

Suicide Ideation, Self-Harm, Suicide Attempts, and Suicide Fatalities in Nassau County

Data from the New York State (NYS) Statewide Planning and Research Cooperative System (SPARCS) was analyzed to see patterns in suicide ideation, suicide attempts and self-harm. Unique claim transaction IDs were utilized and aggregate values less than 11 were suppressed to meet data suppression criteria. NYS Vital Statistics data was analyzed to observe trends in suicide fatality rates across Nassau County. Aggregate Vital Statistics data was suppressed if values were less than 10. The first part of this report focuses on inpatient claims for suicide ideation or self-harm from 2018 - 2023. The second shows emergency department claims for the same period. Vital Statistics data from 2018 – 2022 is provided in the third section of this report. Methods and disclaimers are in the final sections of this report.

Key takeaways:

- Overall, there were almost an equal number of males and female who were hospitalized or visited an emergency department with self-harm or suicide ideation diagnoses. However, 76% of the population which committed suicide were male.
There was gender-based differences in age group distributions for hospitalizations and emergency department visits. Males 25 and older were hospitalized and visited the emergency department more frequently than their female peers, while young females (0-24) were hospitalized or visited an emergency department more than their male peers.
- Depression co-diagnosis was more common among hospitalized patients (69%) than among those who visited the emergency department (50%).
- Of those who committed suicide, 40% died from hanging, strangulation, or suffocation. The second leading cause of death, firearms, accounted for 25% of the total suicide deaths. The majority of those who committed suicide by firearm were male.

I. Hospitalizations

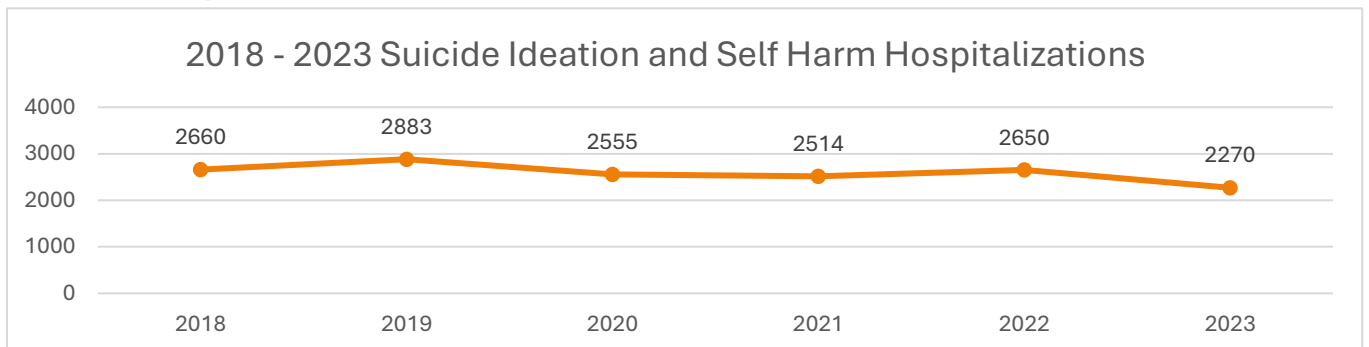


Figure 1: Suicide related and self-harm hospitalizations peaked in 2019. Between 2019 - 2023, hospitalizations have decreased by 21.3% .

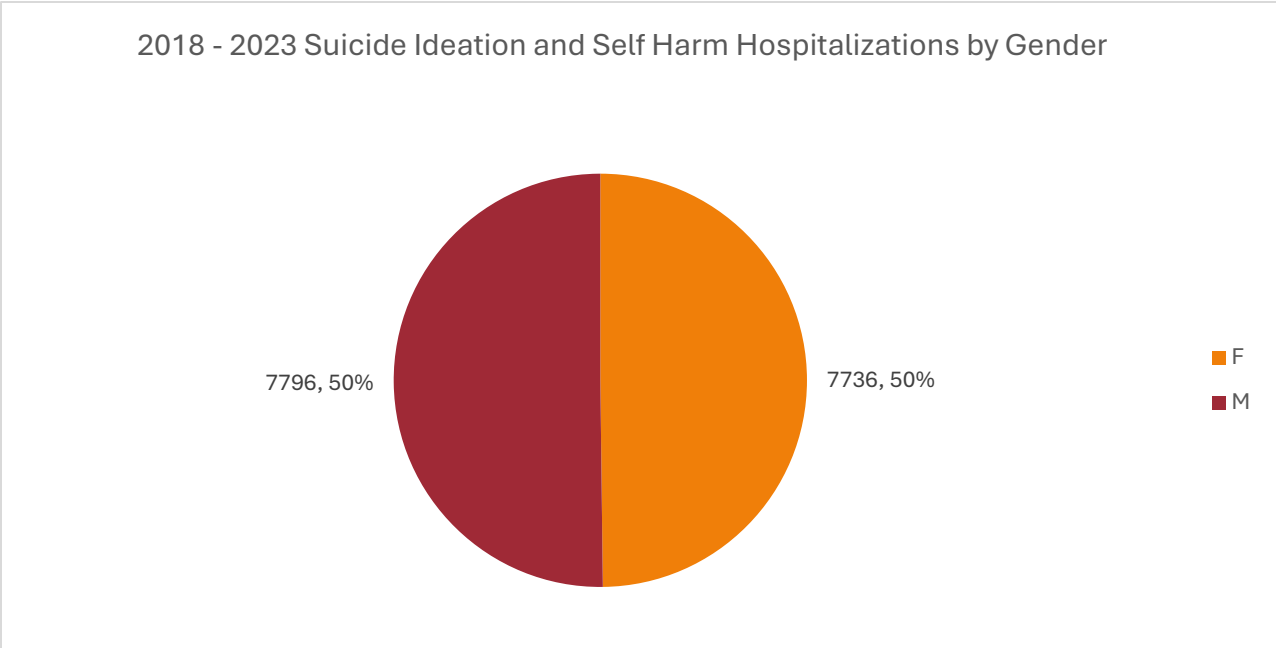


Figure 2: There were almost an equal number of men and women hospitalized with a suicide ideation and/or self-harm diagnosis.

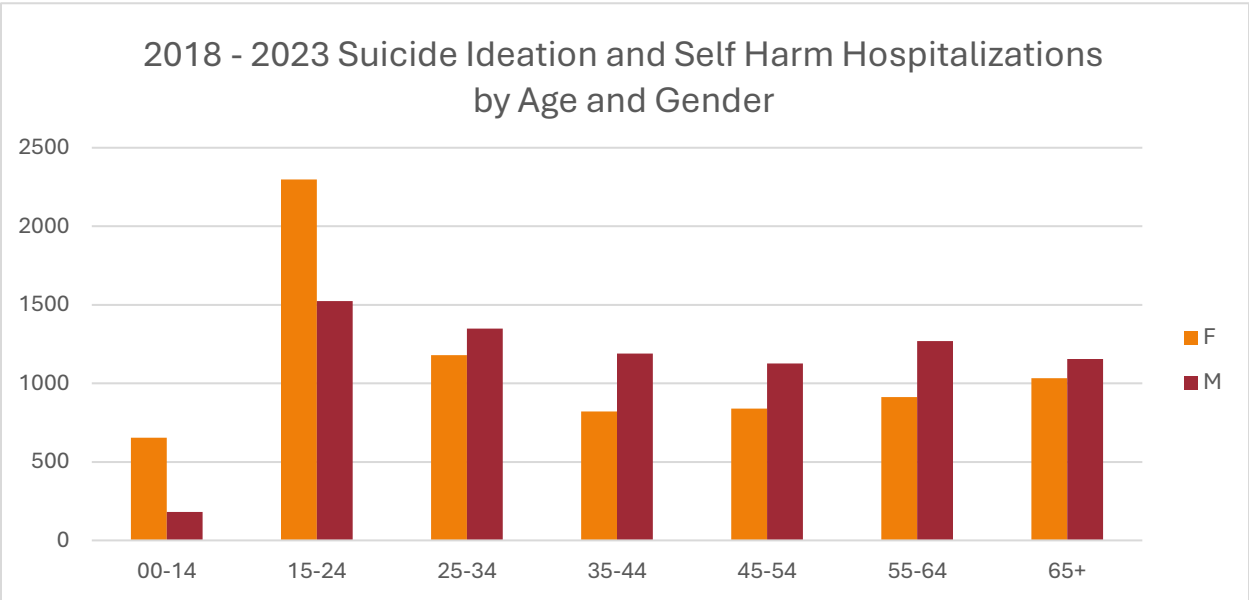


Figure 3: Even though the total amount of males and females were approximately equal, there were differences between the age groups. Young females had more hospitalizations than their male counterparts. Males between the ages of 20-44, 45-64, and 65-74 had more hospitalizations than females.

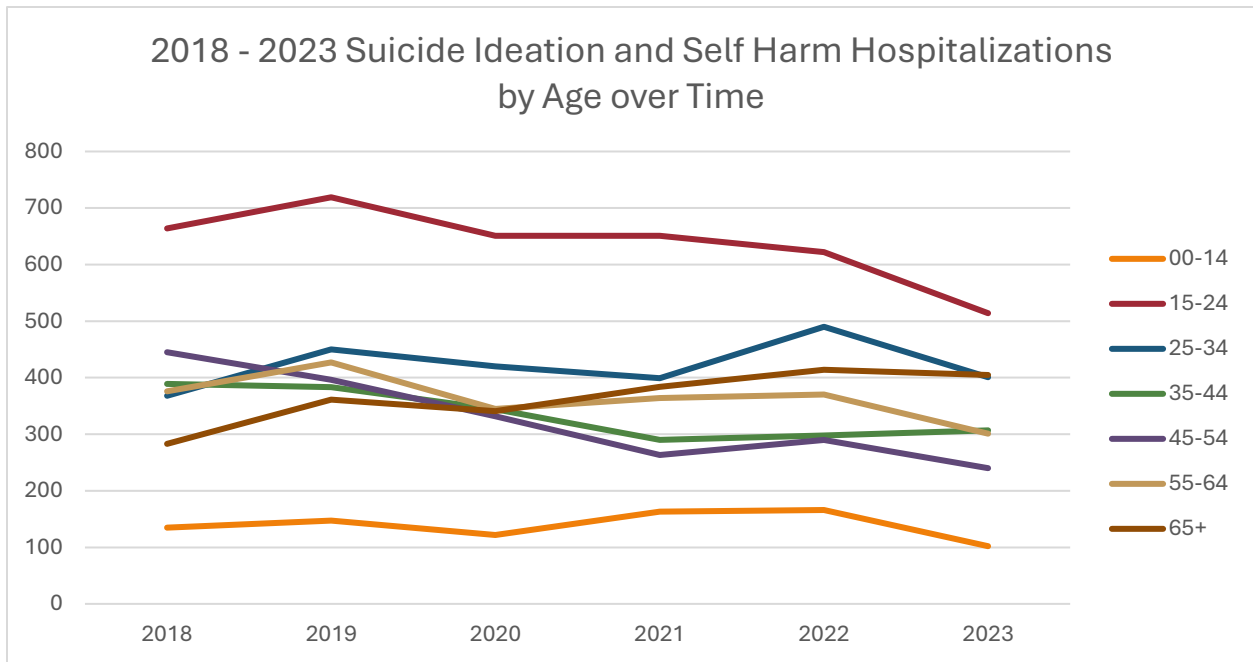


Figure 4: – For most age groups, hospitalizations remained stable over time. However, between 2018 – 2023, hospitalizations for those 65+ years increased by 43% (283 visits in 2018 to 405 visits in 2023).

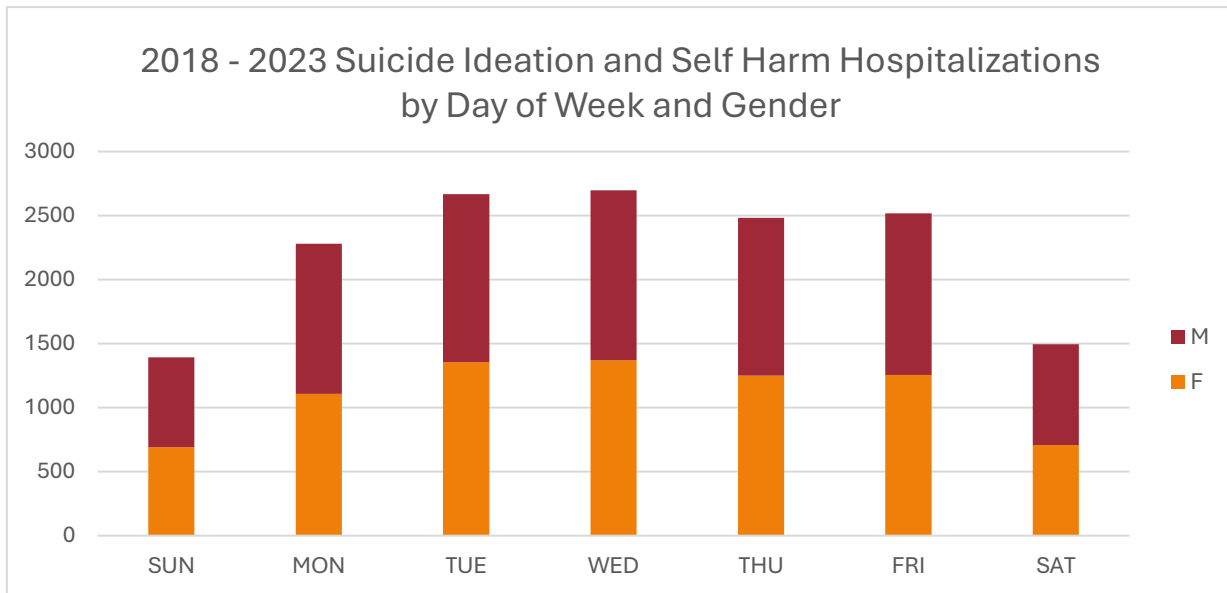


Figure 5: Males and females were both hospitalized more on a weekday than a weekend.

