

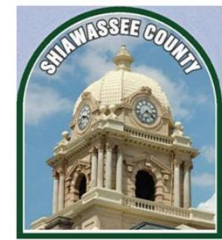


Department of Forensic Pathology
Office of the Medical Examiner

2019 Q2 (April 1 – June 30) Drug Report

Published September 12, 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

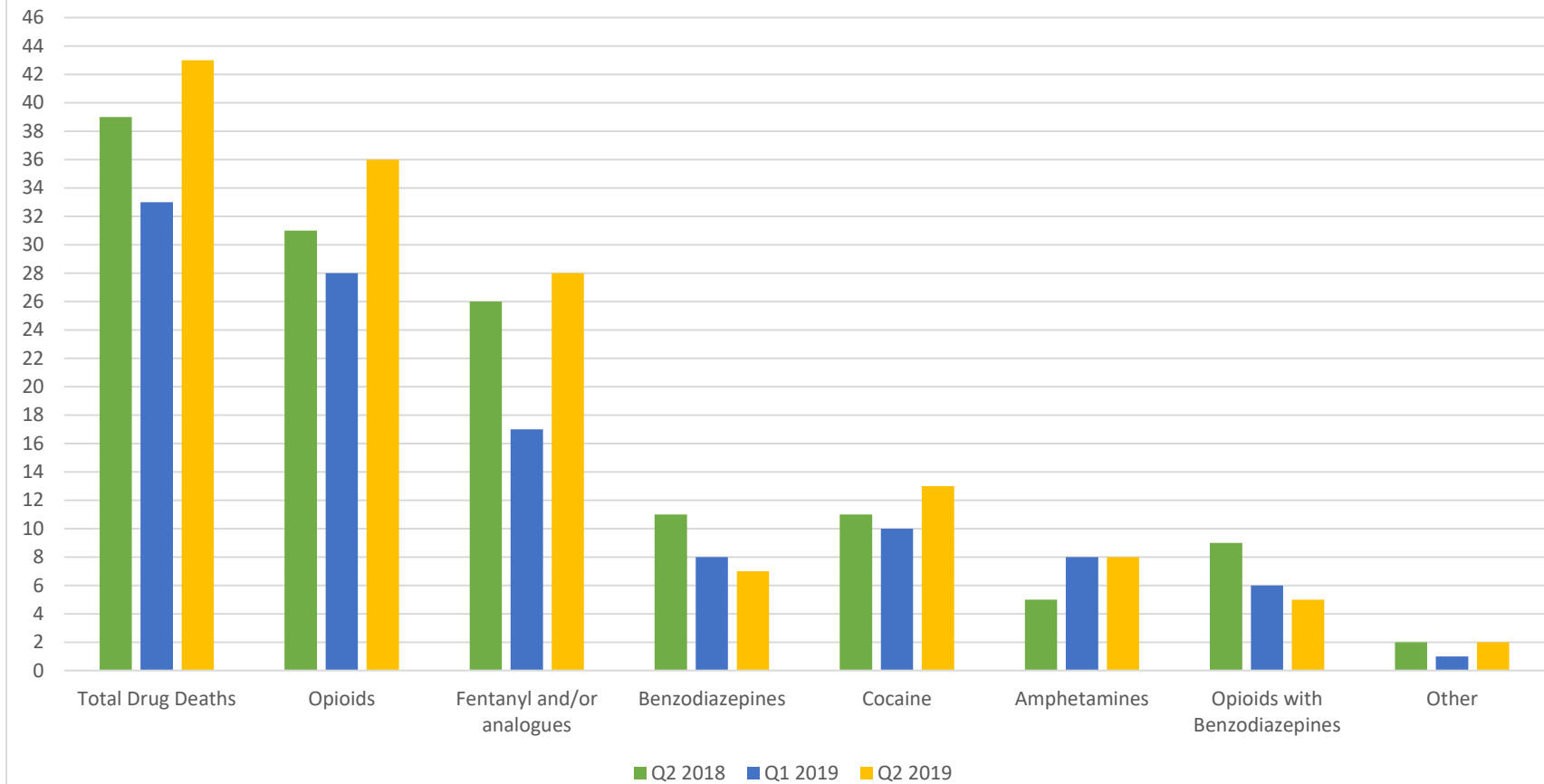
Highlights

All comparisons on the Highlights page are made to the data from Q2 (April 1 – June 30) 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 **increased** by 10.2% (4 more)
- Opioid-related deaths **increased** by 16.1% (5 more) including a 52.9 % increase (9 more) in Ingham County alone
- Fentanyl-related deaths **increased** by 7.7% (2 more) including a 50.0% increase (7 more) in Ingham County alone.
- Cocaine-related deaths **increased** by 18.2% (2 more) including a 100.0% increase (5 more) in Ingham County alone
- Amphetamine/Methamphetamine-related deaths **increased** by 60% (3 more) including a 200% increase (4 more) in Ingham County alone
- Benzodiazepine-related deaths **decreased** by 36.4% (4 less) and opioid-related deaths with benzodiazepines **decreased** by 44.4% (4 less)
- **88%** of all drug-related deaths in Q2 2019 were due to two or more substances
- **13.9%** of all opioid-related deaths in Q2 2019 also involved at least one benzodiazepine
- **30.2%** of all drug related deaths in Q2 2019 involved ethanol (alcohol), including **27.8%** of opioid-related deaths
- The majority (**81%**) of Cocaine and Amphetamine/methamphetamine deaths also involved an opiate (nearly all fentanyl and/or heroin)

All-County Drug Class Occurrences in Drug-Related Deaths²

Q2 2019 compared with Q1 2019 and Q2 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.

