



Department of Forensic Pathology
Office of the Medical Examiner

2019 Q1 (January 1 – March 31) Drug Report

Published July 29, 2019





Introduction

Drug-Related Deaths - Defined

We define drug deaths as those which result entirely or partially from the physiologic effects of acute toxicity. Therefore, included here are deaths which resulted from a combination of natural disease and acute intoxication (e.g. lung disease complicated by opioid intoxication). Our definition does not include deaths by violence, in which the violent behavior may have been caused or contributed to by intoxication (e.g. death due to injury from motor vehicle crash in which the at-fault driver was intoxicated). We also do not include deaths related to the effects of chronic substance use (e.g. deaths due to alcoholic liver disease or heart disease which may have been contributed to by chronic cocaine use) if not combined with acute toxicity.

Methods

The majority of the drug deaths reported are due to more than one substance, as you will see in the detailed tables that follow. Often, decedents have even more substances present in their body at the time of death or overdose incident than just the substances listed as having caused or contributed to death. After autopsy and review of records, including toxicology report, the medical examiner assigned to the case determines which of the substances present played a causal role in the death. Thus, there may be substances present in a given case which are not included in the cause of death statement.

Occasionally, intoxicated decedents survive in the hospital for a time prior to death, following acute drug intoxication. In these cases, all efforts are made to obtain and test the earliest blood and urine available from their time in the hospital for the overdose incident, so that the toxicology results reflect what was in the body at the time the overdose occurred.

New information occasionally becomes available after a “final” cause and manner of death was determined, which sometimes, albeit rarely, results in a change to the “final” cause or manner of death. As such, the statistics contained herein may be subject to change at any time.

The extent of toxicology testing is determined by the medical examiner assigned to the case, based upon the circumstances of death. During the period reported, our office used Axis Forensic Toxicology for toxicology testing.¹

¹ If you have questions about what drugs we are currently capable of detecting, please visit www.axisfortox.com or email michelle.fox@sparrow.org

