



Department of Forensic Pathology  
Office of the Medical Examiner

2020 Q4 (October 1 – December 31) Drug Report

Published March 9, 2021





## 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.<sup>1</sup>

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<sup>1</sup> If you have questions about what drugs we are currently capable of detecting, please visit [www.axisfortox.com](http://www.axisfortox.com) or email [michelle.fox@sparrow.org](mailto:michelle.fox@sparrow.org)

## Highlights

Unless otherwise indicated, all comparisons on the Highlights page are made to the data from the same quarter as the previous year (Q4 2019). 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).

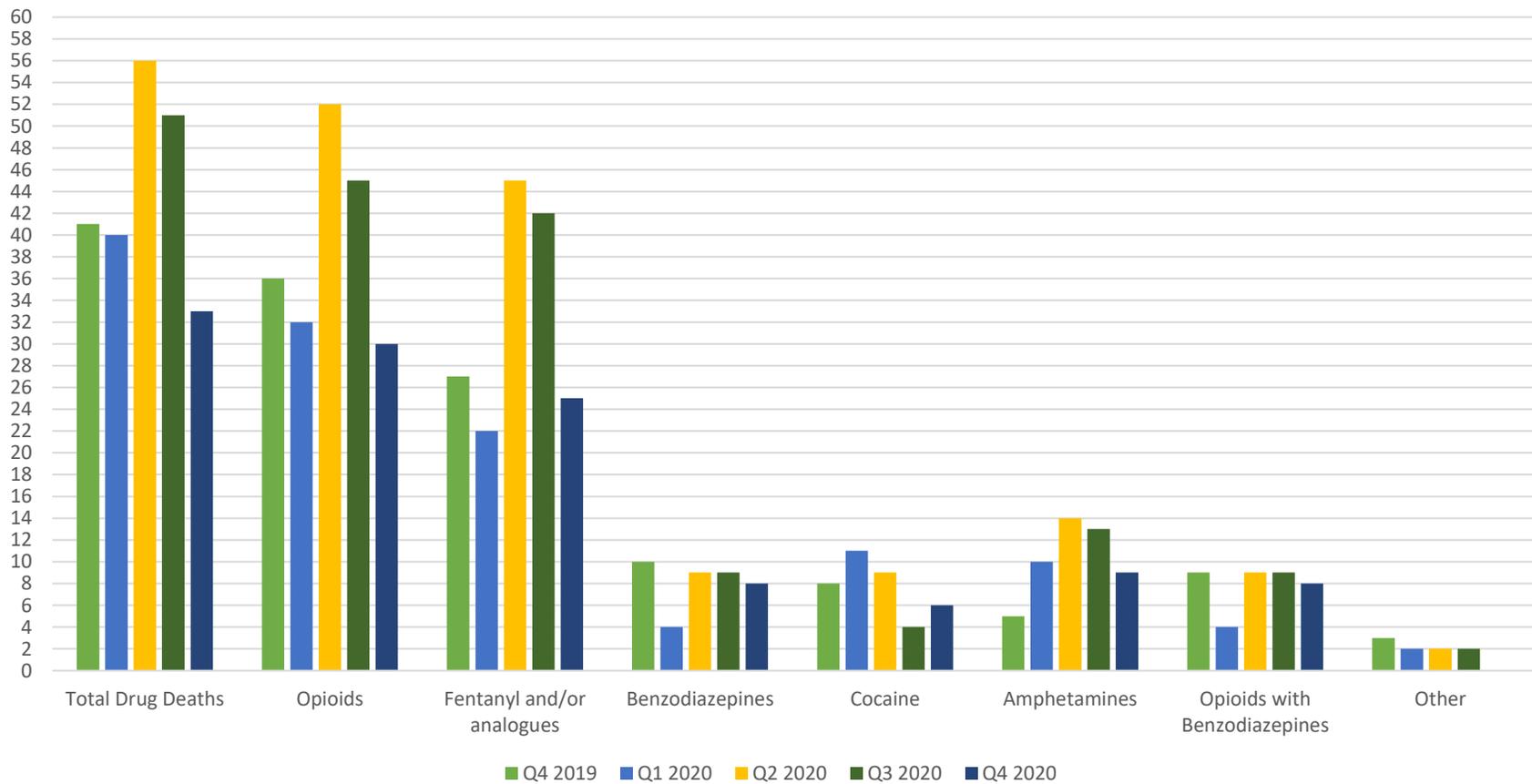
- Total drug-related deaths **decreased** by **19.5%** (8 less)
- Opioid-related deaths **decreased** by **16.6%** (6 less)
- Fentanyl and/or fentanyl analogue-related deaths **decreased** by **7.4%** (2 less)
- Fentanyl and/or fentanyl analogue(s) were involved in 25 of 33 drug-related deaths (**75.8%**) in Q4 2020
- Cocaine-related deaths **decreased** by **25%** (2 fewer)
- Amphetamine/Methamphetamine-related<sup>2</sup> deaths **increased** by **80%** (4 more)
- **91%** of all drug-related deaths in Q4 2020 involved at least one opioid
- **63.6%** of all drug-related deaths in Q4 2020 involved two or more substances
- **26.7%** of all opioid related deaths in Q4 2020 involved at least one benzodiazepine
- **15%** of all drug related deaths in Q4 2020 involved ethanol (alcohol)

