

Office of the Medical Examiner



2022 Annual Report

Kent County Health Department
700 Fuller Avenue NE
Grand Rapids, Michigan 49503

2022 Kent County Medical Examiner Annual Report

To the Kent County Board of Commissioners
and to the Citizens of Kent County:

I am happy to share the 2022 Kent County Medical Examiner Annual Report. In 2022, 1906 cases were referred to our office; of these, we accepted 74.9% and declined the remaining 25.1%. Most of the declined cases were individuals dying in hospice without a physician in attendance. Although we had a whopping 2770 cases referred in 2021 and 2374 in 2020, most of the excess cases were due to Covid. The number of accepted cases in these two years was 1386 (2020) and 1471 (2021), so the number of accepted cases was about the same in 2022.

We had a slight decrease in autopsies from 2021, with the overall number of 377, compared to 384 in 2021 and 296 in 2013. Cremations crept up to 4,587 representing an increase from 4,365 in 2021 and a continuous increase over the last 10 years (2,912 permits issued in 2013). These permits generated approximately \$321,090 for the County.

The five manners of death are natural, accident, suicide, homicide, and indeterminate. Natural deaths accounted for nearly 59% of the total, followed by nearly 32% accidents, 6% suicides, nearly 3% homicides, and just under 1% indeterminate. Natural deaths were principally due to cardiovascular disease (69%), followed by alcohol-related deaths (7.9%), other (7.2%), respiratory (6.7%), central nervous system disease (4.9%), and cancer (4.3%).

Like past years, the most frequent cause of accidental deaths are falls (41.5%), mostly in the elderly. These deaths are, troublingly, followed by overdoses (26.3%), the vast majority of which are from fentanyl, with the third spot occupied by motor vehicle accidents at 14.5%.

Our unclaimed body census climbed slightly to 38, an increase of 2 decedents from the previous year. Unfortunately, in some cases the next of kin refuse to take responsibility for the deceased, leaving it to our office to make final arrangements. But for the diligent work of our administrative office personnel and our investigators, this sad number would be much higher. We continue to be ranked among the top 10 counties in Michigan for Gift of Life donor referrals. In 2022, Kent County ranked second place for 2022 referrals, thus showing another way the deceased can help the living.

We look forward to the construction of a new County Morgue facility in the next two to three years.

Respectfully submitted,



Stephen D. Cohle, MD
Kent County Chief Medical Examiner

Medical Examiner Reportable Deaths and Autopsy

The Michigan County Medical Examiners Law, P.A. 181 of 1953, as amended, and the Michigan Public Health Code, P.A. 368 of 1978, as amended, mandates that specific types of deaths (listed below, left) be referred to the medical examiner for investigation. Medical examiner investigation of a death may also be ordered by the county's prosecuting attorney, the Michigan Attorney General or, upon the filing of a petition, signed by six (6) electors of a county. Not all deaths referred to the medical examiner for investigation necessarily result in an autopsy; however, an autopsy is generally ordered in certain circumstances (listed below, right), to determine more accurately the cause and manner of death.

Types of Deaths Reportable to the Medical Examiner, P.A. 368 of 1978

1. Sudden deaths and unexpected deaths (all deaths occurring in operating room, in recovery room, anesthesia related, natural death but not expected, occupational related deaths, subdural hematoma, intracerebral hemorrhage, etc.)*
2. Accidental deaths (motor vehicle, burns, drowning, falls, broken bones, drug overdose, drug toxicity, subdural hematoma, recent or past trauma, etc.)
3. Violent deaths (homicide, gunshot, stabbing, suicide, subdural hematoma, etc.)*
4. Suspicious circumstances surrounding a death.*
5. Deaths occurring as a result of an abortion.
6. Upon written order of the prosecuting attorney or the attorney general or upon the filing of a petition signed by six (6) electors of a county.
7. Death of a prisoner in any county or city jail who dies while so imprisoned.
8. If a fetal death occurs without medical attendance at or after the delivery.

In terms of a physician attendance: for the purposes of the medical examiner program, we consider that an investigation is required when:

- A. The deceased was last seen by a physician more than **ten (10) days before his or her death, if the cause of death appears to be other than the illness or condition for which the deceased was being treated.
- B. The attending physician cannot accurately determine the cause of death.
- C. When the deceased has not received any medical attention during the ***48 hours prior to the hour of death unless the attending physician, if any, is able to accurately determine the cause of death.

* All trauma related deaths no matter when the trauma occurred.

** The ten (10) day requirement relates solely to physician attendance.

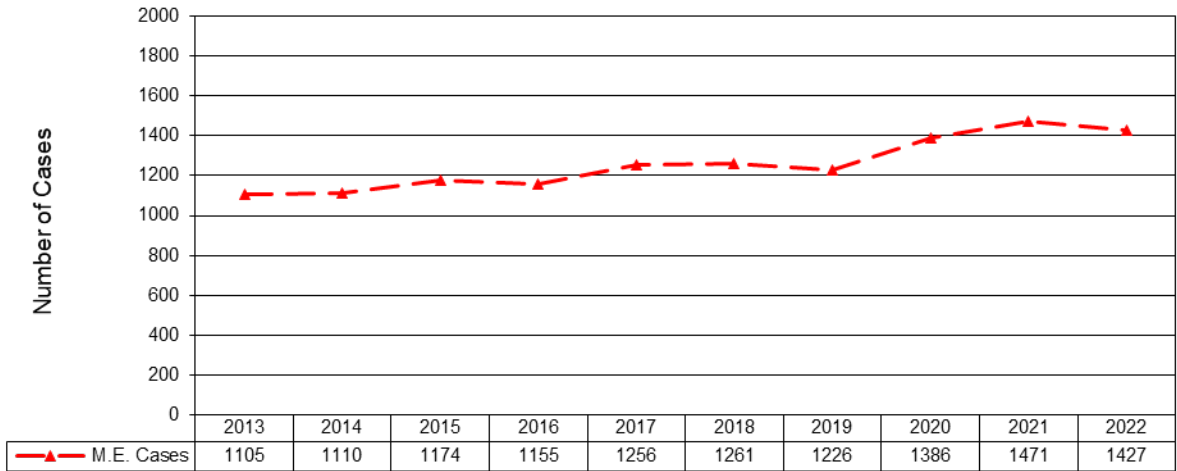
***The 48 hour requirement triggers an investigation when there has been no medical attendance of any kind (i.e., nursing care, etc.)

Types of Medical Examiner Cases for which Autopsy is Generally Ordered

1. Sudden deaths and unexpected deaths only when in the medical examiner's judgment, sufficient medical history is not available to determine cause and manner of death.
2. Accidental deaths such as motor vehicle, burns, drowning, etc. If an individual has been hospitalized for a length of time, it is the medical examiner's decision to order an autopsy.
3. Violent deaths such as homicide, suicide, gunshot, stabbing, etc.
4. Suspicious circumstances surrounding death, including unidentified bodies.
5. Death related to an abortion.
6. Sudden infant deaths (SIDS) and deaths of children 18 and under without significant medical history.
7. Death of a prisoner imprisoned at any county or city jail.
8. In a fetal death occurring without medical attendance at or after delivery.
9. An autopsy may be ordered at the discretion of the medical examiner if the cause of death appears to be other than the illness or condition for which the deceased was being treated, or if the attending physician cannot accurately determine the cause of death.
10. Anesthesia-related and unexpected deaths of patient in health care institutions.
11. Partial autopsies are not done because it is not best practice.
12. Views are performed in cases in which there is adequate history to explain the death, but there are external findings, such as injuries, that require direct examination to determine whether they may be significant injuries that mandate full autopsy.

