



2022

**Annual Report  
Office of the  
Chief Medical Examiner**

**State of Maryland**

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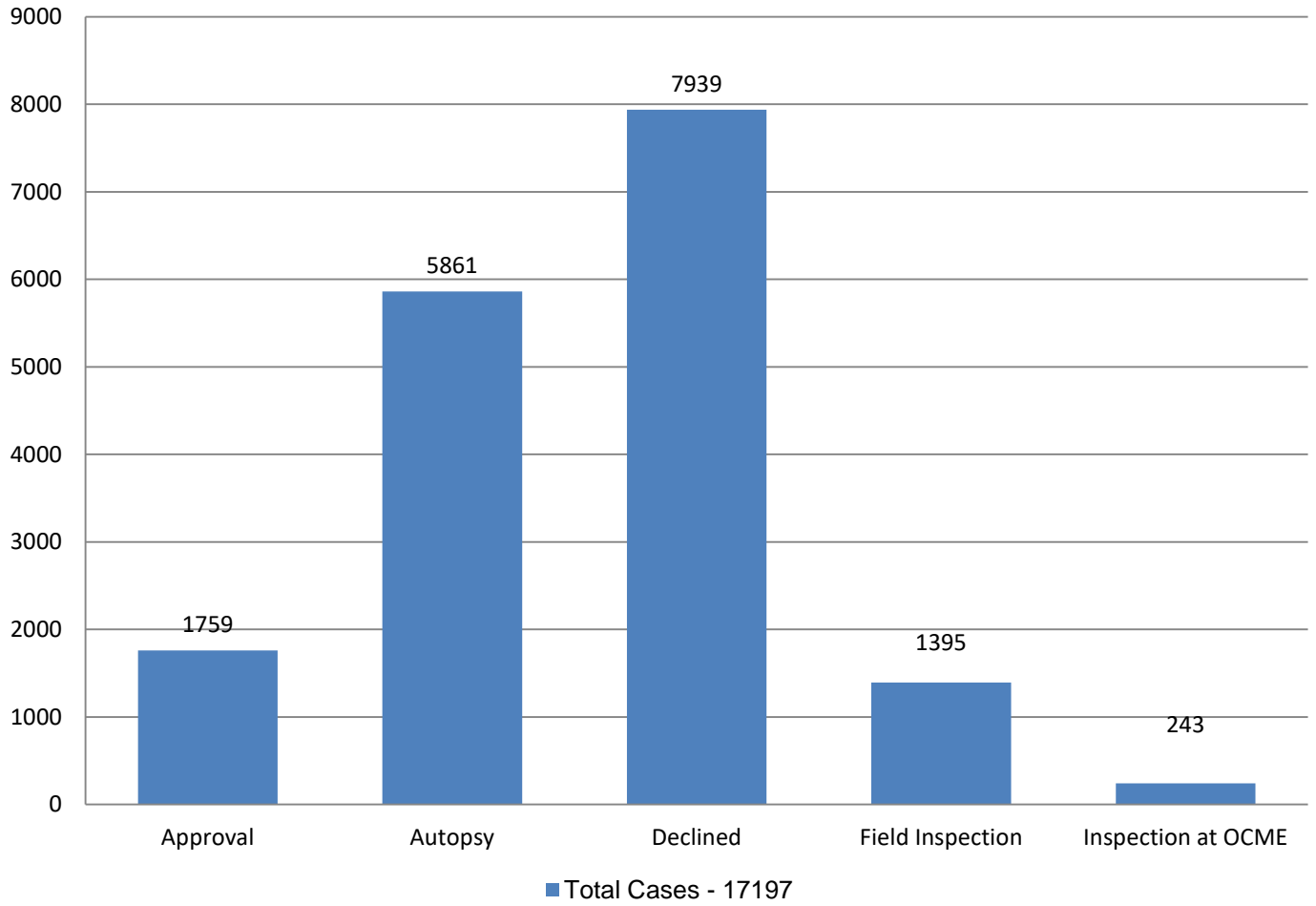
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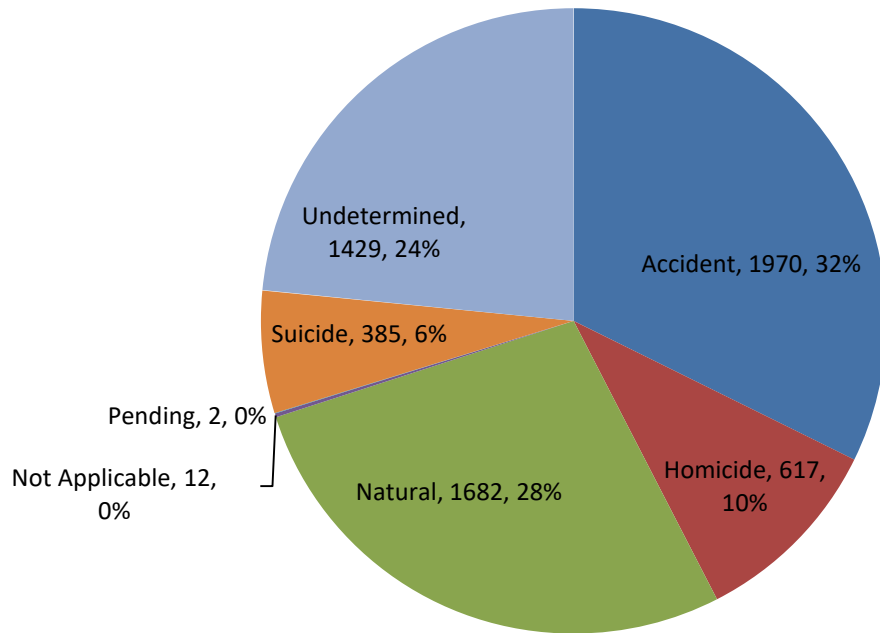
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# 2022 Cases Reported to OCME - Action Taken



## 2022 Medical Examiner Cases Autopsied\*

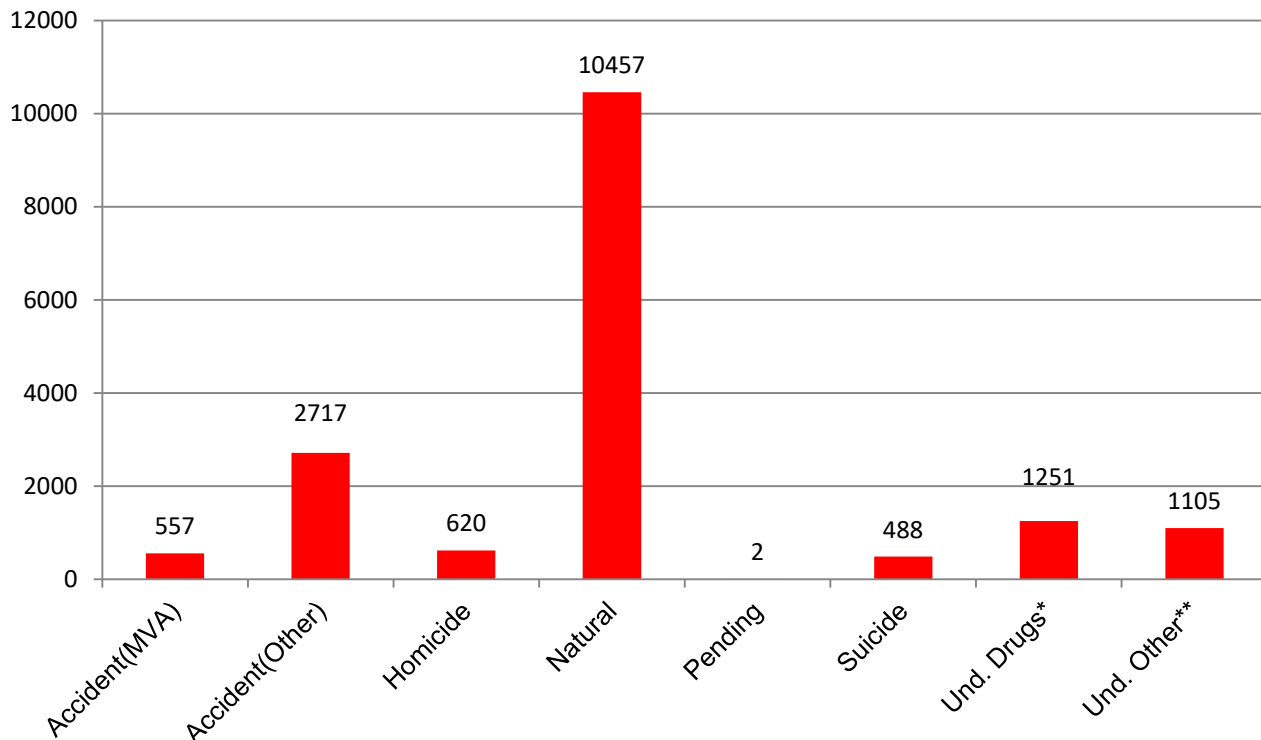


Total Cases Autopsied - 6097

\*12 cases were classified as "not applicable" (e.g. stillborn & non-human remains).

