

A Baseline Profile of Opioid Use in Guam



**Guam Behavioral Health
and Wellness Center
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INTRODUCTION

Project PATH (Preventing Addiction Through Health Empowerment) was established in 2022 under the SPF-Rx Grant awarded by SAMHSA (Substance Abuse and Mental Health Services Administration). Project PATH aims to reduce opioid, illicit drug, and prescription drug misuse in Guam by educating the community around the potential dangers of misusing these substances.

A key feature of Project PATH is the use of evidence and local data to guide strategic interventions for substance use prevention. Project PATH staff are partnering with the Guam State Epidemiological Outcomes Workgroup (SEOW), the longest-running prevention data workgroup in the island, to ensure that local data drive project activities. This report represents the initial attempt to collate existing data sources in Guam and create a baseline profile of opioid and other substance use in Guam.

METHODOLOGY

The SEOW Lead Epidemiologist conducted a scan for existing, publicly available data (1) using online search engines Google and PubMed, (2) going through the websites of relevant agencies, including the Guam Behavioral Health and Wellness Center (GBHWC), the Department of Public Health and Social Services (DPHSS), the Guam Memorial Hospital Authority (GMHA), the Office of the Chief Medical Examiner (CME), the Guam Police Department (GPD), the Guam Customs and Quarantine Agency (CQA), among others, (3) going through online news reports and websites of local news agencies/organizations, and (4) reviewing existing population surveillance databases including the Behavioral Risk Factor Surveillance System (BRFSS) and the Youth Risk Behavior Surveillance System (YRBSS).

Available data were categorized based on whether they provided information about the substances used (supply side) or the population of users (user side). For some databases, such as the Prescription Drug Monitoring Program (PDMP), data are not publicly available at this time, and Project PATH continues to work to establish a Memorandum of Understanding (MOU) for data sharing. The existing, publicly accessible data were analyzed to delineate what is known at the present time regarding opioid and other substance use in Guam.

FINDINGS

Supply side information

Existing literature prior to 2020 indicate that opioid use was not a major feature of substance use in Guam.

A study published in the journal *PeerJ (life and Environment)* stated:

“Overall, the US Territories (Puerto Rico, Guam, US Virgin Islands and American Samoa) had significantly lower distribution of opioids than Florida and Hawaii.”¹

A strategy paper published by the Guam Bureau of Statistics and Plans (BSP) in June 2019 identified crystal methamphetamine and marijuana as the most commonly misused substances in the island²:

“Crystal methamphetamine or “ice” continues to be the most commonly abused illegal drug on (sic) Guam, and it has been the prominent drug of choice on (sic) Guam over the past three decades... Marijuana is another prevalent illegal drug on Guam.”

However, the BSP Report issued a precautionary warning about opioids for the future:

“Although reports from our law enforcement agencies have not seen the level of opioid addiction problems experienced in the continental United States, law enforcement officials are concerned Guam might be facing similar issues and they are closely monitoring the opioid related cases and looking for possible crime trends or pattern to mitigate it from becoming a potential crisis on Guam... Currently there has not been any reports of fentanyl cases on Guam, but it is only a matter of time when this will happen.”³

A 2020 National Drug Threat Assessment Report by the United States Department of Justice (DOJ) Drug Enforcement Administration (DEA) echoed the findings of the BSP report:

“Methamphetamine and marijuana are the two principal drugs used in Guam. Cocaine is resurgent and is popular with the college-aged

¹ Cabrera FF, Gamarra ER, Garcia TE, Littlejohn AD, Chinga PA, Pinentel-Morillo LD, Tirado JR, Chung DY, Pande LJ, McCall KL, Nichols SD, Piper BJ. Opioid distribution trends (2006-2017) in the US Territories. *PeerJ*. 2019 Jan 15;7:e6272. doi: 10.7717/peerj.6272. PMID: 30671308; PMCID: PMC6338096.

² Government of Guam Bureau of Statistics and Plans. *Guam's FY 2019-2022 Strategy for Drug Control, Violent Crime and Criminal Justice System Improvement*. June 2019, Hagatna, Guam:Government of Guam.

³ Ibid.

population. MDMA, ketamine, and illicit pharmaceuticals are also available to a lesser degree and often purchased in clubs and bars.”⁴

Data published by the Guam Customs and Quarantine Agency (CQA) began to report seizures of fentanyl in 2022, with subsequent amounts confiscated in 2023 and 2024 (Figure 1).