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<sup>2</sup> Methamphetamine is metabolized to amphetamine in the body, thus, it is not always clear what the presence of amphetamine indicates (illicit methamphetamine use vs. prescription amphetamine use).

## All-County Drug Class Occurrences in Drug-Related Deaths

Q4 2020 compared with Q1, Q2, & Q3 2020, and Q4 2019



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.

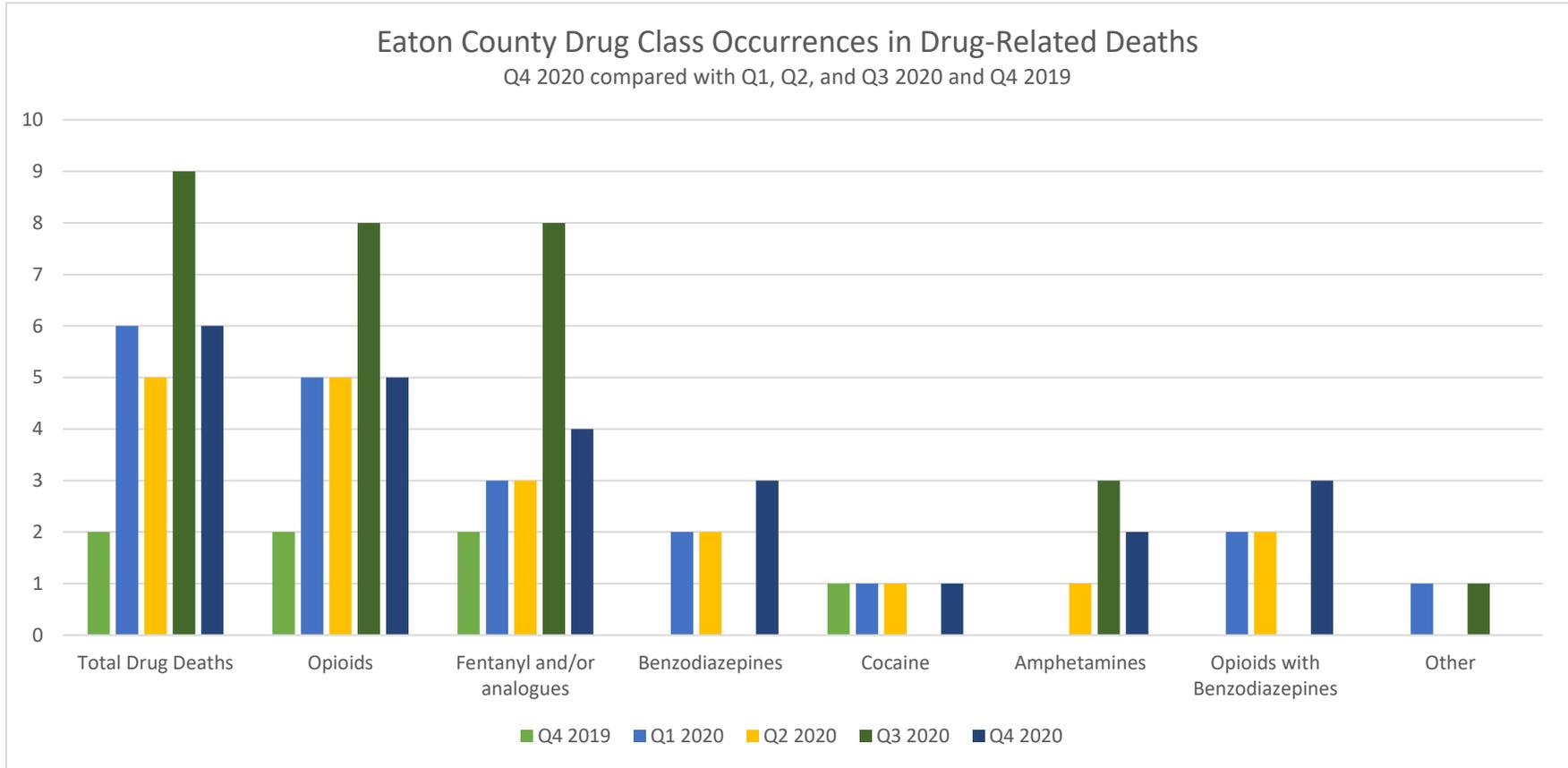
# Eaton County

## Drug-Related Deaths

2020 Q4 Eaton County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	19	fentanyl	Accident
Female	29	fentanyl, acetylfentanyl, alprazolam	Accident
Male	35	fentanyl, mitragynine, tramadol	Accident
Female	48	alprazolam, cocaine, fentanyl	Accident
Female	57	alprazolam, methamphetamine, morphine	Accident
Male	59	methamphetamine	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

