

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 - 2024. The second shows emergency department claims for the same period. Vital Statistics data from 2018 – 2024 (with 2024 data sourced from NYC excluded) 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 (68%) than among those who visited the emergency department (50%).
- Of those who committed suicide, 41% died from hanging, strangulation, or suffocation. The second leading cause of death, firearms, accounted for 24% of the total suicide deaths. The majority of those who committed suicide by firearm were male.



I. Hospitalizations

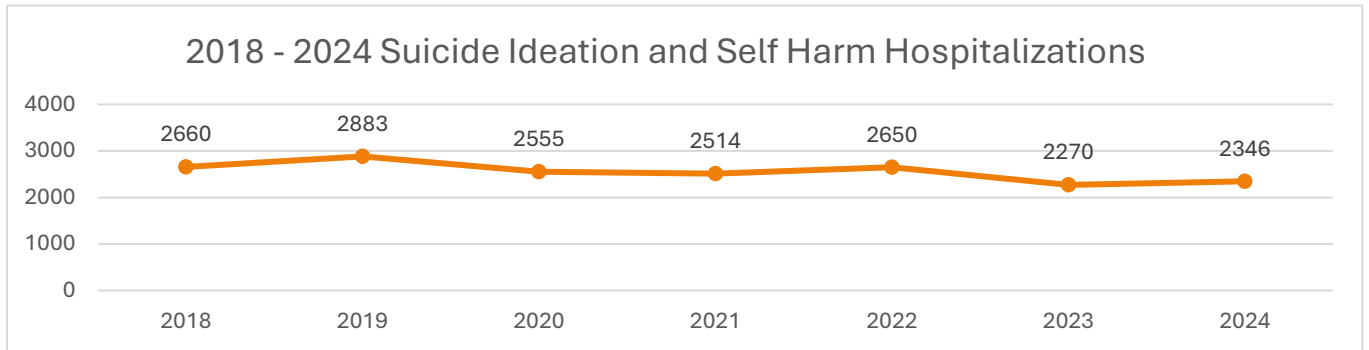


Figure 1: Suicide related and self-harm hospitalizations peaked in 2019. Between 2019 - 2024, hospitalizations have decreased by 18.6%.

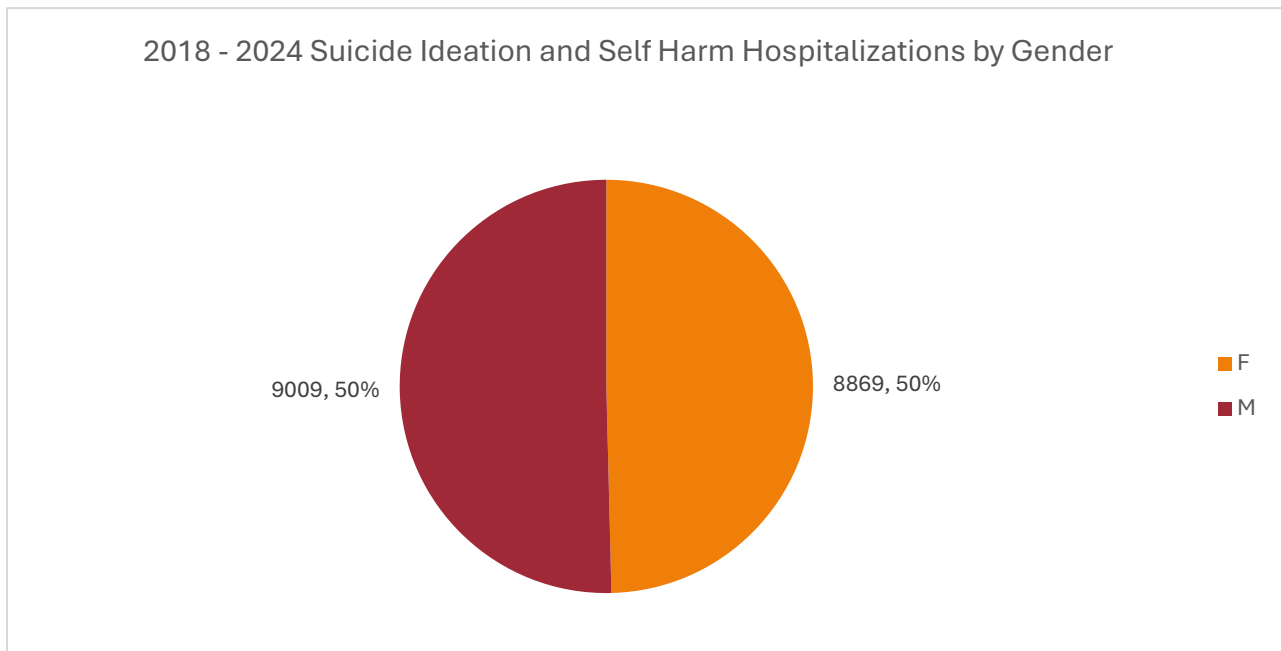


Figure 2: There were almost an equal number of men and women hospitalized with a suicide ideation and/or self-harm diagnosis.