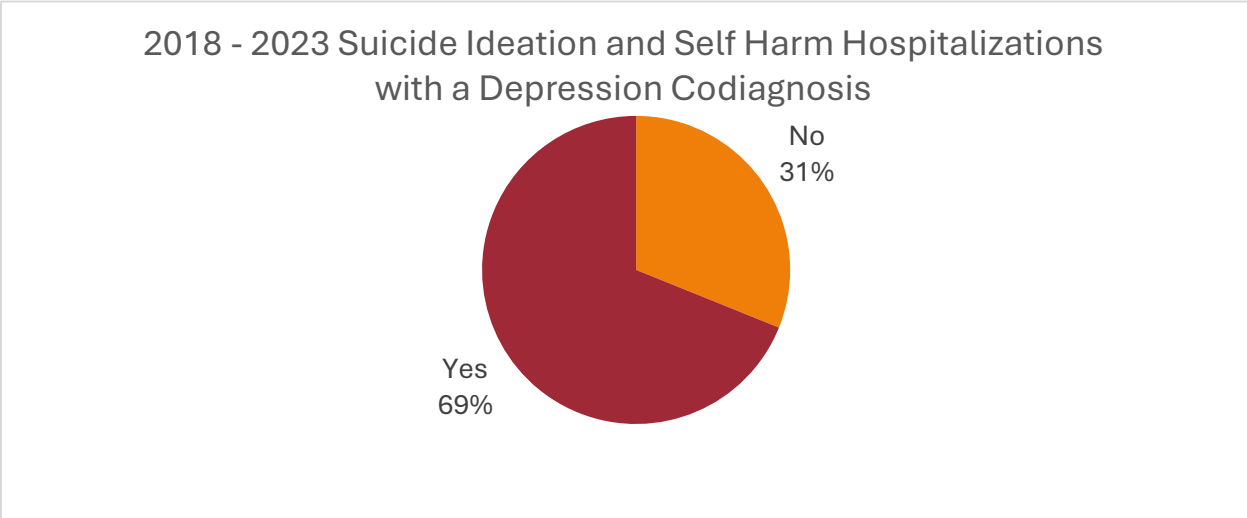


Figure 6: Of all hospitalizations with a suicide related or self-harm diagnosis, 69% also had a depression related co-diagnosis.

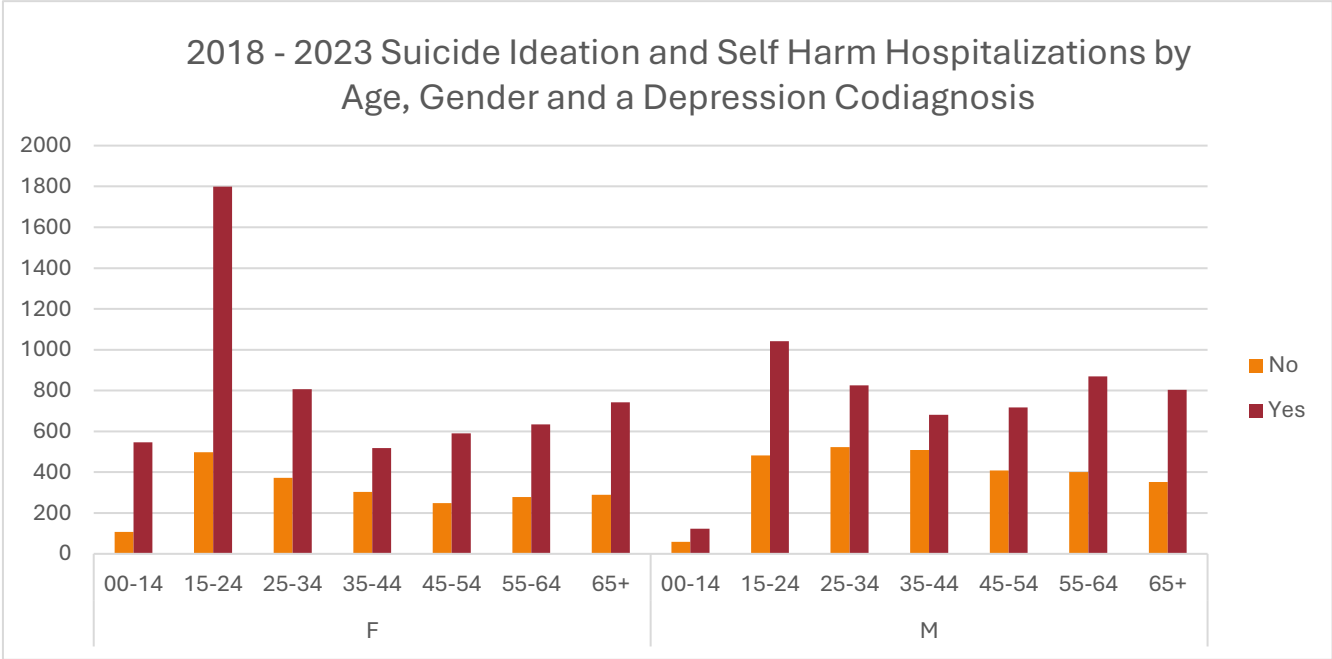


Figure 7: Most young males and females, those 24 and younger, also had a depression related diagnosis. In fact, around 68% of young males (1165 of 1706) and 79.5% of young females (2345 of 2950) had a depression related co-diagnosis.

2018 - 2023 Suicide Ideation and Self Harm Hospitalizations by Race

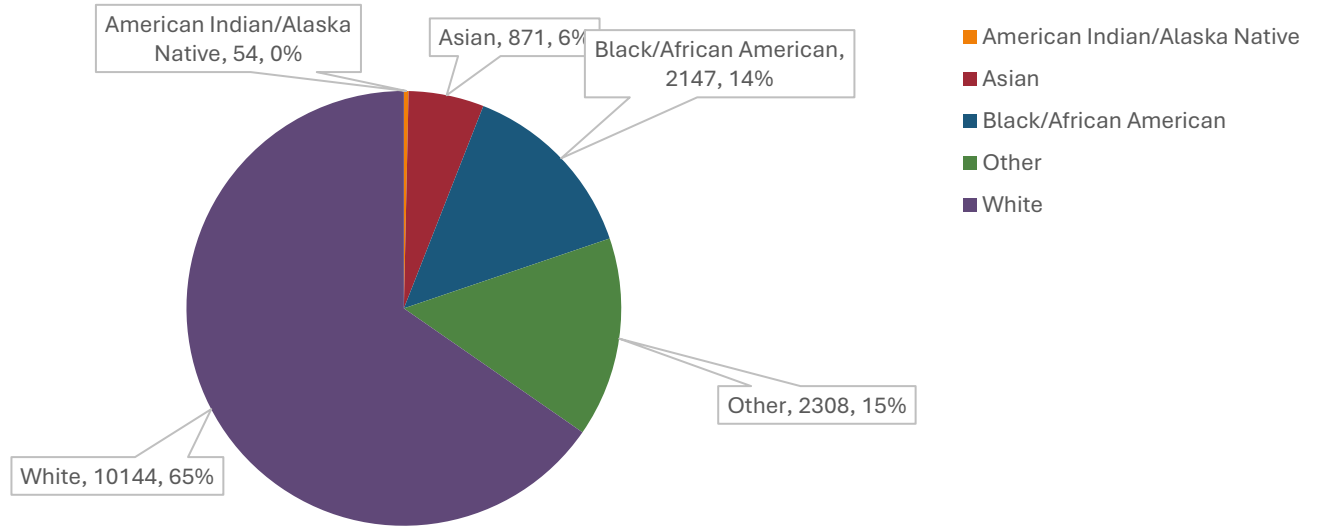


Figure 8: In total, most cases were white.

2018 - 2023 Suicide Ideation and Self Harm Hospitalizations Rate per 10,000 by Race

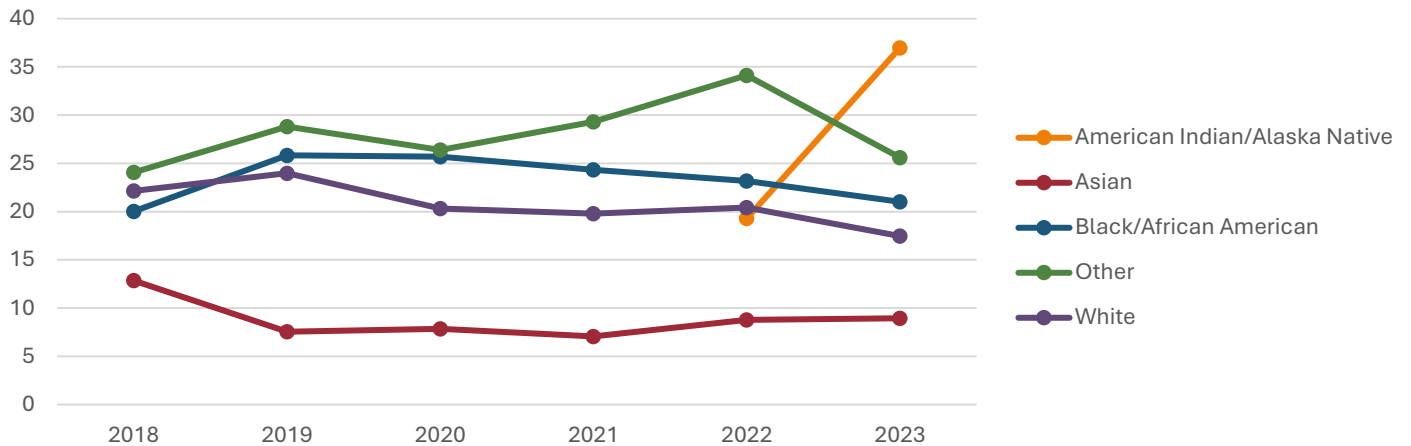


Figure 9: Other race had the highest rate for all year besides 2023. In 2023, American Indian/Alaskan Natives had the highest rate. However, this population only had 23 hospitalized cases in 2023 while other race had 351 cases in 2023. The rate for American Indian / Alaskan Native was suppressed from 2018 – 2021 because there were less than 11 hospitalizations for this population.

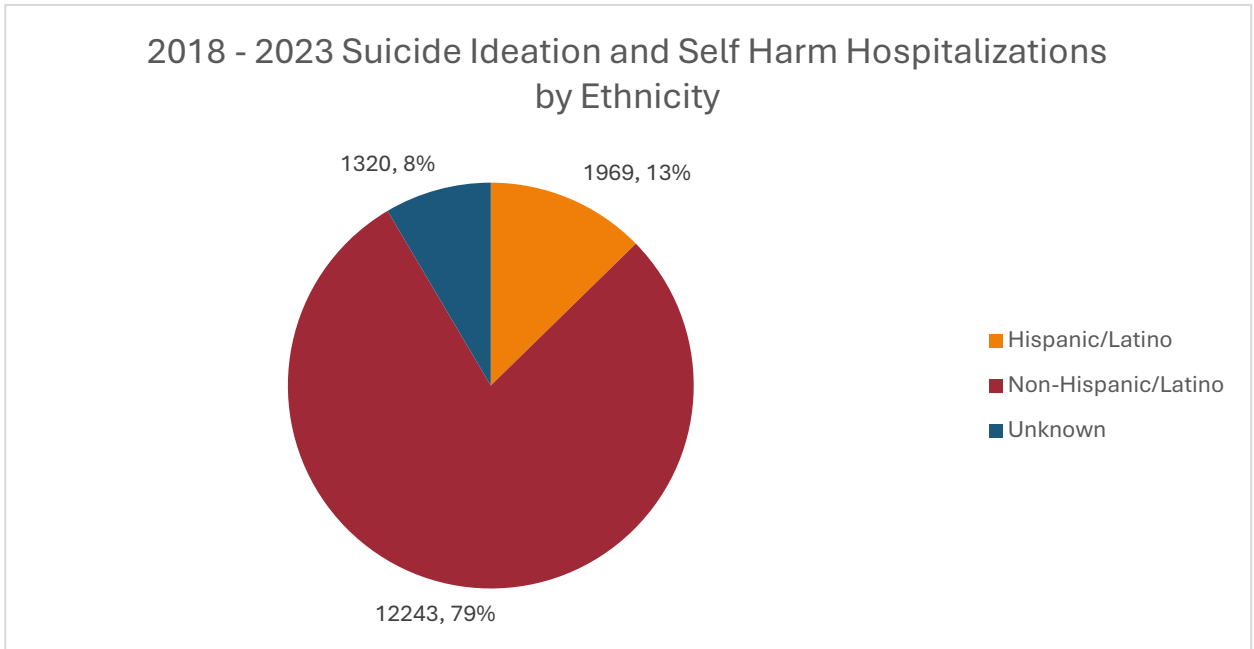


Figure 10: In total, most cases were non-Hispanic.

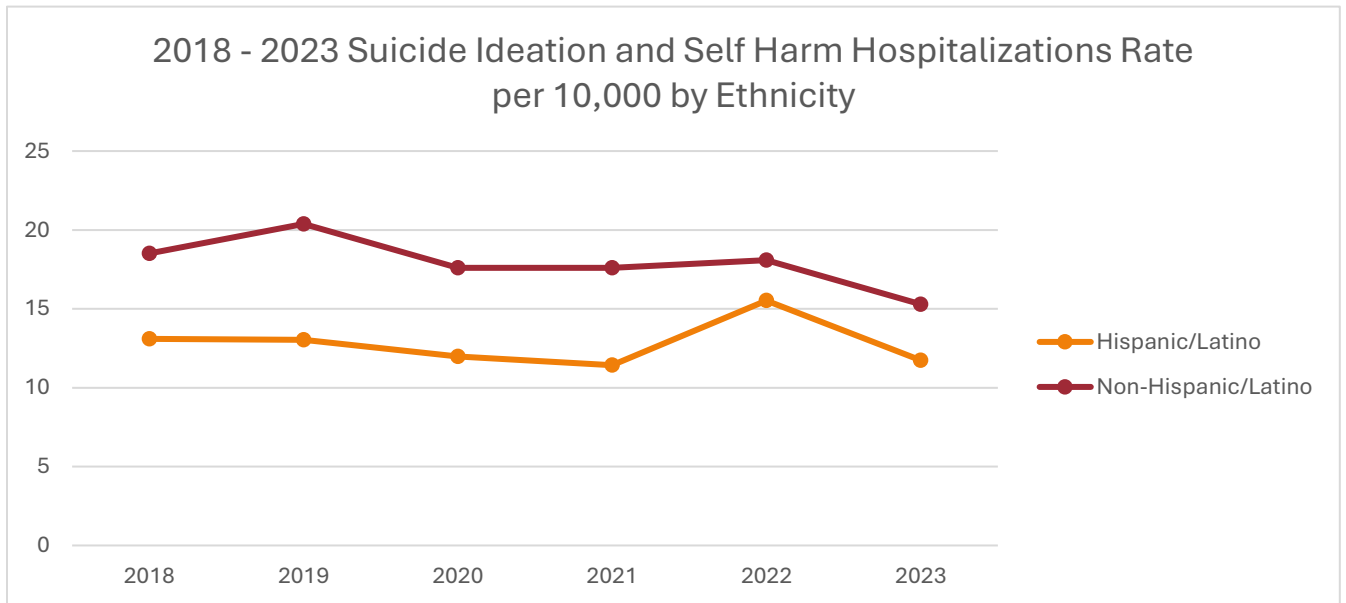


Figure 11: The rate amongst non-Hispanics was higher for all years.