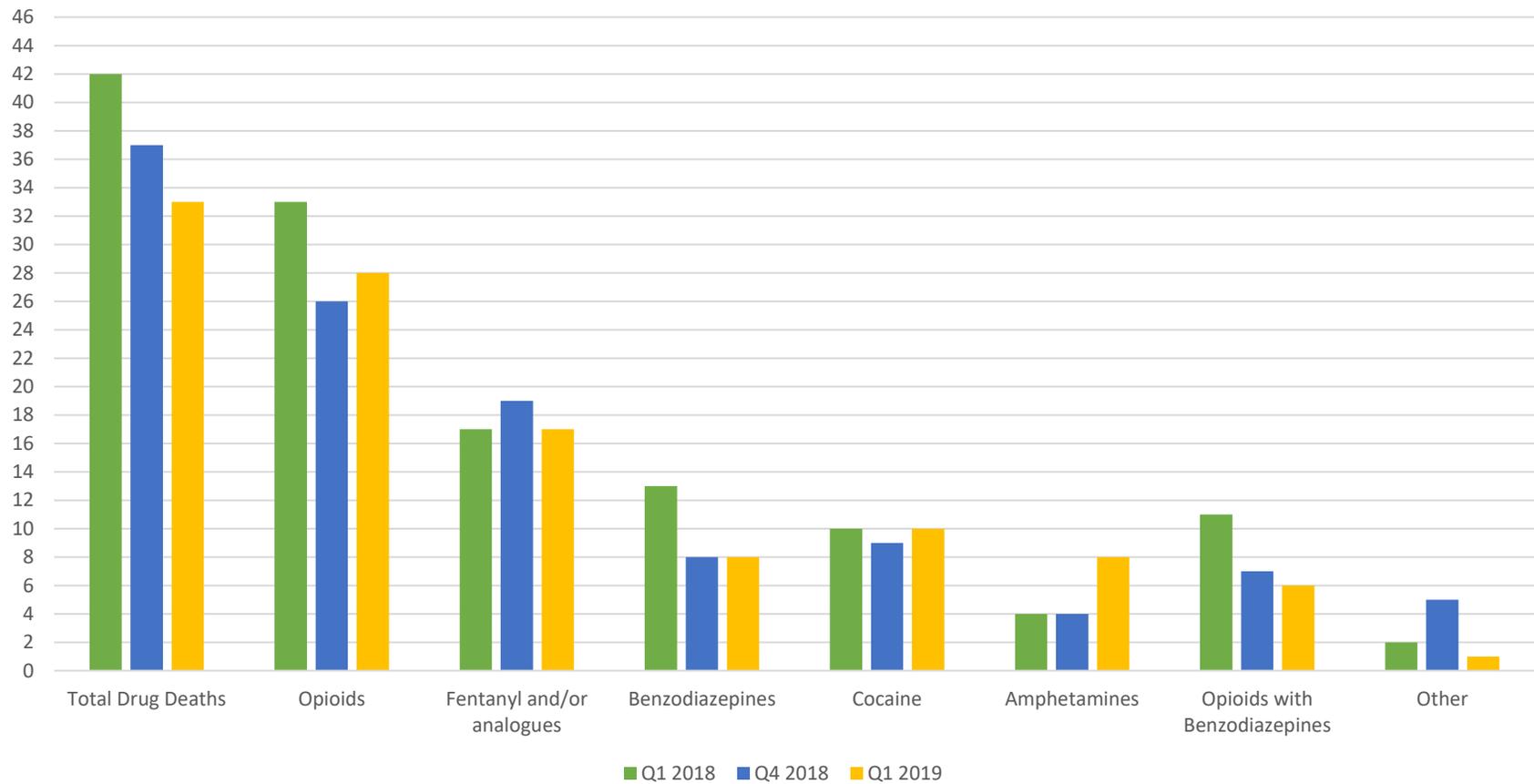
Highlights

All comparisons on the Highlights page are made to the data from Q1 (January 1-March 31) of 2018. As stated above, most drug-related deaths are due to a combination of more than one substance. As such, numerous deaths fall into multiple of the below statistical categories (i.e. *all* heroin, fentanyl, methadone, and fentanyl analogue-related deaths are included in the opioid-related deaths category, and many deaths involved both heroin and fentanyl, and are included in both specific categories).

- Total drug-related deaths **decreased** by 21.4% (9 less)
- Opioid-related deaths **decreased** by 15.2% (5 less)
- Fentanyl-related deaths neither Increased or decreased
- Cocaine-related deaths neither Increased or decreased
- Amphetamine/Methamphetamine-related deaths **increased** by 100% (4 more)
- Benzodiazepine-related deaths **decreased** by 36.4% (4 less)
- Fentanyl analogues identified as having caused or contributed to death in Q1 2019 included: acetylfentanyl only
- **75.8%** of all drug-related deaths in Q1 2019 were due to two or more substances
- **21.4%** of all opioid-related deaths in Q1 2019 also involved at least one benzodiazepine
- **10.7%** of all opioid-related deaths in Q1 2019 also involved ethanol (alcohol)
- **18.2%** of all drug related deaths in Q1 2019 involved ethanol (alcohol)

All-County Drug Class Occurrences in Drug-Related Deaths²

Q1 2019 compared with Q1 2018 and Q4 2018



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication – both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

² One previously unaccounted Shiawassee County drug related death has been added to Q1 after publication of original report. Rev. 9/12/19