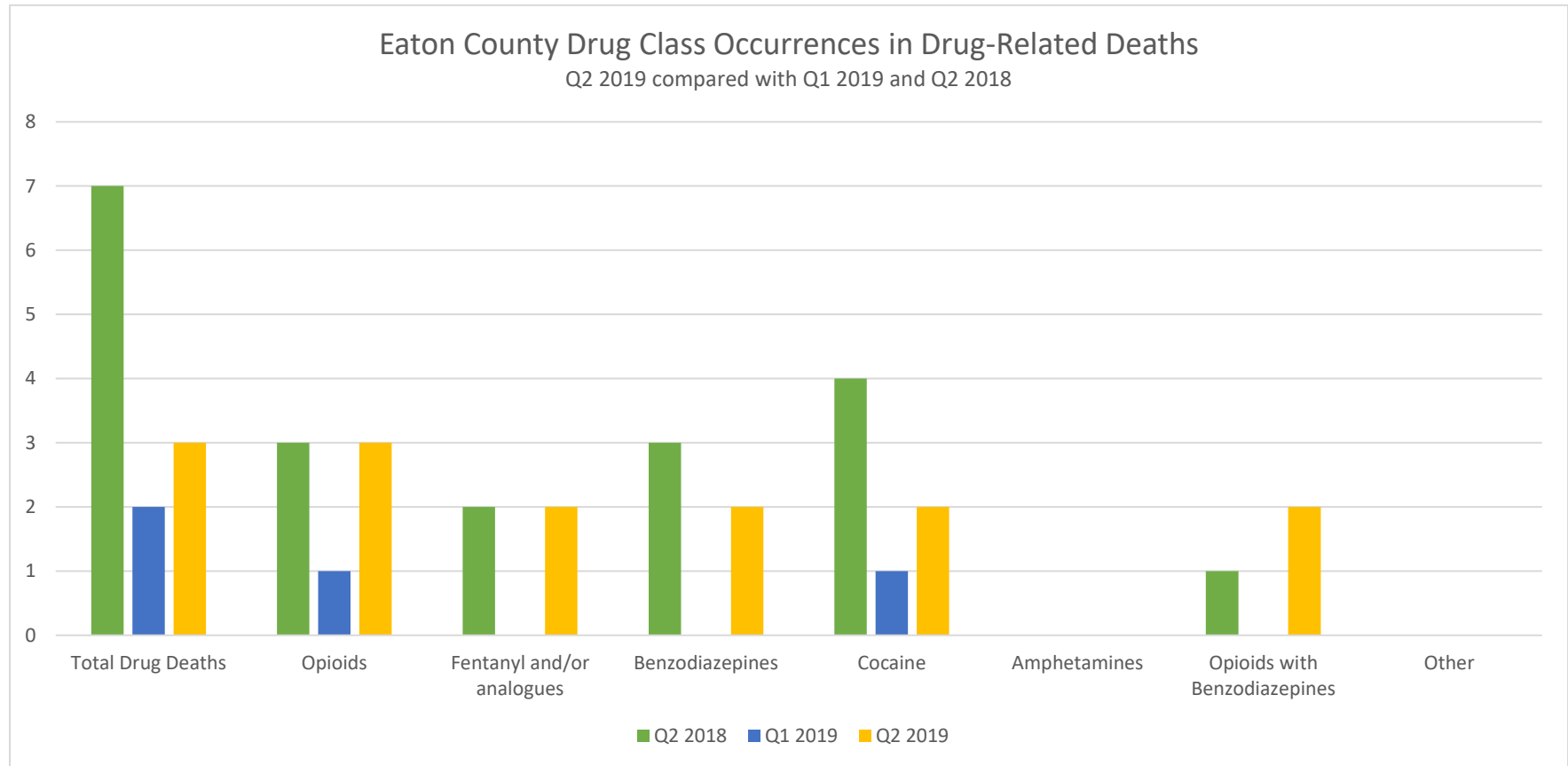
Eaton County

Drug-Related Deaths

2019 Q2 Eaton County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	32	alprazolam, fentanyl	Accident
Male	33	cocaine, ethanol, fentanyl	Indeterminate
Female	40	alprazolam, cocaine, morphine	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

