

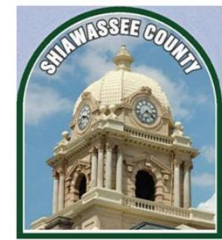


Department of Forensic Pathology  
Office of the Medical Examiner

2021 Q2 (April 1 – June 30) Drug Report

Published September 16, 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)

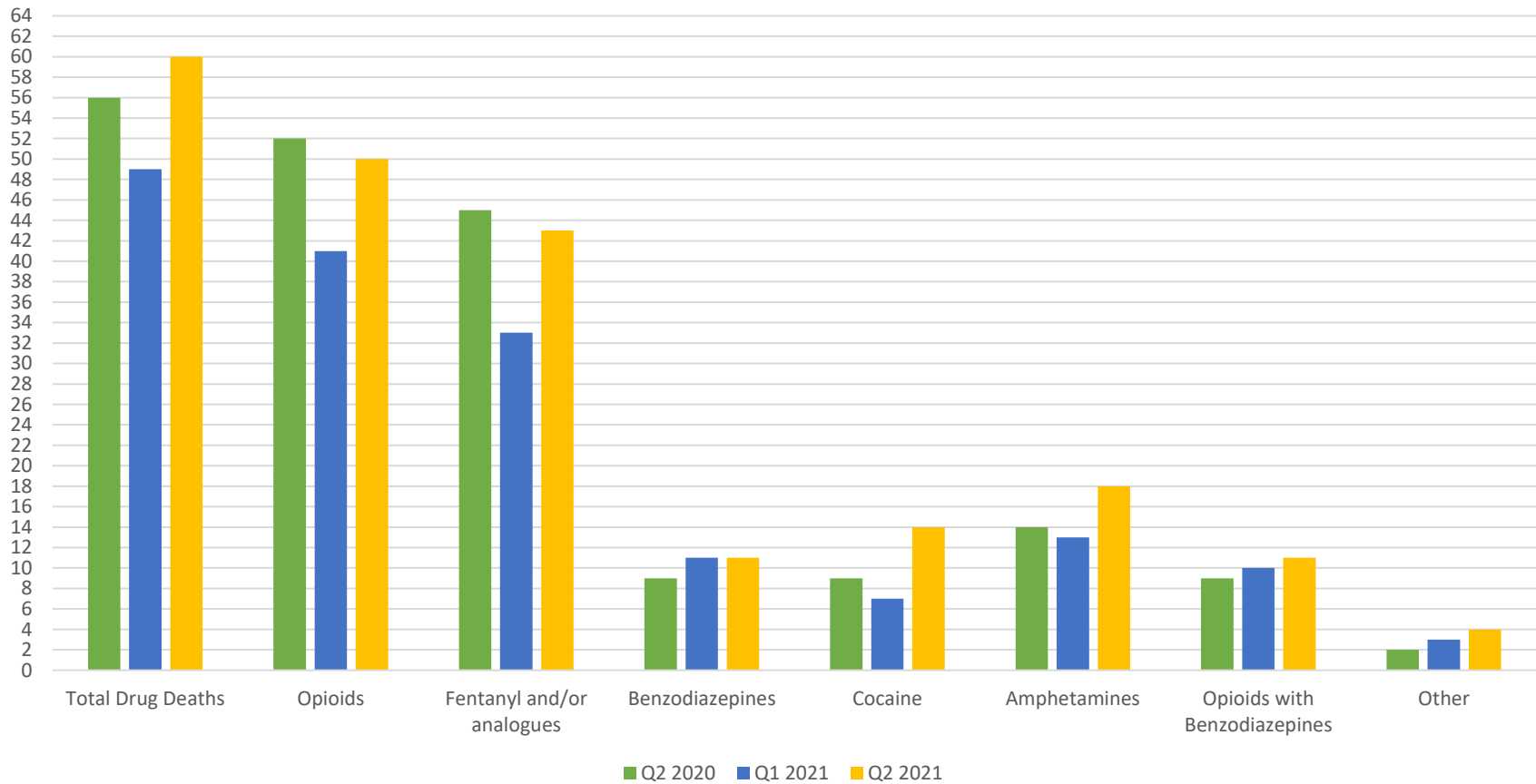
## Highlights

All comparisons on the Highlights page are made to the data from Q2 (April 1 – June 30) of 2020. 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 deaths involving both heroin and fentanyl are included in both specific categories).

