIT homeless count, the proportion of PEH who were sheltered (vs. unsheltered) increased from 25% in 2019 to 30% in 2022. In January 2023, the percentage of PEH who were sheltered decreased to 27%. It remains to be seen whether PEH traffic deaths begin to decrease as newer programs, like the LA Mayor's "Inside Safe" program,[4] are implemented. The fact that two-thirds of traffic-related deaths occurred between 9pm and 9am suggests that providing nighttime shelter and permanent housing to PEH would help prevent these deaths.

After a spike in homicide mortality among PEH in 2021, the rate increased again in 2022 to 214 per 100,000, the highest we have seen since we began tracking the data. 2021 also saw a spike in homicides in LA City and in the County as a whole, but those numbers began to decline slightly in

[1] Garcia MD, Chinchilla M, Henwood B, et al. Latino/Hispanic Unsheltered Homelessness Before and After COVID-19. Manuscript accepted for publication. *AJPH*.
[2] https://file.lacounty.gov/SDSInter/ceo/ardi/1149668_BOARDMEMO-REPORTBACKONESTABLISHINGANANTIRACISTLOSANGELESCOUNTYPOLICYAGENDA.pdf
[3] Project Roomkey was a collaborative effort by the State, County and the Los Angeles Homeless Services Authority (LAHSA) to secure hotel and motel rooms for vulnerable people experiencing homelessness during the COVID-19 pandemic.
[4] Inside Safe is a city-wide, voluntary, proactive housing-led strategy to bring people inside from tents and encampments, and to prevent encampments from returning.

2022 and then declined considerably in 2023.[4] Hopefully we will see a similar decrease among PEH when we report data for 2023. In 2021 and 2022 the proportion of homicides among Black and Latinx deaths were two to three times greater than among White deaths.

Suicide mortality has remained relatively stable among PEH since we began tracking the data. However, from 2020 to 2022, the suicide rate almost doubled among PEH aged 18-29, and in 2022, this was the age group with the highest suicide rate. With the exceptions of 2020 and 2021 (at the peak of the COVID-19 pandemic), suicide has consistently ranked as the fifth leading cause of death among PEH in LA County.

In 2021 and 2022 combined, PEH were almost four times more likely to die than people in the LA County population as a whole (**Table 2**). This mortality gap[1] has increased since we first calculated it for the combined years of 2017 to 2019, when PEH were just under three times more likely to die. It is likely that recent increases in PEH deaths from drug overdoses, transportation related injuries, and homicides have contributed to the widening of the mortality gap. The mortality gaps for these specific causes have also increased such that in 2021 and 2022 combined, PEH were 40.5 times more likely to die of a drug overdose and about 18 times more likely to die of both homicide and traffic-related injuries compared to the LA County population as a whole. The CHD mortality gap has also increased, and we suspect that this may be due, at least in part, to the long-term effects of methamphetamine use on cardiovascular disease.[2] We plan to explore this relationship in more depth in the coming year.

Finally, despite early concerns that COVID-19 would disproportionately affect LA County's unhoused population, our previous estimates of the COVID-19 mortality gap during the first two years of the pandemic (2020-2021) along with those reported here for 2021-2022 indicate that this gap was much narrower than for any other leading cause of death among PEH. While a variety of factors may have contributed to this phenomenon, early in the pandemic, the LA County Department of Public Health established a multi-disciplinary team exclusively devoted to COVID-19 prevention and mitigation efforts targeting PEH. Through an emergency agreement with LAHSA, DPH was able to detect and respond to 1,116 COVID-19 outbreaks in emergency shelters from 2020-2022. An additional 743 outbreaks were responded to at other PEH settings, including encampments, single room occupancy housing, interim housing and recuperative care centers. Through August 13th, 2023, 83,136 PEH had received at least one COVID-19 vaccination dose. Among all PEH deaths we

[4] https://www.lapdonline.org/

[1] We use the term "mortality gap" to mean the mortality rate ratio (MRR), which is the mortality rate among PEH divided by the mortality rate in the total LA County population.