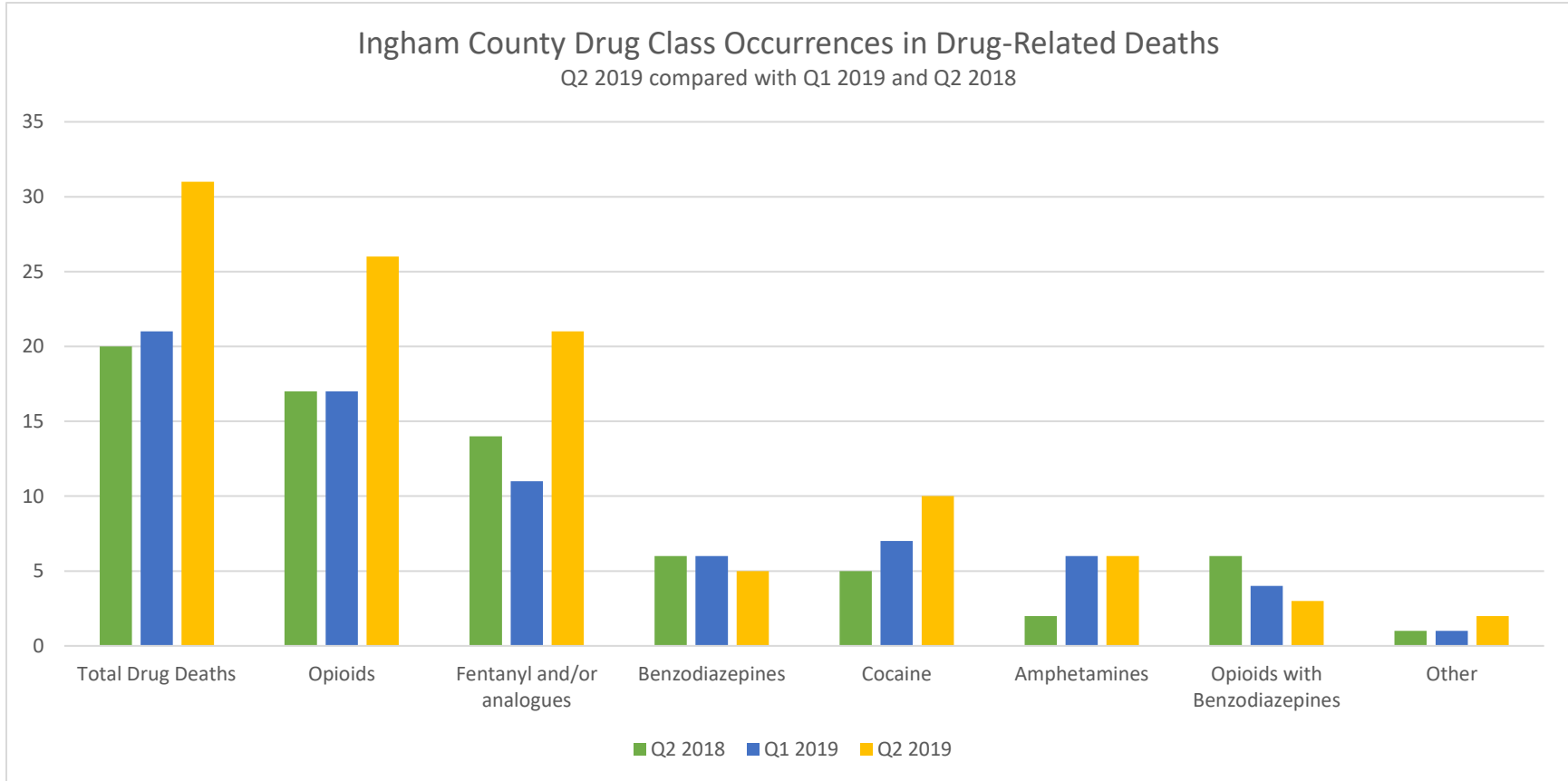
Drug-Related Deaths

2019 Q2 Ingham County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	24	methamphetamine, fentanyl	Accident
Female	25	fentanyl, heroin, ethanol	Accident
Male	25	ethanol, clonazepam, alprazolam, diphenhydramine	Accident
Female	28	methamphetamine, cocaine, acetyl fentanyl, fentanyl, cyclobenzaprine	Accident
Female	28	fentanyl, heroin, cocaine, U47700, acetylfentanyl, butyrylfentanyl	Accident
Female	32	alprazolam, cocaine, heroin, methamphetamine	Accident
Male	32	cocaine, fentanyl, heroin	Accident
Female	34	acetylfentanyl, cocaine, diphenhydramine, fentanyl	Indeterminate
Female	35	acetylfentanyl, cocaine, ethanol, fentanyl, hydroxyzine, methamphetamine	Accident
Male	35	loperamide	Accident
Male	35	methamphetamine, fentanyl, heroin	Accident
Male	36	fentanyl, heroin	Accident
Male	37	ethanol, gabapentin	Accident
Female	39	acetylfentanyl, fentanyl, cocaine	Accident
Male	40	heroin, fentanyl	Accident
Male	40	kava, clonazepam, lorazepam, dextromethorphan	Accident
Male	43	fentanyl, heroin, tramadol	Accident
Female	43	cocaine, ethanol, fentanyl, heroin	Accident
Male	47	fentanyl, heroin, methadone	Accident
Male	49	ethanol, hydromorphone, gabapentin, amitriptyline	Accident
Male	51	ethanol, fentanyl, heroin	Accident
Female	52	fentanyl, butalbital, gabapentin, hydrocodone, oxycodone, ethanol	Accident
Male	53	methamphetamine, morphine	Accident

Male	54	alprazolam, fentanyl, morphine	Accident
Male	55	methadone	Accident
Male	56	ethanol	Accident
Female	59	cocaine	Accident
Male	62	cocaine, fentanyl	Accident
Male	62	fentanyl, morphine, diphenhydramine	Accident
Female	66	ethanol, fentanyl, heroin	Accident
Male	67	alprazolam, heroin, fentanyl	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.