- Total drug-related deaths **increased** by 7.1% (4 more)
- Opioid-related deaths **decreased** by 3.8% (2 less)
- Fentanyl-related deaths **decreased** by 4.4% (2 less)
  - **39.5%** of Fentanyl related deaths also involved one or more stimulants (cocaine and/or methamphetamine)
  - **44%** of Fentanyl related deaths were presumptively positive (not confirmed) for parafluorofentanyl
- Cocaine-related deaths **increased** by 55.6% (5 more)
- Amphetamine/Methamphetamine-related deaths **increased** by 28.6% (4 more)
- Benzodiazepine-related deaths **increased** by 22.2% (2 more)
- **81.7%** of all drug-related deaths in Q2 2021 were due to two or more substances
- **22%** of all opioid-related deaths in Q2 2021 also involved at least one benzodiazepine
- **22%** of all opioid-related deaths in Q2 2021 also involved ethanol (alcohol)
- **21.6%** of all drug related deaths in Q2 2021 involved ethanol (alcohol)

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

Q2 2021 compared with Q2 2020 and Q1 2021



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.

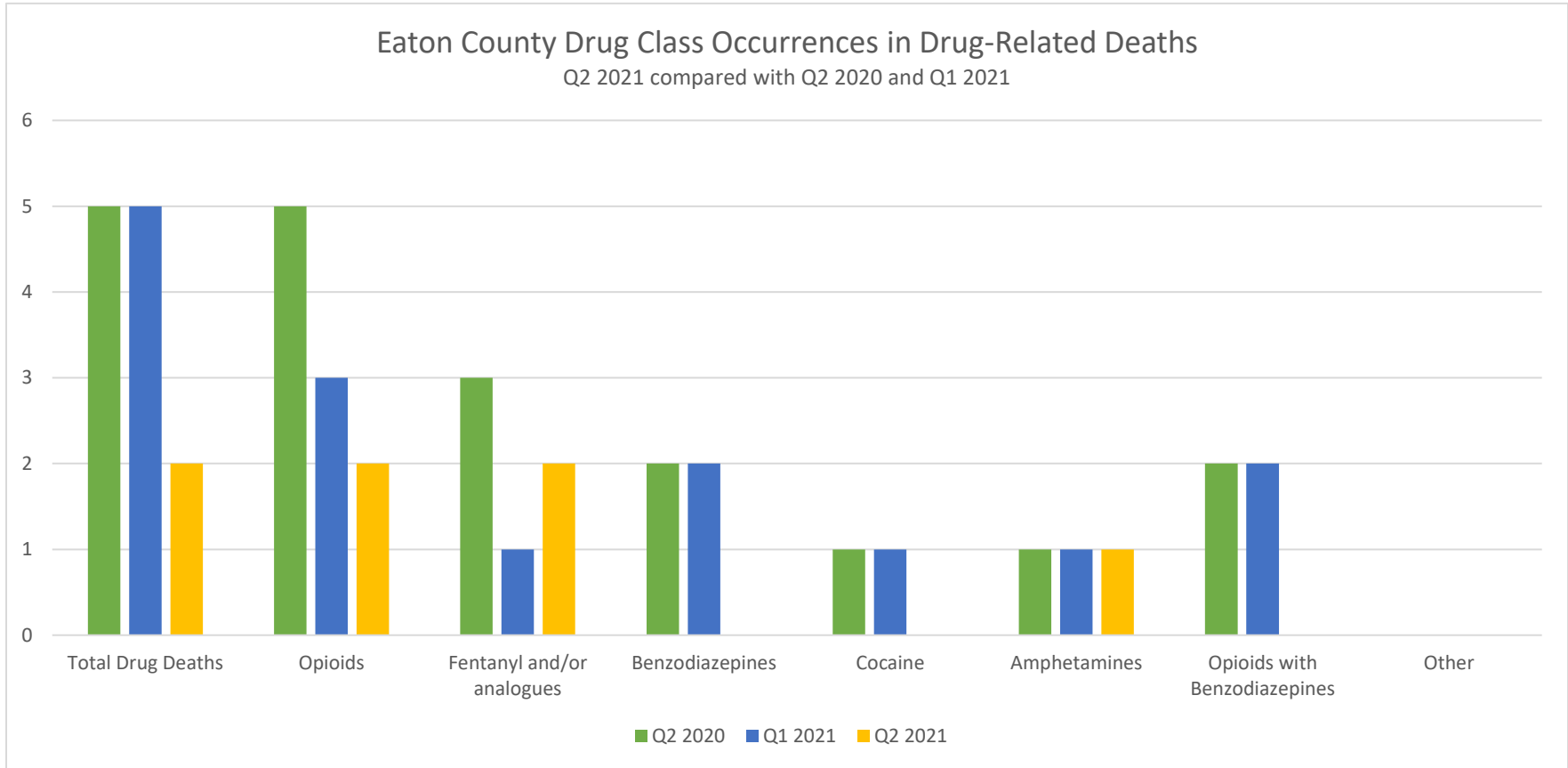
# Eaton County

## Drug-Related Deaths

2021 Q2 Eaton County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	42	ethanol, fentanyl, heroin	Accident
