

Suicide in Guam, 2023

TECHNICAL NOTES:

Population projections by age, sex and ethnicity based on Guam's 2020 census data have not yet been officially released. Thus, after consulting with colleagues at the Bureau of Statistics and Plans, we decided to use the 2010 population projections by age, sex and ethnicity for this report, understanding that once the updated population projections by ethnicity are issued, we will be re-calculating rates and issuing a revised version of this technical report.

At the time of the writing of this report, 2023 suicide statistics for the US were not yet available. We continued to use the 2022 national data to compare with Guam; however, once the 2023 national data are released, we will be amending this report to reflect the more current data.

Because the numbers of suicides per year for Guam are small, caution is needed when interpreting annual data. To help offset this, we have aggregated suicide data over several years to better understand demographic patterns.

Suggested citation: David AM, on behalf of the Guam SEOW. Suicide in Guam, 2023. GBHWC: Tamuning, Guam, 2024.

INTRODUCTION

In 2023, Guam's COVID-19 Pandemic State of Emergency ended. However, in May 2023, the island community was devastated by a Category 4 Super typhoon that battered Guam, destroying numerous homes and disrupting power, water and Internet connectivity for weeks. As a result, a State of Emergency was declared once more until post-typhoon recovery was underway.

The Guam Behavioral Health and Wellness Center (GBHWC)'s 988 Suicide and Crisis Lifeline celebrated its 1-year anniversary in July 2023. Calls to the Lifeline doubled during the period right after Typhoon Mawar.¹ The Mobile Crisis Response Team (MCRT), launched in 2022, also commemorated its 1-year anniversary in 2023. These two services have augmented suicide prevention outreach in Guam.

Within this backdrop, this data brief summarizes the analysis of suicide data for 2023.²

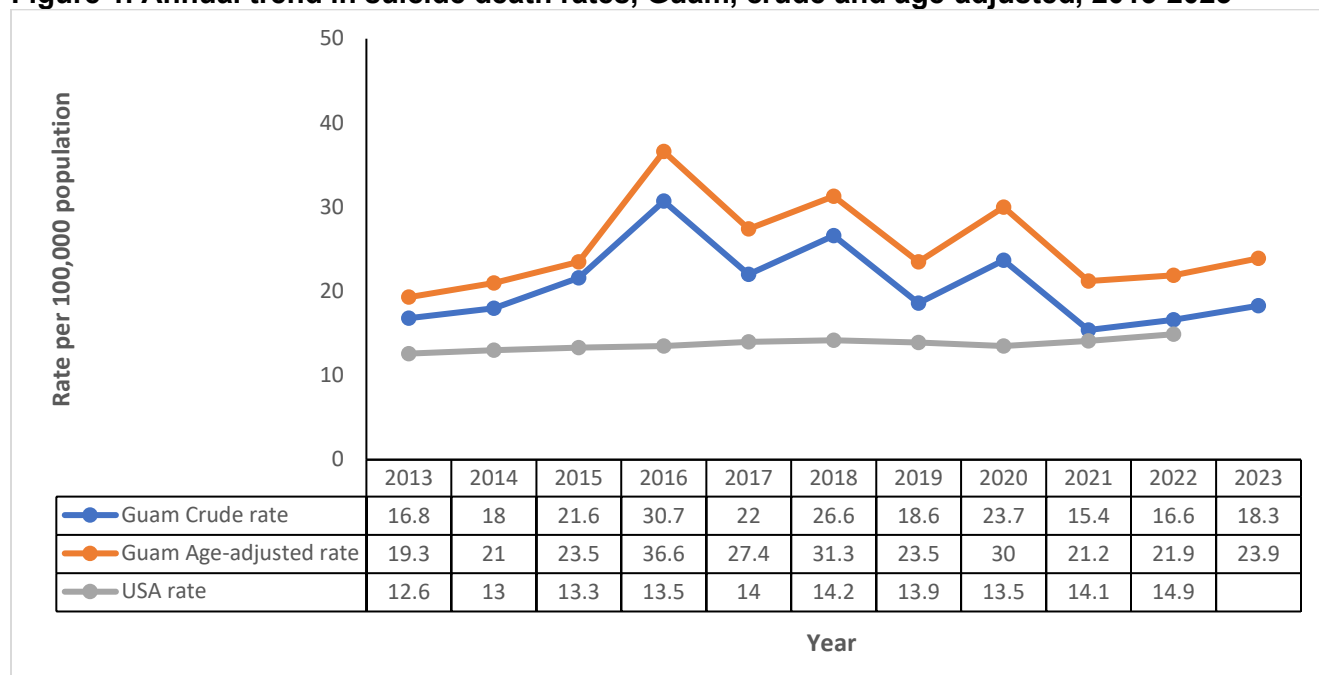
TREND and PRALENCE

In 2023, there were 31 suicide deaths in Guam, resulting in a crude suicide rate of 18.3 per 100,000. Age-adjustment to the US 2000 standard population raised the suicide rate to 23.9 per 100,000. This represents an increase from 2022 (Figure 1). Guam's suicide mortality remains significantly higher than the US (Figure 1, Table 1).

¹ O'Connor J. Calls to 988 Lifeline double after Mawar. The Guam Daily Post. August 14, 2023.

² NOTE: This is this is a supplemental report to the bi-annual epi report on substance use and mental health that is developed by/on behalf of the SEOW.

Figure 1. Annual trend in suicide death rates, Guam, crude and age-adjusted, 2013-2023



Sources: Calculated based on data taken from the Office of the Chief Medical Examiner, DPHSS Office of Vital Statistics and Bureau of Statistics and Plans, 2013-2023; US statistics from US Centers for Disease Control and Prevention (CDC), National Vital Statistics System-Mortality Data via CDC WONDER, and National Institute of Mental Health at <https://www.nimh.nih.gov/health/statistics/suicide> (US 2023 official data not yet available.)

