

The Connecticut Violent Death Reporting System Advisory Board Meeting

Presented by Michael Makowski, MPH
December 5, 2023

Injury and Violence Surveillance Unit
Community, Family Health and Prevention Section
Connecticut Department of Public Health

Agenda

1. Introductions
2. Program and Updates-Brief Overview of NVDRS/CTVDRS
3. Program Success Stories
4. Current Projects
5. Data Presentation

The Connecticut Violent Death Reporting System (CTVDRS) collects data about the **victims of homicide, suicide, unintentional firearm deaths, and deaths of undetermined intent**

- Data sources: State Vital Records, Police reports, Supplementary Homicide Reports and Family Violence Reports (DESPP), OCME investigation, autopsy and toxicology data
- Data collection began in 2015
- Data from Connecticut Violent Death Reporting System (CTVDRS) 2015 to August 31, 2023

CTVDRS Variables Collected

Data collected is victim –“centric”

- Basic and extended demographics-(marital status, level of education, occupation)
- Injury and Death Information- Date of Death, Where Death Occurred- City, In Their Residence; Manner and Death Cause
- Weapon- Firearm, Sharp instrument, Asphyxia, Poison, etc.
- Circumstances- Risk or Stressors
- Suspect- Relationship of victim to suspect
- Toxicology

CTVDRS Variables Collected Circumstances

Risks/ Stressors or Triggers

- Diagnosed Mental Illness (MI); Current treatment for MI, Substance Use Disorder- Alcohol or Drugs
- Intimate Partner Problems; Injury Result: of an Argument; During Commission of a Crime (for example, robbery, drug trade, etc.)
- Drive-by shooting; Gang-related
- History of suicide attempts/ ideations; Physical Health Problems- chronic pain, chronic or terminal illness
- Criminal history or past arrests/convictions

CTVDRS Program Updates

- 3rd round of CDC funding
- Currently in year 2 of a 5-year funding cycle (2022-2027); \$ 1.2 M

CTVDRS Success Stories

- CDC data quality reports - CTVDRS composite ranking of 4th or 5th among 52 funded sites since 2017
 - CTVDRS supports other grants and programs at DPH - Comprehensive Suicide Prevention (CSP), Community Gun Violence Prevention (CGVP), etc.
- Moving Data to Action - Signage for Suicide Help

Suicide Prevention Signage

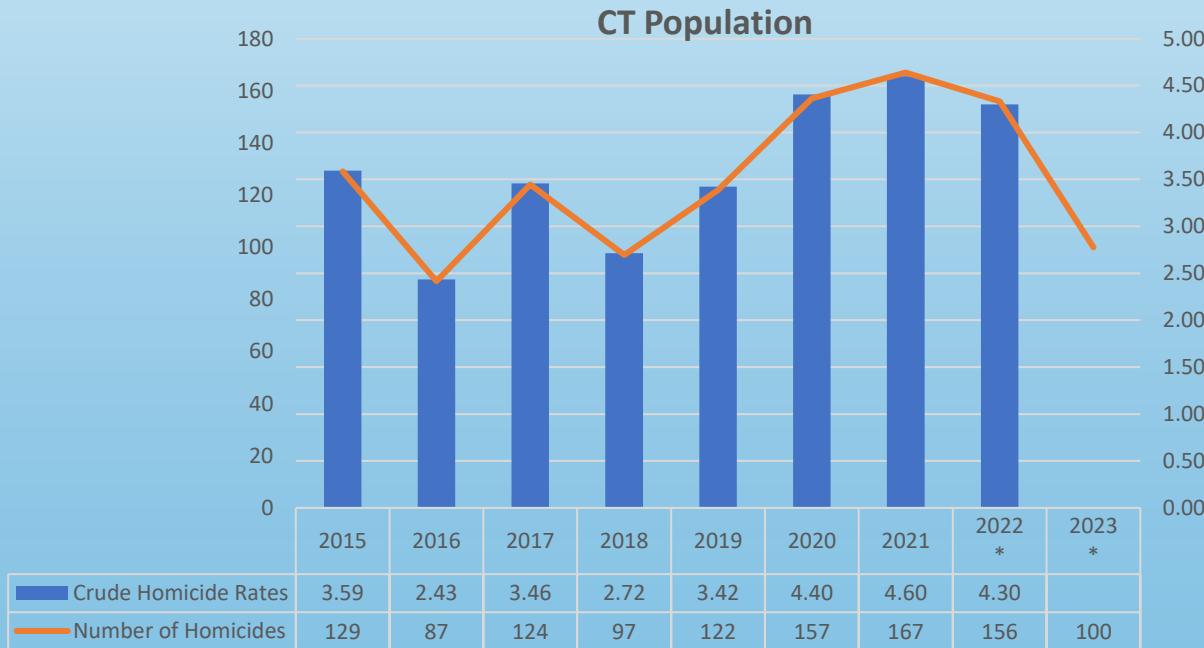


Current Program Projects

- Quantifying data on homicides committed by permitted firearm owners vs. people using illegal firearms (working with DESPP Special Firearms Unit)
- Obtaining arrest data for homicide victims and suspects
- Future- explore, quantify how illegal firearms are obtained in CT- straw purchases, etc.

Homicide Rates In Connecticut 2015 to Present

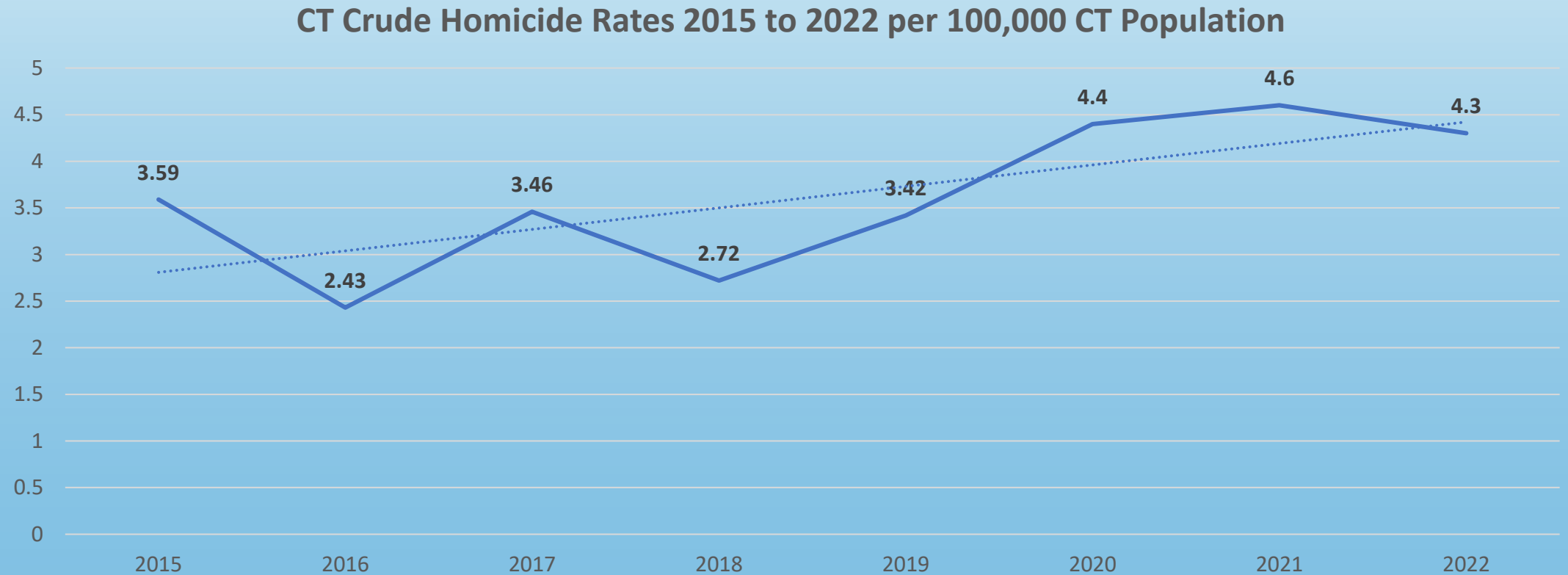
Crude Homicide Rates and Numbers for CT 2015 to 2023* per 100,000