\*\*Three homicides were not autopsied

## 2022 Cases Reported to OCME Manner of Death



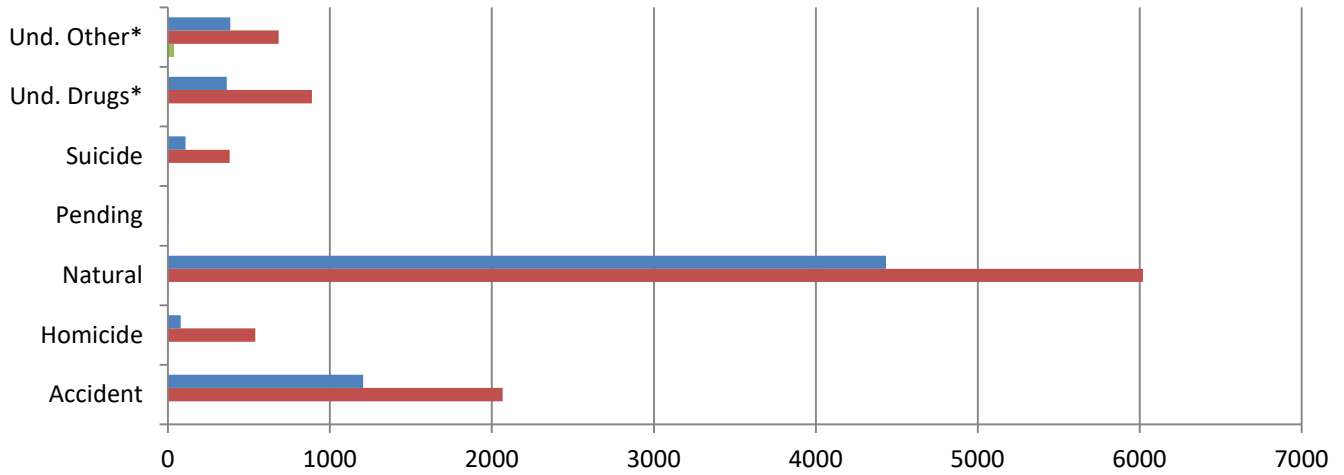
Total Cases – 17197

\*Undetermined Manner: Drugs/Narcotics

\*\* Undetermined Manner: Other

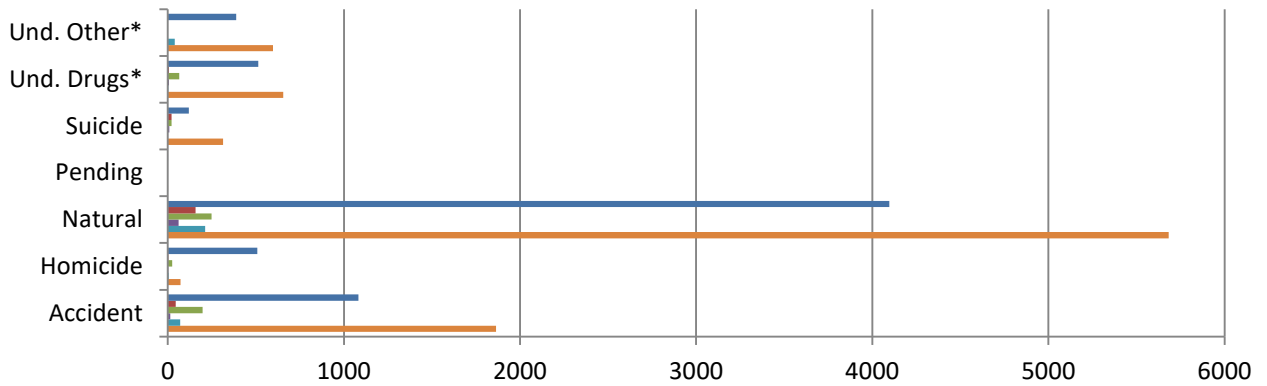
# 2022 Manner of Death

## Classified by Sex



	Accident	Homicide	Natural	Pending	Suicide	Und. Drugs*	Und. Other*
Female	1204	79	4433	1	108	363	385
Male	2067	539	6020	1	380	888	683
Unknown	3	2	4				37

## Classified by Race



	Accident	Homicide	Natural	Pending	Suicide	Und. Drugs*	Und. Other*
African American	1082	508	4096	1	120	513	389
Asian	46	4	157		22	7	
Hispanic	198	26	249		22	65	
Other	14	4	61		9	7	
Unknown	70	5	212		1	4	39
White	1864	73	5682	1	314	655	597

\*Undetermined Manner: Drugs/Narcotics

\*\* Undetermined Manner: Other

Manner of Death

Cause of Death	Accident	Homicide	Natural	Not Applicable	Suicide	Undetermined	Pending	Total
<b>Asphyxiation</b>	<b>100</b>	<b>4</b>	<b>2</b>		<b>104</b>	<b>18</b>		<b>228</b>
Airway obstruction/Aspirated stomach content	8		2					10
Drowning	56				12	16		84
Hanging	1				75			76
Smoke inhalation	9					1		10
Strangulation/Asphyxiation	26	4			17	1		48
Chemical/Drug/Alcohol Intoxication/Abuse/Use	1144	3	117		74	1278		2616
<b>Alcohol abuse/use</b>	<b>12</b>		<b>88</b>			<b>6</b>		<b>106</b>
Alcohol and drug intoxication/use	7		1		5	5		18
Alcohol intoxication/use	21		11			3		35
Carbon monoxide	7				2			9
Cocaine and alcohol intoxication/use	3		1			5		9
Cocaine intoxication/use	51		5		1	26		83
Drug intoxication/abuse/use	55	1	6		41	54		157
Narcotic and alcohol intoxication/use	139				3	181		323
Narcotic intoxication/use	849	2	4		22	998		1875
Narcotic abuse/use			1					1
Circulatory system	34	2	1234			9		1279
<b>Aneurysm</b>	<b>1</b>		<b>3</b>					<b>4</b>
Cardiac arrhythmia			76					76
Cardiomyopathy			13					13
Cardiovascular disease	18		754			5		777
Cerebrovascular disease	3		36					39
Hemorrhage			9			1		10
Other cardiac	2	1	296			3		302
Pulmonary embolism	10	1	47					58
Congenital / Perinatal	1		5	6		49		61
<b>Congenital/Perinatal</b>	<b>1</b>		<b>4</b>	<b>6</b>		<b>1</b>		<b>12</b>
Sudden Unexplained Death in Infancy (SUDI)			1			48		49
Digestive system disease	1		33			1		35
<b>Cirrhosis</b>			<b>5</b>			<b>1</b>		<b>6</b>
Gastrointestinal hemorrhage			14					14
Liver Disease	1		5					6
Other digestive			8					8
Fatty liver			1					1
<b>Electrocution</b>	<b>3</b>				<b>1</b>			<b>4</b>
<b>Endocrine and metabolic disease</b>	<b>1</b>		<b>60</b>			<b>1</b>		<b>62</b>
Diabetes			50			1		51
Other Endocrine and metabolic	1		10					11
<b>Hyperthermia</b>	<b>4</b>							<b>4</b>
<b>Hypothermia</b>	<b>60</b>					<b>7</b>		<b>67</b>
<b>Infectious disease</b>	<b>1</b>		<b>45</b>			<b>3</b>		<b>49</b>
<b>Other infectious disease</b>	<b>1</b>		<b>18</b>			<b>3</b>		<b>22</b>
<b>COVID-19</b>			<b>27</b>					<b>27</b>
<b>Malignant neoplasms (Cancer)</b>	<b>1</b>		<b>20</b>					<b>21</b>

Manner of Death

<b>Cause of Death</b>	<b>Accident</b>	<b>Homicide</b>	<b>Natural</b>	<b>Not Applicable</b>	<b>Suicide</b>	<b>Undetermined</b>	<b>Pending</b>	<b>Total</b>
<b>Nervous system disease</b>	<b>2</b>	<b>1</b>	<b>36</b>			<b>1</b>		<b>40</b>
Meningitis			2					2
Other CNS	1	1	11			1		14
Seizure disorder	1		23					24
<b>Non-human remains</b>				<b>2</b>				<b>2</b>
<b>Other natural cause</b>			<b>63</b>					<b>63</b>
<b>Other non-natural cause</b>	<b>11</b>	<b>3</b>		<b>4</b>	<b>2</b>			<b>20</b>
<b>Pending</b>							<b>2</b>	
<b>Respiratory system</b>	<b>1</b>		<b>67</b>		<b>1</b>	<b>4</b>		<b>73</b>
Asthma			5					5
Chronic obstructive pulmonary disease			8					8
Other respiratory	1		12		1	2		16
Pneumonia			41			2		43
Respiratory distress syndrome			1					1
<b>Thermal Injuries (Burns)</b>	<b>23</b>	<b>2</b>			<b>2</b>	<b>4</b>		<b>31</b>
<b>Traumatic injury</b>	<b>583</b>	<b>602</b>			<b>201</b>	<b>17</b>		<b>1403</b>
Blunt force	72	22			5	3		102
Fracture	8					1		9
Gunshot wound	1	505			156	1		663
Head/Chest injuries	75	9				5		89
Multiple injuries	412	18			30	7		467
Other trauma	15	5						20
Sharp force/cutting		43			10			53
<b>Unknown cause</b>						<b>37</b>		<b>37</b>
<b>Grand Total</b>	<b>1970</b>	<b>617</b>	<b>1682</b>	<b>12</b>	<b>385</b>	<b>1429</b>	<b>2</b>	<b>6097</b>



# Manner of Death - 3 Year Comparison

## Medical Examiner Cases: Manner of Death, Maryland 2022

Manner of Death	Number	%
Accident	3274	19.0%
Homicide	620	3.6%
Natural	10457	60.8%
Pending	2	0.0%
Suicide	488	2.8%
Undetermined	2356	13.7%
<b>Total</b>	<b>17197</b>	<b>100%</b>

## Medical Examiner Cases: Manner of Death, Maryland 2021

Manner of Death	Number	%
Accident	2921	16.5%
Homicide	704	4.0%
Natural	10564	59.6%
Suicide	524	3.0%
Undetermined	3003	17.0%
<b>Total</b>	<b>17716</b>	<b>100%</b>

