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HARRIS COUNTY HOMELESSNESS MORTALITY REPORT (PILOT)

UPDATE - JULY 2023

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ACKNOWLEDGEMENTS

INTRODUCTION

Make no mistake, people are dying on the streets, all across this county. In partnership with the Harris County medical examiner (aka the Institute of Forensic Sciences or HCIFS) we were able to identify 193 deaths of people experiencing homelessness (PEH) in 2021, which means in Harris County, someone dies in homelessness at a rate greater than <u>every other day</u>. Through this report, we aim to draw attention to the deaths of individuals who are living in homelessness in our community, and highlight the causes of those deaths.

The manner and causes of these deaths, and the demographics of those who are dying in this condition have particular significance for public health, non-profit, and service programs in our community. Most notably, we hope this information is of use for programs aiming to prevent homelessness and preserve the lives of those who must suffer through it. These findings should have significance for community education efforts and for legislative and governmental advocacy work as well. Longer term, we are seeking a valid and reliable estimate of the excess, early mortality associated with the experience of homelessness. Through age- and gender-adjusted analyses, stratified by manner and causes of deaths we can best estimate the health impacts for these vulnerable members of our community.

On a personal note: During the final drafting of this report a man named Victor, a neighbor and friend who helped advise this work, passed away on September 11, 2022. Victor lived in a tent under I-45 beside Cullen Blvd.

LIMITATIONS
We need to offer some disclaimers up front: The numbers in this report are certain to reflect an undercount of the number of actual deaths occurring in homelessness in Harris County. Further, the reliance on medical examiner data means that we are examining a subset of the total deaths in the county overall - although it is expected that, at a minimum, the majority of deaths occurring in homelessness are seen by the HCIFS. However, we must refrain from providing any excess mortality calculations until the county-wide data is available.

This work relies on methods described in the National Health Care for the Homeless Council's Mortality Toolkit, but does not perfectly match or provide a comparison to other municipal communities implementing similar strategies.

This report is an updated draft of the initial pilot report, which includes 78 additional, adjudicated cases from HCIFS records. It is paired with a set of recommendations, from case definitions to data standards, which we have used to increase the sensitivity of detection methods, complicating the usefulness of this data longitudinally (i.e. comparison to years prior to 2021). Without naming prospective partners, this project will also seek to supplement this surveillance effort through additional community data sources in coming years.

Finally, a quick word of thanks to the HCIFS for their support of this analysis, including the adoption of a 10-year DUA. Thanks as well to the UH Division of Research for their support of this work through the internal Small Grant Program.

-Ben King, PhD MPH

HOMELESSNESS IN HARRIS COUNTY

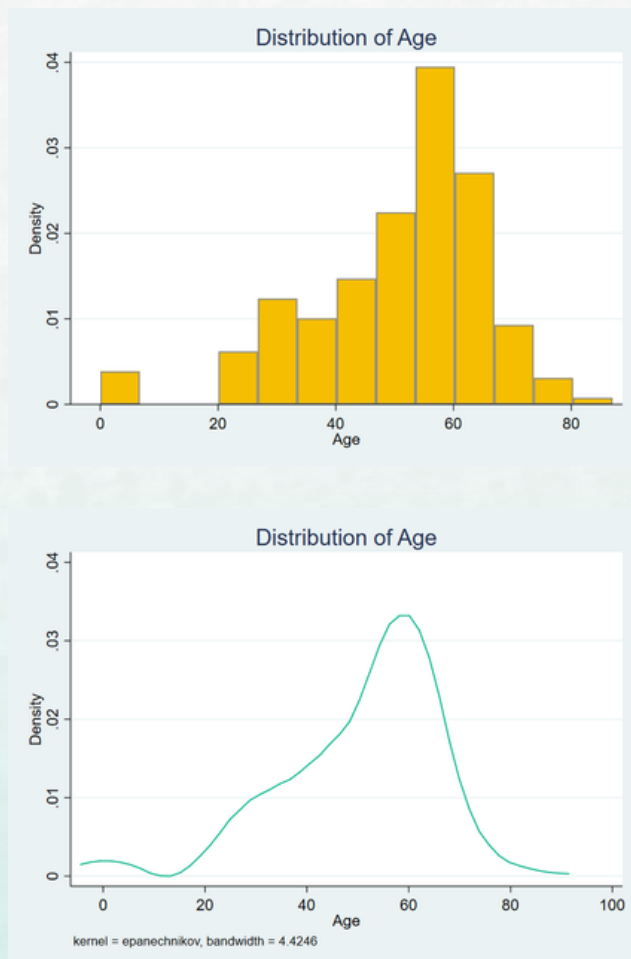| Point-In-Time Counts				
Race/Ethnicity	2021	2021	2022	2022
American Indian or Alaska Native	25	0.8%	25	0.8%
Asian	35	1.1%	42	1.3%
Black or African American	1724	56.6%	1633	52.3%
Hispanic/Latino	411	13.5%	515	16.5%
Multi-Racial	44	1.4%	59	1.9%
Native Hawaiian or Other Pacific Islander	8	0.3%	8	0.3%
White, Non-Hispanic/Latino	800	26.3%	842	27.0%
***From HUD HDX; Hispanics are subtracted from White race total				

In both 2021 and 2022, over half of the homeless count is made up by Black or African American individuals. This proportion is higher than across the rest of the United States. In 2020*, 39.4% of the people experiencing homelessness (PEH) in all of the US were Black (HUD,2021). 20.3% of people living in Houston are Black, suggesting that Black individuals are dramatically overrepresented in homelessness (US Census Bureau, 2021; HUD, 2021 & 2022).

In 2021, an estimated 27.7% of the Harris County population was White (US Census Bureau, 2021). In contrast, 26.3% of the homeless population was White at one point in time in the same year. This slight under-representation of White people experiencing homelessness is fairly consistent with national trends. The disparity in representation of demographic groups in homelessness experience that this report highlights helps to demonstrate systemic influences on the drivers that both cause homelessness and result in deaths in homelessness.

Between 2021 and 2022, The estimated percent of Hispanic individuals increased by 3 percentage-points and the amount of Black individuals decreased by 4 percentage-points, while the estimate of White PEH remained relatively constant.

*2021 point in time count National estimates only involved people in emergency shelters and transitional housing programs, due to the ongoing COVID pandemic.

DEMOGRAPHICS

Distribution of Age

Distribution of Age
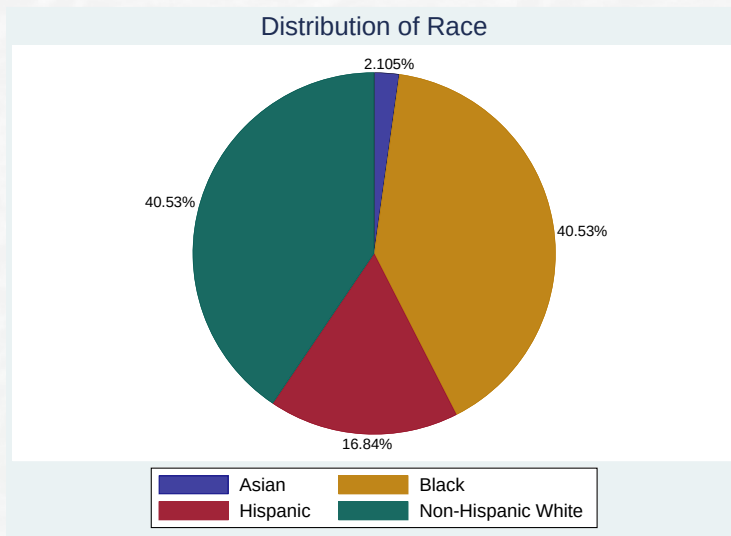
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Age

Persons experiencing homelessness (PEH) die at a much younger age than the general population. The mean age of death for PEH in 2021 in Houston was 50.87 (SD=15.23). In comparison, the life expectancy in the US is 77 (CDC, 2020). This discrepancy in life expectancy illustrates the increased risk of premature death associated with homelessness. The peak (mode) frequency of deaths was also under 60 years, further highlighting the issue of early mortality in PEH (CDC, 2020).

A brief disclaimer on interpretation of this finding: This statistic (50.87 years) is pointing to individuals actively experiencing homelessness at the time of their death, so it does not reflect individuals who passed after receiving a housing intervention or for whom homelessness is otherwise resolved. The evidence for supportive housing extending life is mixed, but overall suggests an excess early mortality for those who remain in homelessness. Prioritization of housing for those (theoretically) at higher risk of mortality would necessarily suggest that the observed age disparity under-represents the excess mortality caused by homelessness. However, to the extent that housing priority targets older age individuals, it may actually underestimate the mean age of death for the larger cohort of individuals with the experience of homelessness.