- As of August 31, 2023 there were 100 homicides

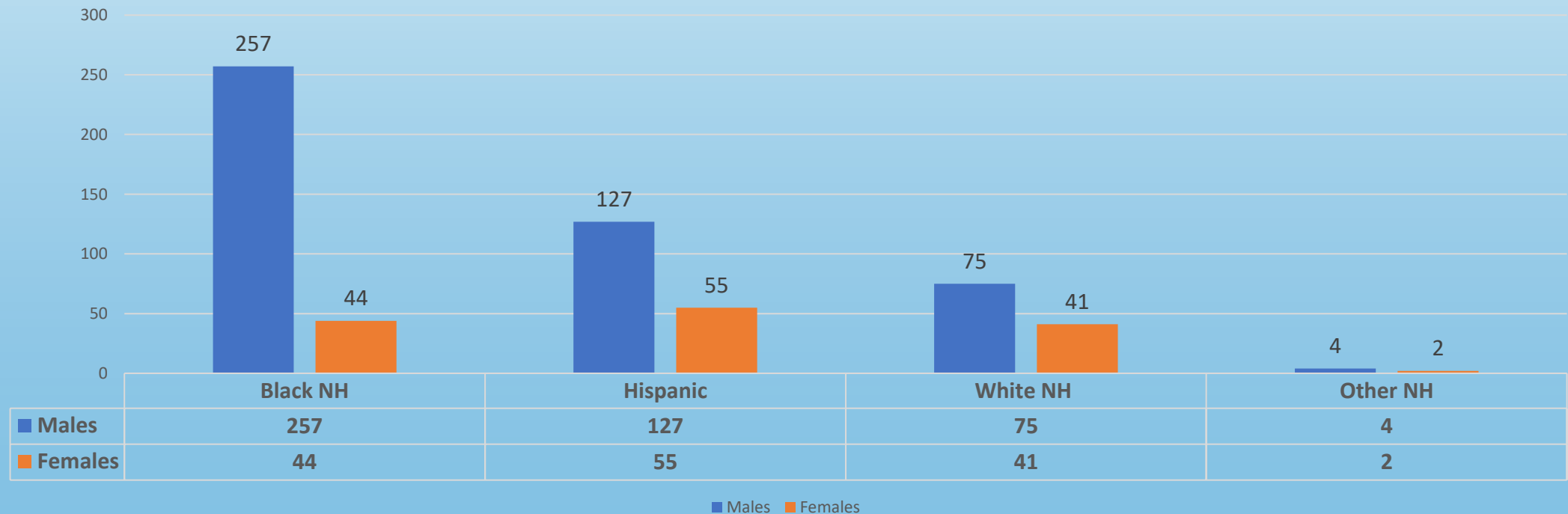
*2022 and 2023 data are preliminary; Rates are provisional, currently using 2020 population data for CT

Homicide Trends 2015 to 2022



Homicide by Race, Ethnicity, and Sex

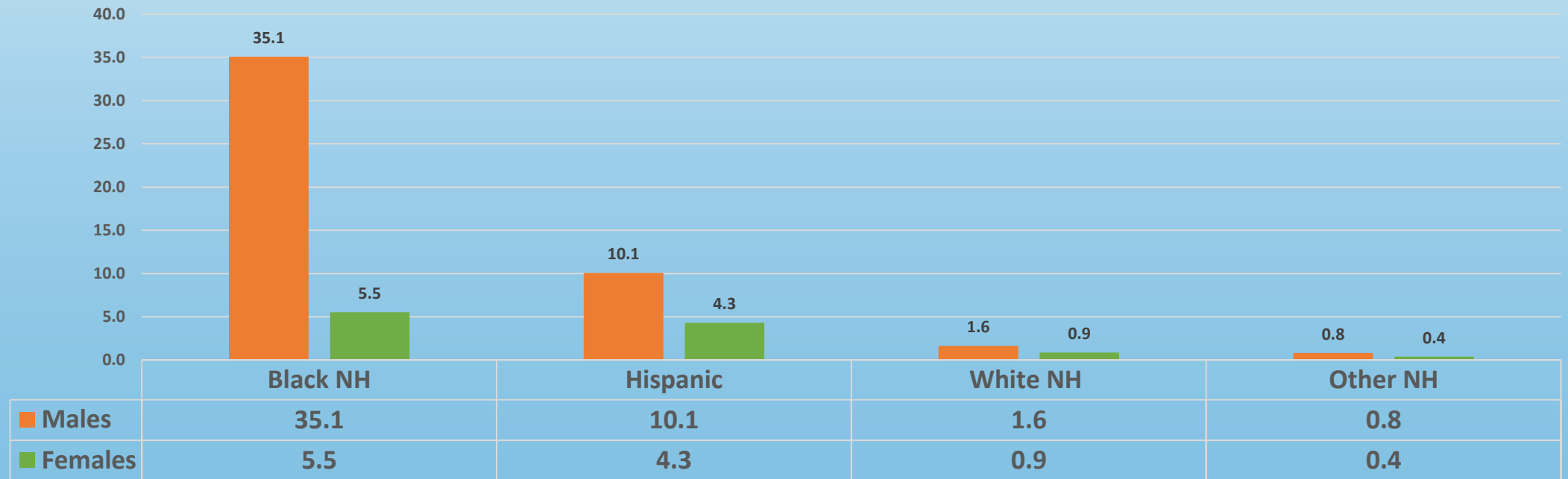
Homicides in CT by Race, Ethnicity, and Sex from 2020 to 2023*