Note: Guam crude data was age-adjusted using direct standardization against the 2000 US Standard Population

Table 1. Suicide death rate, Guam vs. US, 2022-2023

	Guam 2022	Guam 2023	US 2022	US 2023
Deaths (number)	28	31	49,476	
Crude suicide death rate per 100,000	16.6	18.3		
Age-adjusted suicide death rate per 100,000	21.9	23.9	14.2	

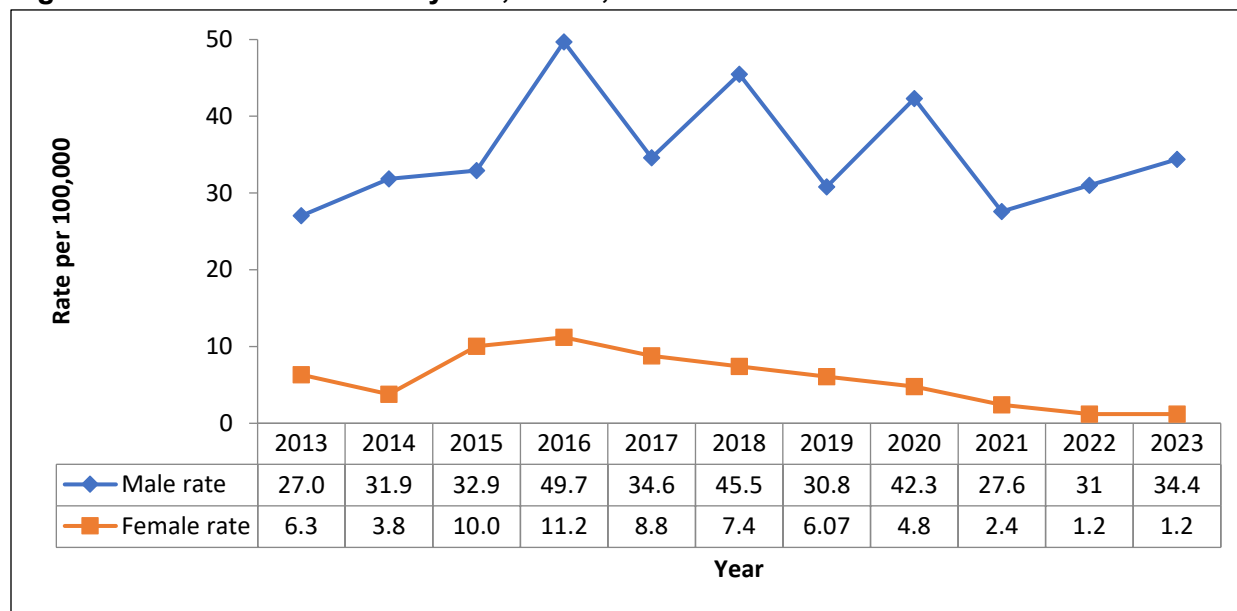
Sources: Guam rates calculated based on data taken from the Office of the Chief Medical Examiner, and population projections for 2022 based on the 2020 Census, Bureau of Statistics and Plans; US statistics from US Centers for Disease Control and Prevention (CDC) Data & Statistics Fatal Injury Report for 2022, retrieved May 11, 2024 as reported by the American Foundation for Suicide Prevention at <https://afsp.org/suicide-statistics/#:~:text=Additional%20facts%20about%20suicide%20in,of%20suicide%20deaths%20in%202022>. (US 2022 data are still provisional and may change as more data is released.)

CORRELATES OF SUICIDE MORTALITY

Sex

Suicide deaths in Guam occur predominantly among males, who consistently outnumber female suicide deaths. In 2023, the ratio of male to female suicide deaths was 30:1. Suicide rates remained stable for females, but increased among males, widening the sex gap (Figure 2).

Figure 2. Suicide death rate by sex, Guam, 2013-2023



Sources: Calculated from data provided by the Office of the Chief Medical Examiner, 2013-2023 and 2023 population projections by sex based on the 2010 census as reported in the 2019 Guam Statistical Yearbook, Bureau of Statistics and Plans

