



2021

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

**State of Maryland**

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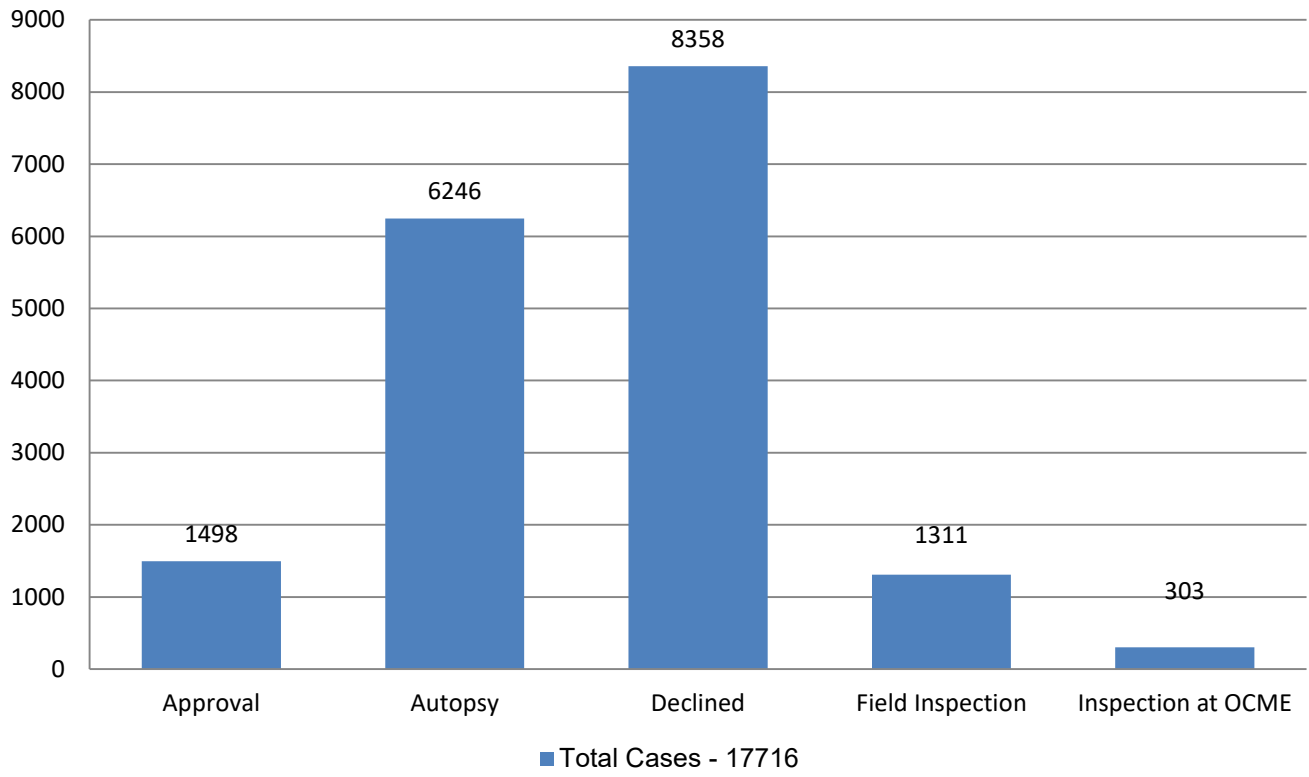
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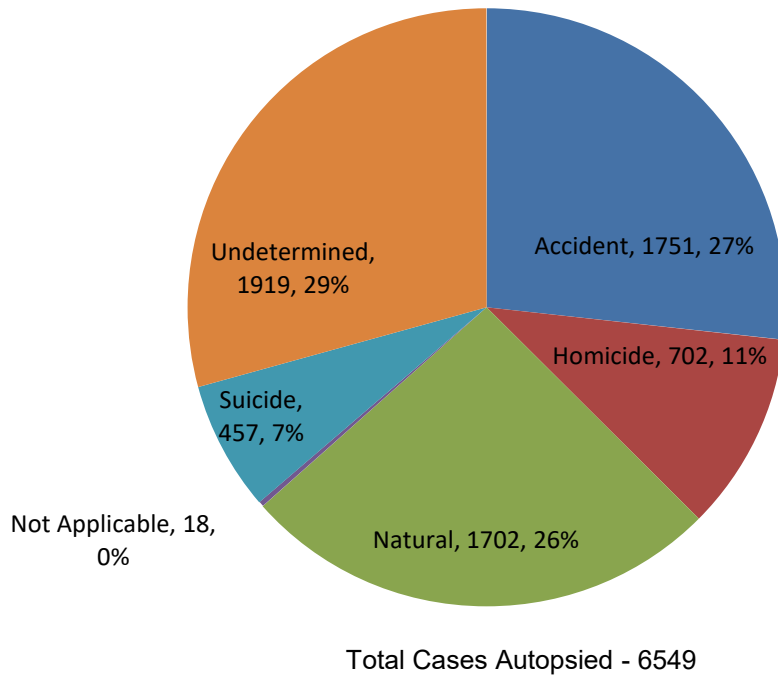
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# 2021 Cases Reported to OCME - Action Taken



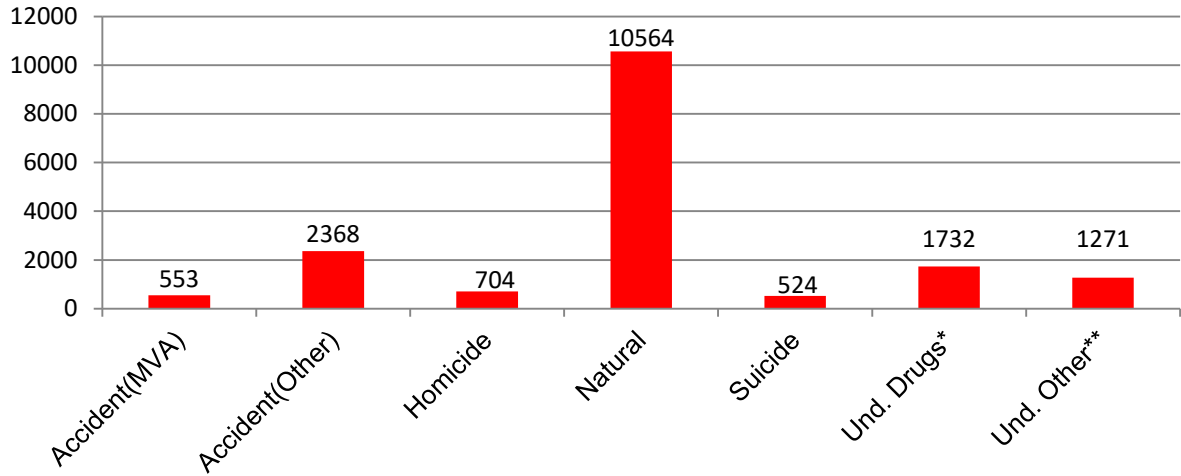
## 2021 Medical Examiner Cases Autopsied\*



\*18 cases were classified as “not applicable” (e.g. stillborn & non-human remains)