Male	57	fentanyl, 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

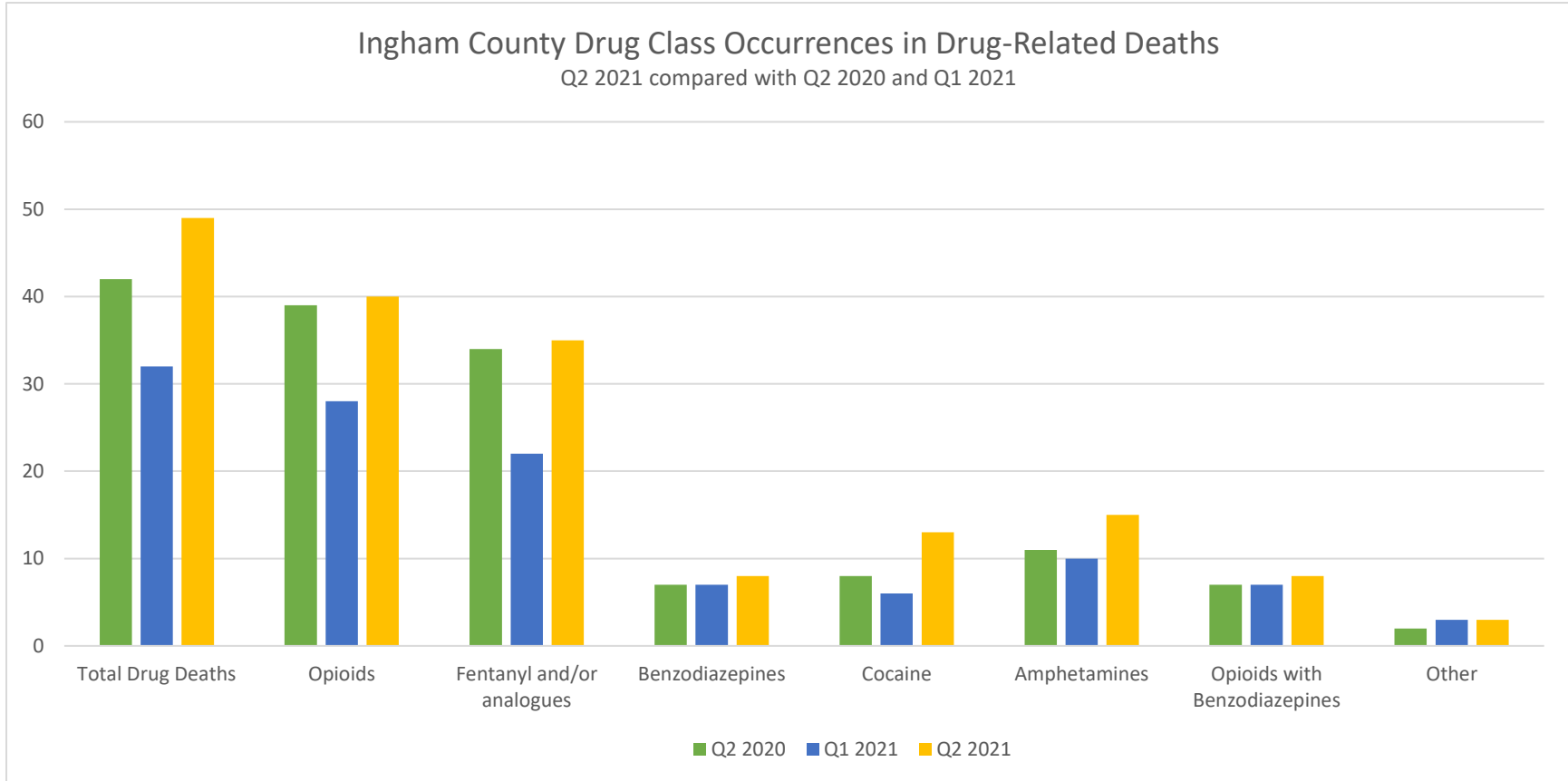
2021 Q2 Ingham County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	19	fentanyl, methamphetamine	Accident
Female	20	amphetamine, ethanol, fentanyl	Accident
Male	21	etizolam, fentanyl, ketamine	Accident
Male	22	ethanol, etizolam, fentanyl	Accident
Female	24	cocaine, methamphetamine	Accident
Male	26	alprazolam, cocaine, fentanyl	Accident
Male	26	fentanyl	Accident
Female	32	amphetamine, clonazepam, cocaine, fentanyl	Accident
Male	32	methamphetamine	Accident
Male	33	fentanyl	Accident
Male	33	cocaine, ethanol, fentanyl	Accident
Female	34	amitriptyline, ethanol	Suicide
Female	34	fentanyl, methamphetamine	Accident
Female	35	fentanyl, methamphetamine	Accident
Male	36	chlordiazepoxide, gabapentin, methadone, phenobarbital	Accident
Male	36	fentanyl	Accident
Female	37	fentanyl	Accident
Female	38	fentanyl, methamphetamine	Accident
Male	39	cocaine, fentanyl, tramadol	Accident
Female	40	cocaine, fentanyl, methamphetamine	Accident
Male	41	opioid/opiate (cannot be further specified)	Accident
Female	41	aripiprazole, chlorpromazine, olanzapine, mitragynine, sertraline	Indeterminate