Figure 1. Drug seizures in Guam, 2022-2024, in gross grams unless otherwise indicated

Type of Drug	2020	2021	2022	2023	2024*
Fentanyl	-	-	79.4	8.5	119 tablets**
Methamphetamine	36,336.4	75,839	50,808.6	22,388	25,250
Cocaine	-	-	250	37,390	0
Ecstasy	-	-	38.2	18.6	136,148.7
Marijuana/Derivatives	11,206.69	88,016	66782.2	31,158.5	124.6

Note: * - From January to August 2024

** - quantity of suspected illegal fentanyl pending further analysis

Sources:

Government of Guam Customs and Quarantine Agency. *Citizen-centric Report Fiscal Year 2022*. Jan 2024. Available online at: <https://cqa.guam.gov/citizen-centric-reports/>

Government of Guam Customs and Quarantine Agency. Press Release August 12, 2024. *Guam Customs Reports Illegal Drug Seizure Amounts from January 2023 to Date*. August 2024, Hagatna, Guam.

Available online at <https://cqa.guam.gov/press-releases/>

“With fentanyl having made landfall in Guam and claiming the lives of our citizens, our officers maintain heightened vigilance and are postured to respond accordingly,” Guam Customs and Quarantine Agency Director Ike Peredo said in the press release.

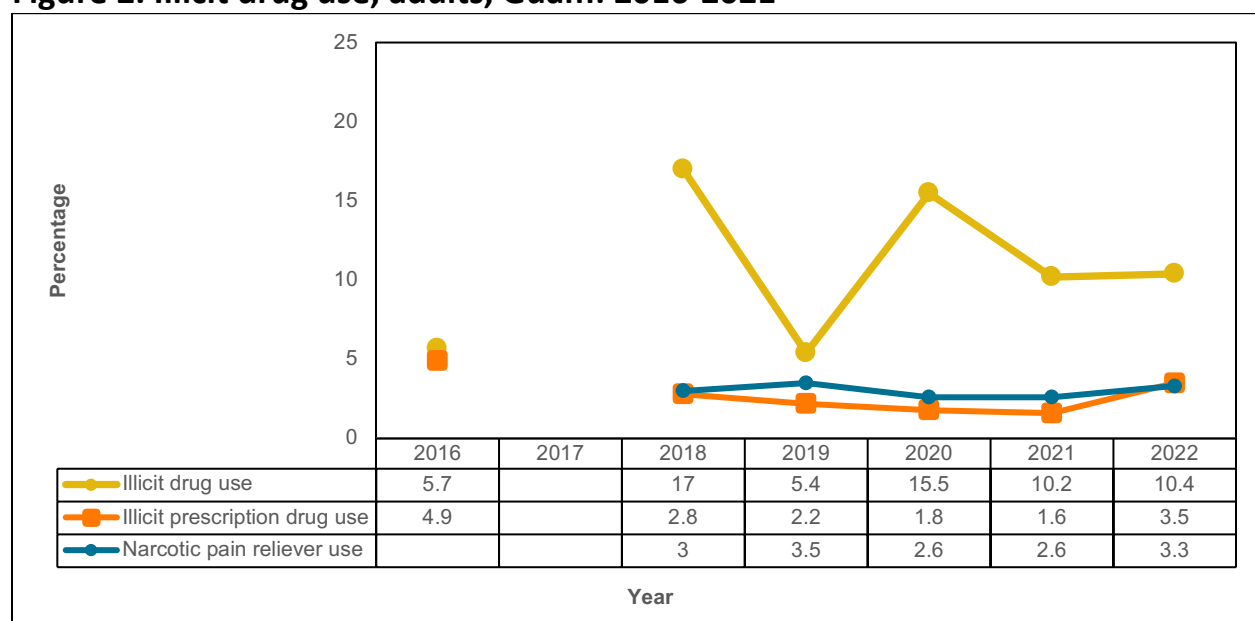
⁴ US Department of Justice Drug Enforcement Administration. *2020 Drug Enforcement Administration National Drug Threat Assessment*. March 2021, Washington, DC:DEA.