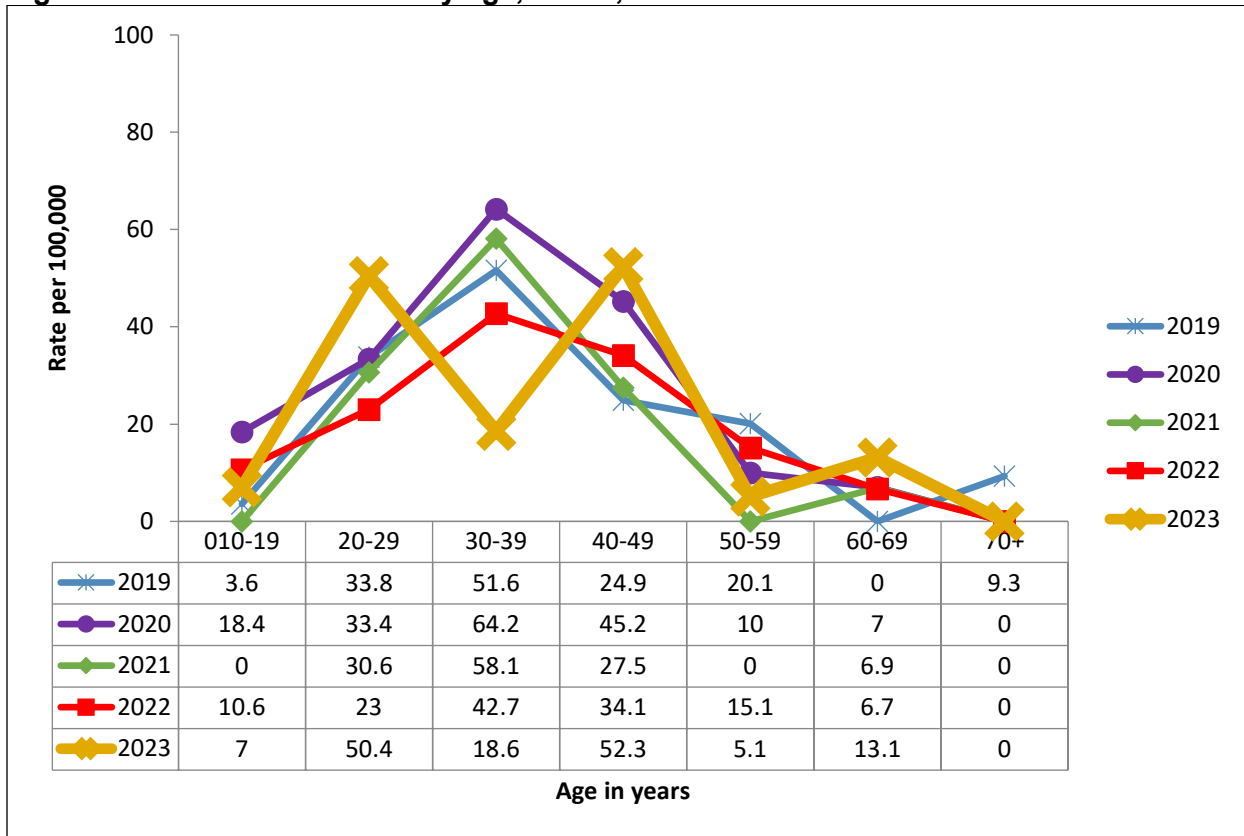
Age

In the US, suicide is highest among adults aged 85 and over (23.0 per 100,000 in 2022).³ In Guam, for 2023, when suicide deaths are disaggregated by age, a bi-modal pattern is observed, with peaks at 20-29 years and 40-49 years (Figure 3). Over the past decade, the peak rate in Guam shifted from those aged 20-29 to those aged 30-39 years; this is the first time that a bi-modal distribution is noted. The age range for suicide deaths in 2023 ranged from 16 to 65 years, with a mean age of 34.5 years.

Collectively, nearly half (45%) of all suicide deaths in Guam from 2013-2023 occurred in those younger than 30 years, and over a quarter (27%) happened among those aged 30-39 years (Figure 4). The proportion of suicide deaths was highest among those aged 20-29 years. Only 1% occurred in those 70 years old or older. Thus, deaths by suicide in Guam occur predominantly among young people, unlike in the US mainland. However, suicide rates in older age groups appear to be increasing over time, reducing the difference in rates between younger and older age groups.

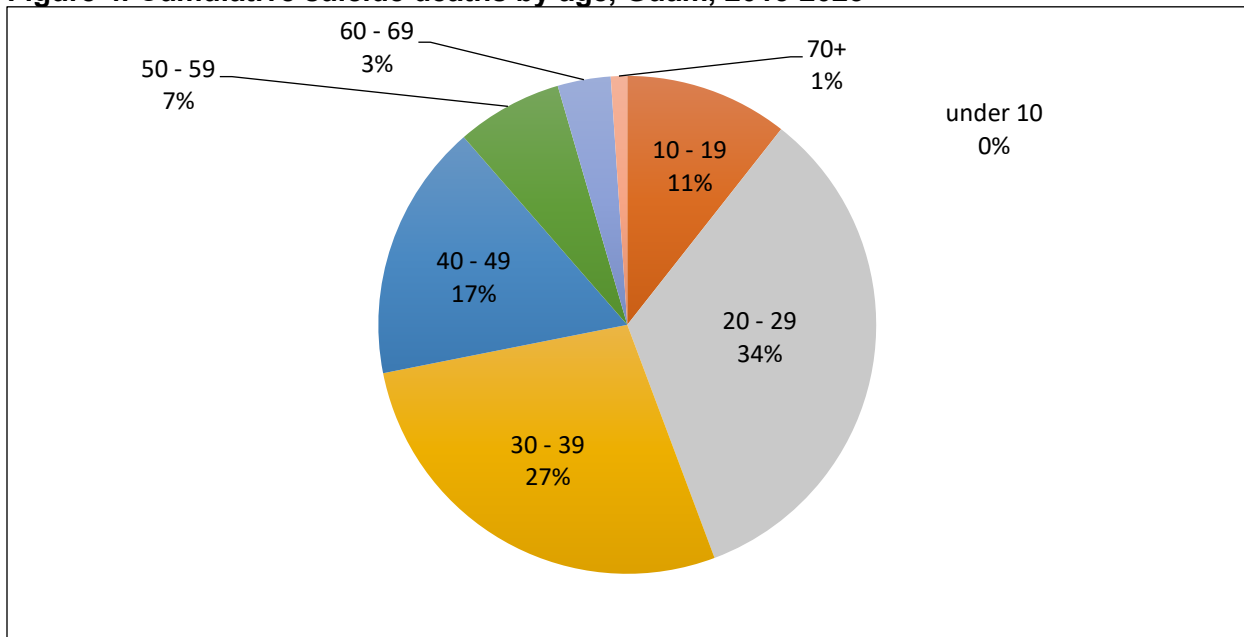
³ Centers for Disease Control and Prevention (CDC) Data & Statistics Fatal Injury Report for 2022, as reported in American Foundation for Suicide Prevention Suicide Statistics, available at <https://afsp.org/suicide-statistics>

Figure 3. Suicide death rates by age, Guam, 2019-2023



Sources: Calculated from data provided by the Office of the Chief Medical Examiner and Bureau of Statistics and Plans, 2019-2023, and population projections by age based on the 2010 census provided by the Bureau of Statistics and Plans, 2019 Statistical Yearbook