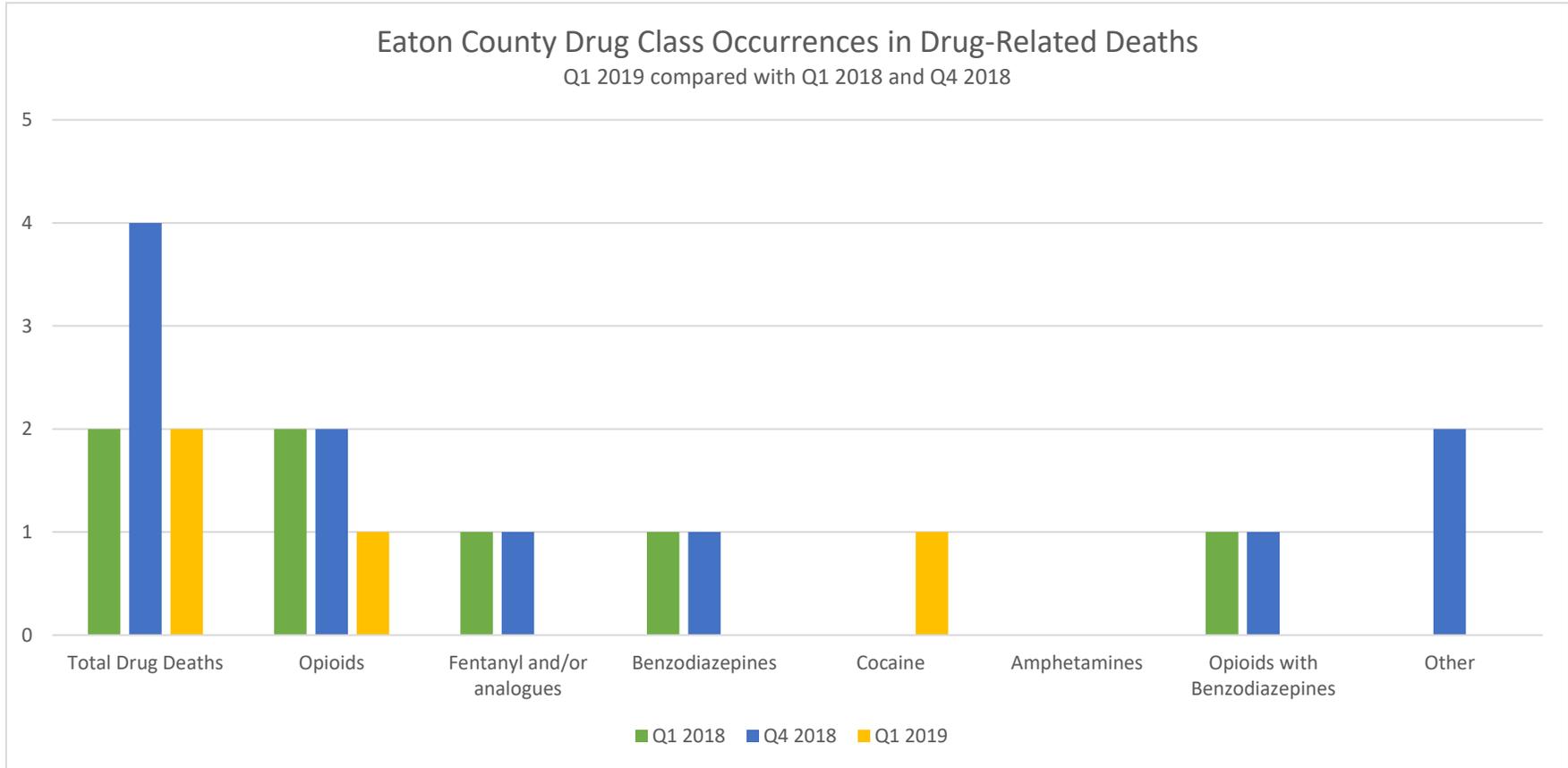
Eaton County

Drug-Related Deaths

2019 Q1 Eaton County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	48	codeine, ethanol, hydrocodone, pseudoephedrine	Suicide
Female	52	cocaine	Accident

Eaton County

Drug-Related Deaths



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication – both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

