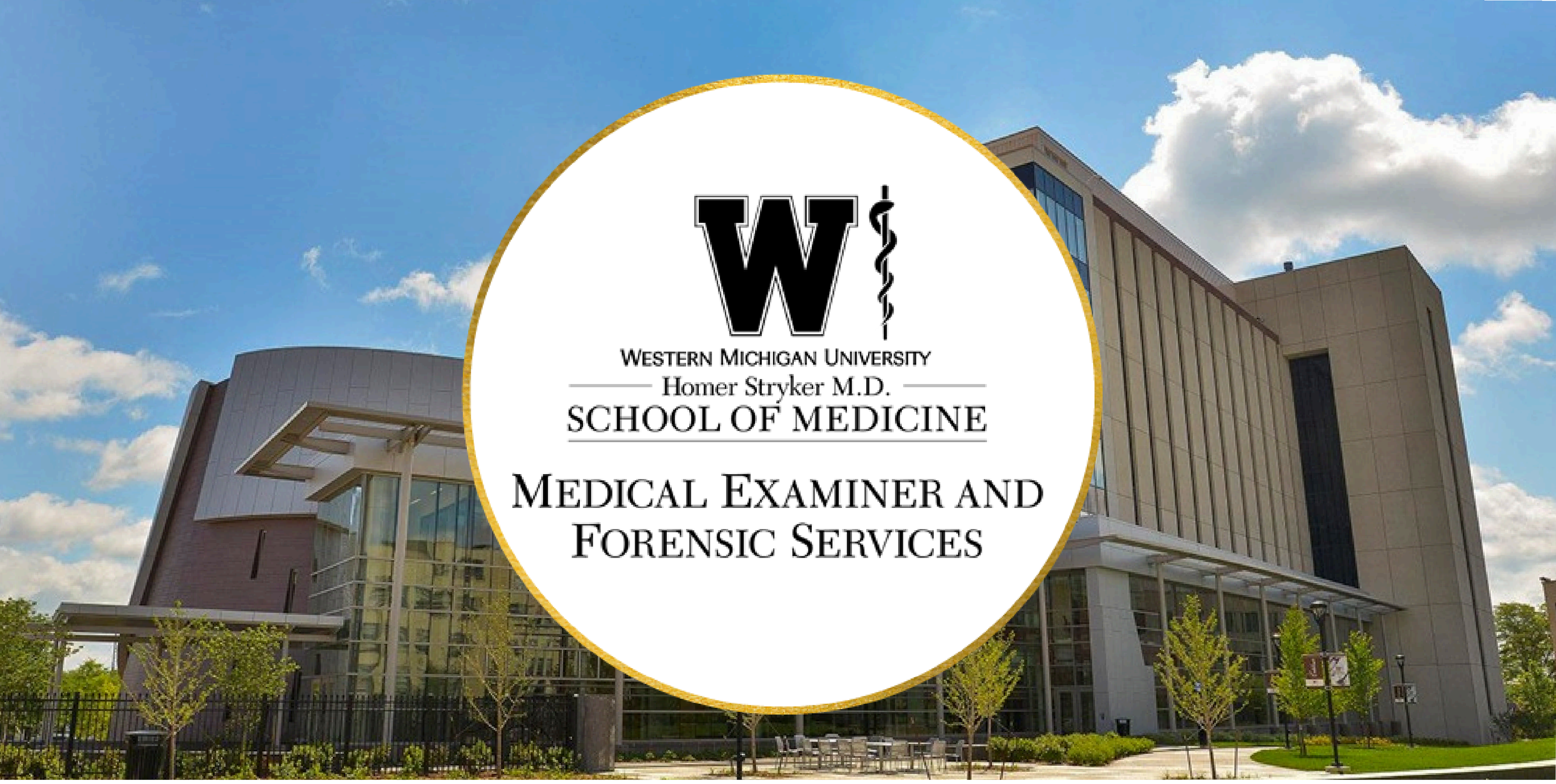


MEDICAL EXAMINER'S OFFICE

2023 Annual Report

DRUG-RELATED FATALITIES

Allegan	Cass	Mason
Barry	Grand Traverse	Muskegon
Berrien	Kalamazoo	St. Joseph
Calhoun	Leelanau	Van Buren

Office of the Medical Examiner
Western Michigan University
Homer Stryker M.D. School of Medicine

Disclaimer

The data in this report was collected from 12 counties served by the Office of the Medical Examiner located within the Department of Pathology at Western Michigan University Homer Stryker M.D. School of Medicine (WMed). Data includes deaths in which drugs were listed as the immediate cause of death or as contributory to death on the death certificate. Acute alcohol-related deaths are deemed drug-related deaths and are included in this report. We served Osceola county for a limited portion of 2022, therefore the county is not included. This report provides updated statistics in an effort to reduce the frequency of drug-related deaths in the counties we serve.

WESTERN MICHIGAN UNIVERSITY
Homer Stryker M.D.
SCHOOL OF MEDICINE
MEDICAL EXAMINER AND
FORENSIC SERVICES

Sources: All information included in this report was extracted from death scene investigation reports, law enforcement and EMS reports, death certificates, obituaries, and autopsy reports.

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Western Michigan University
Homer Stryker M.D.
SCHOOL OF MEDICINE

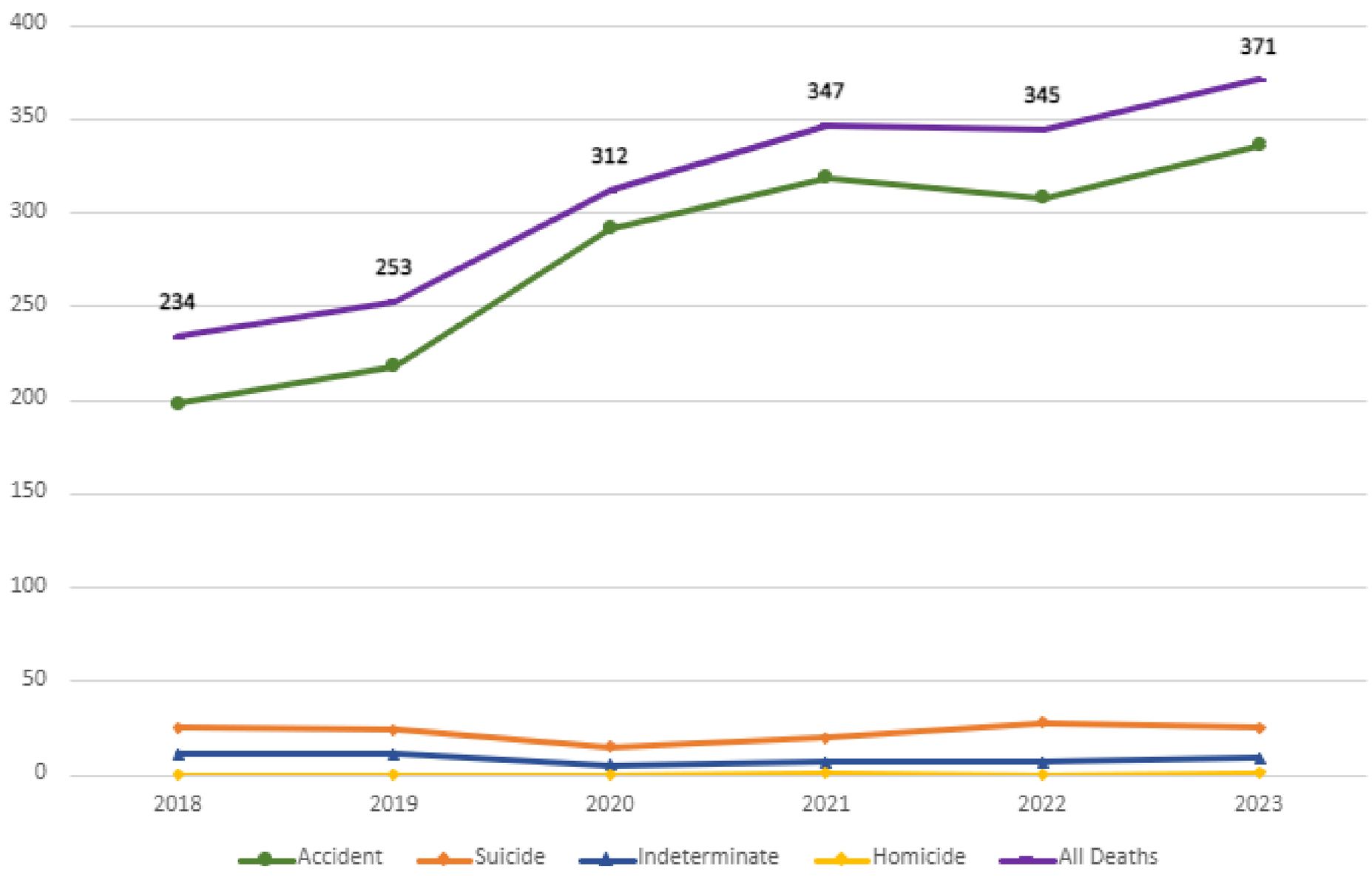
Medical Examiner and
Forensic Services

Drug-Related Death Trends

Manner of Drug-Related Deaths by Year, All Counties (12)

	2018	2019	2020	2021	2022	2023
Accident	198	218	292	319	308	**337**
Suicide	25	24	15	20	28	**25**
Homicide	0	0	0	1	0	**1**
Indeterminate	11	11	5	7	7	**9**
Total	**234**	**253**	**312**	**347**	**345**	**372**
Total involving opioids	178	177	240	266	265	**267**
% of Deaths involving opioid(s)	76%	70%	77%	77%	77%	**72%**

Drug-Related Deaths by Year, All Counties (12)



Drug-Related Death Trends

Manner of Drug-Related Deaths 2023, All Counties (12)

	2023 Accidental Drug-Related Deaths	2023 Indeterminate Drug-Related Deaths	2023 Opioid-Related Deaths
Allegan	9	0	6
Barry	9	0	7
Berrien	50	4	38
Calhoun	37	0	30
Cass	9	0	8
Grand Traverse	33	1	22
Kalamazoo	86	1	67
Leelanau	1	0	0
Mason	6	0	7
Muskegon	75	3	67
St. Joseph	8	0	6
Van Buren	14	0	9
2023 Total	**337**	**9**	**267**
2022 Total*	308	7	265

9.1% increase in accidental drug-related deaths from 2022 to 2023

*Osceola County was not included in the total for 2022 to allow for a clearer comparison between 2022 and 2023.

Drug-Related Death Trends

Drug-Related Deaths Comparison by Year, All Counties (12)

	2022 Accidental Drug-Related Deaths	2023 Accidental Drug-Related Deaths	2022 All Drug-Related Deaths*	2023 All Drug-Related Deaths
Allegan	15	9	16	11
Barry	8	9	8	9
Berrien	50	50	57	57
Calhoun	42	37	47	41
Cass	8	9	8	10
Grand Traverse	22	32	22	35
Kalamazoo	62	86	73	90
Leelanau	1	1	2	1
Mason	6	6	6	8
Muskegon	71	75	78	86
St. Joseph	11	8	12	9
Van Buren	13	14	16	14
Total	**308**	**337**	**345**	**372**

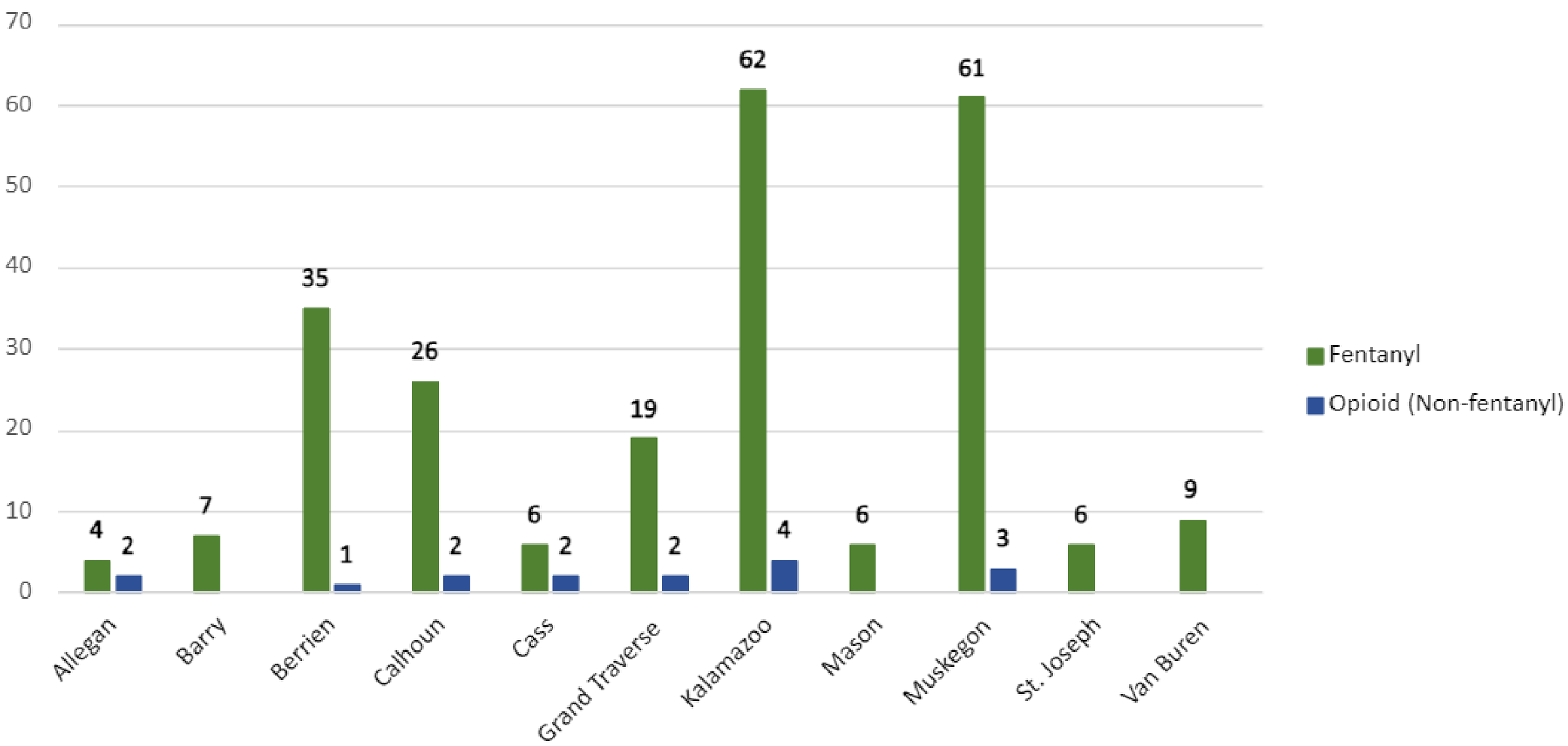
- Allegan County: **40%** **decrease** in accidental drug-related deaths from 2022
- Calhoun County: **11.9%** **decrease** in accidental drug-related deaths from 2022
- Grand Traverse County: **45.5%** **increase** in accidental drug-related from 2022
- Kalamazoo County: **38.7%** **increase** in accidental drug-related deaths from 2022
- **7.5%** **increase** **in all drug-related deaths**

*Osceola County was not included in the total for 2022 to allow for a clearer comparison between 2022 and 2023.