## Medical Examiner Cases: Manner of Death, Maryland 2020

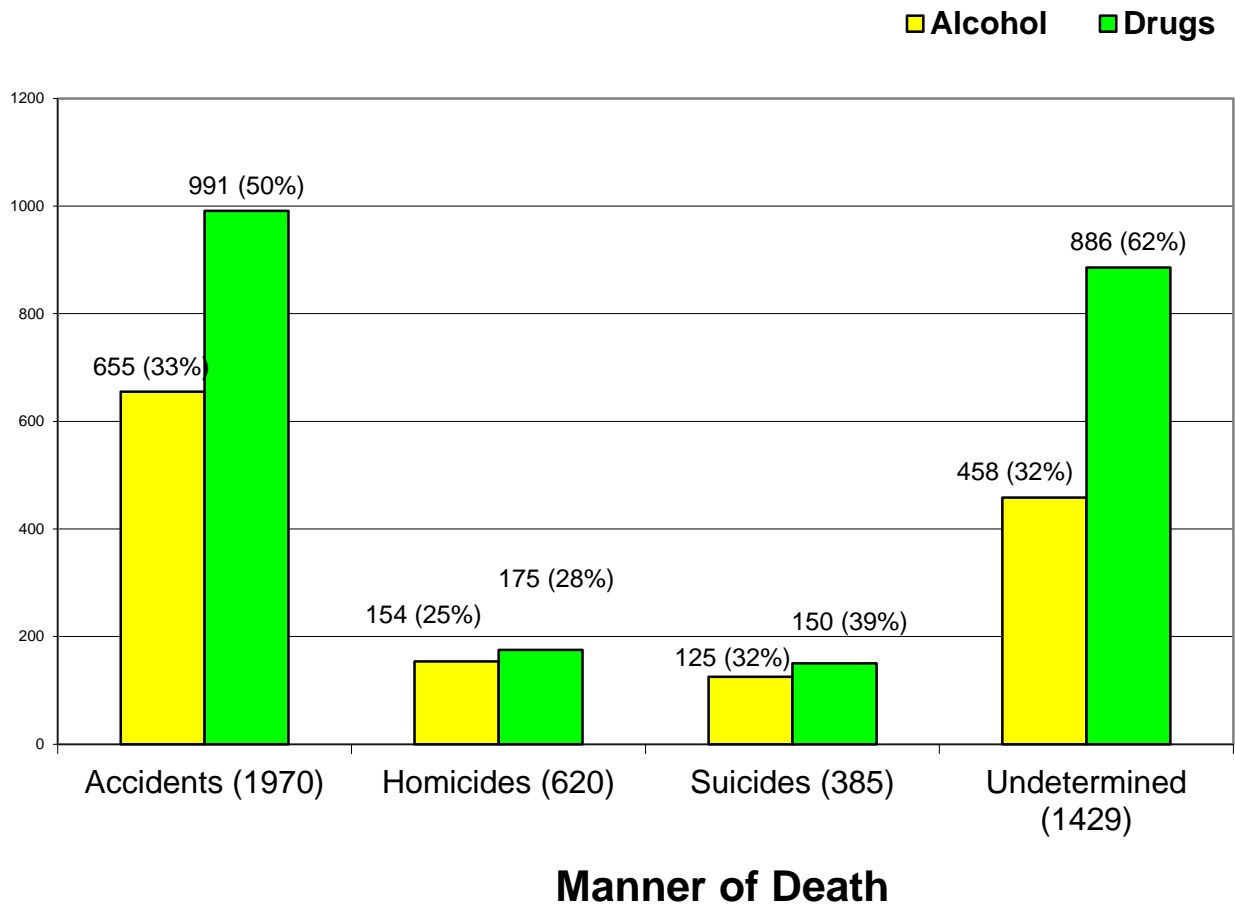
Manner of Death	Number	%
Accident	3095	16.8%
Homicide	649	3.5%
Natural	12028	65.2%
Suicide	556	3.0%
Undetermined	2113	11.5%
<b>Total</b>	<b>18441</b>	<b>100%</b>

## 2022 Manner of Death by County

2022 - Manner	Accident	Homicide	Natural	Suicide	Undetermined	Pending	Total
Allegany	35	3	41	9	22		110
Anne Arundel	133	19	115	38	121		426
Baltimore City	630	355	393	70	534		1982
Baltimore County	196	26	219	47	178		666
Calvert	22	2	27	9	8		68
Caroline	10	1	12		10		33
Carroll	40	3	40	6	32		121
Cecil	63	10	30	10	50	1	164
Charles	62	11	45	19	27		164
Dorchester	22	7	8	4	4		45
Frederick	65	7	38	16	37		163
Garrett	10		6	3	3		22
Harford	63	6	66	10	58		203
Howard	51	4	52	12	30		149
Kent	8		9	2			19
Montgomery	120	27	157	48	64		416
Prince George's	240	106	247	36	124	1	754
Queen Anne's	6		11	2	5		24
Saint Mary's	26	5	30	11	20		92
Somerset	10	1	9	6	5		31
Talbot	16	1	7	8	4		36
Washington	76	13	62	6	70		227
Wicomico	40	6	40	4	24		114
Worcester	26	4	18	9	11		68
<b>Grand Total</b>	<b>1970</b>	<b>617</b>	<b>1682</b>	<b>385</b>	<b>1441</b>	<b>2</b>	<b>6097</b>
2022 - Case Type	Autopsy	OCME Insp.	Total	County	Autopsy	OCME Insp.	Total
Allegany	107	3	110	Washington	224	3	227
Anne Arundel	405	21	426	Wicomico	109	5	114
Baltimore City	1909	73	1982	Worcester	66	2	68
Baltimore County	630	36	666	<b>Grand Total</b>	<b>5855</b>	<b>242</b>	<b>6097</b>
Calvert	63	5	68				
Caroline	33		33				
Carroll	117	4	121				
Cecil	158	6	164				
Charles	156	8	164				
Dorchester	44	1	45				
Frederick	155	8	163				
Garrett	19	3	22				
Harford	198	5	203				
Howard	147	2	149				
Kent	19		19				
Montgomery	396	20	416				
Prince George's	725	29	754				
Queen Anne's	24		24				
Saint Mary's	86	6	92				
Somerset	30	1	31				
Talbot	35	1	36				