\*\*Two homicide cases were not autopsied

## 2021 Cases Reported to OCME Manner of Death



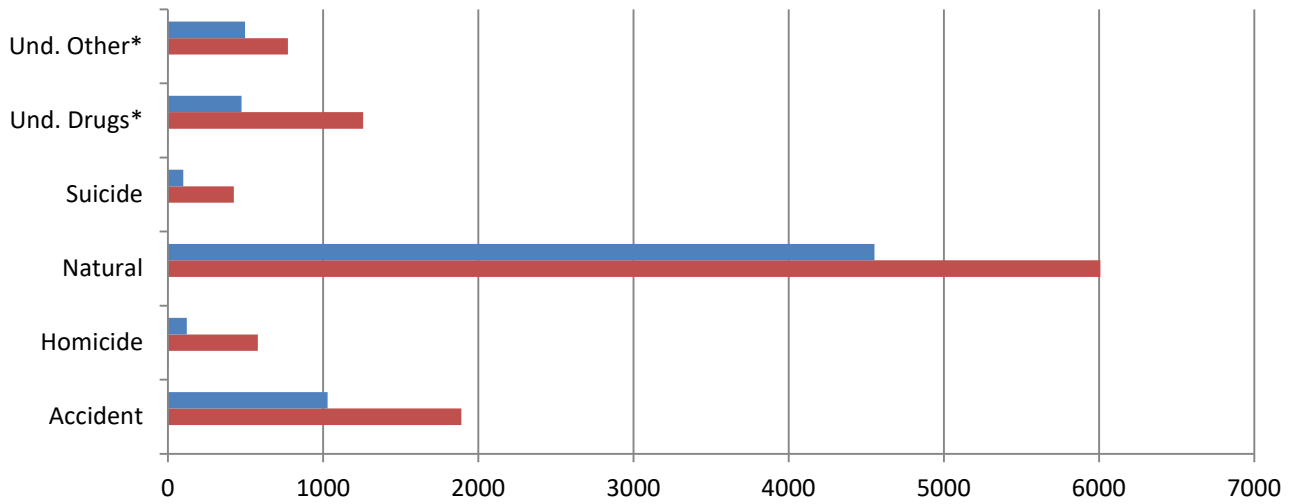
Total Cases –17716

\*Undetermined Manner: Drugs/Narcotics

\*\* Undetermined Manner: Other

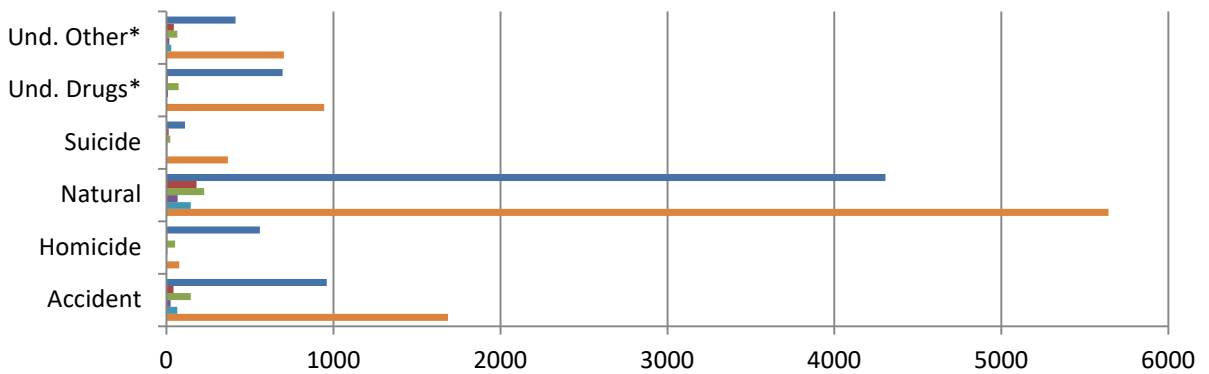
# 2021 Manner of Death

## Classified by Sex



	Accident	Homicide	Natural	Suicide	Und. Drugs*	Und. Other*
Female	1029	121	4553	99	474	497
Male	1890	580	6010	425	1258	772
Unknown	2	3	1		1	1

## Classified by Race



	Accident	Homicide	Natural	Suicide	Und. Drugs*	Und. Other*
African American	960	559	4306	110	695	414
Asian	41	6	179	14	8	44
Hispanic	145	52	225	22	72	64
Other	24	6	67	5	9	17
Unknown	64	4	146	5	3	29
White	1687	77	5641	368	945	703

\*Undetermined Manner: Drugs/Narcotics

\*\* Undetermined Manner: Other

**Manner of Death**

Cause of Death	Accident	Homicide	Natural	N/A	Suicide	Undeter- mined	Total
<b>Asphyxiation</b>	<b>103</b>	<b>8</b>	<b>4</b>		<b>126</b>	<b>13</b>	<b>254</b>
Airway obstruction/Aspirated stomach content	2		4				6
Drowning	67				7	13	87
Hanging	1				111		112
Smoke inhalation	8						8
Strangulation/Asphyxiation	25	8			8		41
<b>Chemical/Drug/Alcohol Intoxication/Abuse/Use</b>	<b>887</b>	<b>4</b>	<b>132</b>		<b>49</b>	<b>1765</b>	<b>2837</b>
Alcohol abuse/use	3		103			2	108
Alcohol and drug intoxication/use	10		2		4	8	24
Alcohol intoxication/use	17		5			5	27
Carbon monoxide	2				4		6
Cocaine and alcohol intoxication/use	5					7	12
Cocaine intoxication/use	41		7			30	78
Drug intoxication/abuse/use	41		11		24	47	123
Narcotic and alcohol intoxication/use	115	1			4	286	406
Narcotic intoxication/use	653	3	4		13	1380	2053
<b>Circulatory system</b>	<b>42</b>	<b>5</b>	<b>1159</b>			<b>7</b>	<b>1213</b>
Aneurysm	2		5				7
Cardiac arrhythmia	2	1	67			1	71
Cardiomyopathy			8				8
Cardiovascular disease	22	1	731			2	756
Cerebrovascular disease	4		24			1	29
Hemorrhage	1		15				16
Other cardiac	6	3	251			3	263
Pulmonary embolism	5		58				63
<b>Congenital / Perinatal</b>			<b>2</b>	<b>5</b>		<b>45</b>	<b>52</b>
Congenital/Perinatal			2	5		2	9
Sudden Unexplained Death in Infancy (SUDI)						43	43
<b>Digestive system disease</b>	<b>3</b>		<b>39</b>				<b>42</b>
Cirrhosis			4				4
Gastrointestinal hemorrhage			18				18
Liver Disease	1		3				4
Other digestive	2		7				9
Fatty liver			7				7
<b>Electrocution</b>	<b>4</b>						<b>4</b>
Electrocution	4						4
<b>Endocrine and metabolic disease</b>			<b>65</b>				<b>65</b>
Diabetes			55				55
Other Endocrine and metabolic			10				10
<b>Hyperthermia</b>	<b>15</b>					<b>2</b>	<b>17</b>
Hyperthermia	15					2	17
<b>Hypothermia</b>	<b>38</b>					<b>7</b>	<b>45</b>
Hypothermia	38					7	45
<b>Infectious disease</b>	<b>1</b>	<b>1</b>	<b>47</b>				<b>49</b>
Other infectious disease	1	1	47				49
<b>Malignant neoplasms (Cancer)</b>			<b>24</b>				<b>24</b>
Malignant neoplasms (Cancer)			24				24

N/A = Not Applicable

**Manner of Death**

<b>Cause of Death</b>	<b>Accident</b>	<b>Homicide</b>	<b>Natural</b>	<b>N/A</b>	<b>Suicide</b>	<b>Undeter- mined</b>	<b>Total</b>
<b>Nervous system disease</b>	<b>1</b>	<b>1</b>	<b>28</b>			<b>1</b>	<b>31</b>
Meningitis			4				4
Other CNS			12				12
Seizure disorder	1	1	12			1	15
<b>Non-human remains</b>				<b>8</b>			<b>8</b>
Non-human remains				8			8
<b>Other natural cause</b>			<b>125</b>				<b>125</b>
Other natural cause			125				125
<b>Other non-natural cause</b>	<b>37</b>	<b>6</b>		<b>5</b>	<b>16</b>		<b>64</b>
Other non-natural cause	37	6		5	16		64
<b>Respiratory system</b>	<b>6</b>		<b>77</b>				<b>83</b>
Asthma			7				7
Chronic obstructive pulmonary disease	1		10				11
Other respiratory	2		11				13
Pneumonia	3		49				52
<b>Thermal Injuries (Burns)</b>	<b>28</b>	<b>1</b>			<b>1</b>	<b>11</b>	<b>41</b>
Thermal Injuries (Burns)	28	1			1	11	41
<b>Traumatic injury</b>	<b>586</b>	<b>676</b>			<b>265</b>	<b>29</b>	<b>1556</b>
Blunt force	36	12			1	4	53
Fracture	16						16
Gunshot wound		579			233	4	816
Head/Chest injuries	57	4				6	67
Multiple injuries	455	29			22	13	519
Other trauma	22	3					25
Sharp force/cutting		49			9	2	60
<b>Unknown cause</b>						<b>39</b>	<b>39</b>
Unknown cause						39	39
<b>Grand Total</b>	<b>1751</b>	<b>702</b>	<b>1702</b>	<b>18</b>	<b>457</b>	<b>1919</b>	<b>6549</b>

N/A = Not Applicable



# Manner of Death - 3 Year Comparison

## 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>	17716	100%

## 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>	18441	100%

## Medical Examiner Cases: Manner of Death, Maryland 2019

Manner of Death	Number	%
Accident	2540	16.4%
Homicide	619	4.0%
Natural	9647	62.3%
Suicide	638	4.1%
Undetermined	2051	13.2%
<b>Total</b>	15495	100%

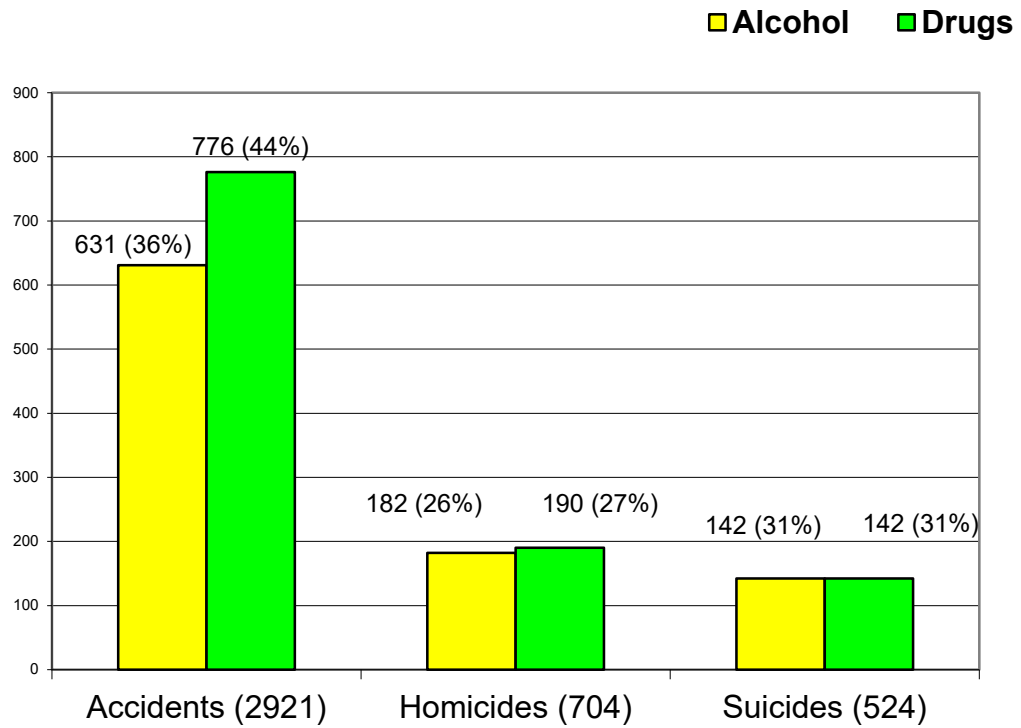
## 2021 Manner of Death and Case Type by County