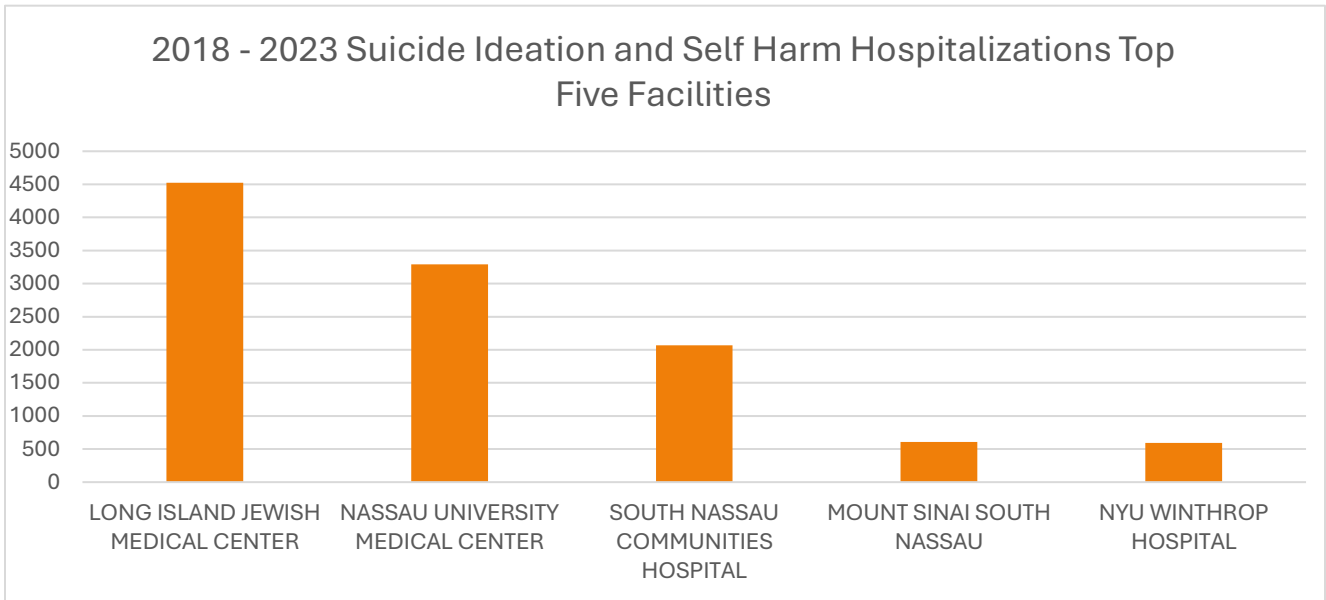
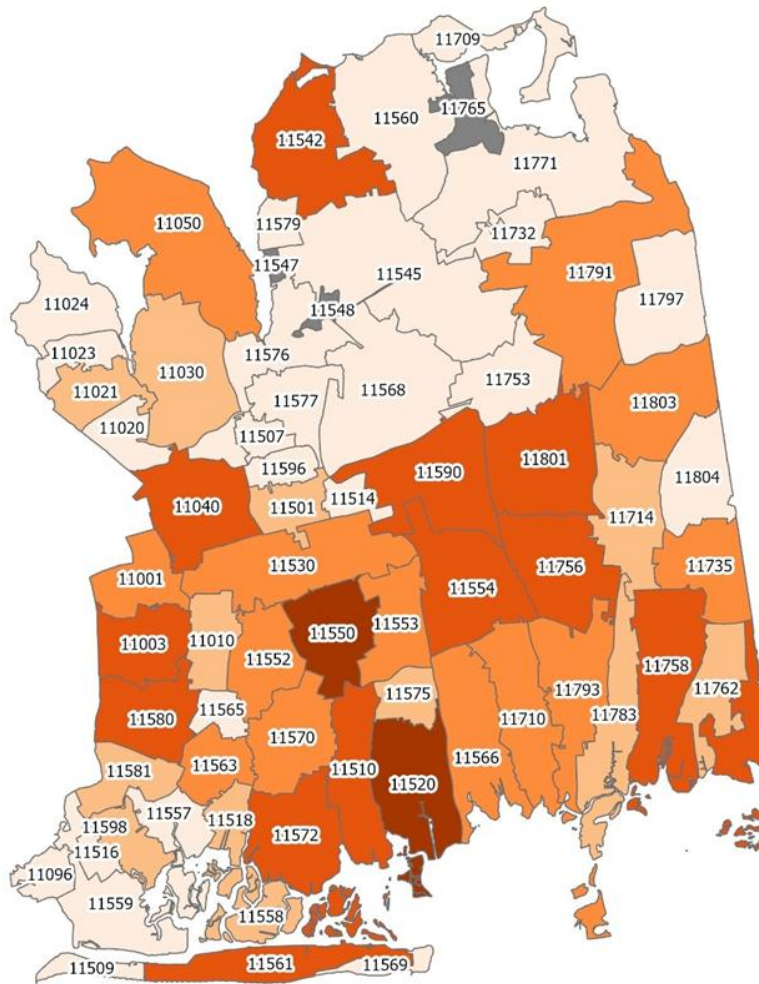


Figure 12: Almost 30% of all hospitalizations occurred at Long Island Jewish Medical Center (4525 of 15,532). The top 5 facilities accounted for 70% of all hospitalizations (11,079 of 15,532).



Suicide Ideation and Self Harm Hospitalizations - 2018 - 2023



Legend

Inpatient Cumulative Frequency

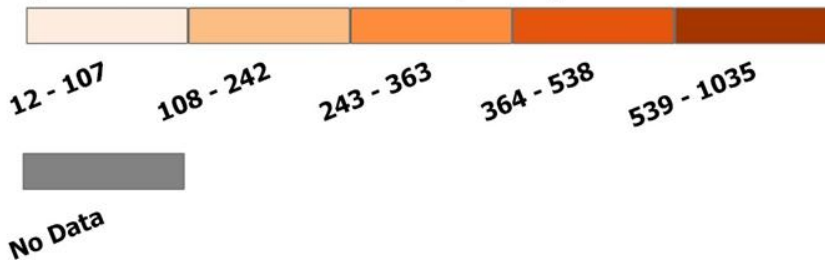
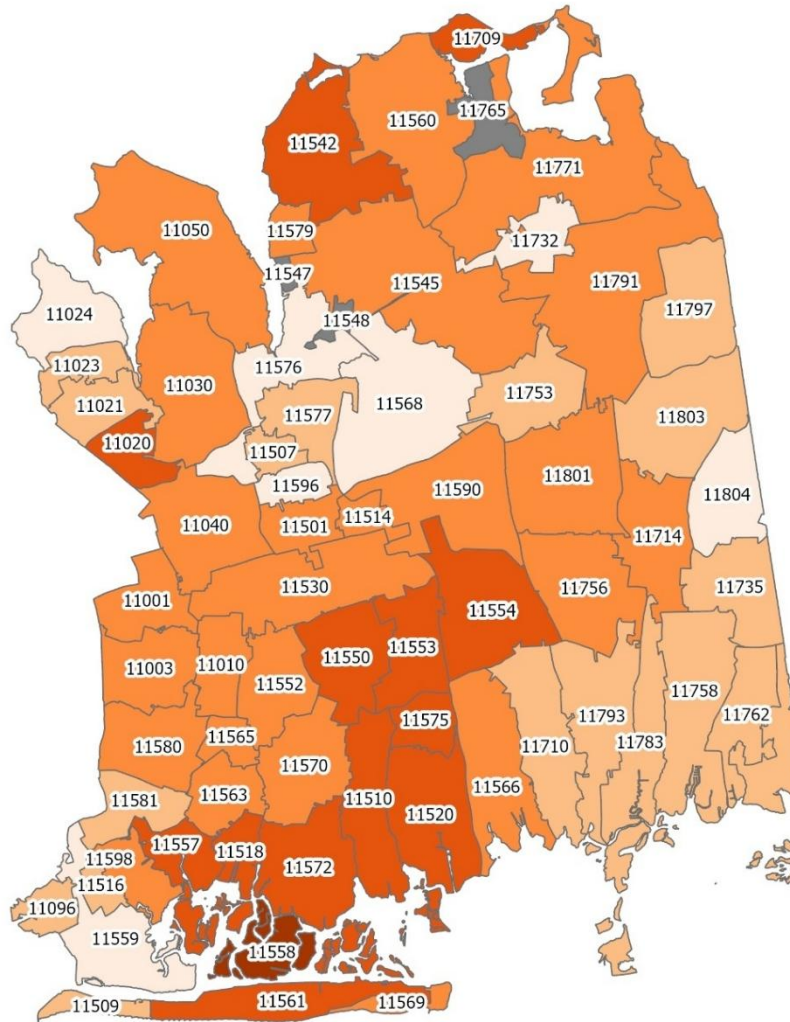


Figure 13: Frequency was highest in Hempstead and Freeport

Suicide Ideation and Self Harm Hospitalizations - 2018 - 2023



Legend

Inpatient Cumulative Age Adjusted Rate per 10,000

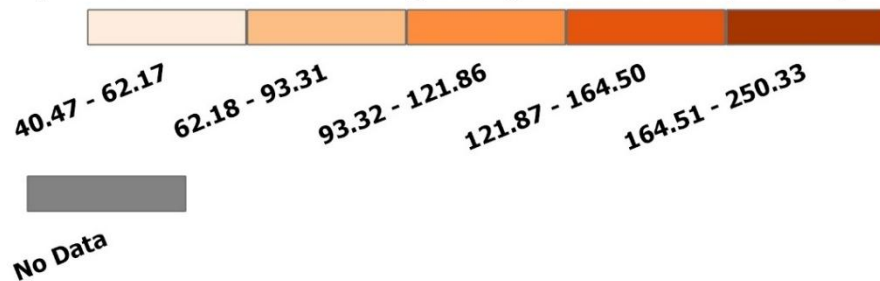


Figure 14: Island Park had the highest cumulative age adjusted rate per 10,000.

II. Emergency Department

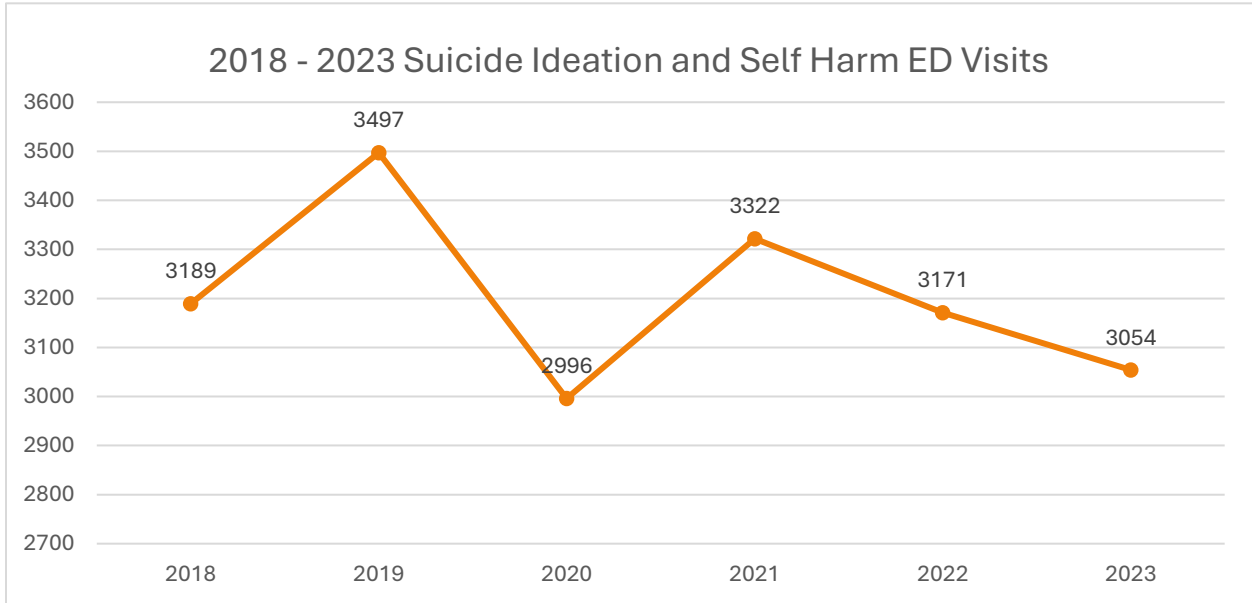


Figure 15: Visits to the emergency department with a suicide related or self-harm diagnosis peaked in 2019. There was a noticeable drop in 2020. Since, ED visits have steadily decreased between 2021 – 2023. From peak to 2023, ED visits have decreased by 12.7%.

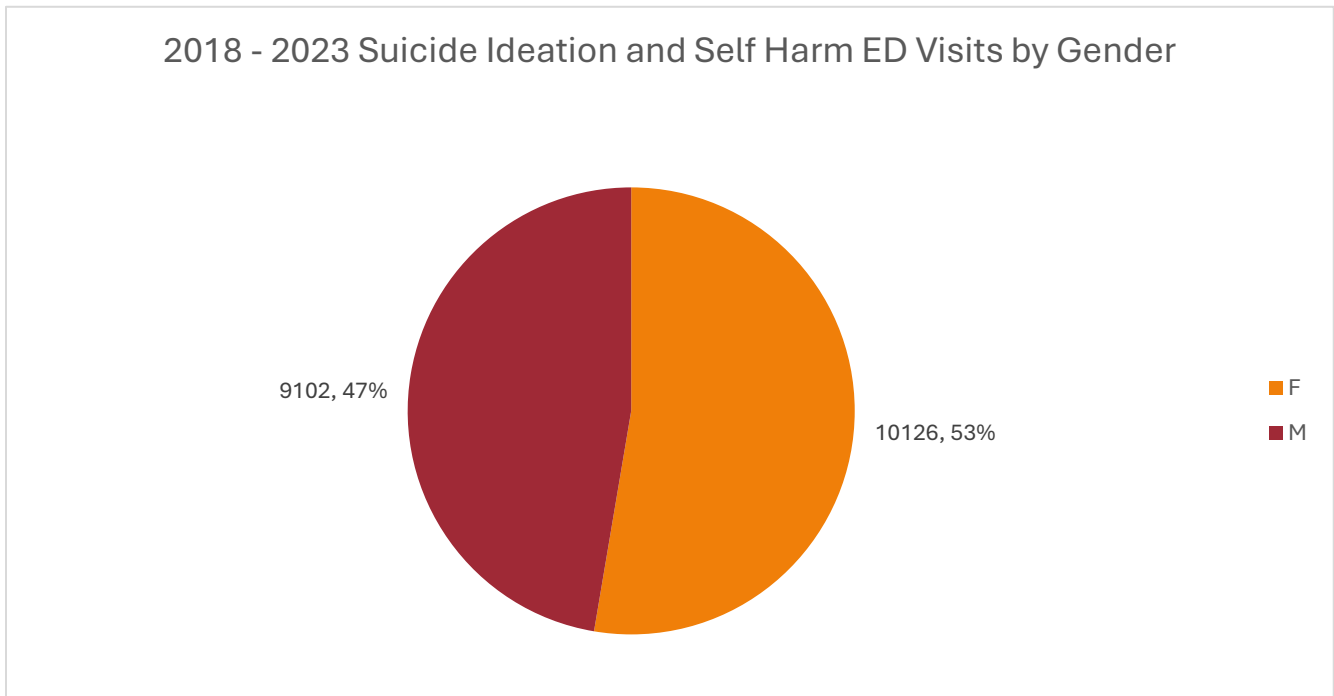


Figure 16: More females visited the emergency department.