Race

Distribution of Race

2.105%

40.53%

40.53%

16.84%

Asian
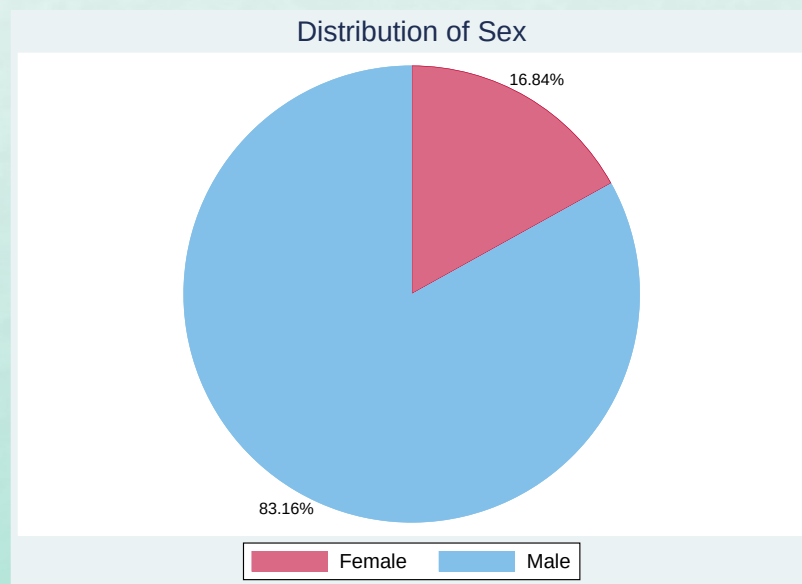Black
Hispanic
Non-Hispanic White

Black individuals were the majority and made up 40.53% of our total group, which is less than the proportion in homelessness in the PIT count. However, Black people make up only 20.3% of the Houston population, suggesting that Black people are still over-represented in homeless mortality.

Non-Hispanic White people also made up 40.53% of deaths, which is over-represented relative to the Harris County population (27.7%) and the proportion experiencing homelessness at any PIT (26.3%). Non-Hispanic White people are also more likely to experience "chronic homelessness" in Harris County (data not shown), and one component of "chronicity" is the duration of homelessness. *3 cases were unknown.
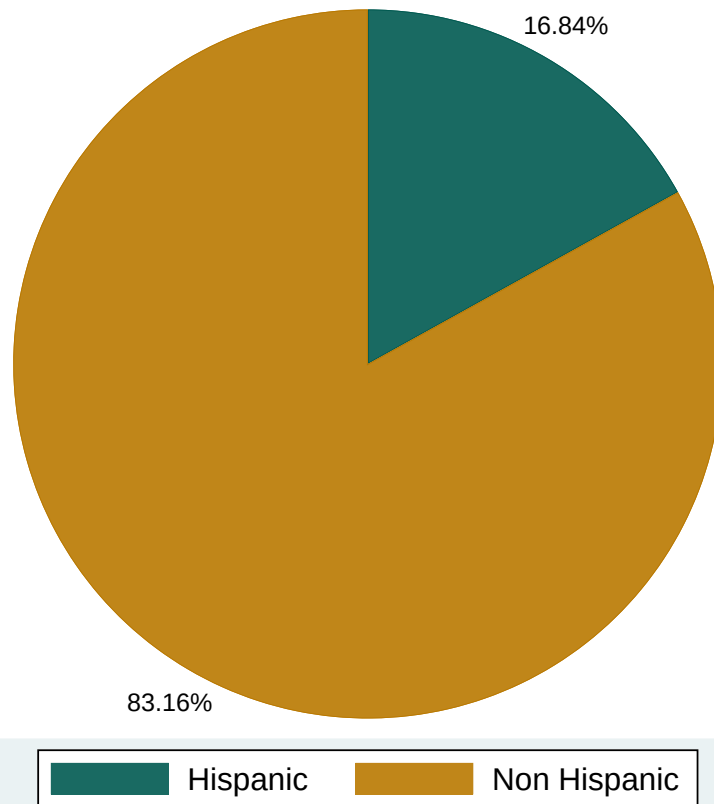
Sex

An overwhelming majority (83.16%) of deaths of PEH in 2021 were males. By way of comparison, the general Houston population is 49.8% male; 65% of the total, January 2022, PIT survey and 80% of the PIT unsheltered individuals were male (CFTH, 2022).

The drivers of this over-representation of males in deaths identified by the Medical Examiner is rooted partially in their over-representation in homelessness. However, the greater risk of males for homicide victimization and accidental deaths is explored further, below.

Distribution of Sex

16.84%

83.16%

Female
Male

Distribution of Ethnicity

16.84%
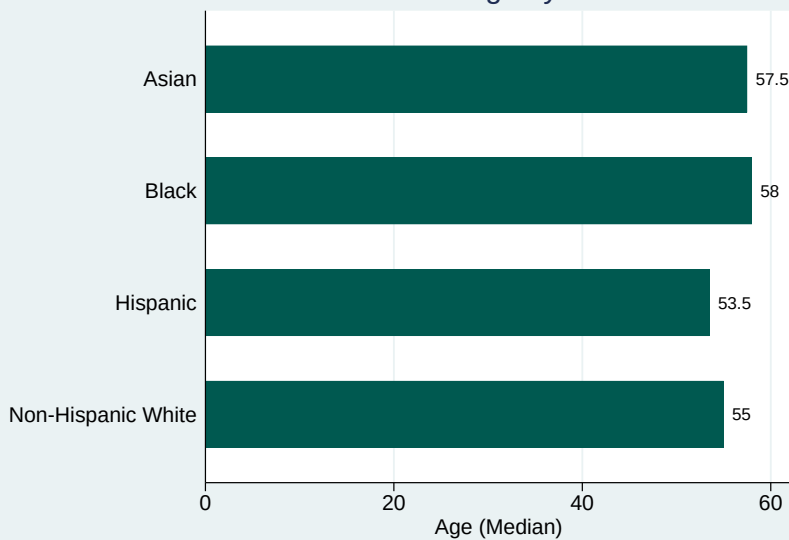
83.16%

Hispanic   Non Hispanic

Ethnicity

16.84% of the PEH who died in 2021 were Hispanic. The Houston population was 44.5% Hispanic in 2021, suggesting that this group is underrepresented in PEH mortality. However, this is slightly higher than the 13.5-16.5% estimated to be experiencing homelessness in January of 2021 and 2022 respectively.

This suggests that while Hispanic people are less likely to be experiencing homelessness at any given point in time, their risk of death may be slightly greater. Additionally, Hispanic PEH died at a younger median age compared to Non-Hispanics (see below).

DEMOGRAPHIC COMPARISONS

Median Age by Race

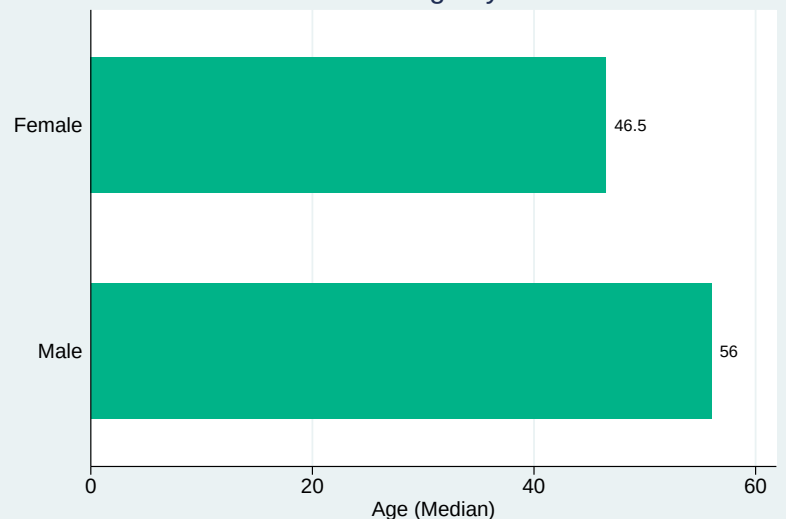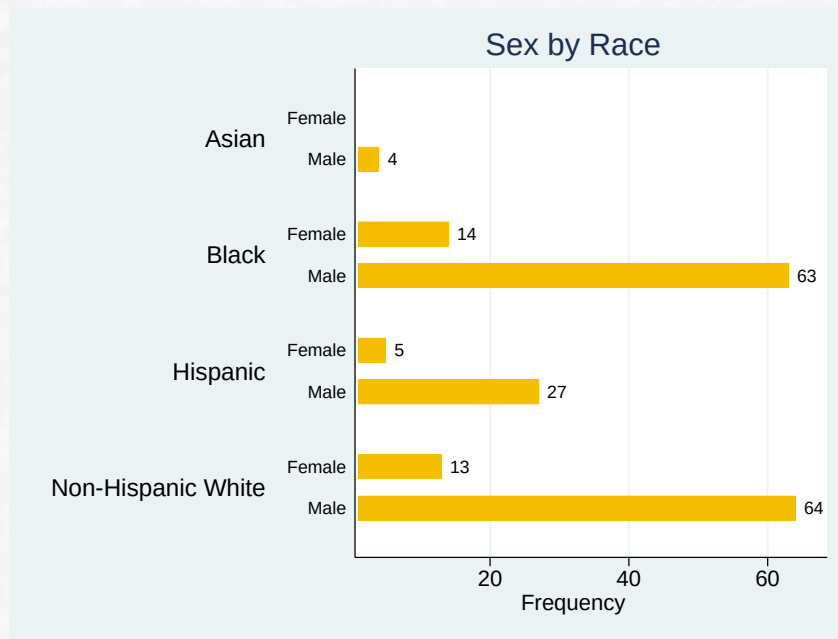| Race	Age (Median)
Asian	57.5
Black	58
Hispanic	53.5
Non-Hispanic White	55

Age by Race

Black individuals had the highest median age of death of PEH in 2021. Hispanic people had the lowest median age at 53.5 years old. Non-Hispanic White people had the second youngest median age at death.