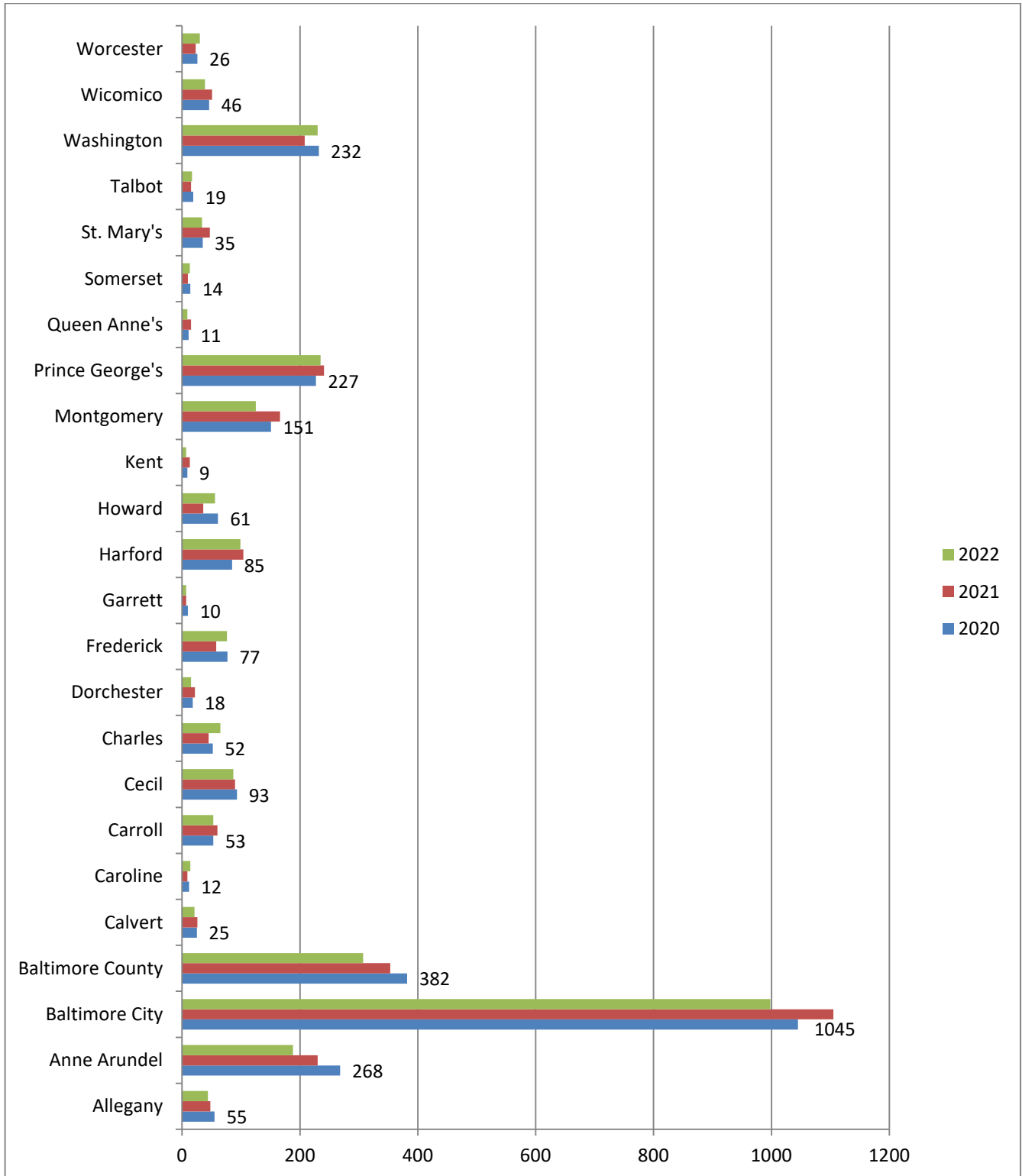
# 2022 Toxicology Testing

## # of Cases Positive for Alcohol and/or Drugs (Percentage of the Manner of Death)

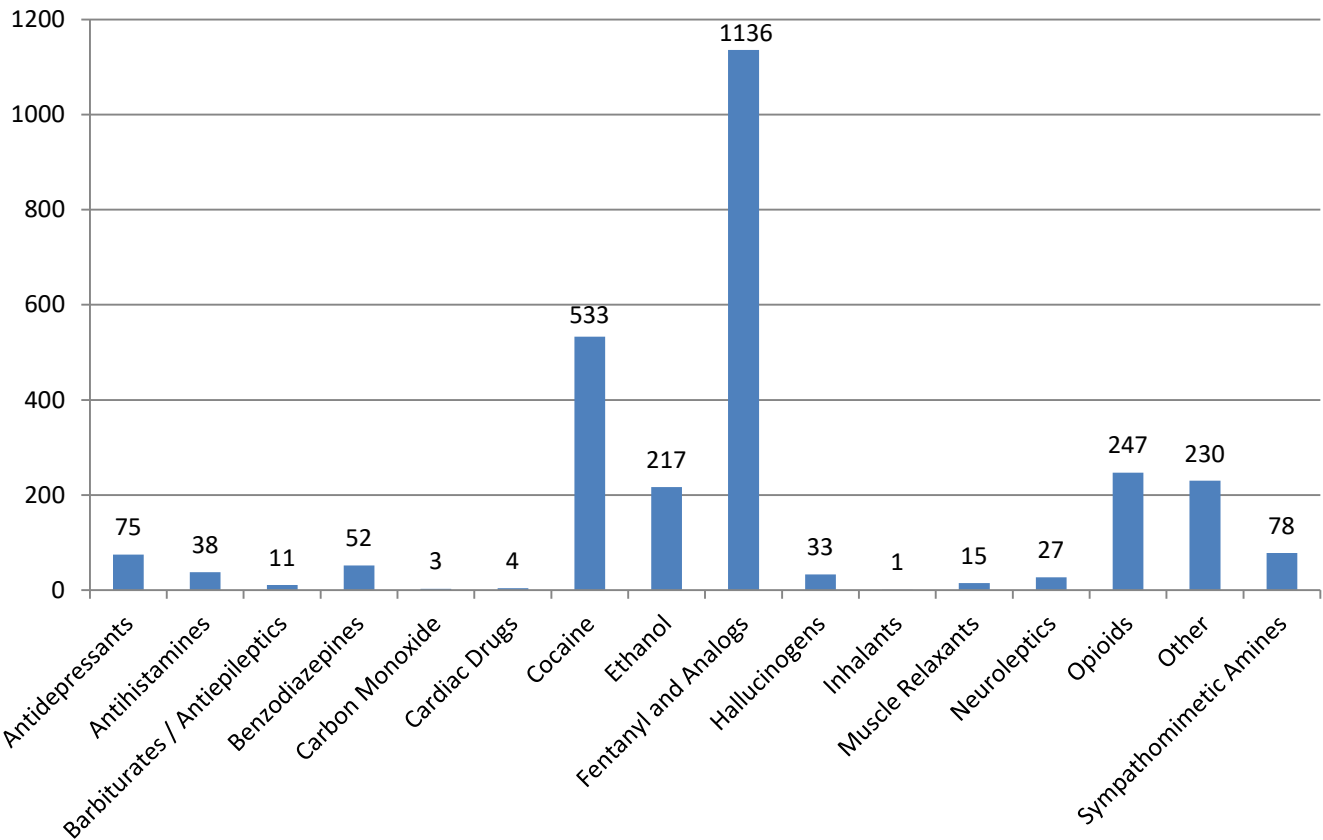


# Drug Deaths

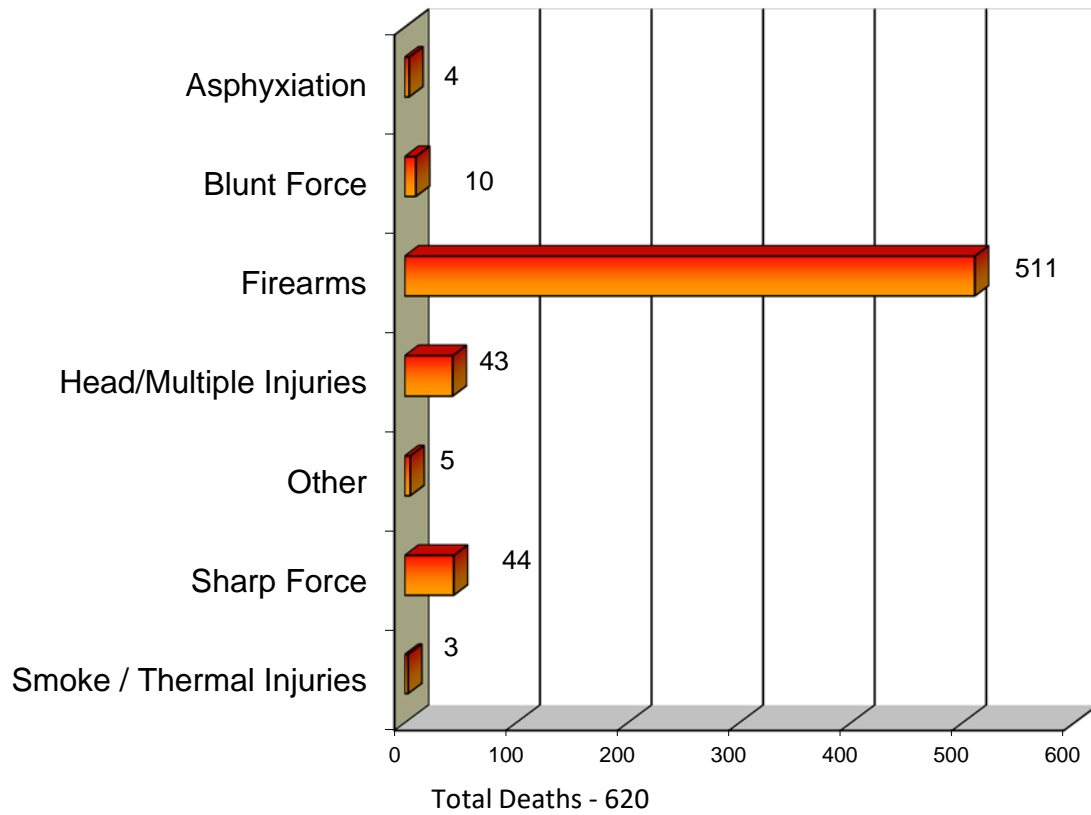
## 3 Year Comparison by Jurisdiction 2020-2022