Figure 4. Cumulative suicide deaths by age, Guam, 2013-2023

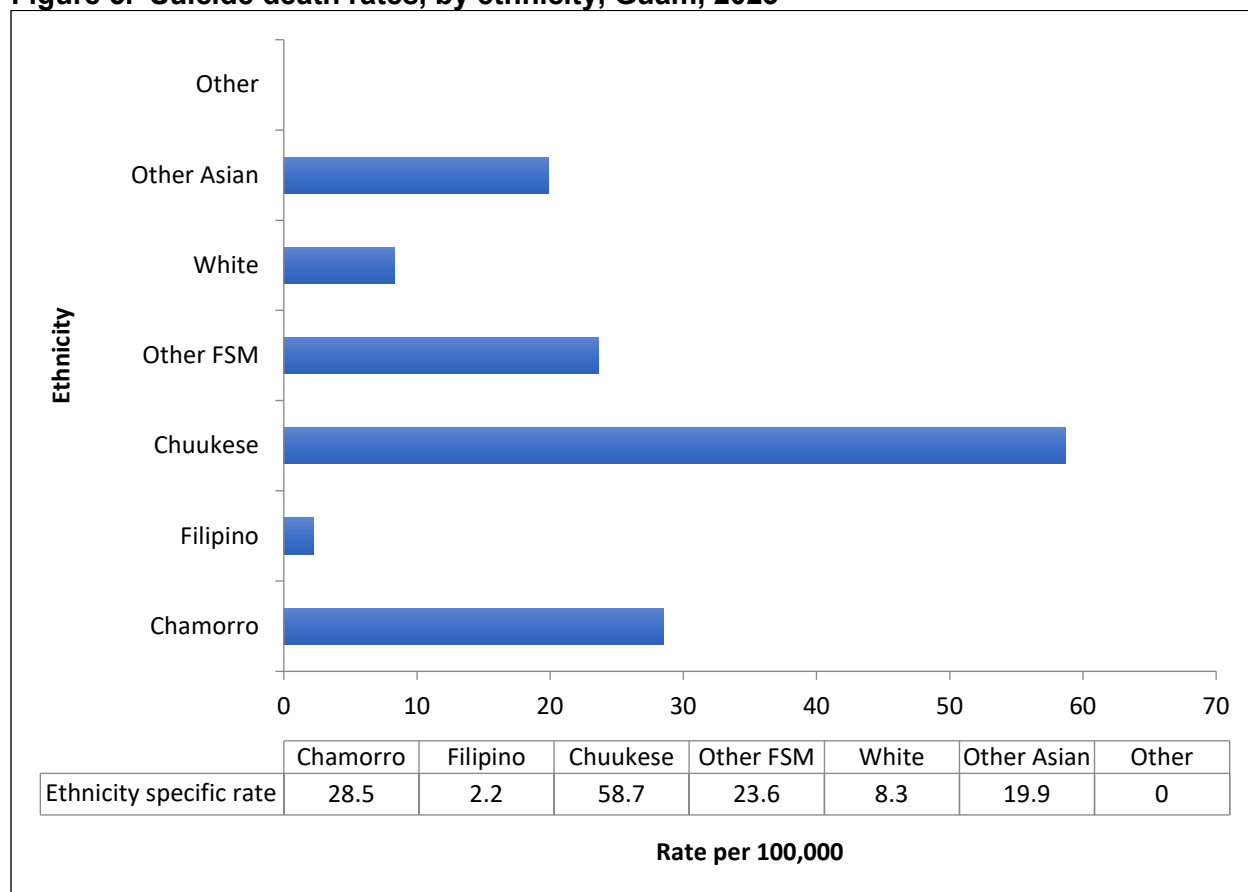


Sources: Calculated from data provided by the Office of the Chief Medical Examiner, 2013-2023

Ethnicity

In 2023, the greatest number of suicide deaths occurred among CHamorus, followed by Chuukese. When these are corrected for the relative contribution of each ethnic group to the total population (Figure 5), Chuukese have the highest suicide death rates per 100,000, followed by CHamorus and other Micronesians. In contrast, in the US mainland, Pacific Islanders have the lowest suicide rates.