Age by Sex

In 2021, male PEH deaths were older than female deaths. The median age of death for females was 46.5 years and the median age of death for males was 56. While under-represented in homelessness and in deaths, females died at a younger median age. This may be due to a younger age at entry into homelessness or, likely, greater risks associated with the homelessness experience.
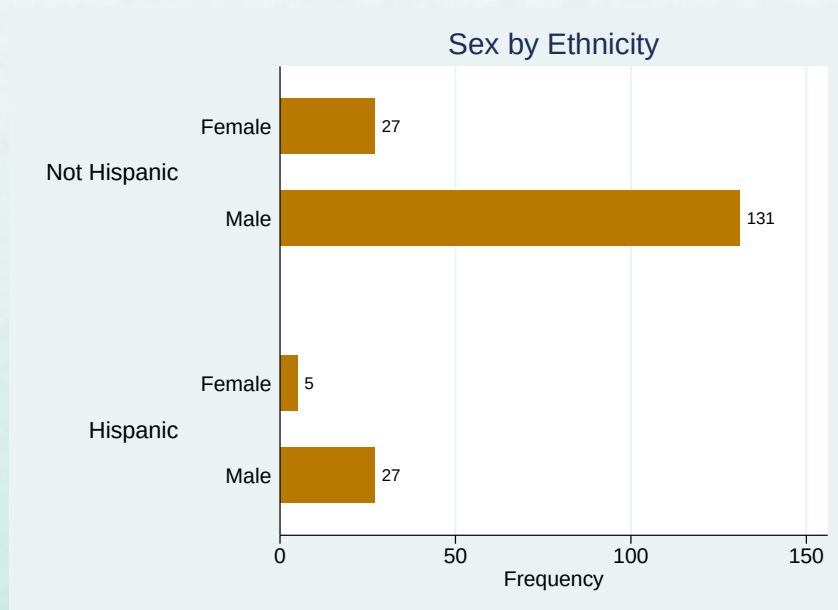
Median Age by Sex

Sex	Age (Median)
Female	46.5
Male	56

Sex by Race

Sex by Race

Non-Hispanic White men represented the largest group of PEH who died in 2021. A close second was Black men. Black women were the largest group of women in the group, followed by non-Hispanic White women and then Hispanic women.
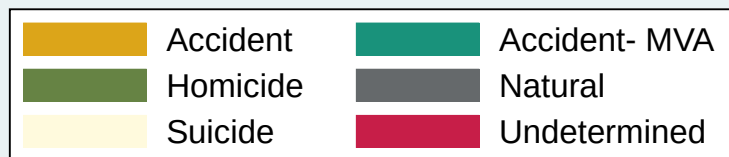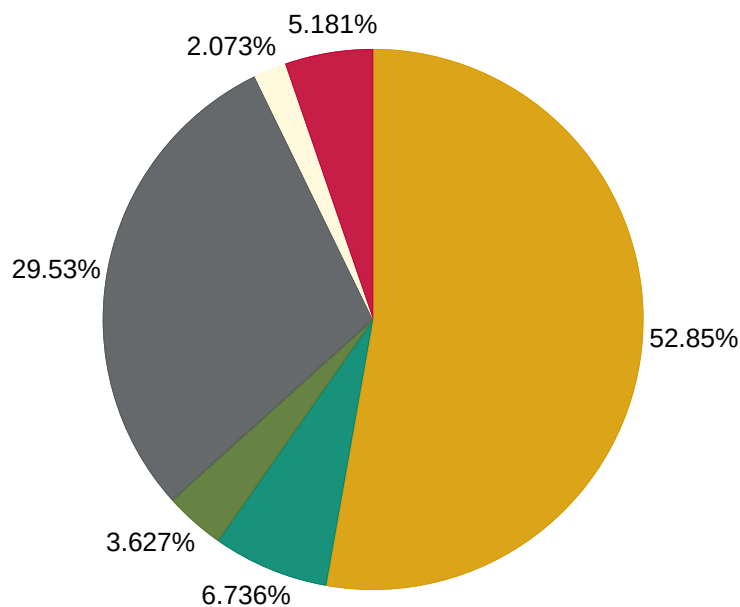

Sex by Ethnicity

Sex by Ethnicity

The largest group by far was non-Hispanic men. As described previously, the largest subgroup by race is of non-Hispanic White men, which is illustrated here by the Hispanic/Non-Hispanic comparison. The relative gender gap is not substantially different in Non-Hispanics and in Hispanic PEH. This suggests a similar relative risk of mortality for Hispanic females vs Non-Hispanic females.
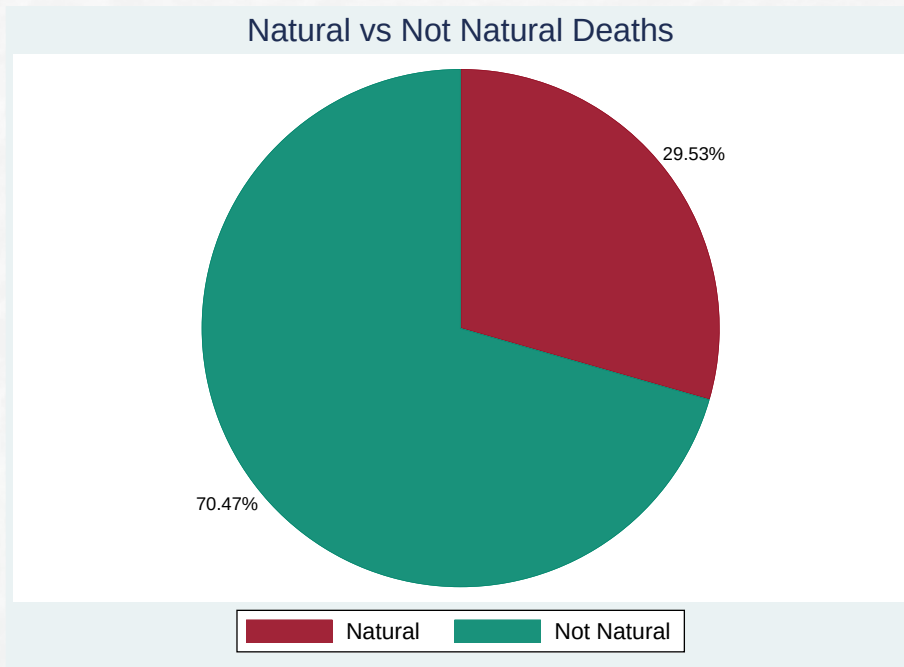
MANNER OF DEATH OVERVIEW

Manner of Death

▮	Accident	▮	Accident- MVA
▮	Homicide	▮	Natural
▮	Suicide	▮	Undetermined

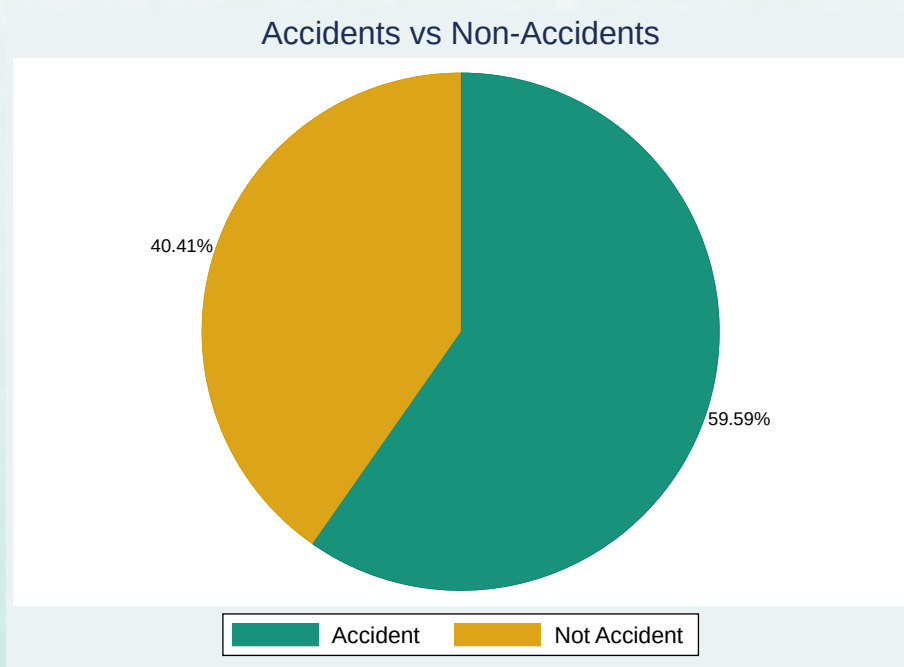Pie chart values: 5.181%, 2.073%, 29.53%, 52.85%, 3.627%, 6.736%

Manner of Death

Accidents caused a majority of deaths in PEH in 2021. Accidents include unintentional injuries, substance overdoses, etc. The second largest category after accidents (with or without moving vehicle accidents) is natural causes of death.