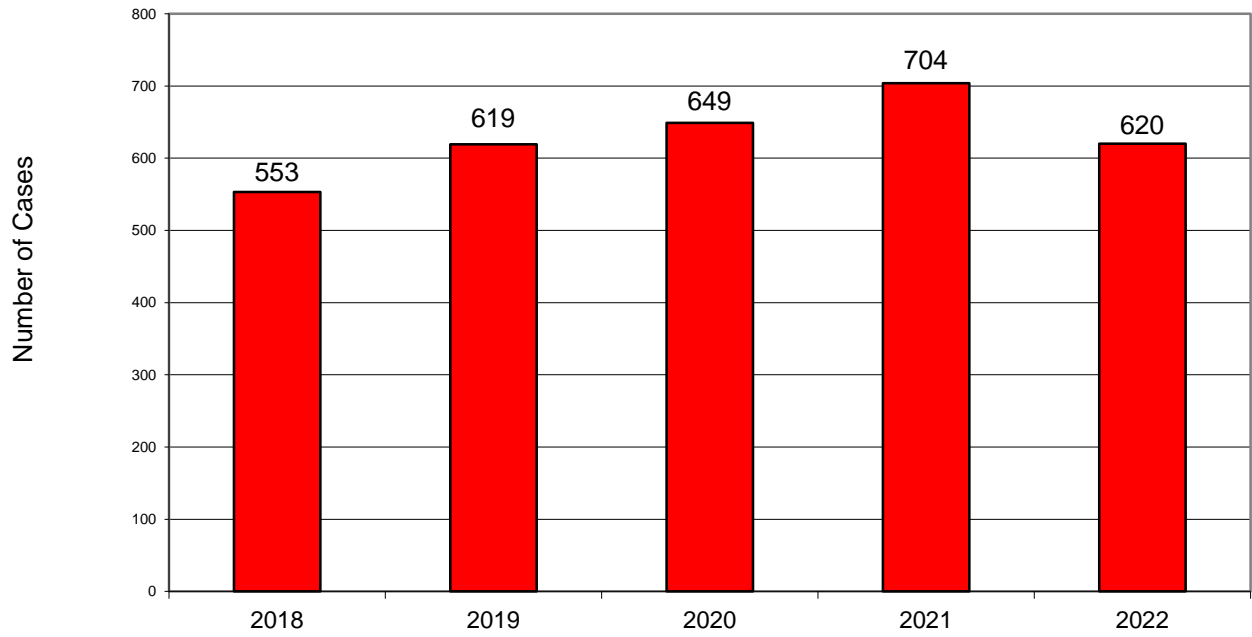
## 2022 Drug Deaths Undetermined Manner



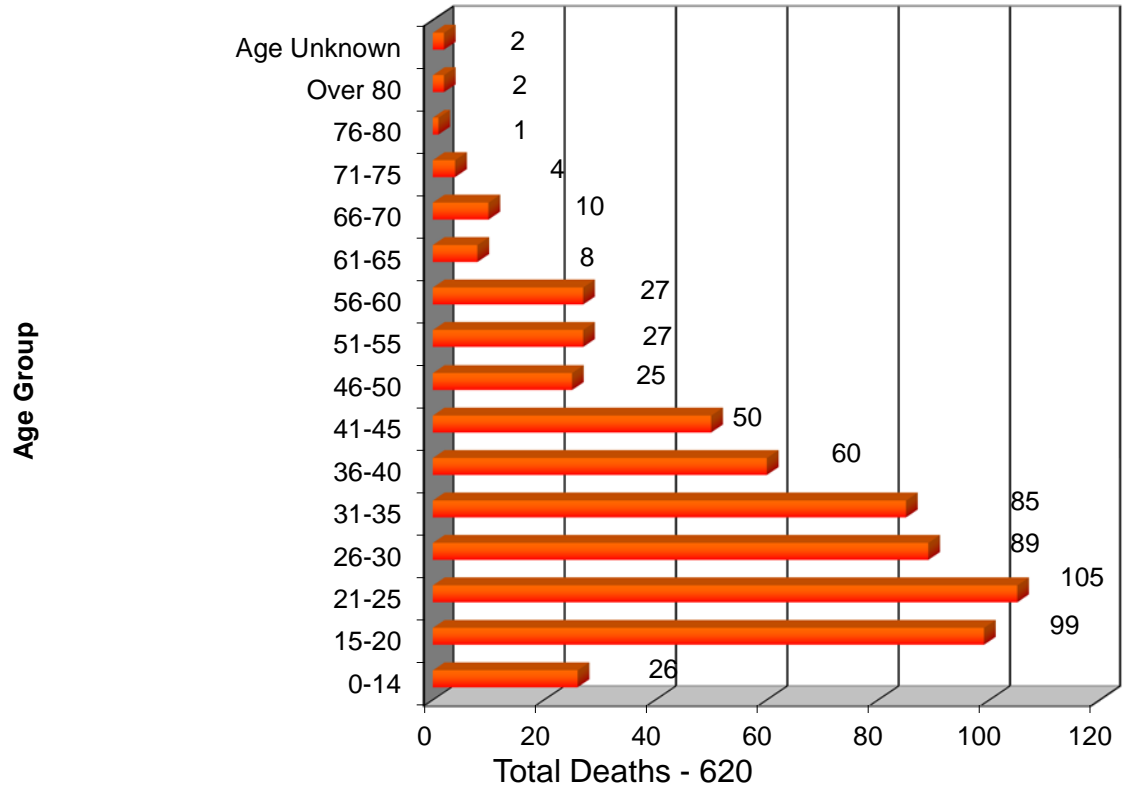
## 2022 Homicide Deaths Cause of Death



# Homicides 5 Year Comparison 2018 - 2022

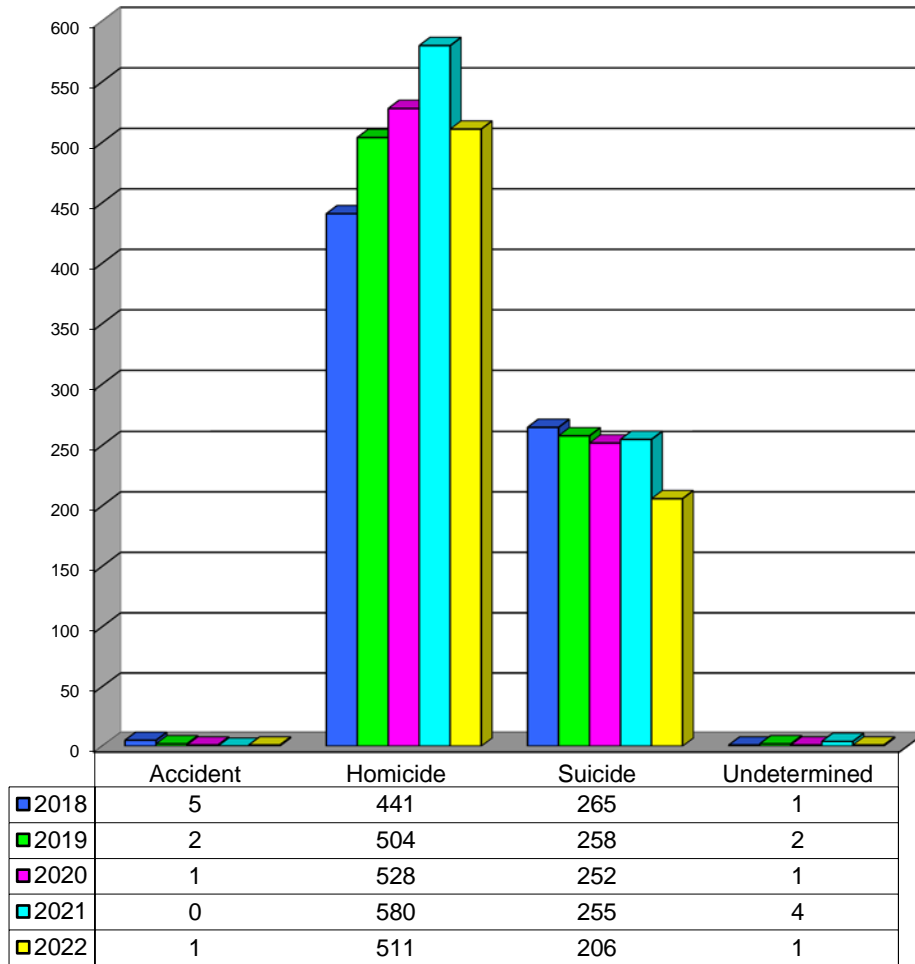


# 2022 Homicide Deaths by Age

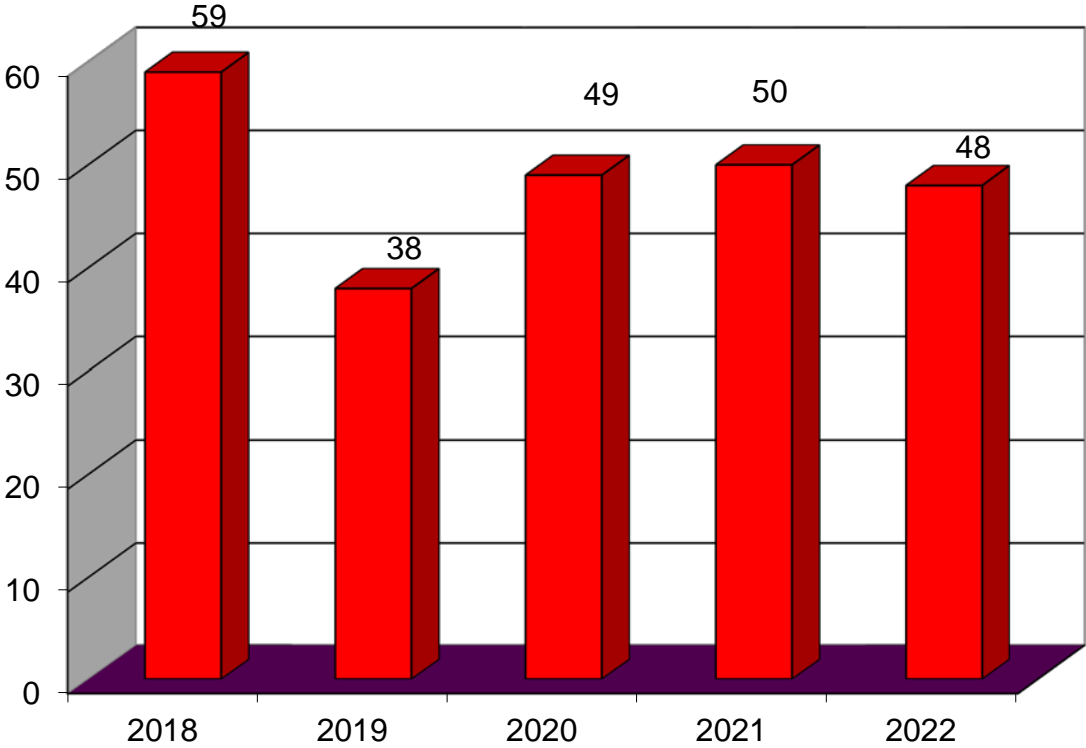




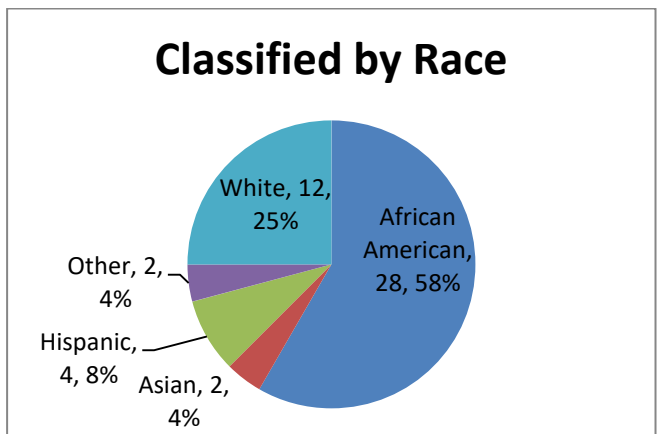
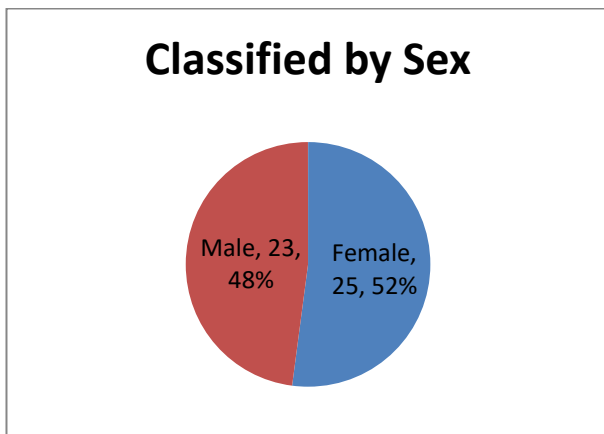
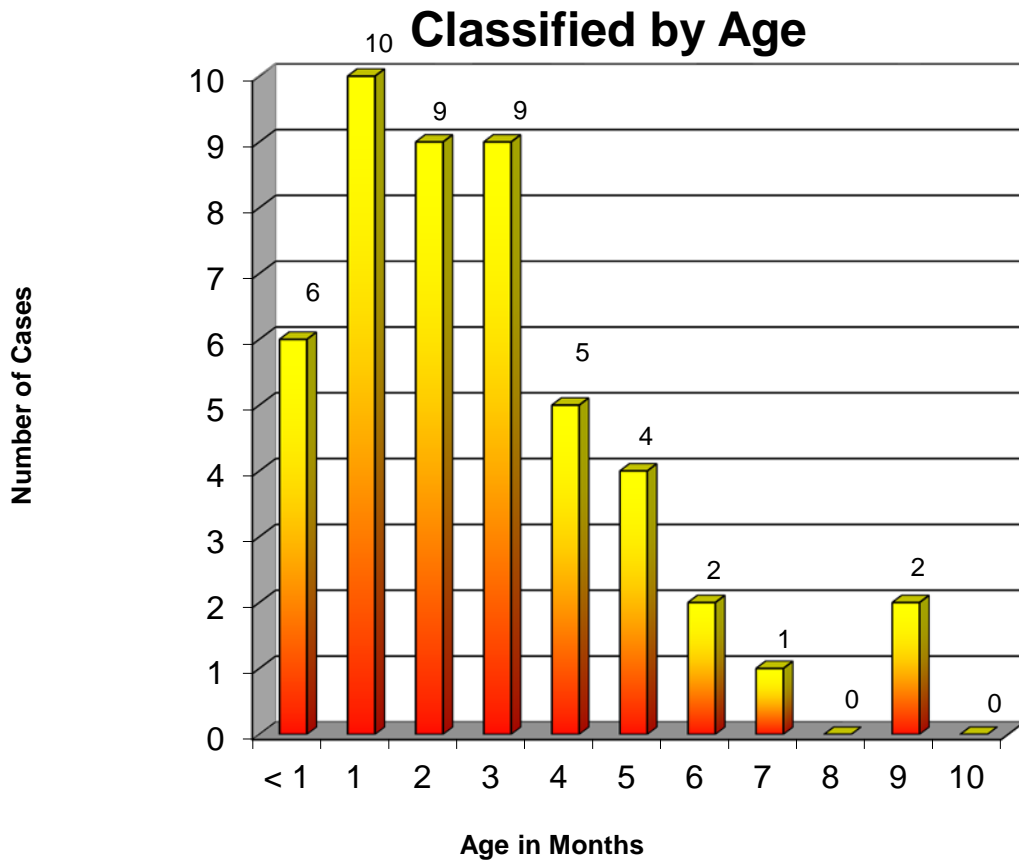
# Firearm Deaths 2018 - 2022