2021 - Manner	Accident	Homicide	Natural	Suicide	Undetermined	Total
Allegany	26	4	47	7	34	118
Anne Arundel	131	24	131	57	153	496
Baltimore City	547	385	409	73	727	2141
Baltimore County	182	40	226	42	244	734
Calvert	17		20	13	17	67
Caroline	7		6	1	6	20
Carroll	34	1	34	14	36	119
Cecil	45	5	34	10	66	160
Charles	35	7	49	9	24	124
Dorchester	9	4	10	6	21	50
Frederick	43	5	37	20	41	146
Garrett	7	1	6	4	6	24
Harford	60	5	58	26	73	222
Howard	44	8	58	20	25	155
Kent	15	1	5	1	7	29
Montgomery	109	36	157	49	122	473
Prince George's	252	149	234	38	138	811
Queen Anne's	9	1	7	3	12	32
Saint Mary's	29	3	29	11	35	107
Somerset	5		7	2	9	23
Talbot	13	2	8	7	11	41
Washington	55	13	60	23	84	235
Wicomico	48	7	45	14	31	145
Worcester	29	1	25	7	15	77
<b>Grand Total</b>	<b>1751</b>	<b>701</b>	<b>1702</b>	<b>457</b>	<b>1936</b>	<b>6549</b>

2021 - Case Type	Autopsy	OCME Insp.	Total	County	Autopsy	OCME Insp.	Total
Allegany	111	7	118	Washington	223	12	235
Anne Arundel	469	27	496	Wicomico	139	6	145
Baltimore City	2046	95	2141	Worcester	73	4	77
Baltimore County	701	33	734	<b>Grand Total</b>	<b>6246</b>	<b>303</b>	<b>6549</b>
Calvert	61	6	67				
Caroline	19	1	20				
Carroll	112	7	119				
Cecil	155	5	160				
Charles	118	6	124				
Dorchester	49	1	50				
Frederick	144	2	146				
Garrett	22	2	24				
Harford	209	13	222				
Howard	146	9	155				
Kent	27	2	29				
Montgomery	447	26	473				
Prince George's	783	28	811				
Queen Anne's	32		32				
Saint Mary's	99	8	107				
Somerset	22	1	23				
Talbot	39	2	41				

# 2021 Toxicology Testing

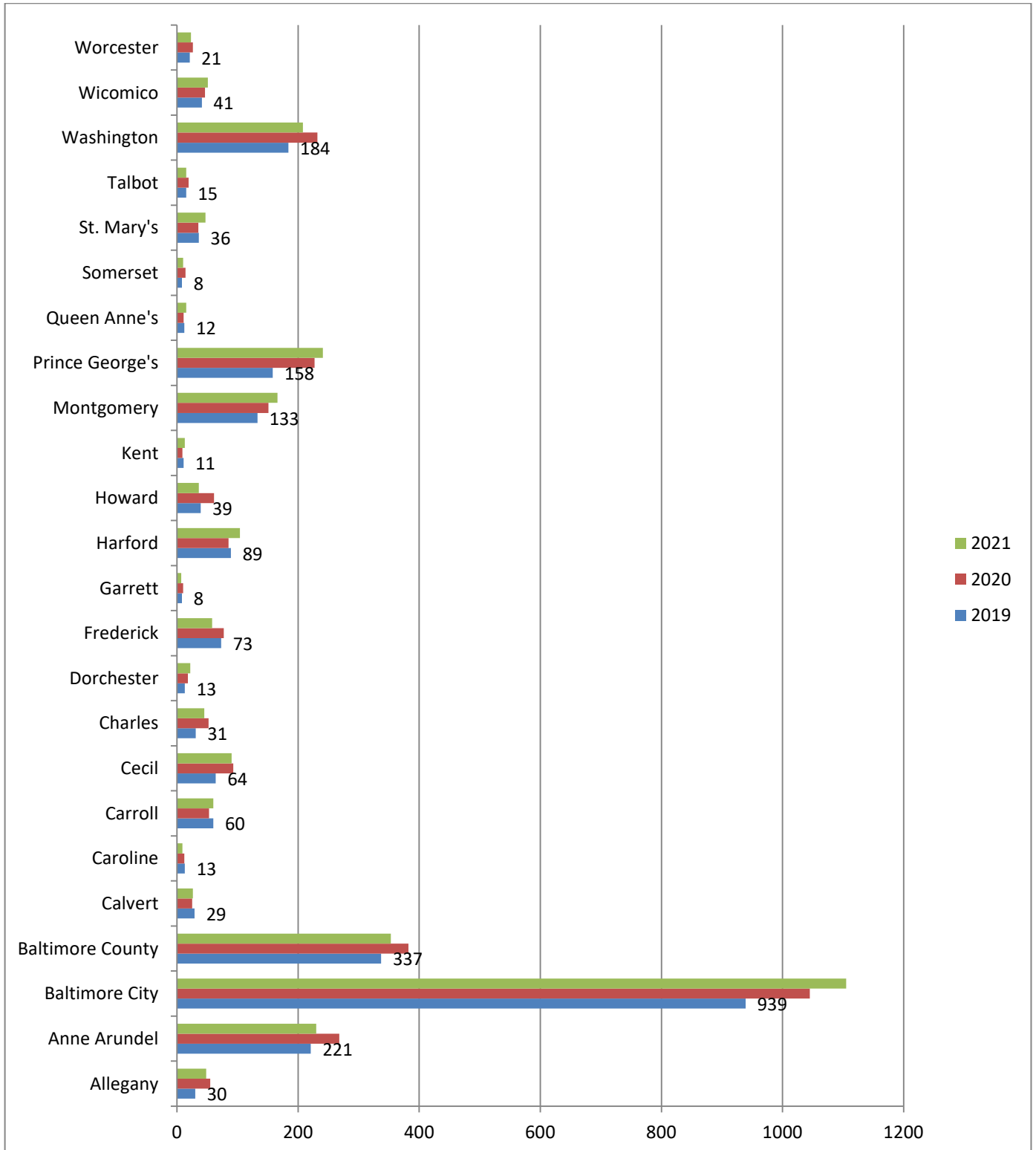
## # of Cases Positive for Alcohol and/or Drugs (Percentage of the Manner of Death)