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Opioid-Related Deaths

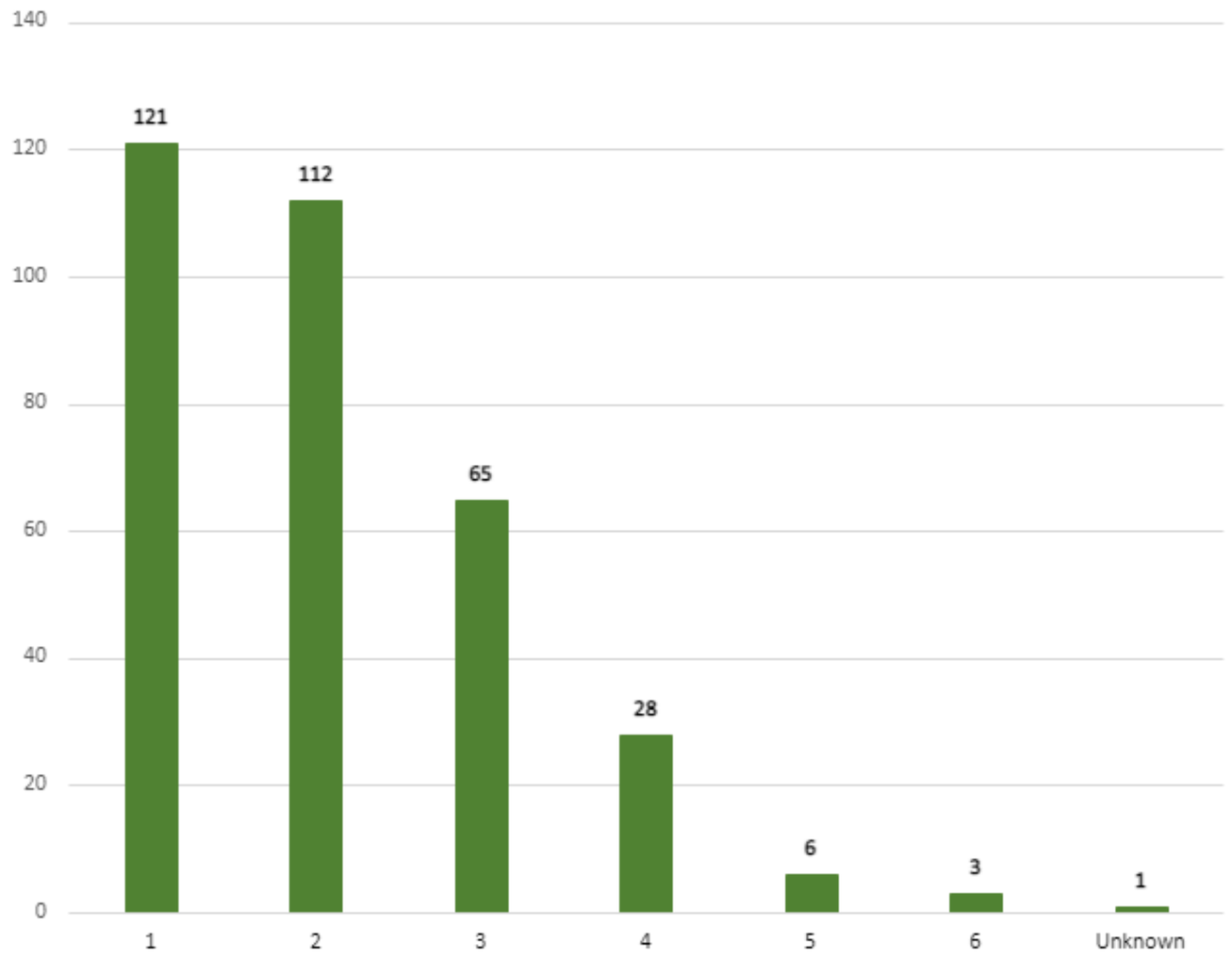
Opioids Identified in Cause of Death for Accidental Drug-Related Deaths by County



- **257** accidental drug-related deaths involved fentanyl or an opioid
- **76%** of all accidental drug-related deaths involved fentanyl or an opioid
- **241** accidental drug-related deaths involved fentanyl
- **72%** of accidental drug-related deaths involved fentanyl

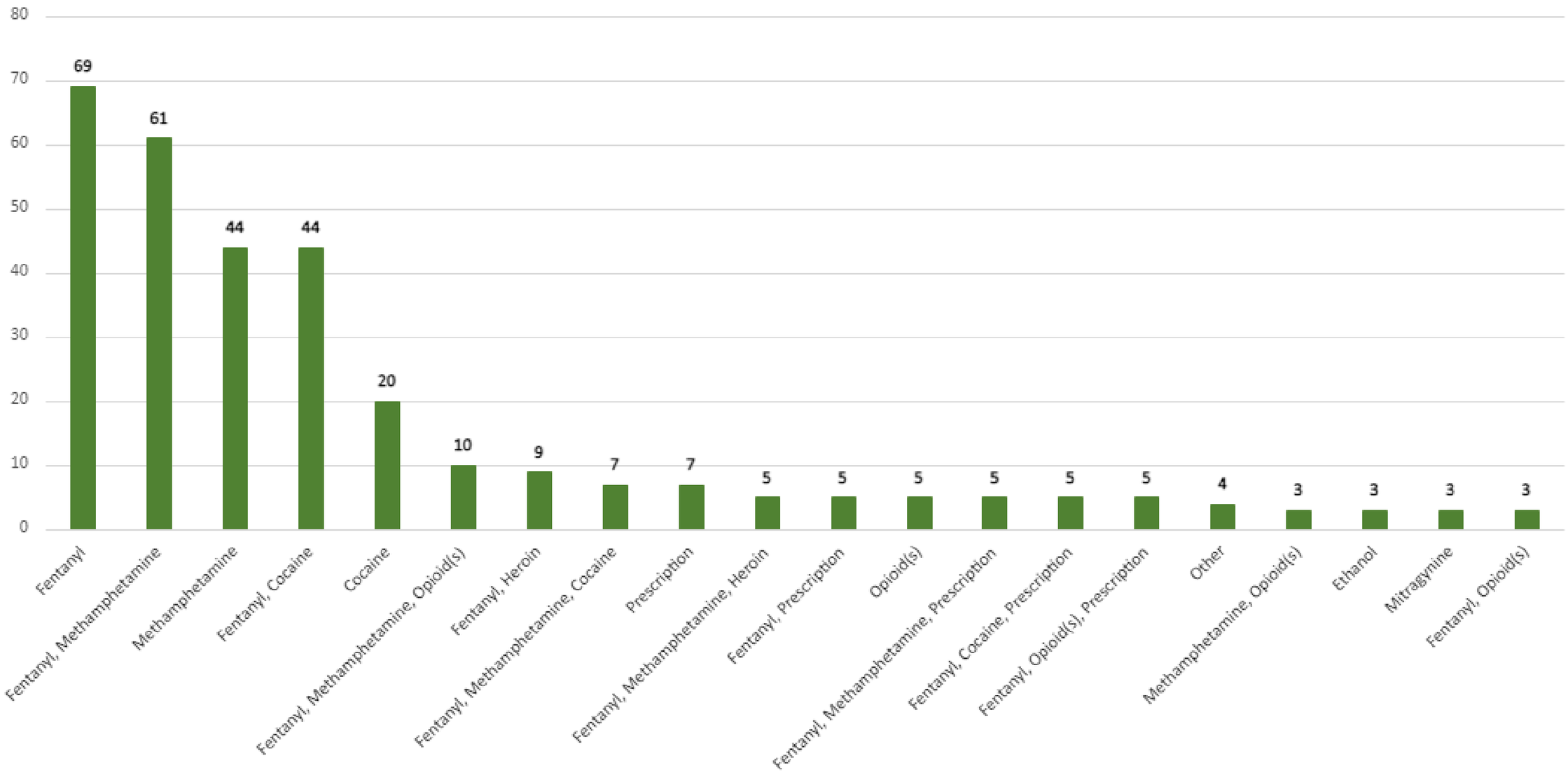
Polysubstance Use & Drug Type

Number of Substances Listed on Death Certificate that Contributed to Accidental Drug-Related Deaths



- **30% or 102** of accidental drug-related deaths involved 3 or more substances
- **33%** of accidental drug-related deaths involved 2 substances
- **36%** of accidental drug-related deaths involved only a single substance

Drugs Identified in Cause of Death for Accidental Drug-Related Deaths*

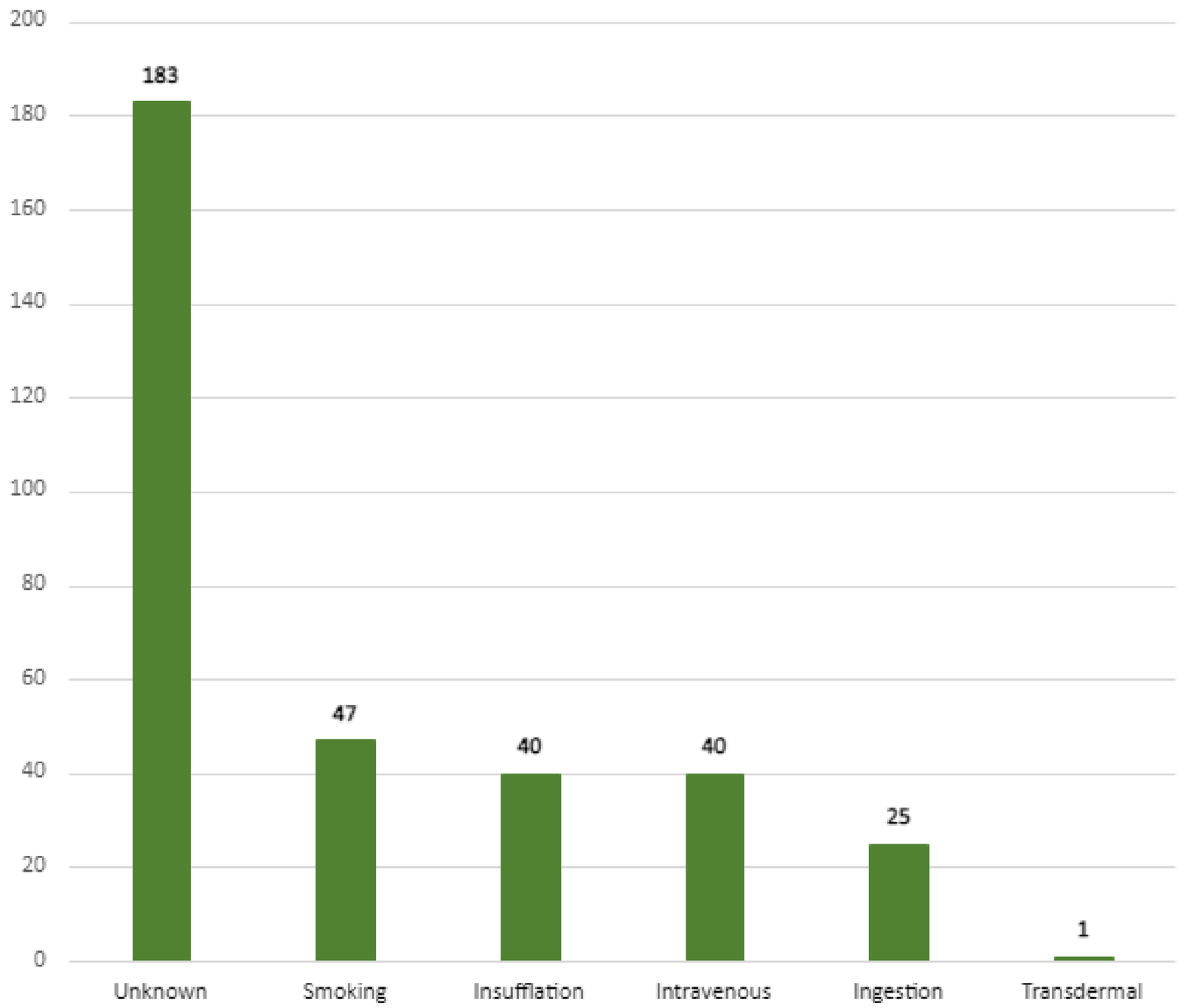


*Only showing instances where each drug combination occurred more than twice in the year

**"Other" refers to any non-opioid prescription, cleaning materials, and chemicals

Routes of Administration

Route of Administration for Accidental Drug-Related Deaths

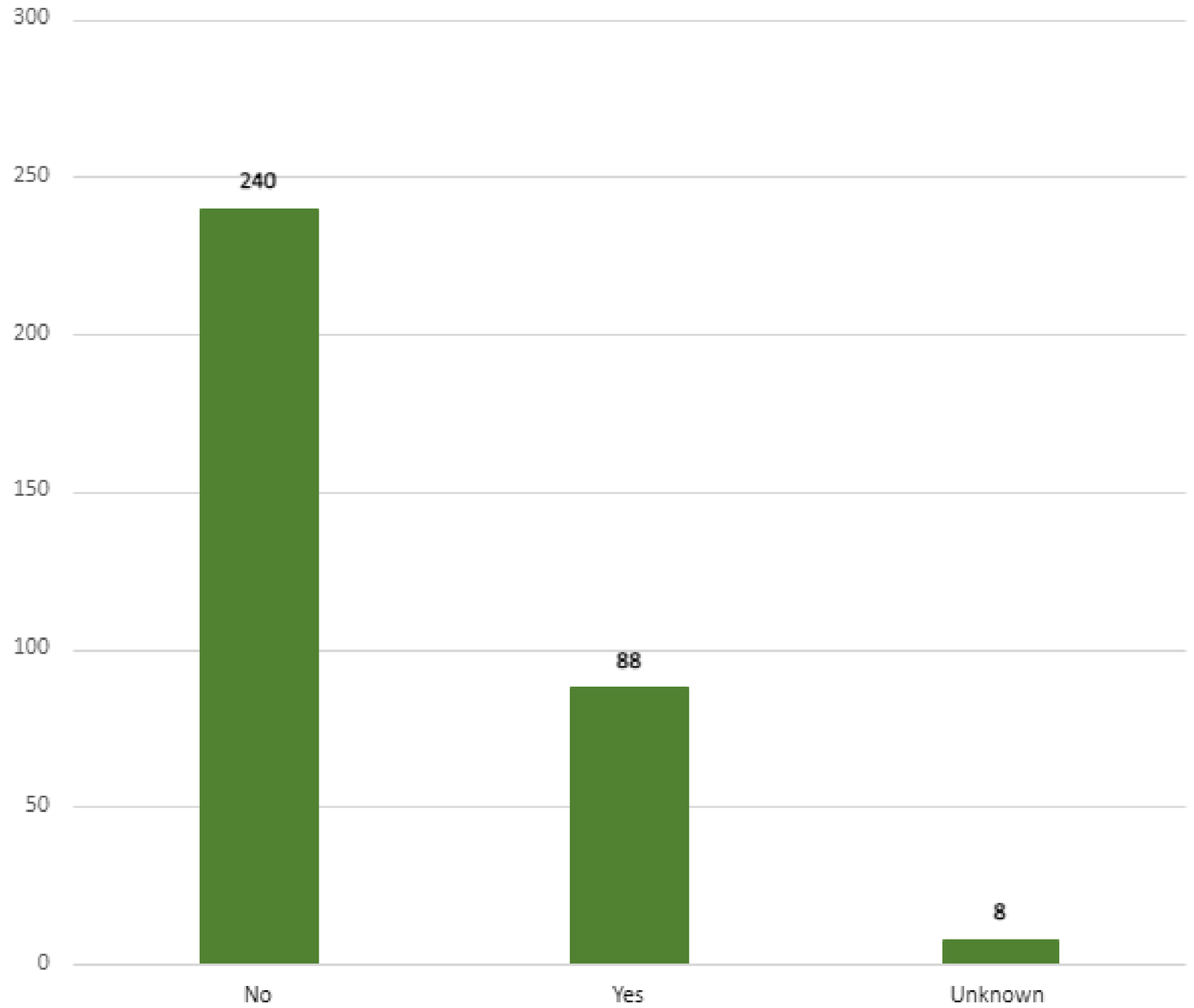


- **14%** of accidental drug-related deaths involved smoking of illicit substances
- **12%** of accidental drug-related deaths involved insufflation of substances*
- **12%** of accidental drug-related deaths involved intravenous (IV) drug use
- **7.4%** of accidental drug-related deaths involved ingestion

*Insufflation is the act of blowing a substance into a body cavity. This route of administration is commonly known as “snorting”.

Naloxone Administration

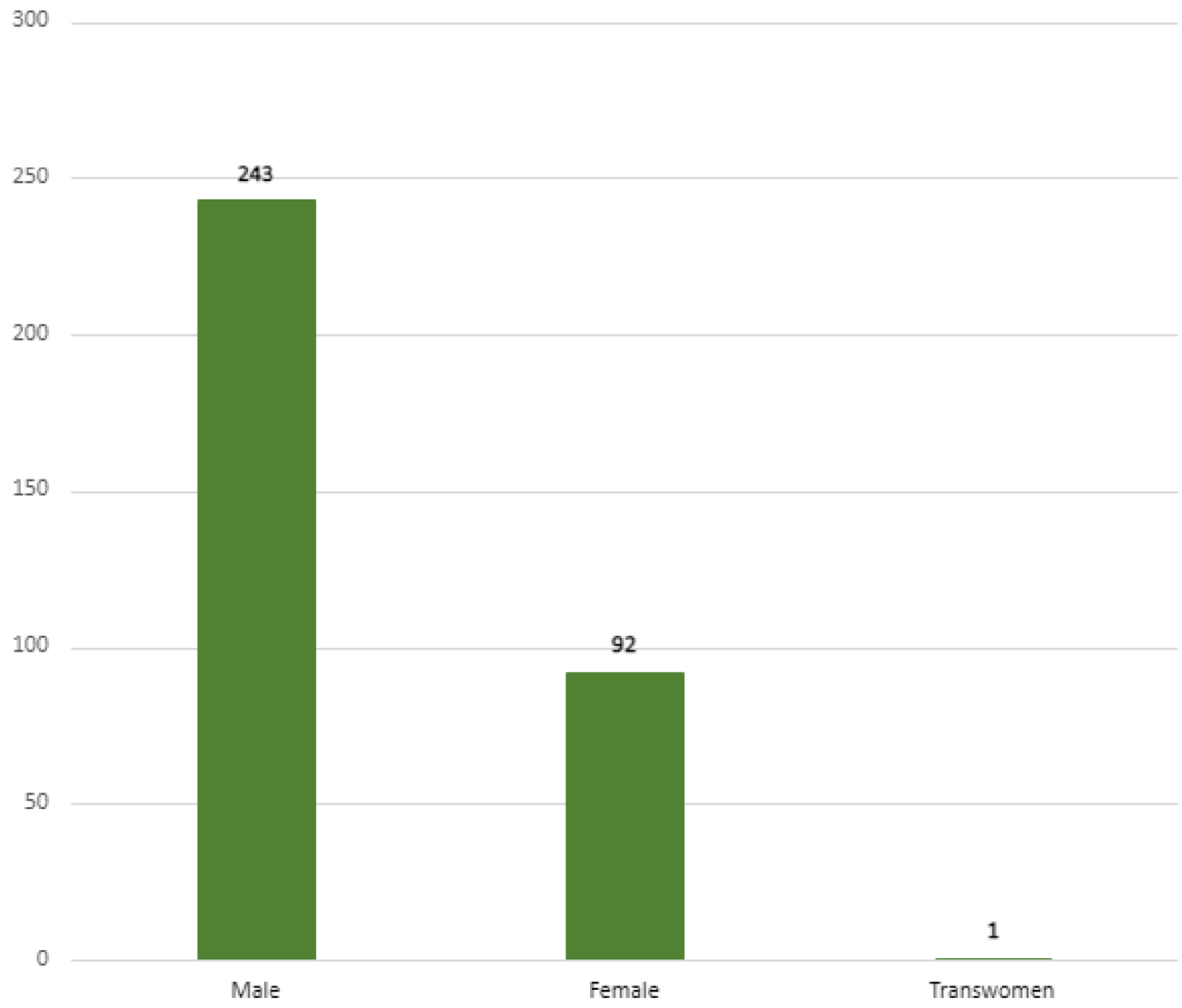
Naloxone (Narcan) Administration in Accidental Drug-Related Deaths