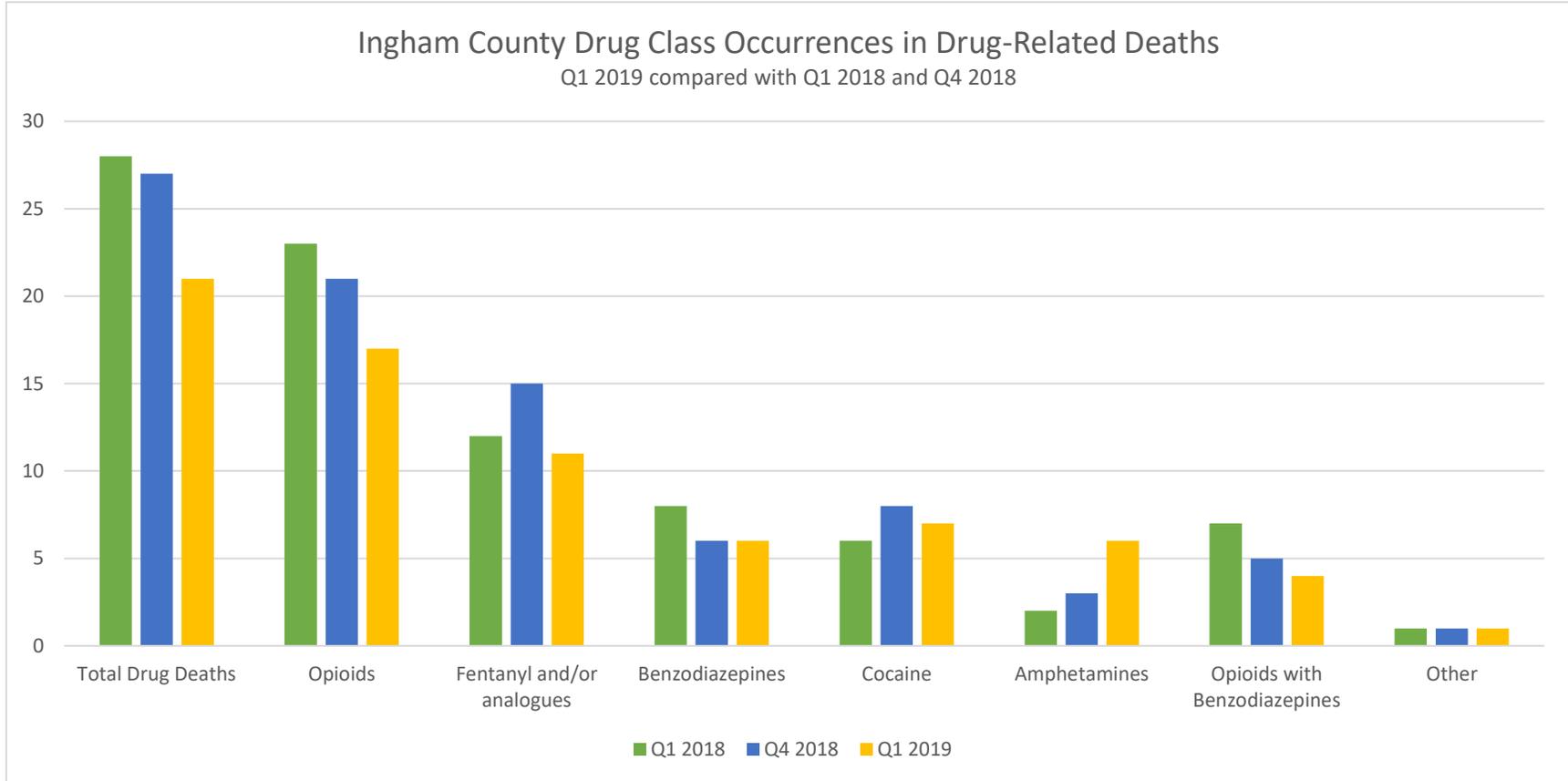
Ingham County

Drug-Related Deaths

2019 Q1 Ingham County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	20	morphine, codeine, alprazolam, lorazepam, nordiazepam, cocaine	Accident
Male	27	acetylfentanyl, clonazepam, fentanyl, ketamine, methamphetamine	Accident
Female	28	cyclobenzaprine, diphenhydramine, fentanyl, morphine	Indeterminate
Male	29	acetylfentanyl, cocaine, fentanyl, methamphetamine	Accident
Female	31	fentanyl	Accident
Male	33	alprazolam, cocaine, fentanyl, methadone, morphine	Accident
Female	34	fentanyl, heroin, gabapentin	Accident
Female	38	hydrocodone, hydroxyzine, mitragynine	Suicide
Male	38	cocaine, fentanyl, heroin	Accident
Female	39	fentanyl, hydrocodone, methamphetamine, cocaine, diphenhydramine	Accident
Male	41	buprenorphine, methamphetamine, morphine	Accident
Male	44	methamphetamine	Accident
Male	44	ethanol	Accident
Male	45	fentanyl, cocaine, morphine, diphenhydramine	Accident
Male	50	methamphetamine, cocaine, heroin, ethanol	Accident
Male	59	alprazolam, ethanol	Suicide
Male	59	ethanol, fentanyl, morphine	Indeterminate
Female	60	lorazepam, diphenhydramine, mirtazapine, trazodone, chlorpromazine, fluphenazine, ethanol	Suicide
Female	62	meperidine	Suicide
Male	63	clonazepam, hydrocodone, promethazine	Accident
Male	63	fentanyl, heroin, hydrocodone	Accident

Ingham County

Drug-Related Deaths



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication – both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