[2] Richards JR, Harms BN, and Kelly A. Turnipseed SD, Methamphetamine use and heart failure: Prevalence, risk factors and predictors. *American Journal of Emergency Medicine.* 2018; 36 (8): 1423-1428; Ben-Yehuda O, and Siecke, N. Crystal Methamphetamine: A Drug and Cardiovascular Epidemic. *JACC: Heart Failure.* 2018; 6 (3).

identified in 2021 and 2022, 31.1% matched with the California Immunization Registry (CAIR) database, meaning that they had received at least one COVID-19 vaccine. For the subset of COVID-19 deaths, only 3.7% had received at least one COVID-19 vaccination.[1]

While the other (i.e., non-infectious) leading causes of death among PEH stem from a more complex set of social factors for which no simple remedy is available, the PEH experience with COVID-19 should remind us that the negative health impacts of homelessness can be mitigated through concerted public action. The recommended actions that follow are designed to help reduce the disproportionate burden of mortality in this vulnerable population.

[1] The 2021-2022 PEH death file was matched with the CAIR database to identify decedents with records of at least one COVID-19 vaccination.

Recommendations

Ensure Rapid Access to Housing and Shelter that are Responsive to the Needs of LA County Residents Experiencing Homelessness

1. Ensure that agency staff providing outreach and engagement services, and physical health, mental health, substance use, and social services to Los Angeles County residents experiencing homelessness, are regularly trained on the most current versions of the Homeless Management Information System (HMIS) tools (e.g., VI-SPDAT) to facilitate linkage to housing options.
2. Sustain and expand LA County's supply of permanent supportive housing and interim housing options—including Recovery Bridge Housing, Recovery Housing, and Mental Health Service Act Housing—that align with the individual needs of LA County residents experiencing homelessness.
3. Expand the range of housing options, across the housing continuum, that are responsive to the needs of the community, such that people who use drugs will not lose their housing due to substance use. Ensure that there is recovery-oriented housing available to residents who benefit from abstinence-focused living environments, and that all congregate housing settings have readily available overdose prevention services.

Expand Harm Reduction and Overdose Prevention Outreach, Engagement and Response, Prioritizing Los Angeles County Residents Experiencing Homelessness at Highest Risk for Overdose

4. Advance legislation, regulation, and local engagement and advocacy needed to establish safer consumption spaces.
5. Sustain and expand harm reduction and overdose prevention services—including syringe services, naloxone and fentanyl test strip distribution and education, oxygen administration, and screening and referral for substance use treatment and other physical and mental health services—for people in jails, hospitals and congregate residential settings, and through street-based outreach and engagement teams, to reach LA County residents experiencing homelessness where they reside and receive services.
6. Sustain and expand drop-in spaces, with low barriers to access, where Los Angeles County residents experiencing homelessness can access harm reduction services, including linkage and referral to substance use treatment and other needed physical and mental health services in a friendly and welcoming environment.

7. Sustain and expand telehealth and mobile physical health, mental health, and substance use services to meet the needs of Los Angeles County residents experiencing homelessness where they reside.
8. Integrate peer-driven and peer-led services to ensure that people with lived experience have a direct role in shaping and delivering services to Los Angeles County residents experiencing homelessness.
9. Support the development and expansion of outreach and engagement, harm reduction, overdose prevention, and substance use field- and facility-based services for Black, Indigenous, and people of color, and transgender, gender non-conforming, and intersex residents experiencing homelessness.

Ensure that Physical Health, Mental Health, and Substance Use Treatment Services are Available and Responsive to the Needs of LA County Residents Experiencing Homelessness

10. Train medical providers in field- and facility-based settings to better understand and accommodate the special needs of LA County residents experiencing homelessness (e.g., food insecurity, high stress, lack of storage space and of control over their physical environment) when making chronic disease management recommendations. Providers can accommodate these special needs while delivering cardiac care and other disease management, including simplifying medication regimens, addressing the social and psychiatric needs of clients, and delivering care in a non-judgmental and appropriately paced way.
11. Sustain and expand comprehensive primary and preventive care services for LA County residents experiencing homelessness, prioritizing those at risk for or suffering from coronary heart disease and other chronic conditions, including street medicine programs, mobile clinics, and case management that links clients to needed facility-based medical care.
12. Expedite and facilitate patient access to cardiac testing, specialty medications, and cardiac procedures, as well as voluntary placement in recuperative care and other supportive interim housing settings to better diagnose or manage cardiac disease. Ensure ready access to high quality cardiologists integral to the care of clients with complex cardiac conditions.
13. Sustain and expand mental health services for LA County residents experiencing homelessness including the full range of outreach and engagement, and community and congregate setting-based services for LA County residents experiencing homelessness who may also be experiencing serious mental illness.
14. Sustain and expand LA County's Reaching the 95% (R95) Initiative, which lowers the eligibility threshold for initiation of substance use treatment to ensure that treatment is increasingly available to LA County residents who use drugs, lengthens the time of engagement in

substance use treatment services, and increases the presence of community-based outreach and engagement teams to help LA County residents experiencing homelessness receive needed substance use treatment services.

