

Navajo Epidemiology Center



Dine Action Plan Data

Violence, Substance Abuse, Suicide, Missing & Murdered Diné Relatives

Background

“The Diné Action Plan (DAP) is a multi-disciplinary collaboration intended to identify several issues affecting the Navajo Nation by using Diné teachings and the Diné Planning Model. Together, the DAP will serve as the foundational document in developing planning documents providing for coordination in addressing issues. The DAP will also serve as an informational and data resource outlining the ongoing public safety issues affecting the Navajo Nation which can be used as a reference document for future grant applications.”ⁱ

The DAP intends to address 4 modern monsters faced by Diné today. The Navajo Epidemiology Center is working with partners to collect and analyze data to help address these monsters: Violence, Suicide, Substance Abuse, and Missing and Murdered Diné Relatives. We have also included some infectious disease data showing health concerns that are attributable to substance abuse.

Methods

Health care facilities operating on the Navajo Nation including Indian Health Service (IHS), 638, and private clinics submit clinical data to the IHS National Data Warehouse (NDW). IHS then makes this data available to Tribal Epidemiology Centers via the Epi Data Mart (EDM). Facilities send this data to the NDW on a regular schedule with the majority of them sending monthly.

This report contains diagnosis data from the EDM if the patient was treated between January 1 and December 31, 2023, inclusive, and comparison data from 2020 through 2023. Clients are included only if they are Native American, Navajo, and have a community residence on the Navajo Nation, including the 3 Navajo satellite communities (Alamo, Ramah, and Tohajiilee), or within a border town¹. Crude rates are reported for single year charts and tables, while age adjusted rates are utilized when comparing data by gender or across time.

Health conditions are organized according to the International Classification of Diseases (ICD) 10 standards, and according to the National Center of Health Statistics (NCHS) guidelines for 113 selected causes of death (http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_19.pdf). COVID-19 is now included among the 113 select causes. The data in this report pertains to monsters identified by the

¹ Border towns include Aztec (NM), Blanding (UT), Bloomfield (NM), Bluff (UT), Cuba (NM), Farmington (NM), Flagstaff (AZ), Upper Fruitland (NM), Gallup (NM), Grants (NM), Holbrook (AZ), Joseph City (AZ), Kirtland (NM), Monticello (UT), Page (AZ), Waterflow (NM), Winslow (AZ)

Dine Action Plan: Violence, Suicide, and Substance Use, as well as infectious diseases. Important issues such as opioid poisoning can be found within the T codes.

U.S. Census data from 2010 and 2020 provide population data for each Navajo Chapter and border town. The author estimated the 2023 Navajo Nation population by calculating the population change between 2010 and 2020 and applying a constant rate of change for each year from 2011-2023. The combined Navajo and border town populations are then used as the denominator to calculate the rates. Rates are age adjusted to the 2000 U.S. population.

Results

Substance Use

Chart 1. Substance Use Emergency Department (ED) Rates, 2023

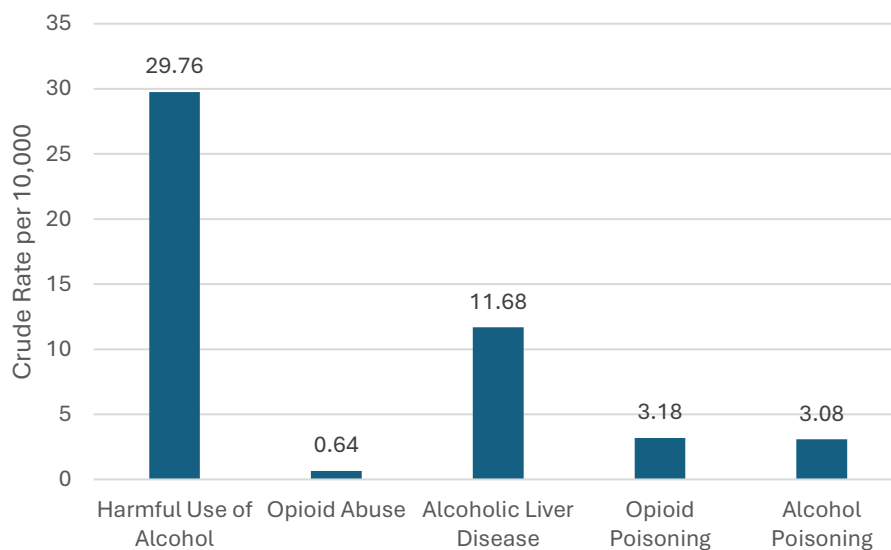


Chart 1 illustrates the burden of alcohol use on the Navajo people and health care system. While opioid abuse is a public health concern, the data does not show this to be as large a burden as alcohol. Now is a good time to plan continuing prevention programs to ensure opioid abuse does not become a new monster.