*2023 data are preliminary

Crude Homicide Rates by Race, Ethnicity, & Sex

Crude Rates for Homicides in CT per 100,000 CT Population by Race, Ethnicity, and Sex, 2020 to 2023*



*2022 and 2023 data are preliminary; Rates are provisional, currently using 2020 population data for CT

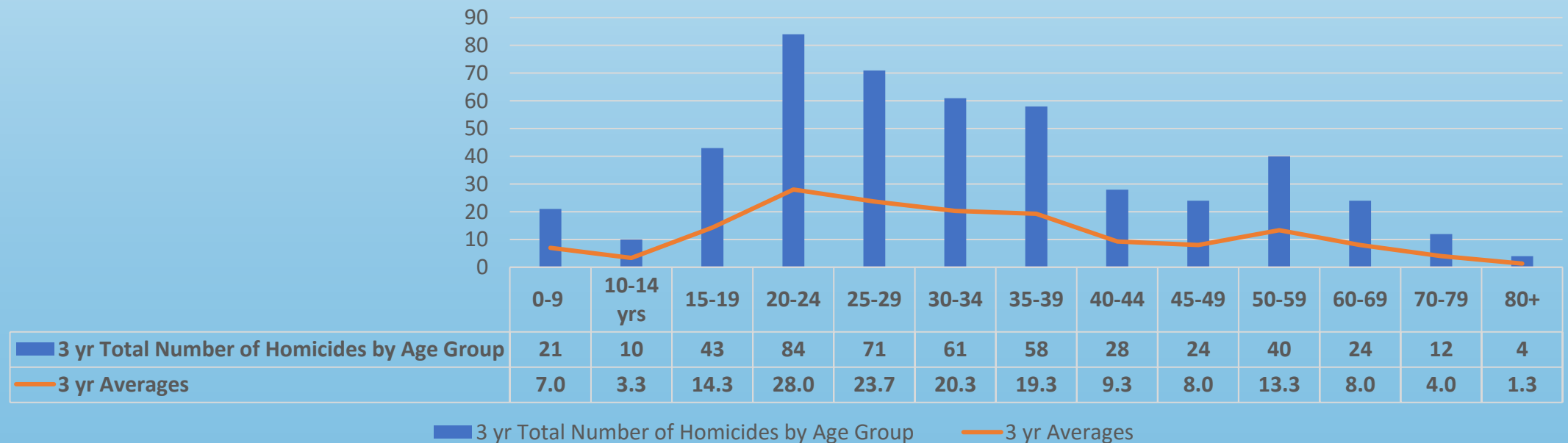
Crude Homicide Rates by Race/Ethnicity for 2015-2019 and 2020-2022*

Race/Ethnicity	Total Number Homicides (2015 to 2019)	Crude Rate 2015-2019 per 100,000 CT population	Crude Rate 2020-2022 per 100,000 CT population	Total Number of Homicides 2020-2022*	Rate Difference 2015 to 2019 Compared to 2020-2022*
Non-Hispanic Black	255	14.0 (12.3-15.7)	21.6 (18.9-24.3)	242	+ 54%
Non-Hispanic White	165	1.4 (1.2-1.6)	1.4 (1.0-1.6)	101	No change
Hispanic	133	4.60 (3.8-5.4)	6.9 (5.7-8.1)	129	+ 48%

*2022 data are preliminary

CT Homicides and Rates of Homicide

Number of Homicides in CT by Age Group and
Homicide Rate per 100,000 CT pop. by Age Group, 2020-2022*



*2022 data are preliminary

Homicides by Lethal Means 2020-2022*

	2015-2019 (5 years)	Yearly Average of Homicides (% of homicide)	2020-2022 (3 years)	Yearly Average of Homicides (% of homicide)	Difference in percentage of firearm deaths 2015-19 compared to 2020-22
Number of Firearm Homicides	343	68.6 (61.2)	347	115.6 (72.5)	+18.5
Number of Sharp Force Homicides (Stabbing)	69	13.8 (8.1)	69	23.0 (13.3)	+64.2

*2022 and 2023 data are preliminary;

Intimate Partner Violence Homicides

- 2015 to August 31, 2023* N=131; (14-16 per year)
- 11% of all homicides were IPV (total homicides N=1,140)
- 78% (N=102) were females; 22% (N=29) were males
- White NH females 47% (N=48); Black NH 30% (N=31); Hispanic 20% (N=20); Other NH N=3

*2023 data are preliminary

CT Cities with Highest Rate of Homicides

Connecticut Cities (Injury City) Ranked by Homicide Rate (≥ 15 Homicides) during 2020 to 2023*

City	Number of Homicides	Homicide Rate per 100,000 City Pop.
Hartford	129	26.6
New Haven	80	14.9
Bridgeport	78	13.1
Waterbury	56	12.2
Hamden	15	6.1
Stamford	15	2.8

* Data are preliminary for 2022 and 2023; 2023 data are from January 1st to August 31, 2023; rates calculated from counts ≤ 20 should be viewed with caution because of statistical unreliability

Known Risks and Circumstances for Homicides 2020-2021

Circumstances	Number of Occurrences	Rate per 100 Homicides
Disputes/Arguments	91	28.0
Assault	46	14.2
Drug Involvement	39	12.0
Robbery	25	7.7
Drug Trade	24	7.4