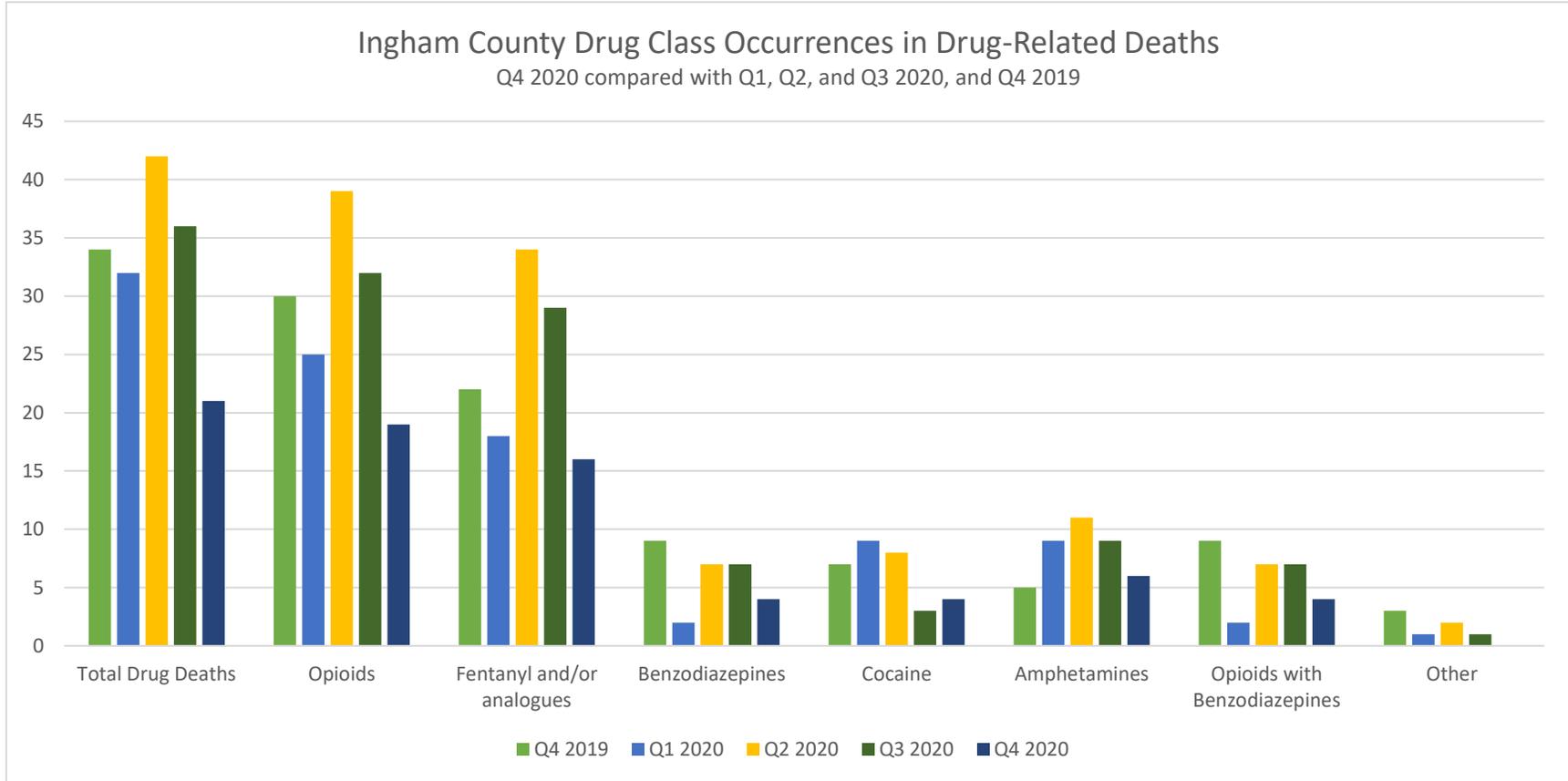
## Drug-Related Deaths<sup>3</sup>

2020 Q4 Ingham County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	1	fentanyl	Pending
Female	19	fentanyl, amphetamine, dextromethorphan, hydroxyzine	Accident
Male	21	fentanyl, cocaine, adinazolam, etizolam, ethanol	Accident
Male	28	fentanyl	Accident
Male	29	fentanyl	Accident
Female	29	fentanyl	Accident
Male	30	methadone	Accident
Male	31	fentanyl, heroin	Accident
Male	37	diazepam, fentanyl	Accident
Male	38	methamphetamine	Accident
Female	41	methamphetamine, fentanyl, morphine, xylazine	Accident
Male	42	diphenhydramine, fentanyl	Accident
Male	49	hydrocodone, ethanol	Accident
Female	49	cocaine, fentanyl	Accident
Female	54	fentanyl, cocaine, cyclobenzaprine, sertraline, ethanol	Accident
Male	58	fentanyl, methamphetamine, clonazepam, ethanol	Accident
Male	59	cocaine, fentanyl	Accident
Male	61	methamphetamine	Accident
Female	65	hydrocodone, carisoprodol	Accident
Female	65	alprazolam, ethanol, fentanyl, methamphetamine	Accident
Male	72	fentanyl	Accident

<sup>3</sup> (1) death is pending further investigation at the time of report.