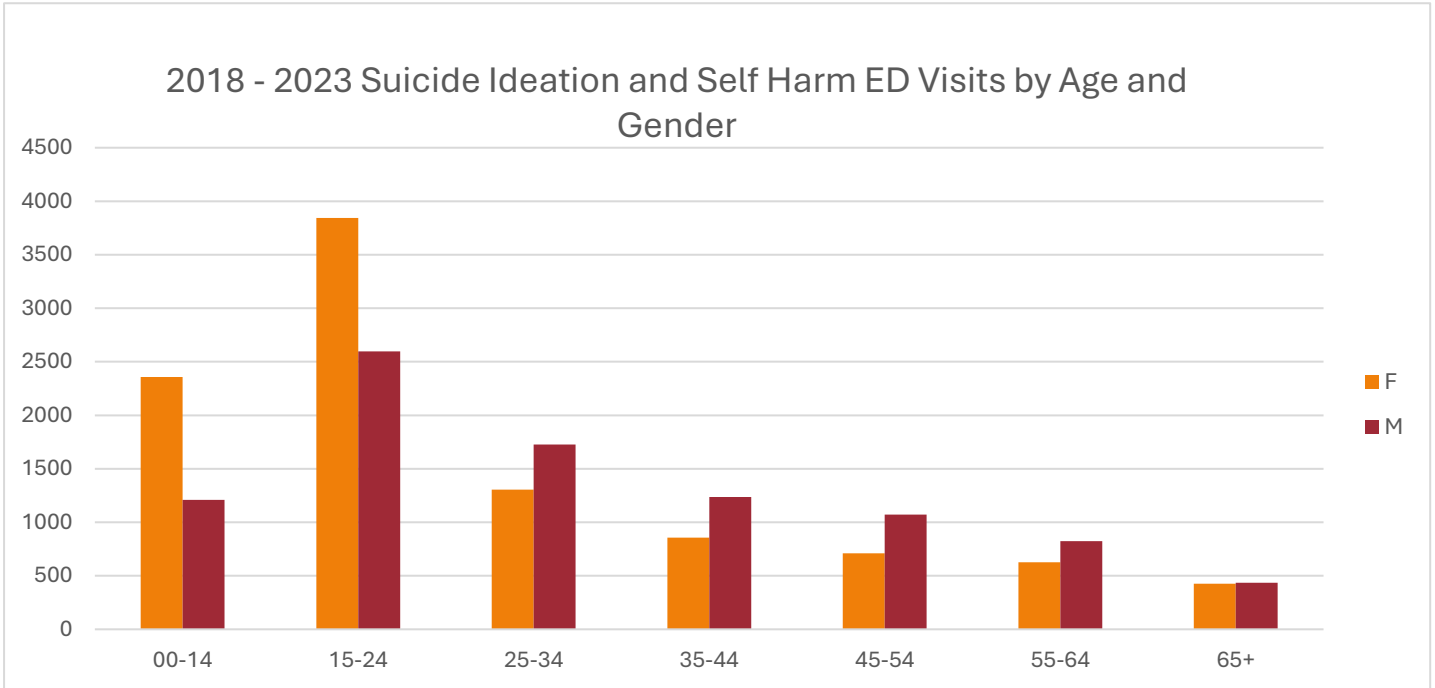


Figure 17: Even though the total number of ED visits between men and women were similar, there were differences within age groups. Around 62% of those 24 and younger were female. Around 57% of those over the age of 24 were male.

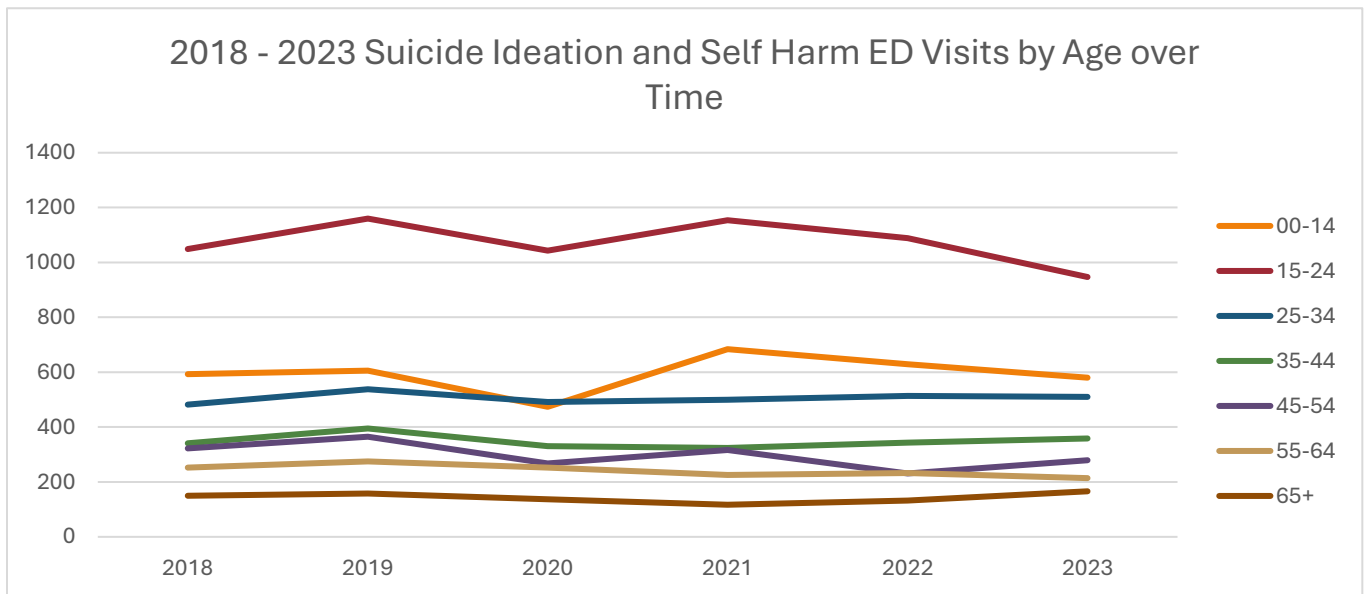


Figure 18: Over the years, emergency department visits for suicide ideation or self-harm have slightly fluctuated for all age groups.

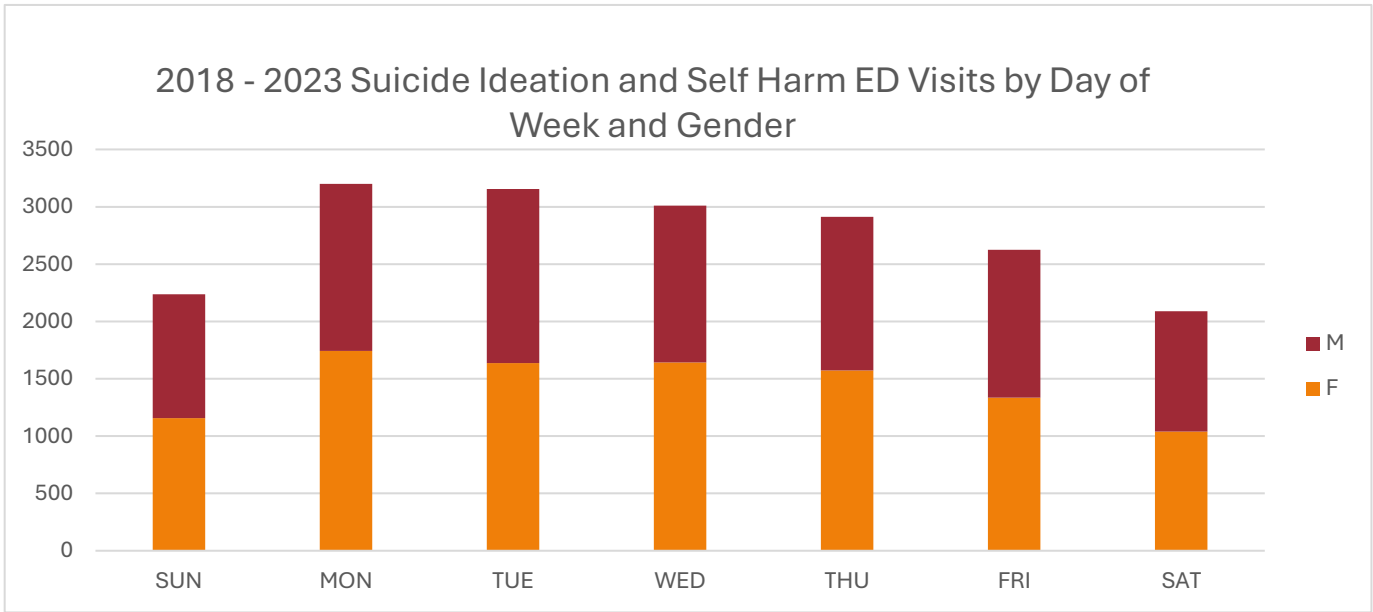


Figure 19: The total number of emergency department visits peaked on Monday, followed by a steady decline into the weekend. Weekend daily totals were less than the weekly daily totals.

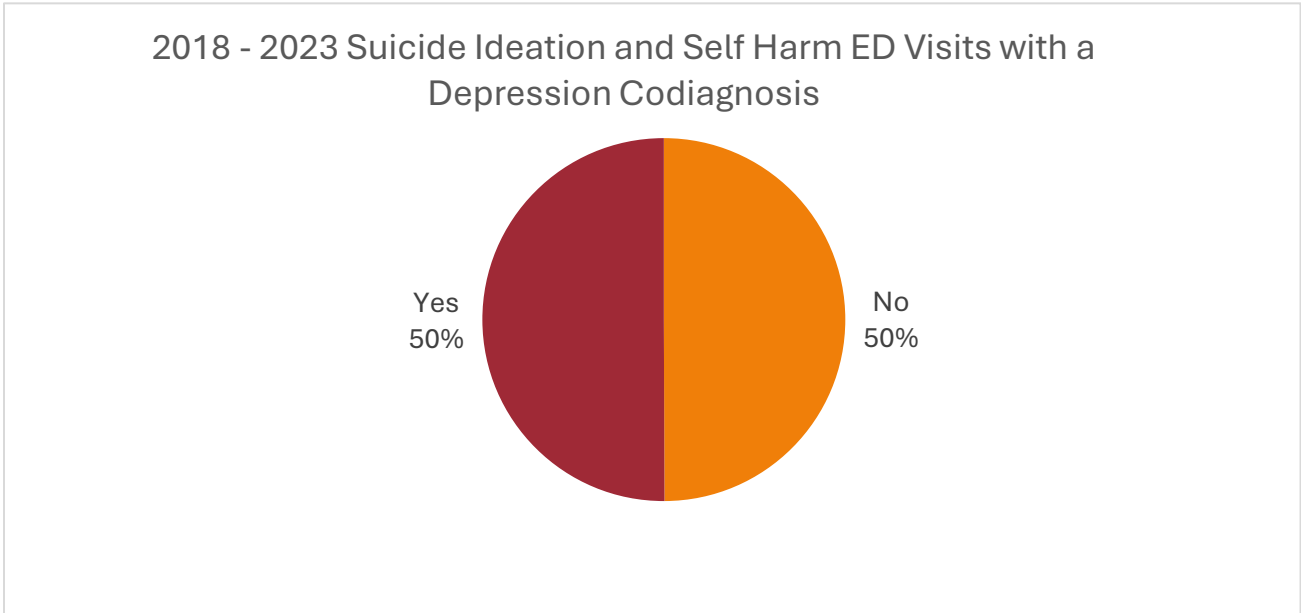


Figure 20: 50% of visitors to an emergency department had depression co-diagnosis.

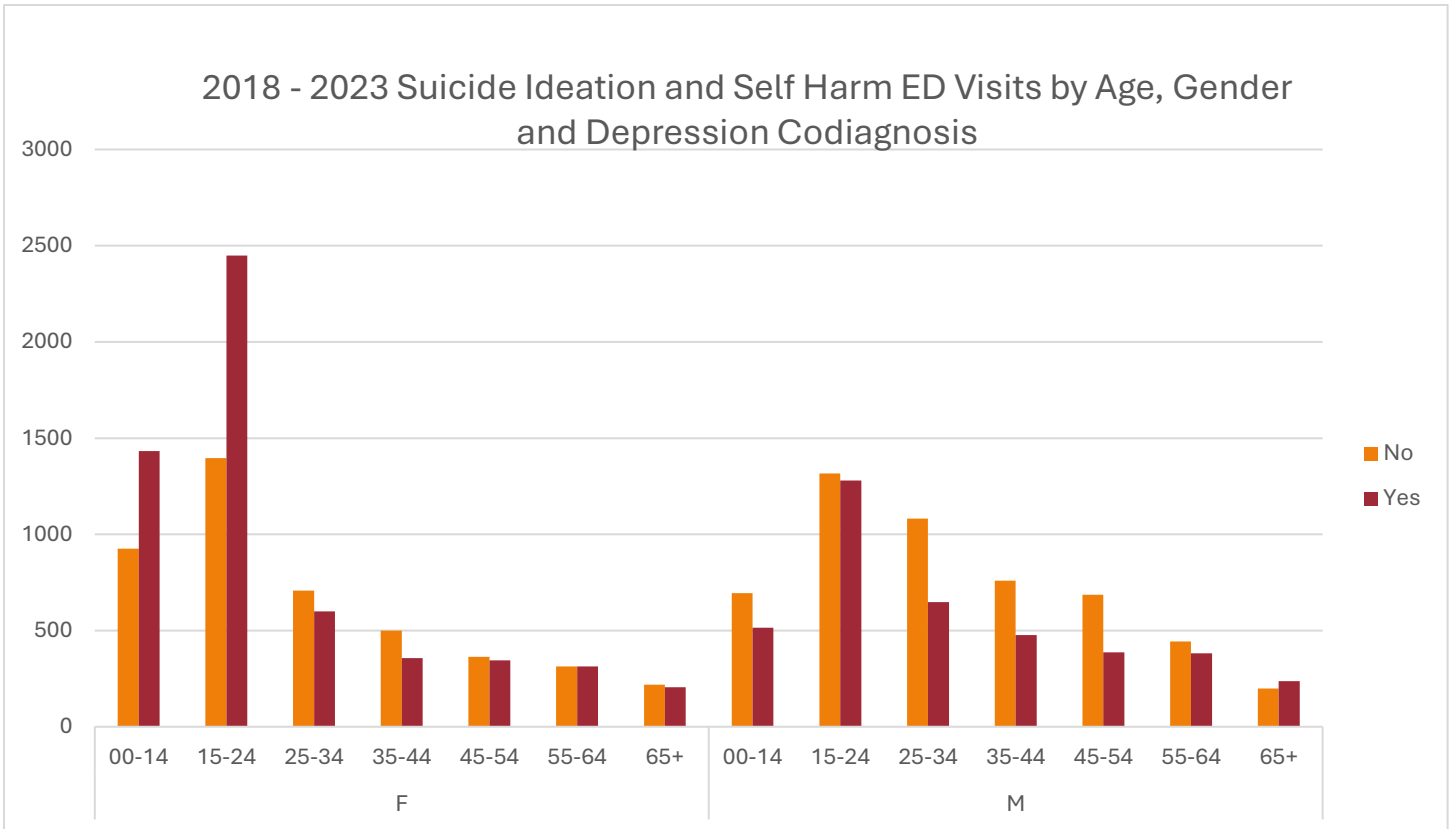


Figure 21: Around 63% of females between the ages of 15 – 24 had a depression co-diagnosis.