15. Sustain and expand FDA-approved opioid addiction medication services, with minimal barriers to access, across all physical health, mental health, and substance use treatment providers in LA County.
16. Ensure best-practices for the implementation of infectious disease protocols—including facility-level protocols around cleaning, disinfection and ventilation, and person-level protocols such as symptom and temperature screening, testing, cohorting within shelters, and return to work guidance—are deployed in settings that serve and/or house LA County residents experiencing homelessness.

Reduce Traffic Deaths among Los Angeles County Residents Experiencing Homelessness

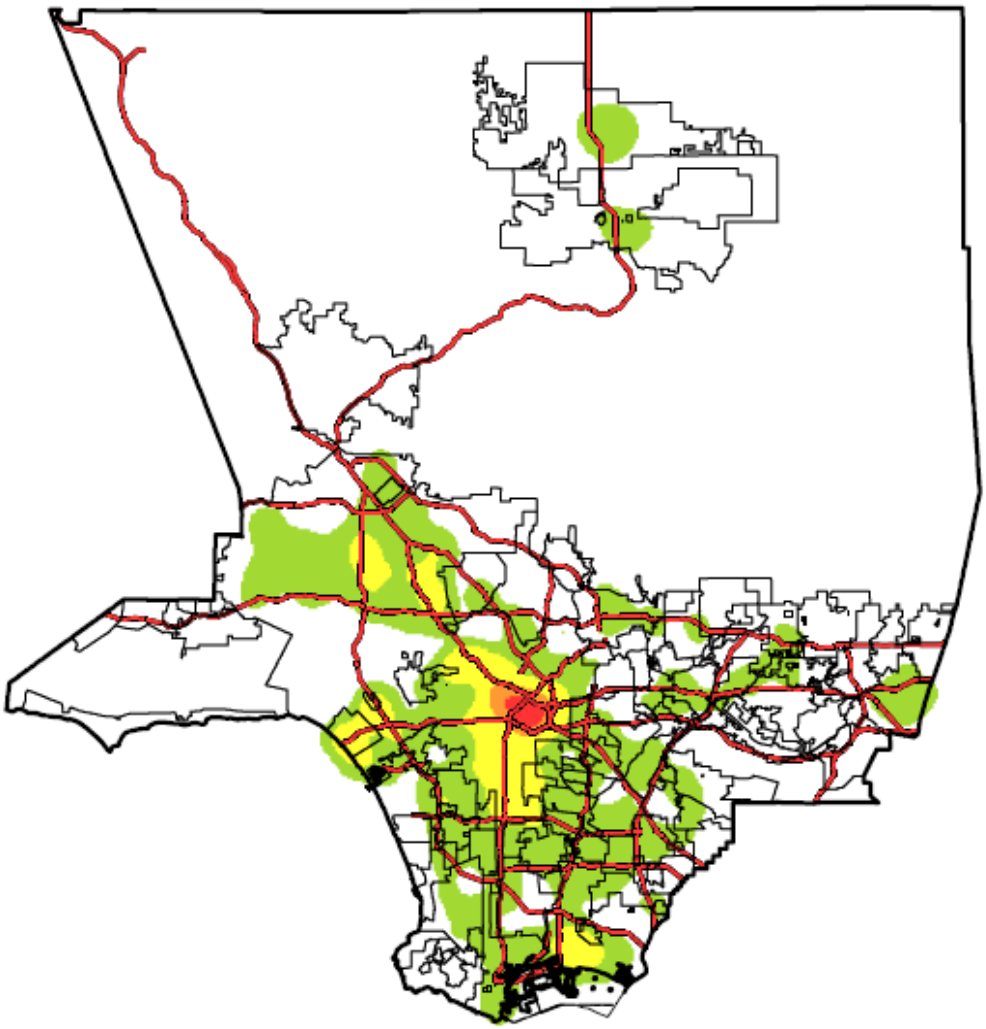
17. Collaborate with municipalities and unincorporated communities to identify concentrations of fatal injury collisions involving LA County residents experiencing homelessness to inform community planning (e.g., pedestrian plans) and strengthen local infrastructure, programming, and policy interventions that can prevent future traffic deaths.

