

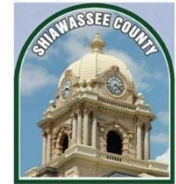


Department of Forensic Pathology
Office of the Medical Examiner

2023 Q2 (April 1 – June 30) Drug Report

Published September 6, 2023





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

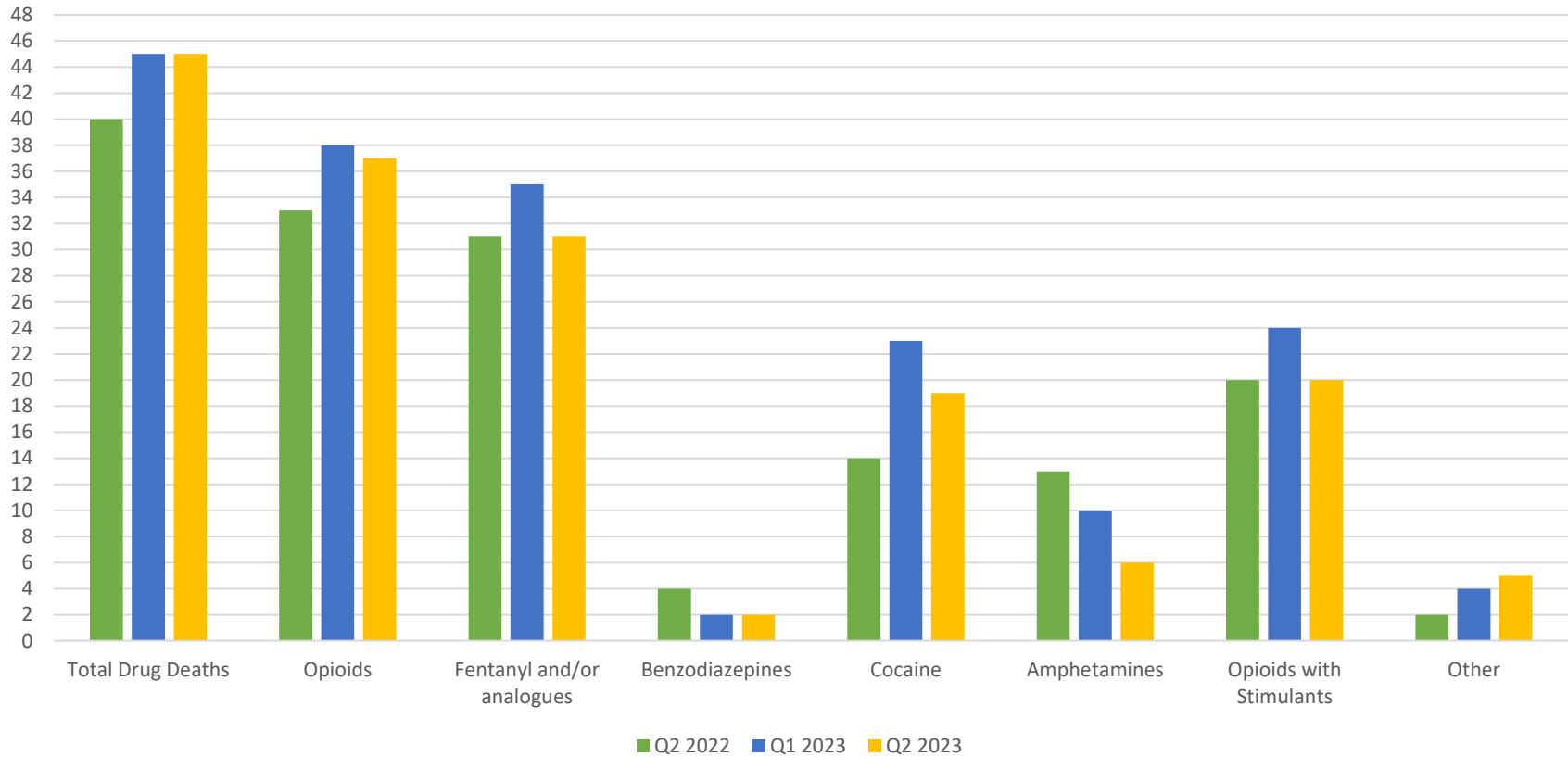
¹ If you have questions about what drugs we are currently capable of detecting, please visit www.axisfortox.com or email michelle.fox@sparrow.org

Disclosure

On Sept. 20, 2022, Livingston County entered into an agreement with Sparrow Forensic Pathology for Medical Examiner services. On Oct. 1, 2022, Clinton County also selected Sparrow Forensic Pathology to serve as the county's Medical Examiner. Below are abbreviated statistics for these two counties based on the nine months which we served as their Medical Examiner and without comparison to Q2 for previous years. Full statistics for these counties will be included in the 2023 Annual Drug Report.