2022 Medical Examiner Caseload

Figure 1: Accepted Kent County Medical Examiner Cases, 2013-2022

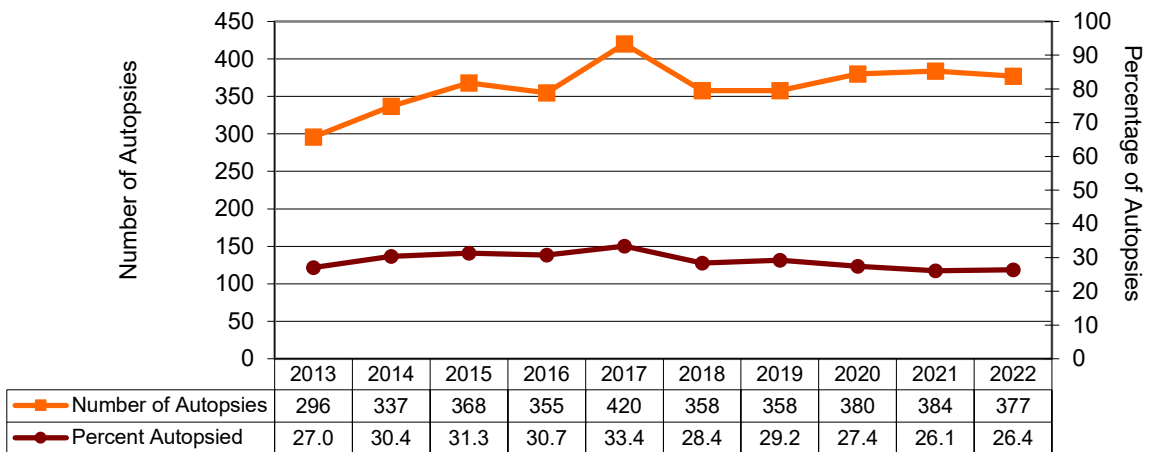


Total Referred Medical Examiner Cases in 2022: 1,906

Accepted	1,427	74.9%
Declined	479	25.1%

In 2022, there were 6,753 deaths in Kent County. The medical examiner was contacted regarding 1,906 of these deaths. 1,427 cases were accepted for investigation, while 479 were declined as these cases did not fall within jurisdiction of the Office of the Medical Examiner. There were no exhumations in 2022. In 2022, there were 527 referrals to Gift of Life and Eversight resulting in 88 organ/tissue donations and 20 eye donations.

Figure 2: Medical Examiner Cases with Autopsy, 2013-2022



Of the 377 autopsies performed, 374 were charged to Kent County. The remaining 3 autopsies were performed at the request of other counties. Toxicology was performed on 413 cases with 28 of those being views where only toxicology was performed. There were no partial autopsies performed.

2022 Medical Examiner Caseload

Figure 3: Referred Medical Examiner Caseload by Month, 2018-2022

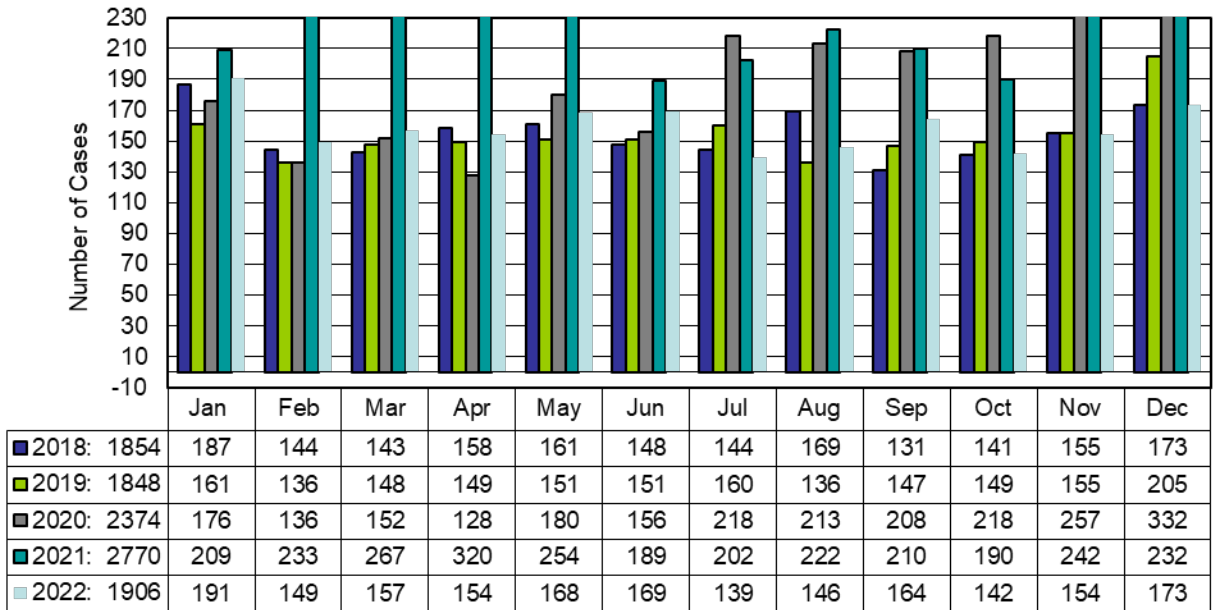
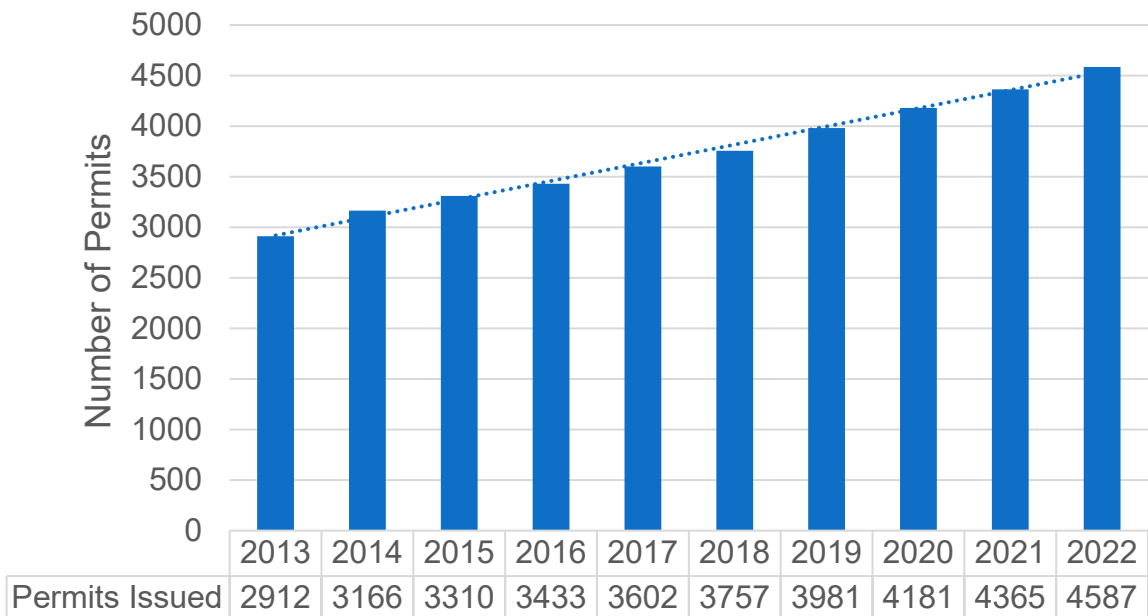
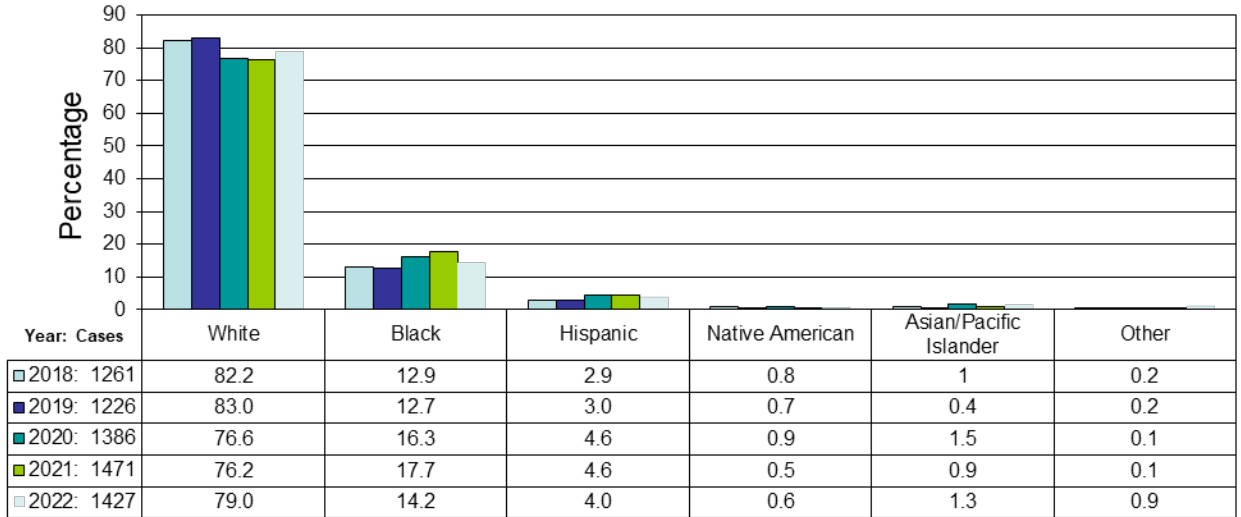