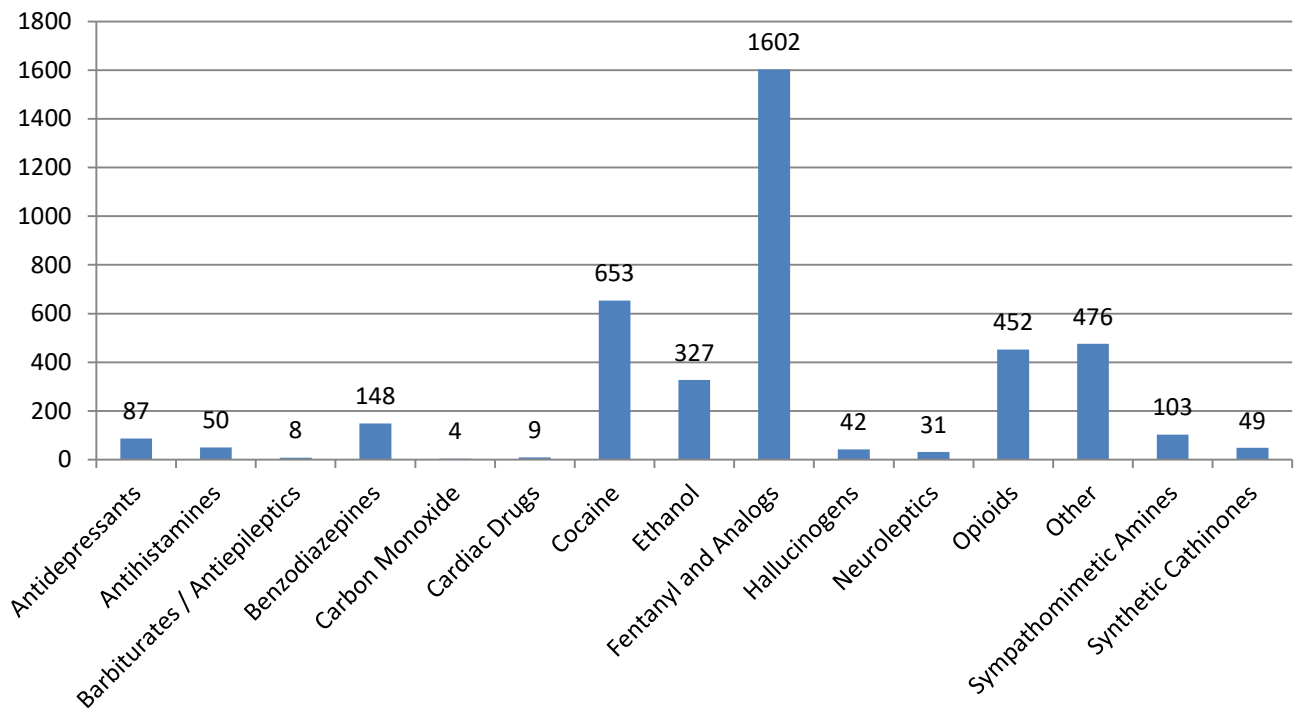
**Manner of Death**

# Drug Deaths

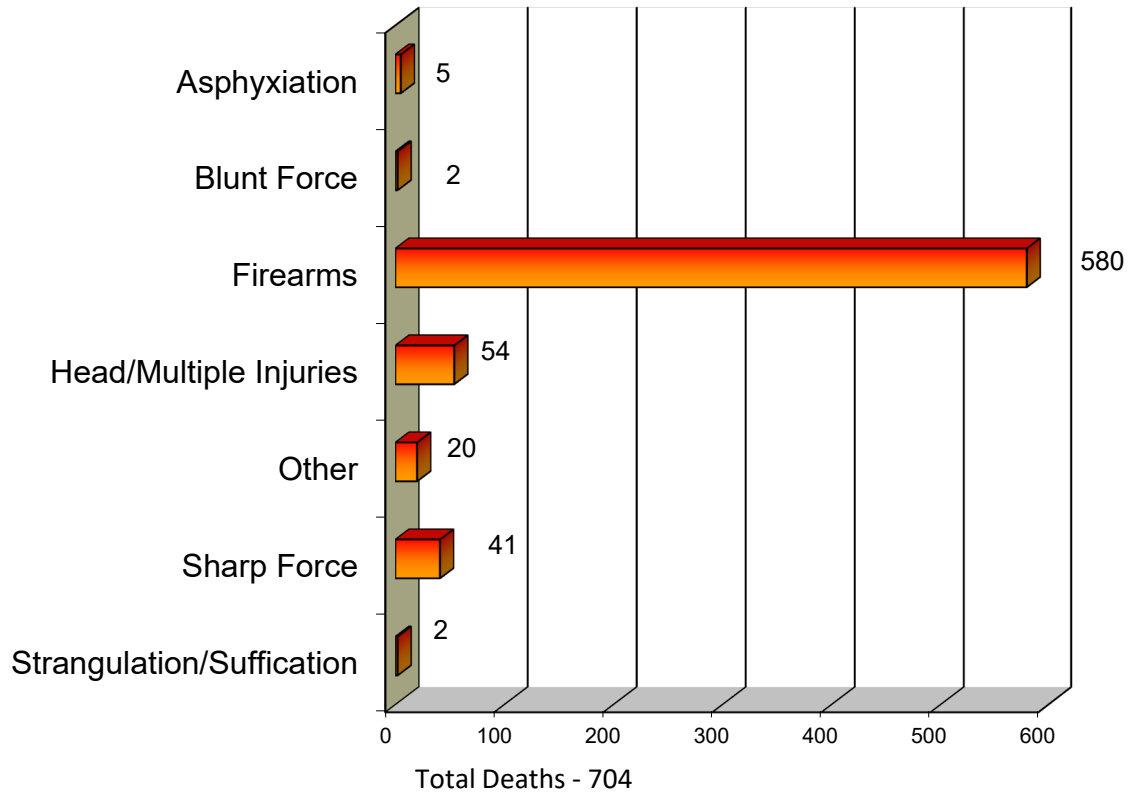
## 3 Year Comparison by Jurisdiction 2019-2021