Combined County Drug Class Occurrences in Drug-Related Deaths Excluding Clinton and Livingston Counties

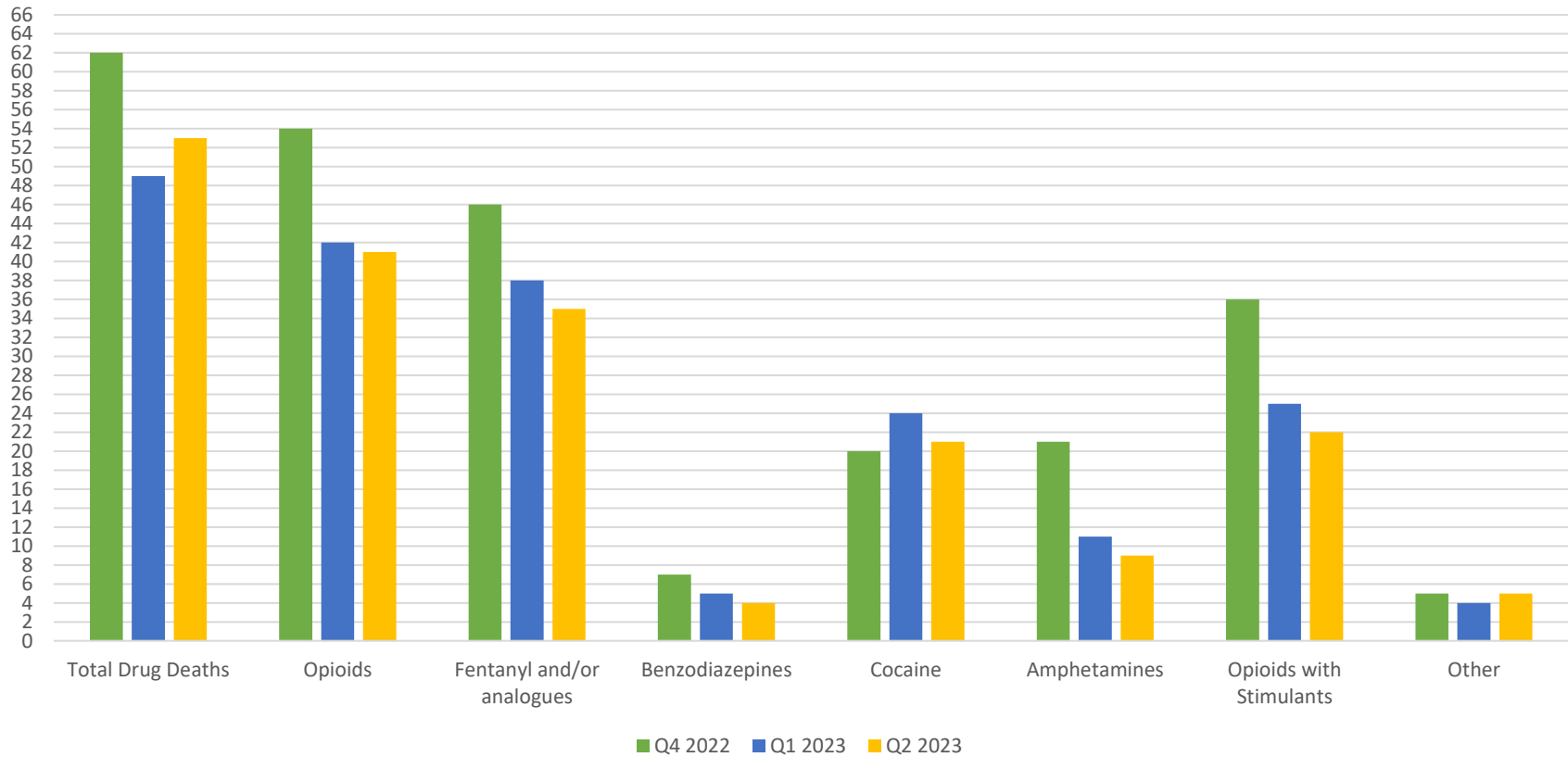
Q2 2023 compared with Q1 2023 and Q2 2022



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.

Combined County Drug Class Occurrences in Drug-Related Deaths Including Clinton and Livingston Counties