Natural vs Not Natural Deaths

29.53%

70.47%

Natural　　　　Not Natural

Natural Death

Non-natural deaths were a majority of the mortality compared to natural deaths. A majority of the non-natural deaths were composed of accidents.

Accidents vs Non-Accidents
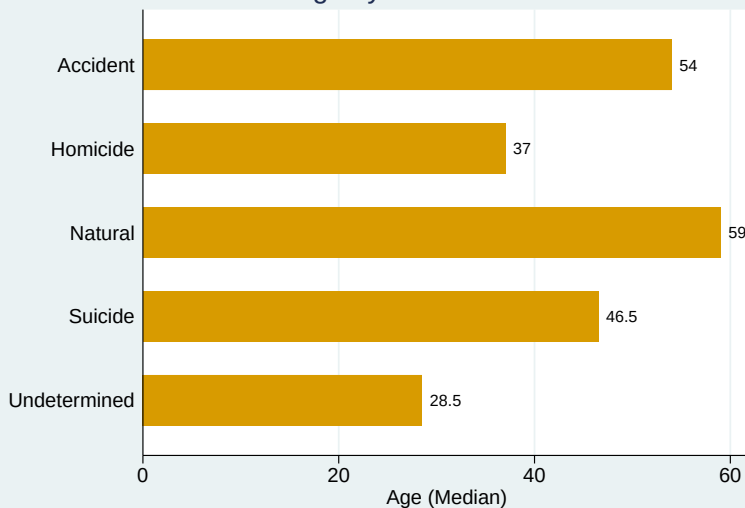
40.41%

59.59%

Accident　　　　Not Accident

Accidental Death

A majority of the deaths were comprised of accidents. From 2016-2020, the leading cause of death for all of Harris County was heart disease, with accidents being the third leading cause of death (Harris County Public Health, 2021). It should be noted that the Accidental manner of death includes unintentional overdoses (See below).

DEMOGRAPHICS BY MANNER OF DEATH

Age by Manner of Death

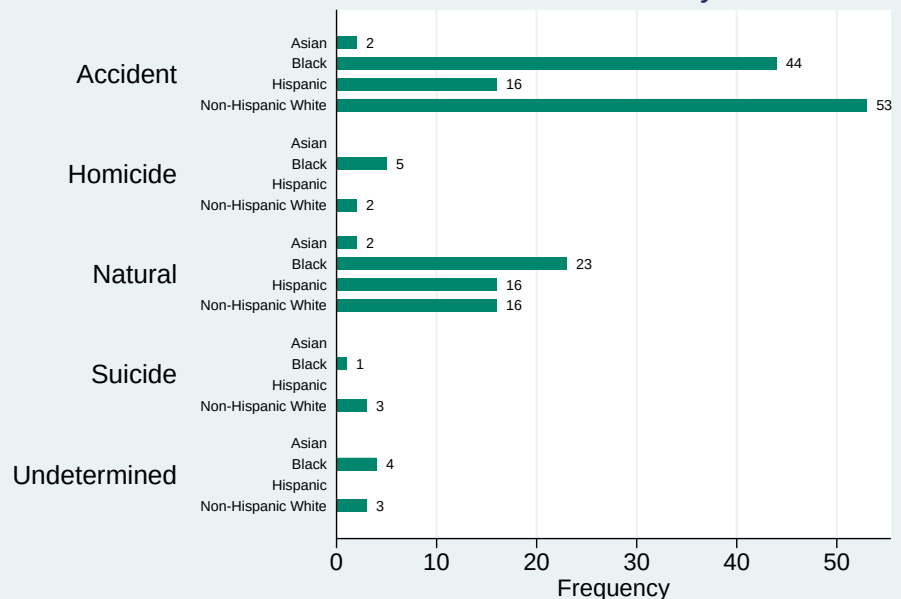| Manner	Age (Median)
Accident	54
Homicide	37
Natural	59
Suicide	46.5
Undetermined	28.5

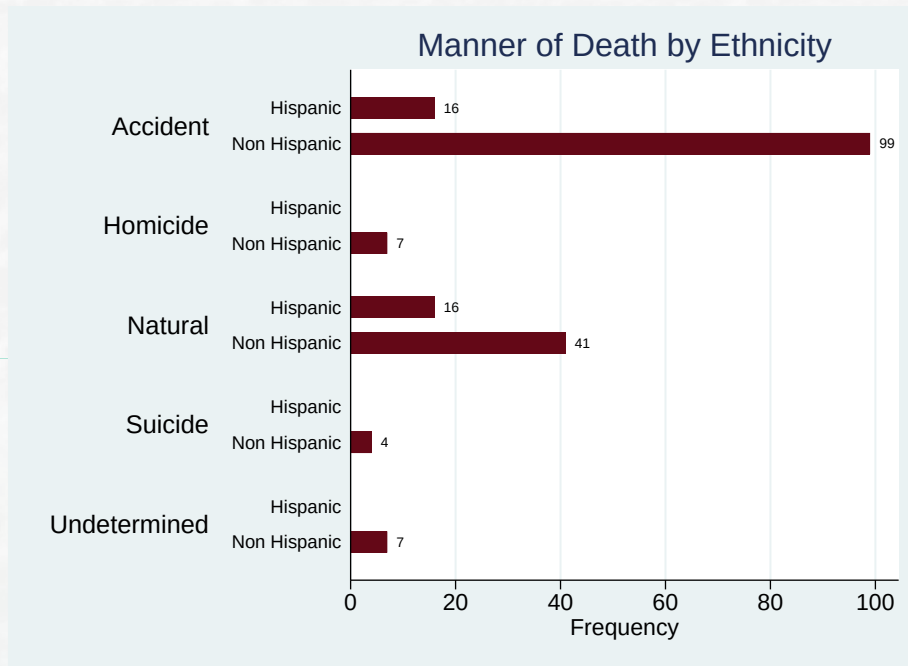**Age (Median)**

Age and Manner of Death

Natural deaths had the highest median age of 59 years. Following natural deaths were accidents and suicides. The manner of death with the lowest median age besides "undetermined" was homicide.

Race and Manner of Death

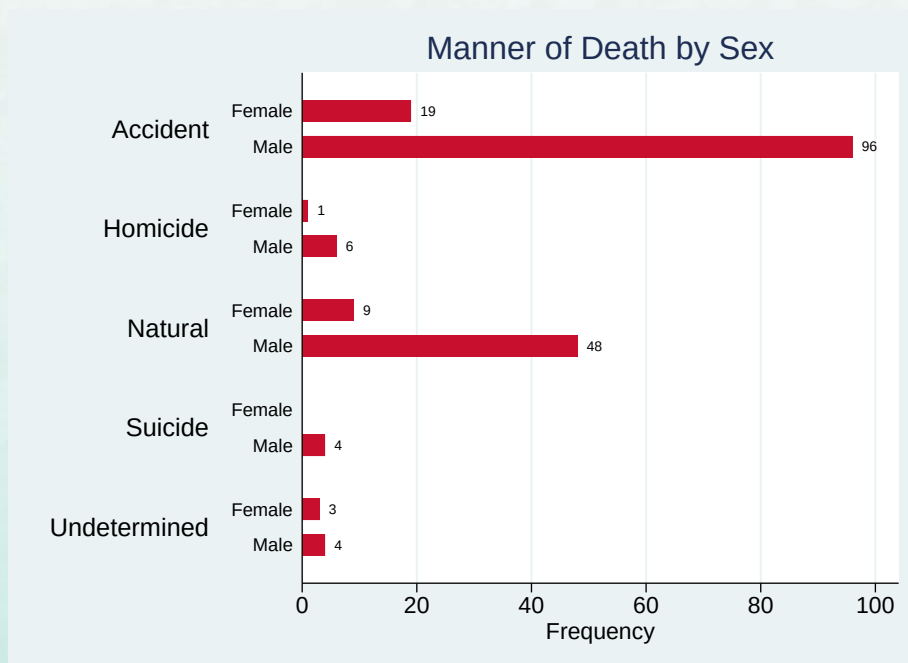The highest frequency of deaths was in the accidental category among non-Hispanic White people.