Chart 2. Substance Use Hospitalization Rates, 2023

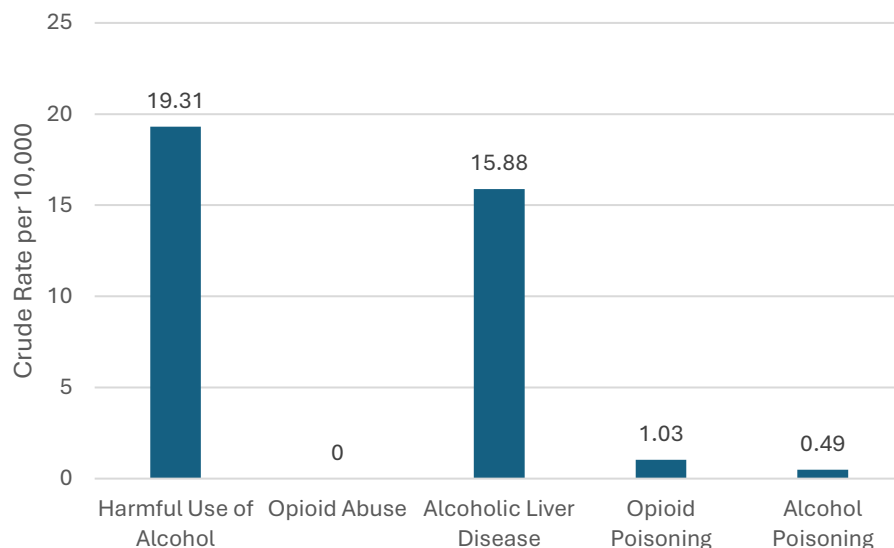


Chart 2 continues to illustrate the burden of alcohol abuse on the Navajo people. Opioid hospitalization remains low. However, if an individual passes away from acute opioid poisoning the EDM data would not capture this event. Mortality data is necessary to fully understand the impact of opioid on Navajo.

Table 1. Substance Use Trends (Age-adjusted rates per 10,000), 2020-2023

Condition	2020	2021	2022	2023	Trend
Harmful use of Alcohol: ED	5.37	26.91	27.53	33.72	↑
Alcoholic Liver Disease: ED	21.93	28.96	20.81	13.18	↓
Harmful use of Alcohol: Hospitalization	0.94	6	11.37	21.59	↑

Table 1 indicates Harmful use of alcohol has increased since 2020, but the more chronic issue of Alcoholic Liver Disease has decreased since 2020.

Note: If there was no significant difference across time the data was omitted.

Violence

Chart 3. Violence Emergency Department Rates, 2023

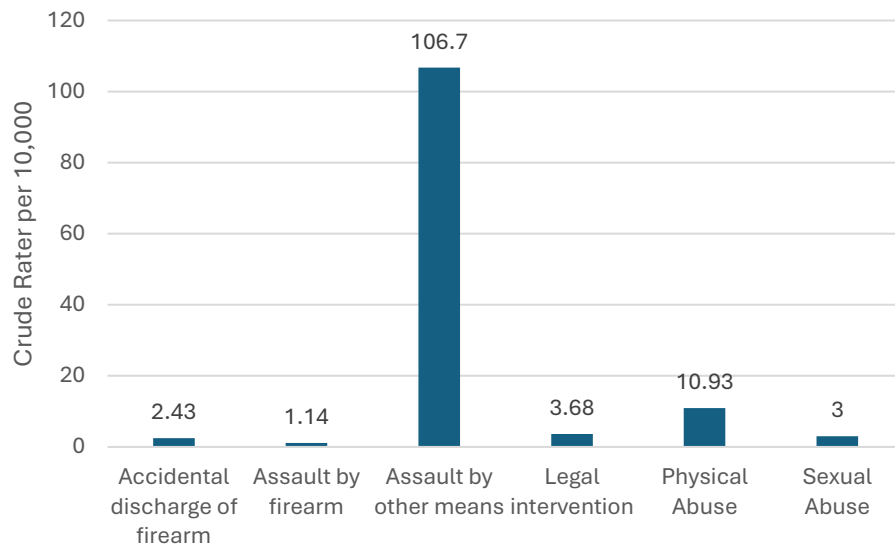


Chart 3 illustrates the magnitude of the monster of assault on the Navajo Nation. Firearms do not play a major role in most Navajo assaults. Assault by other means include methods such as sharp objects, blunt objects, or the use of one's body to inflict injury.