- **Naloxone was administered on scene in 26.2%** of confirmed accidental drug-related deaths
- Naloxone may not have been administered because the individual was obviously deceased when first responders arrived

Demographics

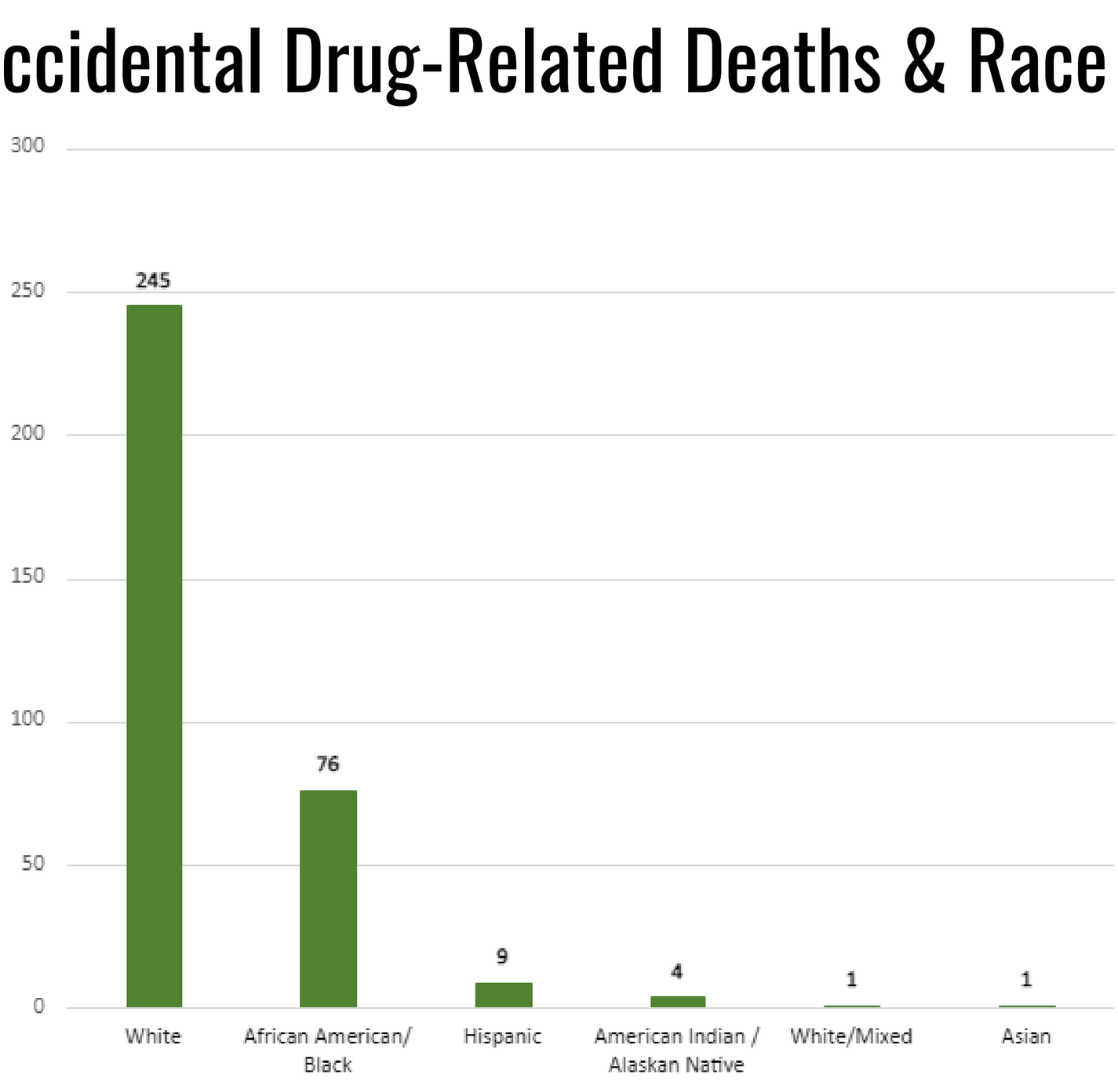
Accidental Drug-Related Deaths & Sex



Accidental Drug-Related Deaths & Age

- **2** adolescents (<18 yrs)
- **36** young adults (18-29 yrs)
- **278** adults (30-65 yrs)
- **20** older adults (65+ yrs)

Accidental Drug-Related Deaths & Race



Accidental Drug-Related Deaths & Veteran Status

- **21** were veterans
- **315** were not veterans

Demographics

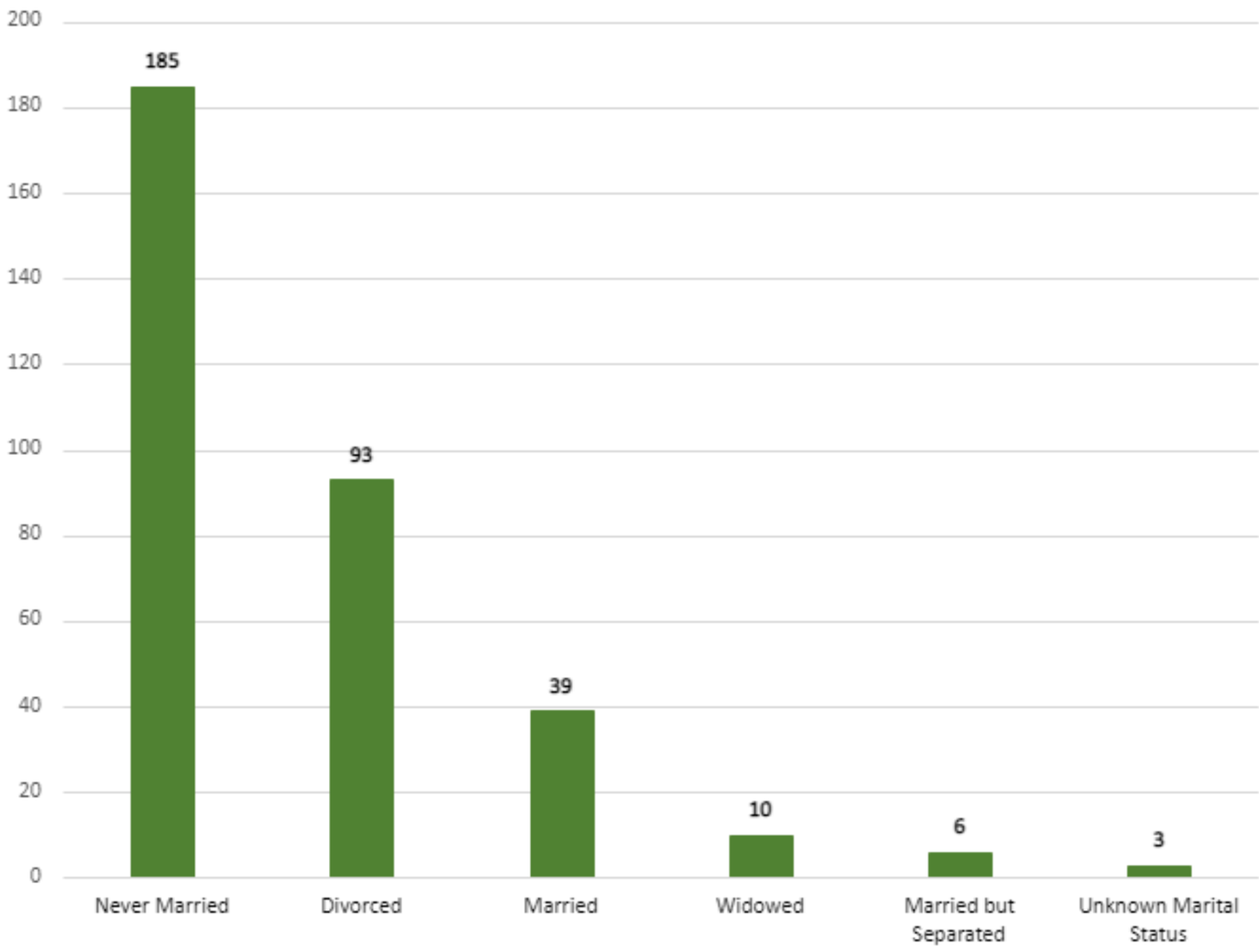
Accidental Drug-Related Deaths & Housing Status

- **280** had secure housing
- **48** were unhoused
- **8** had an unknown housing status

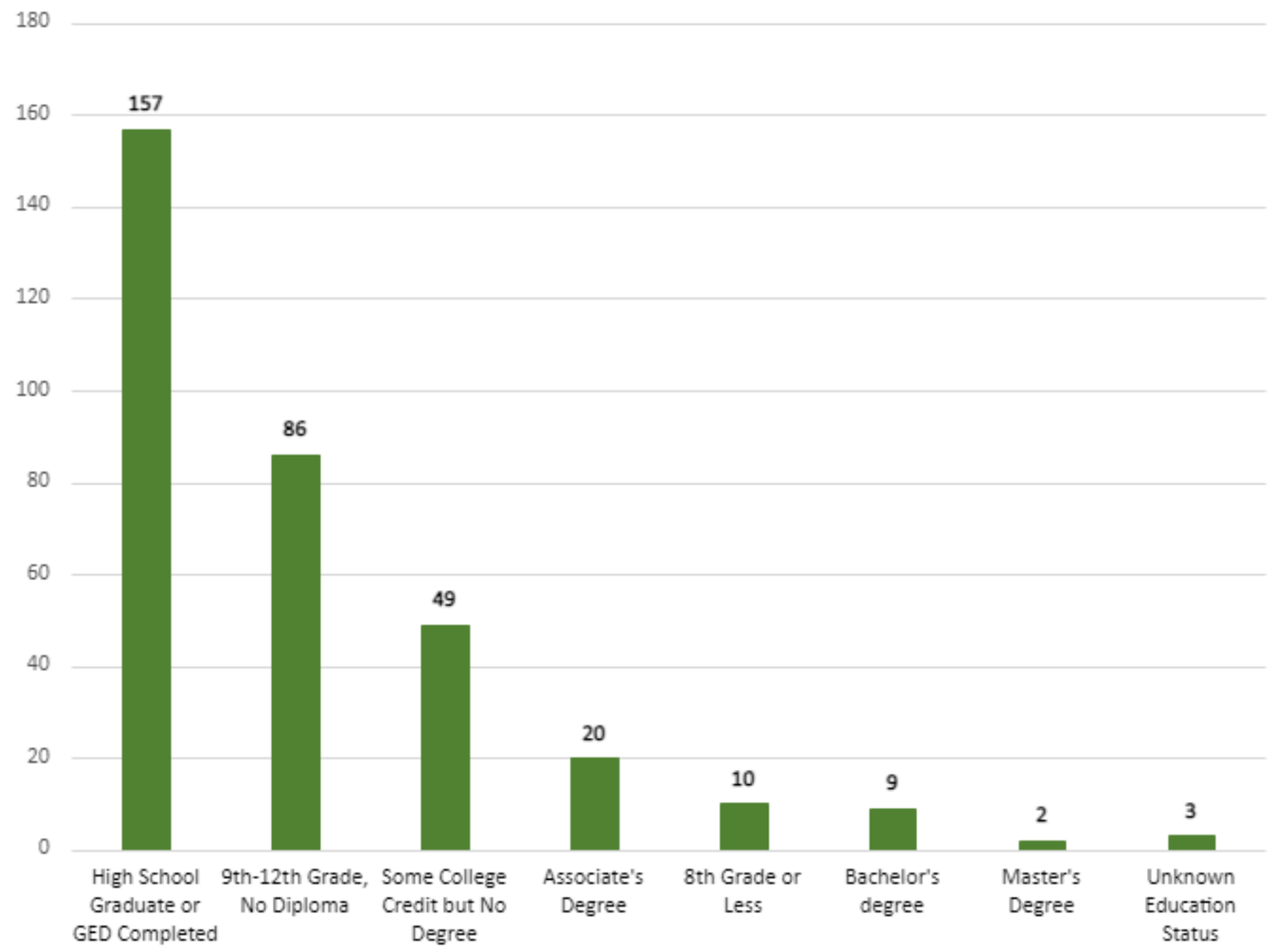
Accidental Drug-Related Deaths & Employment Status

- **103** were employed
- **155** were unemployed
- **4** were retired
- **8** were unemployed due to disability
- **66** had an unknown employment status