Manner of Death by Race

	Race	Frequency
Accident	Asian	2
	Black	44
	Hispanic	16
	Non-Hispanic White	53
Homicide	Asian	
	Black	5
	Hispanic	
	Non-Hispanic White	2
Natural	Asian	2
	Black	23
	Hispanic	16
	Non-Hispanic White	16
Suicide	Asian	
	Black	1
	Hispanic	
	Non-Hispanic White	3
Undetermined	Asian	
	Black	4
	Hispanic	
	Non-Hispanic White	3

Frequency

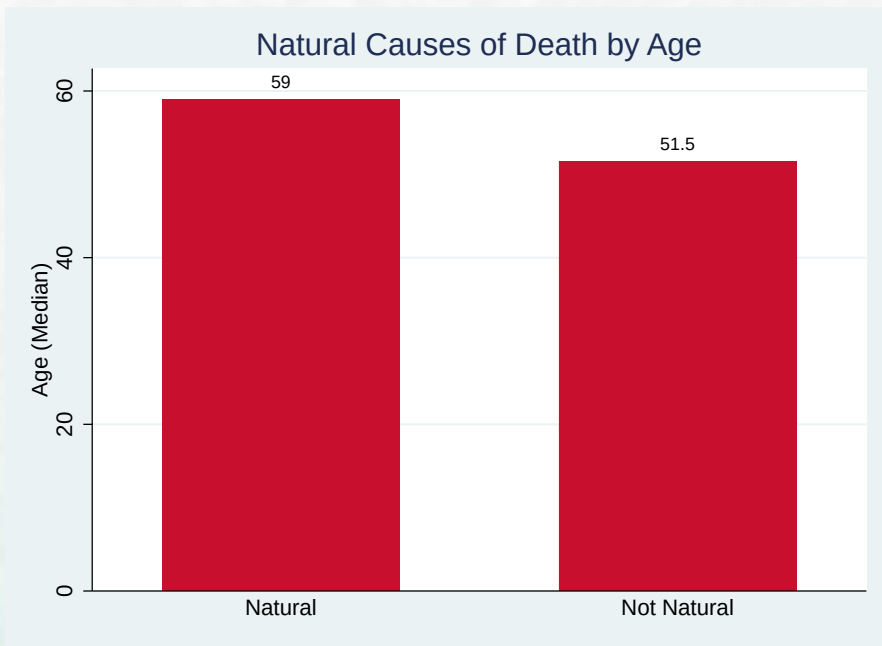## Manner of Death by Ethnicity

Ethnicity and Manner of Death

The ethnicity with the highest frequency in manner of death was for non-Hispanic people in the accidental death category.

Manner of Death by Sex

Sex and Manner of Death

The sex with the highest frequency in manner of death was for males in the accidental death category.

DEMOGRAPHICS BY NATURAL CAUSE OF DEATH

Natural Causes of Death by Age

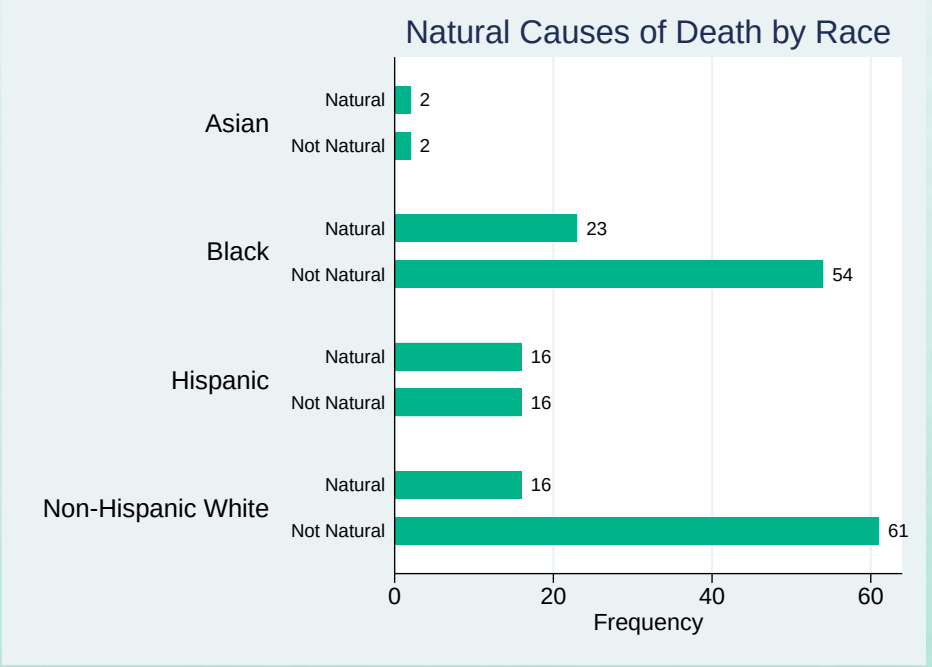Age (Median)

- Natural: 59
- Not Natural: 51.5

Age and Natural Cause of Death

Natural cause of death had a higher median age than non-natural causes of death. However, the two categories are close in median age.
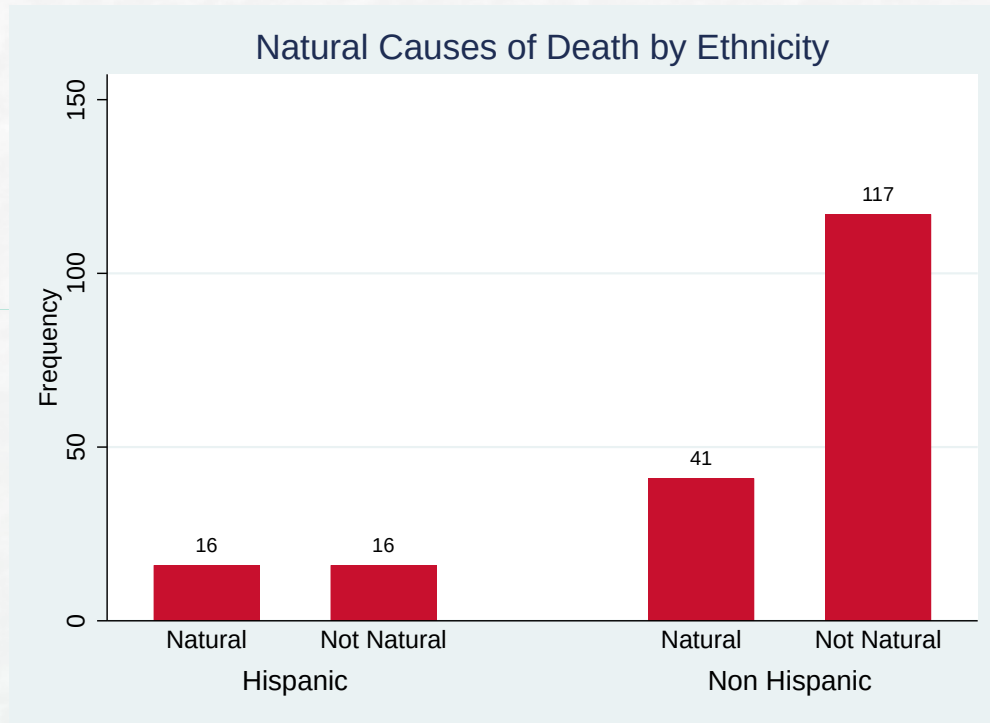
Race and Natural Cause of Death

The highest frequency of natural deaths occurred in Black individuals.