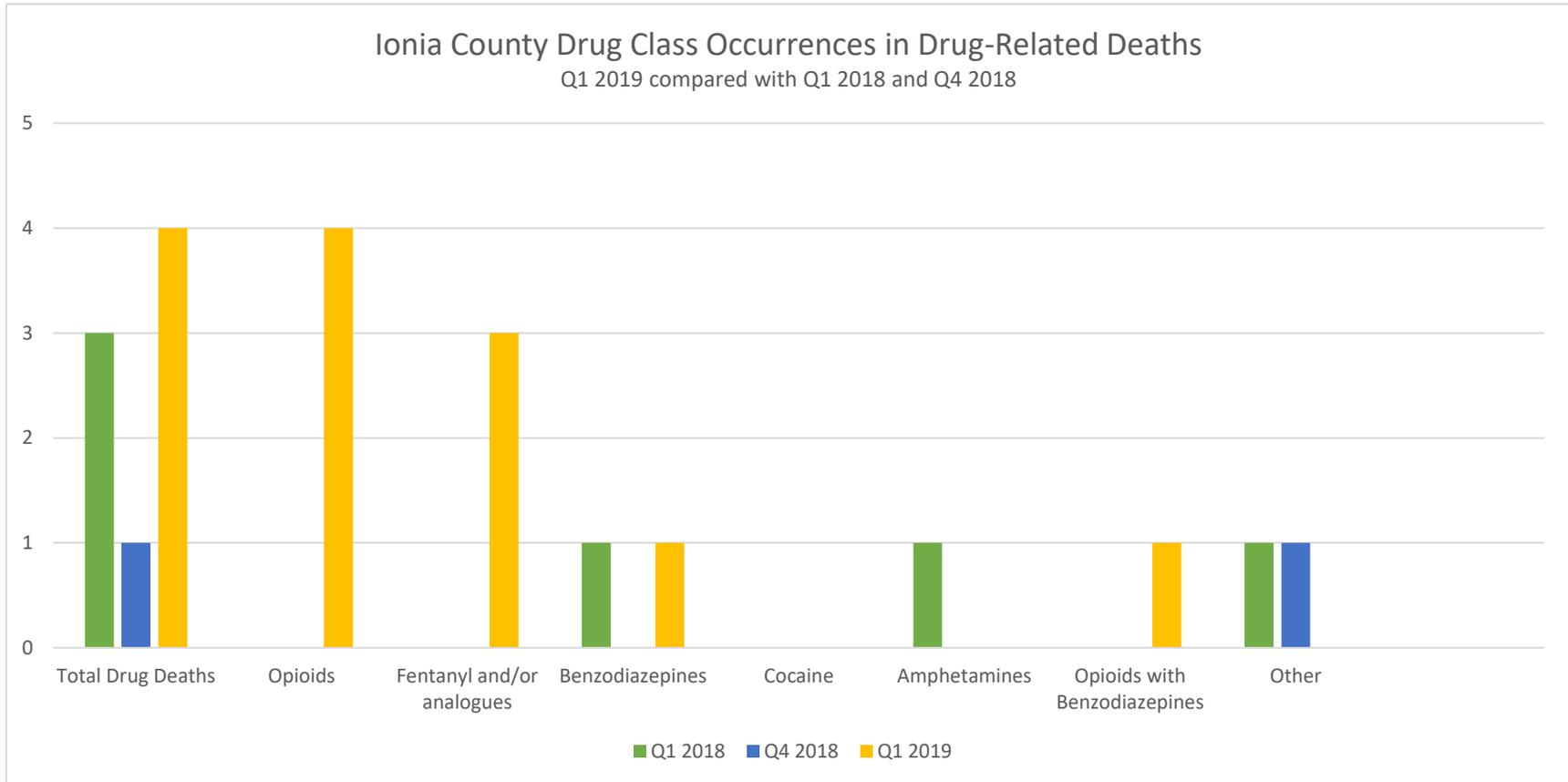
Ionia County

Drug-Related Deaths

2019 Q1 Ionia County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	32	fentanyl	Accident
Female	47	fentanyl, acetylfentanyl, cyclobenzaprine, gabapentin	Accident
Female	49	cyclobenzaprine, diazepam, methadone, tramadol	Accident
Male	50	fentanyl	Accident

Ionia County

Drug-Related Deaths



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication – both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