Q2 2023 compared with Q1 2023 and Q4 2022



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Clinton County

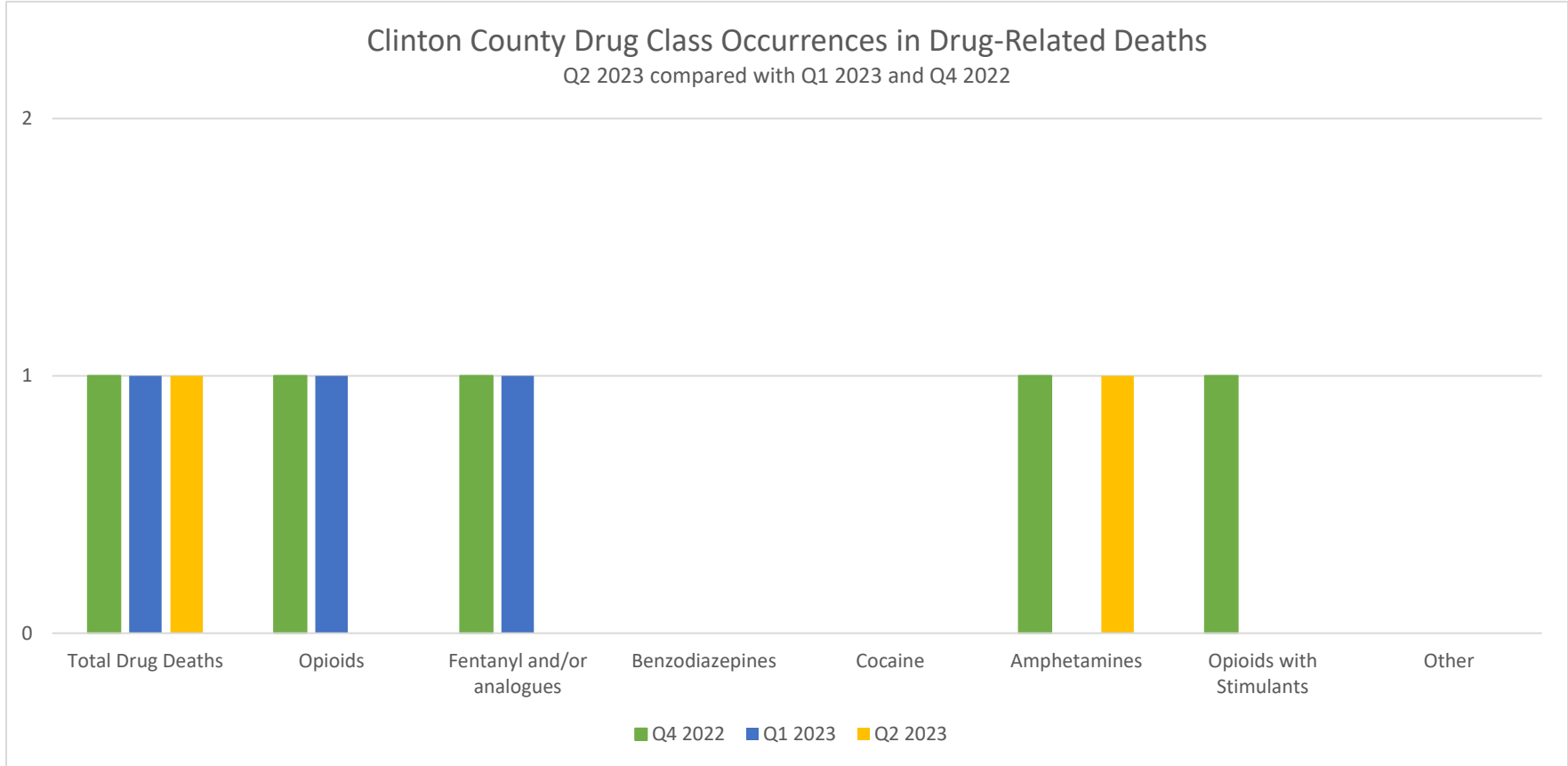
Drug-Related Deaths

2023 Q2 Clinton County Drug-Related Deaths

Sex	Age	Substance(s) Causing Death	Manner of Death
Male	47	amiodarone, duloxetine, gabapentin methamphetamine, metoprolol	Accident