Natural Causes of Death by Race

Asian
- Natural: 2
- Not Natural: 2

Black
- Natural: 23
- Not Natural: 54

Hispanic
- Natural: 16
- Not Natural: 16

Non-Hispanic White
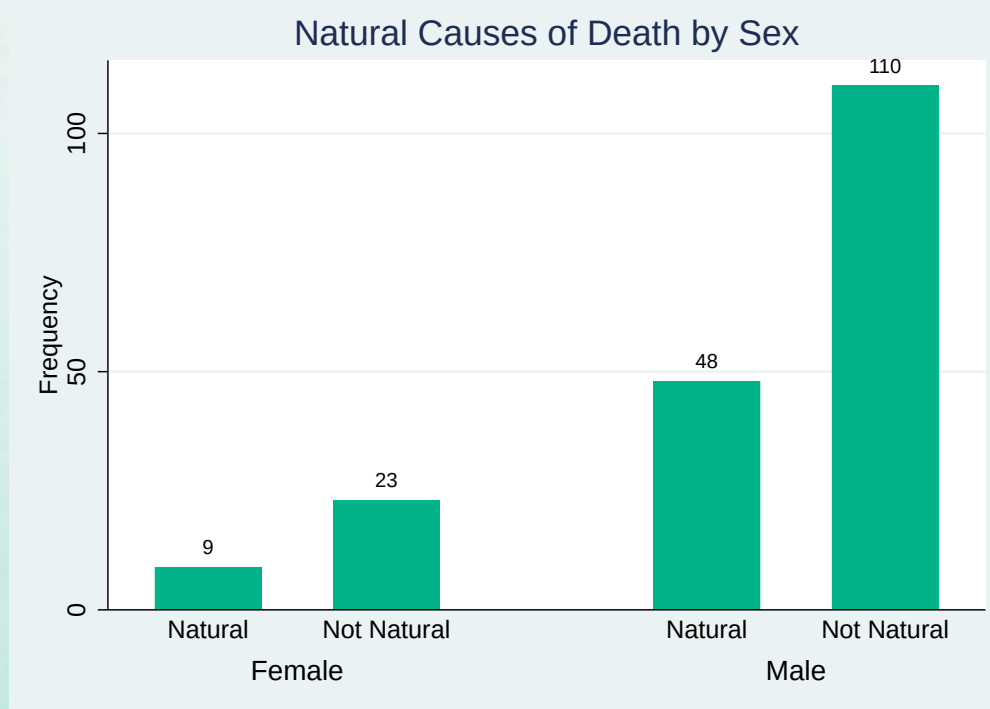- Natural: 16
- Not Natural: 61

Frequency

Ethnicity and Natural Cause of Death

Non-Hispanic individuals had a higher frequency of natural deaths, but a smaller proportion of all deaths, relative to Hispanic people.
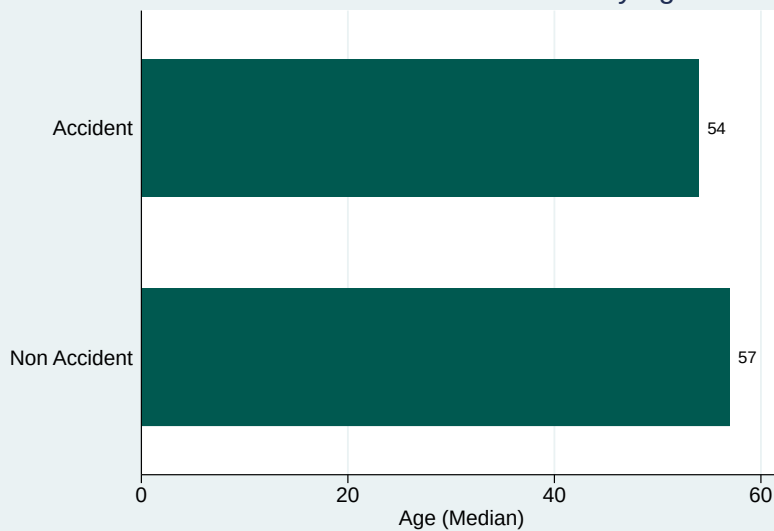
Natural Causes of Death by Ethnicity

Sex and Natural Cause of Death

Although more males died overall and in both categories, males suffered a similar rate of natural deaths relative to females.

Natural Causes of Death by Sex

DEMOGRAPHICS BY ACCIDENTAL DEATH

Accidental Causes of Death by Age

Accident — 54
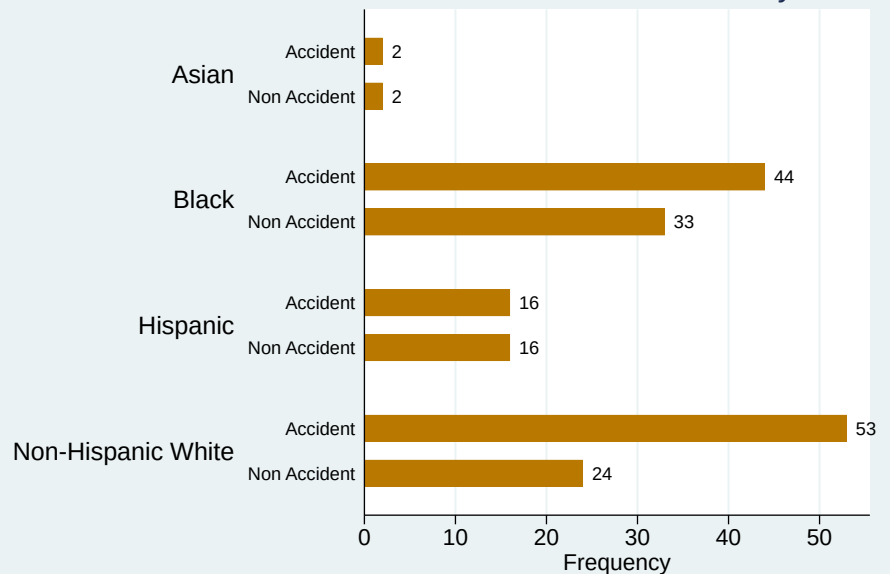Non Accident — 57

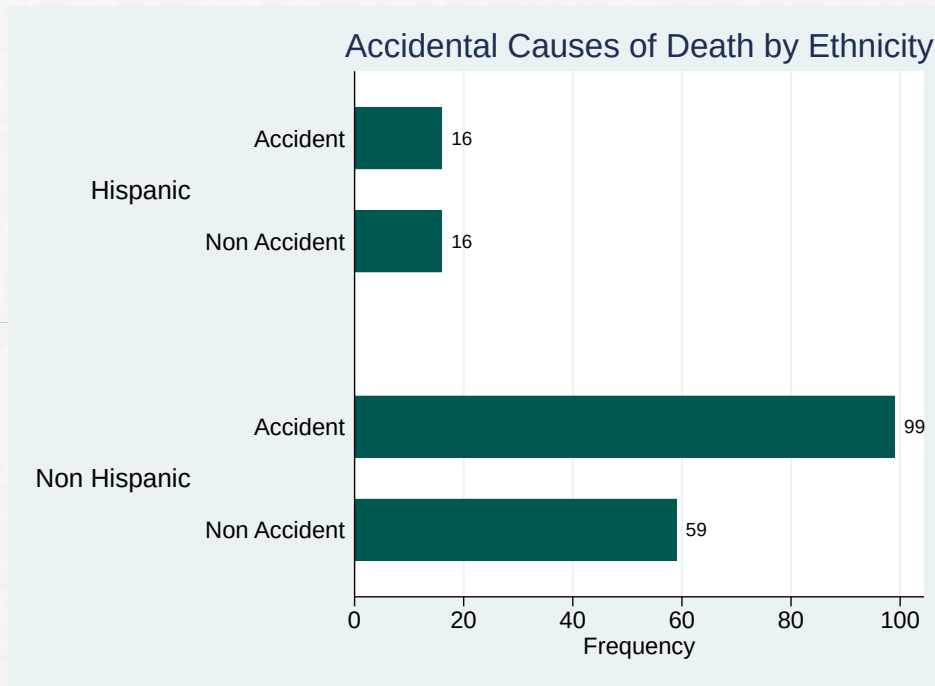Age (Median)

Age and Accidental Death

Accidental deaths had a younger median age compared to all non-accidental deaths.

Race and Accidental Death

Non-Hispanic White individuals were more than twice as likely to experience accidental deaths. A much smaller increased relative risk of accidental death was seen for Black individuals.
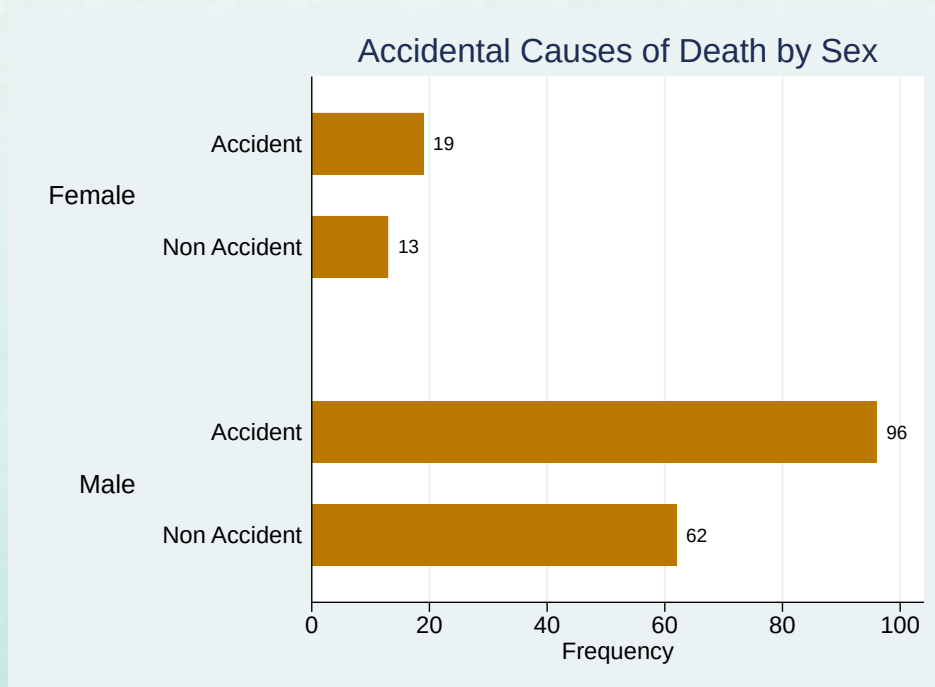
Accidental Causes of Death by Race

Asian
Accident — 2
Non Accident — 2

Black
Accident — 44
Non Accident — 33

Hispanic
Accident — 16
Non Accident — 16

Non-Hispanic White
Accident — 53
Non Accident — 24

Frequency

Accidental Causes of Death by Ethnicity

Hispanic
- Accident: 16
- Non Accident: 16

Non Hispanic
- Accident: 99
- Non Accident: 59

Frequency

Ethnicity and Accidental Death

Non-Hispanic individuals had the highest frequency and much greater relative risk of accidental death.