Accidental Drug-Related Deaths & Marital Status

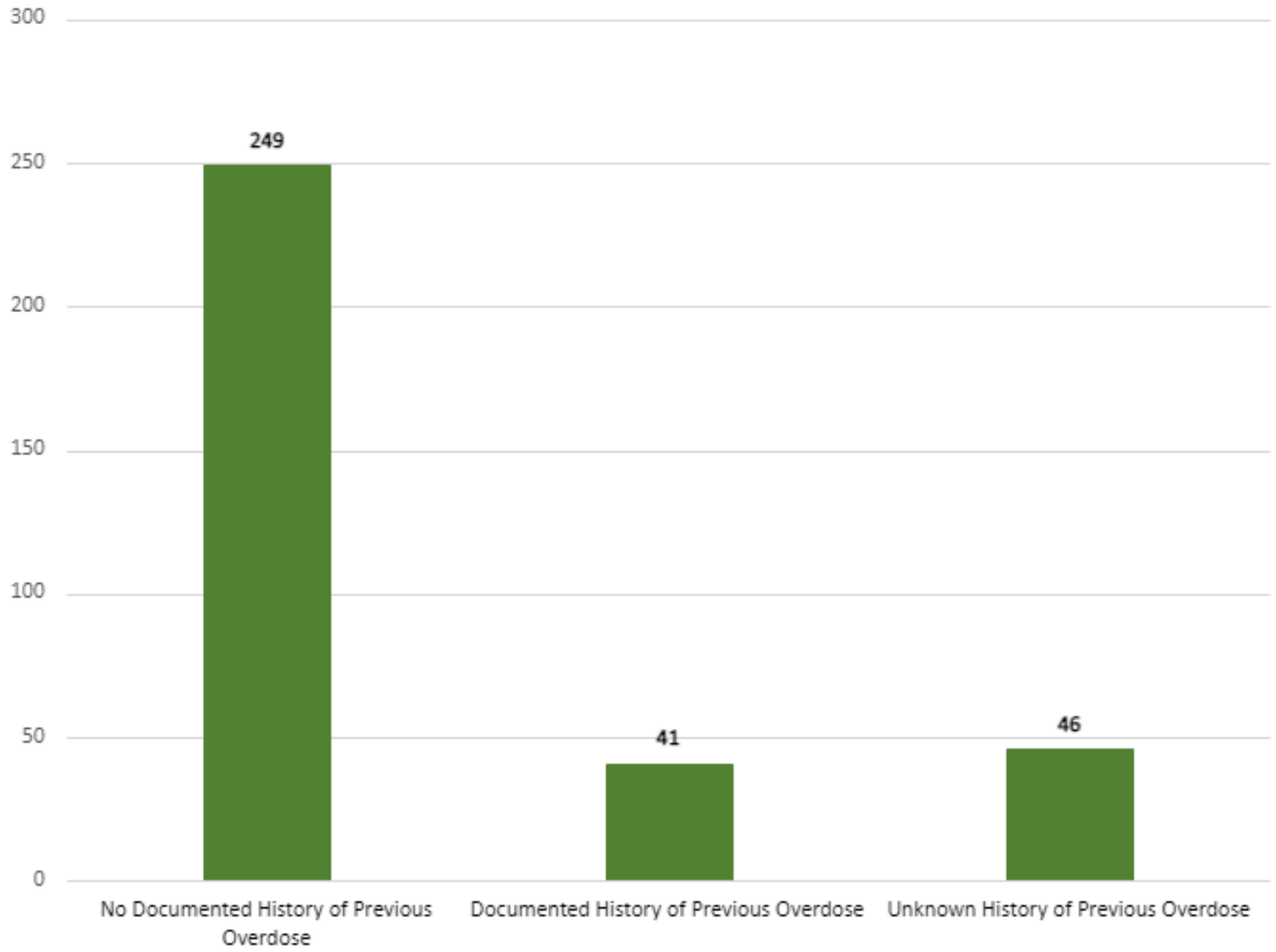


Accidental Drug-Related Deaths & Education Status



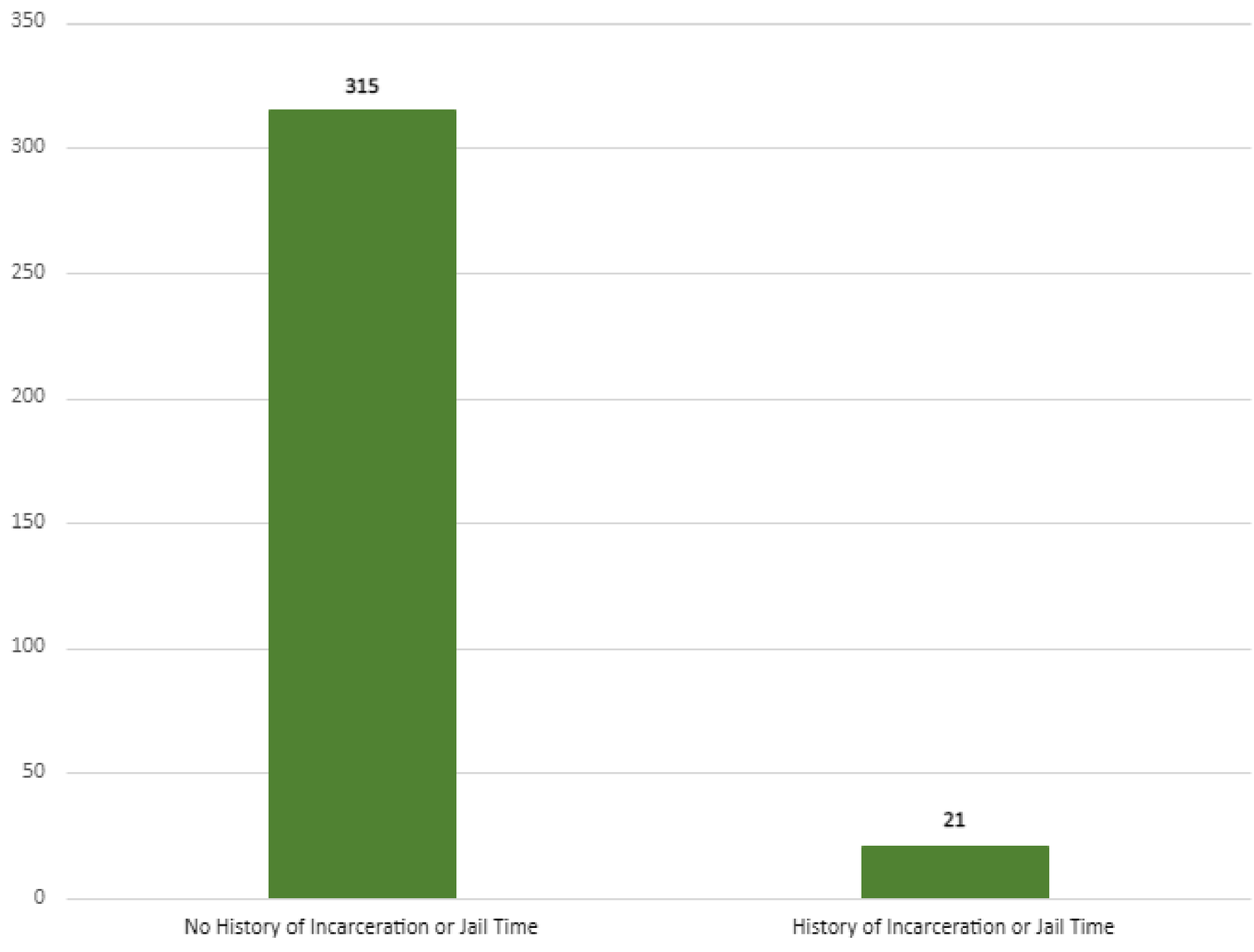
Demographics

Accidental Drug-Related Deaths & History of Previous Overdose



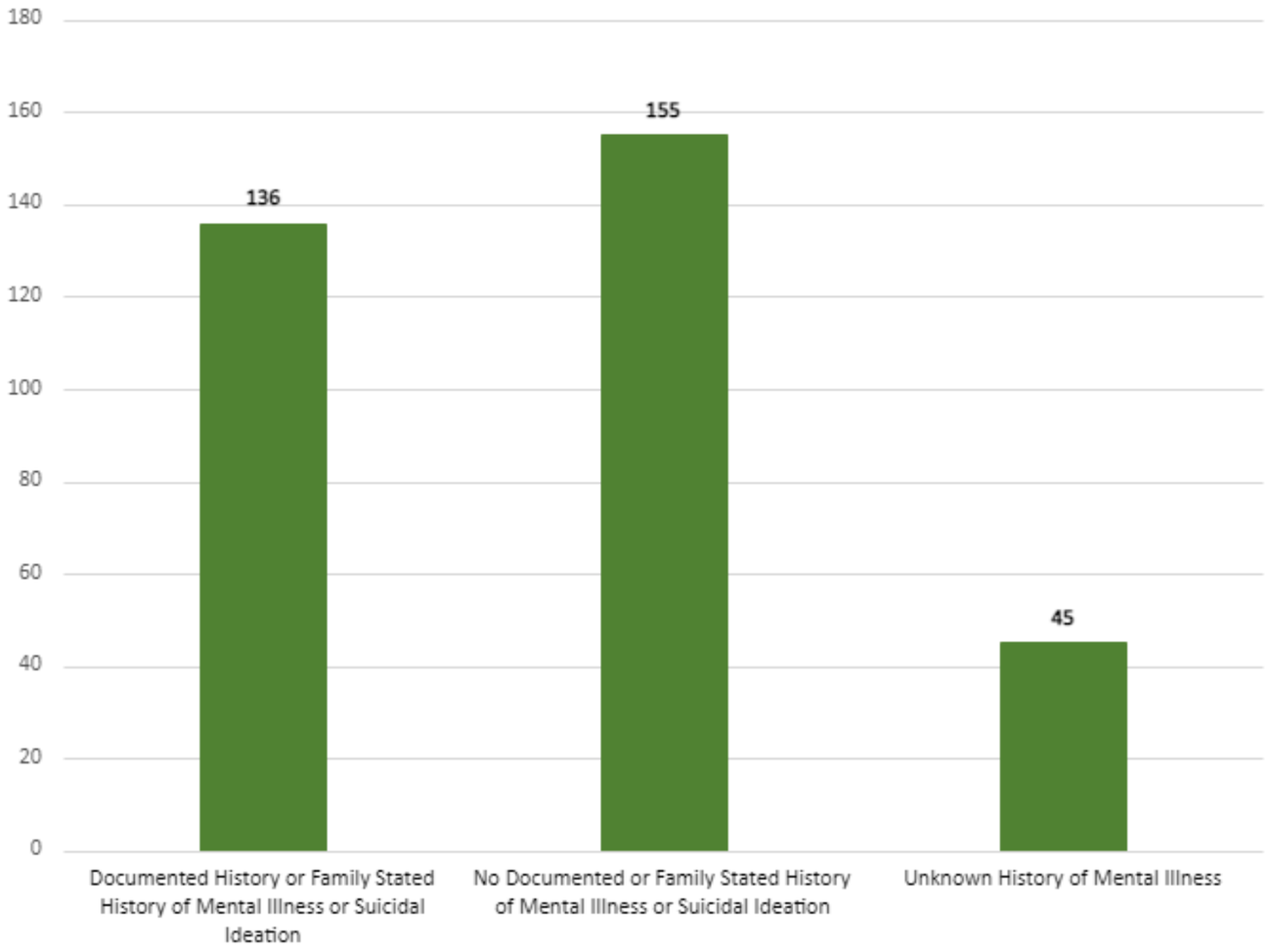
- **249** accidental drug-related deaths **did not** have a known or reported history of a previous overdose
- **41** accidental drug-related deaths had a least one overdose reported in their medical history
- **12.2%** of accidental drug-related deaths had a reported **previous overdose**

Accidental Drug-Related Deaths & History of Incarceration



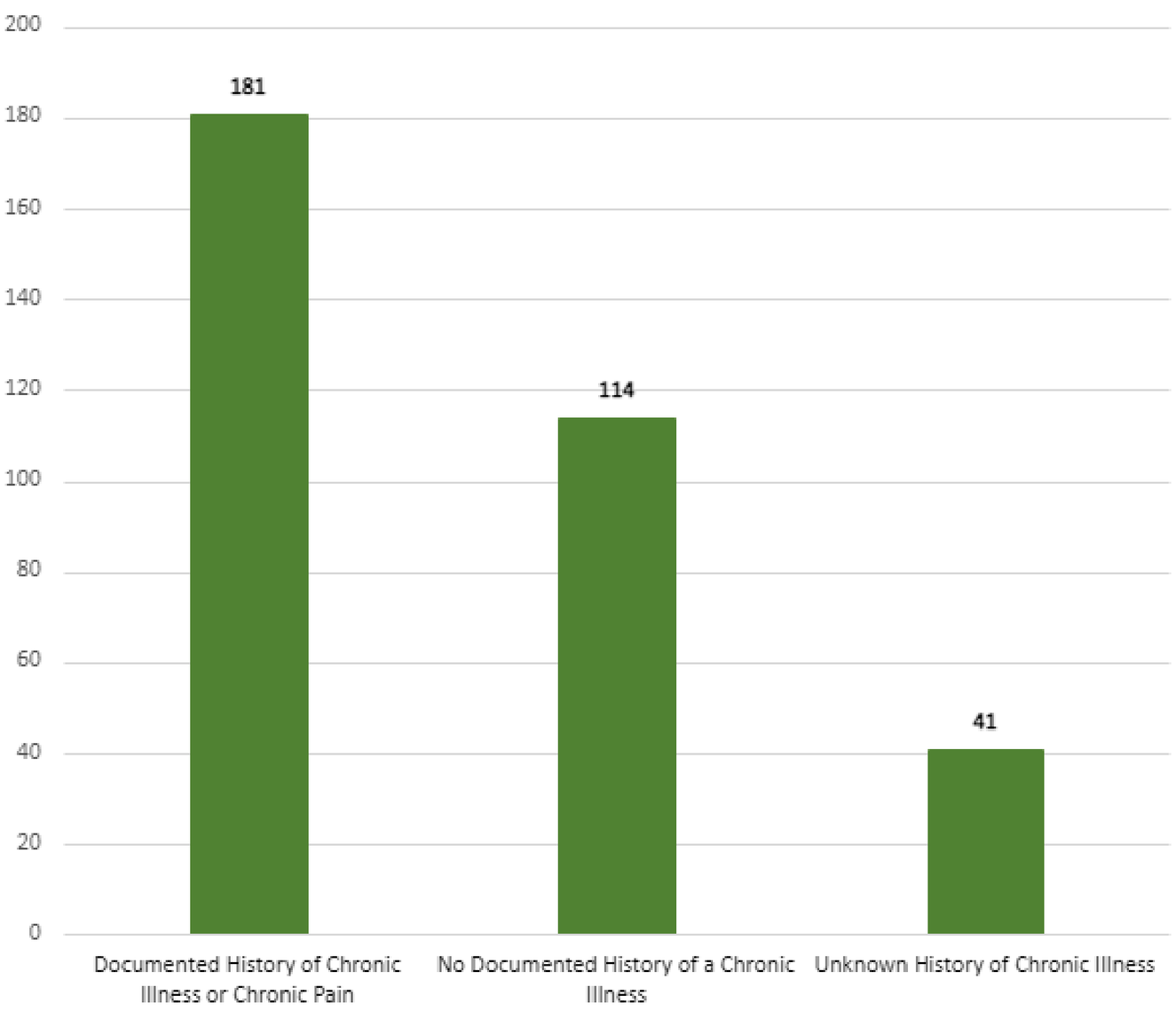
Demographics

Accidental Drug-Related Deaths & History of Mental Illness



- **136** had a documented history of mental illness
- **40%** of all accidental drug-related deaths had a documented mental illness
- **181** had a documented history of chronic illness
- **54%** of all accidental drug-related deaths had a documented chronic illness
- **80** had both a documented history of mental illness and chronic illness
- **24%** of all accidental drug-related deaths had documented mental illness and a chronic illness

Accidental Drug-Related Deaths & History of Chronic Illness

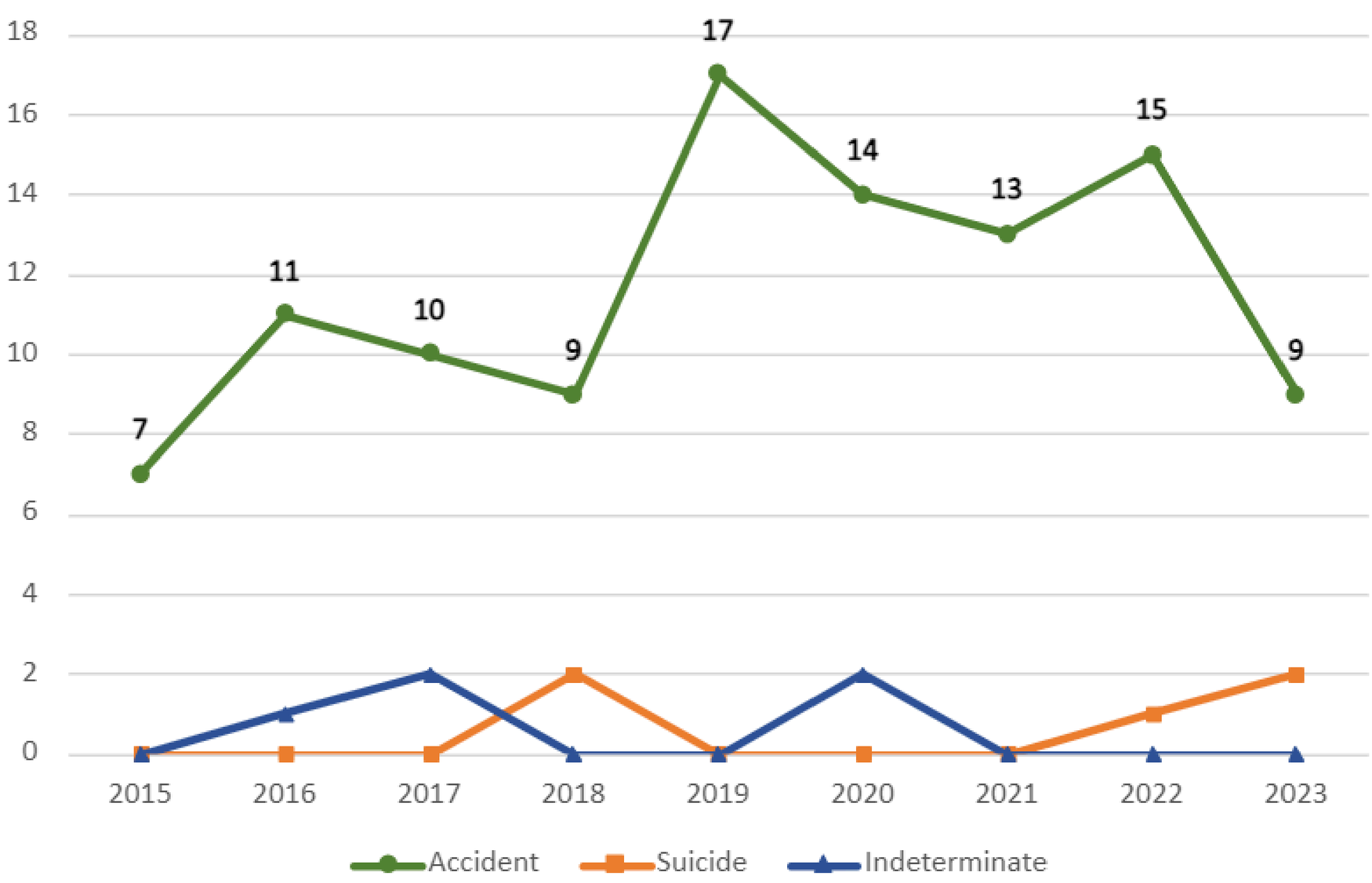


Allegan County

Drug-Related Deaths by Manner

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accident	7	11	10	9	17	14	13	15	**9**
Suicide	0	0	0	2	0	0	0	1	**2**
Indeterminate	0	1	2	0	0	2	0	0	**0**
Total	**7**	**12**	**12**	**11**	**17**	**16**	**13**	**16**	**11**
Total involving opioids	6	8	6	8	13	11	9	9	**6**
% of Deaths involving opioid(s)	86%	67%	50%	78%	76%	69%	69%	60%	**55%**