Clinton County

Drug-Related Deaths



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Eaton County

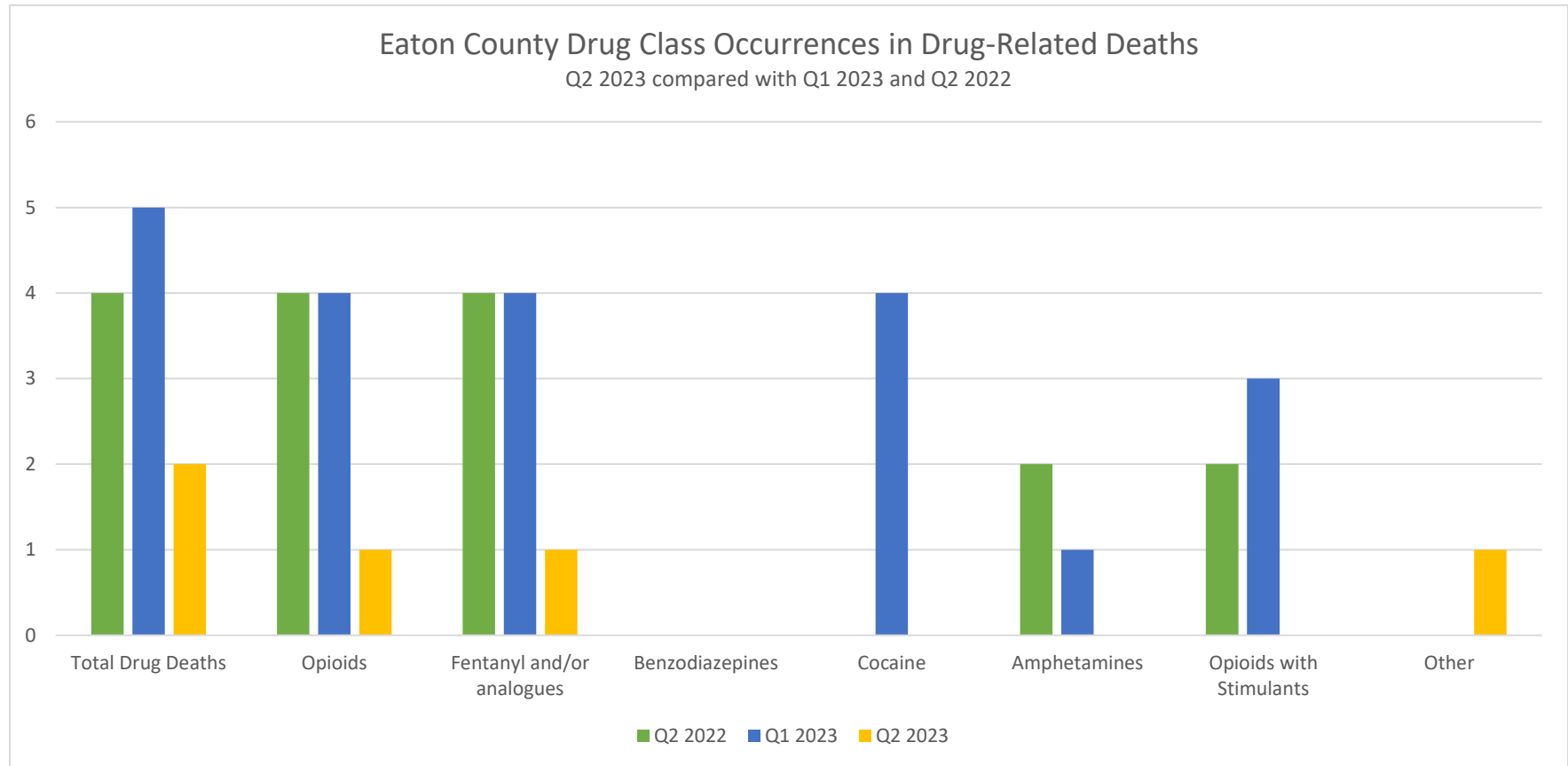
Drug-Related Deaths

2023 Q2 Eaton County Drug-Related Deaths

Sex	Age	Substance(s) Causing Death	Manner of Death
Male	35	duloxetine, ethanol, fentanyl, hydroxyzine, mirtazapine	Accident
Female	47	amitriptyline, bupropion, ethanol, gabapentin, hydroxyzine	Suicide