# SUDI Deaths 2018 - 2022 Comparison



# Sudden Unexplained Death in Infancy – 2022



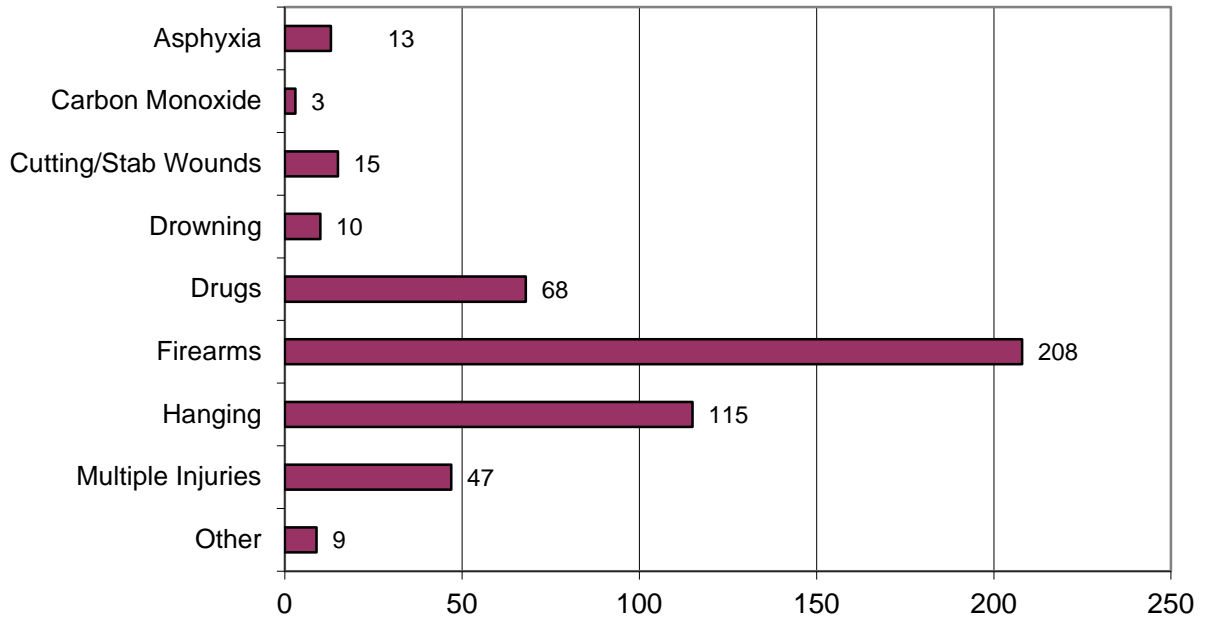
**Total of 48 Deaths**

## Infant Deaths (age live birth to one year)

### Manner of Death

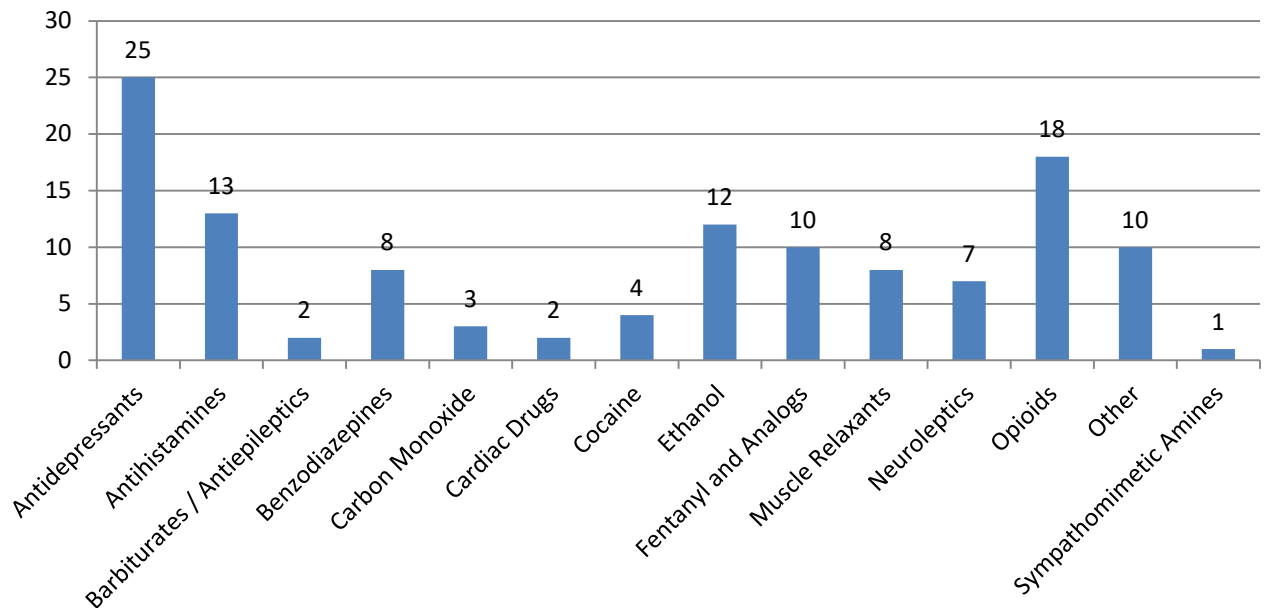
Cause of Death	Accident	Homicide	Natural	Undeter- mined	Total
<b>Asphyxiation</b>	<b>11</b>				<b>11</b>
Strangulation/Asphyxiation	11				11
<b>Chemical/Drug/Alcohol Intoxication/Abuse/Use</b>				<b>3</b>	<b>3</b>
Narcotic intoxication/use				2	2
Drug intoxication/abuse/use				1	1
<b>Circulatory system</b>	<b>1</b>		<b>2</b>		<b>3</b>
Cardiomyopathy			1		1
Other cardiac			1		1
Pulmonary embolism	1				1
<b>Congenital / Perinatal</b>			<b>1</b>	<b>48</b>	<b>49</b>
Sudden Unexplained Death in Infancy (SUDI)			1	47	48
Congenital/Perinatal				1	1
<b>Infectious disease</b>	<b>1</b>		<b>2</b>		<b>3</b>
Other infectious disease	1		1		2
COVID-19			1		1
<b>Other non-natural cause</b>	<b>2</b>				<b>2</b>
<b>Respiratory system</b>			<b>4</b>		<b>4</b>
Pneumonia			3		3
Other respiratory			1		1
<b>Thermal Injuries (Burns)</b>		<b>1</b>			<b>1</b>
<b>Traumatic injury</b>	<b>1</b>	<b>1</b>			<b>2</b>
Blunt force		1			1
Multiple injuries	1				1
<b>Unknown cause</b>				<b>1</b>	<b>1</b>
<b>Grand Total</b>	<b>16</b>	<b>2</b>	<b>9</b>	<b>52</b>	<b>79</b>