Drug-Related Deaths by Year



Allegan County

All Drug-Related Deaths

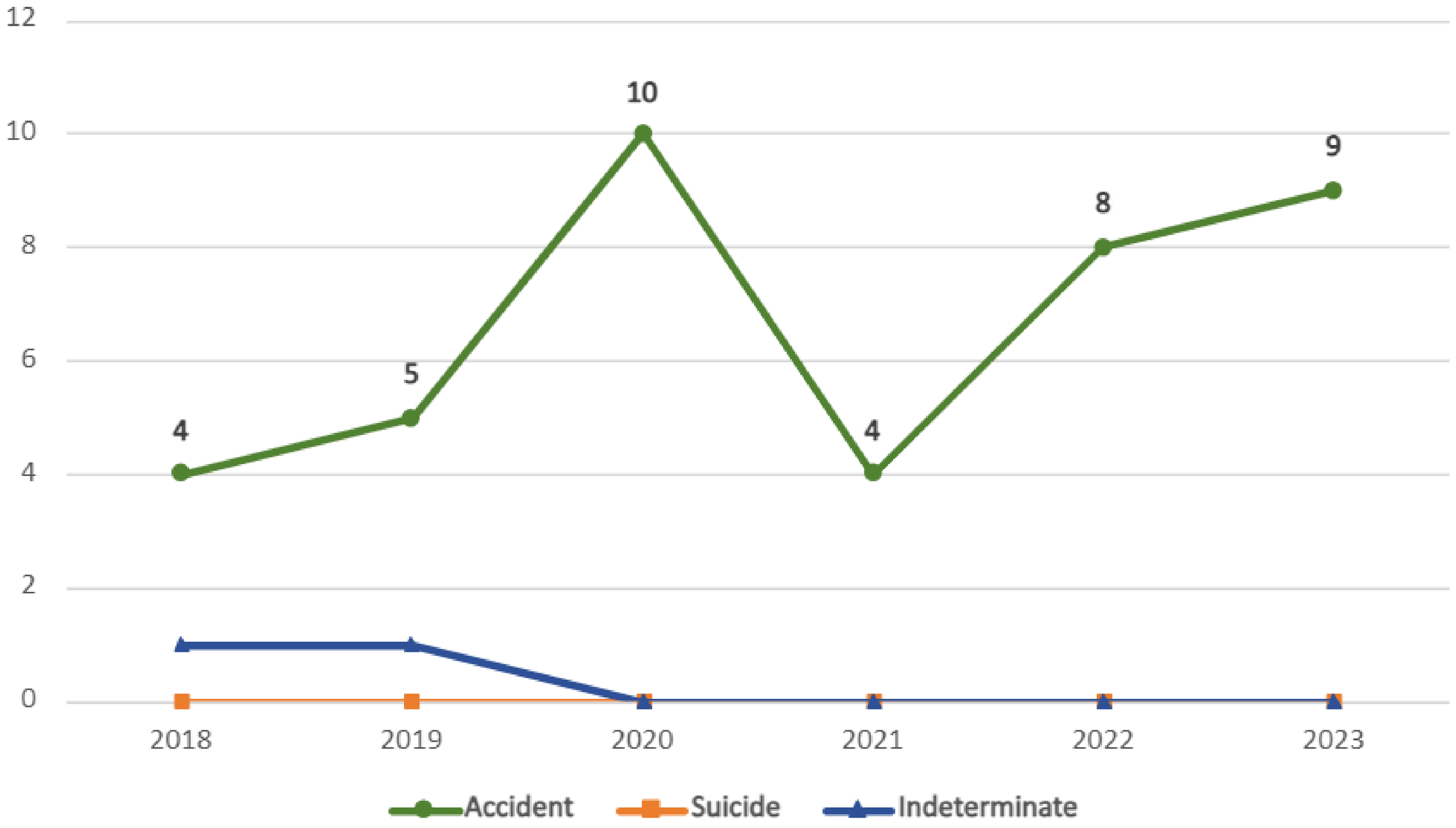
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
44	Male	White	49348	Diphenhydramine	N
54	Female	White	49348	Amphetamine, Quetiapine	N
52	Male	White	49348	Methamphetamine	N
33	Male	White	49419	Fentanyl, Ethanol	Y
56	Male	White	49419	Alprazolam, Nordiazepam, Methadone	Y
39	Male	White	49080	Fentanyl, Ethanol, Hydrocodone, Methamphetamine	Y
45	Male	White	49080	Methamphetamine	N
19	Male	Hispanic	49078	Fentanyl	Y
51	Female	White	49078	Oxycodone	Y
50	Female	White	49323	Fentanyl, para-Fluorofentanyl	Y
58	Female	White	49344	Methamphetamine	N

Barry County

Drug-Related Deaths by Manner

	2018	2019	2020	2021	2022	2023
Accident	4	5	10	4	8	**9**
Suicide	0	0	0	0	0	**0**
Indeterminate	1	1	0	0	0	**0**
Total	**5**	**6**	**10**	**4**	**8**	**9**
Total involving opioids	2	4	8	4	7	**7**
% of Deaths involving opioid(s)	40%	67%	80%	100%	88%	**78%**

Drug-Related Deaths by Year



Barry County

All Drug-Related Deaths

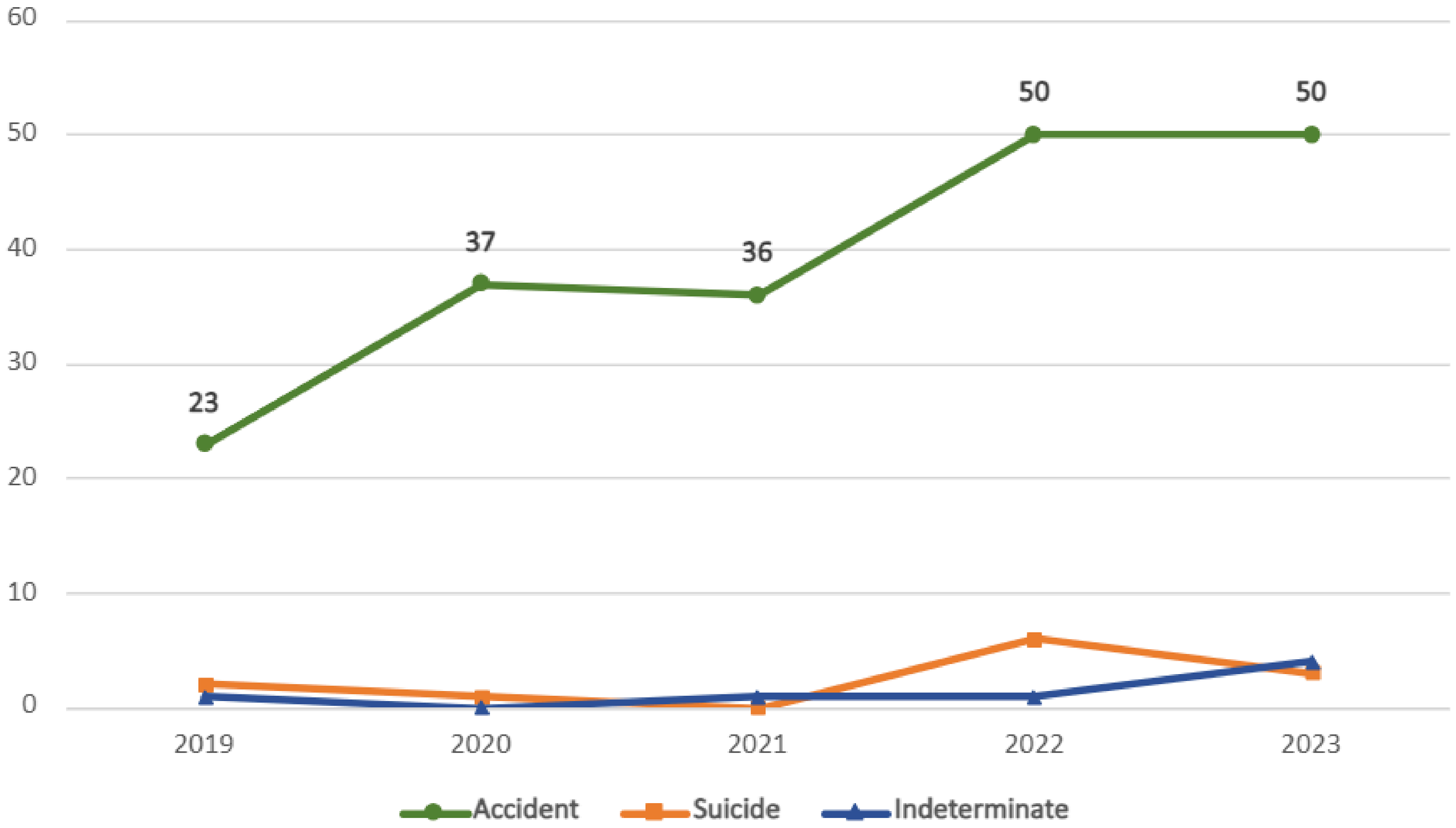
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
37	Male	White	49058	Fentanyl, Ethanol	Y
43	Male	White	49058	Methamphetamine	N
47	Male	White	49058	Fentanyl, Methamphetamine	Y
61	Male	White	49058	Fentanyl, Methamphetamine	Y
33	Male	White	49080	Fentanyl	Y
38	Male	White	49344	Fentanyl, Methamphetamine	Y
48	Male	White	49046	Methamphetamine	N
50	Female	White	39333	Fentanyl, Heroin, para-Fluorofentanyl, Diphenhydramine	Y
50	Male	White	49097	Fentanyl, Methamphetamine	Y

Berrien County

Drug-Related Deaths by Manner

	2019	2020	2021	2022	2023
Accident	23	37	36	50	**50**
Suicide	2	1	0	6	**3**
Indeterminate	1	0	1	1	**4**
Total	**26**	**38**	**37**	**57**	**57**
Total involving opioids	22	29	28	46	**38**
% of Deaths involving opioid(s)	92%	78%	76%	86%	**67%**

Drug-Related Deaths by Year



Berrien County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
23	Male	African American/Black	49022	Fentanyl, Carfentanil, Cocaine, Ethanol, para-Fluorofentanyl	Y
30	Male	White	49022	Methadone, Methamphetamine	Y
34	Male	White	49022	Fentanyl, Acetyl fentanyl, Methamphetamine	Y
35	Female	White	49022	Fentanyl, Methamphetamine, para-Fluorofentanyl	Y
39	Male	White	49022	Fentanyl, Methamphetamine	Y
39	Male	African American/Black	49022	Fentanyl, Diphenhydramine	Y
40	Female	White	49022	Fentanyl, Methamphetamine	Y
40	Female	African American/Black	49022	Fentanyl, Cocaine, Ethanol	Y
45	Female	White	49022	Fentanyl, Methamphetamine	Y
46	Male	African American/Black	49022	Fentanyl, Cocaine	Y
48	Male	African American/Black	49022	Fentanyl, Cocaine, para-Fluorofentanyl	Y
53	Male	White	49022	Methamphetamine	N
54	Female	White	49022	Methamphetamine	N
56	Female	African American/Black	49022	Cocaine	N
61	Male	African American/Black	49022	Fentanyl, Cocaine	Y
62	Male	African American/Black	49022	Cocaine	N
64	Female	White	49022	Fentanyl, Cocaine	Y
65	Male	African American/Black	49022	Fentanyl, Cocaine	Y
31	Male	African American/Black	49120	Fentanyl, Ethanol	Y
32	Female	White	49120	Clonazepam, Cyclobenzaprine, Lamotrigine, Venlafaxine	N
35	Male	White	49120	Fentanyl, Methamphetamine, Metonitazene	Y
39	Male	White	49120	Ethanol	N
42	Male	White	49120	Fentanyl, Acetyl fentanyl, Cocaine, Methamphetamine, para-Fluorofentanyl	Y
44	Male	Hispanic	49120	Fentanyl, Ethanol	Y
47	Female	White	49120	Fentanyl	Y
51	Male	White	49120	Fentanyl, Methamphetamine	Y
54	Male	White	49120	Fentanyl	Y
59	Male	White	49120	Fentanyl, Methamphetamine	Y
62	Male	White	49120	Fentanyl	Y
69	Male	White	49120	Methamphetamine	N

Berrien County

All Drug-Related Deaths

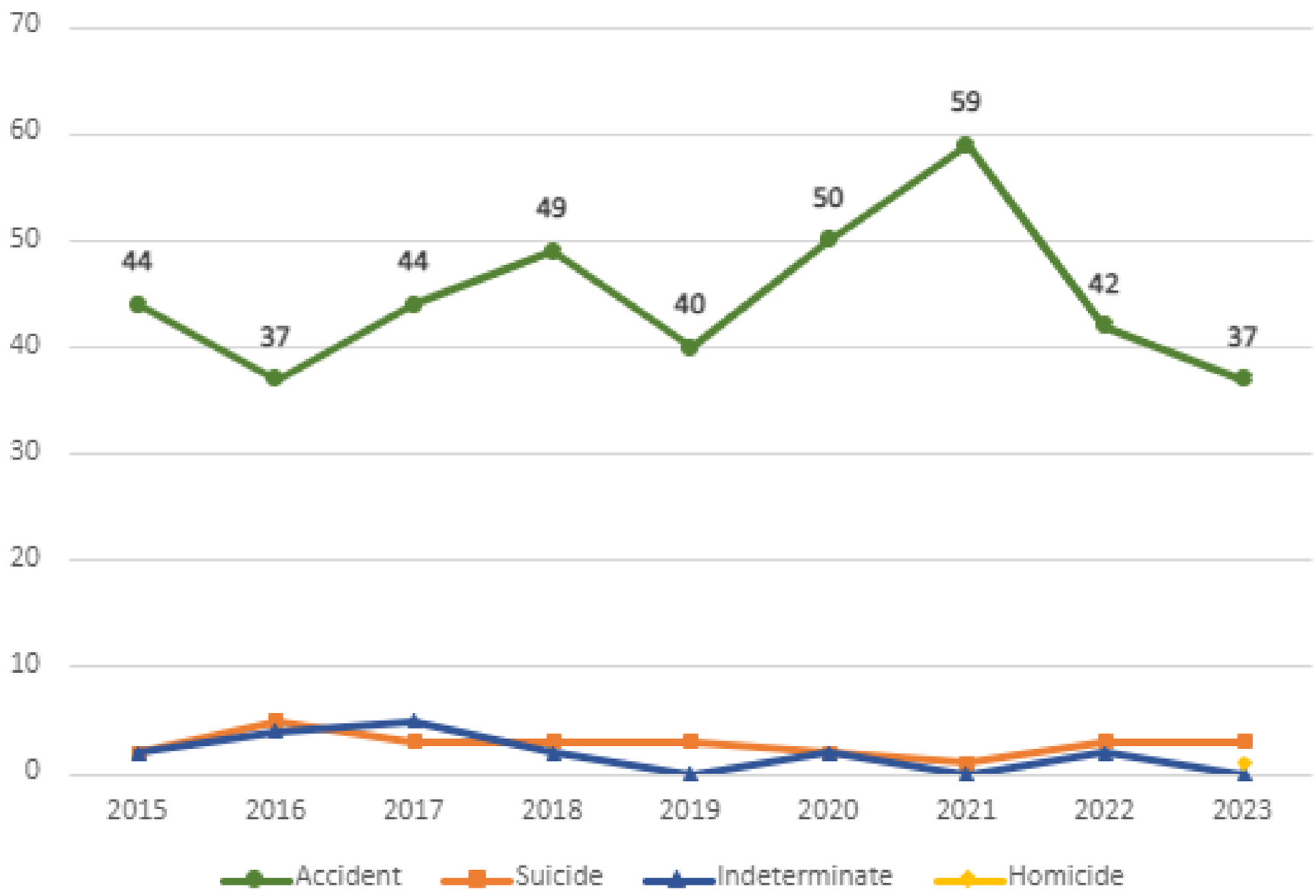
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
16	Male	White	49038	Diphenhydramine	N
30	Male	White	49038	Fentanyl, Methamphetamine, Xylazine	Y
39	Male	White	49038	Fentanyl, Methamphetamine	Y
40	Female	American Indian/ Alaskan Native	49038	Methamphetamine	N
51	Female	White	49038	Fentanyl, Methadone, para-Fluorofentanyl	Y
57	Male	African American/Black	49038	Fentanyl	Y
58	Female	American Indian/ Alaskan Native	49038	Fentanyl, Methamphetamine	Y
64	Male	White	49038	Methamphetamine	N
37	Male	White	49098	Fentanyl, Heroin	Y
37	Male	White	49098	Fentanyl	Y
40	Female	White	49098	Methamphetamine	N
43	Female	White	49098	Fentanyl	Y
58	Male	White	49098	Fentanyl, Diazepam, Methamphetamine	Y
29	Male	Hispanic	49117	Ethanol	N
30	Male	White	49117	Sodium Nitrite	N
59	Female	Hispanic	49117	Fentanyl	Y
54	Female	White	49127	Fentanyl, Methamphetamine	Y
60	Male	White	49127	Fentanyl, Cocaine	Y
32	Female	White	49085	Cocaine	N
48	Male	African American/Black	49085	Methamphetamine	N
52	Male	White	49126	Fentanyl	Y
57	Male	White	49103	Bromazolam, Methamphetamine, Opioids	Y
53	Female	White	49107	Acetaminophen, Methamphetamine	N
49	Male	White	Unknown place of injury	Methamphetamine	N
58	Male	White	Unknown place of injury	Cocaine	N
59	Male	African American/Black	Unknown place of injury	Cocaine	N
64	Male	White & American Indian/Alaskan Native	Unknown place of injury	Fentanyl	Y

Calhoun County

Drug-Related Deaths by Manner

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accident	44	37	44	49	40	50	59	42	**37**
Suicide	2	5	3	3	3	2	1	3	**3**
Homicide	0	0	0	0	0	0	0	0	**1**
Indeterminate	2	4	5	2	0	2	0	2	**0**
Total	**48**	**46**	**52**	**54**	**43**	**54**	**60**	**47**	**41**
Total involving opioids	42	40	48	48	36	46	49	38	30
% of Deaths involving opioid(s)	91%	88%	94%	92%	88%	87%	83%	74%	**73%**