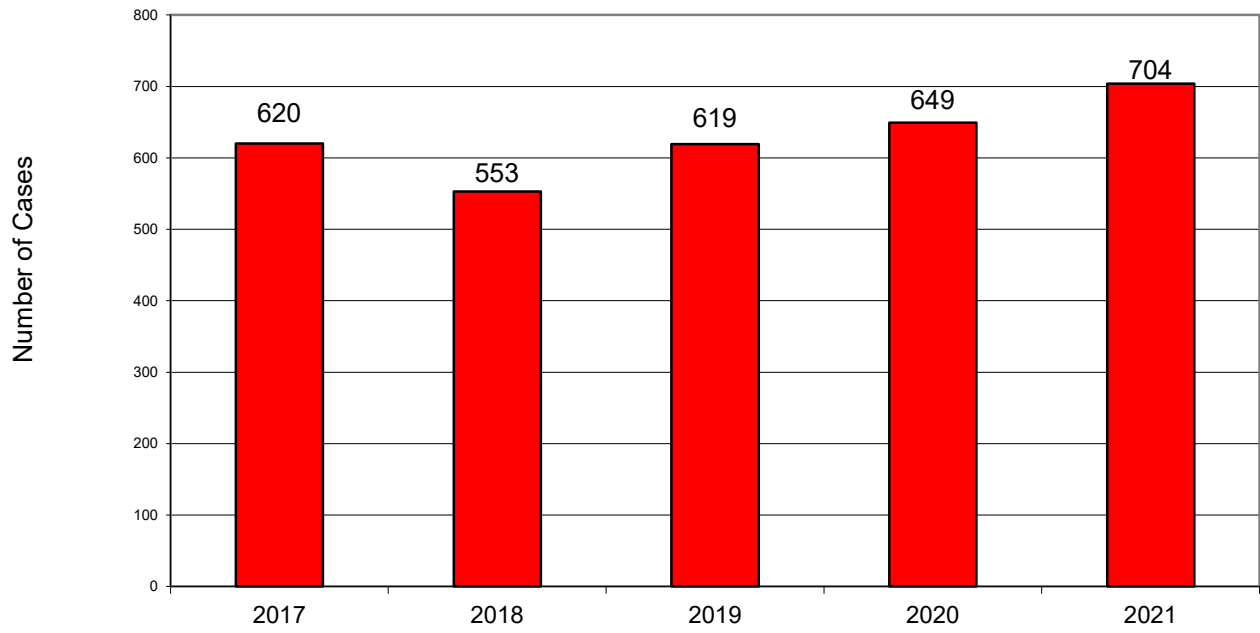
## 2021 Drug Deaths Undetermined Manner



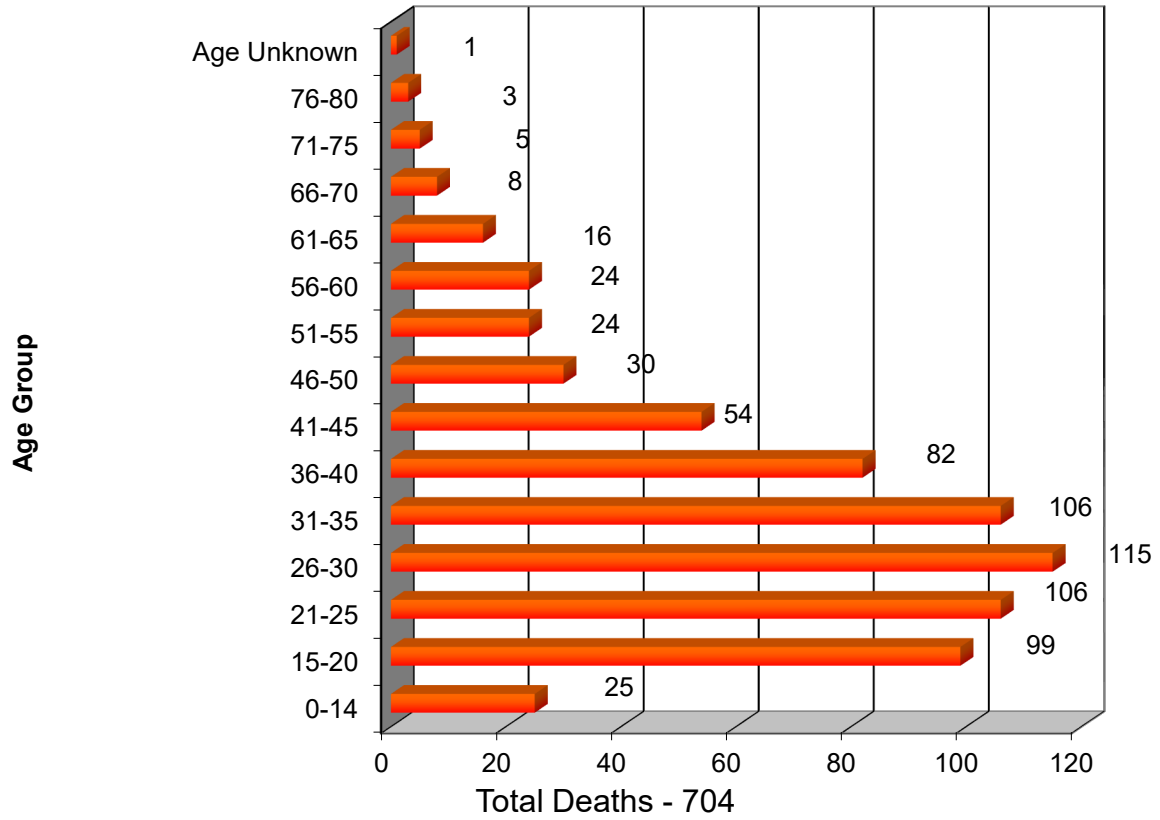
# 2021 Homicide Deaths Cause of Death



# Homicides 5 Year Comparison 2017 - 2021

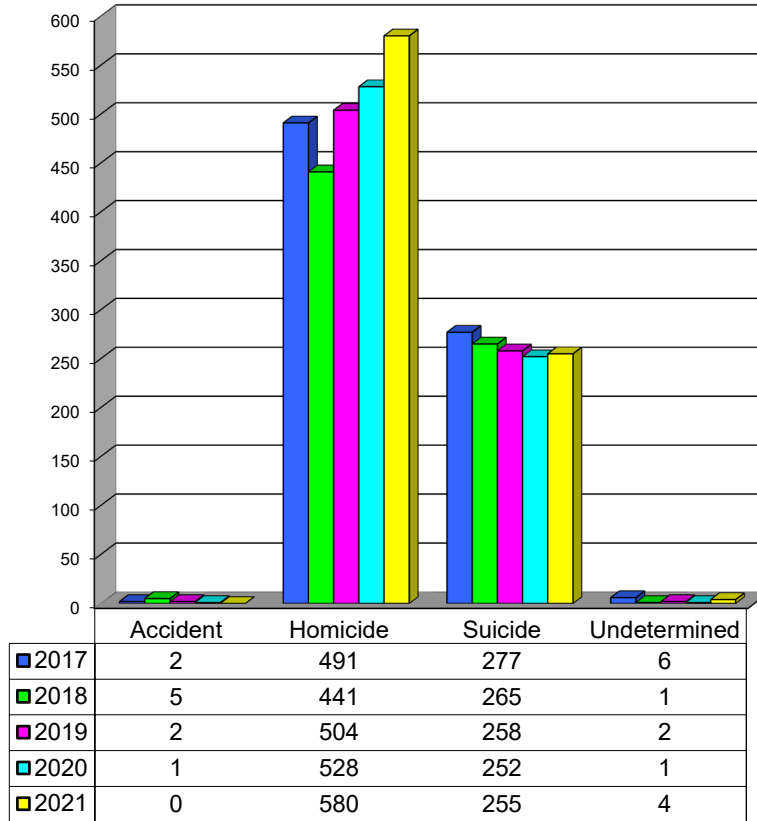


# 2021 Homicide Deaths by Age

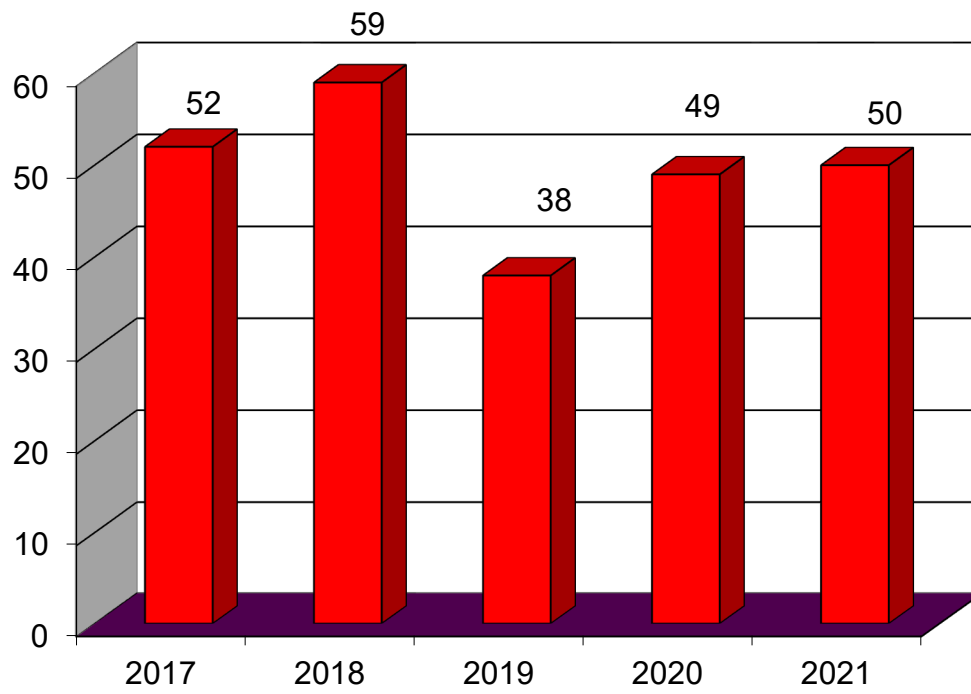




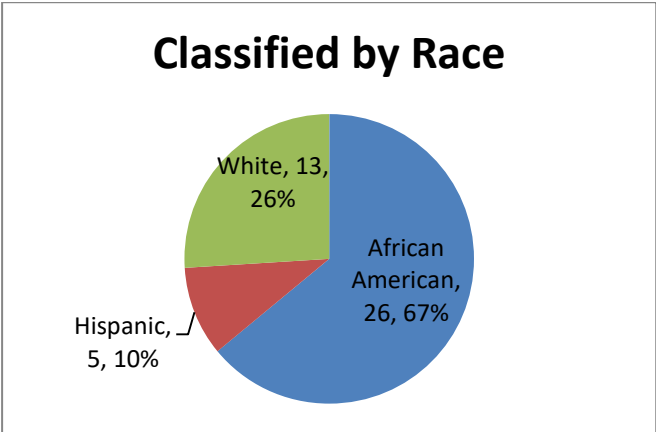
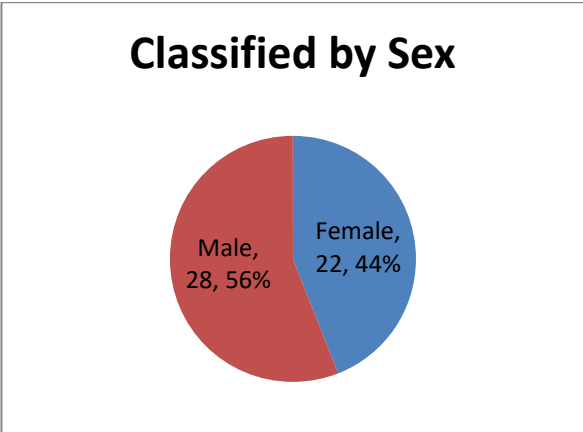
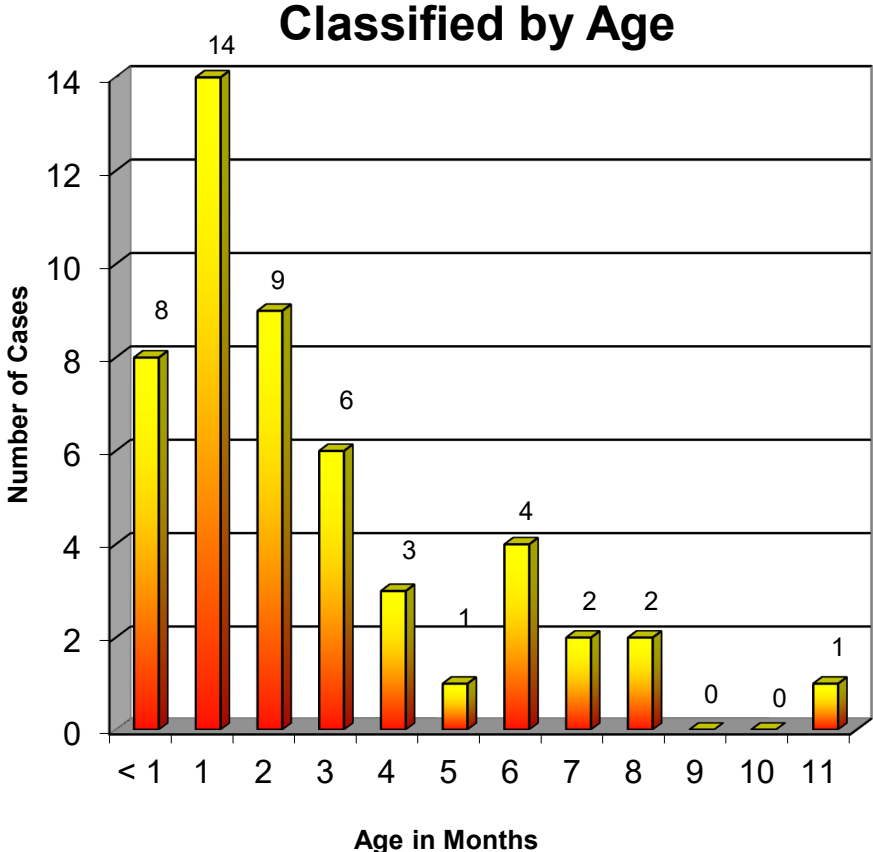
# Firearm Deaths 2017 - 2021