Accidental Causes of Death by Sex

Female
- Accident: 19
- Non Accident: 13

Male
- Accident: 96
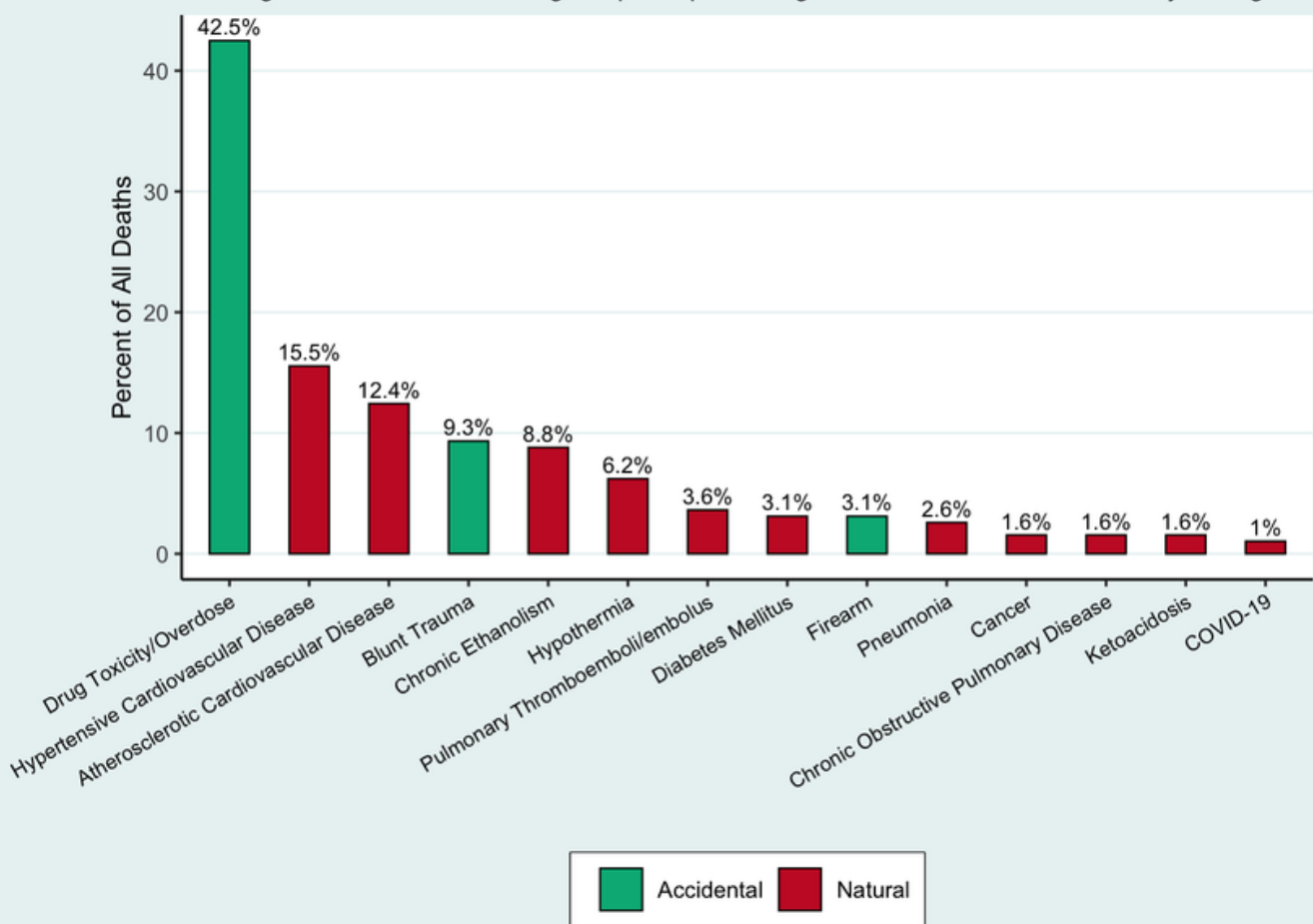- Non Accident: 62

Frequency

Sex and Accidental Death

Males had the highest frequency of accidental deaths by a large margin, but demonstrated similar relative risk compared to females.

SUMMARY OF CAUSES OF DEATH

Leading Causes of Death Among People Experiencing Homelessness in Harris County During 2021

Bar chart showing Percent of All Deaths by cause:
- Drug Toxicity/Overdose: 42.5% (Accidental)
- Hypertensive Cardiovascular Disease: 15.5% (Natural)
- Atherosclerotic Cardiovascular Disease: 12.4% (Natural)
- Blunt Trauma: 9.3% (Accidental)
- Chronic Ethanolism: 8.8% (Natural)
- Hypothermia: 6.2% (Natural)
- Pulmonary Thromboemboli/embolus: 3.6% (Natural)
- Diabetes Mellitus: 3.1% (Natural)
- Firearm: 3.1% (Accidental)
- Pneumonia: 2.6% (Natural)
- Cancer: 1.6% (Natural)
- Chronic Obstructive Pulmonary Disease: 1.6% (Natural)
- Ketoacidosis: 1.6% (Natural)
- COVID-19: 1% (Natural)
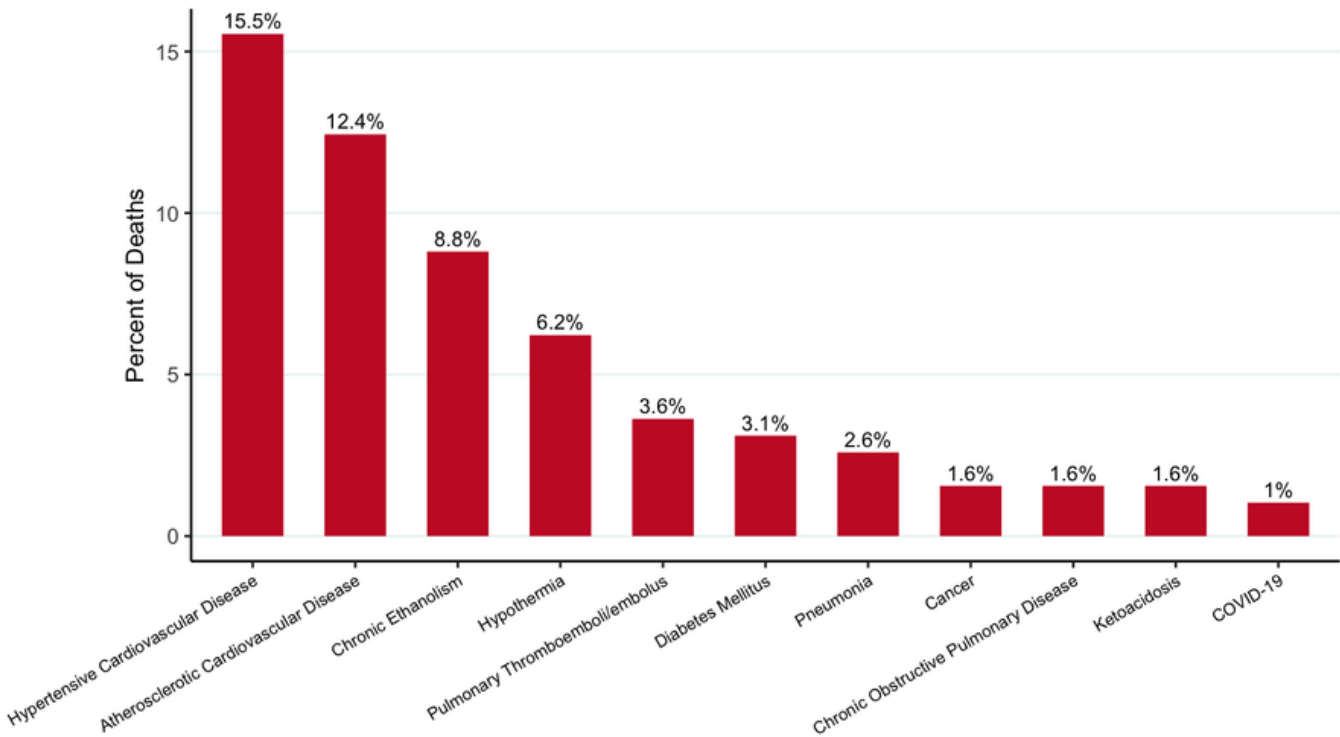
Legend: Accidental (green), Natural (red)

Most Common Causes of Death

The most common cause of death by far among people experiencing homelessness was drug toxicity/overdose. This cause of death falls into the accidental death category, which was higher than the non-accidental deaths category (see above).