## 2022 Suicide Deaths Classified by Cause of Death

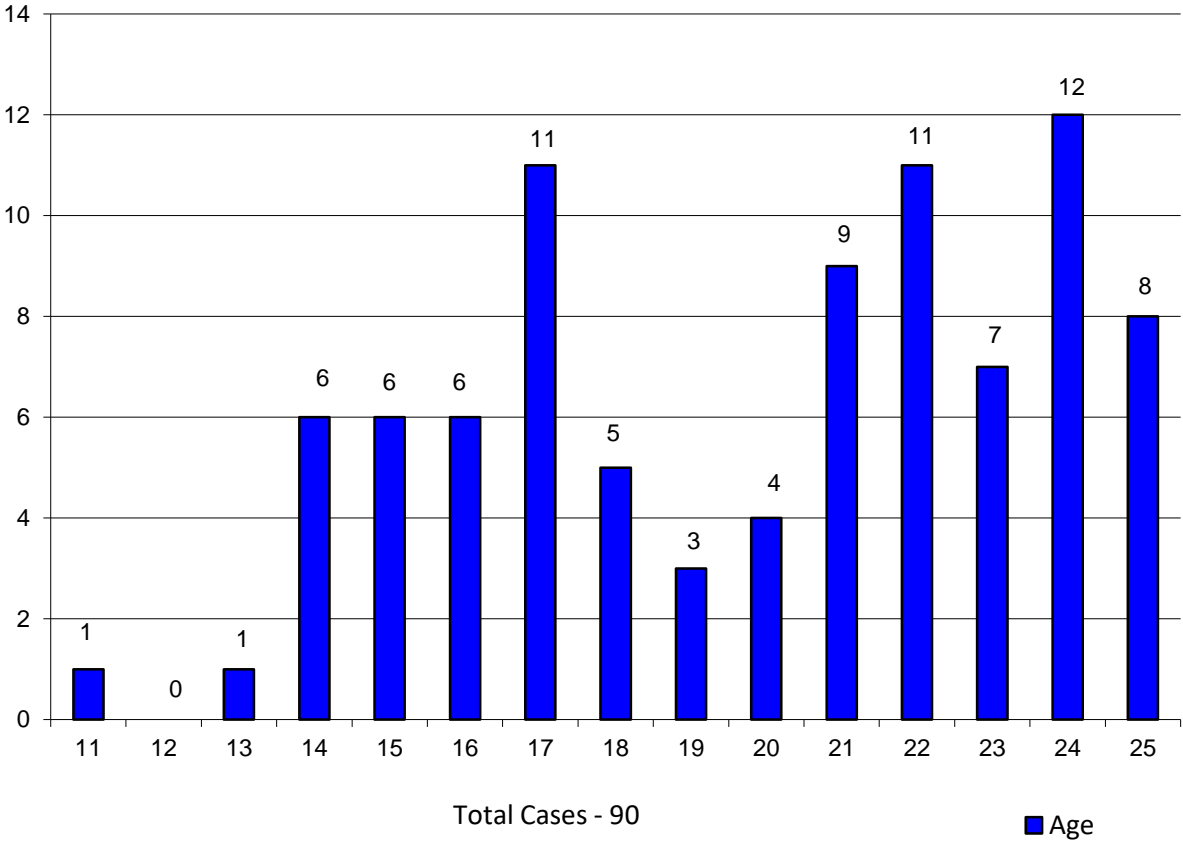


Total Cases - 488

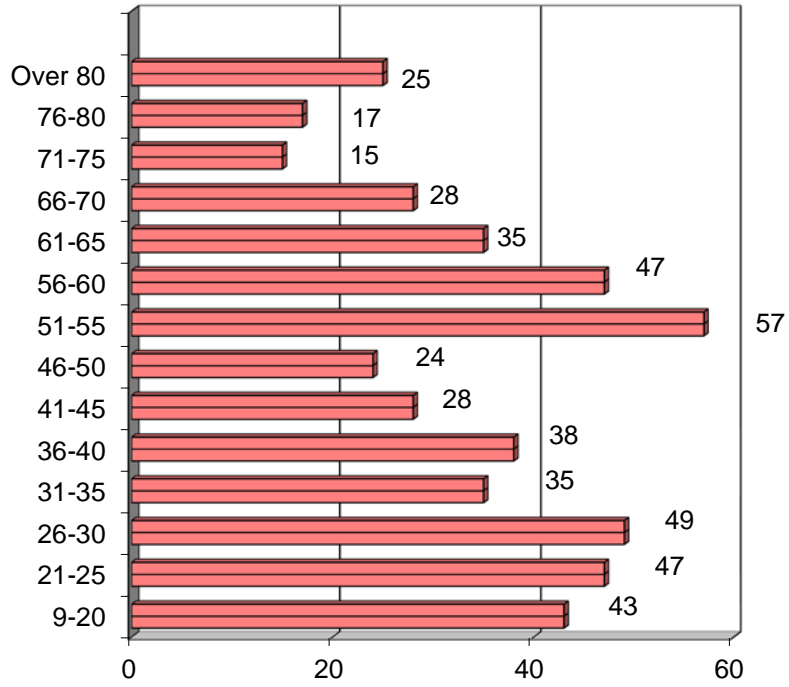
### By Drug Classification



# 2022 Youth Suicides 25 Years of Age and Under

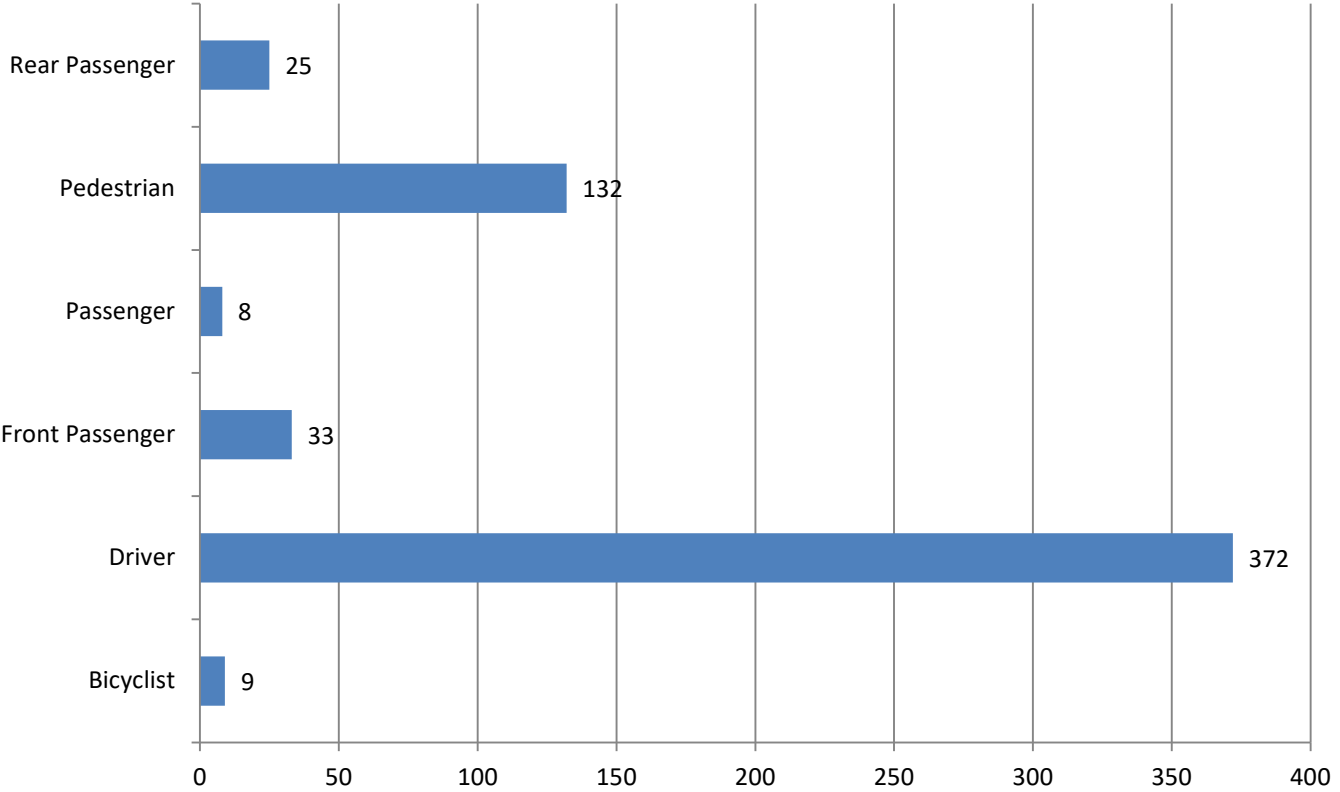


# 2022 Suicide Deaths by Age



Total Deaths - 488

# 2022 Transportation Accidents Classified by Activity

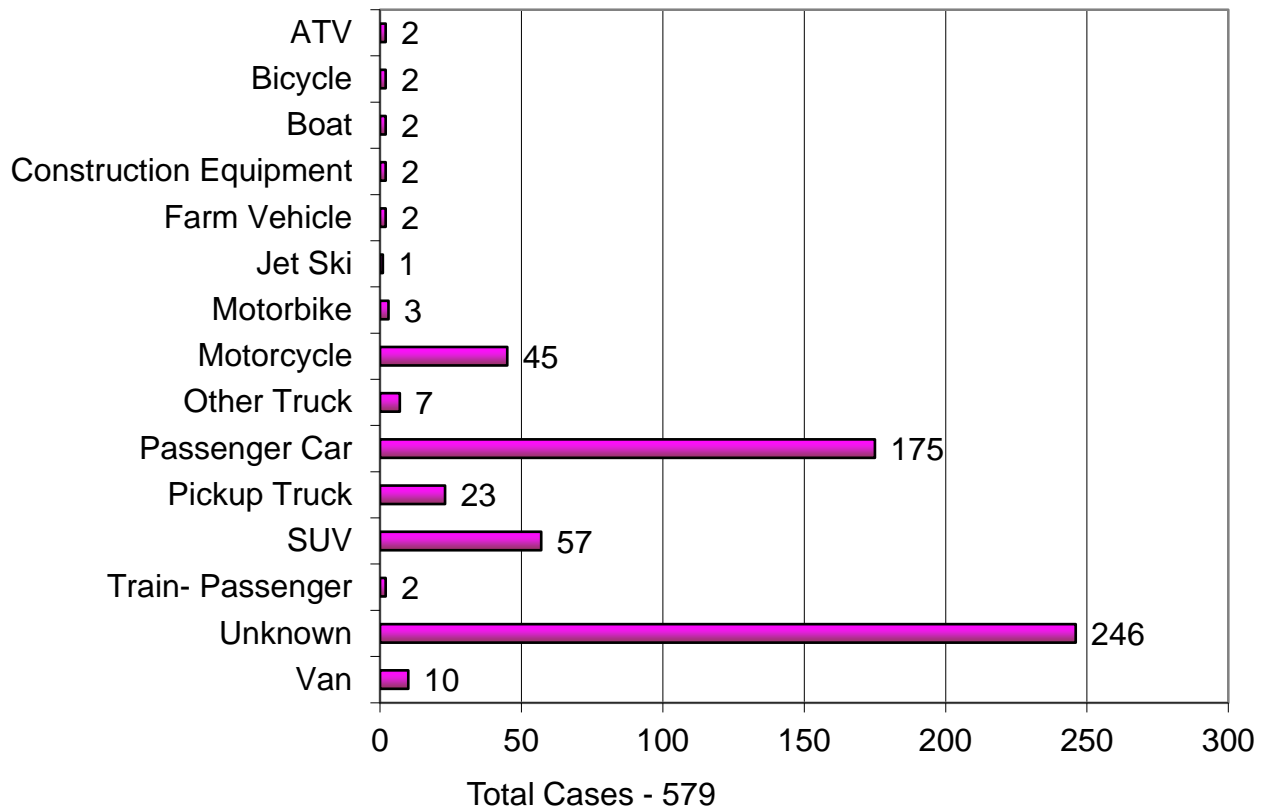


Total Cases – 579

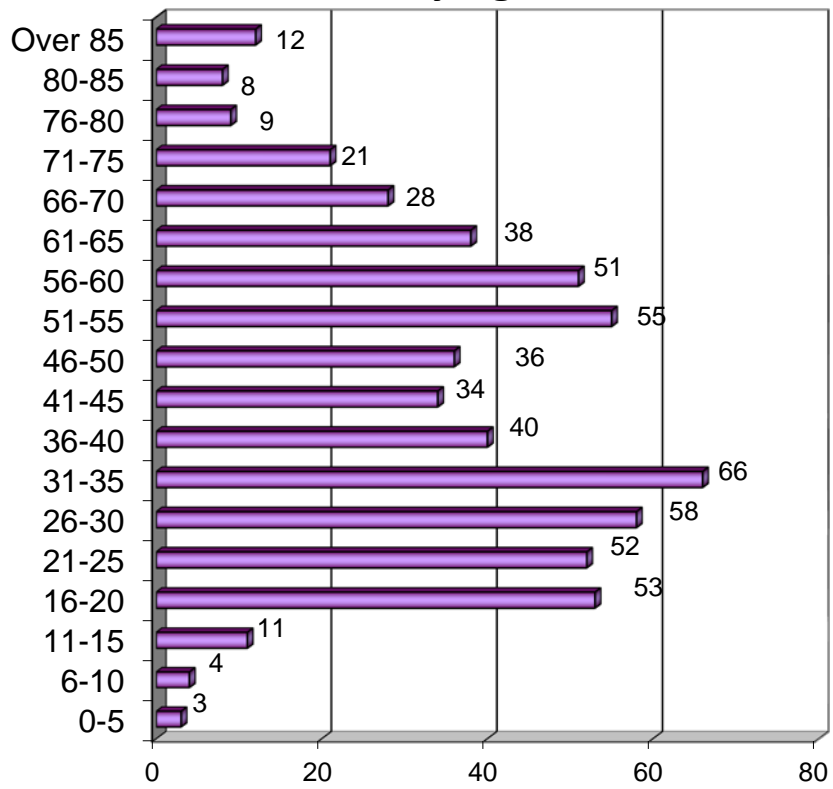


# 2022 Transportation Deaths

## Type of Vehicle

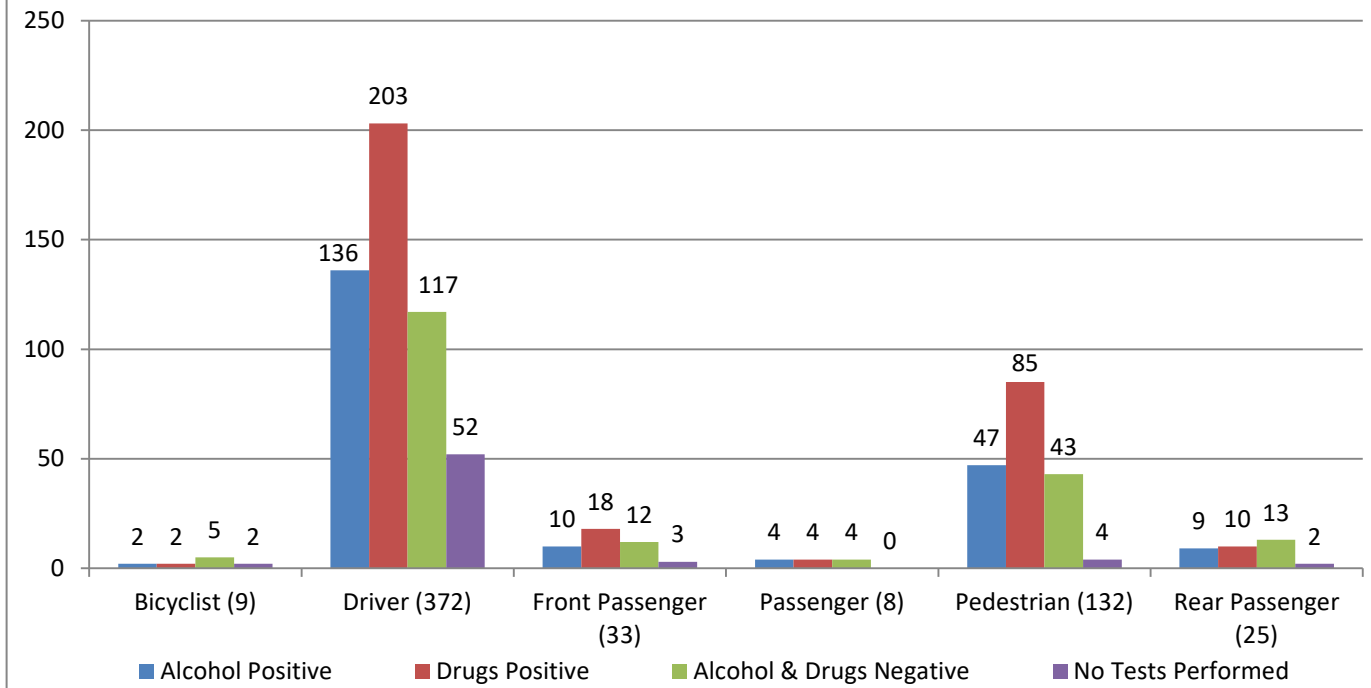


# 2022 Transportation Deaths by Age



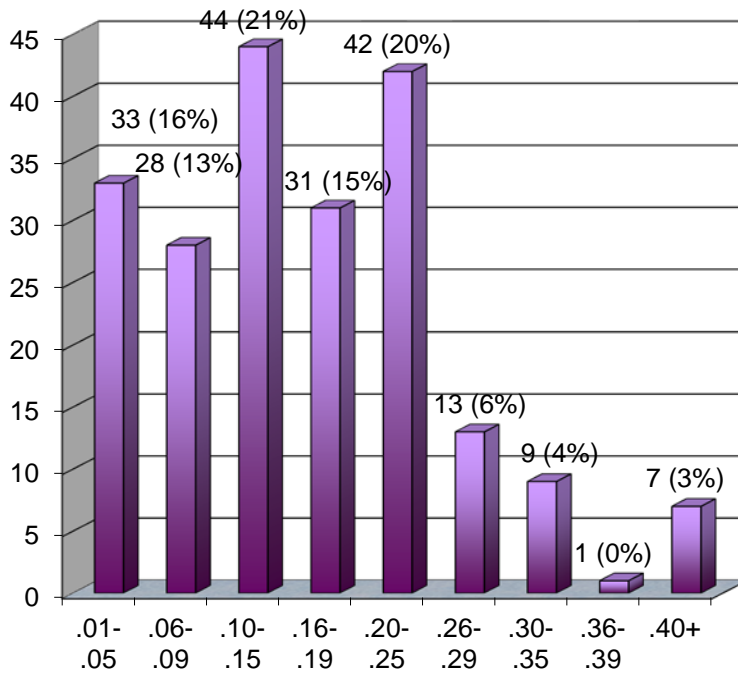
Total Cases - 579

## 2022 Transportation Accidents Alcohol/Drug Results



The alcohol and drug tests are not mutually exclusive, so the numbers in parentheses may not add up to the numbers on the bar graphs. For example, a bicyclist may be positive for both alcohol and drugs.

**2022 Transportation Deaths  
Blood Alcohol Concentration in 208 Cases  
42%\* Tested Positive**



579 Transportation Deaths  
283 Negative for Alcohol  
88 No Testing Performed

\*Percent based on total cases tested for alcohol

## ADDENDUM

### Miscellaneous Data

1. Number of Autopsies	4154
Number of Partial Autopsies	1632
Number of CT Autopsies	69
2. Organ donations	106
3. Unclaimed bodies released to State Anatomy Board	420
4. Exhumations	0
5. Bodies transported to the OCME	6081
6. Infant deaths certified (age live born to 1 year)	91
7. Infants autopsied	79
8. Drug-related accidental deaths certified	1321
9. Drug-related accidental deaths autopsied	1174
10. Non-MVA, non-drug related accidents certified	1404
11. Non-MVA, non-drug related accidents autopsied	309

# 2022 Drug Classifications

## Antidepressants

Amitriptyline  
Bupropion  
Citalopram  
Clomipramine  
Desipramine  
Desmethylvenlafaxine  
Doxepin  
Fluoxetine  
Fluvoxamine  
Imipramine  
Mirtazapine  
Nardoxepin  
Nortriptyline  
Nortriptyline  
Paroxetine  
Sertraline  
Trazodone  
Venlafaxine

## Antihistamines

Brompheniramine  
Chlorpheniramine  
Cyproheptadine  
Diphenhydramine  
Doxylamine  
Hydroxyzine  
Meclizine  