# 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.

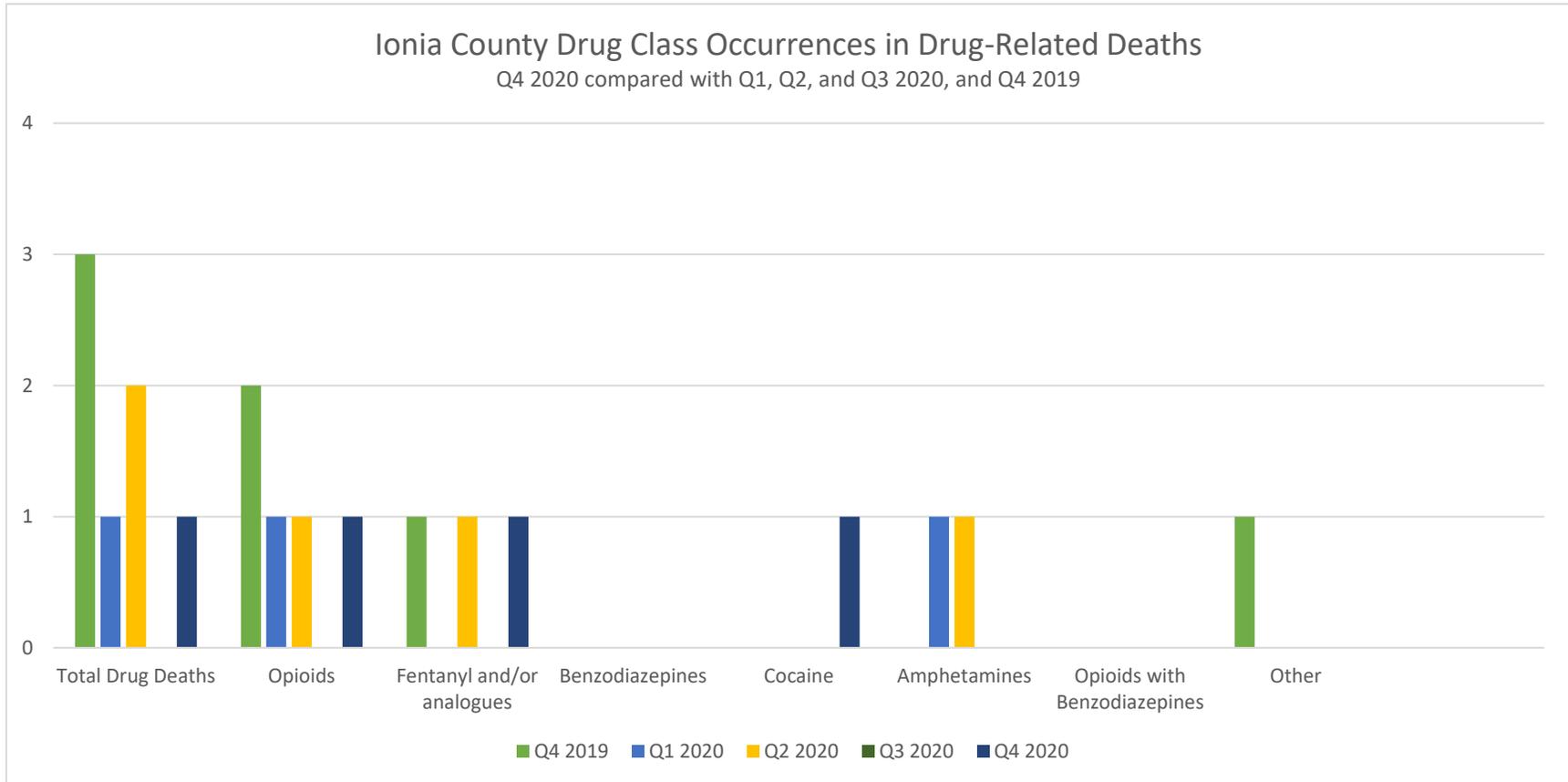
# Ionia County

## Drug-Related Deaths

2020 Q4 Ionia County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	57	cocaine, fentanyl, morphine	Accident

# Ionia County

## Drug-Related Deaths