Male	42	fentanyl	Accident
Female	42	cocaine, methamphetamine, methadone	Accident
Female	44	amphetamine, cocaine, fentanyl, methadone	Accident
Male	44	ethanol, fentanyl	Accident
Female	47	diphenhydramine, fentanyl	Indeterminate
Male	48	ethanol, fentanyl	Accident
Male	48	amitriptyline, bupropion, gabapentin	Suicide
Female	49	methamphetamine	Accident
Male	49	cocaine, ethanol, fentanyl	Accident
Male	50	cyclobenzaprine, fentanyl	Accident
Male	51	methamphetamine	Accident
Female	51	alprazolam, cyclobenzaprine, morphine, nordiazepam	Accident
Female	51	fentanyl, methamphetamine	Accident
Male	51	cocaine, ethanol, fentanyl	Accident
Female	52	alprazolam, fentanyl	Indeterminate
Male	52	cocaine, ethanol	Accident
Male	54	fentanyl, hydrocodone	Accident
Female	54	cocaine, ethanol, fentanyl	Accident
Male	56	cyclobenzaprine, diazepam, gabapentin, oxycodone	Accident
Female	56	gabapentin, fentanyl, tramadol	Accident
Female	59	diphenhydramine, ethanol, fentanyl	Accident
Male	61	methamphetamine	Accident
Male	62	fentanyl, tramadol	Accident
Female	64	fentanyl, morphine	Accident
Male	64	fentanyl, morphine	Accident
Male	66	fentanyl	Accident
Male	68	cocaine, 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.