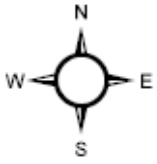
Appendix

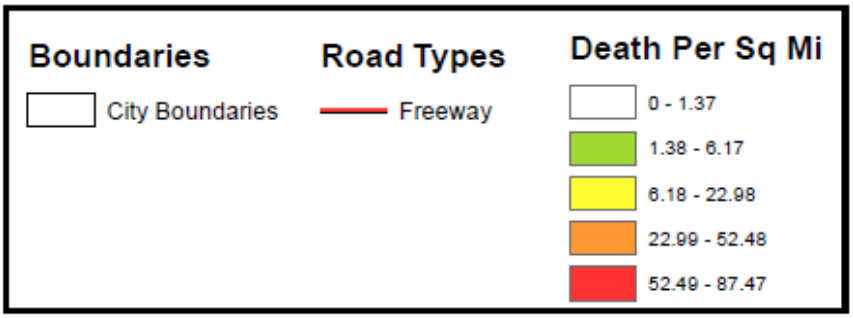
Table A-1: Size and Characteristics of LA County PEH Population 2015-2023									
Year[1]	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021[2]**	**2022**	**2023**
Total Count[3]	44,359	46,874	55,048	52,765	58,936	66,436	67,790	69,144	75,518
Gender									
Male (incl. trans.)	66%	66%	68%	68%	68%	67%	66.5%	66%	68%
Female (incl. trans.)	33%	33%	32%	31%	31%	32%	32.5%	33%	31%
Age Group[4]									
<18	10%	8%	9%	9%	9%				
18-24	8%	8%	6%	6%	6%				
25-54	57%	60%	61%	59%	61%				
55-61	17%	16%	16%	16%	15%				
62+	8%	9%	8%	10%	9%				
<18						12%	11%	10%	
18-29						15%	14%	13%	
30-39						20%	22%	24%	
40-49						19%	19%	20%	
50-59						22%	21%	20%	
60-69						11%	11%	11%	
70+						2%	2%	3%	
<18									9%
18-24									5%
25-34									19%
35-44									23%
45-54									19%
55-64									18%
65-69									42%
70+									2%
Race/Ethnicity									
American Indian/ Alaska Native	3%	3%	1%	1%	2%	1%	1%	1%	1%
Asian	2%	2%	1%	1%	2%	1%	1%	1%	2%
Black	39%	39%	40%	36%	33%	34%	32%	30%	32%
Latino/x	27%	27%	35%	35%	36%	36%	40%	44%	43%
Native Hawaiian/ Other Pacific Islander	.2%	.2%	.3%	.4%	.6%	.3%	.3%	.2%	.5%
White	25%	25%	20%	25%	25%	25%	23%	21%	19%
Multi-racial	5%	5%	2%	1%	2%	2%	2.5%	3%	3%
Shelter Status									
Unsheltered	70%	75%	73%	75%	75%	72%	71%	70%	73%
Sheltered	30%	25%	27%	25%	25%	28%	29%	30%	27%
Chronic Homelessness[5]									
Chronically Homeless	34%	31%	31%	27%	28%	38%	39.5%	41%	45%

[1] Point in time counts (for total counts) and demographic surveys (for demographic data) were conducted in late January of the year indicated.
[2] Since the point in time count and demographic survey were not conducted in 2021 due to the COVID-19 pandemic, 2021 estimates were calculated by averaging the values for 2020 and 2022.
[3] Total count data are for all of LA County. Demographic estimates are for the LA CoC only, which excludes Glendale, Pasadena and Long Beach. Percentages do not always add to 100% due to rounding. Source: https://www.lahsa.org/homeless-count/
[4] Available age groupings for age data have changed over the years. beginning in 2020, 10-year age grouping became available, which allowed for more precise age adjustment of mortality rates.
[5] Chronic homelessness is defined as homelessness of at least 12 months duration (continuous, or at least four separate occasions in the last three years that add up to 12 months), and presence of a qualifying disability.