User side information: Prevalence and burden

ADULTS

Information on the prevalence of substance misuse among adults in Guam comes from the State Added Questions (SAQs) to the BRFSS questionnaire. Guam started asking about other illicit drug use and illicit prescription drug use in its BRFSS as SAQs in 2016. In 2018, a question on narcotic pain reliever use was added, given the growing interest nationwide in this issue. In 2022, 10.4% of adults reported illicit drug use other than marijuana. (Figure 2). 3.5% of adults reported taking prescription drugs that were not prescribed for them, and 3.3% reported narcotic pain reliever use. Illicit prescription drug use doubled between 2021 and 2022.

Figure 2. Illicit drug use, adults, Guam: 2016-2021



Source: DPHSS, BRFSS 2016-2022; blank cells = no data available

Note: Data from the 2023 SAQs are not yet available

CORRELATES OF ILLICIT DRUG USE

Because of the small numbers of adults reporting illicit drug use, it is difficult to state with accuracy if true differences exist across demographic categories.

Age at initiation

In 2022, about 3.7% of adults who used illicit drugs started before the age of 18 years.

Working for employers who conduct random employee drug testing

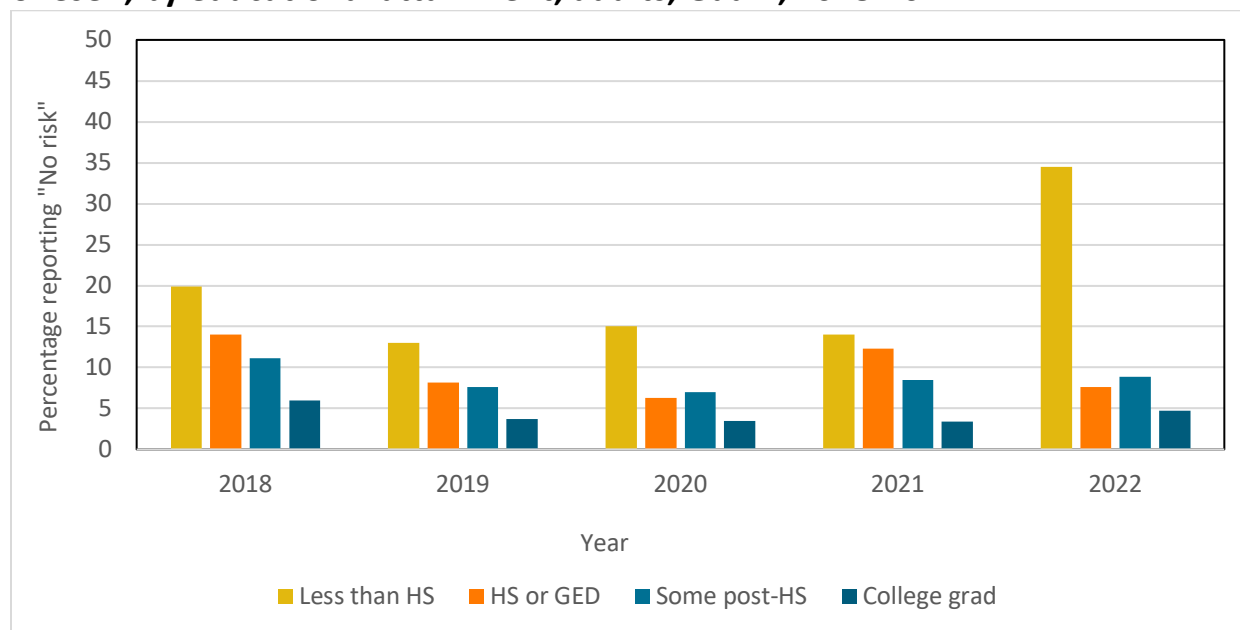
In 2022, 33.6% of adults were more likely to work for employers who conduct random drug or alcohol testing on its employees, while 11.4% were less likely to do so.

CORRELATES OF ILLICIT PRESCRIPTION DRUG USE

Perception of risk

In 2022, 60.3% of adults believed there is great risk in using prescription drugs improperly, while 10.5% believed there was no risk. Higher educational attainment was associated with greater perceived risk (Figure 3). There were differences in perception of risk across the ethnic categories. In 2022, CHamorus, Filipinos and Micronesians were more likely to perceive no risk in using other people's prescriptions drug (Figure 4).