Figure 4: Cremation Permits Issued, 2013-2022



Demographics of Medical Examiner Cases

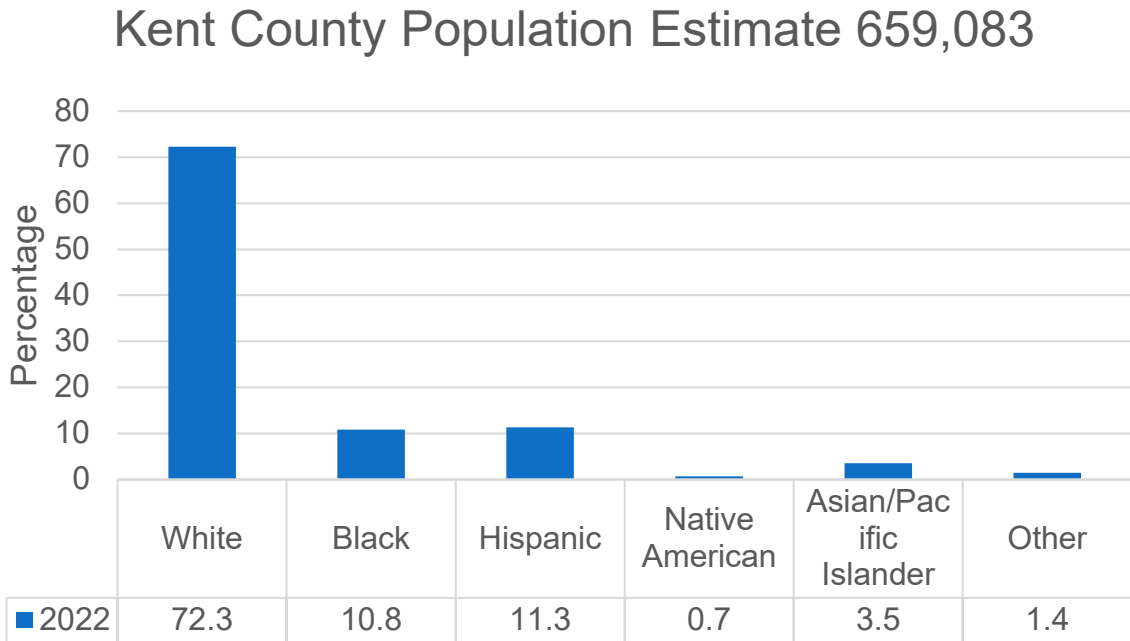
Figure 5: Medical Examiner Cases by Race/Ethnicity, 2018-2022



Number of 2022 Cases by Race/Ethnicity: White (1127), Black (203), Hispanic (57), Asian/Pacific Islander (18), Other (14)

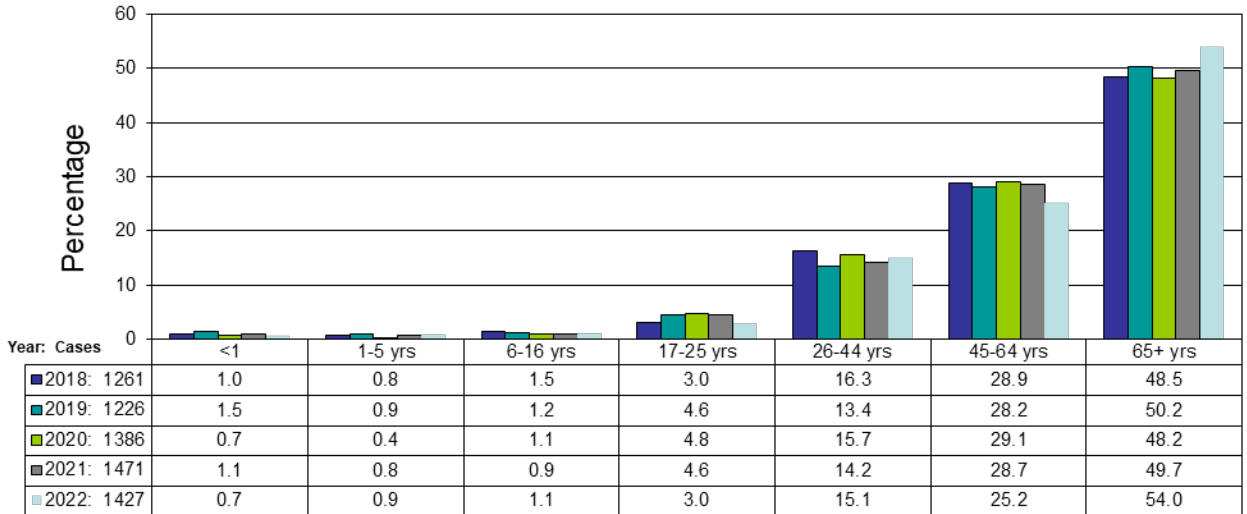
Figure 6: County Population by Race/Ethnicity, 2022

Source: US Census Bureau 2022 Quick Facts for Kent County, MI. Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable.