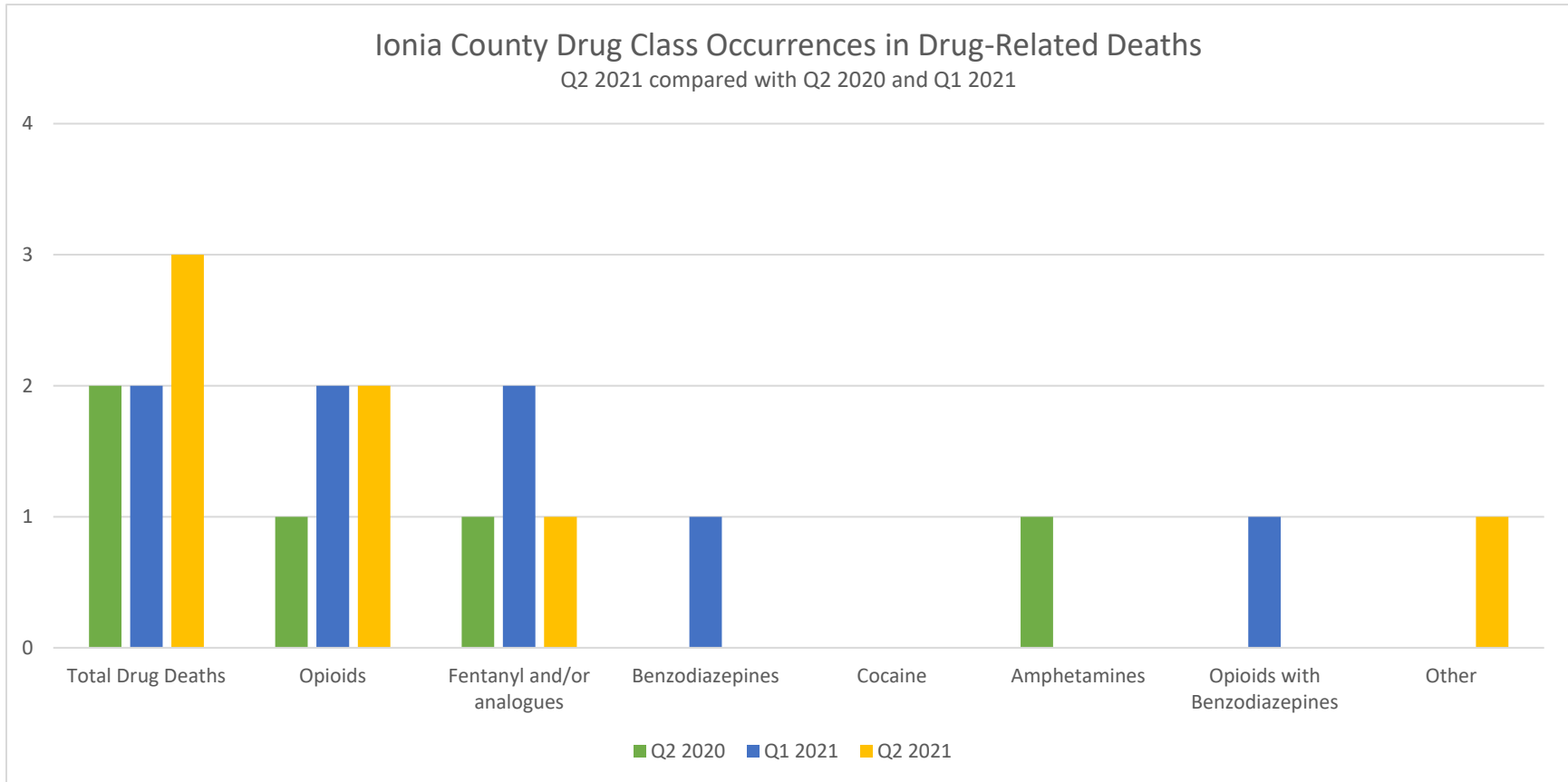
# Ionia County

## Drug-Related Deaths

2021 Q2 Ionia County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Female	12	bupropion, metoprolol	Suicide
Male	36	diphenhydramine, fentanyl	Accident
Female	63	bupropion, dextromethorphan, diphenhydramine, gabapentin, hydrocodone, methadone, paroxetine	Accident