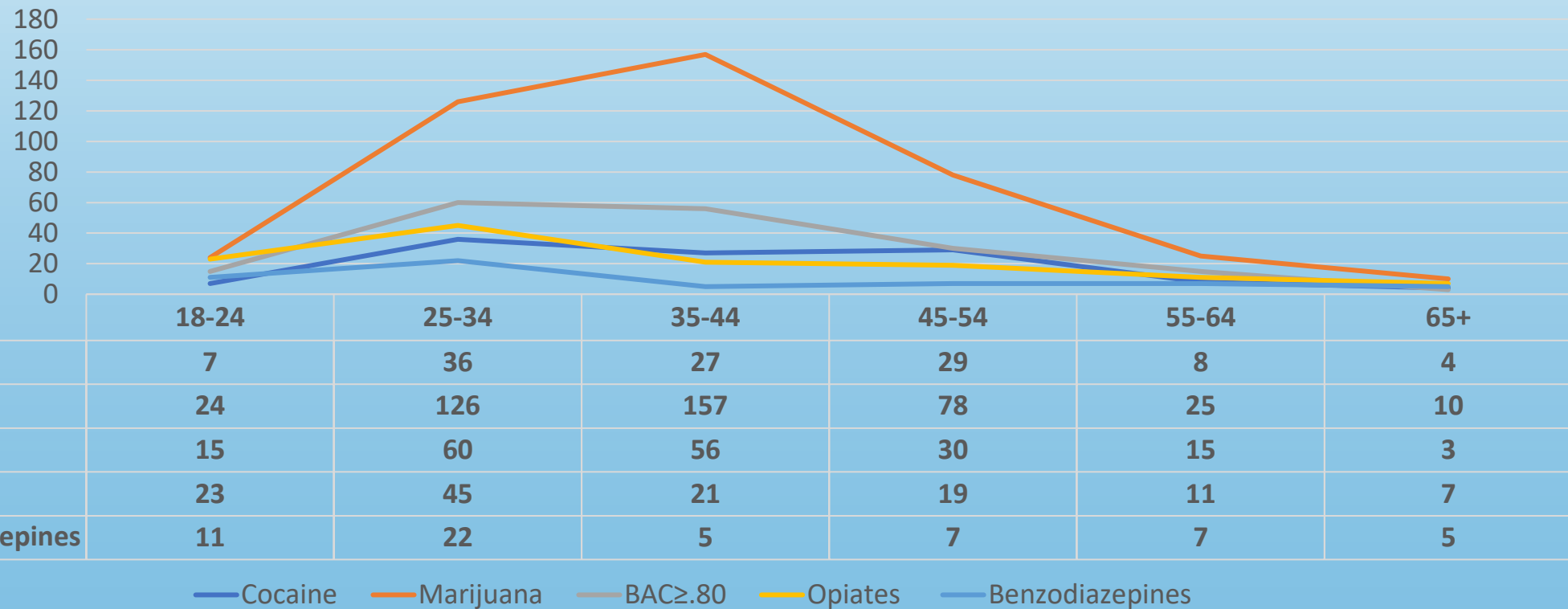
Substance Use In Homicides

Comparison of Rate of Positive Drug Results from Blood at the Time of Autopsy 2015-2019 and 2020-2022

Drug	Number of Positives 2015 to 2019	2015 to 2019 Rate per 100 Homicides	Number Positives 2020 to 2022	Rate per 100 Homicides 2020 to 2022
Total Number of Homicides (All)	559		480	
Marijuana	171	30.5 (26.0-35.0)	254	52.9 (46.3-59.5)
Alcohol	135	24.1 (20.0-28.2)	139	28.9 (24.2-33.6)
Opiates	66	11.8 (8.9-14.7)	69	14.3 (10.9-17.7)
Cocaine	56	10.1 (7.3-12.8)	56	11.6 (8.6-14.6)
Benzodiazepines	41	7.3 (5.1-9.5)	20	4.1 (2.3-5.9)