Chart 4. Violence Hospitalization Rates, 2023

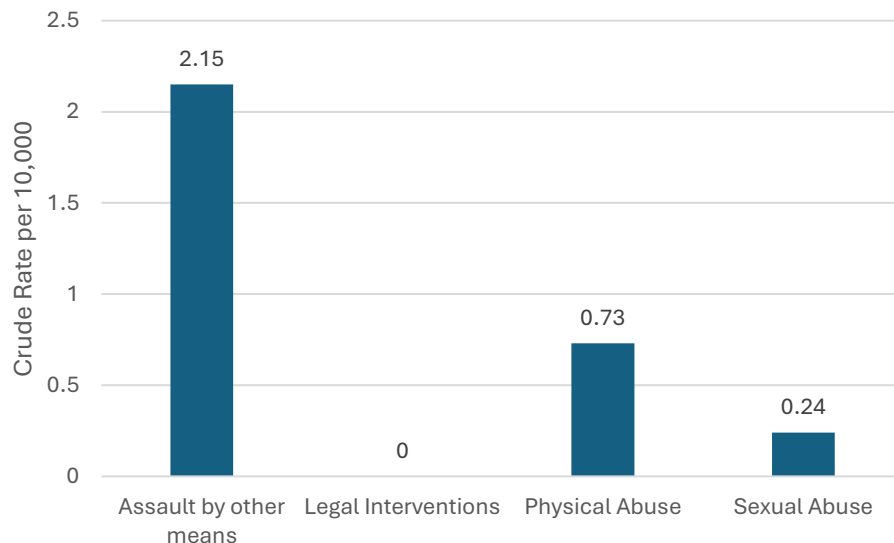


Chart 4 indicates that among different types of violence assault by other means is most likely to lead to hospitalization. The rate for assault hospitalization is much lower than the rate for ED visits. Most people injured in assault are treated and released.

Table 2. Violence Trends (Age-adjusted rate per 10,000), 2020-2023

Injury Type	2020	2021	2022	2023	Trend
Assault by other means: ER	155.2	130.9	125.1	106.7	↓

Table 2 indicates that while Assault is a major concern there has been some progress in lowering its impact since 2020.

Suicide

Chart 5. Suicide Emergency Department Rates, 2023

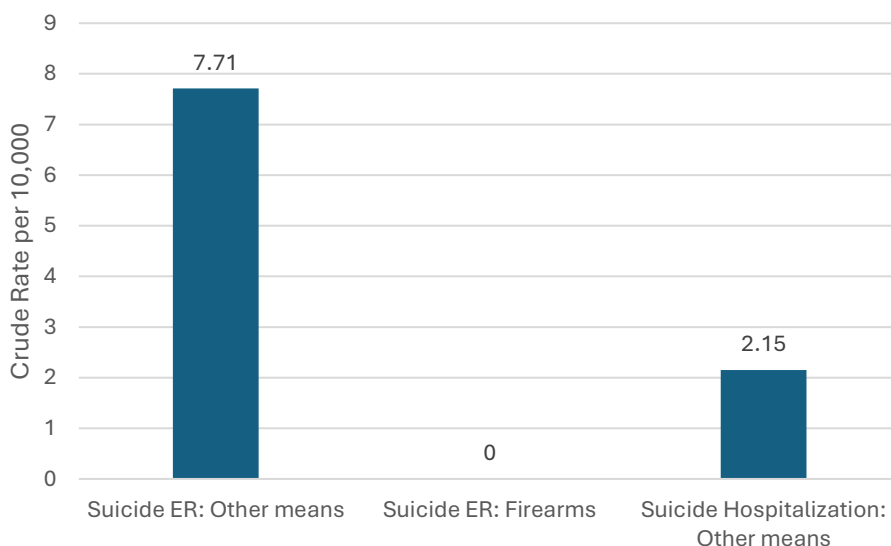


Chart 5 illustrates that the treatment rate for suicide attempts by firearms are very low. Most who attempt suicide use other means such as drug use, sharp objects, or strangulation. What can't be reported with EDM are fatalities as a result of suicide attempts. The use of firearms is more likely to result in fatality, and individuals using this method may not present at a clinical setting.

Table 3. Violence Trends (Age-adjusted rate per 10,000)

Condition	2020	2021	2022	2023	Trend
Suicide by other means: ER	11.53	8.92	7.85	7.71	↓

Table 3 indicates, as with Assault, that there has been some progress in reducing treatment rates for suicide attempt.