Demographics of Medical Examiner Cases

Figure 7: Medical Examiner Cases by Age at Death, 2018-2022



Number of 2022 Cases by Age: <1yrs (10), 1-5yrs (13), 6-16yrs (16), 17-25yrs (43), 26-44yrs (215), 45-64yrs (360), 65+yrs (770)

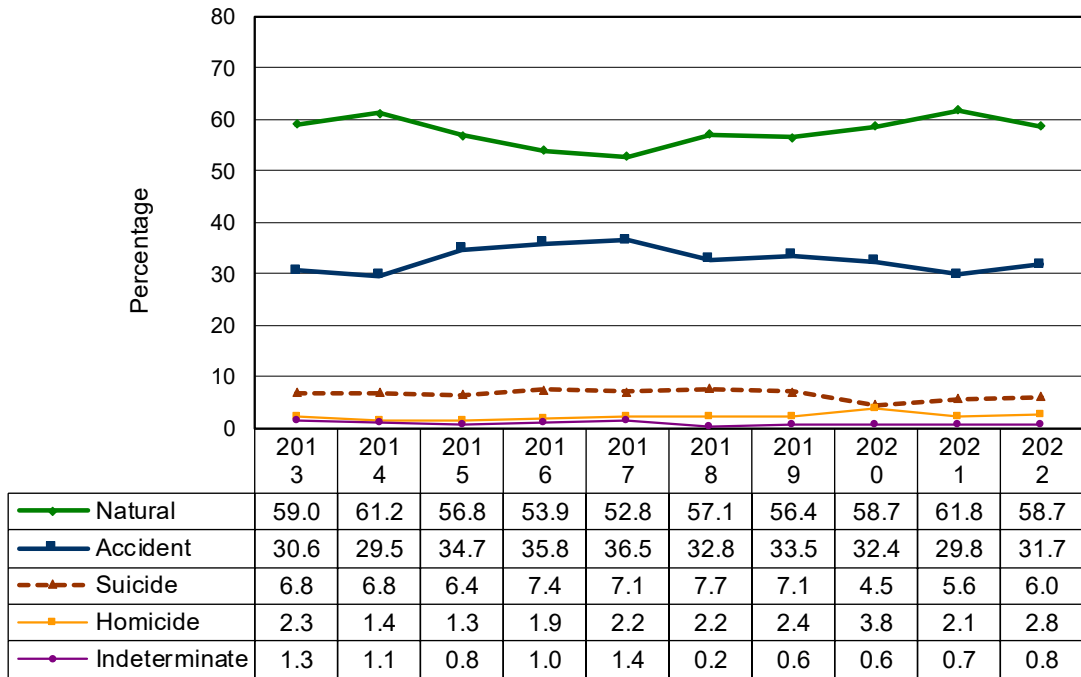
Table 1: Medical Examiner Cases by Gender, 2018-2022

Gender	2018	2019	2020	2021	2022
Female	39.1%	36.4%	35.5%	35.2%	36.1%
Male	60.9%	63.5%	64.5%	64.8%	63.9%
Unknown		0.1% (fetus)			

Number of 2022 Cases by Gender: Female decedents (515), Male decedents (912)

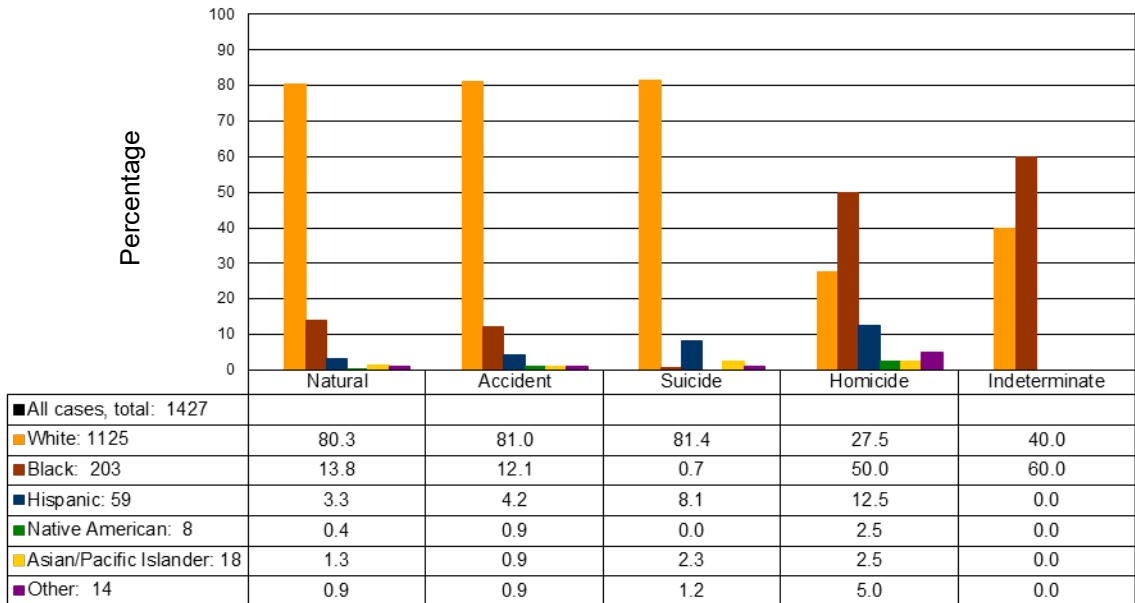
Manner of Death

Figure 8: Medical Examiner Cases by Manner of Death, 2013-2022



Number of 2022 Cases by Manner of Death: Natural (838), Accident (453), Suicide (86), Homicide (40), Indeterminate (10)
 *Indeterminate deaths: In the event a manner of death cannot be determined after thorough investigation, autopsy and associated studies.