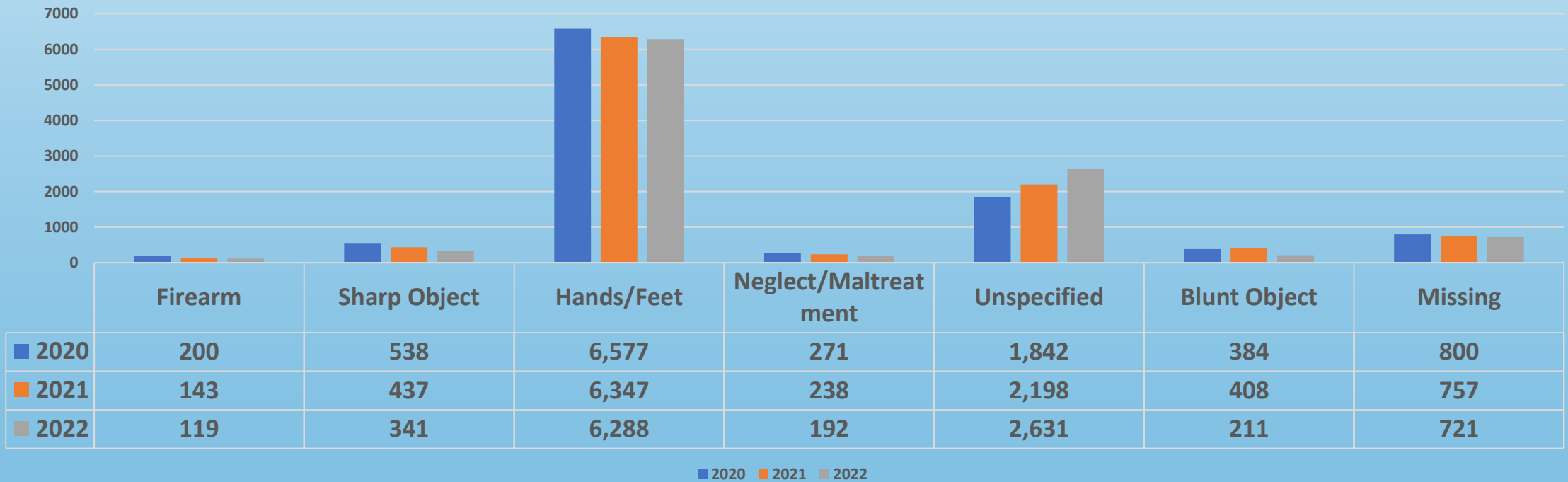
Substance Use in Homicides by Age Group

Substances found in Homicides at the Time of Autopsy by Age Group, 2015-2022



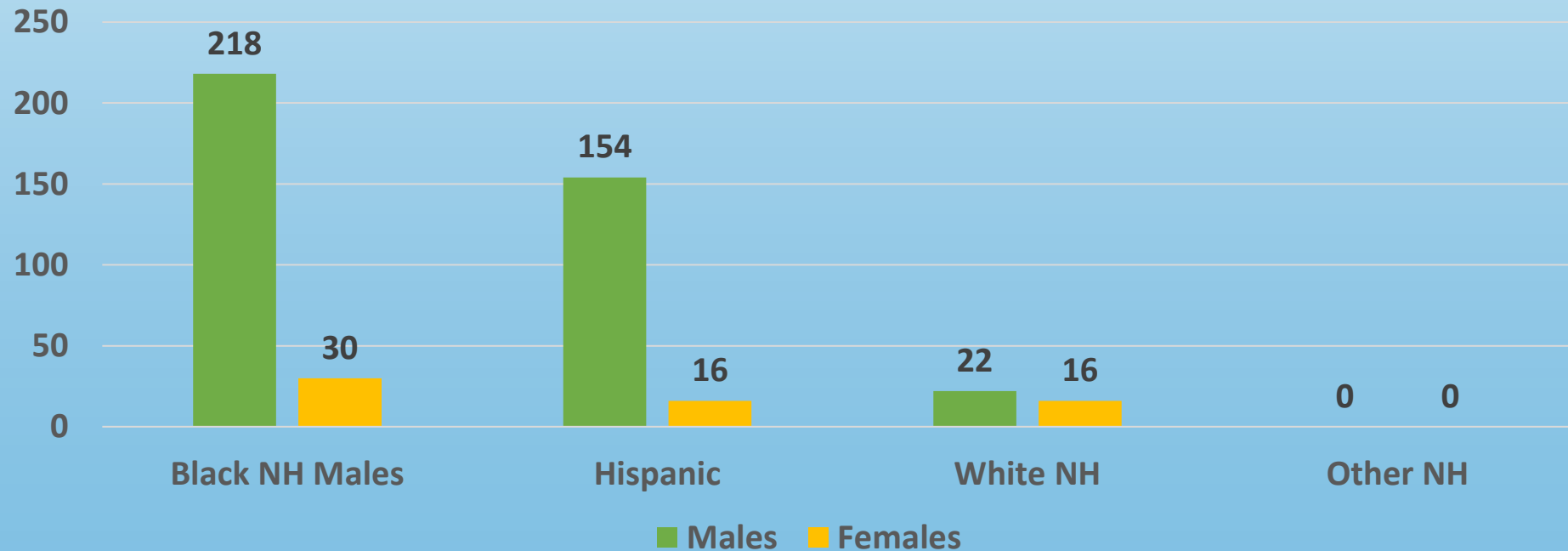
Non-Fatal Assaults

Assaults by Weapon Type, 2020-2022 Hospital ED Discharge Data



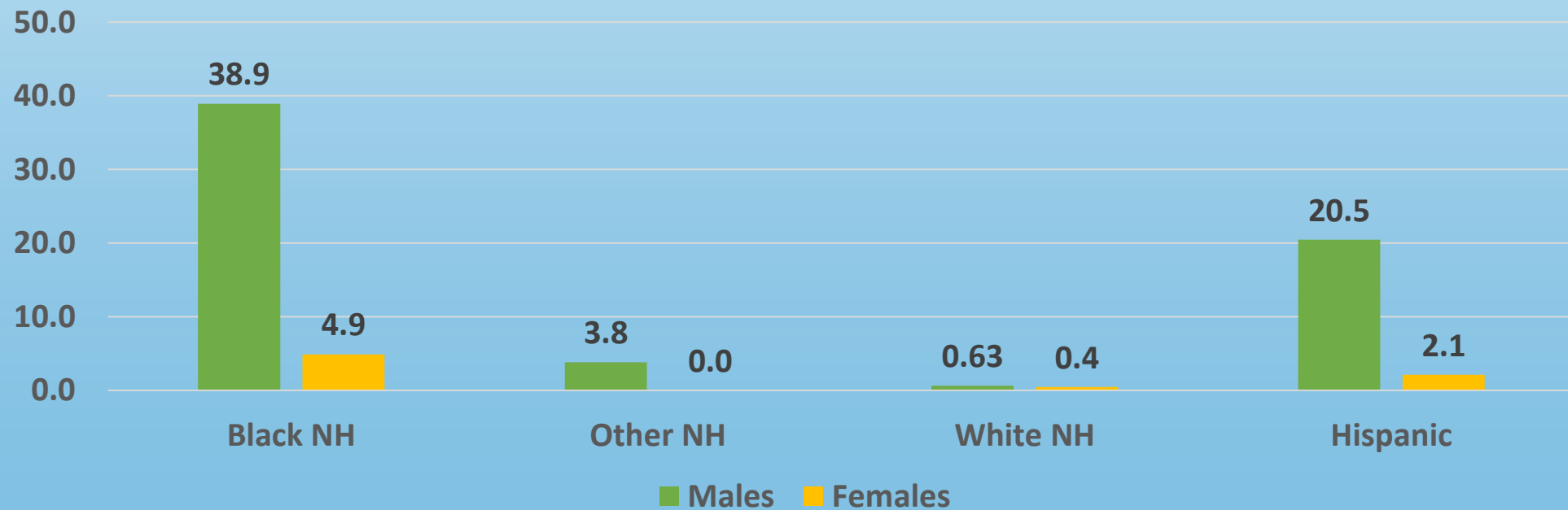
Non-Fatal Firearm Assaults

Firearm Assaults by Race and Sex, 2020-2022 Hospital ED Discharge Data



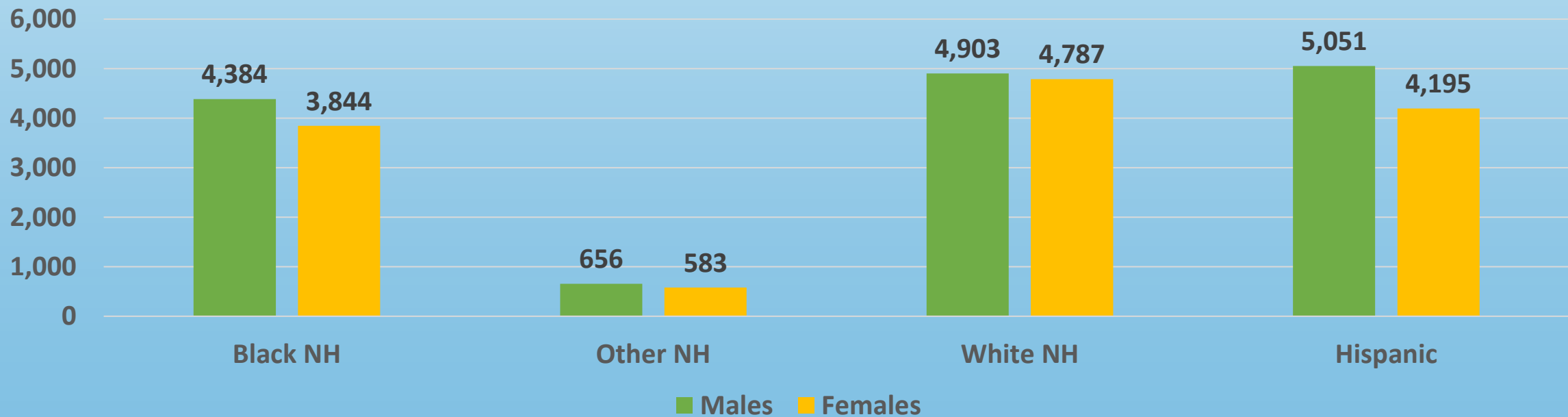
Rate of Non-Fatal Firearms Assaults

Rate of Firearm Assaults per 100,000 CT pop., by Race and Sex, 2020-2022 Hospital ED Discharge Data