## SUDI Deaths 2017 - 2021 Comparison



# Sudden Unexplained Death in Infancy – 2021



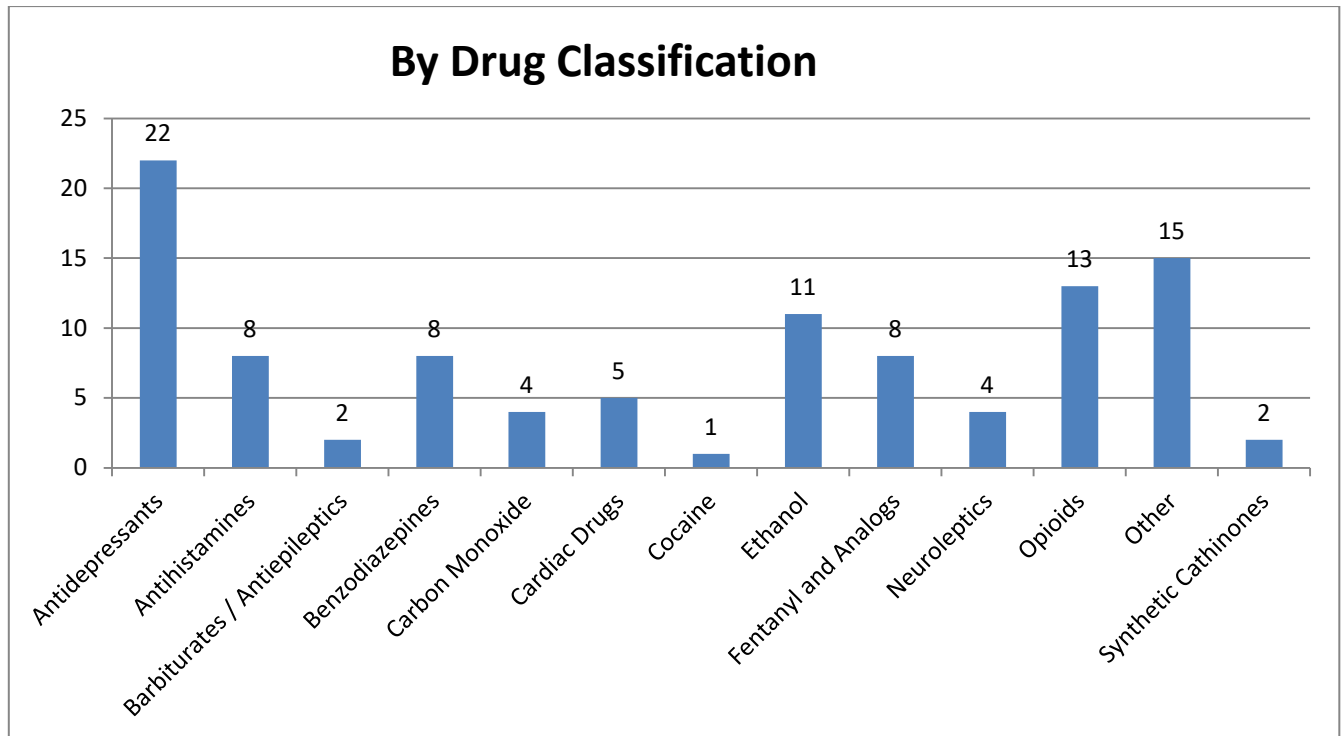
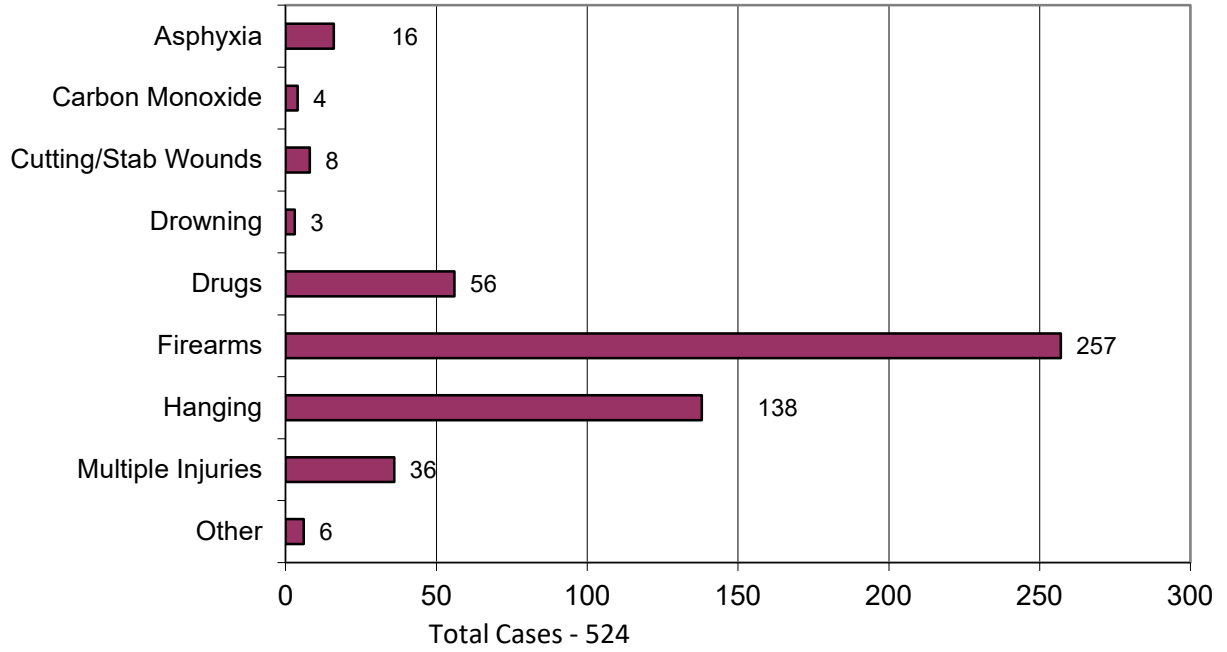
Total of 50 Deaths

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

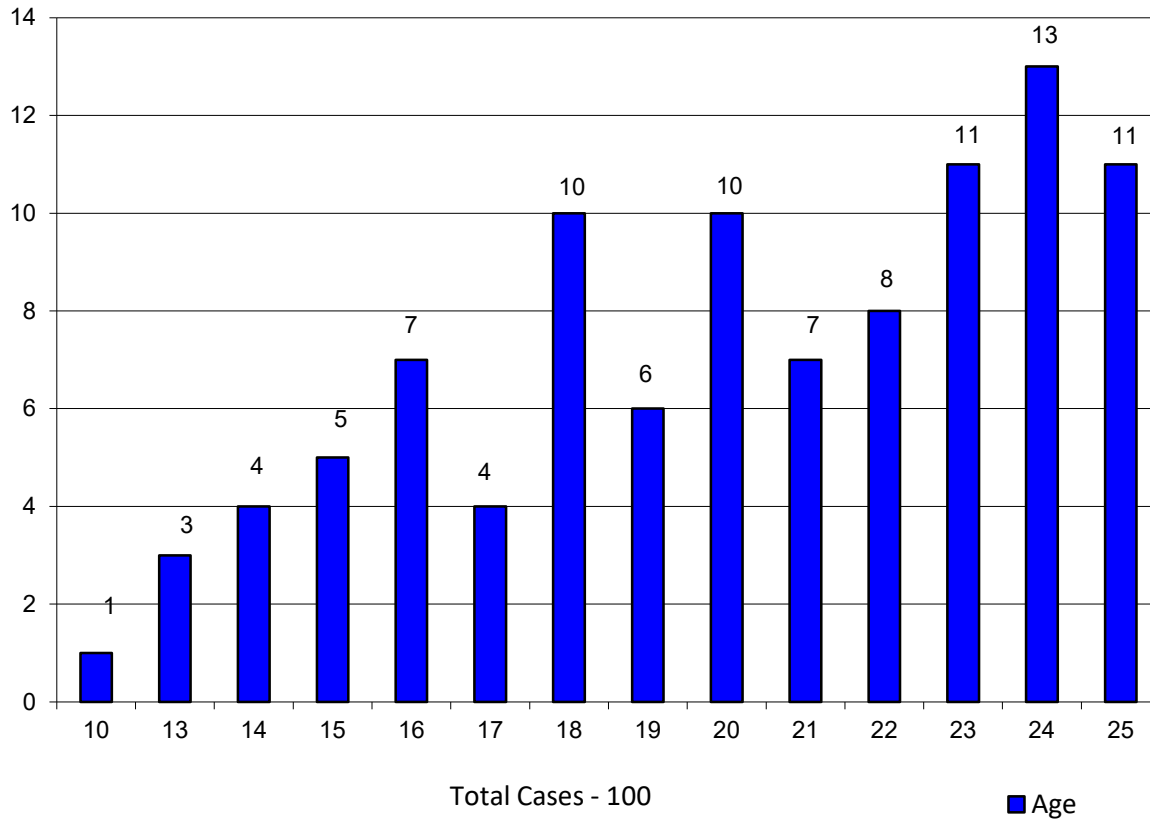
### Manner of Death

Cause of Death	Accident	Homicide	Natural	Undetermined	Total
<b>Asphyxiation</b>	<b>10</b>				<b>10</b>
Drowning	2				2
Strangulation/Asphyxiation	8				8
<b>Chemical/Drug/Alcohol Intoxication/Abuse/Use</b>		<b>1</b>		<b>1</b>	<b>2</b>
Narcotic intoxication/use		1		1	2
<b>Circulatory system</b>			<b>4</b>		<b>4</b>
Cardiac arrhythmia			2		2
Other cardiac			2		2
<b>Congenital / Perinatal</b>				<b>42</b>	<b>42</b>
Sudden Unexplained Death in Infancy (SUDI)				40	40
Congenital/Perinatal				2	2
<b>Infectious disease</b>			<b>1</b>		<b>1</b>
Other infectious disease			1		1
<b>Nervous system disease</b>			<b>1</b>		<b>1</b>
Meningitis			1		1
<b>Other natural cause</b>			<b>1</b>		<b>1</b>
Other natural cause			1		1
<b>Other non-natural cause</b>		<b>2</b>			<b>2</b>
Other non-natural cause		2			2
<b>Traumatic injury</b>	<b>1</b>	<b>2</b>			<b>3</b>
Blunt force		1			1
Head/Chest injuries		1			1
Multiple injuries	1				1
<b>Unknown cause</b>				<b>11</b>	<b>11</b>
Unknown cause				11	11
<b>Digestive system disease</b>			<b>1</b>		<b>1</b>
Liver Disease			1		1
<b>Grand Total</b>	<b>11</b>	<b>5</b>	<b>8</b>	<b>54</b>	<b>78</b>