Figure 9: Manner of Death by Race/Ethnicity, 2022



Manner of Death

Figure 10: Kent County Homicides by Gender, 2018-2022

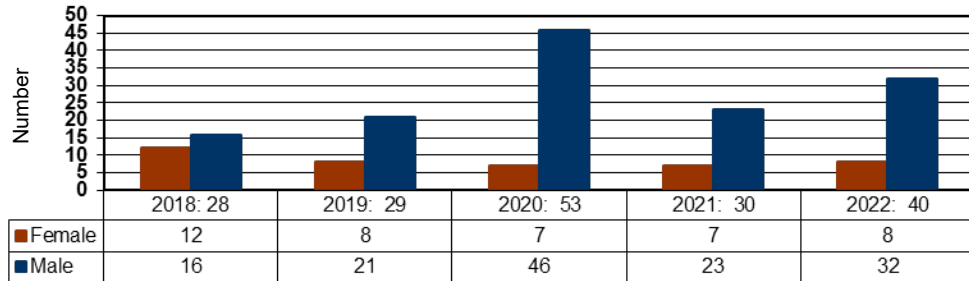


Figure 11: Kent County Homicides, Three-Year Moving Averages, 2010-2022

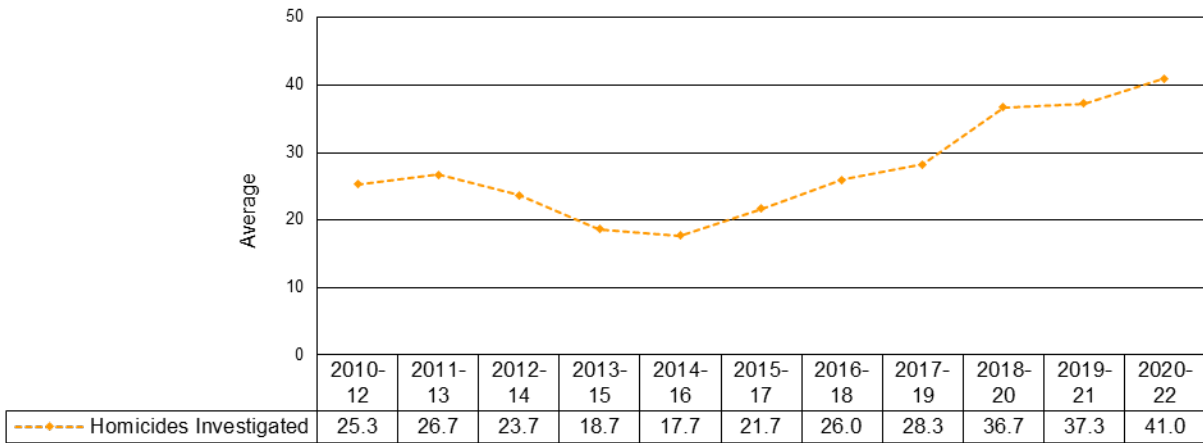
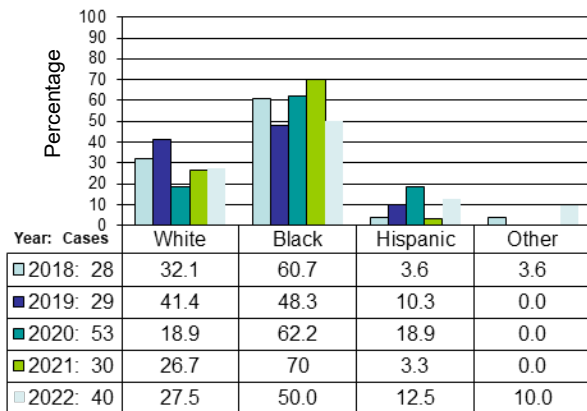


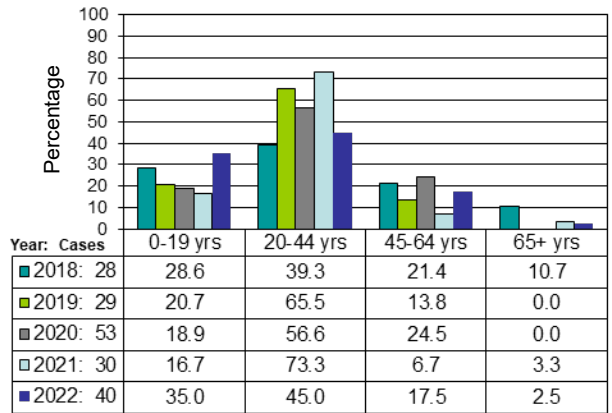
Figure 12: Homicides by Race/Ethnicity, 2018-2022



Number of 2022 Homicides by Race/Ethnicity:
 White (11), Black (20), Hispanic (5), Other* (4)

*Other includes Asian (1), Multiracial (2), Native American (1)

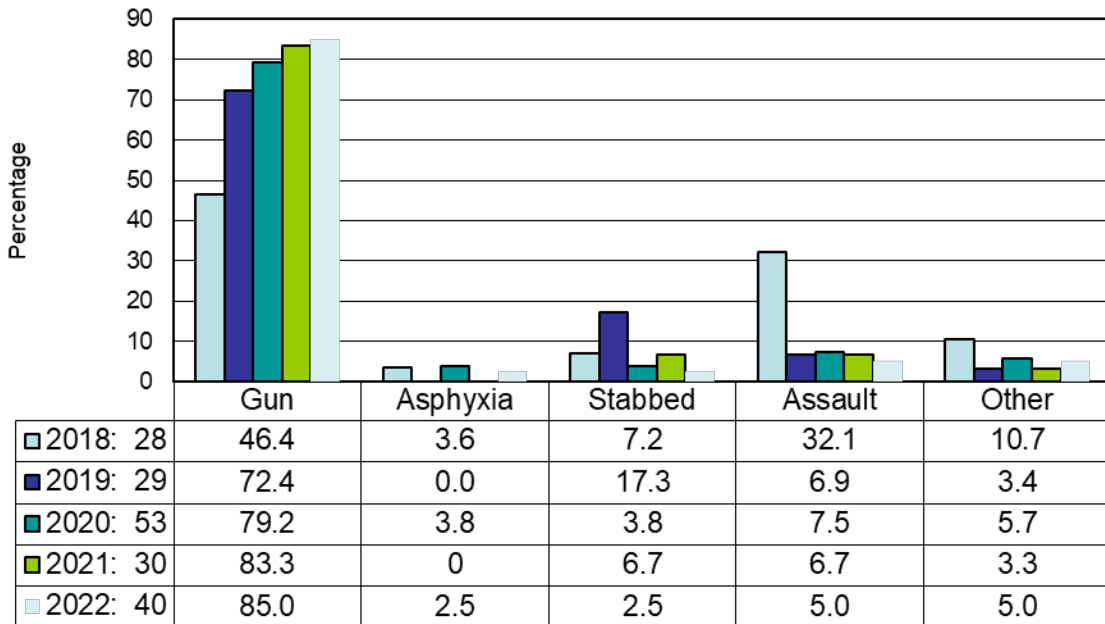
Figure 13: Homicides by Age, 2018-2022



Number of 2022 Homicides by Age:
 0-19yrs (14), 20-44yrs (45), 45-64 (7), 65+yrs (1)

Manner of Death

Figure 14: Homicide Cases by Method Used, 2018-2022



Number of 2022 Homicides by Method Used: Gun (34), Asphyxia (1), Stabbed (1), Assault (3), *Other (1)
 *Other includes death by inhalation of products of combustion, fire set intentionally by other party.