*Multiple causes of death allowed so sum is > 100% of sample.

Leading Causes of Natural Death Among People Experiencing Homelessness in Harris County During 2022
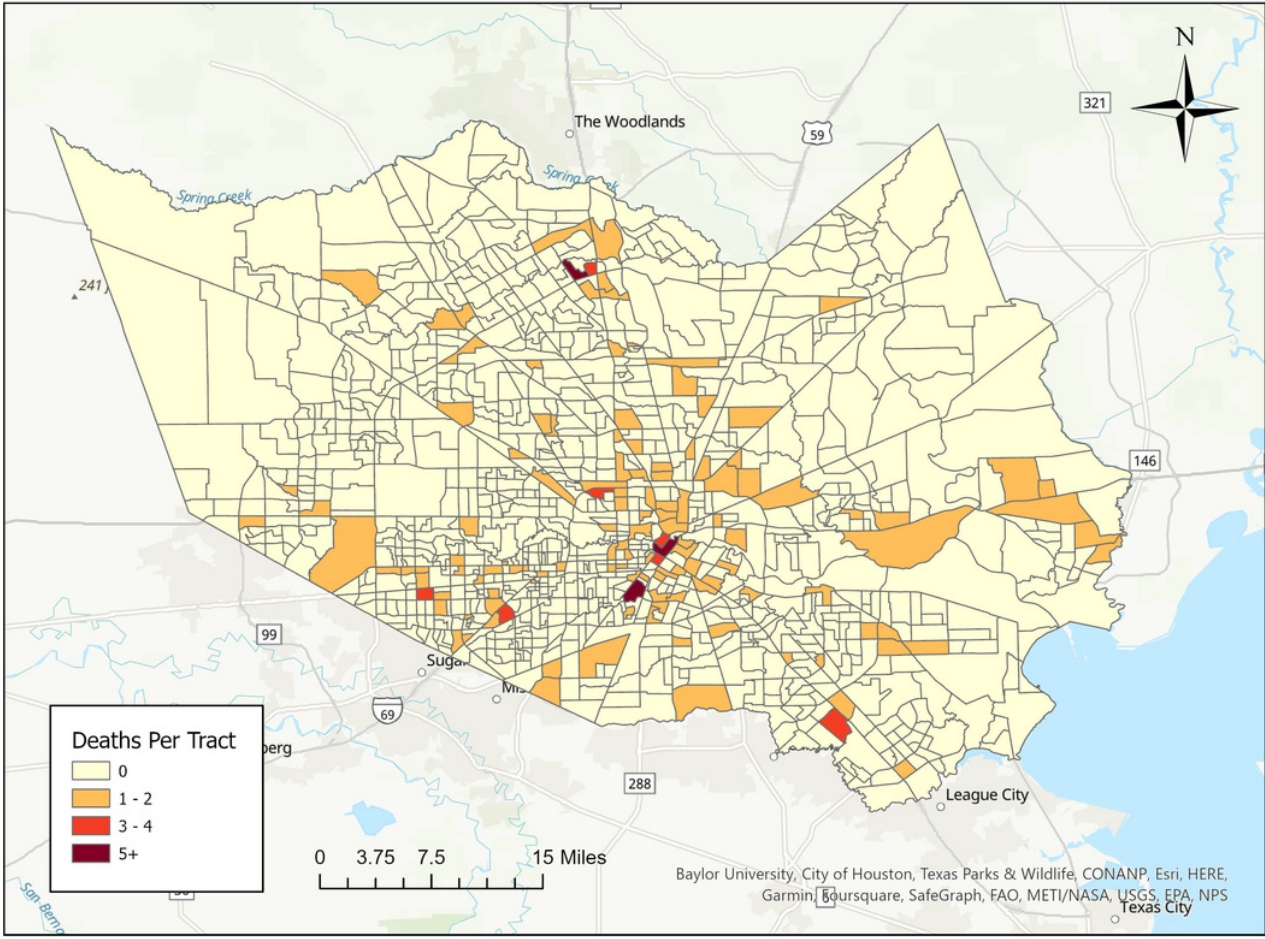
Most Common Causes of Natural Death

The most common cause of natural death among people experiencing homelessness was hypertensive cardiovascular disease, making up 31% of all natural deaths. The second most common cause is atherosclerotic disease. This mirrors the national most common cause of death, which is heart disease.
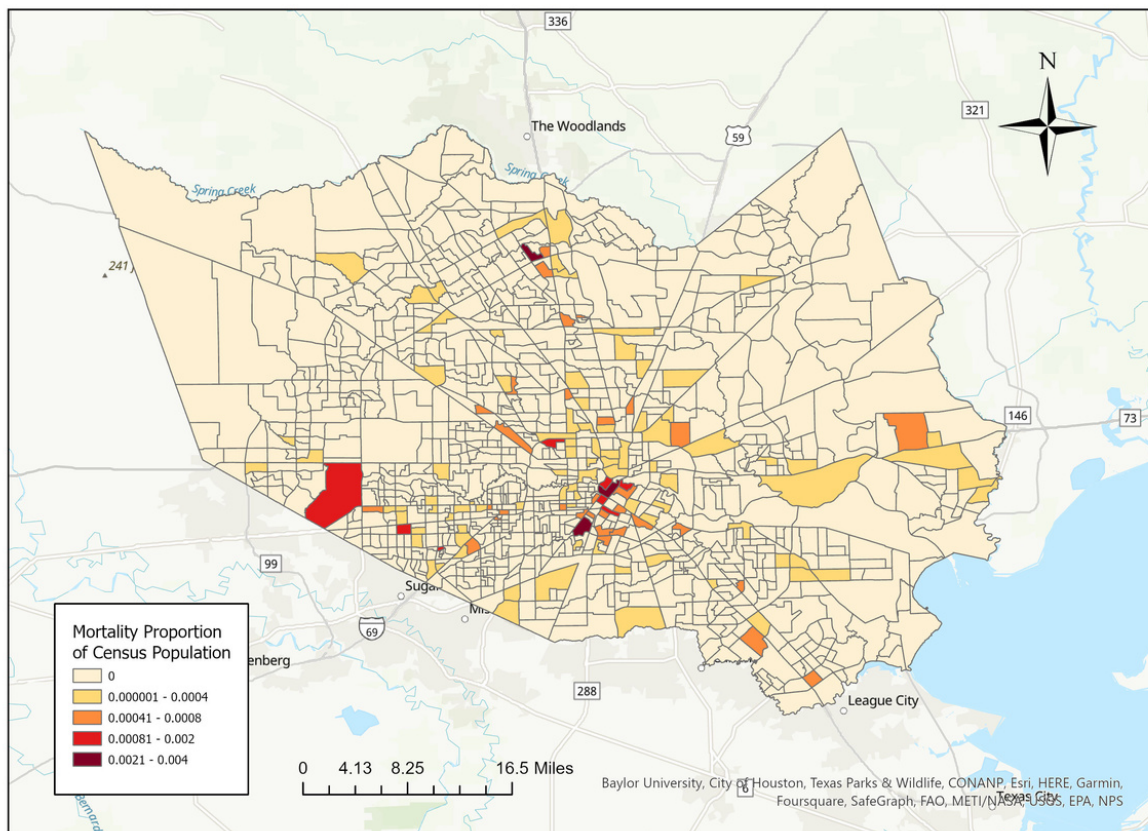
MAPS

Count of Deaths Among People Experiencing Homelessness in 2021

MAPS

Proportion of Deaths of People Experiencing Homelessness in 2021 Compared to Census Population

The broad geographic distribution of deaths across the county demonstrates the widespread burden of the experience of homelessness. It also demonstrates the pervasive risk of mortality across the entire community. Although there are deaths associated with homelessness all across the county, there are notable concentrations (in count and density) in 1) the downtown area, 2) the Texas Medical Center, a region that contains the largest concentration of public and private hospitals in the world, and 3) a hyperlocal neighborhood in north Houston along FM1960.

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