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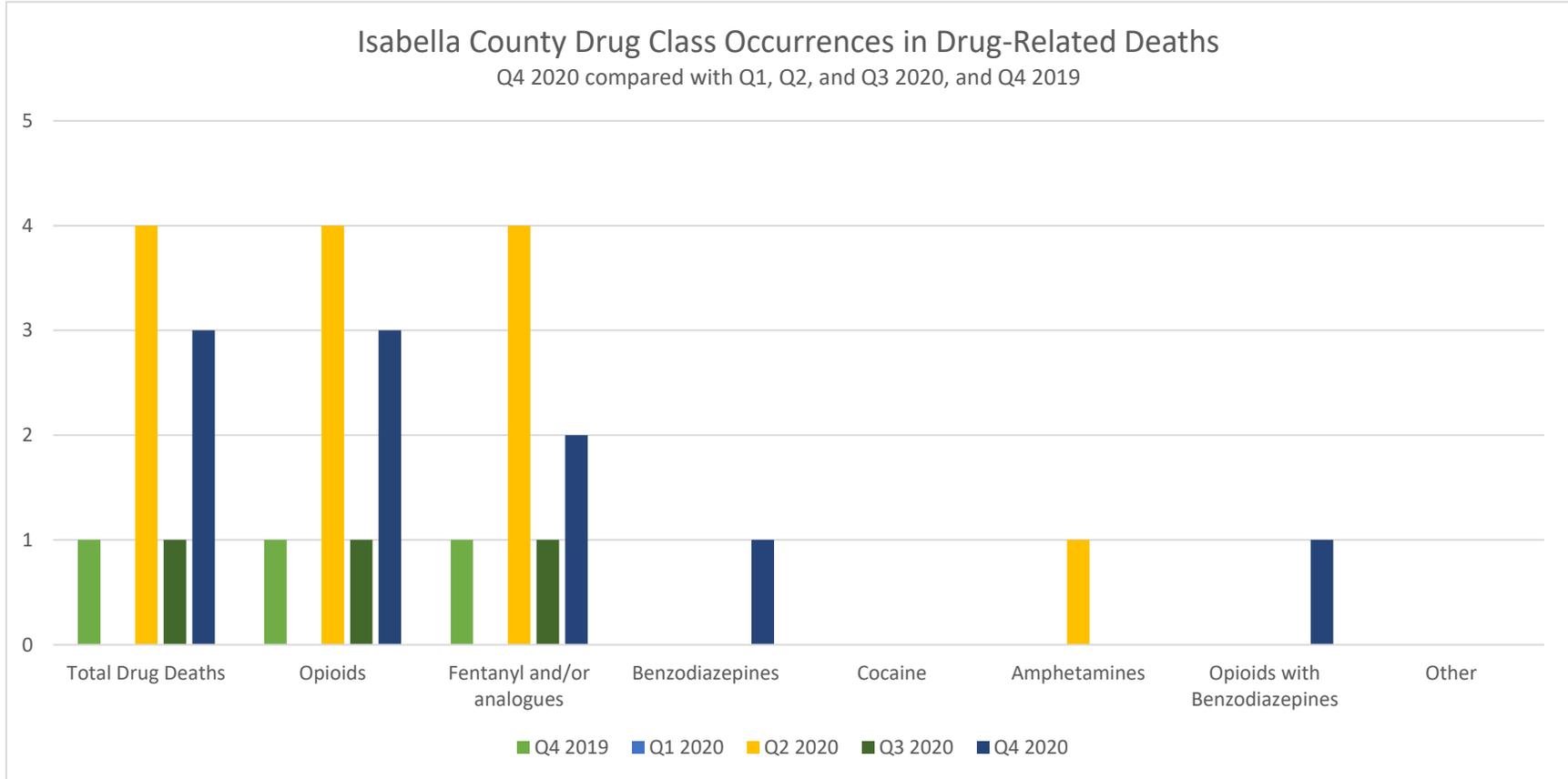
# Isabella County

## Drug-Related Deaths

2020 Q4 Isabella County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	24	alprazolam, diphenhydramine, fentanyl	Accident
Female	26	fentanyl	Accident
Female	34	methadone, gabapentin, hydroxyzine	Accident