Table 2: Gun Homicides by Age, 2018-2022

Year: Cases	AGE			
	0-19 yrs.	20-29 yrs.	30-39 yrs.	40+ yrs.
2018: 13	2	5	0	6
2019: 21	5	10	3	3
2020: 42	6	17	7	12
2021: 25	3	10	7	5
2022: 34	12	7	8	7

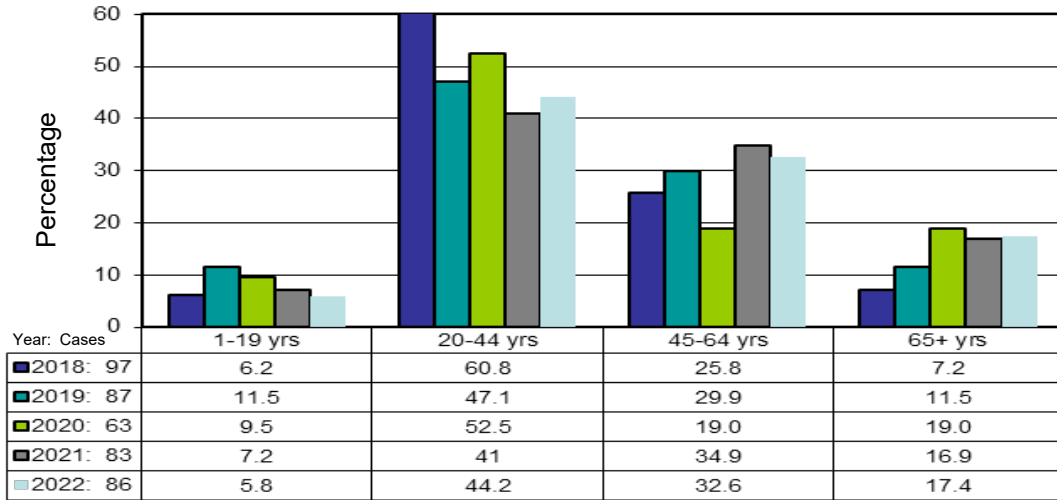
Table 3: Suicide Cases by Race/Ethnicity, 2018-2022

Year: Cases	White	Black	Hispanic	Native American	Asian	Other
2018: 97	83.5%	8.2%	6.2%	0.0%	2.1%	0.0%
2019: 87	81.6%	8.1%	9.2%	0.0%	1.1%	0.0%
2020: 63	79.4%	9.5%	6.3%	0.0%	4.8%	0.0%
2021: 83	85.6%	4.8%	7.2%	2.4%	0.0%	0.0%
2022: 86	81.4%	7.0%	8.1%	0.0%	2.3%	1.2%

Number of 2022 Suicides by Race/Ethnicity: White (70), Black (6), Hispanic (7), Other/Multiracial (1)

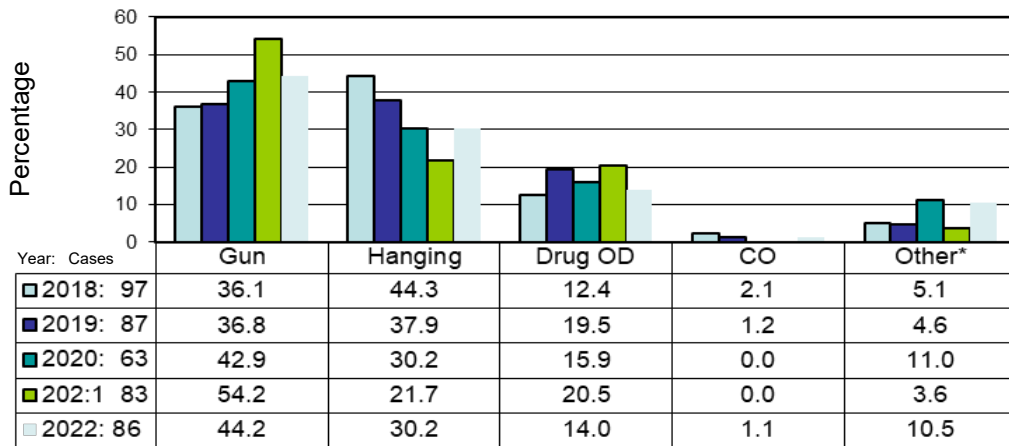
Manner of Death

Figure 15: Suicide Cases by Age, 2018-2022



Number of 2022 Suicides by Age: 1-19yrs (5), 20-44yrs (38), 45-64yrs (28), 65+yrs (15)

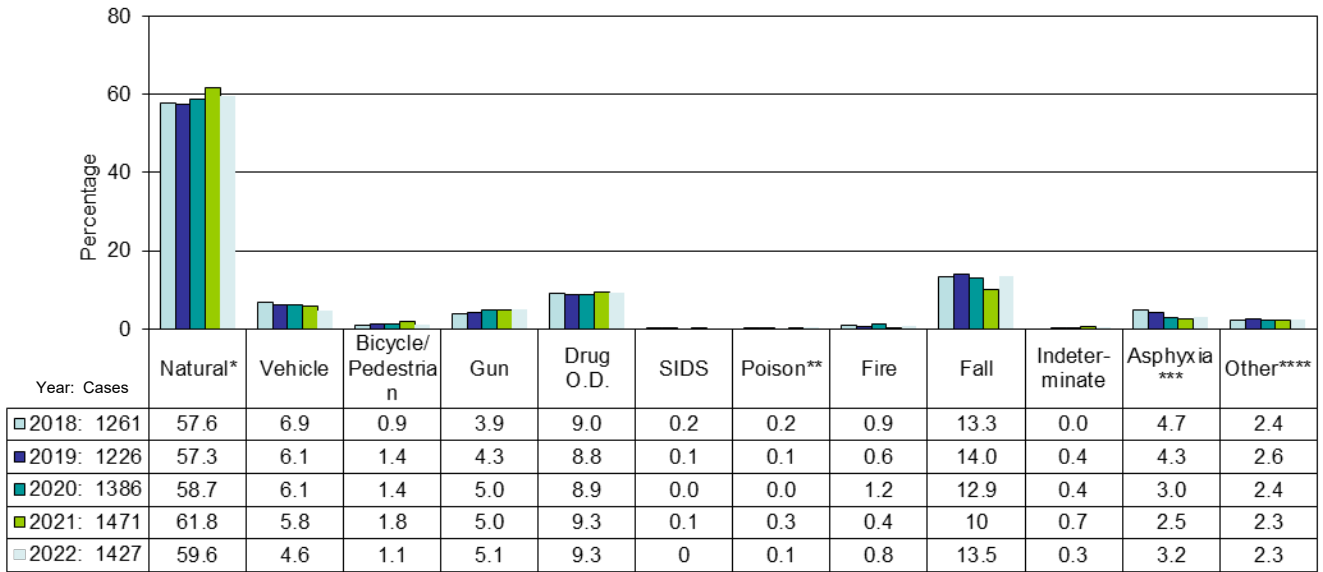
Figure 16: Suicide Cases by Method Used, 2018-2022



In 2022, female decedents accounted for 27 (31.4%) deaths, while males accounted for 59 (68.6%). The number of 2022 suicides by method: Gun (38), Hanging (26), Drug OD (12), Carbon Monoxide/CO (1), Other* (9) Other* consists of inhalation of argon gas (1), jumping from tall structure (3), shot with crossbow (1), decapitation (1), fire (1), stabbed (2)