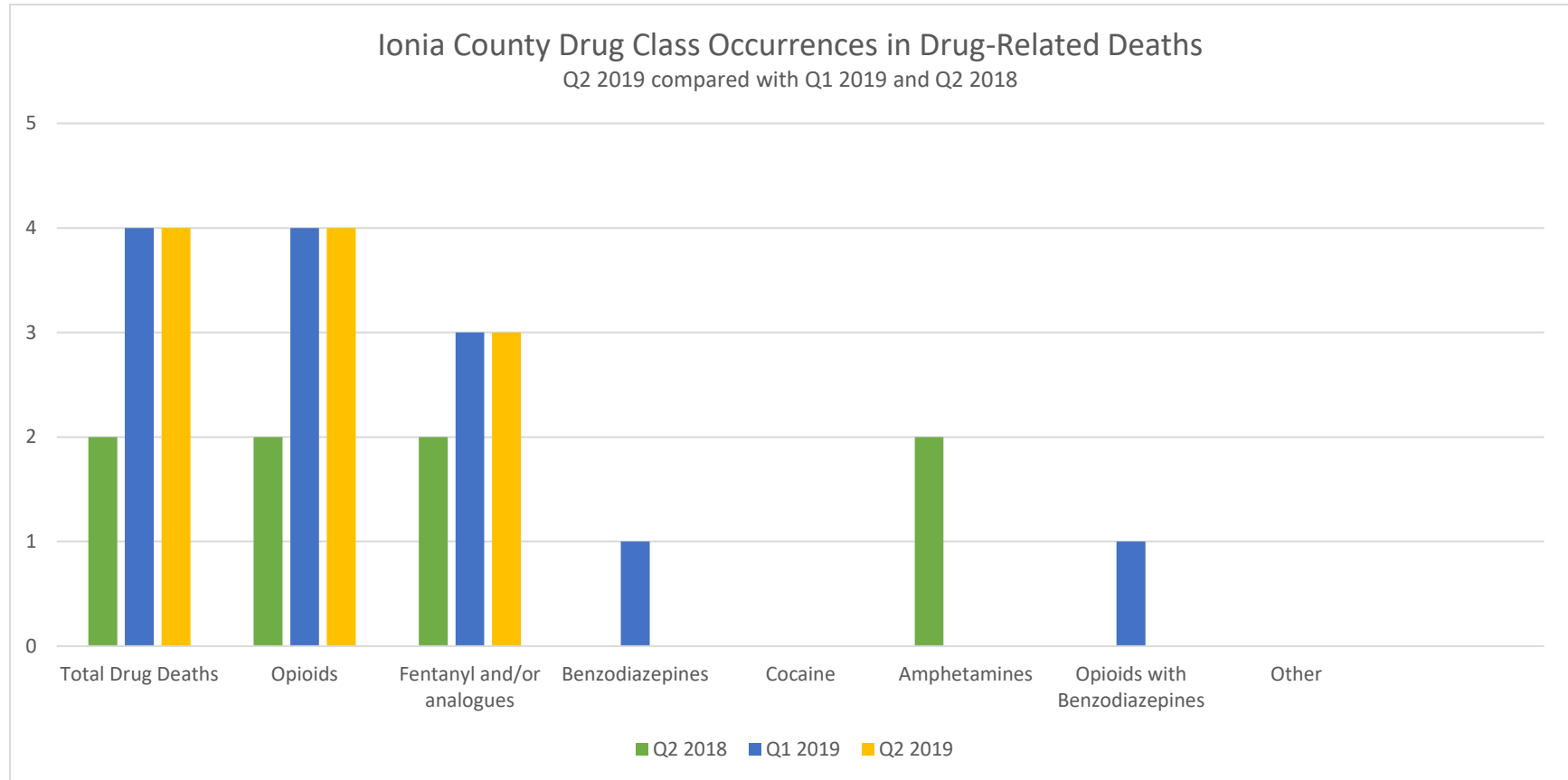
Ionia County

Drug-Related Deaths

2019 Q2 Ionia County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	34	fentanyl, heroin, U-47700	Accident
Female	37	fentanyl, morphine, hydrocodone, ethanol	Accident
Male	51	ethanol, fentanyl, acetylfentanyl	Accident
Male	51	heroin, oxycodone, cyclobenzaprine, gabapentin, duloxetine, pregabalin	Accident