# Ionia County

## Drug-Related Deaths



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# Isabella County

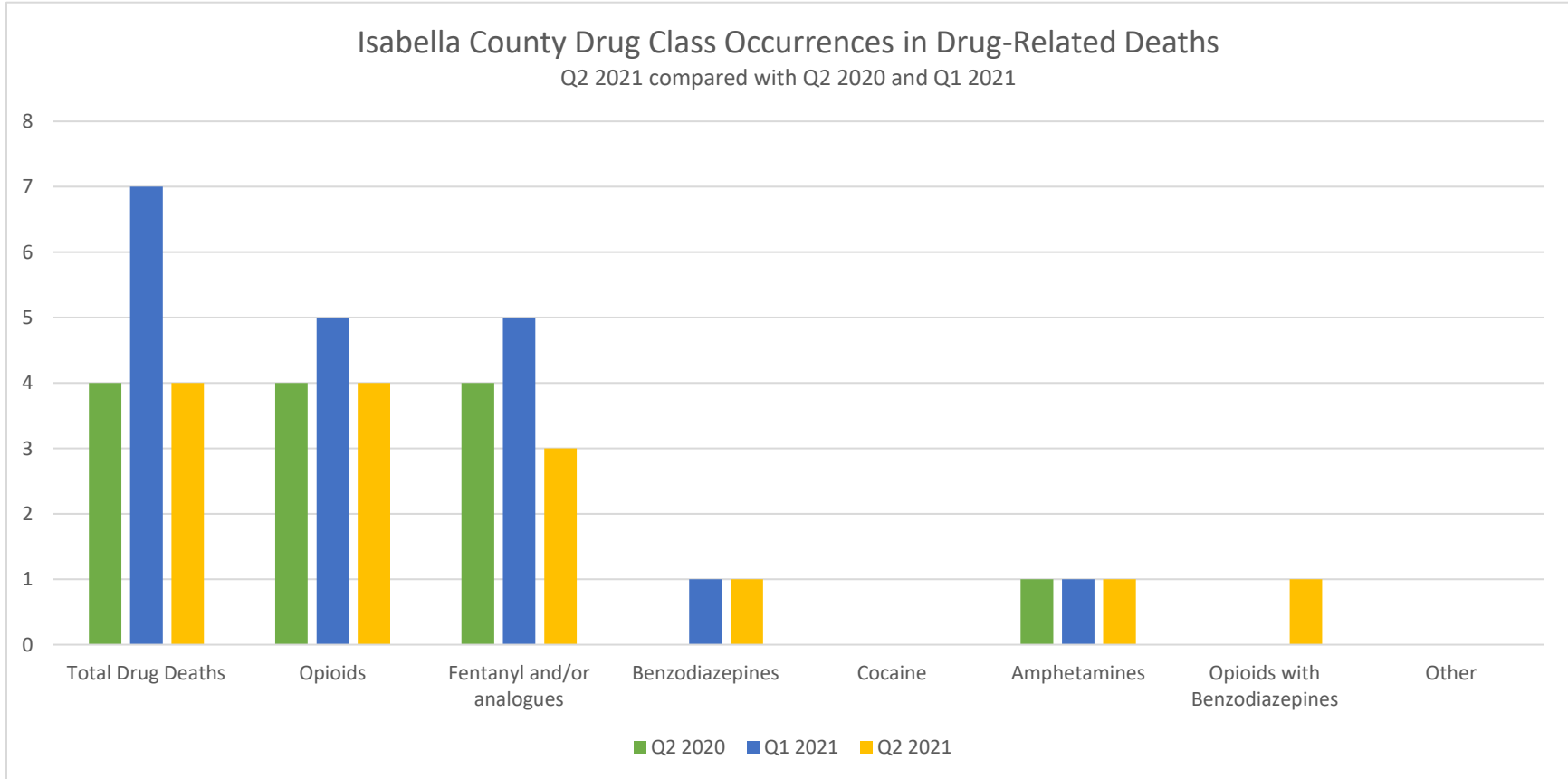
## Drug-Related Deaths

### 2021 Q2 Isabella County Drug-Related Deaths

Sex	Age	Substance(s) Causing Death	Manner of death
Female	25	fentanyl	Accident
Male	32	fentanyl	Accident
Female	35	diazepam, ethanol, fentanyl, methamphetamine	Accident
Male	56	cyclobenzaprine, dextromethorphan, duloxetine, guaifenesin, hydroxyzine, tramadol	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.