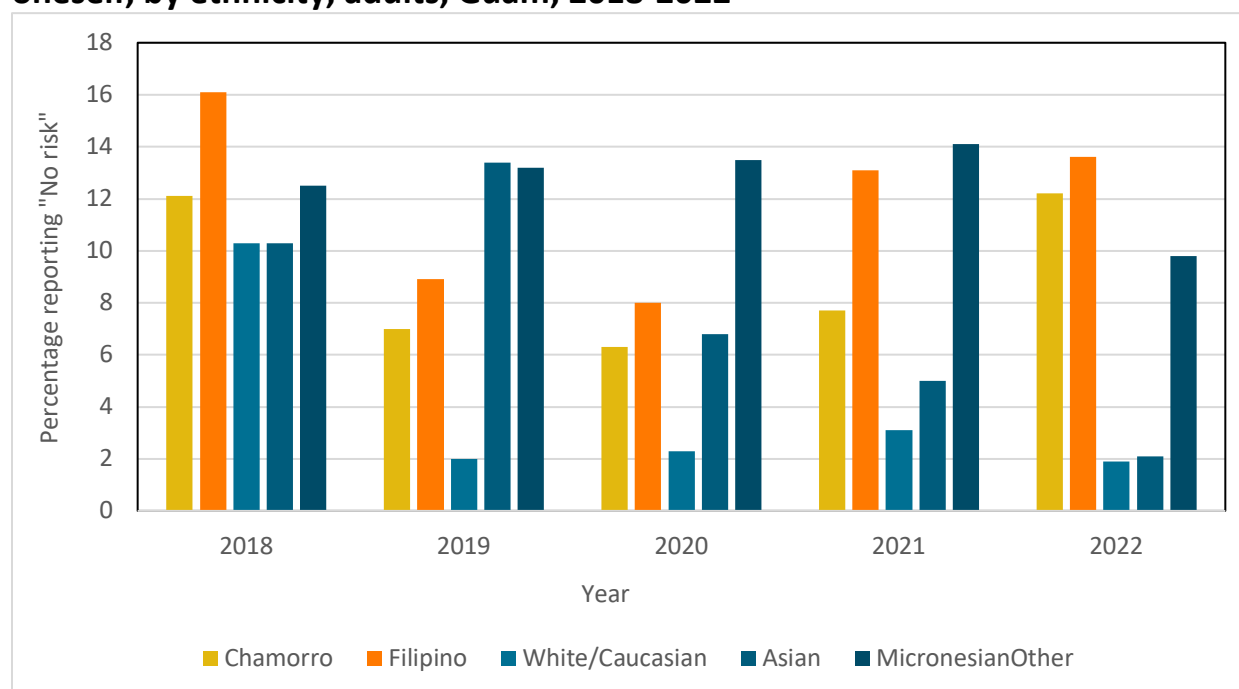
Figure 3. Perception of no risk in using prescription drugs not prescribed for oneself, by educational attainment, adults, Guam, 2018-2022



Source: DPHSS, BRFSS 2018-2022; blank cells = no data available

Note: Data from the 2023 SAQs are not yet available

Figure 4. Perception of no risk in using prescription drugs not prescribed for oneself, by ethnicity, adults, Guam, 2018-2022



Source: DPHSS, BRFSS 2018-2022; blank cells = no data available

Note: Data from the 2023 SAQs are not yet available; the old spelling of “Chamorro” is used in the BRFSS

YOUTH

The YRBSS added a question on lifetime prescription pain medicine misuse in 2017. Guam youth reported lifetime prescription pain medicine misuse of 10.9% in 2017. This increased to 15.5% in 2019. In the US, 14.3% of high school students reported ever taking a prescription pain medicine without a doctor’s prescription. Among Guam middle school students, 6.7% reported prescription pain medication misuse in 2019.⁵ (Note: Guam did not administer the YRBS in 2021 because of the COVID epidemic, and the 2023 survey data have not yet been officially released.)

CORRELATES OF PRESCRIPTION PAIN MEDICATION ABUSE

Sex

Boys tended to report having ever taken a prescription pain medication without a prescription than girls, but this was not a statistically significant difference.

Ethnicity

Micronesians youth were more likely than Chamorro or Filipino youth to report ever taking a prescription pain medication without a prescription, but the differences were not significant.

⁵ Guam Department of Education. Youth Risk Behavior Surveillance System, 2017-2019 Survey data.