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

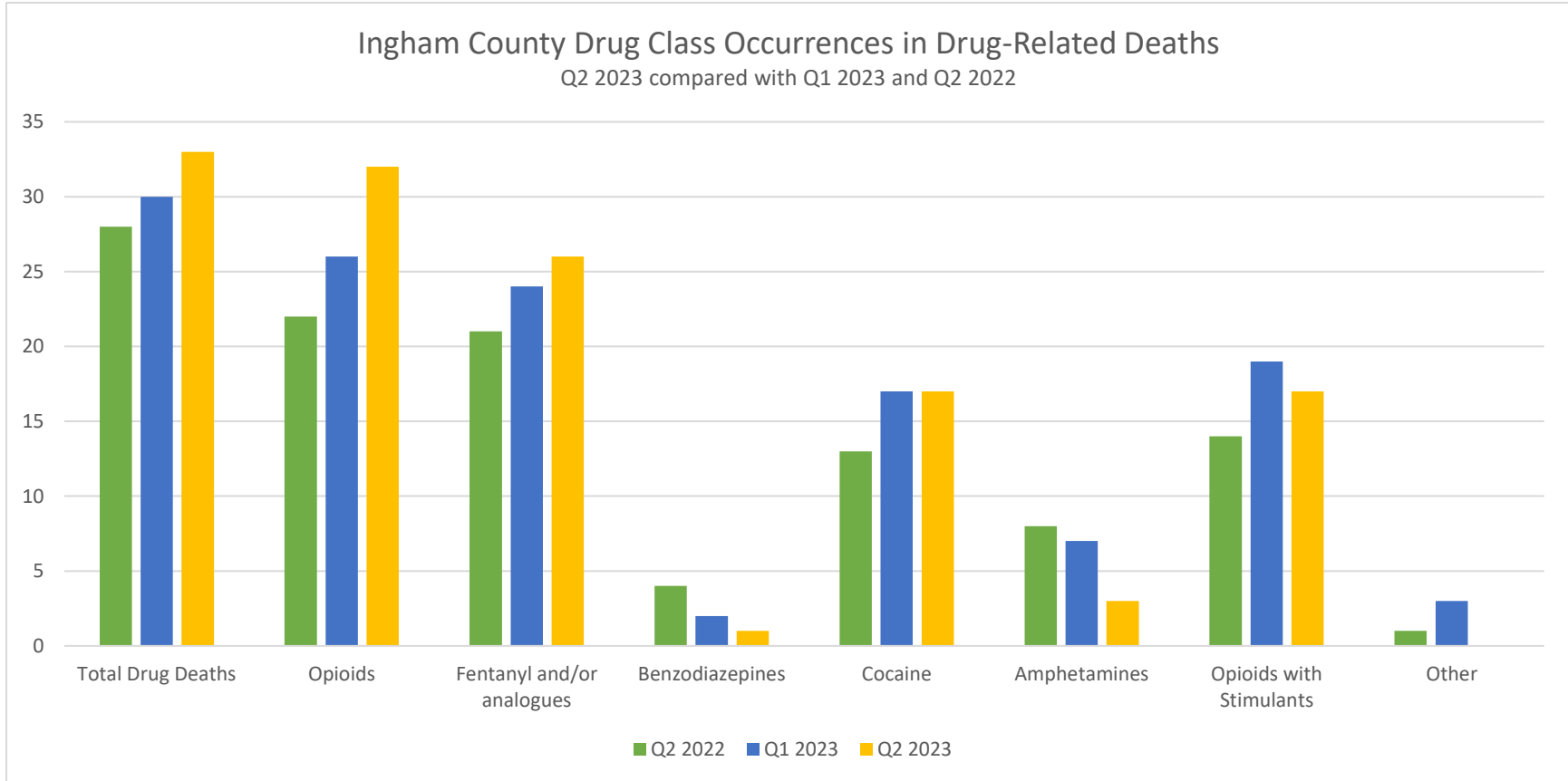
Drug-Related Deaths

2023 Q2 Ingham County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of Death
Male	23	codeine, fentanyl, morphine	Accident
Female	24	alprazolam, hydromorphone, oxycodone	Accident
Male	26	cocaine, fentanyl	Accident
Male	26	cocaine, fentanyl	Accident
Male	28	fentanyl	Accident
Female	28	cyclobenzaprine, fentanyl	Accident
Male	29	fentanyl, oxycodone, promethazine	Accident
Female	30	ethanol, fentanyl	Accident
Male	33	fentanyl, mitragynine	Accident
Male	35	fentanyl	Accident
Male	37	cocaine, ethanol, fentanyl	Accident
Female	38	diphenhydramine, methadone	Accident
Female	40	cocaine, fentanyl	Accident
Male	40	cocaine, fentanyl	Accident
Female	42	cocaine, fentanyl, tramadol	Accident
Female	44	methadone	Accident
Female	44	cocaine, fentanyl, methamphetamine	Accident
Female	46	aripiprazole, atomoxetine, bupropion, duloxetine, fentanyl	Accident
Female	46	cyclobenzaprine, hydrocodone, oxycodone	Accident
Male	47	cocaine, fentanyl	Accident
Male	49	cyclobenzaprine, fentanyl	Accident
Male	49	cocaine, heroin, fentanyl	Accident
Male	50	cocaine, cyclobenzaprine, dextromethorphan, tramadol	Accident

Female	51	cocaine, fentanyl	Accident
Female	53	amphetamine, fentanyl, hydrocodone, xylazine	Accident
Male	54	cocaine, fentanyl, fluorofentanyl, methamphetamine	Accident
Female	56	cocaine, cyclobenzaprine, ethanol	Accident
Male	57	cocaine, fentanyl	Accident
Female	59	morphine, pregabalin	Accident
Male	59	cocaine, fentanyl	Accident
Male	61	cocaine, ethanol, fentanyl, fluorofentanyl	Accident
Female	62	cocaine, ethanol, fentanyl, hydrocodone	Accident
Female	78	fentanyl	Accident

Ingham County

Drug-Related Deaths



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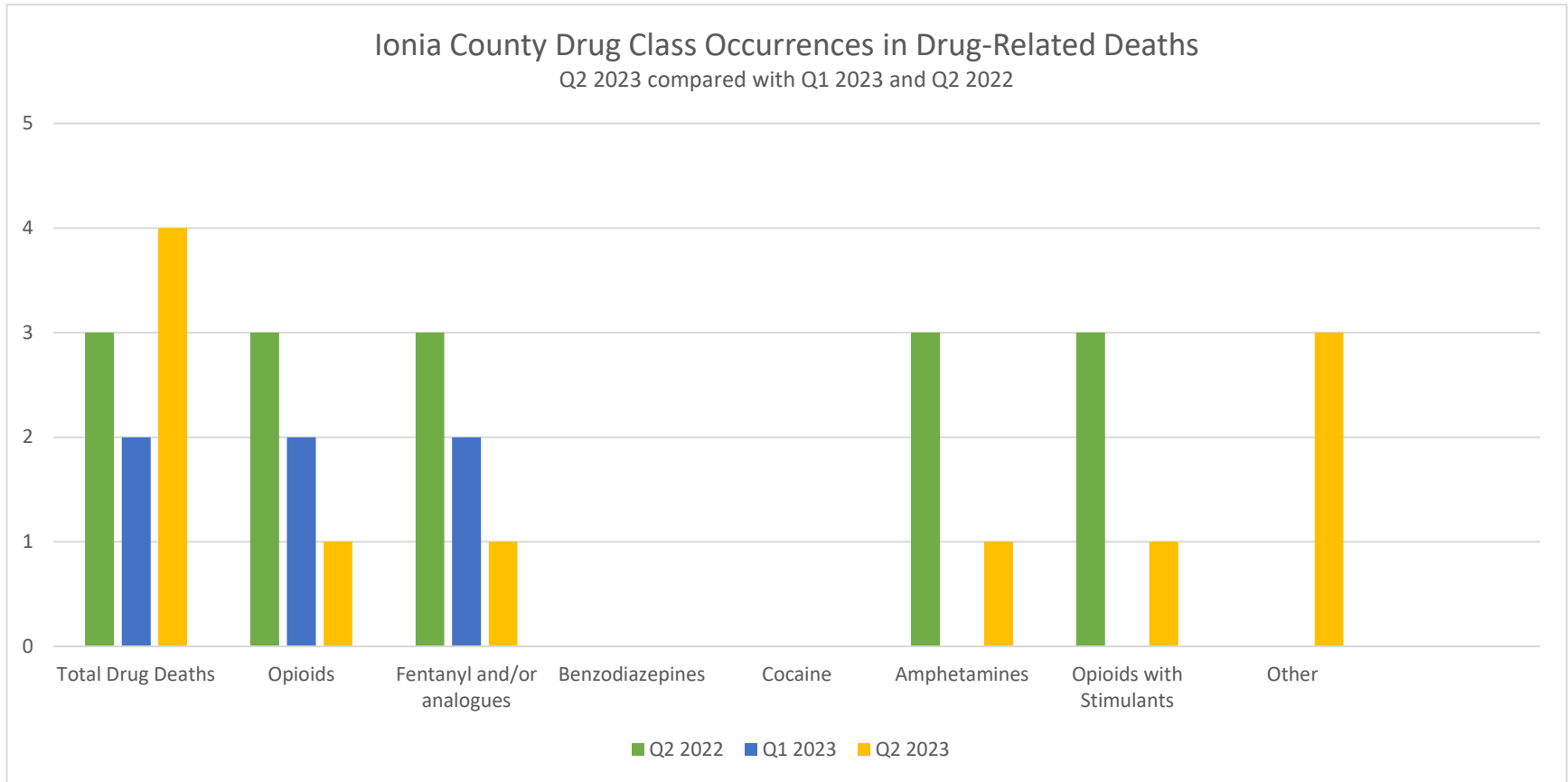
Ionia County