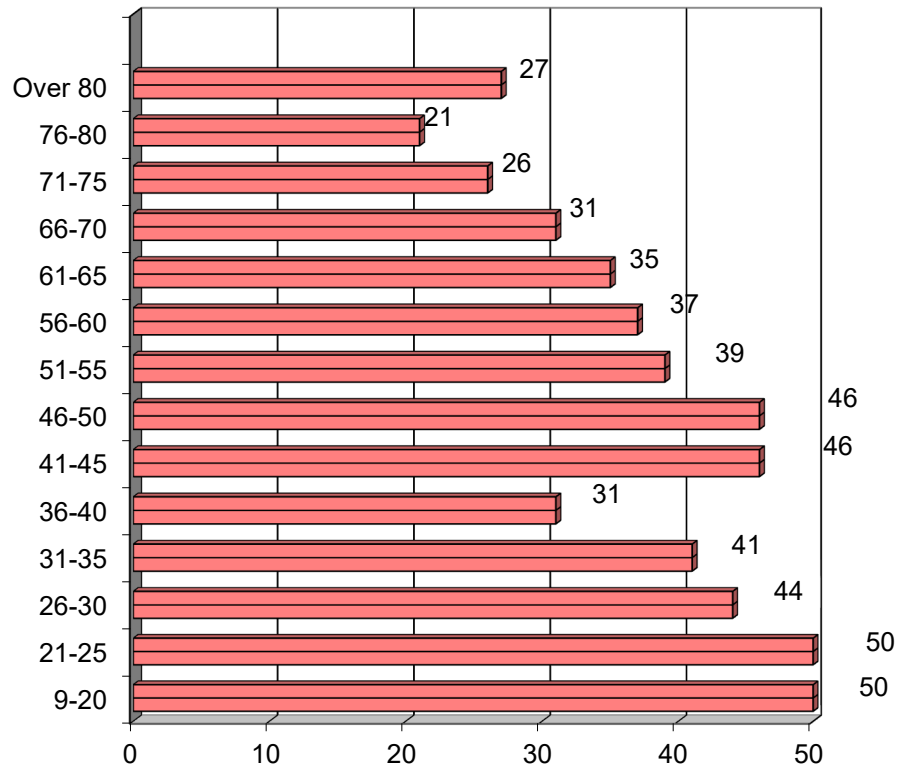
## 2021 Suicide Deaths Classified by Cause of Death



# 2021 Youth Suicides 25 Years of Age and Under

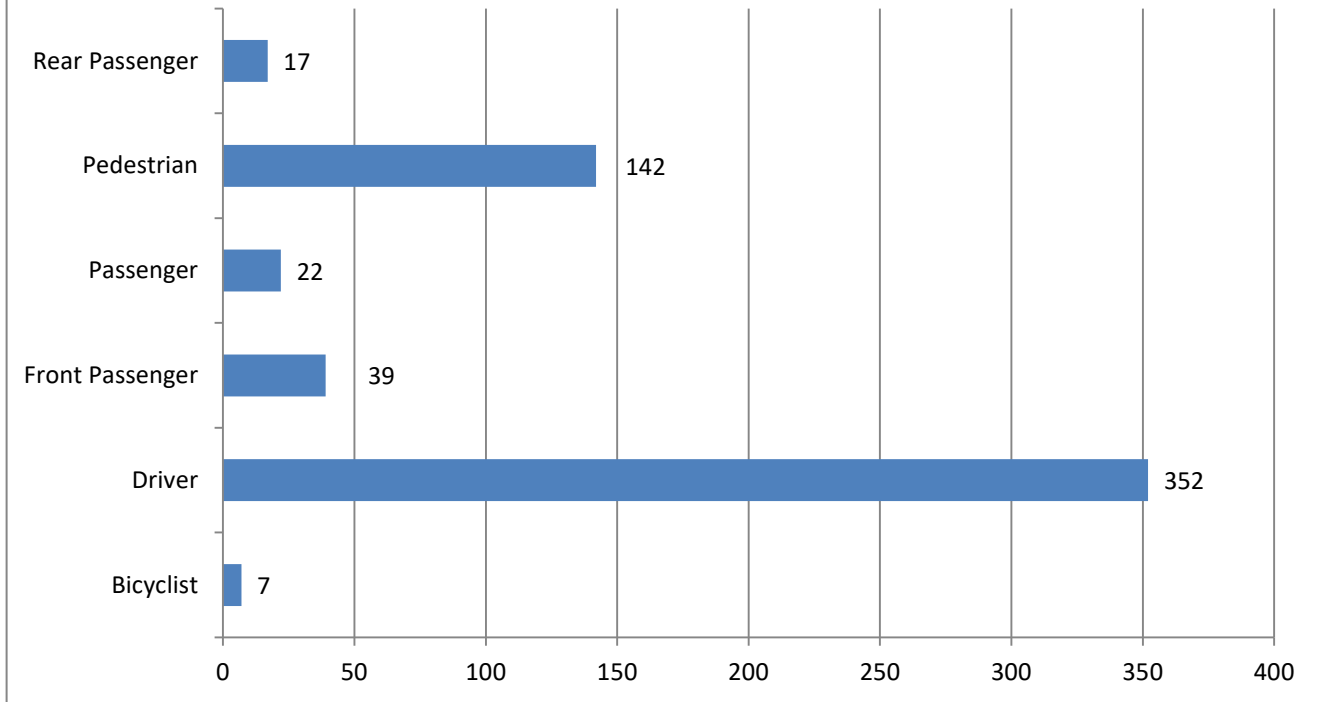


## 2021 Suicide Deaths by Age



Total Deaths - 524

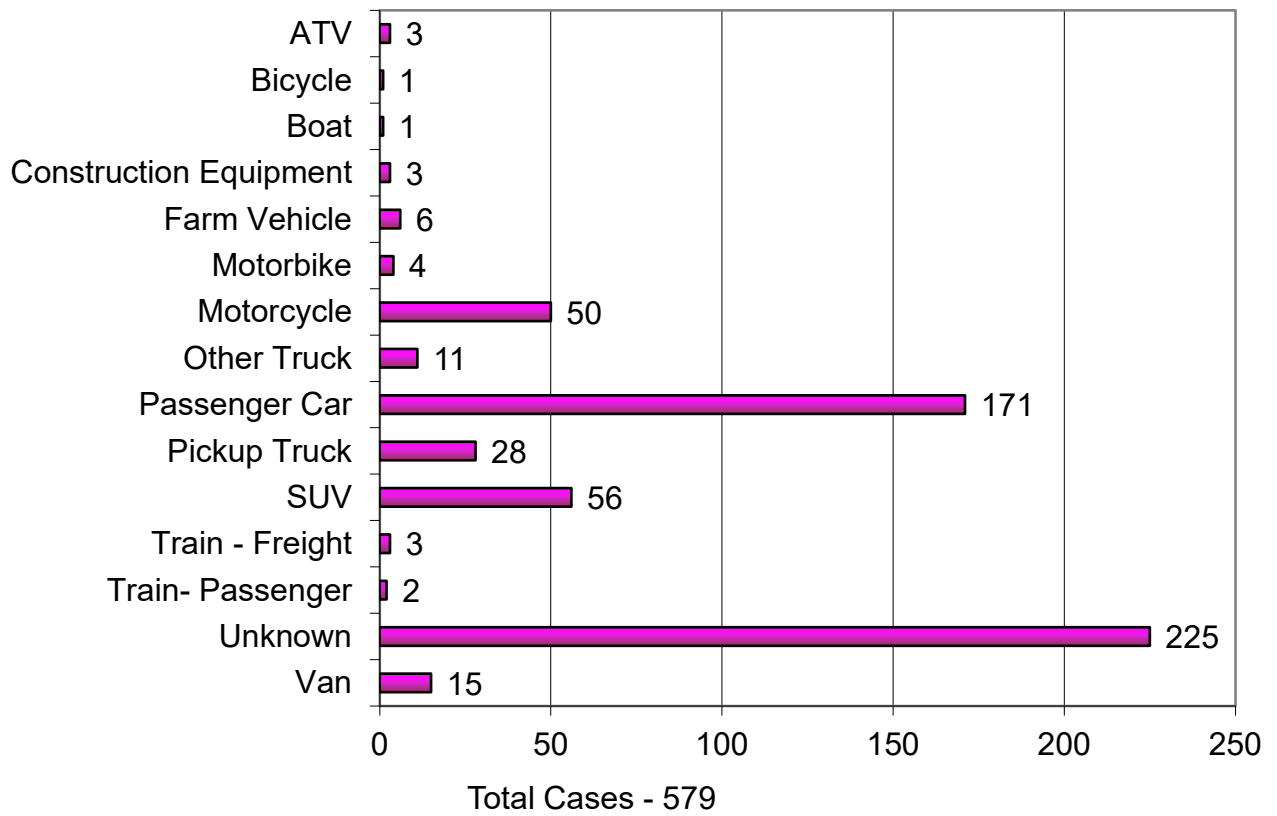
## 2021 Transportation Accidents Classified by Activity