Cause of Death

Figure 17: Medical Examiner Cases by Cause of Death, 2018-2022



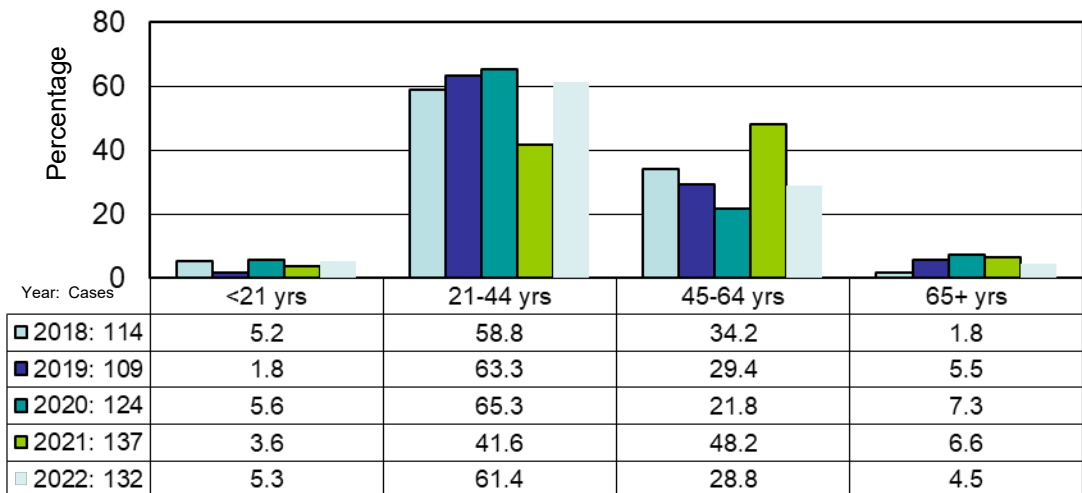
*Natural: alcohol (67); cancer (37); cardiovascular (587); CNS (42); respiratory (57); and Other (61).

**Poison includes carbon monoxide poisoning (2).

***Asphyxia includes deaths from co-sleeping (4), choking on food (5), inhalation of argon gas (1), positional asphyxia (3), neck compression/strangulation (1), suffocation (3), hanging (29)

****Other includes deaths from medical complications of existing illness/injury (3), decapitation (1), trench collapse (2), hyperthermia (1), hypothermia (2), shot with crossbow (1), struck by falling objects (2), aspiration of foreign object (1), snow sled injury (1), assault (3), drowning (13) stabbed (3)

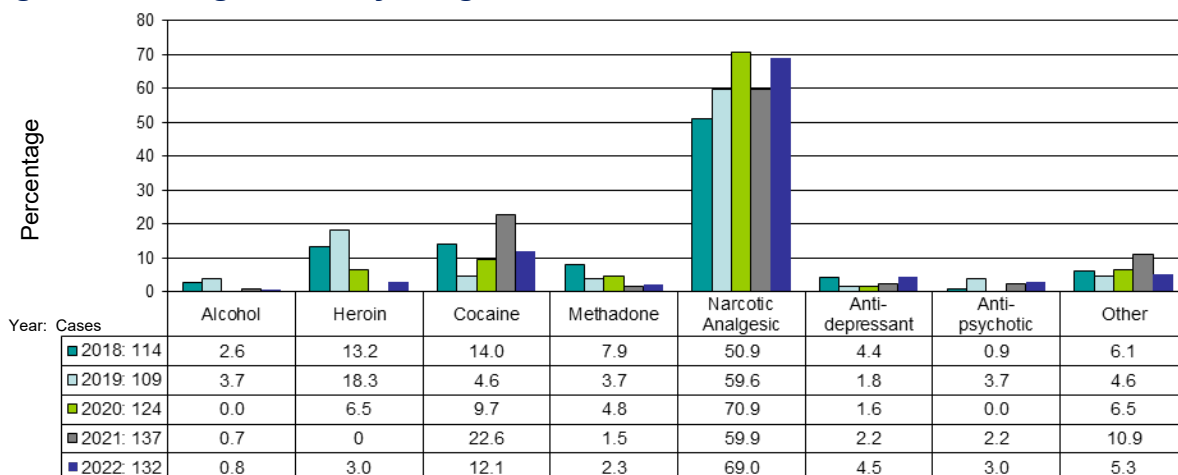
Figure 18: Drug Deaths by Age, 2018-2022



Number of 2022 Drug Deaths by Age: <21yrs (7), 21-44yrs (81), 45-64yrs (38), 65+yrs (6).

Cause of Death

Figure 19: Drug Deaths by Drug of First Mention, 2018-2022



Number of Drug Deaths: alcohol (1), heroin (4), cocaine (16), methadone (3), narcotic analgesic (91), anti-depressants (6), anti-psychotic (4), Other (7)

Table 4: Narcotic Analgesic Deaths by Drug of First Mention, 2022

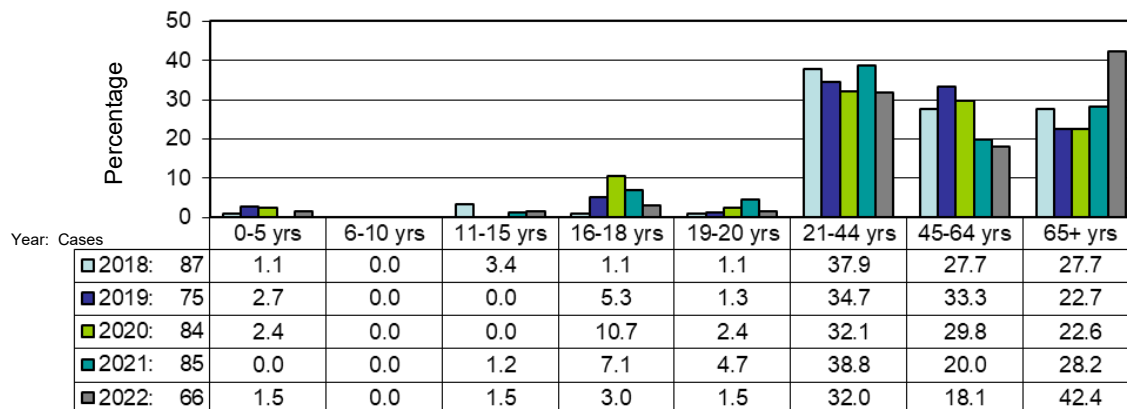
Narcotic Analgesic (generic brand)	Number of Overdoses (91 total)
Fentanyl	97.8% (89 cases)
Hydrocodone	1.1% (1 case)
Buprenorphine	1.1% (1 case)

Table 5: Drug Deaths by Gender, 2022

Manner of Drug Death	Female (38 total cases)	Male (94 total cases)
Accident	71.0% (27 cases)	96.8% (91 cases)
Suicide	23.7% (9 cases)	3.2% (3 cases)
Indeterminate	5.3% (2 cases)	0

Cause of Death

Figure 21: Vehicular Deaths by Age, 2018-2022



Number of Vehicular Deaths: 0-5yrs (1), 11-15yrs (1), 16-18yrs (2), 19-20yrs (1), 21-44yrs (21) 45-64yrs (12), 65+yrs (28)