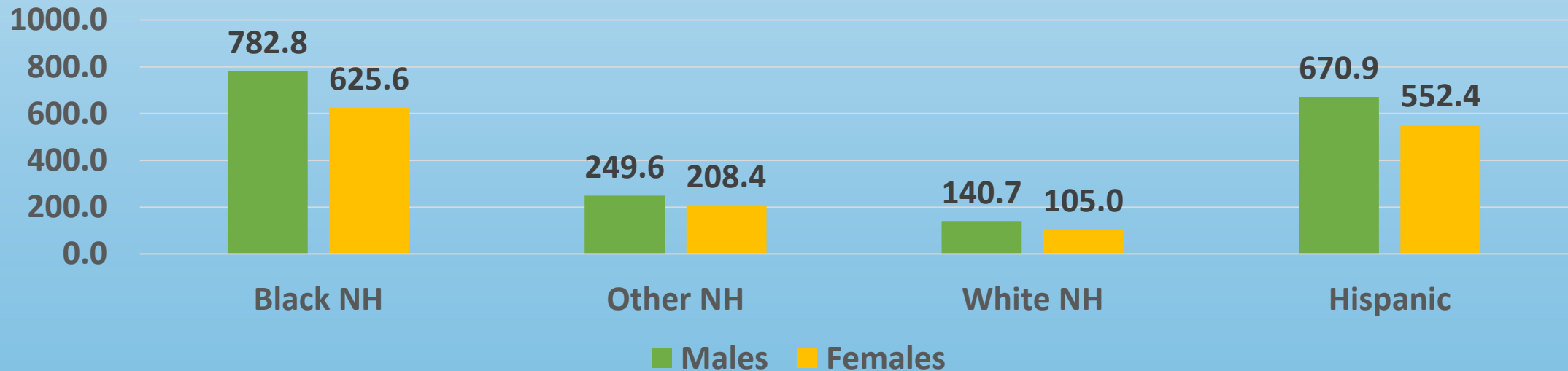
Non-Fatal Assaults (Firearms Excluded)

Assaults (not including Firearms) by Race and Sex, 2020-2022 Hospital ED Discharge Data



Rate of Non-Fatal Assaults (Firearms Excluded)

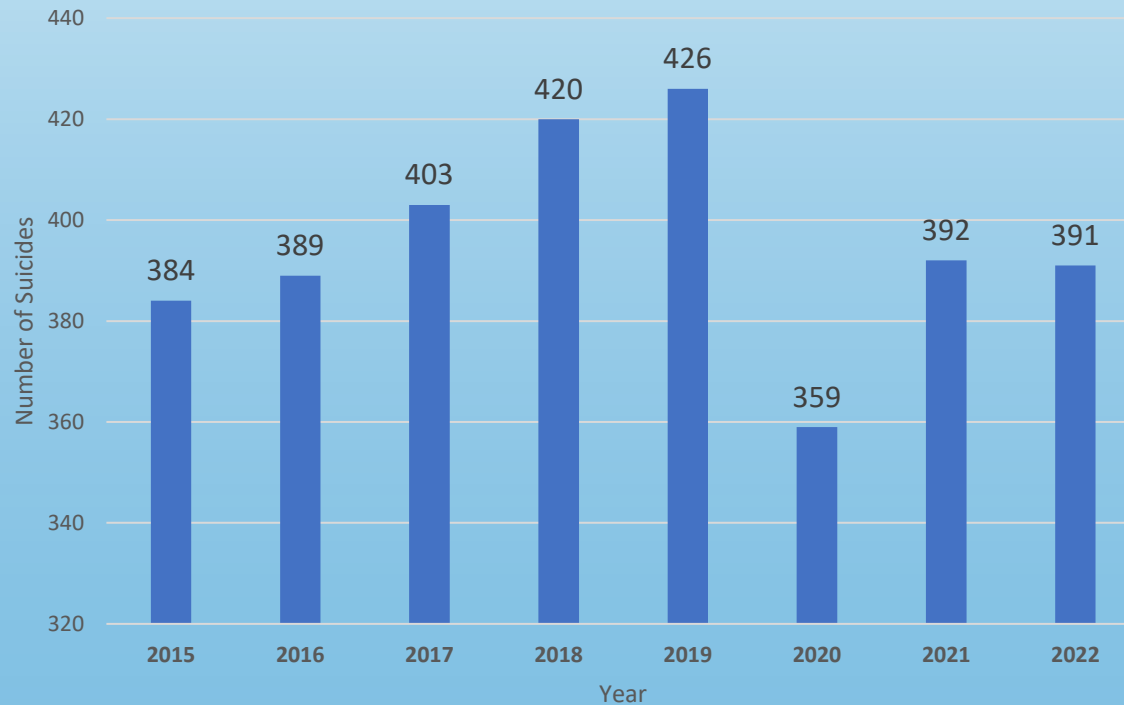
Assault Rates per 100,000 CT Pop. (w/o Firearms) by Race and Sex,
2020-2022 Hospital ED Discharge Data