Figure 5. Suicide death rates, by ethnicity, Guam, 2023

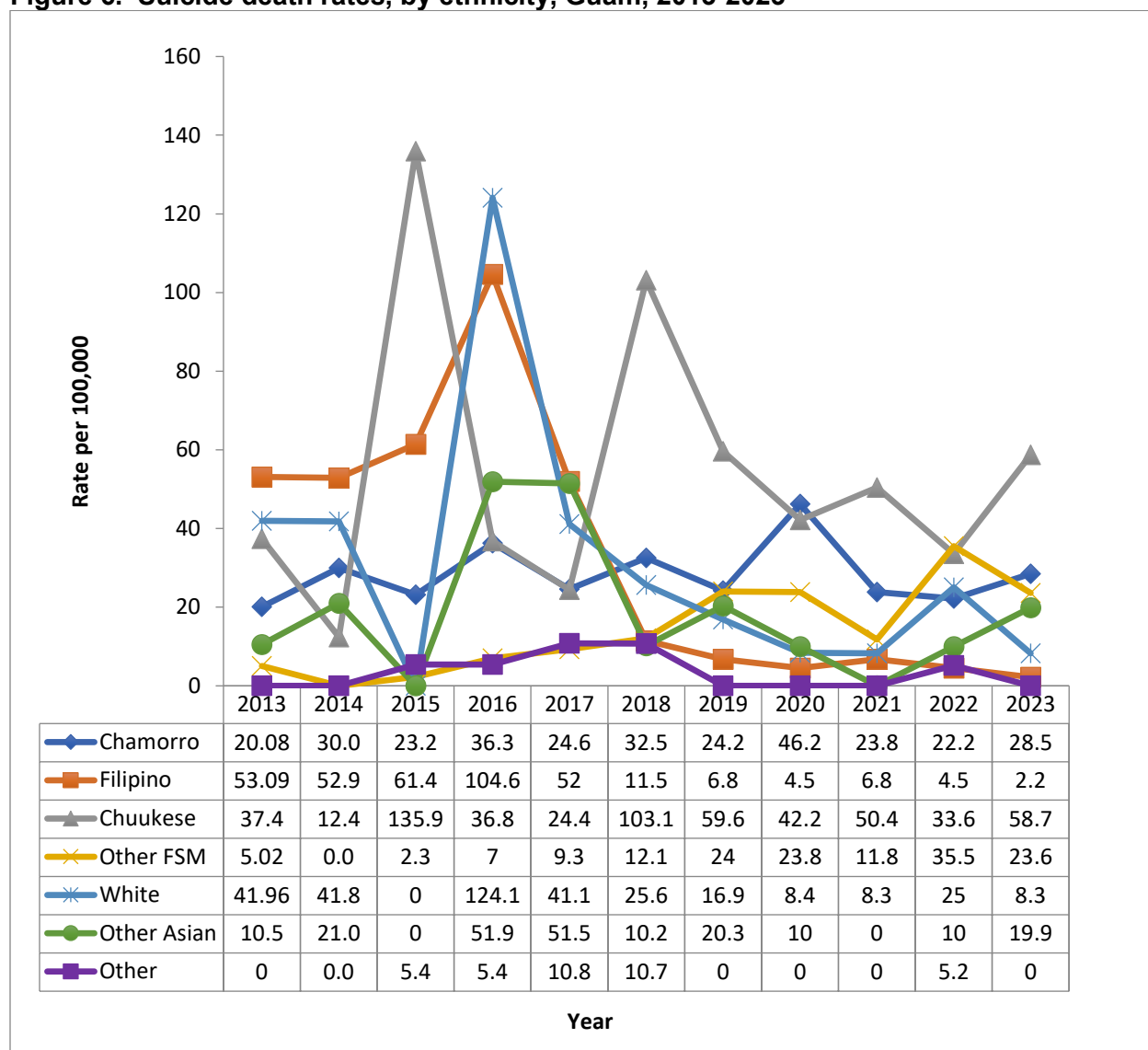


Source: Calculated from 2023 data provided by the Office of the Chief Medical Examiner and population projections published in the 2019 Guam Statistical Handbook

Note: The actual numbers for each of these ethnicity categories are small; caution is needed in interpretation; the CME database still uses the old spelling “Chamorro.”

In 2023 the suicide rate among Chuukese, other Asians and CHamorus increased compared to the previous year, while rates decreased among other Micronesians and Whites (Figure 6).

Figure 6. Suicide death rates, by ethnicity, Guam, 2013-2023



Source: Calculated from data provided by the Office of the Chief Medical Examiner, 2013-2023, and population projections published in the 2019 Guam Statistical Handbook.

Note: The actual numbers for each of these ethnicity categories are small; caution needed in interpretation; the CME database still uses the old spelling “Chamorro”

Site of suicide

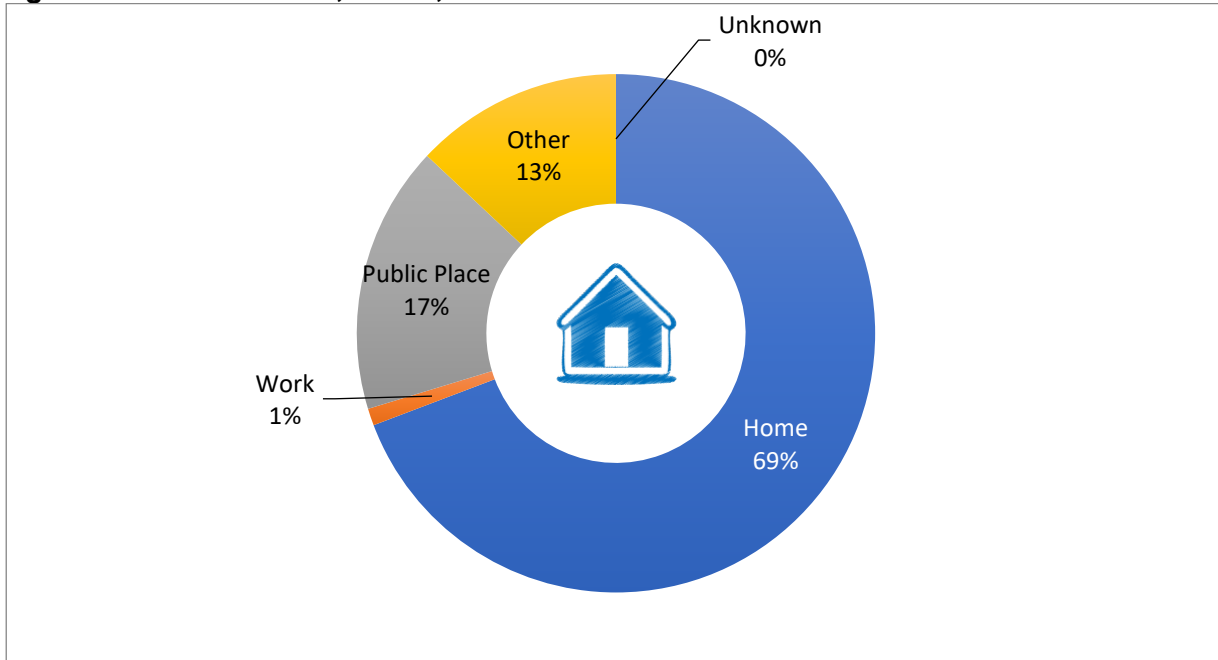
Cumulative data from 2013-2023 show that majority (69%) of suicides occurred in the home. Only 17% occurred in a public place, and only 1% happened at the workplace (Figure 7). Suicide prevention outreach needs to involve families, to equip them to recognize suicide risk among family members and to intervene early to prevent suicide death.