OTHER PREVALENCE DATA

TOHGE Guam - The Guåhan Peer Support Cultivation Foundation - is a recovery community organization that provides peer support services for those who continue to struggle with a mental health and/or substance use disorders. On its website, TOHGE reports that a survey of Tohge's clients and peers revealed **nearly 10% have misused opioids**.⁶

HEALTH BURDEN

The Guam DPHSS conducted a review of non-natural causes of death from 2012-2021. Accidental drug toxicity was among the top 6 causes of non-natural deaths in 2012, 2013, 2020 and 2021 (Figure 5). However, the report did not identify the specific drugs involved in the deaths.

Figure 5. Non-natural causes of death, ranking by year, Guam, 2012-2021

Rank	Year 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	SUICIDE [27]	SUICIDE [27]	SUICIDE [28]	SUICIDE [35]	SUICIDE [50]	SUICIDE [36]	SUICIDE [45]	SUICIDE [32]	SUICIDE [39]	SUICIDE [26]
2	MOTOR VEHICLE ACCIDENTS [14]	MOTOR VEHICLE ACCIDENTS [18]	MOTOR VEHICLE ACCIDENTS [18]	DROWNING [14]	MOTOR VEHICLE ACCIDENTS [12]	MOTOR VEHICLE ACCIDENTS [19]	MOTOR VEHICLE ACCIDENTS [25]	MOTOR VEHICLE ACCIDENTS [17]	MOTOR VEHICLE ACCIDENTS [14]	MOTOR VEHICLE ACCIDENTS [18]
3	DROWNING [7]	DROWNING [15]	DROWNING [18]	MOTOR VEHICLE ACCIDENTS [10]	DROWNING [7]	DROWNING [14]	DROWNING [6]	DROWNING [11]	ACCIDENTAL DRUG TOXICITY [14]	HOMICIDE [10]
4	ACCIDENTAL FALLS [6]	HOMICIDE [10]	HOMICIDE [9]	ACCIDENTAL FALLS [9]	ASPHYXIA (SMOKE IN HALATION) [6]	HOMICIDE [8]	HOMICIDE [6]	HOMICIDE [7]	DROWNING [10]	DROWNING [6]
5	HOMICIDE [3]	ACCIDENTAL DRUG TOXICITY [2]	ACCIDENTAL FALLS [4]	HOMICIDE [7]	HOMICIDE [3]	ASPHYXIA (BUTANE) [2]	ACCIDENTAL FALLS [3]	ACCIDENTAL FALLS [3]	HOMICIDE [7]	ACCIDENTAL FALLS [5]
6	ACCIDENTAL DRUG TOXICITY [2]	ACCIDENTAL FALLS [2]	ACCIDENTAL CRUSHING INJURY [1]	BLUNT FORCE TRAUMA [3]	ACCIDENTAL FALLS [2]	ACCIDENTAL FALLS [2]	ACCIDENTAL ELECTROCUTION [1]	ACCIDENTAL ELECTROCUTION [1]	ACCIDENTAL FALLS [4]	ACCIDENTAL DRUG TOXICITY [4]

Note: The number in brackets represents deaths attributable to that category.

Source: DPHSS, Non-natural Cause of Death Report: A Review of Guam Death Certificates from 2012-2021, August 2023.

When disaggregated by age groups, Overdose deaths are not seen in either the youngest or oldest age groups but represent the fifth most common non-natural cause of death in the 15 to 24 and 25 to 64-year-old age groups (Figure 6).