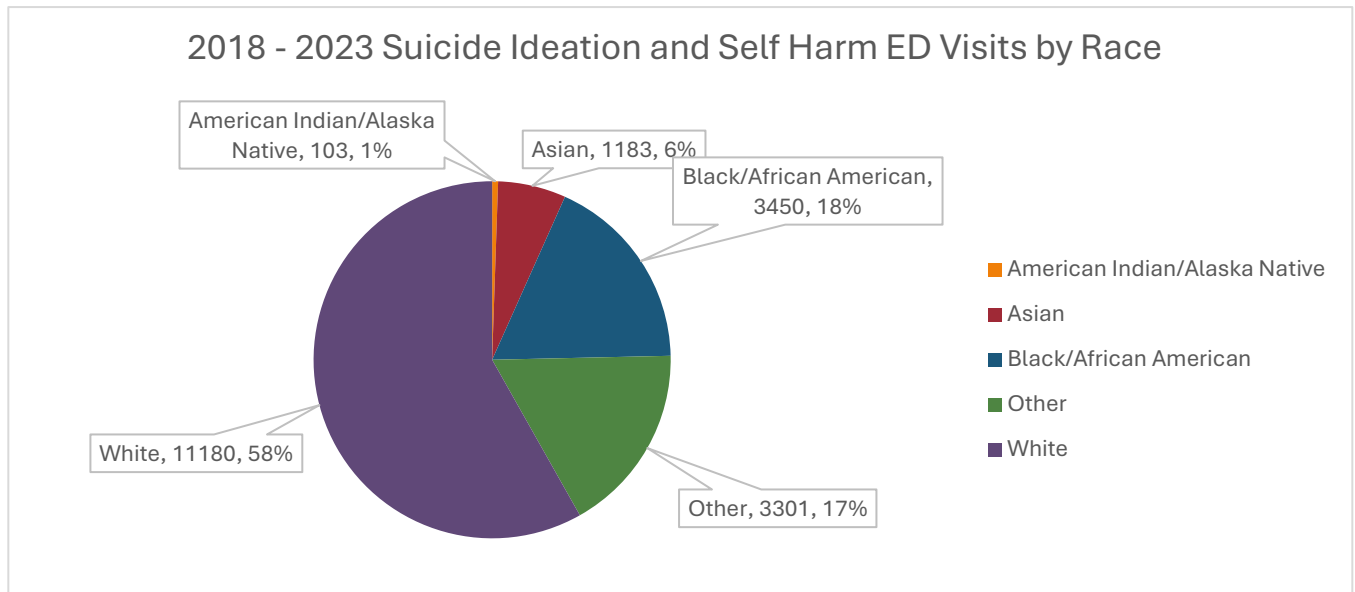


Figure 22: Whites had the highest total frequency of suicide ideation or self-harm emergency department visits.

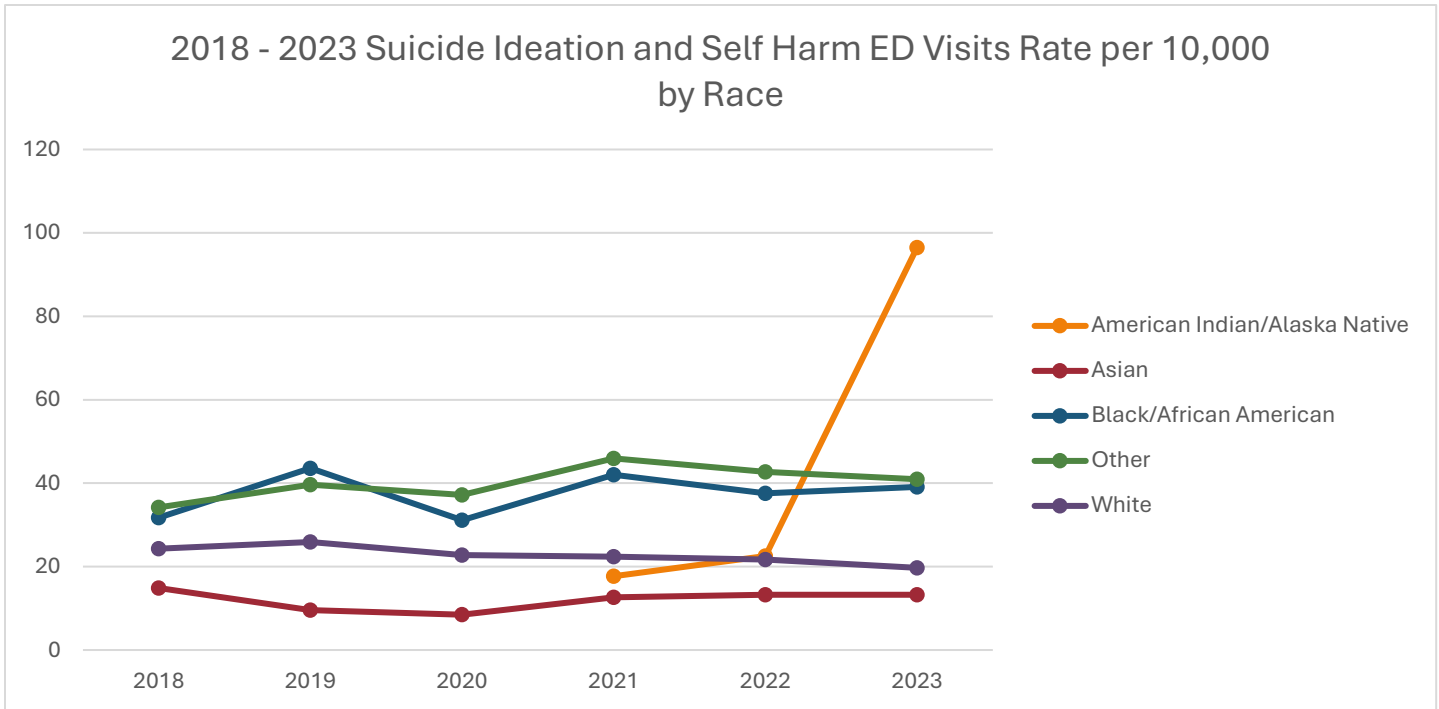


Figure 23: Asians had the lowest rate of emergency department visits for all years. Other and Black or African American had the highest rates of emergency department visits for most years. In 2023, the rate for American Indian or Alaskan Native jumped to 96.47 per 10,000 population, from 11 cases in 2021 to 60 in 223.

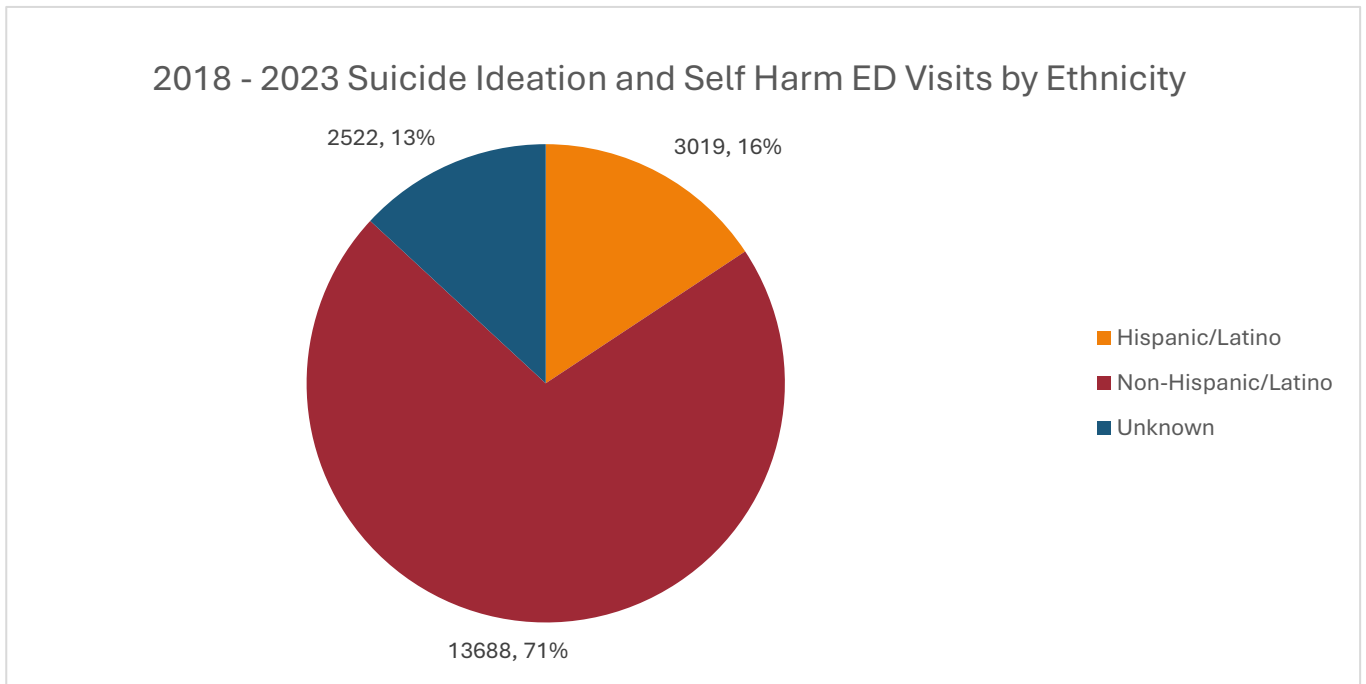


Figure 24: Non-Hispanics had the largest total frequency of emergency department visits.

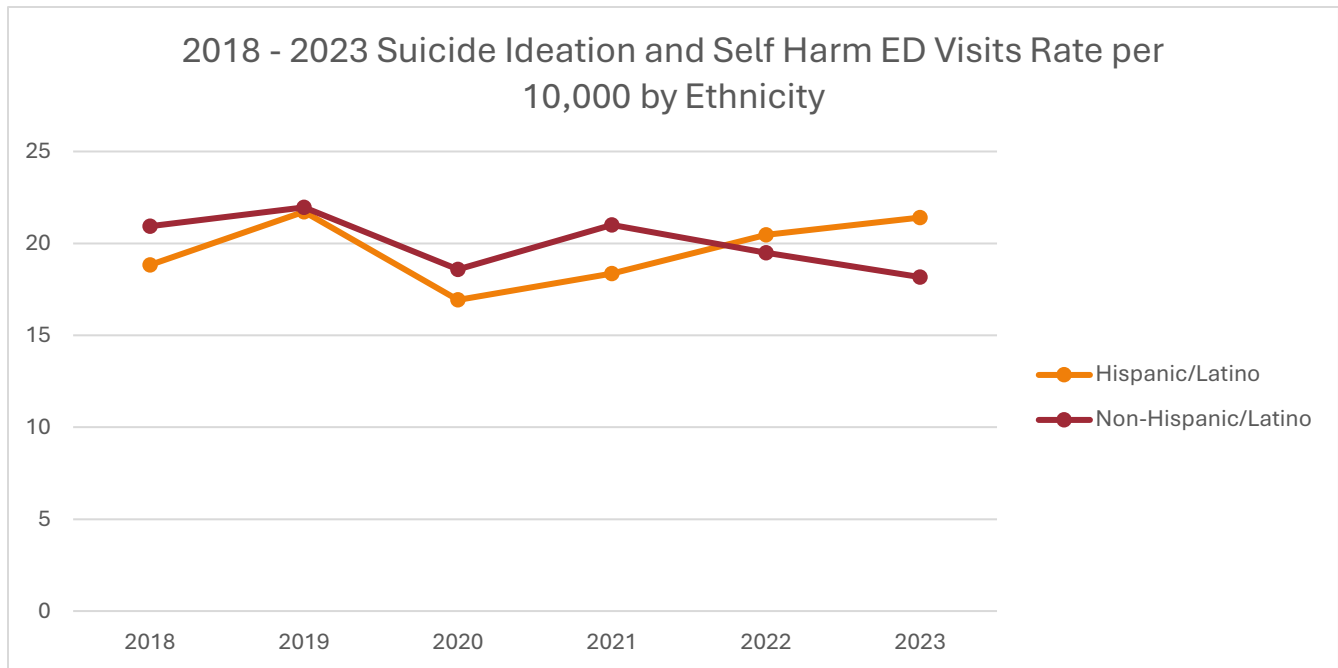


Figure 25: Between 2018 – 2021, non-Hispanics had higher rates of emergency department visits. Since 2022, the rate was higher for those Hispanic or Latino