Drug-Related Deaths

2023 Q2 Ionia County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of Death
Female	21	diphenhydramine	Suicide
Female	30	1,1-Difluoroethane	Accident
Male	33	clozapine, citalopram, ethanol	Accident
Male	45	fentanyl, methamphetamine	Accident

Ionía County

Drug-Related Deaths



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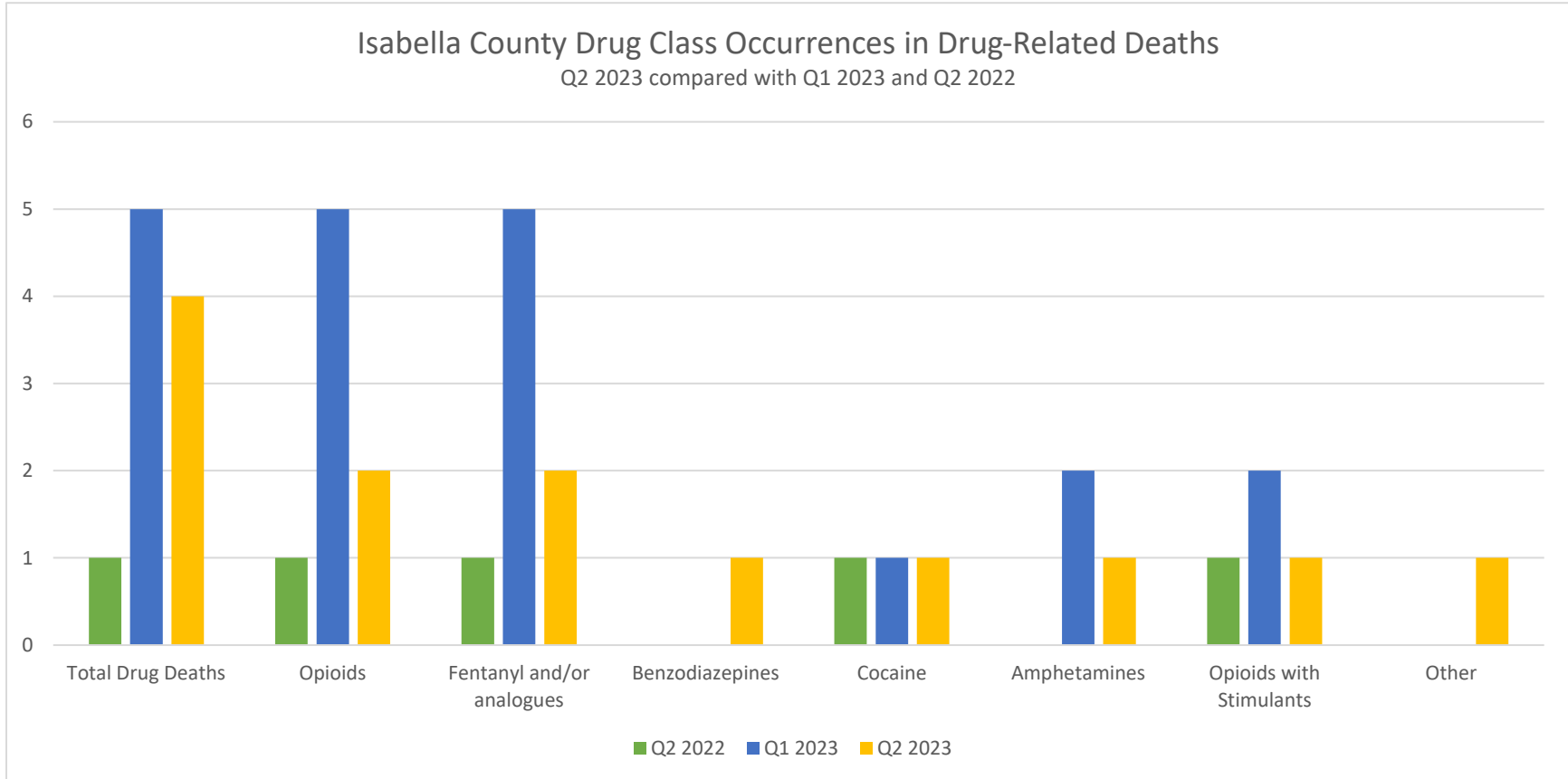
Isabella County