# Isabella County

## Drug-Related Deaths



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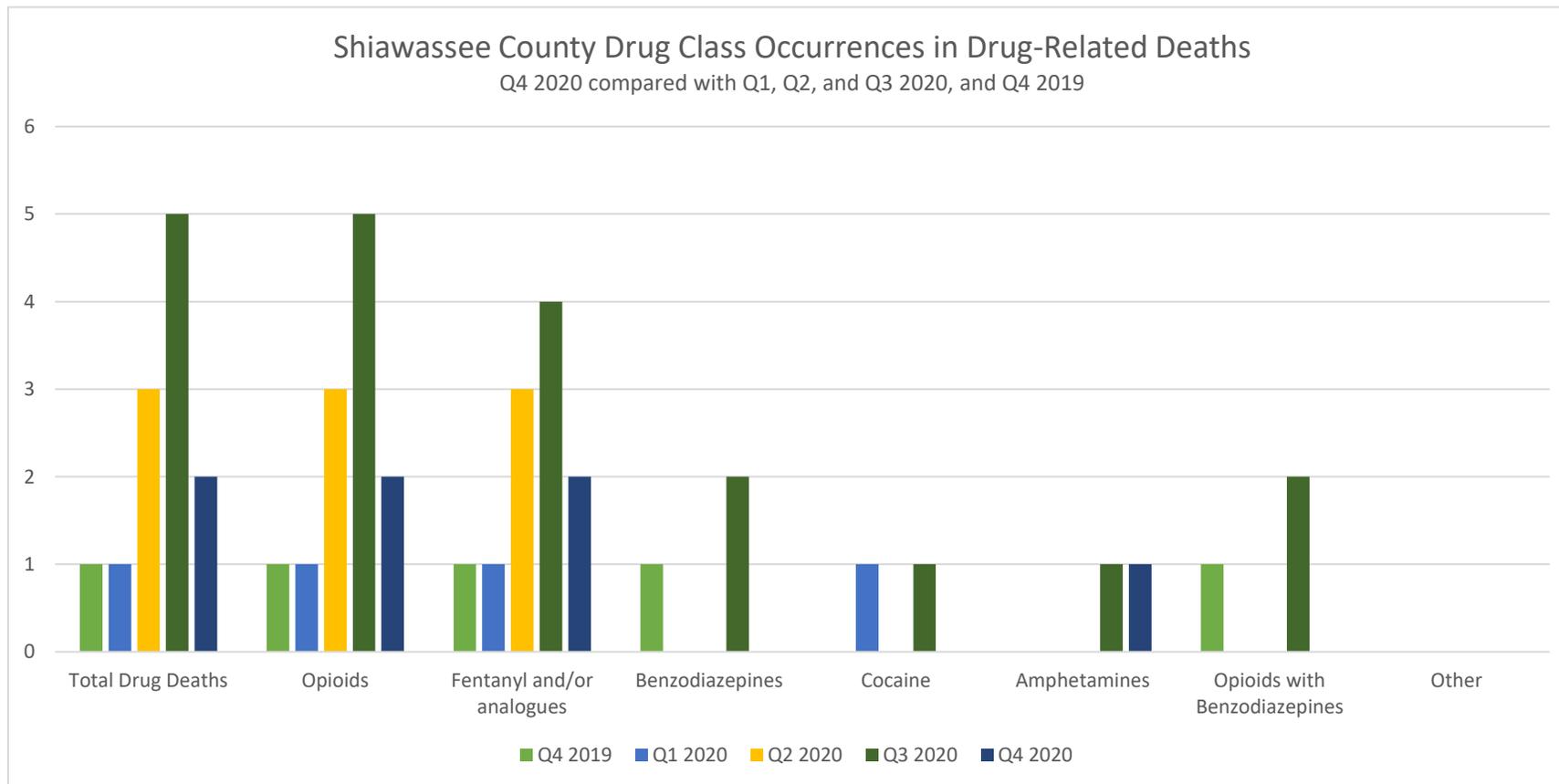
# Shiawassee County

## Drug-Related Deaths

2020 Q4 Shiawassee County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	29	fentanyl, methamphetamine	Accident
Male	38	fentanyl	Accident

# 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.