Pheniramine

## Barbiturates / Antiepileptics

Butalbital  
Carbamazepine  
Gabapentin  
Hydroxycarbazepine  
Lamotrigine  
Levetiracetam  
Pentobarbital  
Phenobarbital  
Phenytoin  
Primidone  
Topiramate

## Benzodiazepines

7-Aminoclonazepam  
Alprazolam

## Benzodiazepines (continued)

Chlordiazepoxide  
Clonazepam  
Diazepam  
Etizolam  
Flubromazepam  
Flurazepam  
Lorazepam  
Midazolam  
Nordiazepam  
Oxazepam  
Temazepam  
Triazolam

## Carbon Monoxide

## Cardiac Drugs

Amlodipine  
Diltiazem  
Flecainide  
Metoprolol  
Procainamide  
Propranolol  
Verapamil

## Cocaine and Metabolites

Benzoyllecgonine  
Cocaethylene

## Fentanyl and Analogs

4-Fluoroisobutyryl fentanyl  
Acetyl Fentanyl  
Acrylfentanyl  
Butyryl Fentanyl  
Carfentanil  
Despropionyl fentanyl  
Fentanyl  
Furanyl fentanyl  
Methoxyacetyl fentanyl  
para-Fluorofentanyl  
Tetrahydrofuran fentanyl

## Hallucinogens

Phencyclidine  
Tenocyclidine

## Inhalants

1,1-Difluoroethane  
Halogenated Hydrocarbons  
Nitrous Oxide

## Muscle Relaxants

Carisoprodol  
Cyclobenzaprine  
Metaxalone  
Tizanidine

## Neuroleptics

Amoxapine  
Aripiprazole  
Buspirone  
Chlorpromazine  
Clozapine  
Haloperidol  
Loxapine  
Olanzapine  
Prochlorperazine  
Promethazine  
Quetiapine  
Thioridazine

## Opioids

6-Monoacetylmorphine  
Buprenorphine  
Codeine  
Free Morphine  
Hydrocodone  
Hydromorphone  
Meperidine  
Methadone  
Mitragnine  
Morphine  
Normeperidine  
Oxycodone  
Oxymorphone  
Tapentadol  
Tramadol  
U-47700

## Other

Acetaminophen  
Amantadine  
Atomoxetine  
Atropine  
Benzoyllecgonine  
Benztropine  
Bupivacaine  
Caffeine  
Carisoprodol  
Dextromethorphan  
Ethylene Glycol  
GHB  
Isopropanol  
Ketamine  
Meprobamate  
Propane  
Propofol  
Quinine  
Synthetic Cannabinoids  
Vecuronium  
Xylazine  
Zolpidem

## Sympathomimetic Amines

Amphetamine  
Ephedrine  
MDMA  
Methamphetamine  
Methylenedioxyamphetamine  
Methylenedioxymethamphetamine  
Phentermine  
Phenylpropanolamine  
Pseudoephedrine

## Synthetic Cathinones

4-Chloroethcathinone  
alpha-Pyrrolidinovalerophenone  
Butylone  
Dibutylone  
Ethylone  
Eutylone  
MDPV  
N-Ethylpentylone  
Pentylone