Infectious Disease

Chart 6. Leading Emergency Department Rates for Infectious Diseases, 2023

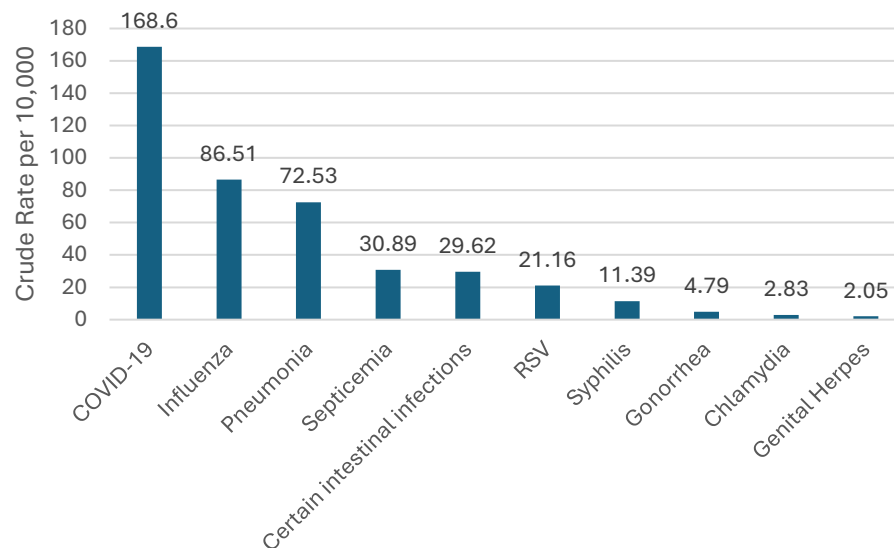


Chart 6 illustrates the high burden that infectious respiratory diseases placed on Navajo people and the Navajo health care system. COVID-19 continued to be an issue through 2023, and has likely masked the annual burden of Influenza and Pneumonia. Additionally, sexually transmitted infections continue to be a problem on Navajo, particularly Syphilis.

Note: Certain intestinal infections include *Clostridium difficile*, foodborne related illness (e.g. *E. coli*, *Staph aureus*), amebiasis, protozoal diseases (e.g. giardiasis, cryptosporidiosis), and infectious gastroenteritis and colitis.

Chart 7. Hospitalization Rates for Infectious Disease, 2023

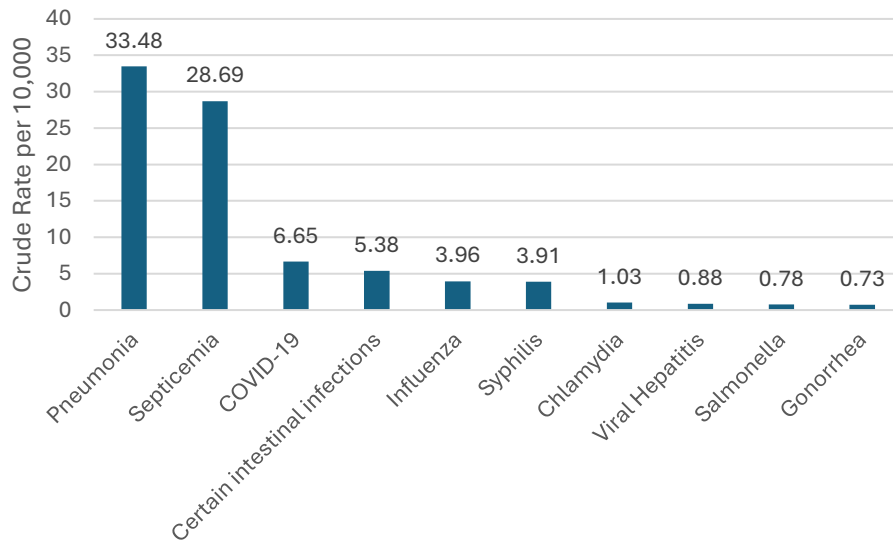


Chart 7 indicates that while COVID-19 continues to be present, Pneumonia and Septicemia are much more likely to cause more serious disease. Syphilis hospitalization is as likely as Influenza hospitalization.