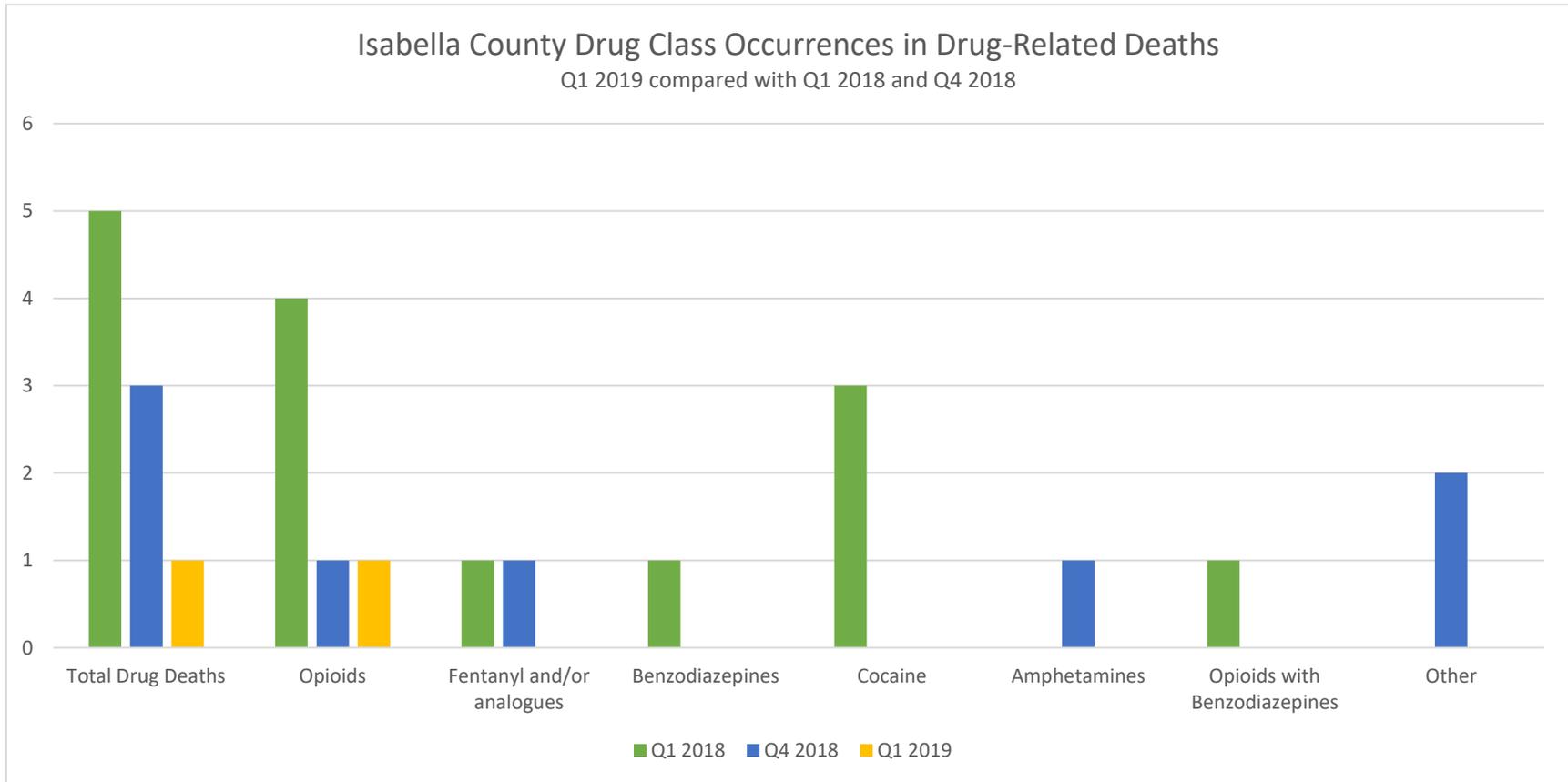
Isabella County

Drug-Related Deaths

2019 Q1 Isabella County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	34	methadone	Accident

Isabella County

Drug-Related Deaths



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication – both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