⁶ TOHGE Guam. Opioids. Available online at: <https://www.tohgeguam.com/opioids>

Figure 6. Top ten non-natural causes of death by age, Guam, 2012-2021

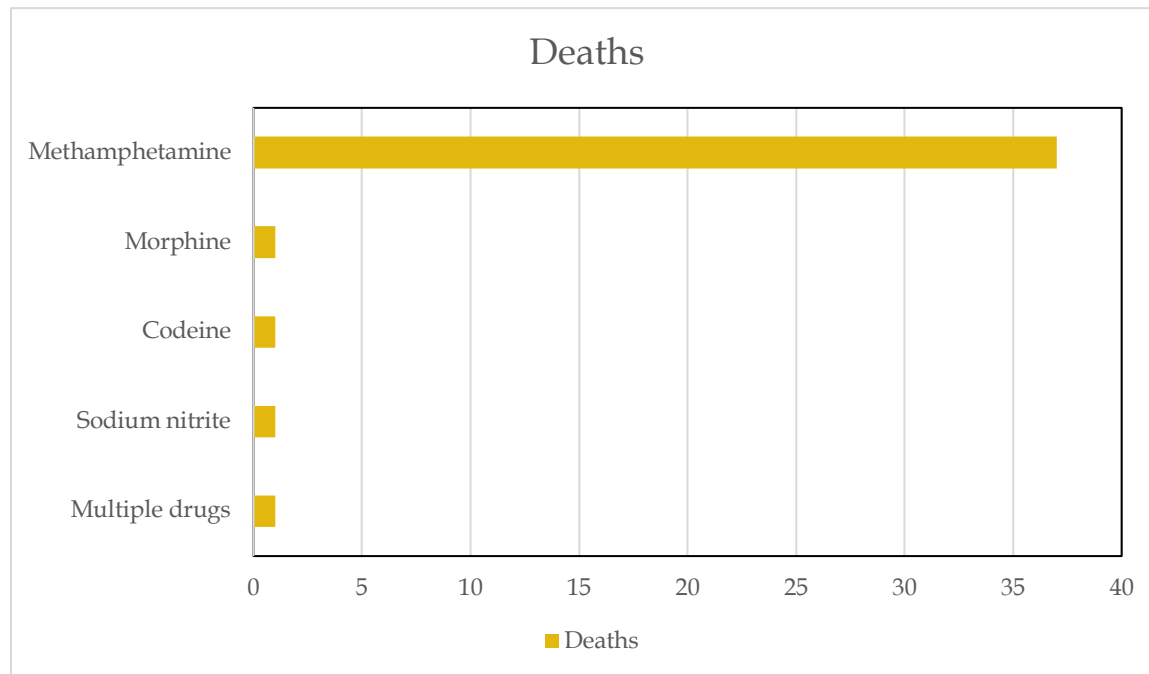
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	0-14	15-24	25-64	65+
1	Drowning [8]	Suicide [93]	Suicide [237]	MVA [20]
2	MVA [7]	MVA [39]	MVA [99]	Fall [20]
3	Accidental Hanging [5]	Drowning [22]	Drowning [66]	Drowning [12]
4	Homicide [5]	Homicide [9]	Homicide [53]	Suicide [11]
5	Suicide [4]	Overdose [3]	Overdose [22]	Homicide [3]
6	House Fire [4]	Fall [2]	Fall [19]	House Fire [1]
7	Fall [1]	House Fire [1]	Electrocution [4]	Work Accident [1]
8	Suffocation [1]	Diving Accident [1]	Diving Accident [3]	--
9	--	Suffocation [1]	Crush [3]	--
10	--	Accidental Hanging [1]	House Fire [2]	--

Source: DPHSS, Non-natural Cause of Death Report: A Review of Guam Death Certificates from 2012-2021, August 2023.

In 2023, the Office of the Chief Examiner reported that 89 accidental deaths were investigated. Drug overdose accounted for majority of these deaths. Of the 41 cases of accidental death by drug use and abuse, methamphetamine was involved in 37 deaths; morphine and codeine accounted for 1 death each (Figure 7).

Figure 7. Accidental deaths caused by drug use and abuse, by type of drug, Guam, 2023



Source: Office of the Chief Medical Examiner, *2023 Annual Report (January-December 2023)*. January 2024, Tamuning, Guam.

A news report dated September 9, 2024, mentioned the Guam Police Department spokesperson reporting 7 deaths by fentanyl in Guam over the last 4 years.⁷

DISCUSSION

These various data indicate that while incipient, opioid use and misuse may be increasing in Guam. Previous to 2022, no opioid drug seizures were reported by the Guam CQA. However, since 2022, quantities of fentanyl have been intercepted entering the island annually. The Chief Medical Examiner has identified 2 accidental deaths in 2023 attributable to opioids. Population data indicate that a small but growing proportion of both youth and adults admit to using others' prescription drugs. Taken altogether, there is sufficient evidence to warrant heightened vigilance against opioid use and increased community outreach and education to inform the public about the potential harms from these substances.

⁷ Pacific Island Times. *The silent killer: Fentanyl deaths raise alarm on Guam*. Sept 6, 2024. Available online at: <https://www.pacificislandtimes.com/post/the-silent-killer-fentanyl-deaths-raise-alarm-on-guam>

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