Method of suicide

From 2013 to 2023, hanging was the predominant method of suicide, accounting for 83% of deaths. Less than one-tenth (9%) occurred through the use of firearms (Figure 8). This contrasts markedly from the pattern in the US mainland, where suicide by firearms was the predominant method. From a prevention policy perspective, interventions that reduce access to lethal means

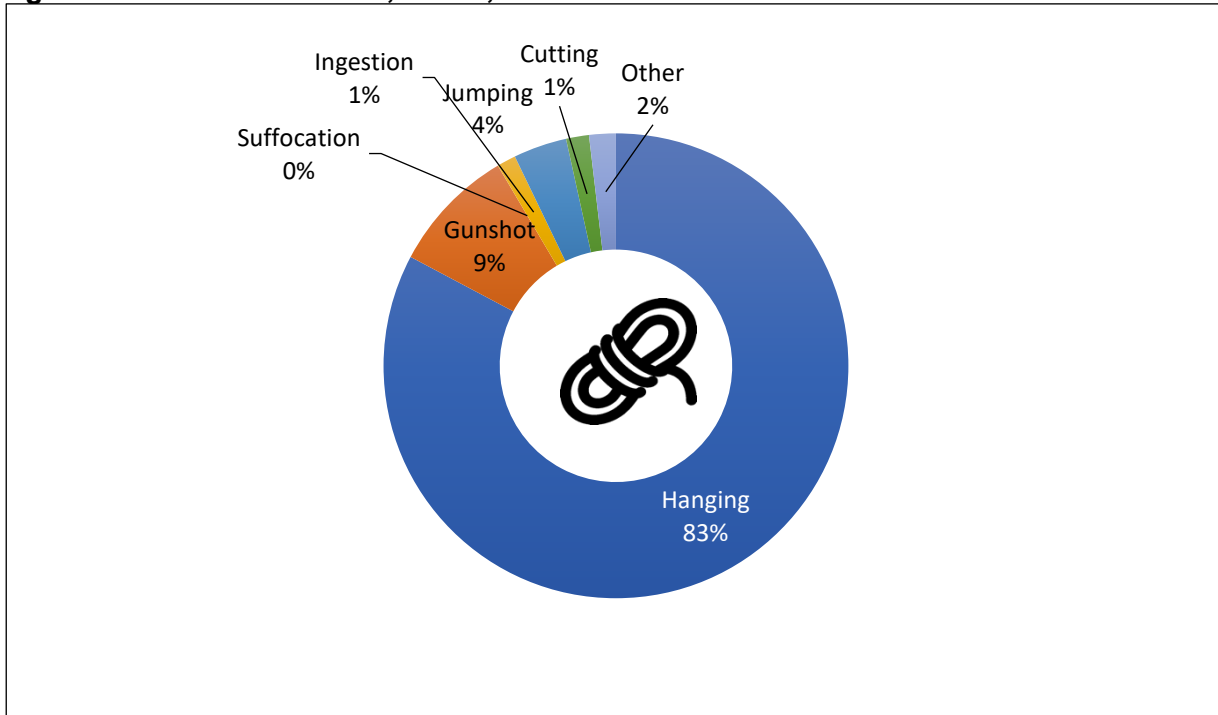
other than firearms may have a limited impact in Guam. Gun control may help avert about a tenth of suicides.

Figure 7. Site of suicide, Guam, 2013-2023



Source: Office of the Chief Medical Examiner, suicide data 2013-2023

Figure 8. Method of suicide, Guam, 2013-2023



Source: Office of the Chief Medical Examiner, suicide data 2013-2023

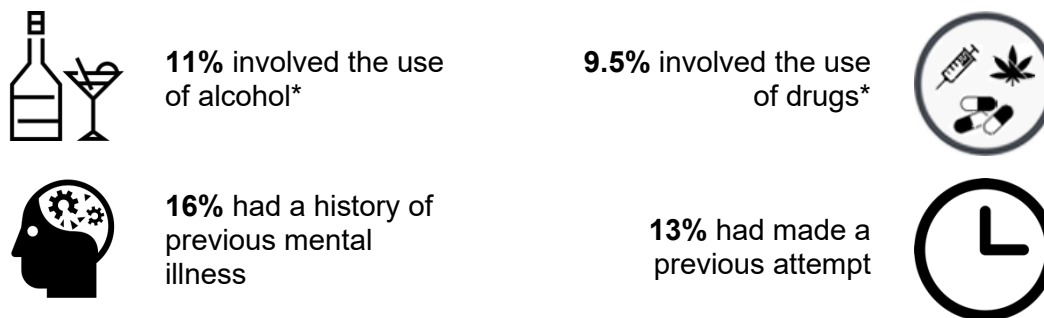
Evidence of intention to die

In 2023, 1 suicide left direct evidence of intent, while 4 left indirect evidence.

Other correlates of suicide mortality

In 2023, nearly half (48%) of suicides had a history of drug use, and one-fourth (26%) had a history of alcohol use. 13% had a history of current or prior mental illness and 19% had made previous attempts.