Shiawassee County

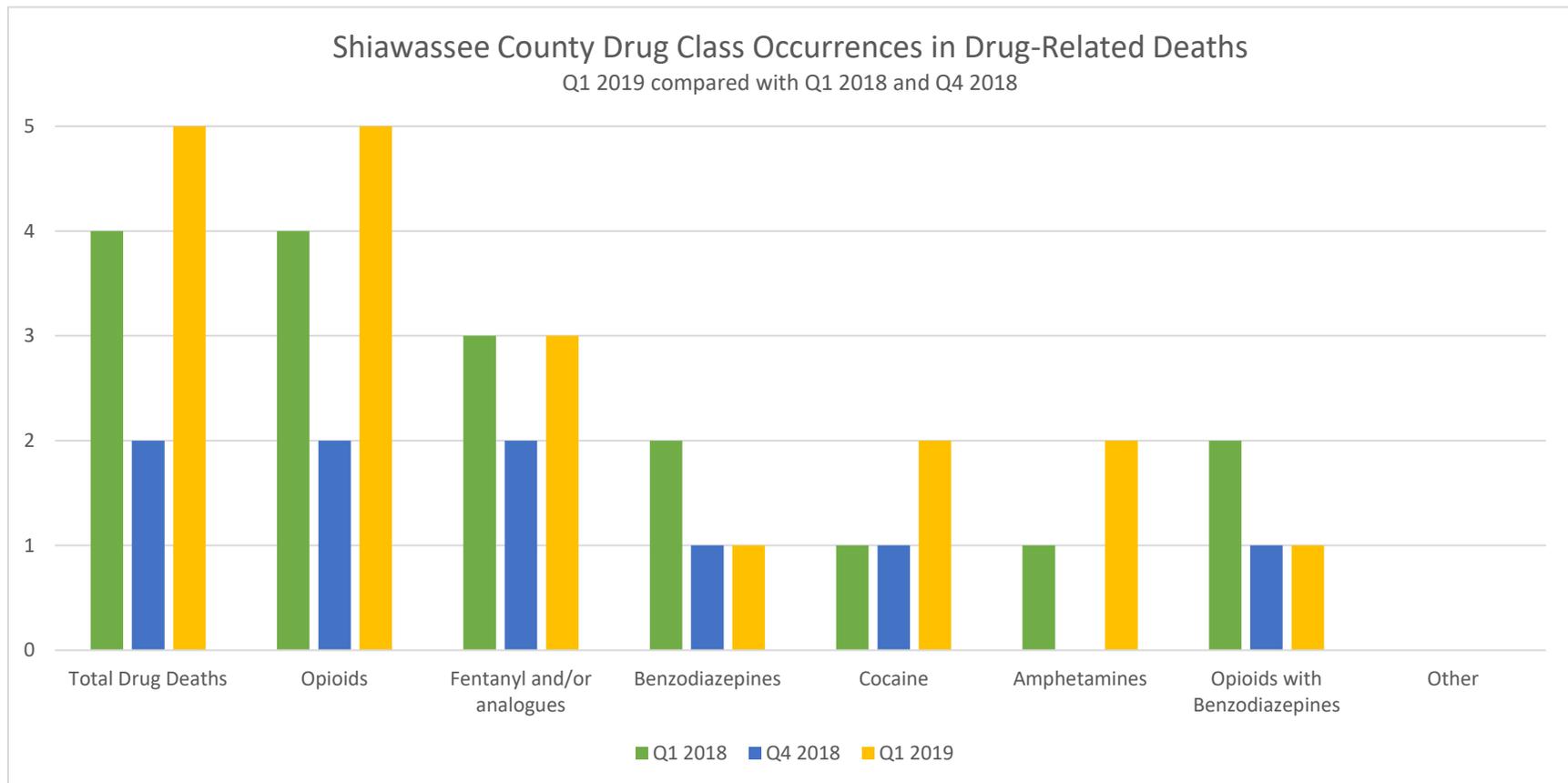
Drug-Related Deaths²

2019 Q1 Shiawassee County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	26	fentanyl, cocaine, amphetamine, clonazepam, diphenhydramine	Accident
Female	41	methamphetamine, methadone, cyclobenzaprine, gabapentin	Accident
Male	55	fentanyl, acetylfentanyl, methadone, pregabalin, diphenhydramine	Accident
Female	57	morphine, gabapentin, diphenhydramine	Accident
Female	60	fentanyl, heroin, cocaine, doxylamine	Accident

² One previously unaccounted Shiawassee County drug related death has been added to Q1 after publication of original report. Rev. 9/12/19

Shiawassee County

Drug-Related Deaths



This chart describes occurrences in one death of a given class of drug. As most drug-related deaths are due to two or more substances, the same death may fall into multiple categories (e.g. death due to fentanyl and alprazolam intoxication falls into the opioids, benzodiazepines, fentanyl and/or analogues, and opioids with benzodiazepines categories). Multiple of the same class of drug in the same death counts as only one occurrence of that class of drugs (e.g. death due to heroin and hydrocodone intoxication).—both of these are opioids so this death falls only in the opioids category, as one occurrence). The “other” category is for occurrences of drug-related deaths due *solely* to drugs which do not fall into the other listed categories.

² One previously unaccounted Shiawassee County drug related death has been added to Q1 after publication of original report. Rev. 9/12/19