Table 4. Infectious Disease All Visits Trends (Age-adjusted rate per 10,000), 2020-2023

Disease	2020	2021	2022	2023	Trends
Salmonella	0.74	1.89	3.10	2.63	↑
Certain intestinal infections	67.67	80.45	65.76	93.76	↑
Septicemia	103.1	88.78	77.14	78.62	↓
Syphilis	32.64	45.95	62.19	77.33	↑
COVID-19	1,304.5	1,029.3	1,986.6	506.7	↓
Influenza	347.0	11.13	203.1	132.8	↓
Pneumonia	426.3	238.6	142.7	163.7	↓

Table 4 Displays rates for all types of health are visits for infectious diseases. Many infectious diseases afflict people, and disrupt their daily lives, but do not require acute or serious hospital care. There have been significant increases in Salmonella treatment, intestinal infections, and Syphilis, while there has been a significant decrease in Septicemia, COVID-19, Influenza, and Pneumonia.

Table 5. Infectious Disease ER Trends (Age-adjusted rate per 10,000), 2020-2023

Disease	2020	2021	2022	2023	Trends
Certain intestinal infections	15.96	18.25	18.29	30.89	↑
Syphilis	6.05	9.61	14.62	12.82	↑
COVID-19	189.5	138.0	302.9	170.2	↓
RSV	30.29	3.54	5.55	22.66	↓
Influenza	182.3	4.55	127.1	87.92	↓
Pneumonia	181.9	96.89	60.50	73.60	↓

Table 5 indicates that acute infectious disease rates increased for intestinal infections and Syphilis, while infectious respiratory disease has decreased since 2020.

Table 6. Infectious Disease Hospitalization Trends (Age-adjusted rate per 10,000)

Disease	2020	2021	2022	2023	Trends
Syphilis	1.47	3.35	6.03	4.36	↑
COVID-19	33.45	15.85	13.62	6.75	↓
RSV	6.62	0.43	1.350	0.53	↓
Pneumonia	100.1	57.53	35.08	33.91	↓

Table 6 indicates a similar pattern for serious infectious disease with Syphilis increasing across time and respiratory infections decreasing.

Table 7. Gender Differences where Males have higher rates than Females, 2023

Emergency Department Visits	
Health Condition	Male: Female Ratio
Harmful Use of Alcohol	3.60
Hospitalization	
Health Condition	Male: Female Ratio
Harmful Use of Alcohol	3.20
Alcoholic Liver Disease	2.32

Table 7 indicates a pattern of Alcohol being a greater burden on male Navajos than female Navajos.

Table 8. Gender Differences where Males have higher rates than Females, 2023

Emergency Department Visits	
Health Condition	Female: Male Ratio
Sexual Abuse	5.17
Influenza	1.38
Hospitalization	
Health Condition	Female: Male Ratio
None	

Table 8 indicates that Sexual Abuse and Influenza impact the female population more than the male population, and that there are no health conditions under consideration within this report in which females have a significantly higher hospitalization rate than males.

Note: these differences are only reported for the DAP categories and infectious disease

Table 9. Increasing Trends for Emergency Room and Hospitalization Rates, 2020-2023

Emergency Room Rates		
Health Condition	Percent Change	Absolute Change
Harmful Use of Alcohol	428%	28.35/10,000
Syphilis	112%	6.77/10,000
Certain Intestinal Infections	93.5%	14.93/10,000
Depression	39.6%	7.73/10,000
Hospitalization Rates		
Health Condition	Percent Change	Absolute Change
Harmful Use of Alcohol	2,197%	20.65/10,000
Syphilis	197%	2.89/10,000

Table 9 indicates which health conditions experienced the largest increase in rates from 2020-2023. The impact of acute alcohol abuse is obvious, and Syphilis continues to be an increasing problem on the Navajo Nation. Depression is included in this table as it may be a risk factor for Suicide (one of the monsters being addressed in the DAP).

Table 10. Decreasing Trends for Emergency Room and Hospitalization Rates, 2020-2023

Emergency Room Rates		
Health Condition	Percent Change	Absolute Change
Pneumonia	-59.5%	108.3/10,000
Influenza	-51.8%	94.4/10,000
Alcoholic Liver Disease	-39.9%	8.75/10,000
Anxiety	-34.9%	22.2/10,000
Hospitalization Rates		
Health Condition	Percent Change	Absolute Change
RSV	-92%	6.09/10,000
COVID-19	-79.8%	26.7/10,000

Table 10 reaffirms previously made observations found in this report. In the last 4 years there has been a decrease in respiratory disease and chronic alcohol use.

Data Considerations/Limitations

The results and interpretation of the EDM data is dependent upon accurate and complete classification of health conditions. Some injuries may not be classified completely to paint the full picture. For example, some injuries could be the result of assault or suicide attempt but coded as an unintentional injury. This could potentially cause the under reporting of some health conditions.

References

ⁱ Begay, et al. Dine Action Plan. [The Diné Action Plan – Navajo Nation](#). Accessed 5/15/25.