Ionia County

Drug-Related Deaths



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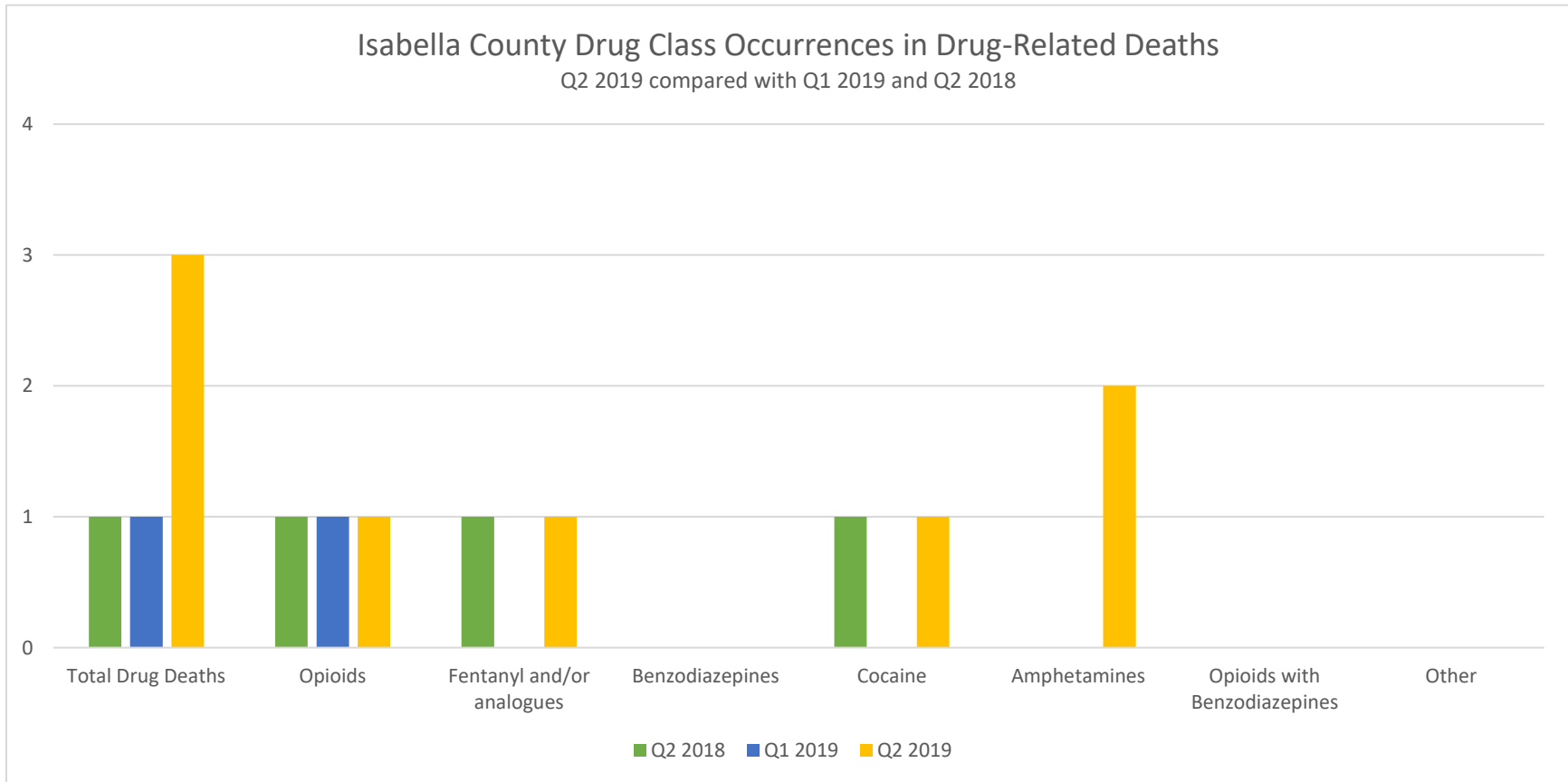
Isabella County

Drug-Related Deaths

2019 Q2 Isabella County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	26	fentanyl	Accident
Male	46	cocaine, methamphetamine	Accident
Male	47	methamphetamine, cyclobenzaprine	Accident