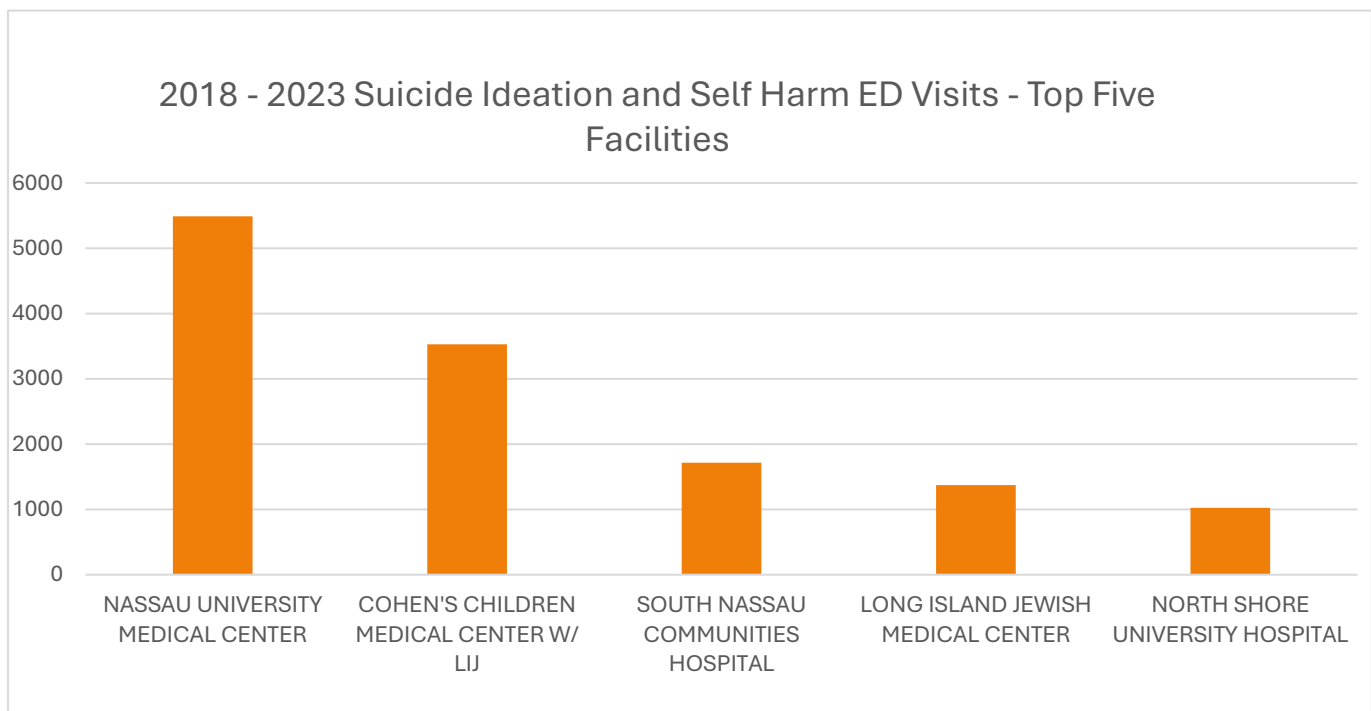
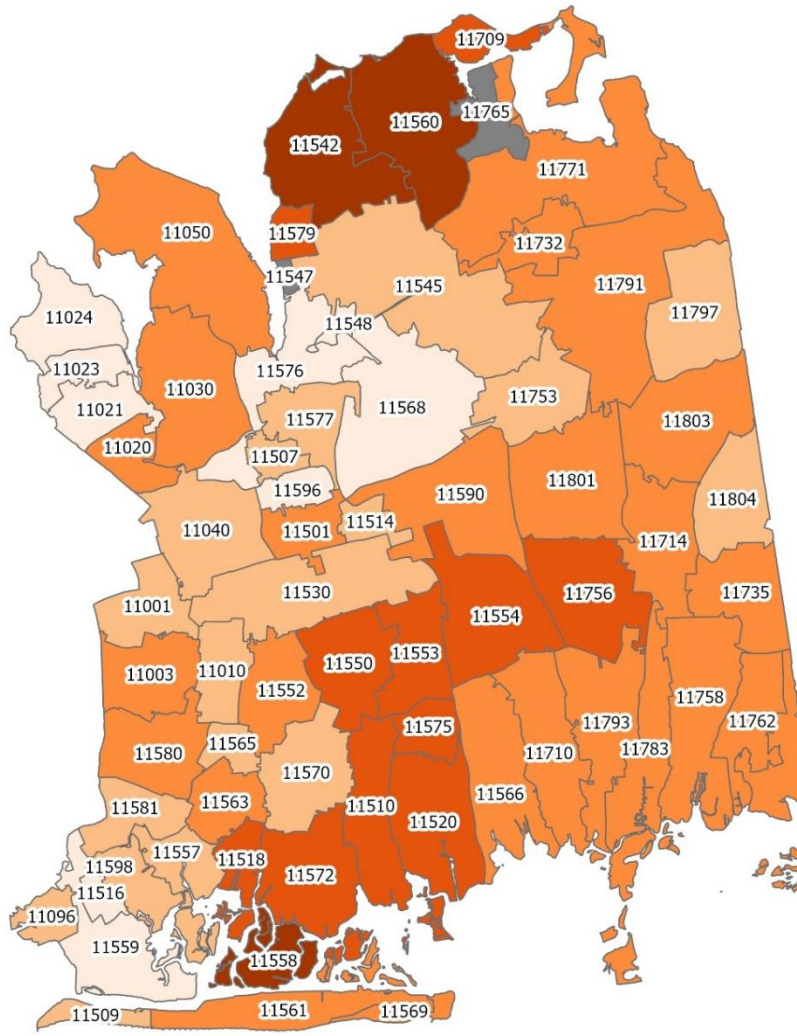


Figure 26: Nassau University Medical Center received around 29% of the total number of visitors over the 6-year span.



Suicide Ideation and Self Harm ED Visits - 2018 - 2023



Legend

Emergency Department Cumulative Age Adjusted Rate per 10,000

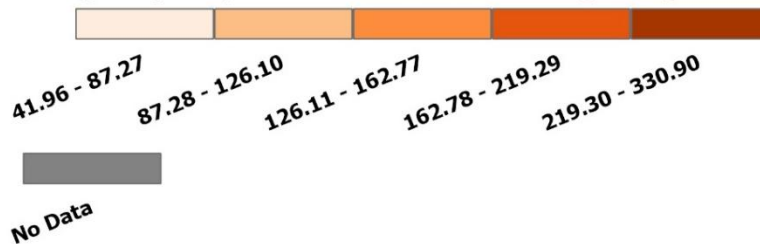


Figure 28: Cumulative age adjusted rate per 10,000 across Nassau County. Island Park, Glen Cove and Locust Valley had the highest rates per 10,000.

III. Suicide Mortality

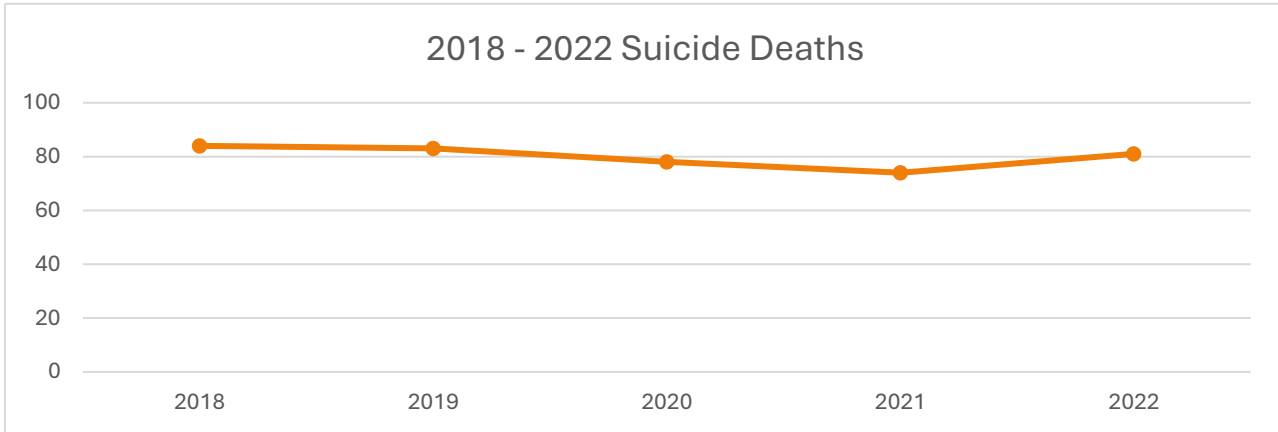


Figure 29: Suicide deaths have stayed between 74 – 84 per year between 2018 – 2022. In this time, there have been 400 suicides.

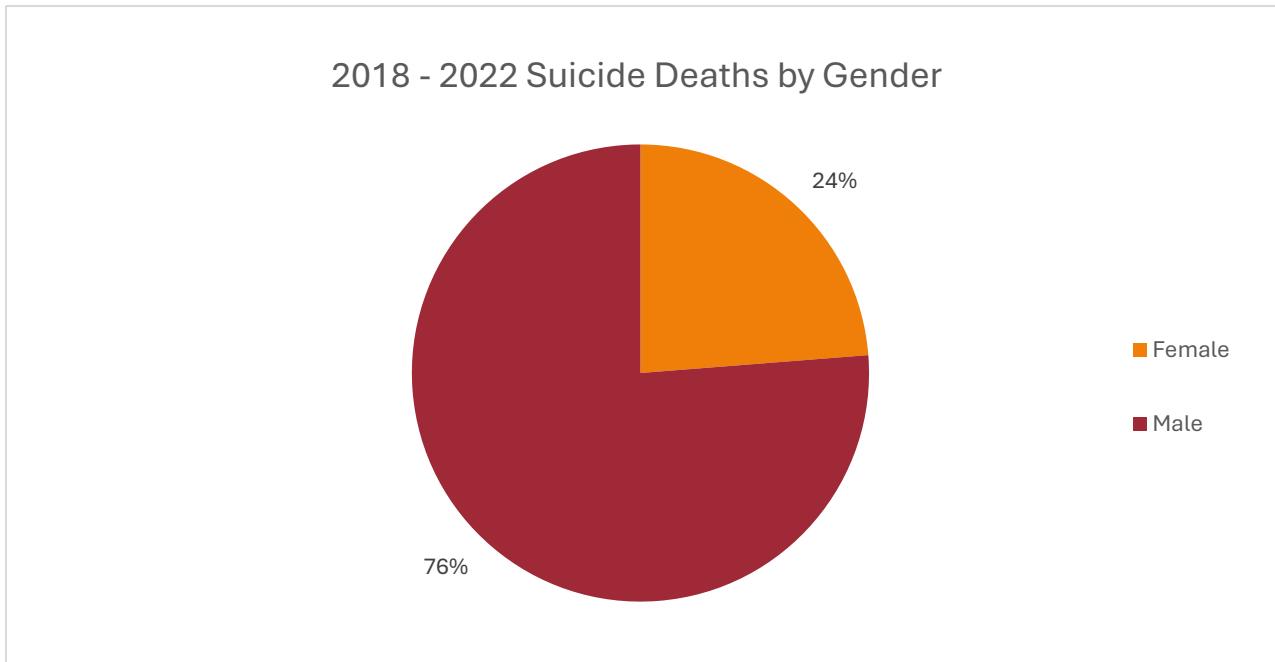


Figure 30: 76% of those who committed suicide were male.

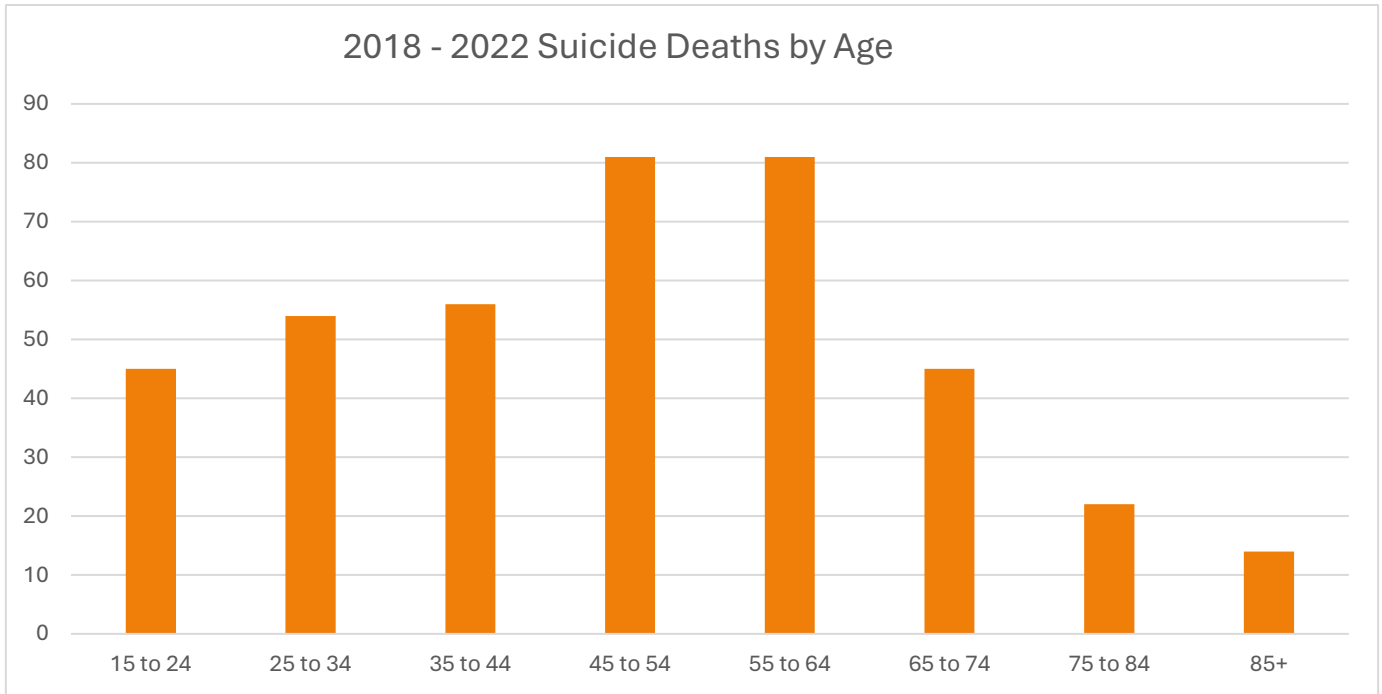


Figure 31: Around 41% of those who committed suicide were between the ages of 45 – 64.