Heat Map 1: Deaths from All Causes Among PEH, 2021 - 2022
Los Angeles County (N=3,669)*

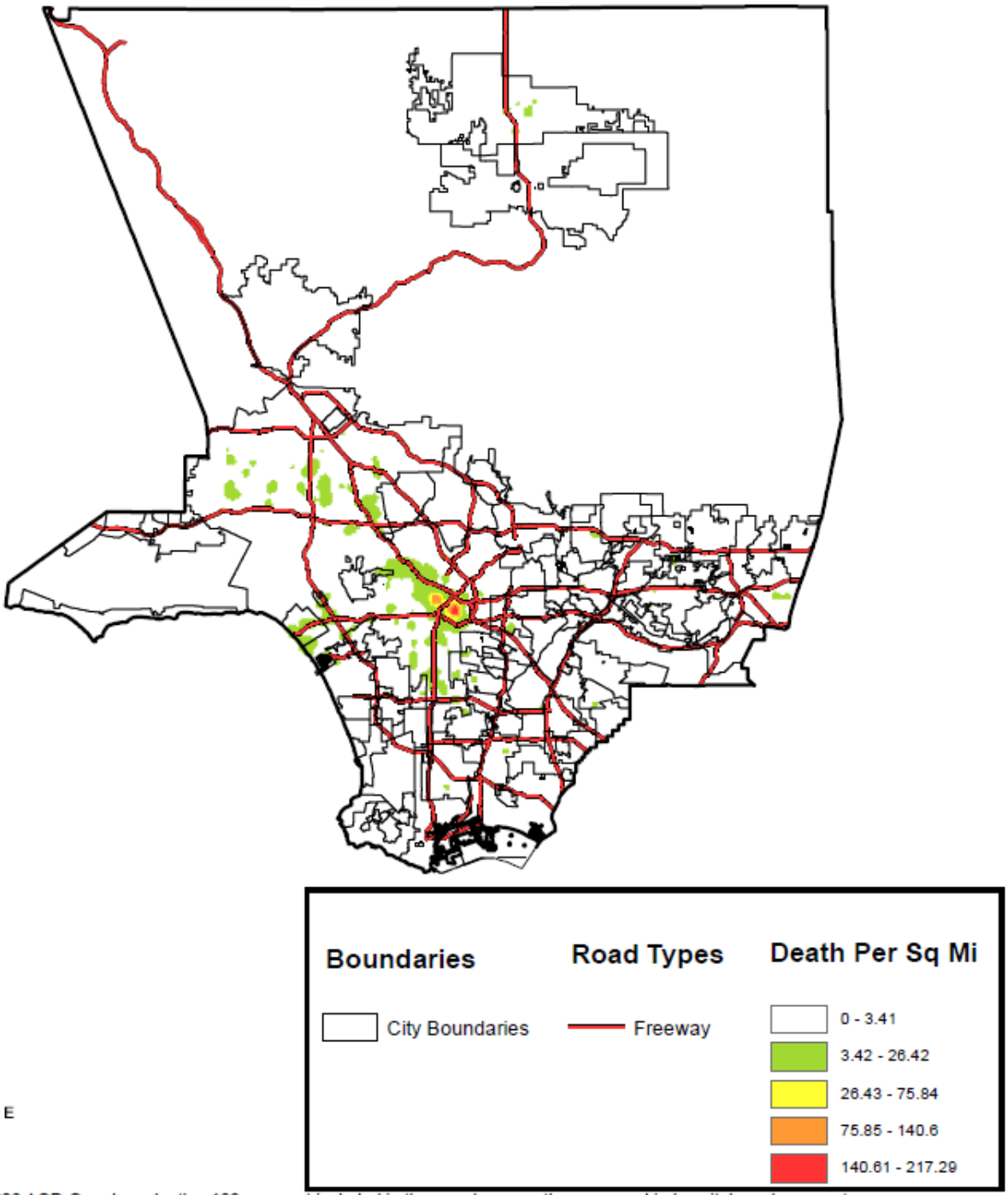






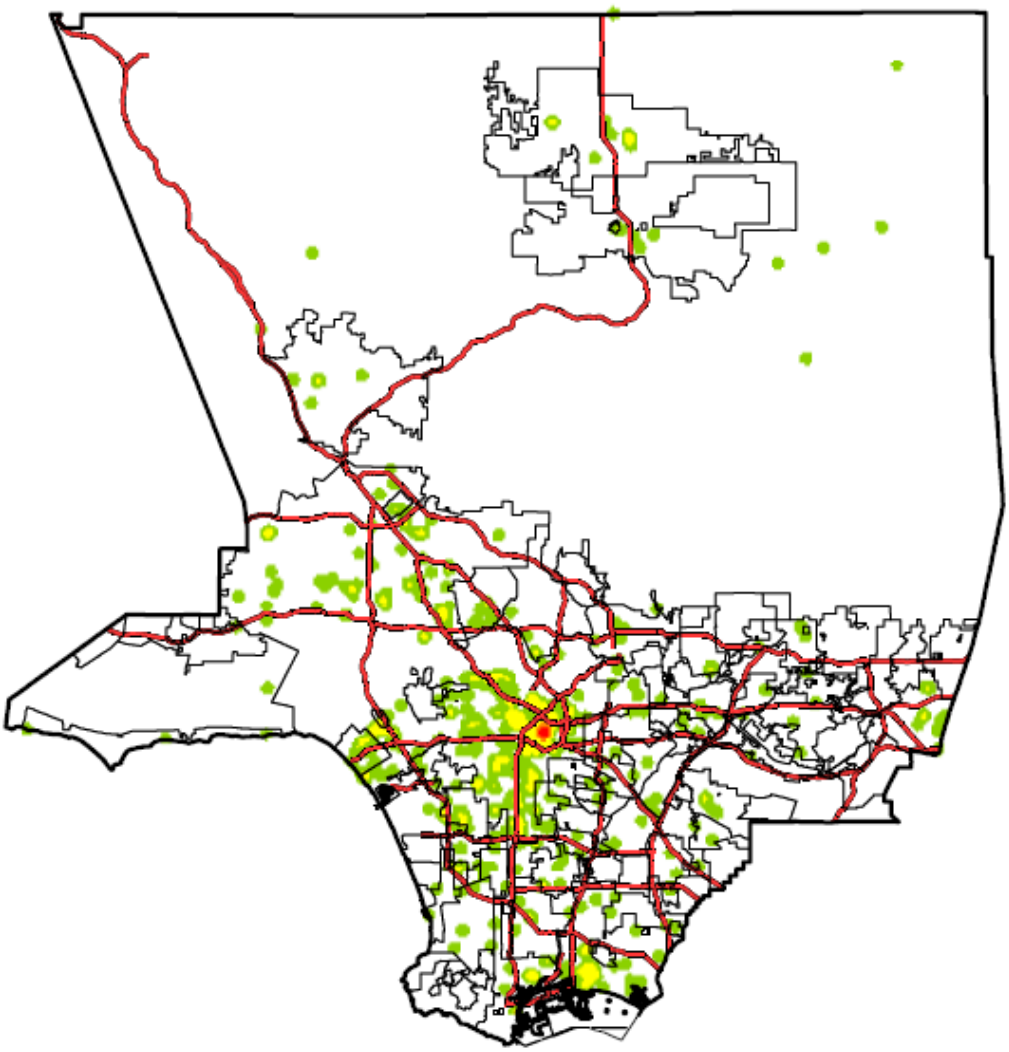
*Out of 4,575 total deaths, 906 were not included in the map because they occurred in hospitals and an event location was not available (549), there was no address information (275), or there was no cause of death information (82).

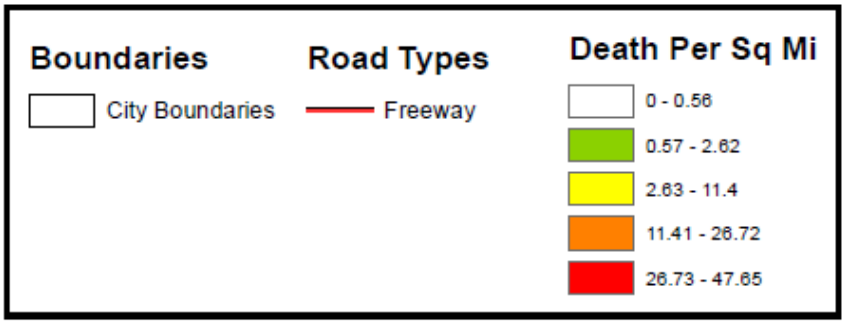
Heat Map 2: AOD Overdose Deaths Among PEH, 2021 - 2022
Los Angeles County (n=1,520)*



*Out of 1686 AOD Overdose deaths, 166 were not included in the map because they occurred in hospitals and an event location was not available (161), or there was no address information (5). 25% of the overdose deaths occurred in the red, orange, and yellow areas.