Isabella County

Drug-Related Deaths



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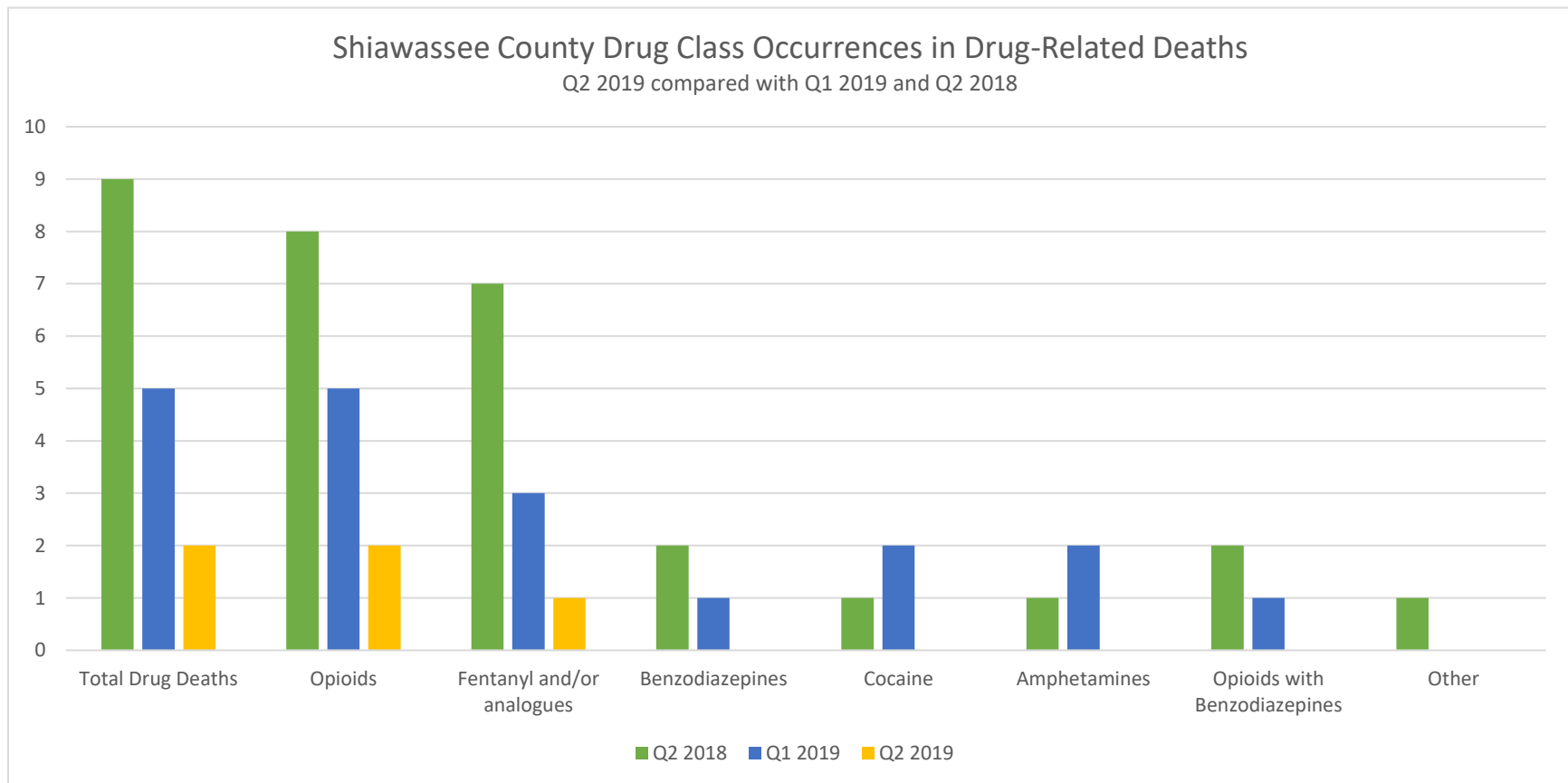
Shiawassee County

Drug-Related Deaths

2019 Q2 Shiawassee County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	24	acetylfentanyl, fentanyl, heroin	Accident
Female	50	oxycodone, cyclobenzaprine, pregabalin, sertraline, chlorophenylpiperazine	Indeterminate

Shiawassee County

Drug-Related Deaths



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