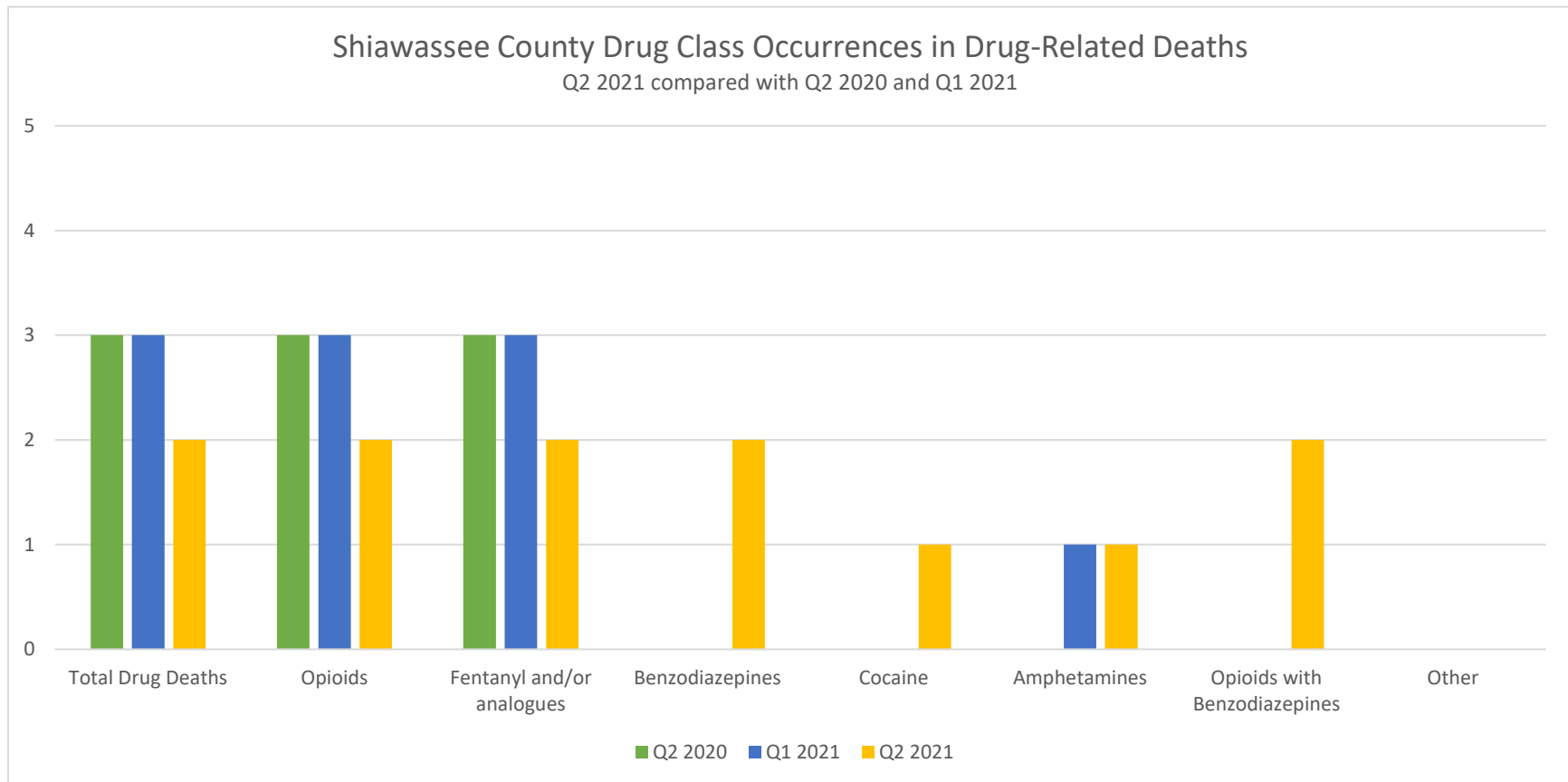
# Shiawassee County

## Drug-Related Deaths

2021 Q2 Shiawassee County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of death
Male	22	alprazolam, cocaine, fentanyl, methamphetamine/amphetamine	Accident
Female	50	diazepam, diphenhydramine, fentanyl, morphine	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.

# Historical Data