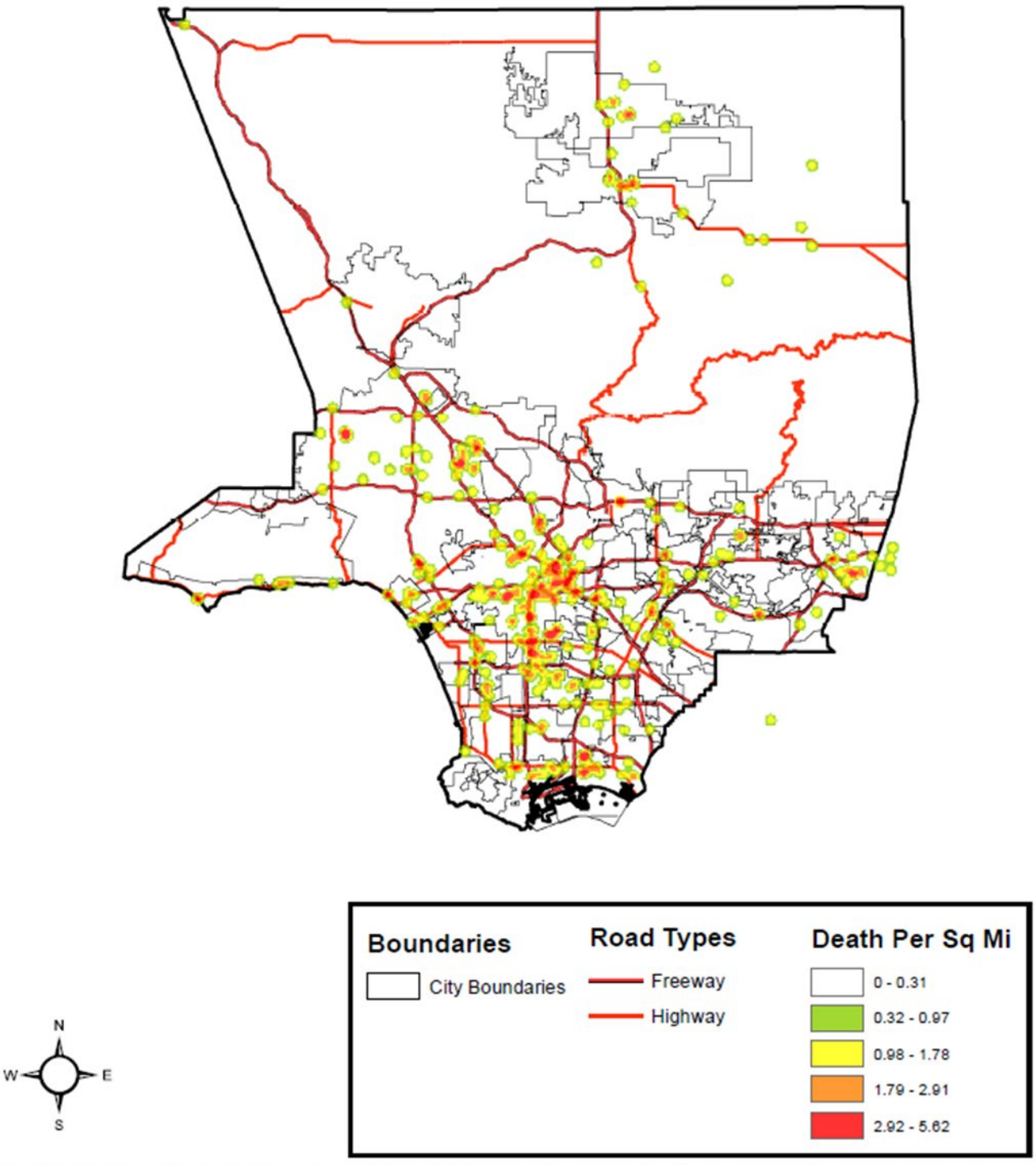
Heat Map 3: Coronary Heart Disease Deaths Among PEH, 2021 - 2022
Los Angeles County (n=476)*