Drug-Related Deaths

2023 Q2 Isabella County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of Death
Female	20	bromazolam, cocaine, fentanyl	Accident
Male	24	mitragynine	Accident
Female	43	fentanyl	Accident
Male	68	methamphetamine	Accident

Isabella County

Drug-Related Deaths



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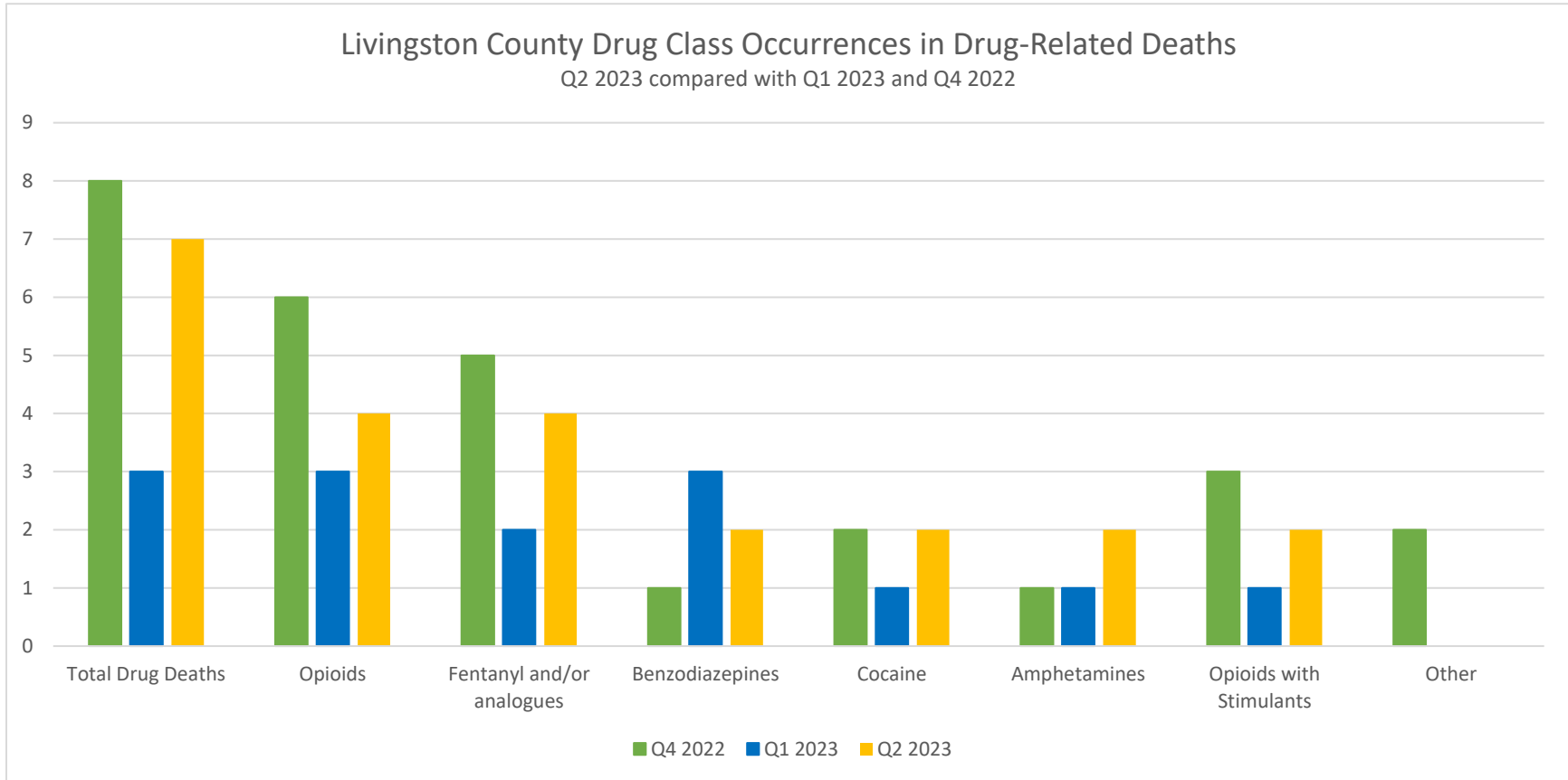
Livingston County