Drug-Related Deaths by Year



Calhoun County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
28	Male	White	49014	Fentanyl, Cocaine, Heroin, Xylazine	Y
36	Male	African American/Black	49014	Fentanyl, Buprenorphine, Cocaine, Xylazine	Y
43	Male	White	49014	Fentanyl	Y
45	Male	White	49014	Fentanyl, Methamphetamine	Y
53	Male	African American/Black	49014	Fentanyl, Cocaine	Y
58	Male	White	49014	Fentanyl, Cocaine	Y
59	Male	White	49014	Fentanyl, Cyclobenzaprine, Methamphetamine	Y
59	Male	White	49014	Fentanyl, Cocaethylene, Cocaine, Ethanol	Y
65	Female	African American/Black	49014	Cocaine	N
70	Female	White & American Indian/Alaskan Native	49014	Acetaminophen	N
40	Male	White	49015	Fentanyl	Y
44	Female	White	49015	Methamphetamine	N
51	Female	White	49015	Methamphetamine	N
53	Female	African American/Black	49015	Cocaine	N
53	Female	White	49015	Fentanyl, Cocaine	Y
57	Male	White	49015	Fentanyl	Y
27	Male	African American/Black	49037	Fentanyl, Cocaethylene, Cocaine, Ethanol	Y
35	Male	White	49037	Fentanyl, Methamphetamine	Y
46	Male	White	49037	Mitragynine	Y
48	Female	White	49037	Morphine	Y
48	Female	African American/Black	49037	Cocaine	N
49	Male	White	49037	Ethanol	N
54	Male	White	49037	Fentanyl, Heroin	Y
59	Male	White	49037	Fentanyl, Methamphetamine	Y
64	Male	White	49037	Fentanyl, Acetyl fentanyl, Methamphetamine	Y

Calhoun County

All Drug-Related Deaths

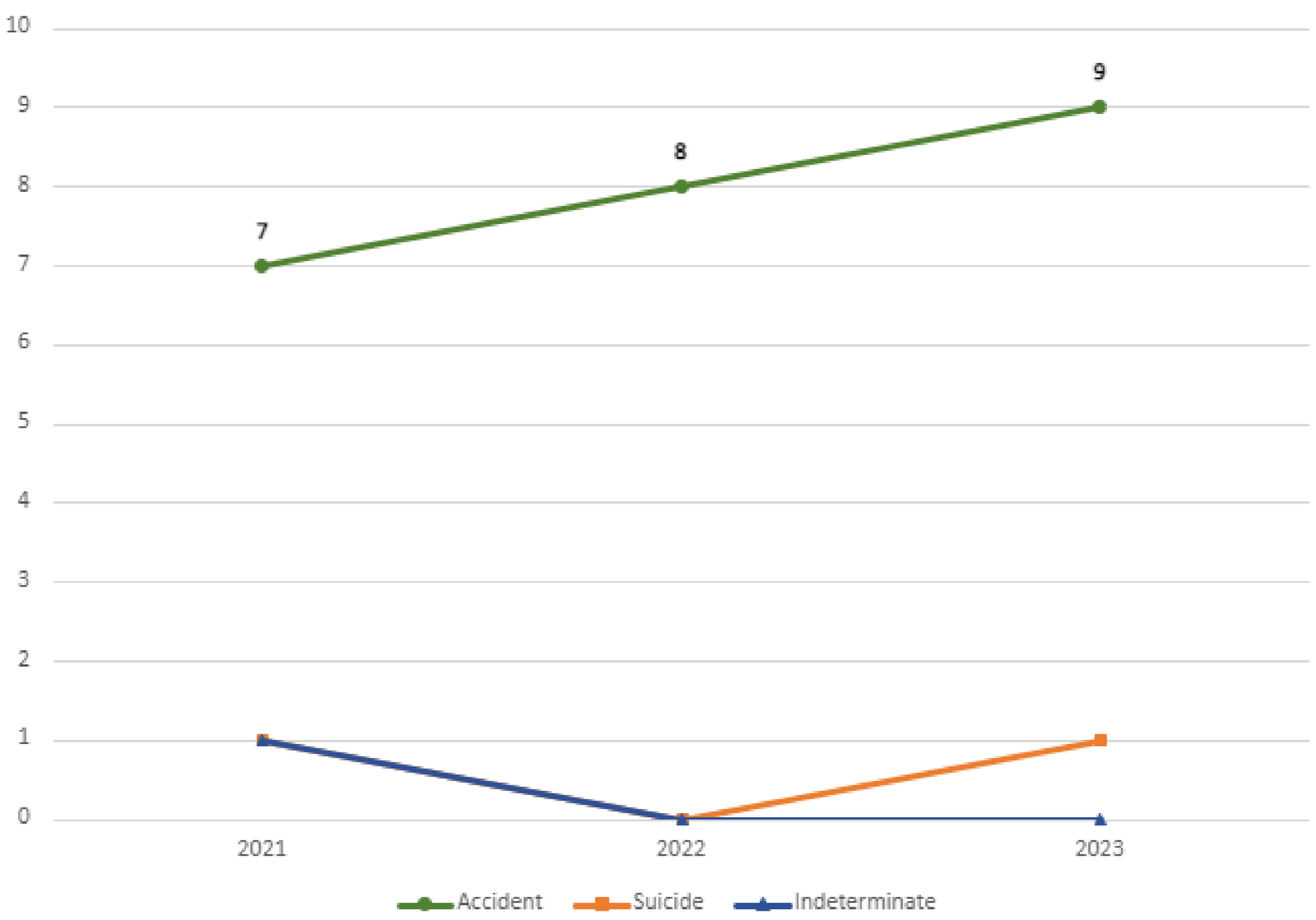
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
6 Days	Male	African American/Black	49017	Fentanyl	Y
24	Female	White	49017	Fentanyl, Ethanol	Y
29	Male	African American/Black	49017	Fentanyl	Y
35	Male	White	49017	Fentanyl, Heroin, para-Fluorofentanyl	Y
37	Male	White	49017	Fentanyl, Methamphetamine	Y
37	Male	African American/Black	49017	Difluoroethane	N
49	Male	White	49017	Fentanyl, Methamphetamine	Y
61	Male	African American/Black	49017	Fentanyl, Acetyl fentanyl, Cocaine, Methamphetamine	Y
33	Male	White	49068	Pseudoephedrine	N
35	Male	White	49068	Fentanyl, Heroin	Y
65	Female	White	49068	Zolpidem	N
83	Male	White	49068	Hydrocodone	Y
39	Female	White	49224	Fentanyl, para-Fluorofentanyl	Y
41	Male	Hispanic	49224	Fentanyl, Cocaine, Ethanol	Y
43	Male	White	49224	Fentanyl, Methamphetamine	Y
47	Male	African American/Black	49224	Methamphetamine	N

Cass County

Drug-Related Deaths by Manner

	2021	2022	2023
Accident	7	8	**9**
Suicide	1	0	**1**
Indeterminate	1	0	**0**
Total	**9**	**8**	**10**
Total involving opioids	8	6	**8**
% of Deaths involving opioid(s)	88%	75%	**80%**

Drug-Related Deaths by Year



Cass County

All Drug-Related Deaths

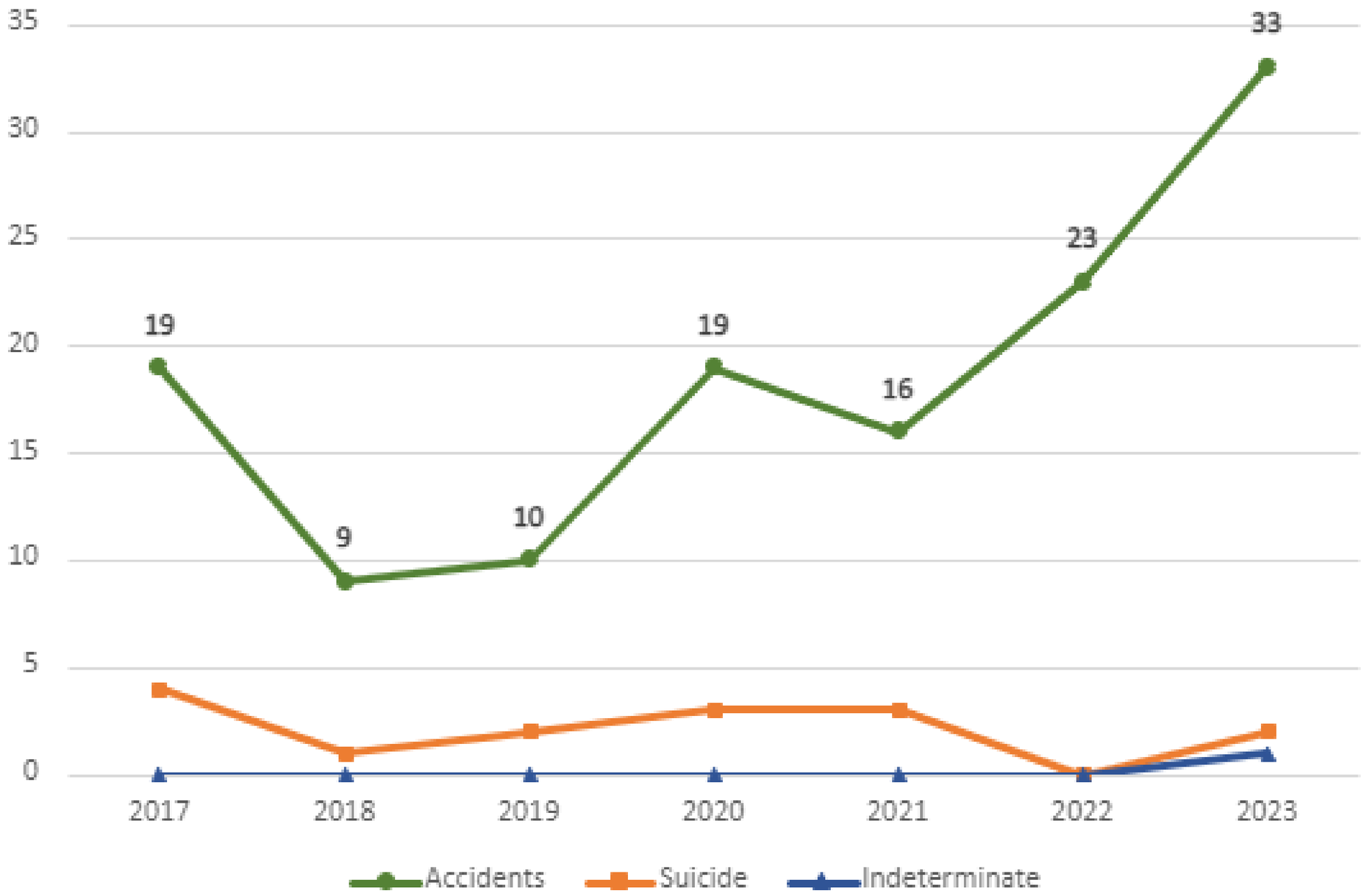
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
27	Female	White	49120	Fentanyl, Methamphetamine	Y
39	Male	White	49120	Fentanyl, Methamphetamine	Y
55	Female	White	49120	Fentanyl, Alprazolam, Diazepam	Y
59	Male	White	49120	Lisinopril, Pantoprazole	N
26	Male	White	49047	Fentanyl, Pregabalin	Y
59	Female	White	49047	Fentanyl, Methamphetamine	Y
62	Male	White	49047	Fentanyl, Gabapentin, Oxycodone	Y
63	Male	White	49047	Methamphetamine	N
60	Male	White	49112	Ethanol, Morphine, Oxycodone	Y
60	Female	White	49031	Methamphetamine, Morphine	Y

Grand Traverse and Leelanau County

Drug-Related Deaths by Manner

	2017	2018	2019	2020	2021	2022	2023
Accident	20	10	10	20	20	23	**33**
Suicide	4	1	2	3	3	1	**2**
Indeterminate	0	0	0	0	0	0	**1**
Total	**24**	**11**	**12**	**23**	**23**	**24**	**36**
Total involving opioids	19	8	8	16	19	22	**22**
% of Deaths involving opioid(s)	79%	73%	66%	70%	83%	92%	**61%**

Drug-Related Deaths by Year



Grand Traverse and Leelanau County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
32	Male	White	49696	Methamphetamine	N
35	Male	White	49696	Fentanyl, Fluorofentanyl, Methamphetamine	Y
52	Male	White	49696	Cocaine	N
54	Male	White	49696	Methamphetamine	N
55	Female	White	49696	Fentanyl, Oxycodone, Temazepam, Alprazolam, Zopiclone	Y
32	Male	White	49686	Fentanyl	Y
35	Female	White	49686	1,1-Difluoroethane	N
38	Female	White	49686	Methamphetamine	N
46	Male	White	49686	Methamphetamine	N
25	Male	White	49685	Fentanyl	Y
41	Female	White	49685	Fentanyl	Y
43	Male	White	49685	Cocaine	N
60	Female	White	49685	Fentanyl, Cocaine	Y
35	Male	White	49684	Fentanyl, Buprenorphine, Cocaine	Y
38	Female	White	49684	Fentanyl	Y
50	Male	White	49684	Fentanyl	Y
62	Male	White	49684	Fentanyl, Fluorofentanyl, Methamphetamine	Y
74	Female	White	49684	Morphine, Oxycodone	Y
42	Male	White	49633	Fentanyl, Methamphetamine, Ethanol	Y
44	Male	White	49633	Fentanyl, Methamphetamine, Diphenhydramine	Y
39	Male	White	49649	Fentanyl, Methamphetamine	Y
43	Male	White	49649	Fentanyl, Methamphetamine	Y
34	Male	White	49690	Fentanyl, Mitragynine	Y
54	Male	White	49690	Mitragynine	Y
29	Male	White	49643	Fentanyl, Mitragynine, Tramadol	Y
35	Male	White	49643	Fentanyl, Cocaine, Fluorofentanyl	Y

Grand Traverse and Leelanau County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
25	Male	White	49668	Fentanyl, Methamphetamine	Y
26	Female	White	49645	Unknown Substance(s)*	Unknown
33	Male	White	49659	Methamphetamine	N
38	Male	White	49617	Buprenorphine, Fluoxetine	Y
46	Female	White	49676	Diazepam, Fluoxetine, Oxycodone	Y
48	Male	White	49621	Cocaine, Ethanol	N
55	Female	White	49637	Methamphetamine	N
61	Female	White	49622	Acetaminophen, Ethanol, Propanolol	N
74	Female	White	49735	Baclofen, Gabapentin, Lorazepam, Metoprolol, Venlafaxine	N
35	Male	White	Unknown place of injury	Fentanyl, Ethanol	N

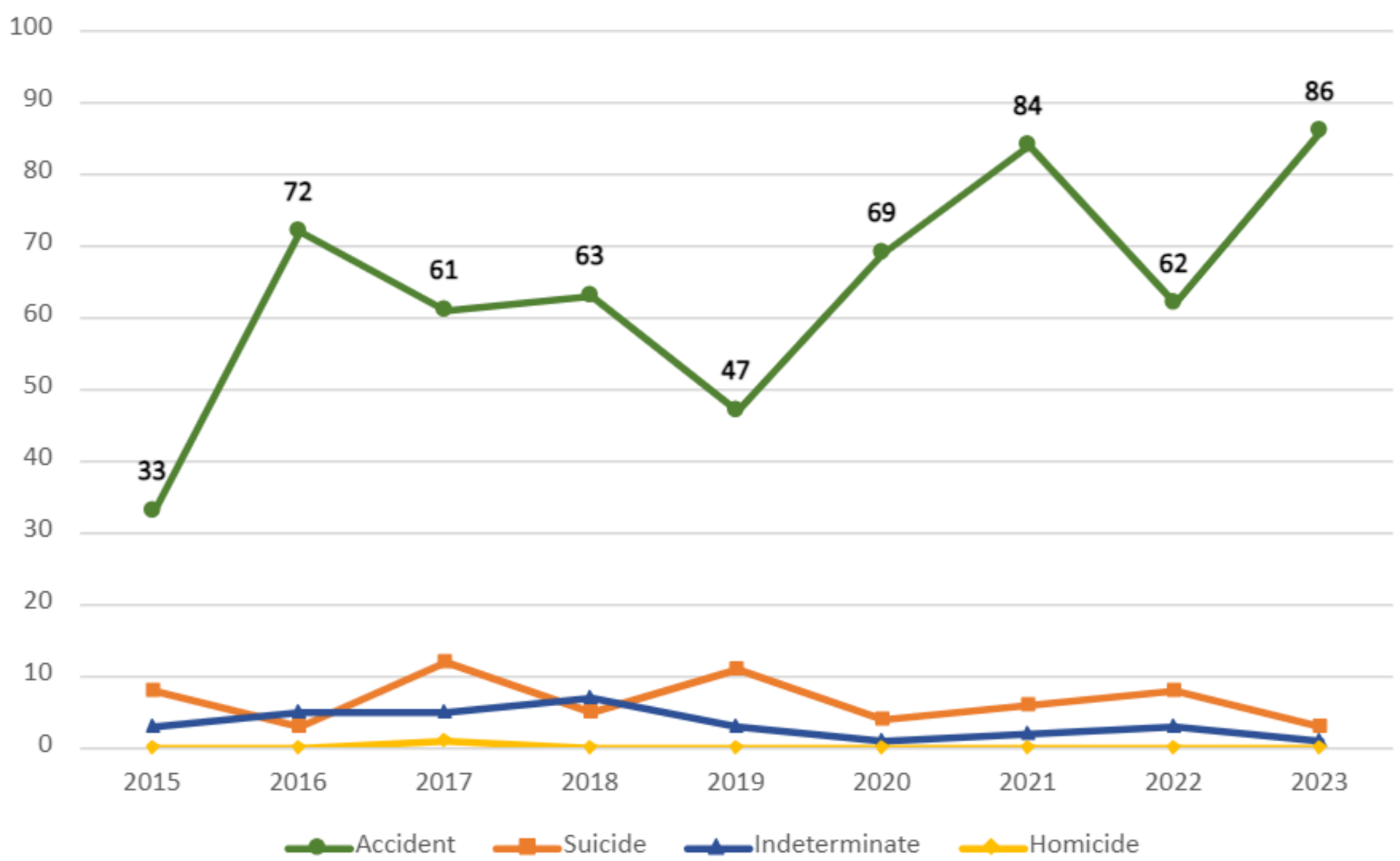
*Due to hospitalization, unable to confirm substances that contributed to death