For the years 2013- 2023, suicides in Guam had the following correlates:

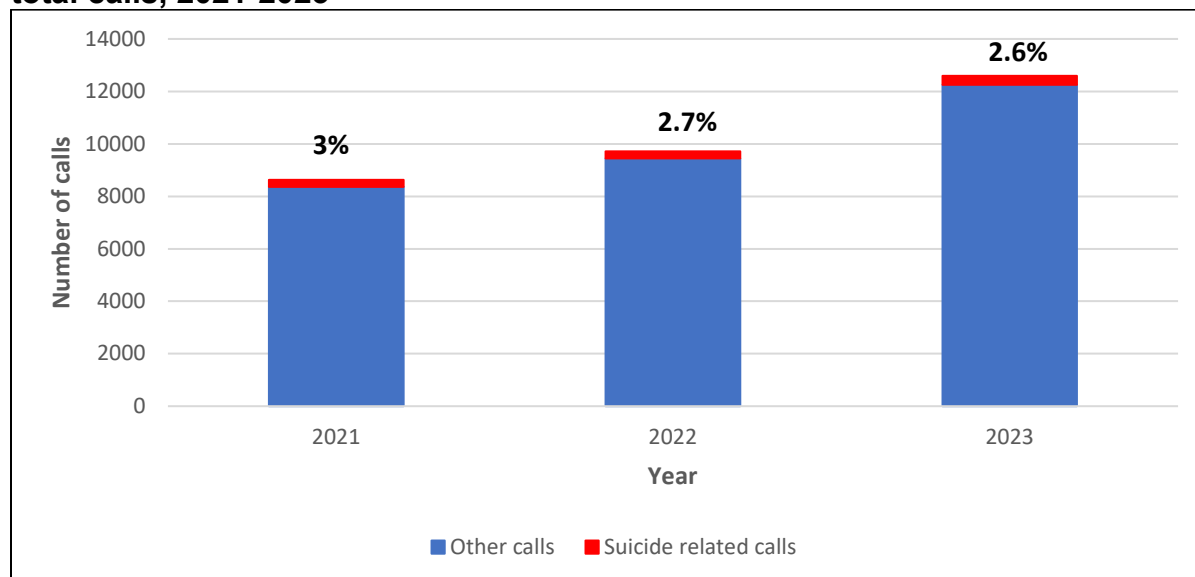


(*Note: These data were obtained by interviewing family and friends of the deceased, without toxicologic confirmation. Thus, these may under-estimate the true prevalence of these correlates.)

GBHWC CRISIS HELPLINE CALLS

In 2023, the GBHWC 988 Lifeline fielded a total of 12,590 calls, of which 267 (2.6%) were suicide related. The number of suicide related calls to the helpline increased from 2022 to 2023, but the proportion relative to total calls remained stable (Figure 9).

Figure 9. Suicide-related calls to the GBHWC crisis helpline, as a proportion of total calls, 2021-2023



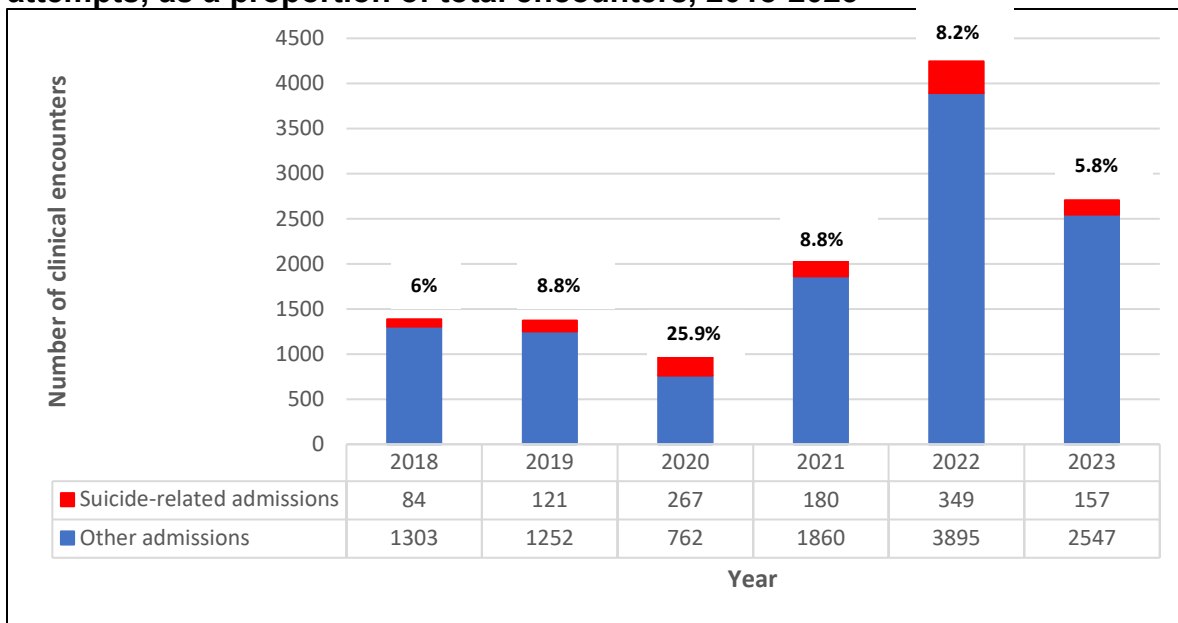
Source: Data provided by MeShaun Bamba, GBHWC 988 Helpline

GBHWC PATIENT ENCOUNTERS INVOLVING SUICIDE IDEATION AND/OR ATTEMPTS

GBHWC’s Mobile Crisis Response Team had a total of 107 activations in 2023, of which 39 were related to suicidal ideation (36.4%).

In 2023, a total of 157 clinical encounters at the GBHWC had suicide attempts or suicide ideation attached to the diagnoses, out of a total of 2704 clients served (5.8% of all encounters). This proportion is lower than that of previous years (Figure 10).

Figure 10. Number of GBHWC clinical encounters with suicide ideation or suicide attempts, as a proportion of total encounters, 2018-2023



Source: GBHWC clinical encounters data, 2018-2023

CONCLUSION AND RECOMMENDATIONS

In Guam, the 2023 suicide rate increased from 2022 and was higher than the US rate.

Although the island had emerged from the COVID pandemic and was recouping from the pandemic's multi-faceted adverse effects, the devastation wrought by Super typhoon Mawar in May 2023 and the prolonged post-typhoon recovery may have contributed to the increase in suicide deaths. Suicide increased in the US as well, but the Guam rate remains markedly higher than the national average.