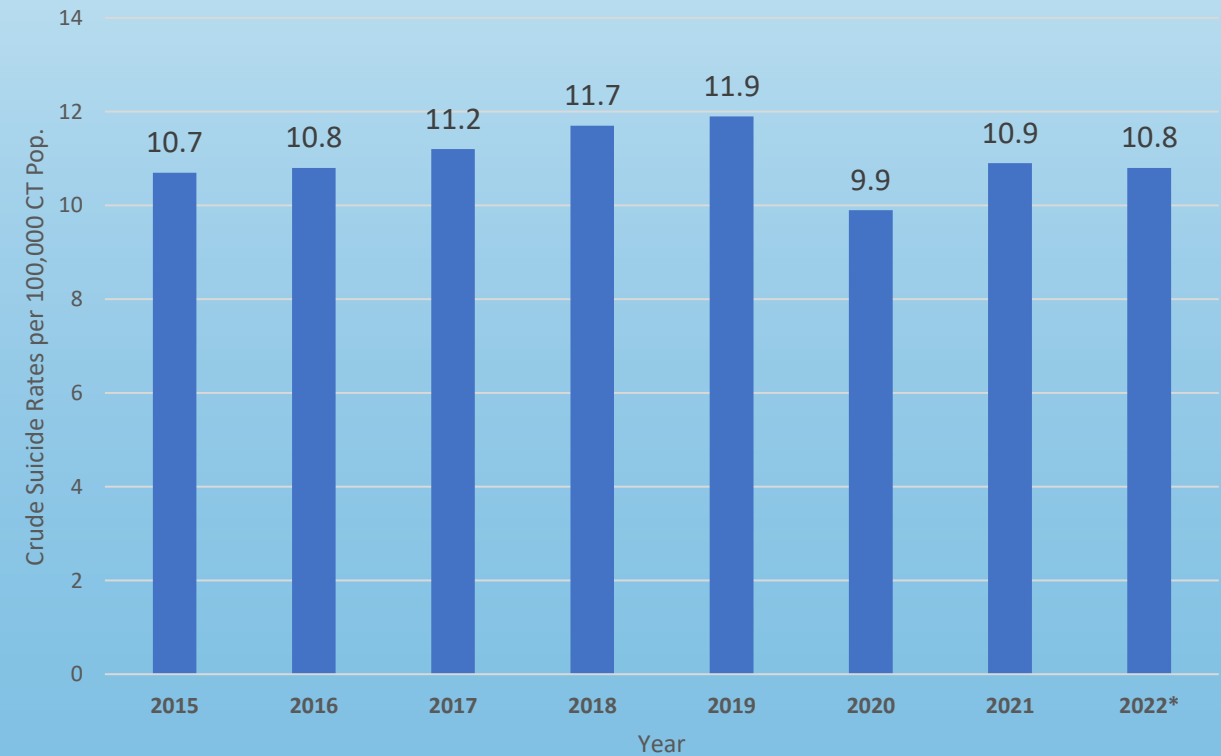
Suicide Trends

Suicide Trends 2015 to 2022

Number of Deaths by Suicide in CT from 2015 to 2022*

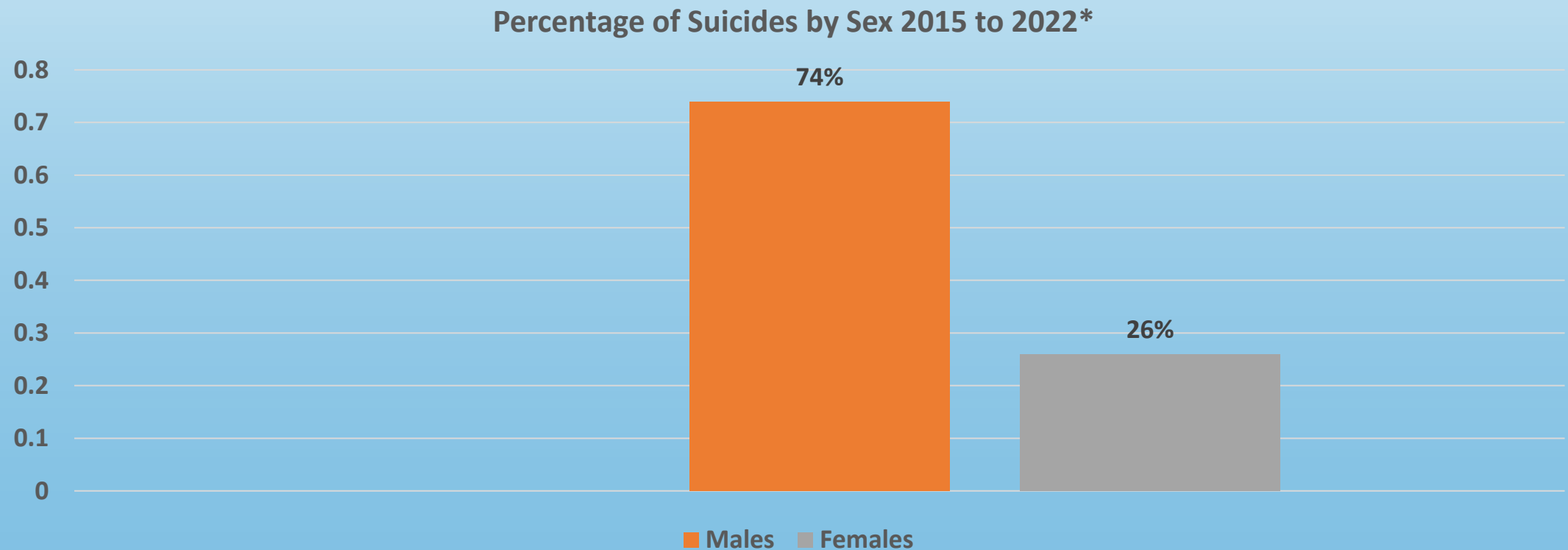


Crude Suicide Rates for CT 2015 to 2022* per 100,000 Pop.



*2022 are preliminary;

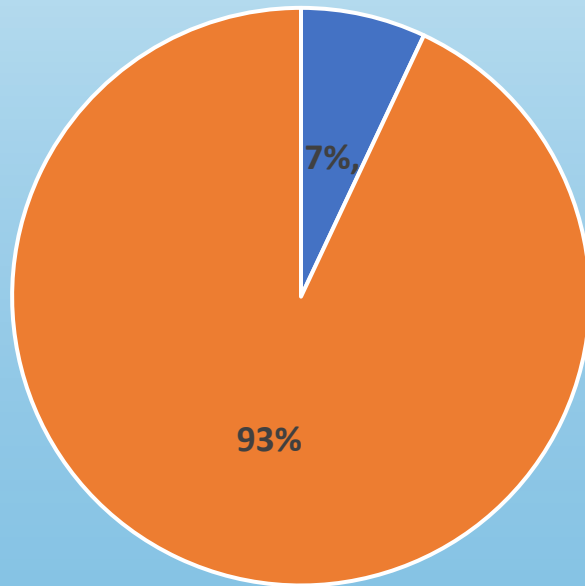
Demographics of Suicide in CT



*2022 are preliminary

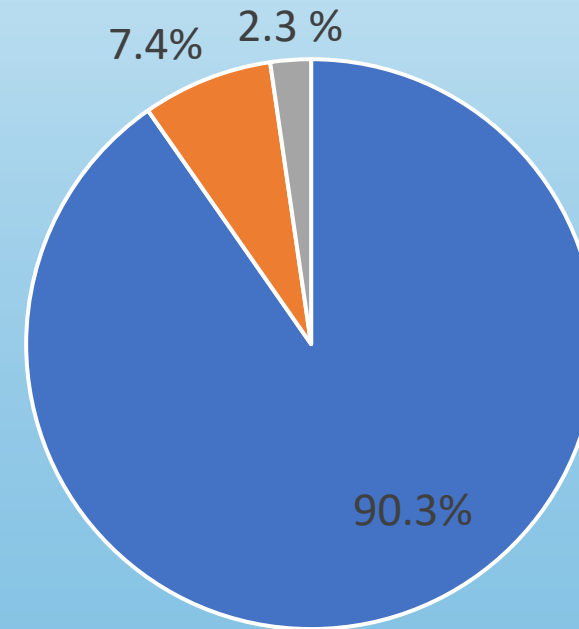
Demographics of Suicides in Connecticut, by Race and Ethnicity

Percentage of Suicide by Ethnicity 2015 to 2022* (N= 3,164)