Kalamazoo County

Drug-Related Deaths by Manner

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accident	33	72	61	63	47	69	84	62	**86**
Suicide	8	3	12	5	11	4	6	8	**3**
Homicide	0	0	1	0	0	0	0	0	**0**
Indeterminate	3	5	5	7	3	1	2	3	**1**
Total	**44**	**80**	**79**	**75**	**61**	**74**	**92**	**73**	**90**
Total involving opioids	30	64	59	51	32	56	63	43	**67**
% of Deaths involving opioid(s)	83%	82%	74%	73%	60%	80%	69%	60%	**74%**

Drug-Related Deaths by Year



Kalamazoo County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
27	Female	White	49048	Fentanyl, Methamphetamine	Y
28	Male	White	49048	Fentanyl	Y
29	Male	African American/Black	49048	Fentanyl, Acetyl fentanyl, Ethanol	Y
31	Male	African American/Black	49048	Fentanyl	Y
31	Male	African American/Black	49048	Fentanyl, Fluorofentanyl	Y
38	Male	White	49048	Fentanyl, Methamphetamine	Y
38	Male	White	49048	Fentanyl, Methamphetamine	Y
41	Female	African American/Black	49048	Fentanyl, Cocaine, Cocaethylene, Ethanol, Methamphetamine	Y
45	Male	African American/Black	49048	Fentanyl, Cocaine, Ethanol	Y
48	Female	African American/Black	49048	Fentanyl, Cocaine	Y
48	Male	White	49048	Methamphetamine	N
53	Female	White	49048	Fentanyl, Ethanol, Methamphetamine	Y
56	Female	White	49048	Fentanyl, Ethanol	Y
56	Male	African American/Black	49048	Cocaine	N
57	Male	White	49048	Fentanyl, Methamphetamine, Morphine, para-Fluorofentanyl	Y
61	Male	White	49048	Fentanyl, Methamphetamine	Y
63	Female	White	49048	Fentanyl, Acetyl fentanyl, Methamphetamine, Morphine	Y
63	Male	African American/Black	49048	Cocaine	N
21	Female	White	49007	Fentanyl, MDA, MDMA, Bromazolam	Y
28	Female	White	49007	Fentanyl	Y
30	Male	White	49007	Fentanyl, Methamphetamine, Morphine	Y
32	Female	Hispanic	49007	Methamphetamine	N
41	Male	African American/Black	49007	Fentanyl, Methamphetamine, Morphine	Y
44	Male	White	49007	Fentanyl	Y
44	Female	African American/Black	49007	Fentanyl, Methamphetamine	Y
49	Male	African American/Black	49007	Fentanyl, Methamphetamine	Y
53	Female	Hispanic	49007	Fentanyl, Alprazolam, Ethanol, Methamphetamine	Y
54	Female	White	49007	Fentanyl	Y
55	Male	African American/Black	49007	Fentanyl, Cocaine	Y
56	Female	African American/Black	49007	Fentanyl	Y
58	Male	African American/Black	49007	Fentanyl, Ethanol	Y
59	Male	African American/Black	49007	Cocaine, Methamphetamine	N

Kalamazoo County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
21	Male	African American/Black	49001	Fentanyl	Y
24	Male	White	49001	Oxycodone	Y
32	Male	African American/Black	49001	Fentanyl, Cocaine	Y
38	Female	African American/Black	49001	Cocaine, Cocaethylene	N
41	Female	African American/Black	49001	Fentanyl, Methamphetamine	Y
41	Male	African American/Black	49001	Fentanyl, Methamphetamine	Y
42	Male	African American/Black	49001	Fentanyl, Cocaine, Ethanol	Y
49	Female	White	49001	Fentanyl, Acetyl fentanyl, Methamphetamine	Y
49	Male	African American/Black	49001	Methamphetamine	N
54	Male	White	49001	Fentanyl, Cocaine, Ethanol	Y
58	Male	White	49001	Fentanyl, Heroin, para-Fluorofentanyl	Y
59	Male	White	49001	Fentanyl, Methamphetamine	Y
65	Female	White	49001	Fentanyl, Acetyl fentanyl, Heroin	Y
69	Female	White	49001	Methamphetamine, Heroin	Y
32	Female	White	49008	Fentanyl, Alprazolam, Morphine	Y
32	Female	White	49008	Fentanyl	Y
34	Male	White	49008	Fentanyl, Clonazepam, Heroin, Methamphetamine, para-Fluorofentanyl	Y
35	Male	African American/Black	49008	Fentanyl, Cocaine	Y
37	Male	White	49008	Fentanyl, Acetyl fentanyl	Y
43	Male	White	49008	Methamphetamine	N
58	Female	White	49008	Fentanyl, Gabapentin, Heroin, Fluorofentanyl	Y
63	Male	African American/Black	49008	Methamphetamine	N
32	Male	White	49002	Fentanyl, Alprazolam	Y
34	Male	White	49002	Fentanyl, Methamphetamine	Y
37	Male	White	49002	Fentanyl	Y
38	Male	White	49002	Methamphetamine	N
38	Male	White	49002	Fentanyl, Methamphetamine, Methadone, para-Fluorofentanyl	Y
64	Male	White	49002	Lithium	N
58	Male	African American/Black	49006	Fentanyl, Cocaine, Amphetamine	Y
28	Male	African American/Black	49006	Fentanyl	Y
66	Male	African American/Black	49006	Cocaine, Ethanol	N
19	Male	White	49006	Fentanyl, Ethanol, Cocaine	Y
58	Male	African American/Black	49006	Fentanyl	Y

Kalamazoo County

All Drug-Related Deaths

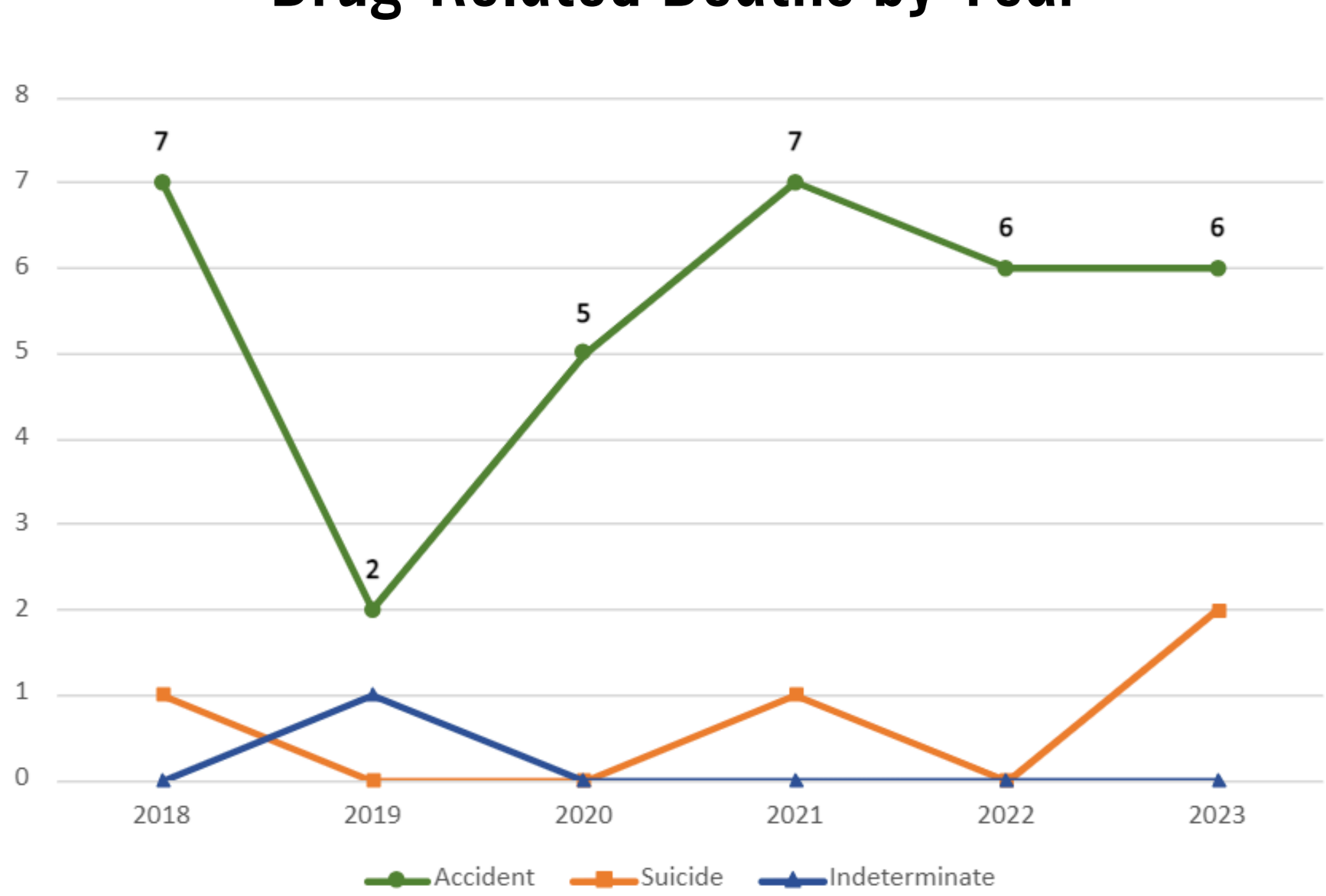
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
21	Male	White	49024	Bupropion, Hydroxybupropion	N
23	Male	White	49024	Fentanyl, Amphetamine, Cocaine, Heroin, Methamphetamine	Y
45	Male	White	49024	Cocaine, Promethazine, Propanolol, Mirtazapine	N
52	Male	White	49024	Cyclobenzaprine, Ethanol, Gabapentin, Quetiapine	N
55	Female	White	49024	Fentanyl, Hydrocodone, Methamphetamine, Oxycodone	Y
28	Female	White	49004	Fentanyl, Methamphetamine	Y
28	Female	White	49004	Fentanyl	Y
31	Male	African American/Black	49004	Fentanyl, Ethanol	Y
49	Male	African American/Black	49004	Fentanyl, Methamphetamine	Y
21	Male	White	49097	Fentanyl	Y
52	Male	White	49097	Fentanyl, Heroin, para-Fluorofentanyl	Y
52	Male	White	49097	Methamphetamine	N
44	Male	White	49053	Acetaminophen, Buspirone	N
58	Male	White	49053	Hydrocodone	Y
28	Male	White	49009	Sodium Nitrite	N
30	Female	White	49201	Fentanyl, Acetyl fentanyl, Methamphetamine	Y
32	Male	White	49060	Fentanyl	Y
40	Female	White	49083	Fentanyl, Methamphetamine	Y
47	Male	American Indian/Alaskan Native	49028	Methamphetamine	N
48	Female	White	49047	Methamphetamine, Opioid(s)	Y
59	Male	White	49071	Methamphetamine	N
68	Male	White	49067	Amphetamines	N
76	Female	White	49079	Benzodiazepines	N
56	Female	African American/Black	Unknown place of Injury	Cocaine	N
47	Male	White	Unknown place of Injury	Fentanyl, Fluorofentanyl, Methamphetamine	Y

Mason County

Drug-Related Deaths by Manner

	2018	2019	2020	2021	2022	2023
Accident	7	2	5	7	6	**6**
Suicide	1	0	0	1	0	**2**
Indeterminate	0	1	0	0	0	**0**
Total	**8**	**3**	**5**	**8**	**6**	**8**
Total involving opioids	4	1	5	7	4	**7**
% of Deaths involving opioid(s)	57%	33%	100%	100%	67%	**88%**

Drug-Related Deaths by Year



Mason County

All Drug-Related Deaths

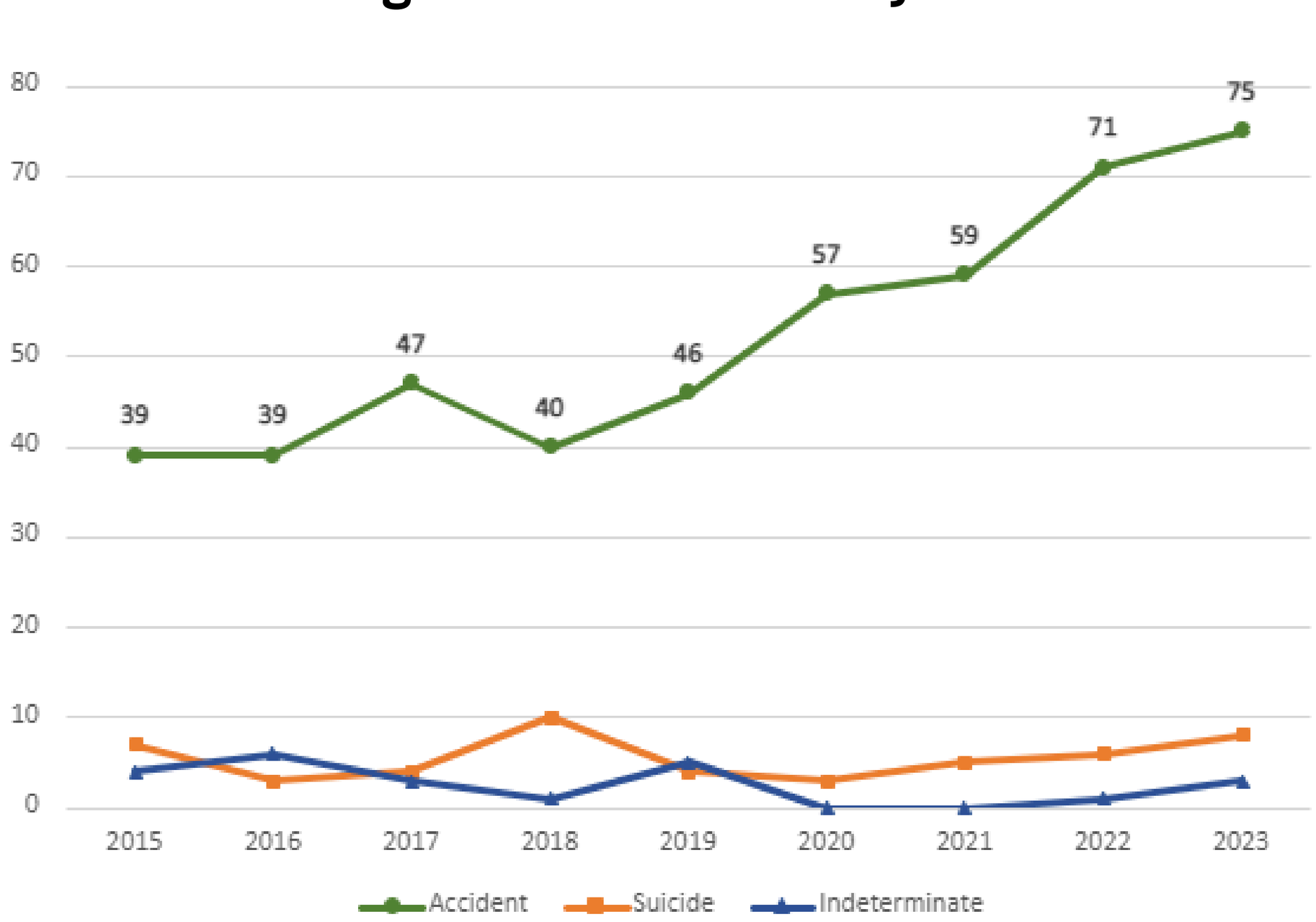
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
38	Male	White	49431	Fentanyl, Cocaine	Y
62	Male	White	49431	Fentanyl, Methamphetamine	Y
68	Male	White	49431	Fentanyl, Methamphetamine, para-Fluorofentanyl, Methadone	Y
78	Female	White	49431	Amlodipine, Methocarbamol	N
44	Male	White	49411	Hydrocodone	Y
41	Male	White	49411	Fentanyl, Ethanol, Methamphetamine	Y
31	Male	White	49410	Fentanyl, Heroin	Y
67	Female	White	49454	Fentanyl	Y