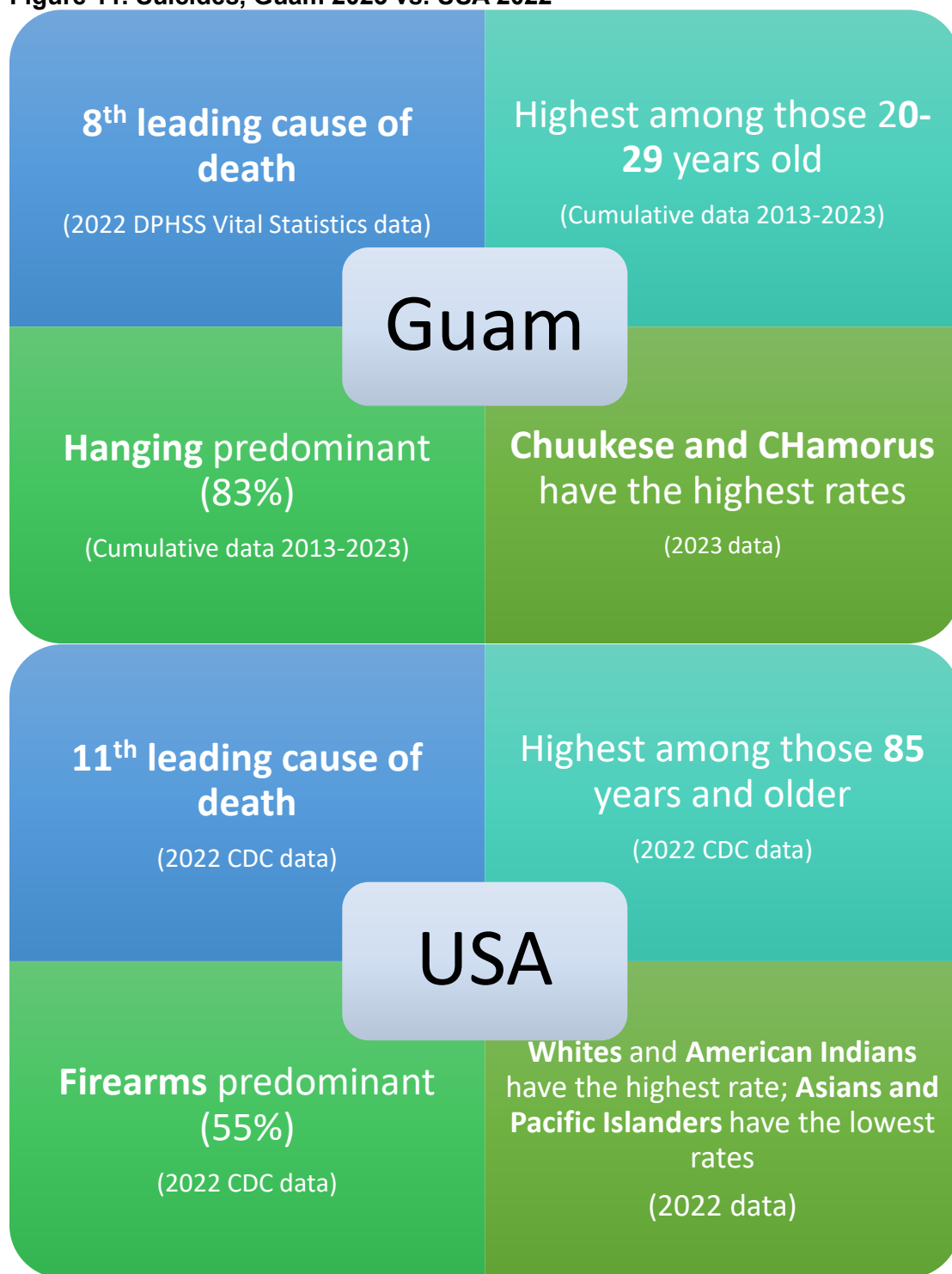
The demographics of suicide in Guam differ from the US, with higher risk among younger persons, and those of CHamoru or Chuukese ethnicity. Previous suicide attempts, alcohol, and drug use, and/or a history of mental illness confer heightened risk. Hanging is by far the predominant method, and majority of suicides occur at home (Figure 11).

Suicide prevention remains a key public health priority, and the data point towards specific strategies to reduce suicide in Guam. These strategies include:

- Investing in suicide prevention efforts towards youth and young adults, especially CHamorus, Chuukese and other Micronesians.
- Strengthening community capacity to recognize the signs of impending or possible suicide and training families, community members and first responders to effectively intervene to bring individuals at risk of suicide to professional attention.
- Training emergency room personnel and other hospital personnel to do brief interventions and referral to GBHWC and other mental health treatment providers for all cases of attempted suicide.
- Ensuring access to continuing care and support for those who have made suicide attempts.
- Aggressively screening to recognize and treat mental illness and depression, including risk factors such as the misuse of alcohol and other drugs, which may be correlated with suicidal ideation and/or depression.
- Preventing and controlling alcohol and other drug abuse.
- Building a sustainable suicide prevention and treatment infrastructure.
- Incorporating mental health interventions and suicide prevention into emergency/crisis response and disaster preparedness.

The establishment of the dedicated 988 Suicide and Crisis Lifeline and the Mobile Crisis Response Team in conjunction with community initiatives to counter suicide risk may reduce suicide rates as more members of the community are engaged in mental health promotion, early recognition of suicide risk and appropriate intervention. Towards this end, these evidence-informed strategies need to be scaled up to ensure widespread community education and prevention capacity building.

Figure 11. Suicides, Guam 2023 vs. USA 2022



Source: Guam data from Office of the Chief Medical Examiner, suicide data 2013-2023 and DPHSS Vital Statistics; US data from CDC National Vital Statistics System-Mortality Data (2022) via CDC WONDER, as reported in <https://www.cdc.gov/nchs/fastats/suicide.htm>

Note: US data for 2022 is provisional.