Table 6: Vehicular Deaths by Gender, 2018-2022

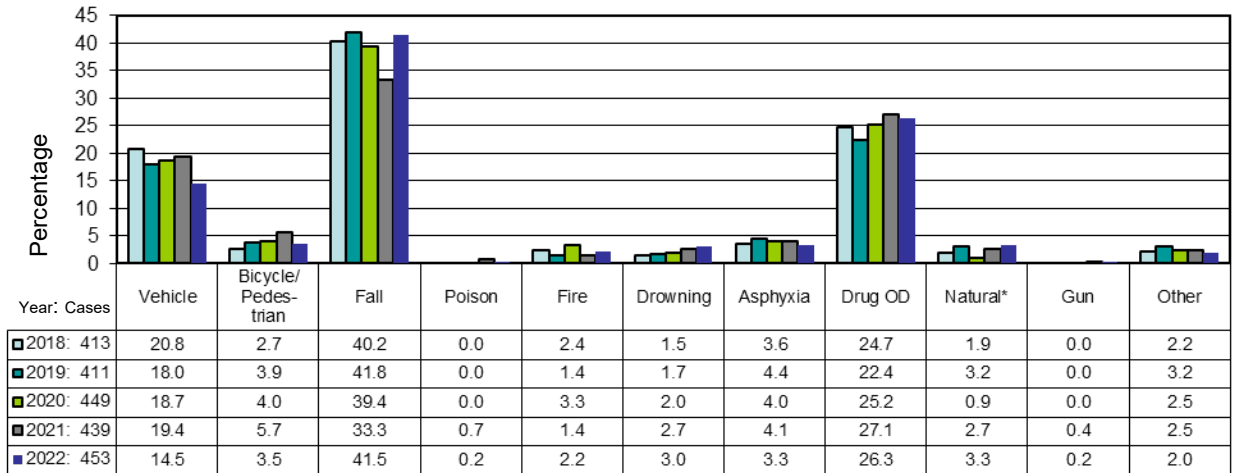
Year	# of Cases Per Year	Female (# of Decedents)	Male (# of Decedents)
2018	87	37.9% (33)	62.1% (54)
2019	75	34.7% (26)	65.3% (49)
2020	84	34.5% (29)	65.5% (55)
2021	85	30.6% (26)	69.4% (59)
2022	66	36.4% (24)	63.6% (42)

Table 7: Bicycle/Pedestrian Deaths by Age, 2018-2022

Year	# of Cases	<21 years	21-44 years	45-64 years	65+ years
2018	11	3	3	3	2
2019	17	3	3	8	3
2020	20	3	6	7	4
2021	26	3	6	10	7
2022	16	0	3	10	3

Cause of Death

Figure 22: Accidental Deaths by Cause, 2018-2022



A natural cause of death can have a contributing factor that determines the death to be accidental. Number of 2022 Accidental Deaths by Cause: Vehicle (66), Bicycle/Pedestrian (16), Fall (188), CO Poisoning (1), Drowning (13), Asphyxia (15), Drug OD (119), Natural (15), Gun (1), Other (9).

Figure 23: Accidental Deaths by Age, 2018-2022

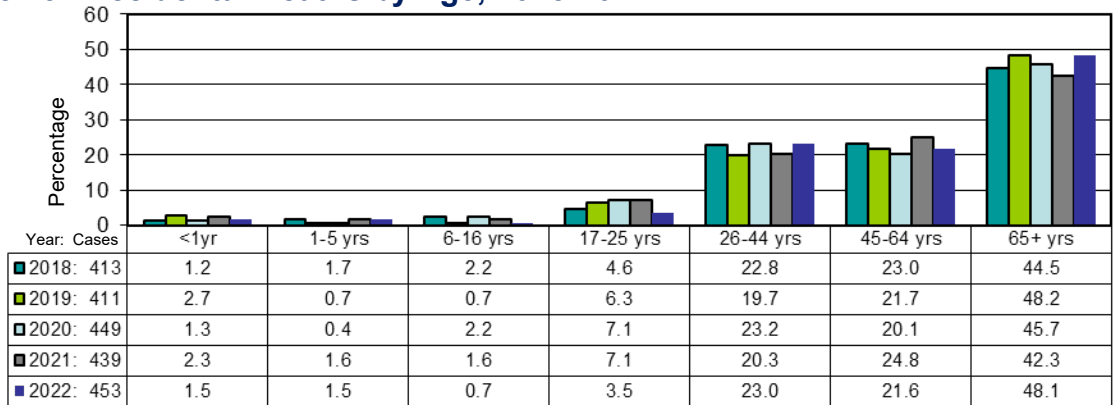
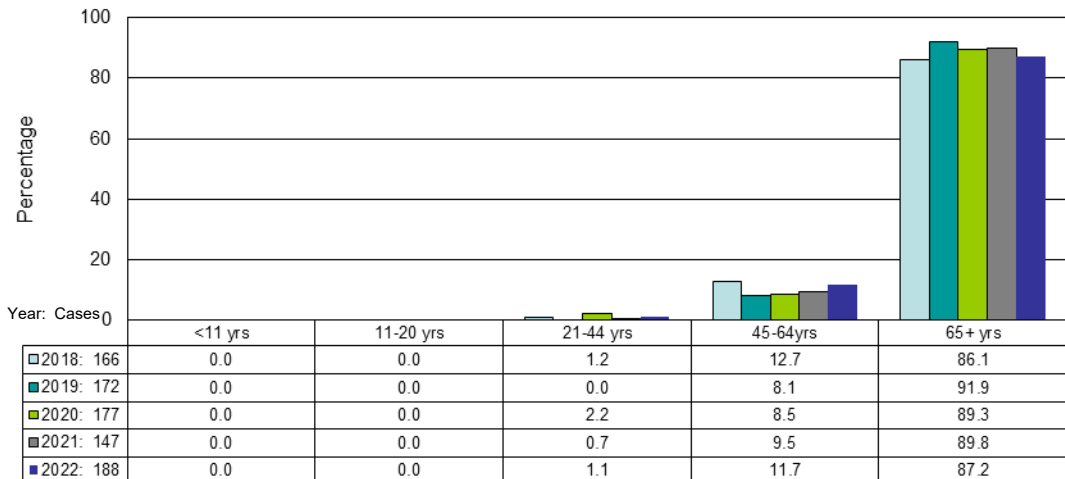


Figure 24: Deaths Resulting from Falls by Age, 2018-2022



MISCELLANEOUS

Unclaimed Bodies 2018-2022

The Office of the Medical Examiner handles all indigent burials in Kent County even if they do not fall under the medical examiner's jurisdiction, with the assistance of the Michigan Department of Health & Human Services. In 2022, the office processed 38 unclaimed burials.

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Medical Examiner Cases	13	20	16	14	21
Not Medical Examiner Cases	17	21	24	22	17
Total Cases	30	41	40	36	38*

*Of the 38 cases, 3 had assets, in which final disposition was handled by the Public Administrator.

Deceased are considered unclaimed when they absolutely have no legal next of kin. Others may fall under this category when family members are unable to afford the expense of a burial/cremation or prefer to not be involved with final disposition.

Child Death Cases Reviewed 2018-2022

The Child Death Review Team reviews the deaths of those in Kent County who are 17 and younger. In 2022, there were 24 child death cases reviewed.

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Natural	0	1	1	3	2
SIDS	4	0	1	0	0
Vehicular Accident	3	2	1	2	2
Accidental	5	9	10	11	6
Suicide	4	4	2	2	2
Homicides	5	5	2	5	8
Indeterminate	0	2	3	2	4
Total Cases	21	23	20	25	24

Accidental includes death by co-sleeping (3), CO Poisoning (1), drug overdose (2)

Suicide includes death by drug overdose (1), gunshot wound (1)

Homicide includes death by gunshot wounds (6), and assault (2).

Indeterminate includes sudden death by unknown cause; after thorough investigation, autopsy and associated studies.

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