■ Hispanic ■ Non-Hispanic

Percentage of Suicides by Race (Non-Hispanic) 2015 to 2022*

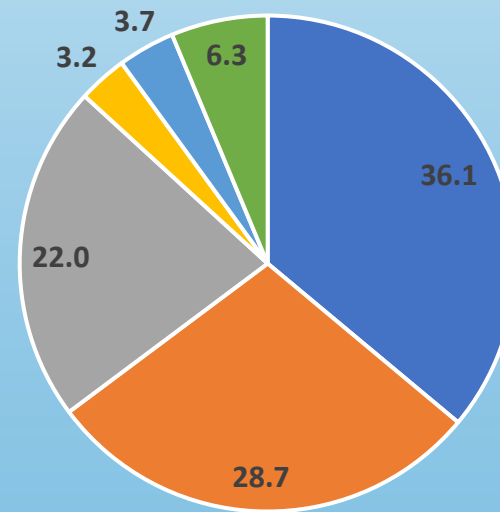


■ White ■ Black ■ Other

*2022 data are preliminary

Lethal Means for Suicides

Lethal Means (Percentage of Suicides) 2015 to 2022*

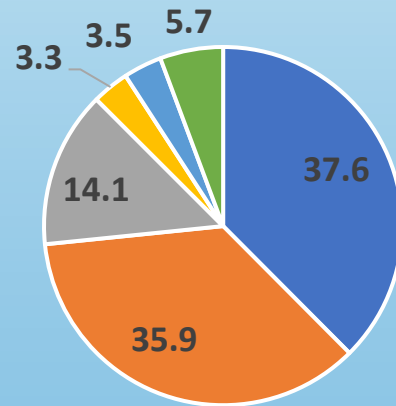


■ Hanging - Strangulation ■ Firearm ■ Poisoning ■ Sharp Instrument ■ Fall ■ Other

* 2022 data are preliminary

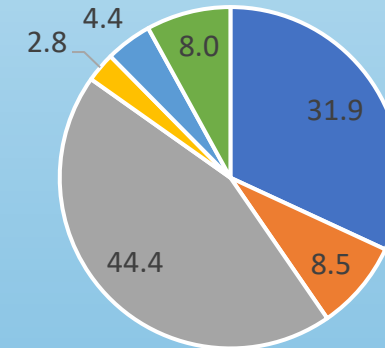
Lethal Means for Suicides

Lethal Means (Percentage of Suicides) for Males
2015 to 2022*



- Hanging - Strangulation
- Firearm
- Poisoning
- Sharp Instrument
- Fall
- Other

Lethal Means (Percentage of Suicides) for Females
2015 to 2022*



- Hanging - Strangulation
- Firearm
- Poisoning
- Sharp Instrument
- Fall
- Other

* 2022 data preliminary

Age-Specific Suicide Rates, a Comparison of 2020-2022* data to 2015-2019 data

Age-Groups	Number of Suicides 2015-2019	Yearly 5 -year average (2015-2019)	Age-Specific Rate 2015-2019 per 100,000 pop	Number of Suicides 2020-2022	Yearly 3-year Average (2020-2022)*	Age-Specific Rate 2020-2022 per 100,000 pop
0-17 yrs	49	10	2.7	32	11	3.0
18-24 yrs	162	32	9.3	84	28	8.2
25-44 yrs	526	105	12.1	325	108	12.1
45-64 yrs	908	182	17.8	426	142	14.4
65+	377	75	12.7	275	92	14.1
Total	2,022	403			380 (N=1,142)	

* data as of 8/31/23; 2022 data are preliminary

Suicide Rates of Connecticut Cities and Towns 2020-2022*

Based on
resident city
and at least 10
suicides from
2020 to 2022

* For counts
less than 20
rates are
considered
unstable,
unreliable; 2022
data are
preliminary

City/Town	Suicide Rate per 100,000	Number of Suicides
Windham	*24.6	18
Windsor	22.7	20
Vernon	*17.6	16
Branford	*16.5	14
Norwich	*13.3	16
Shelton	*13.1	16
Groton	*13.0	15
Torrington	*12.2	13
Fairfield	11.9	22
Manchester	11.7	21
Norwalk	11.7	32
Bristol	*10.4	19
West Hartford	10.4	20
Hamden	*10.4	19
New Britain	10.3	23
Enfield	*10.3	13
Wallingford	*9.8	13
West Haven	*9.6	16

Risk Factors for Suicide 2015-2021

94% (N=2,585) of risk factors or circumstances are known

Most Common Risks

- 1) Mental Health Problem (42.1%; N=1,088) W/Diagnosis : Depression 27.2% (N=704); Bipolar Disorder 3.8% (N=99); Anxiety 1.8% (N= 49); Schizophrenia 1.7% (N=45); Post-Traumatic Stress Disorder < 1% (N=21)
- 2) Depressed Mood (40.7%; N=1,053)
- 3) Substance Misuse- Reported Alcohol & Substance Misuse (27.9%, N=722)
- 4) Physical Health Problem (Acute, Chronic, Terminal Illness or Pain) (21.7%, N=561)
- 5) Intimate Partner Problem (divorce; break-up) (18.2%, N=472)

Data Source: CT Violent Death Reporting System

Risk Factors for Suicide 2015-2021

- 6) Previous Suicide Attempt(s) (15.5%, N=401)
- 7) History Suicidal Ideations (15.0%; N=388)
- 8) Criminal Legal Problems (pending court appearance; arrest warrants; under investigation)
(7.4%; N=190)
- 9) Financial Problems (5.5%; N=144)
- 10) Job Problem (4.8%; N=126)

Data Source: CT Violent Death Reporting System

Most Frequent Substances Found in Blood at Autopsy for Suicides 2015 to 2022*

Very Common to have Multi-Drug Ingestion (includes drug overdose deaths and non-drug deaths)

Substance	Number of Incidents	Percentage of Substances Found at Autopsy
Alcohol	833	26.3
Alcohol BAC \geq .08 75.0% were above legal limit	625	19.7
Benzodiazepines	529	16.7
Opiates	496	15.7
Marijuana	410	12.9
Cocaine	139	4.3

*2022 data are preliminary

Drug Overdose-Involved Suicides 2015 to 2022*

Most Drug Overdoses Involve Multi-Drug Ingestion

Substance	Number of Incidents	Percentage of Fatal Overdoses	Major Drug
Antidepressants	290	43.1	
Benzodiazepines	256	38.0	
Opiates	241	35.9	Oxycodone
Antihistamines	171	25.4	Benadryl
Alcohol	130	19.3	
# Non-drug	98	14.5	Carbon Monoxide

*2022 data are preliminary

Substance Misuse in Suicide 2015-2022*

From “Circumstances Other” Text Box : specific mention of drugs

- 1) Opiates (pain meds); heroin; (N= 43)
- 2) Marijuana (N=40)
- 3) Cocaine/ Crack (N=29)
- 4) Other illicit/polysubstance(N=27)

*2022 are preliminary

Data Source: CT Violent Death Reporting System

The Connecticut Violent Death Data

Questions?

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