Muskegon County

Drug-Related Deaths by Manner

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accident	39	39	47	40	46	57	59	71	**75**
Suicide	7	3	4	10	4	3	5	6	**8**
Indeterminate	4	6	3	1	5	0	0	1	**3**
Total	**50**	**48**	**54**	**51**	**55**	**60**	**64**	**78**	**86**
Total involving opioids	43	41	43	39	43	50	54	64	**67**
% of Deaths involving opioid(s)	95%	87%	84%	85%	84%	88%	88%	83%	**78%**

Drug-Related Deaths by Year



Muskegon County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
29	Male	White	49442	Fentanyl, Cocaine, Ethanol	Y
30	Male	White	49442	Fentanyl, Fluorofentanyl	Y
31	Male	White	49442	Fentanyl, Heroin	Y
32	Female	White	49442	Fentanyl	Y
32	Male	White	49442	Fentanyl	Y
34	Female	White	49442	Fentanyl, Methamphetamine, Tramadol	Y
34	Male	White	49442	Fentanyl, Cocaine, para-Fluorofentanyl	Y
37	Male	White	49442	Fentanyl, Methamphetamine, Ethanol	Y
37	Male	White	49442	Fentanyl, Clonazepam, Methamphetamine, MDMA	Y
37	Male	White	49442	Fentanyl, Ethanol	Y
38	Male	White	49442	Fentanyl, Cocaine	Y
40	Male	White	49442	Fentanyl, Methamphetamine	Y
42	Male	White	49442	Fentanyl, Cocaine, Cocaethylene, Ethanol, Methamphetamine	Y
43	Female	African American/Black	49442	Fentanyl, Ethanol, Methadone	Y
45	Male	African American/Black	49442	Fentanyl, Cocaine, Cocaethylene, Ethanol	Y
46	Female	White	49442	Fentanyl, Methamphetamine, Ethanol	Y
46	Female	White	49442	Fentanyl, Cocaine, Methamphetamine	Y
49	Female	African American/Black	49442	Fentanyl, Acetyl fentanyl, Cocaine, Gabapentin	Y
50	Male	White	49442	Verapamil	N
53	Male	Hispanic	49442	Methamphetamine	N
59	Male	African American/Black	49442	Fentanyl, Cocaine	Y
63	Male	White	49442	Fentanyl, Cocaine	Y
66	Female	Asian	49442	Fentanyl, Cocaine, Fluorofentanyl	N
66	Male	White	49442	Methamphetamine	N
69	Male	White	49442	Fentanyl, Morphine, Diazepam	Y
26	Male	White	49444	Fentanyl	Y
30	Male	African American/Black	49444	Fentanyl, Cocaine	Y
33	Male	African American/Black	49444	Fentanyl	Y
33	Male	White	49444	Fentanyl, Cocaine	Y
33	Male	White	49444	Fentanyl, Ethanol, Cocaine	Y
36	Male	White	49444	Fentanyl	Y
37	Male	White	49444	Fentanyl, Cocaine, Ethanol	Y
41	Male	White	49444	Fentanyl, Methamphetamine, para-Fluorofentanyl	Y
41	Female	White	49444	Methamphetamine	N
43	Female	African Indian/Alaskan Native	49444	Fentanyl, Acetyl fentanyl	Y
45	Male	African American/Black	49444	Fentanyl, Cocaine	Y

Muskegon County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
45	Male	African American/Black	49444	Cocaine, Ethanol	N
49	Female	African American/Black	49444	Fentanyl, Cocaine	Y
55	Male	African American/Black	49444	Fentanyl, Cocaine, Methamphetamine, Morphine	Y
56	Male	White	49444	Fentanyl, Amphetamine, Ethanol	Y
57	Female	White	49444	Methamphetamine	N
64	Male	African American/Black	49444	Fentanyl, Cocaine	Y
64	Male	White	49444	Fentanyl, para-Fluorofentanyl	Y
64	Male	White	49444	Methamphetamine	N
65	Male	African American/Black	49444	Fentanyl, Cocaine, Ethanol, Methamphetamine	Y
65	Male	African American/Black	49444	Fentanyl, Cocaine	Y
67	Male	African American/Black	49444	Fentanyl, Cocaine, Cocaethylene, Dihydrocodeine, Ethanol, Hydrocodone	Y
1	Female	African American/Black	49441	Fentanyl	Y
33	Male	White	49441	Fentanyl, Cocaine, Mirtazapine, Olanzapine	Y
39	Male	African American/Black	49441	Fentanyl, Ethanol, Fluorofentanyl	Y
41	Male	White	49441	Fentanyl, Cocaine	Y
41	Male	White	49441	Fentanyl	Y
43	Male	White	49441	Acetaminophen, Diphenhydramine, Mitragynine, Salicylate	Y
43	Male	White	49441	Fentanyl	Y
44	Male	White	49441	Fentanyl, Methamphetamine, Heroin	Y
44	Male	White	49441	Fentanyl, Ethanol, Methamphetamine	Y
48	Female	White	49441	Dextromethorphan, Guaifenesin	N
52	Male	African American/Black	49441	Fentanyl, Fluorofentanyl	Y
56	Female	African American/Black	49441	Fentanyl, Cocaine, Cyclobenzaprine	Y
56	Male	White	49441	Fentanyl, Cocaine	Y
57	Male	White	49441	Fentanyl, Cocaine	Y
58	Female	White	49441	1,1-Difluoroethane	N
74	Female	White	49441	Amlodipine	N
15	Female	White	49445	Fentanyl	Y
35	Male	White	49445	Mitragynine	Y
42	Male	White	49445	Fentanyl, Cocaine	Y
52	Female	White	49445	Alprazolam, Amitriptyline, Ethanol, Hydroxyzine, Nortriptyline, Temazepam	N
70	Female	White	49445	Potassium Chloride	N
32	Male	White	49457	Fentanyl	Y
68	Male	White	49457	Methamphetamine	N

Muskegon County

All Drug-Related Deaths

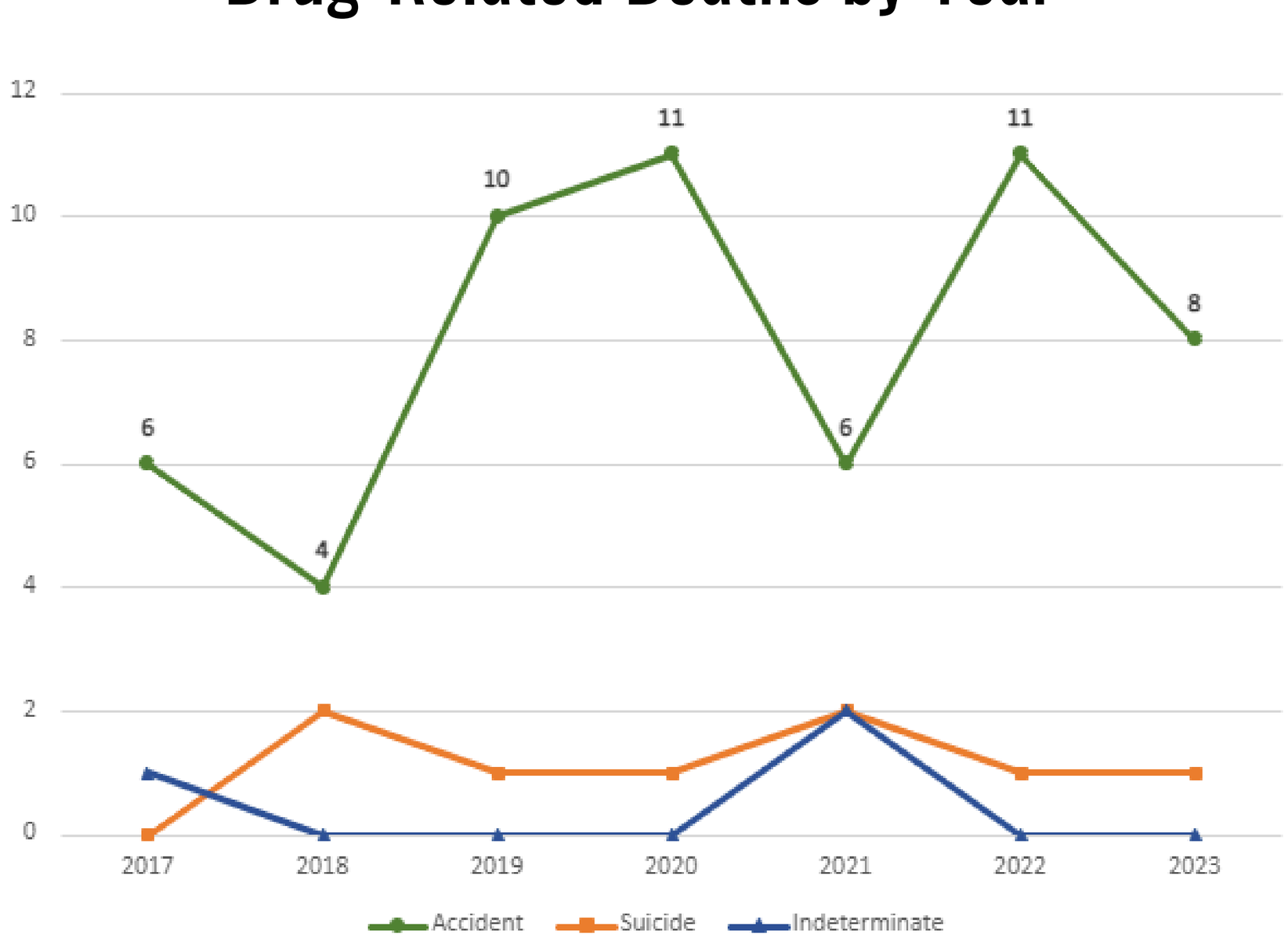
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
34	Male	White	49461	Methamphetamine, Insulin	N
36	Male	White	49461	Fentanyl, Cyclobenzaprine, Ethanol, Fluorofentanyl, Hydroxyzine	Y
37	Male	White	49461	Fentanyl, Cocaine	Y
51	Male	White	49461	Fentanyl, Amphetamine, Cocaine, Diazepam	Y
39	Male	White	49451	Fentanyl, Methamphetamine, para-Fluorofentanyl	Y
63	Male	White	49451	Fentanyl	Y
74	Female	White	49451	Duloxetine	N
26	Female	White	49425	Fentanyl, para-Fluorofentanyl	Y
39	Female	White	49440	Fentanyl	Y
36	Male	White	49446	Fentanyl, para-fluorofentanyl	Y
45	Male	African American/Black	49417	Fentanyl, Methamphetamine	Y
53	Female	White	49327	Alprazolam, Duloxetine, Morphine	Y
64	Female	White	49412	Lysol	N
61	Male	White	60073	Methamphetamine	N
23	Female	White	Unknown place of injury	Methadone	Y
66	Male	White	Unknown place of injury	Cocaine	N

St. Joseph County

Drug-Related Deaths by Manner

	2017	2018	2019	2020	2021	2022	2023
Accident	6	4	10	11	6	11	**8**
Suicide	0	2	1	1	2	1	1
Indeterminate	1	0	0	0	2	0	**0**
Total	**7**	**6**	**11**	**12**	**10**	**12**	**9**
Total involving opioids	6	4	4	11	7	5	**6**
% of Deaths involving opioid(s)	86%	75%	40%	91%	88%	45%	**67%**

Drug-Related Deaths by Year



St. Joseph County

All Drug-Related Deaths

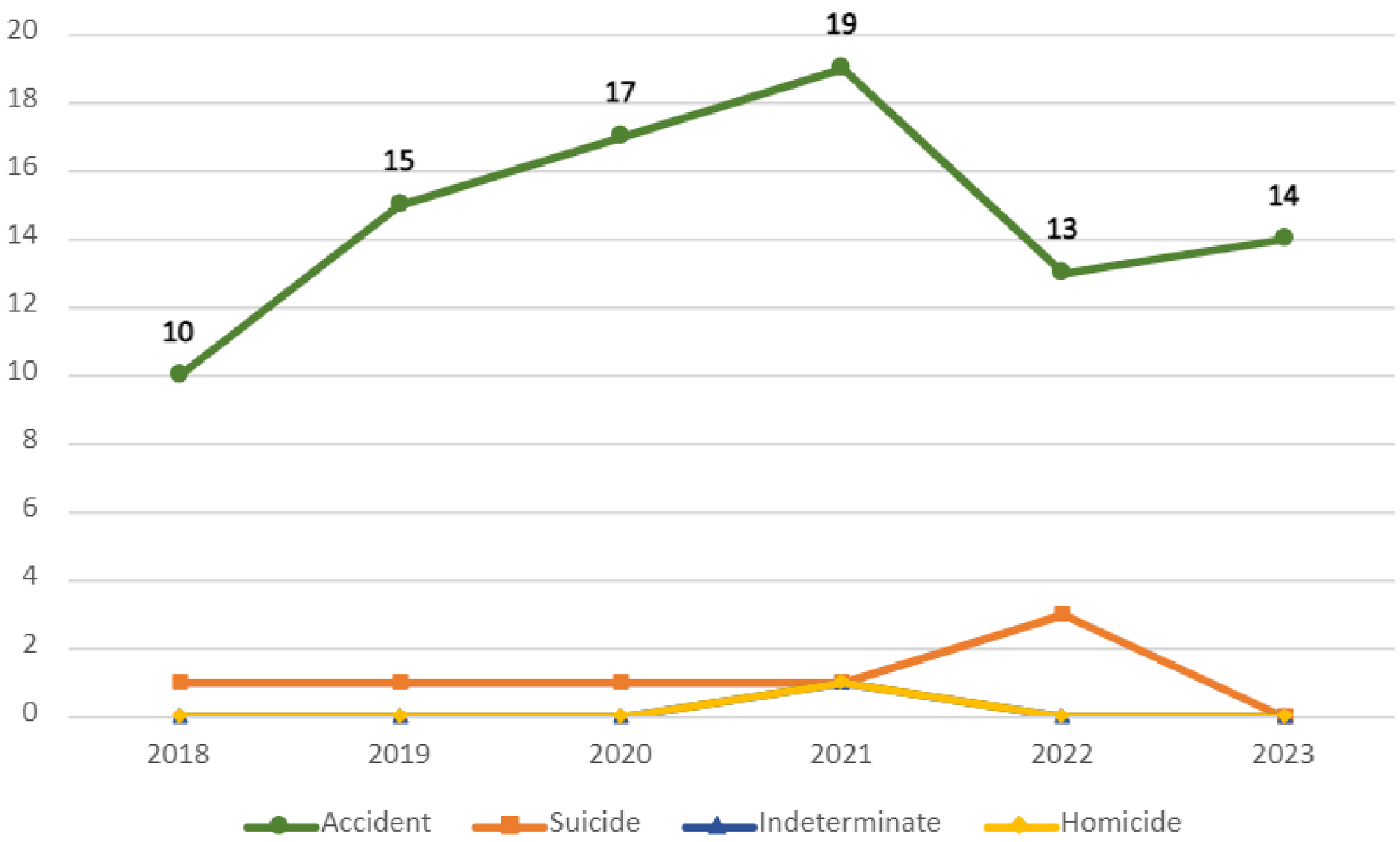
Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
17	Male	White	49093	Fentanyl, Methamphetamine, Heroin	Y
22	Male	White	49093	Fentanyl, Methamphetamine	Y
24	Male	White	49093	Fentanyl, Methamphetamine	Y
25	Male	White	49093	Fentanyl	Y
37	Female	White	49093	Methamphetamine	N
44	Male	White	49093	Fentanyl, Methamphetamine	Y
49	Male	White	49093	Methamphetamine	N
28	Male	White	49010	Fentanyl, Methamphetamine, Morphine	Y
39	Female	White	49042	Diphenhydramine, Olanzapine	N

Van Buren County

Drug-Related Deaths by Manner

	2018	2019	2020	2021	2022	2023
Accident	10	15	17	19	13	**14**
Suicide	1	1	1	1	3	**0**
Homicide	0	0	0	1	0	**0**
Indeterminate	0	0	0	1	0	**0**
Total	**11**	**16**	**18**	**22**	**16**	**14**
Total involving opioids	9	12	11	14	10	**9**
% of Deaths involving opioid(s)	90%	80%	59%	70%	69%	**64%**

Drug-Related Deaths by Year



Van Buren County

All Drug-Related Deaths

Age	Sex	Race & Ethnicity	Zip Code of Injury	Substances Contributing to Death	Opioid (Y/N)
34	Male	African American/Black	49090	Fentanyl	Y
35	Male	White	49090	Fentanyl, Diazepam, Methadone, Nordiazepam	Y
47	Male	White	49090	Methamphetamine	N
66	Female	White	49090	Fentanyl	Y
68	Male	White	49090	Fentanyl, Methamphetamine	Y
39	Female	White	49043	Fentanyl, Methamphetamine	Y
43	Female	African American/Black	49043	Cocaine	N
54	Female	White	49071	Fentanyl, Ethanol, Methamphetamine	Y
59	Male	White	49071	Fentanyl, Morphine	Y
20	Male	White	49065	Cocaine	N
22	Male	White	49013	Fentanyl	Y
52	Male	White	49026	Methamphetamine	N
59	Male	White	49055	Methamphetamine	N
63	Male	White	49057	Fentanyl, Methamphetamine, Heroin	Y

WESTERN MICHIGAN UNIVERSITY
Homer Stryker M.D.
SCHOOL OF MEDICINE

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