Drug-Related Deaths

2023 Q2 Livingston County Drug-Related Deaths			
Sex	Age	Substance(s) Causing Death	Manner of Death
Female	33	fentanyl	Accident
Male	37	ethanol, fentanyl, hydrocodone	Accident
Male	39	methamphetamine	Indeterminate
Female	47	cocaine	Accident
Male	49	bromazolam, cyclobenzaprine, ethanol, fentanyl, fluorofentanyl, methamphetamine, mitragynine, morphine	Accident
Male	64	cocaine, fentanyl	Accident
Female	75	clonazepam, cyclobenzaprine	Suicide

Livingston County

Drug-Related Deaths



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Shiawassee County

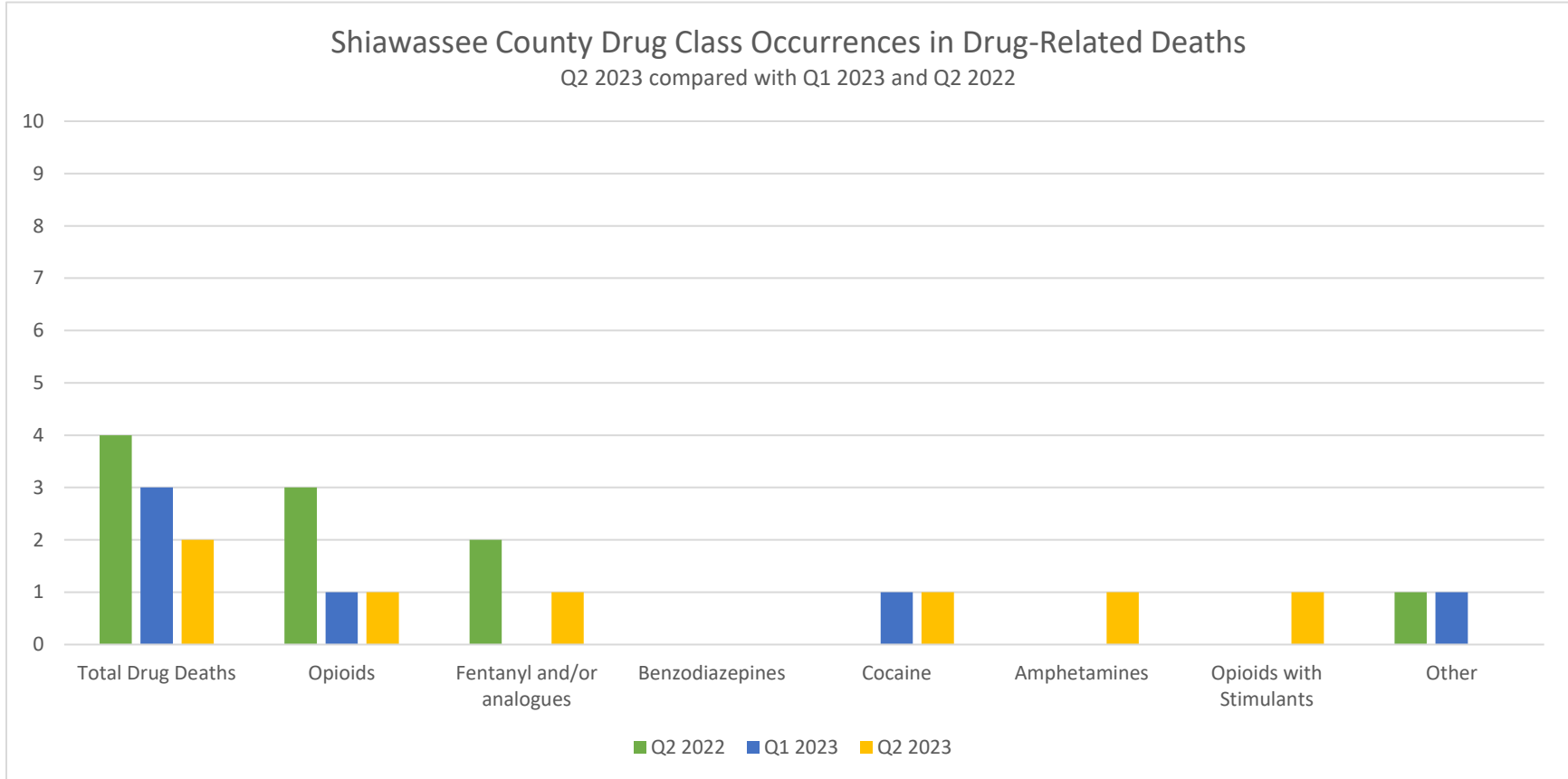
Drug-Related Deaths

2023 Q2 Shiawassee County Drug-Related Deaths

Sex	Age	Substance(s) Causing Death	Manner of Death
Male	40	methamphetamine	Accident
Female	49	cocaine, fentanyl	Accident

Shiawassee County

Drug-Related Deaths



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Historical Data