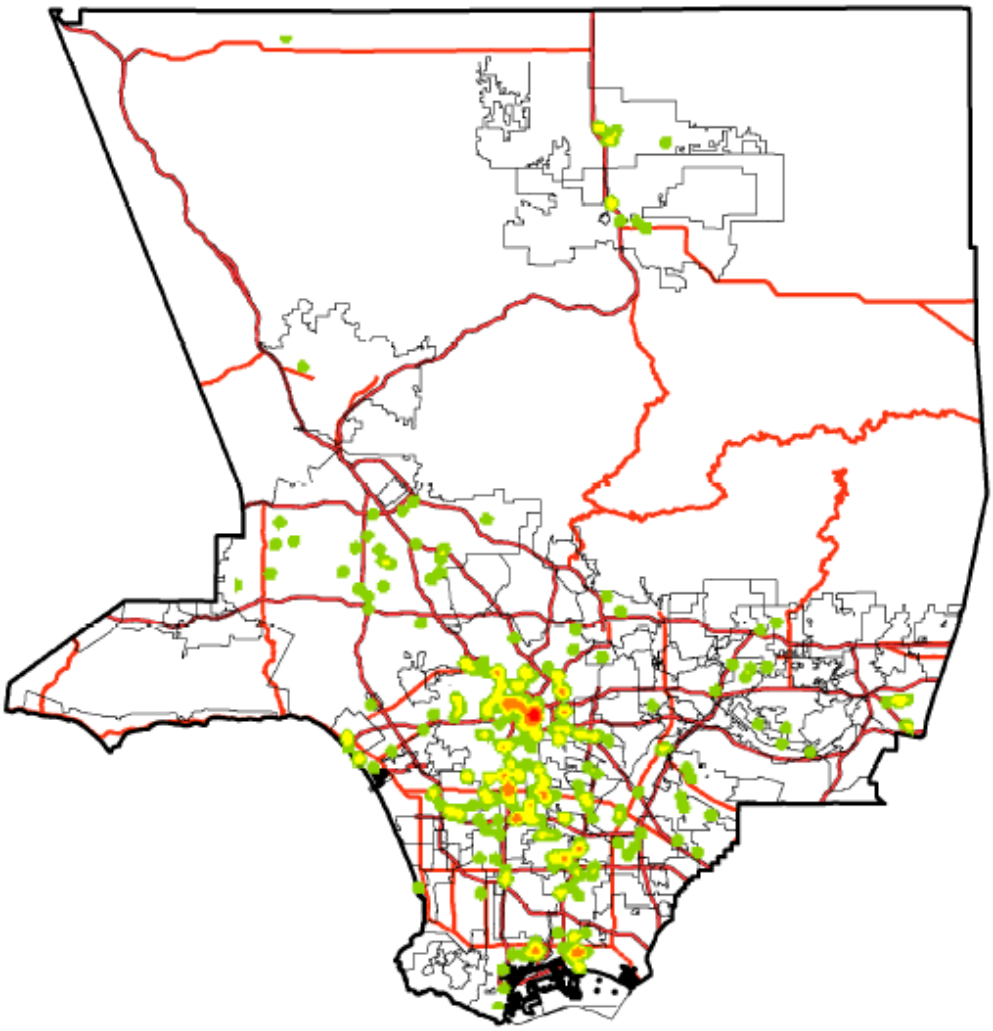
*Out of 548 Coronary Heart Disease deaths, 72 were not included in the map because they occurred in hospitals and an event location was not available (61), or there was no address information (11).

Heat Map 4: Transportation-Related Deaths Among PEH, 2021 - 2022
Los Angeles County (n=337)*



*Out of 348 Transportation-Related deaths, 11 were not included in the map because they occurred in hospitals and an event location was not available (4), or there was no address information (7).

Heat Map 5: Homicide Deaths Among PEH, 2021 - 2022
Los Angeles County (n=292)*



*Out of 293 Homicide deaths, 1 was not included in the map because there was no address information.