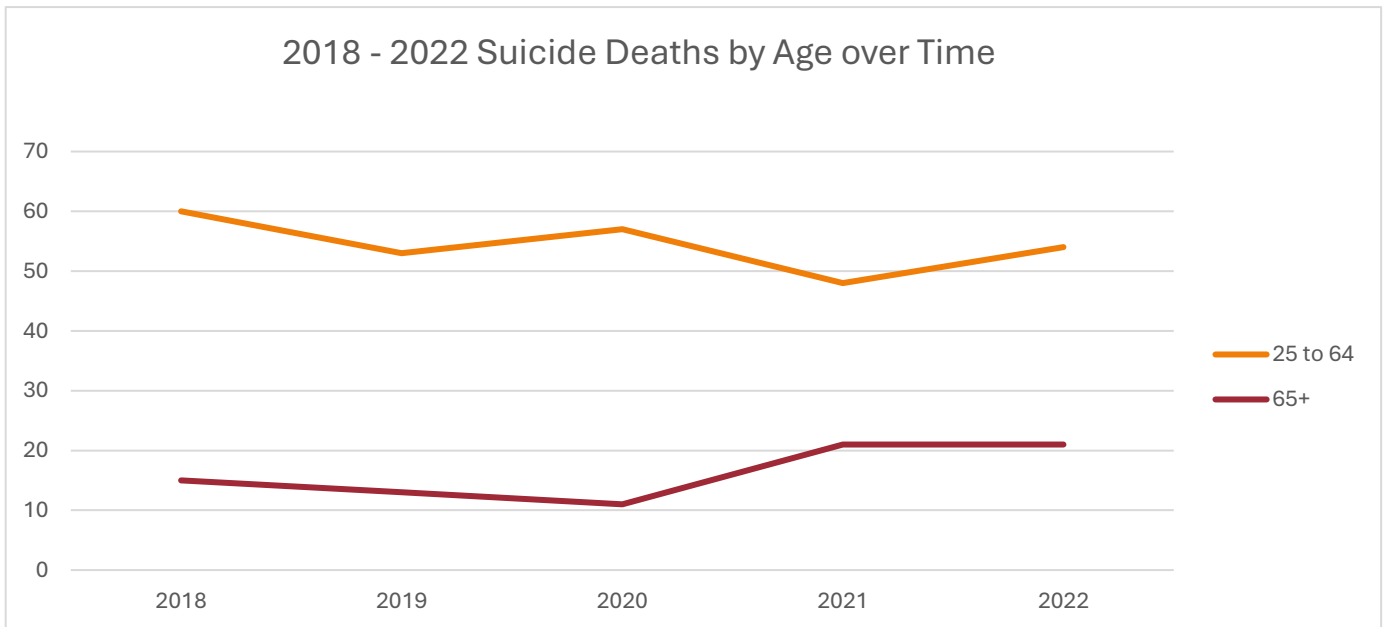


Figure 32: For those 65 and older, between 2018 – 2022 there was a 40% increase in suicides per year.

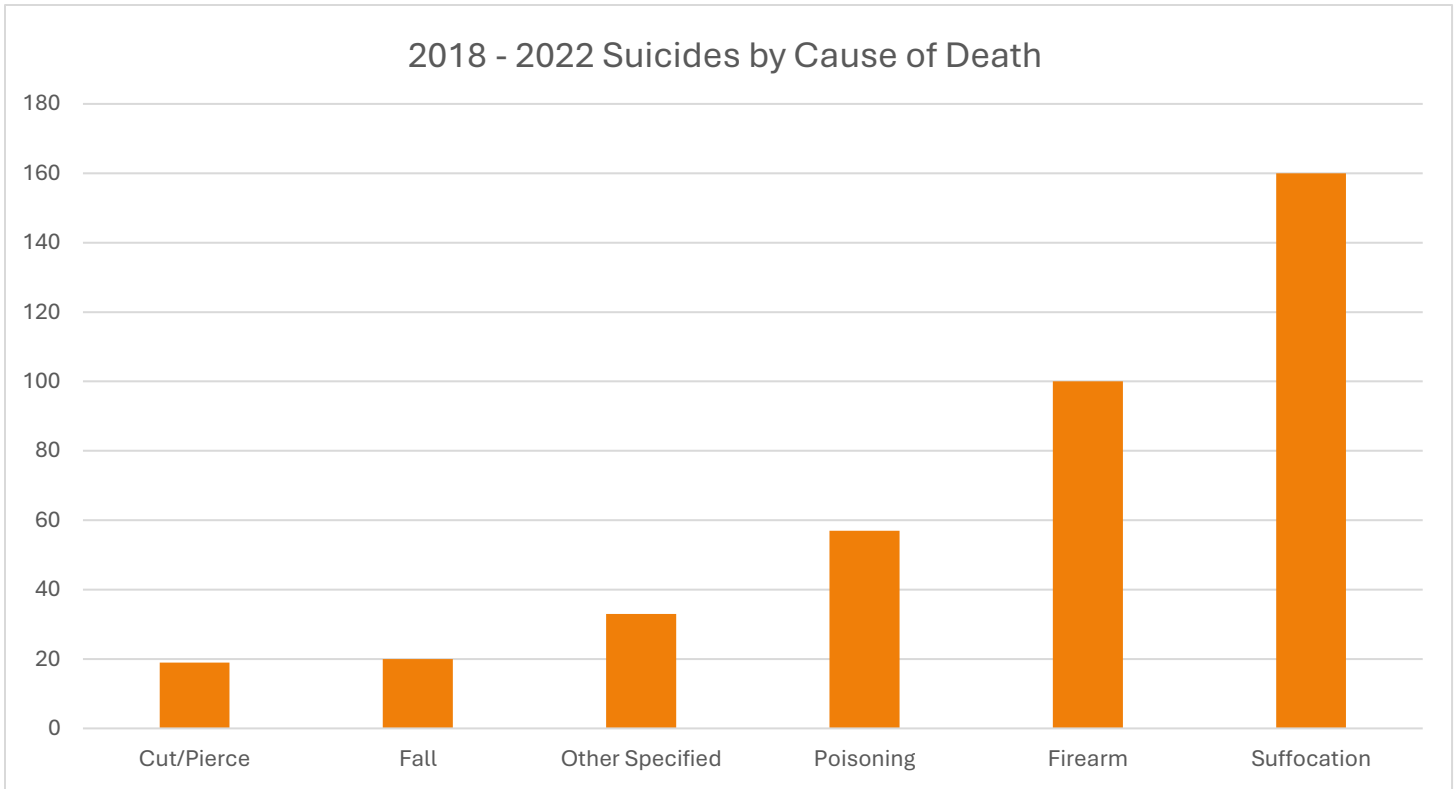


Figure 33: Around 46% of women who committed suicide did it by hanging, strangulation, or suffocation (X70). For those who committed suicide by firearm, nearly all were male.

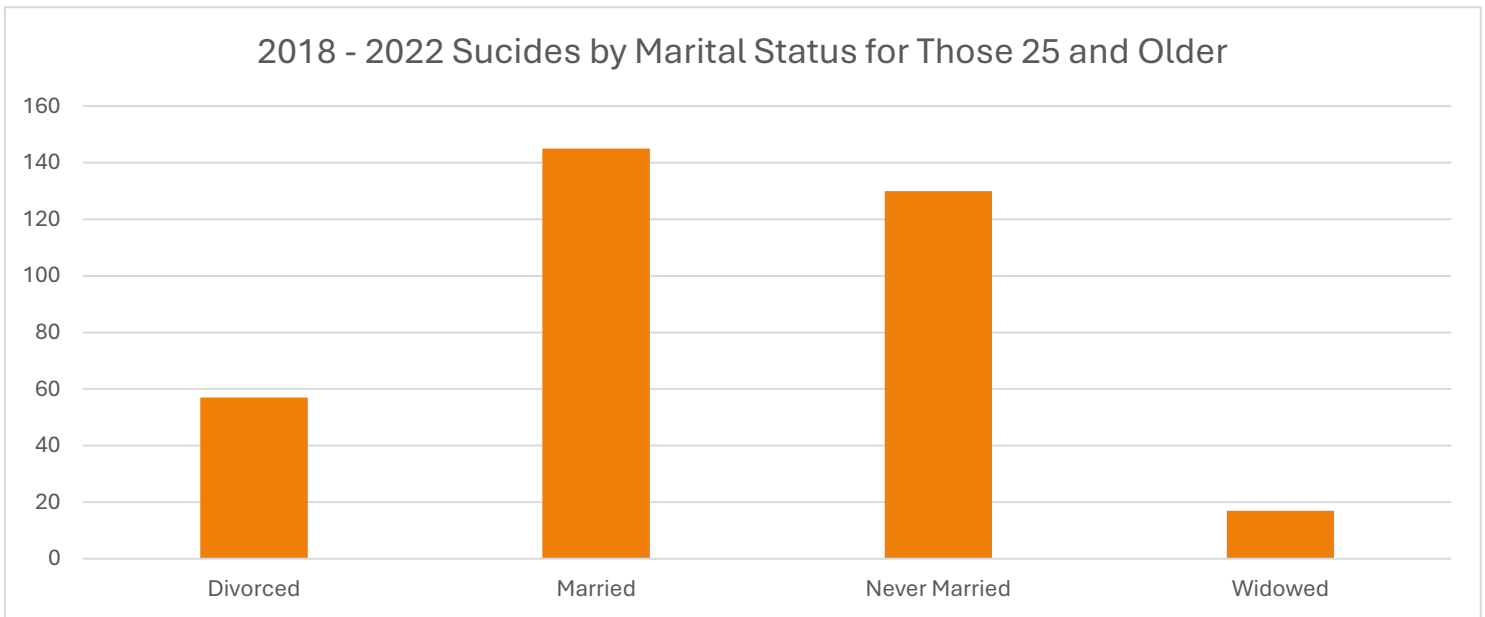


Figure 34: Of those 25 and older who committed suicide, 41% were married.

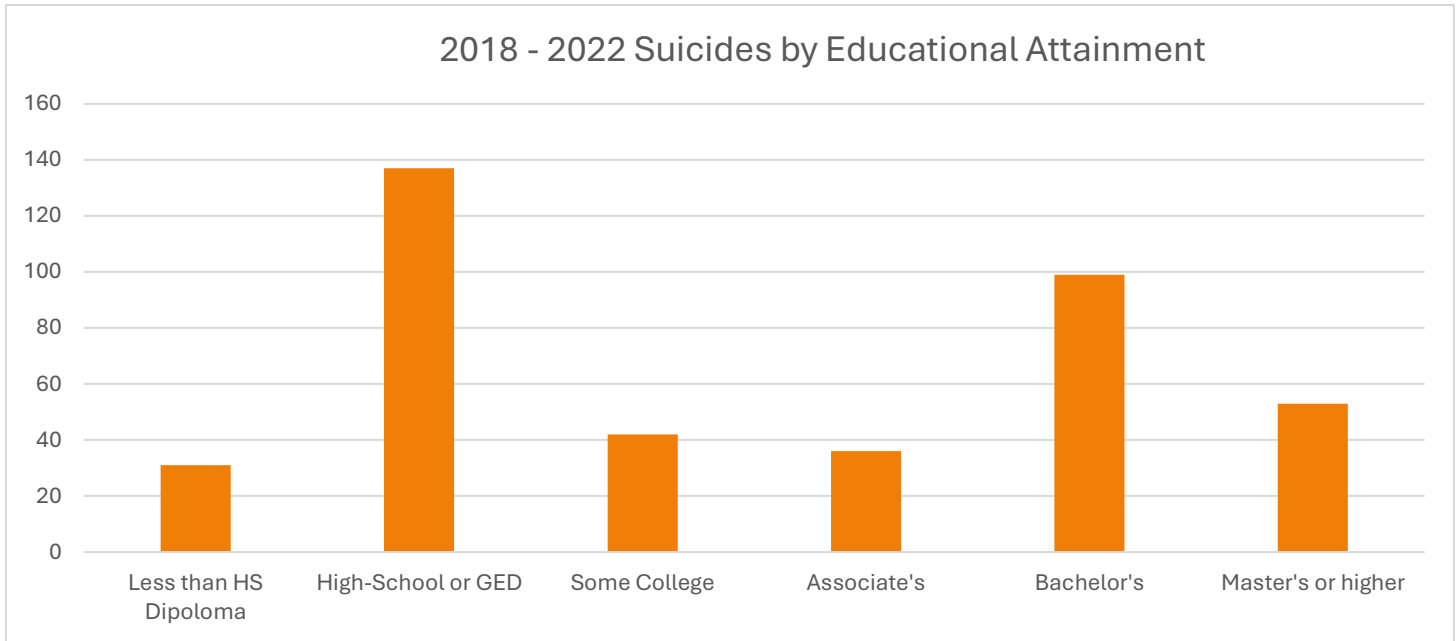


Figure 35: Around 35% of the population who committed suicide graduated High School or had a GED. This chart is for all age groups.

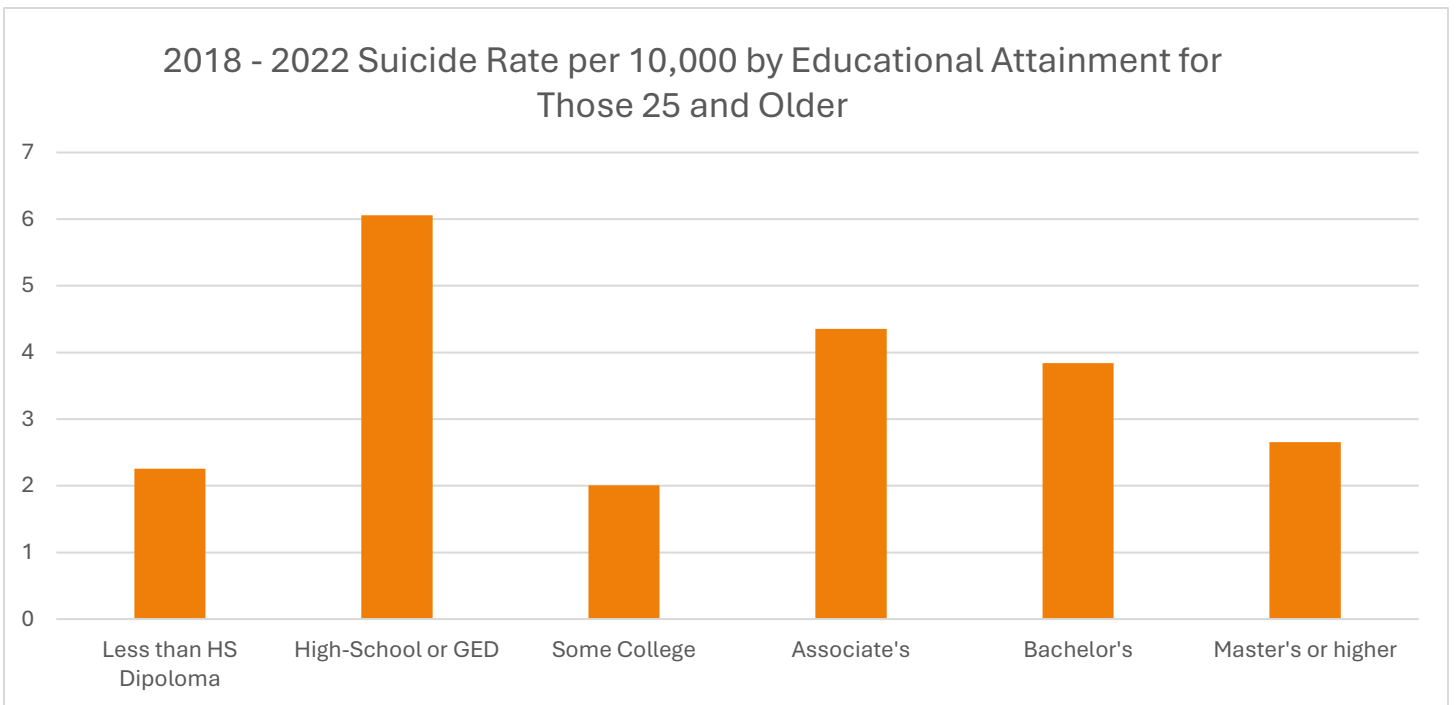


Figure 36: For those 25 and older, suicide rates were highest in the High-School or GED graduate group. 2020 ACS 5-year population estimates were used to calculate these rates.