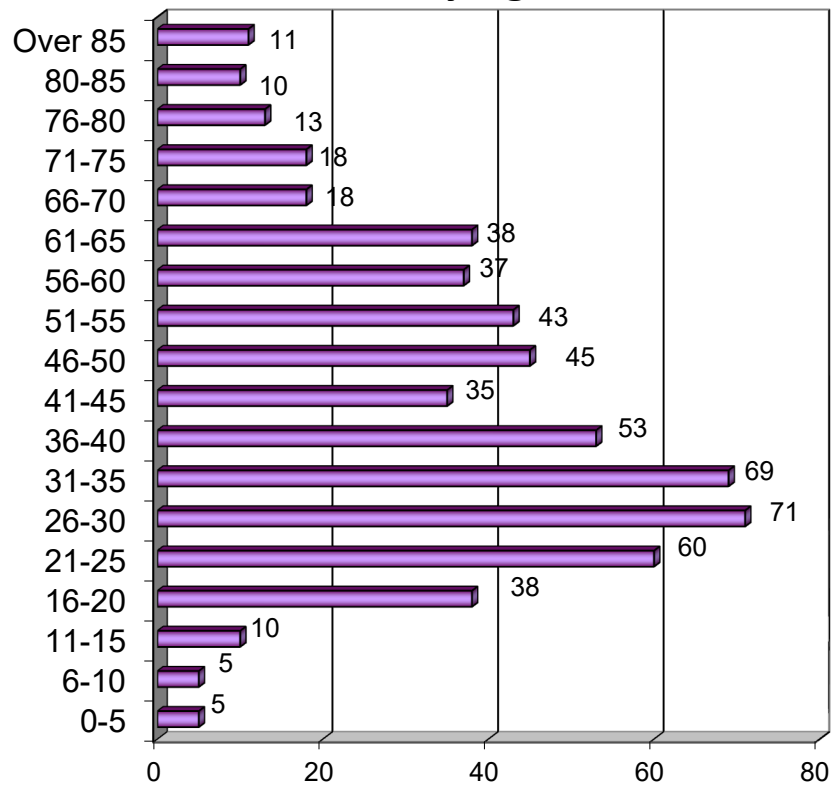
Total Cases – 579



## 2021 Transportation Deaths Type of Vehicle

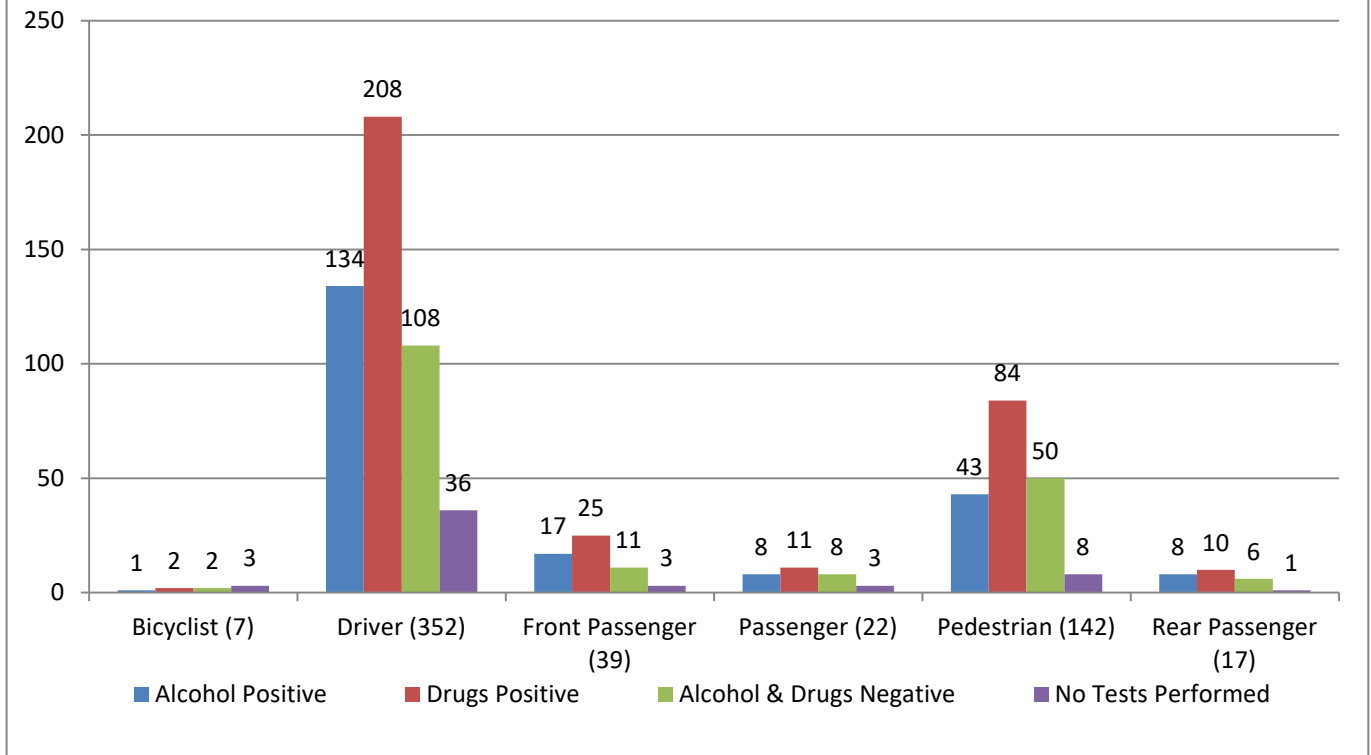


# 2021 Transportation Deaths by Age



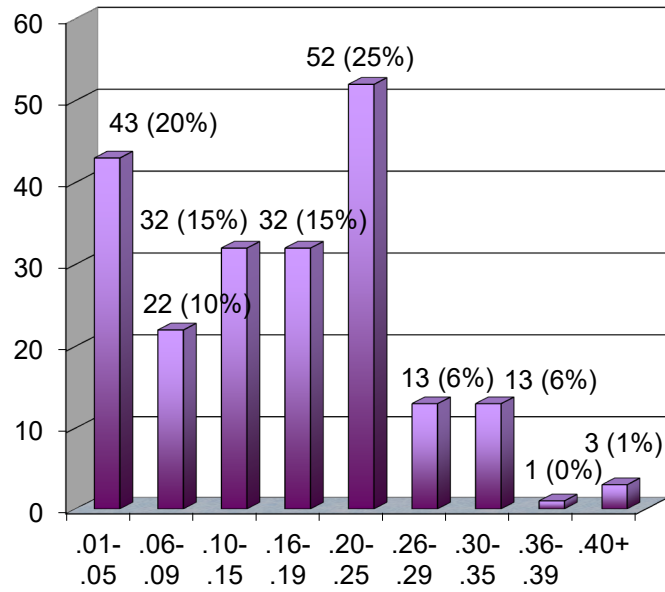
Total Cases - 579

## 2021 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.

**2021 Transportation Deaths  
Blood Alcohol Concentration in 211 Cases  
43%\* Tested Positive**



579 Transportation Deaths  
283 Negative for Alcohol  
85 No Testing Performed

\*Percent based on total cases tested for alcohol

## ADDENDUM

### Miscellaneous Data

1. Number of Autopsies	4361
Number of Partial Autopsies	1745
Number of CT Autopsies	140
2. Organ donations	114
3. Unclaimed bodies released to State Anatomy Board	388
4. Exhumations	0
5. Bodies transported to the OCME	6605
6. Infant deaths certified (age live born to 1 year)	84
7. Infants autopsied	78
8. Drug-related accidental deaths certified	1101
9. Drug-related accidental deaths autopsied	927
10. Non-MVA, non-drug related accidents certified	1362
11. Non-MVA, non-drug related accidents autopsied	327
12. The number of scenes visited by forensic investigators/MEs	7860
13. The number of hospital autopsies that were performed on cases where the OCME has jurisdiction	69
14. The number of bodies that remained unidentified after examination.	17

# 2021 Drug Classifications

## Antidepressants

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

## Antihistamines

Brompheniramine  
Chlorpheniramine  
Diphenhydramine  
Doxylamine  
Hydroxyzine  
Meclizine  
Pheniramine

## Barbiturates / Antiepileptics

Butalbital  
Carbamazepine  
Lamotrigine  
Levetiracetam  
Pentobarbital  
Phenobarbital  
Phenytoin  
Primidone  
Topiramate

## Benzodiazepines

7-Aminoclonazepam  
Alprazolam  
Chlordiazepoxide  
Clonazepam

## Benzodiazepines (continued)

Diazepam  
Etizolam  
Flurazepam  
Lorazepam  
Midazolam  
Nordiazepam  
Oxazepam  
Temazepam  
Triazolam

## Carbon Monoxide

## Cardiac Drugs

Amlodipine  
Diltiazem  
Flecainide  
Metoprolol  
Procainamide  
Propranolol  
Verapamil

## Cocaine and Metabolites

Benzoyllecgonine

## Fentanyl and Analogs

4-Fluoroisobutyl 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

## Neuroleptics

Amoxapine  
Buspirone  
Chlorpromazine  
Clozapine  
Haloperidol  
Loxapine  
Olanzapine  
Prochlorperazine  
Promethazine  
Quetiapine  
Thioridazine

## Opioids

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

## Other

Acetaminophen  
Amantadine  
Atomoxetine  
Atropine  
Benzoyllecgonine  
Benztropine  
Bupivacaine  
Carisoprodol  
GHB  
Ketamine  
Meprobamate  
Quinine  
Synthetic Cannabinoids  
Zolpidem

## Sympathomimetic Amines

Amphetamine  
Ephedrine  
Methamphetamine  
Methylenedioxyamphetamine  
Methylenedioxymethamphetamine  
Phentermine  
Phenylpropanolamine  
Pseudoephedrine

## Synthetic Cathinones

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