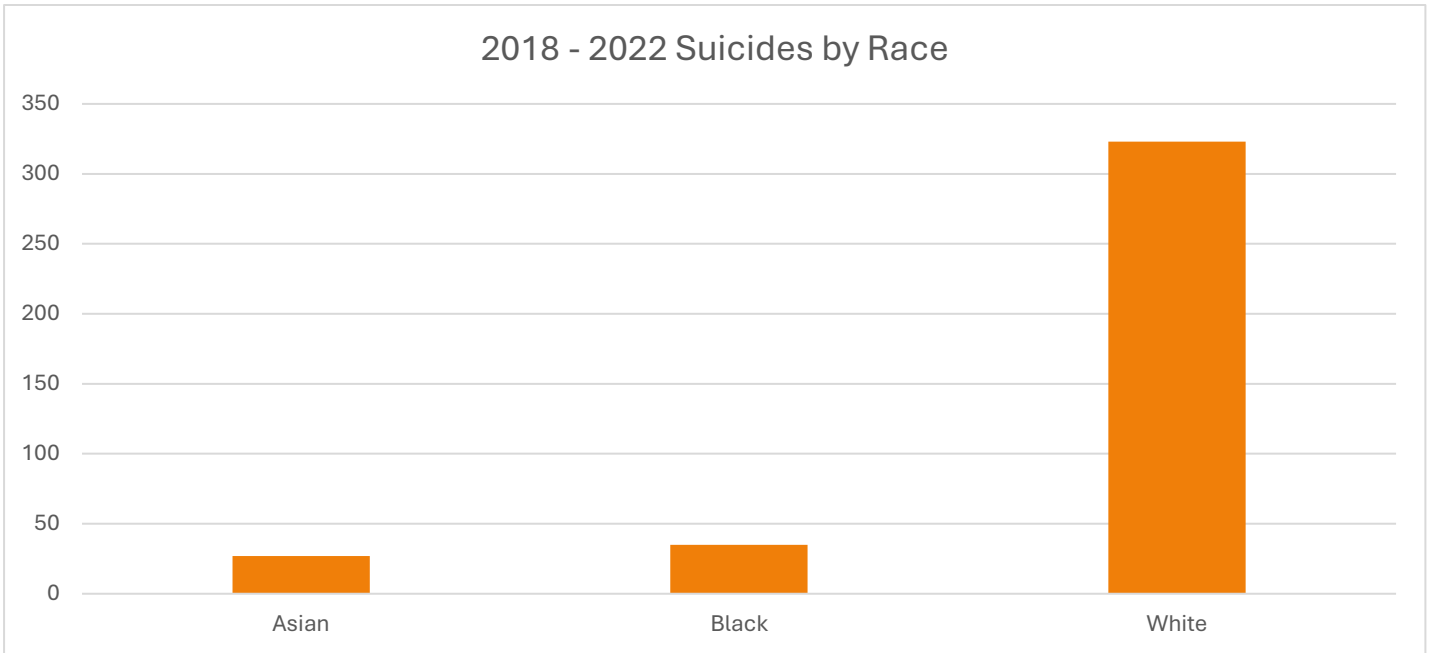


Figure 37: Suicides by race. There were no suicides recorded for American Indian/Alaskan Natives and Native Hawaiian/Pacific Islander. Around 81% of those who committed suicide were white.

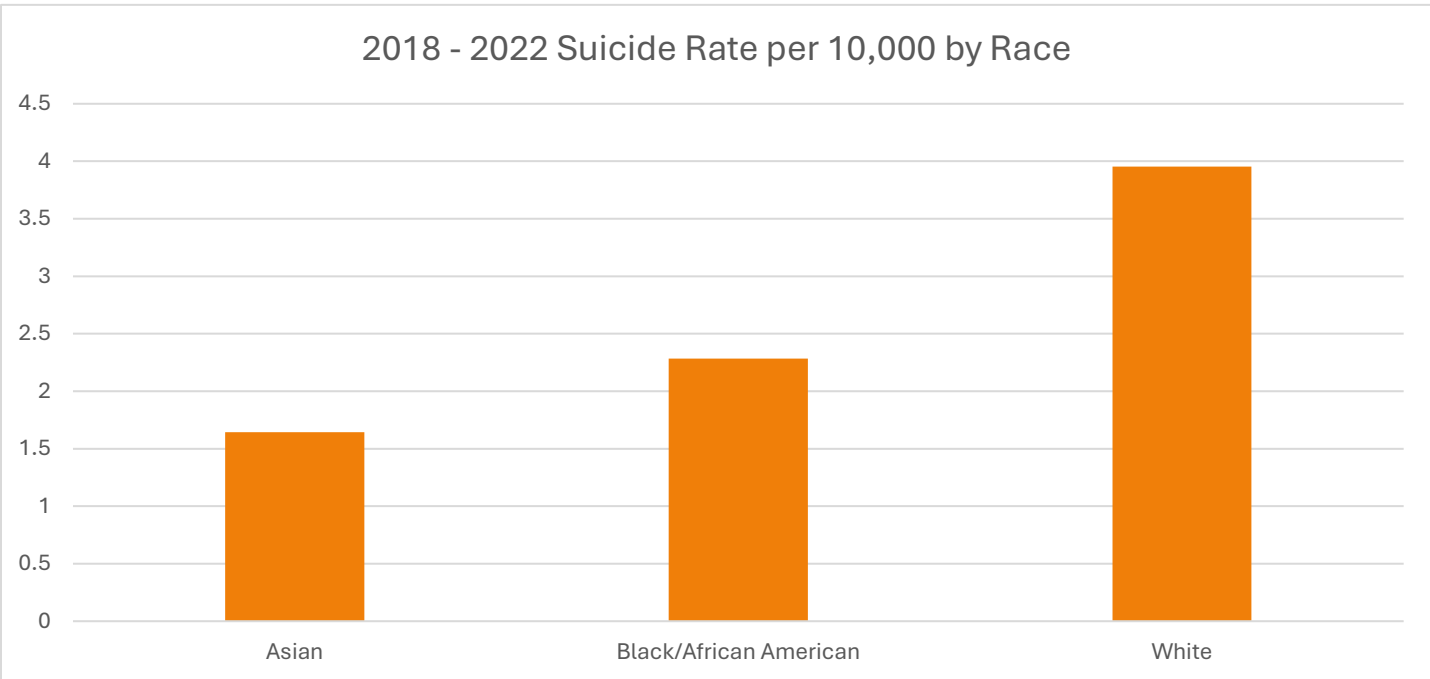


Figure 38: Whites also had the highest cumulative rate of suicide.

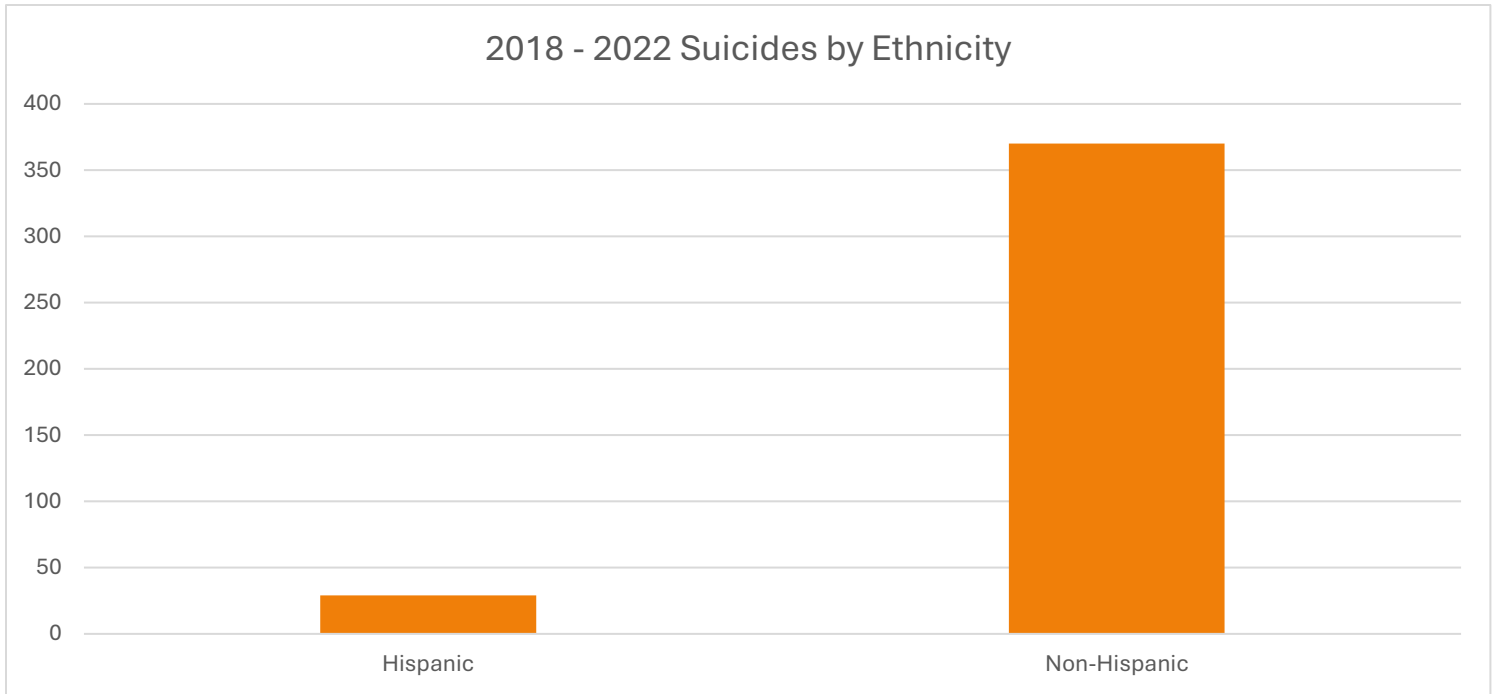


Figure 39: Around 93% of those who committed suicide were non-Hispanic.

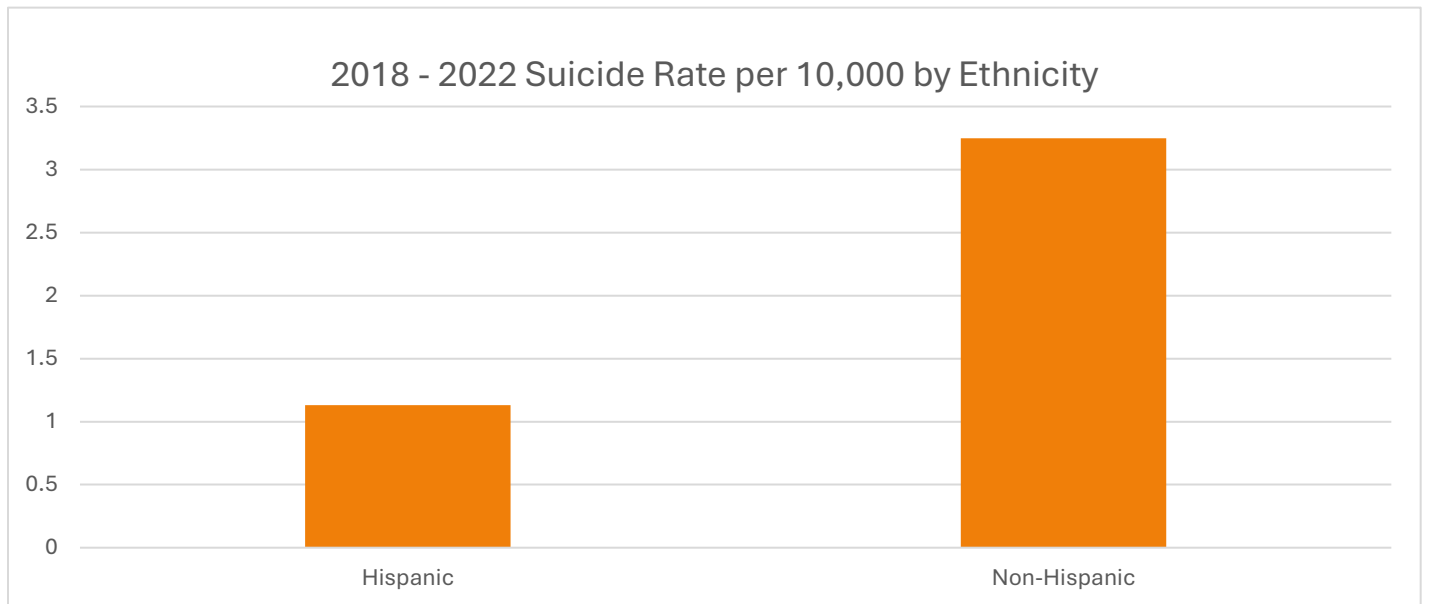


Figure 40: Rates were highest in non-Hispanics.

IV. Methods

Data Source: NYS SPARCS, 2018 – 2023 and NYS Vital Statistics, 2018 - 2022

Suicide ideation and self-harm claims data were merged into a composite dataset. Suicide ideation claims were any ICD-10 diagnosis code of R45.851 (suicide ideation). The self-harm dataset was created by using the external cause of injury SAS format files found at https://ftp.cdc.gov/pub/Health_Statistics/NCHS/injury/tools/ (format catalogs were last accessed in April 2024). Any claim with an injury intent of “intentional self-harm” was included in the self-harm dataset. These two datasets were merged, and duplicate claims were removed. For vital statistics, any death with a mode of death of “suicide” was included in the suicide mortality dataset.

To create the depression co-diagnosis variable, all diagnoses of claims within the composite dataset were analyzed. Any claim with an ICD-10 diagnosis which contained the words depressed, depressive, or depression were marked as depression co-diagnosis. Duplicates claims were removed, and the depression dataset was joined back to the composite dataset. A few examples of depression diagnoses include F32 (depressive episode), F4321 (adjustment disorder with depressed mood), or F530 (postpartum depression). This list is not exhaustive.

V. Disclaimers

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Rates calculated using small numbers may be statistically unstable.