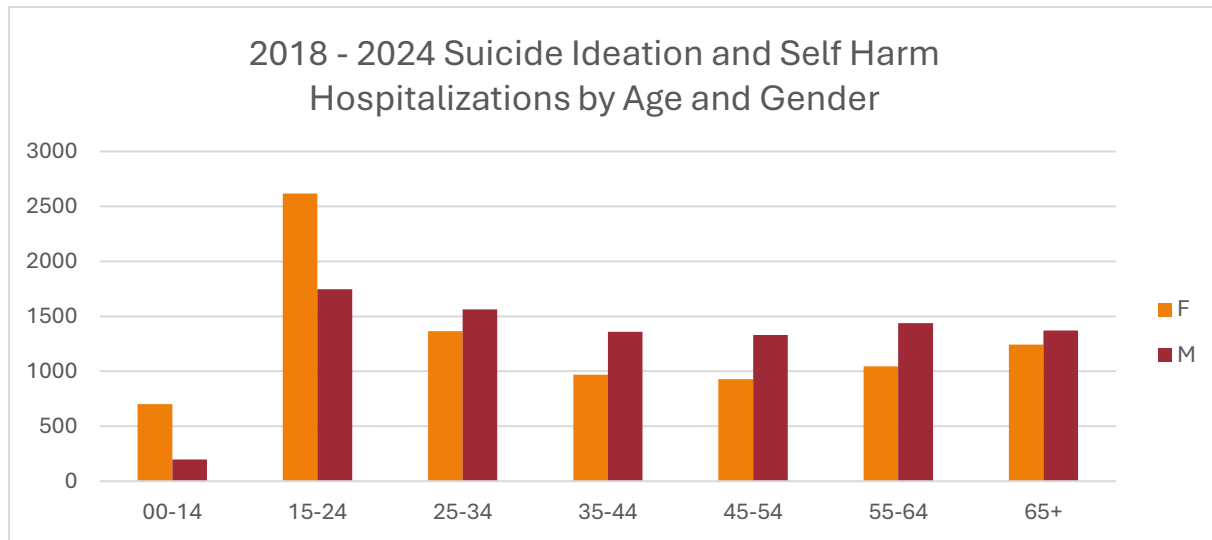


Figure 3: Even though the total amount of males and females were approximately equal, there were differences between the age groups. Young females had more hospitalizations than their male counterparts. Males between the ages of 25-34, 35-44, 45-54, 55-64, and 65+ had more hospitalizations than females.

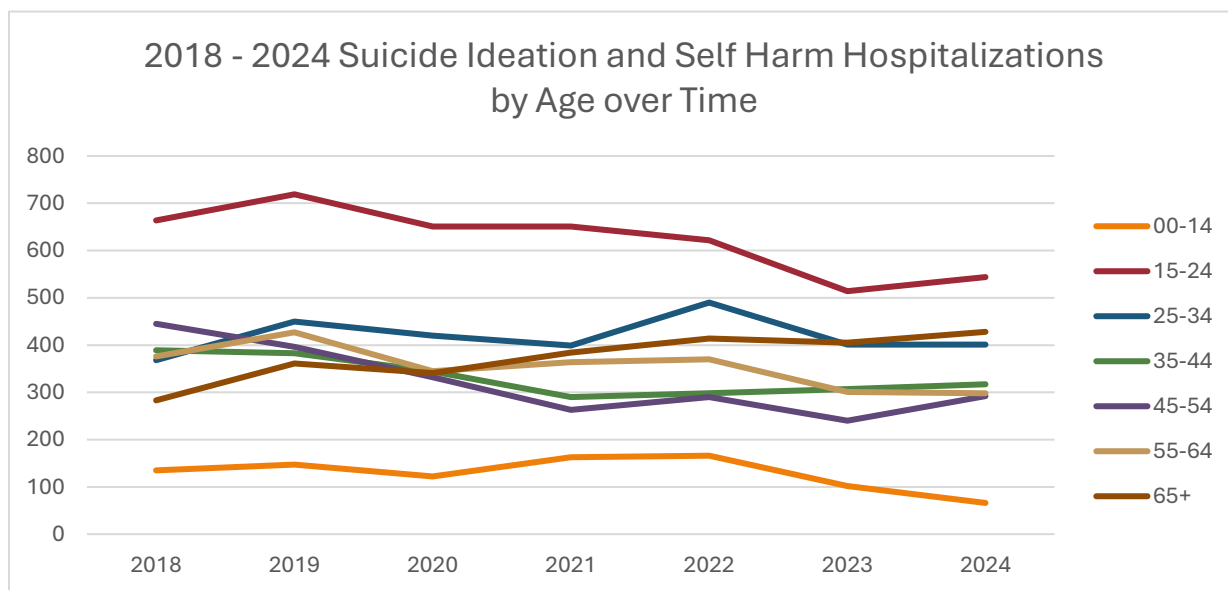


Figure 4: – For most age groups, hospitalizations remained stable over time. However, between 2018 – 2024, hospitalizations for those 65+ years increased by 51% (283 visits in 2018 to 428 visits in 2024).

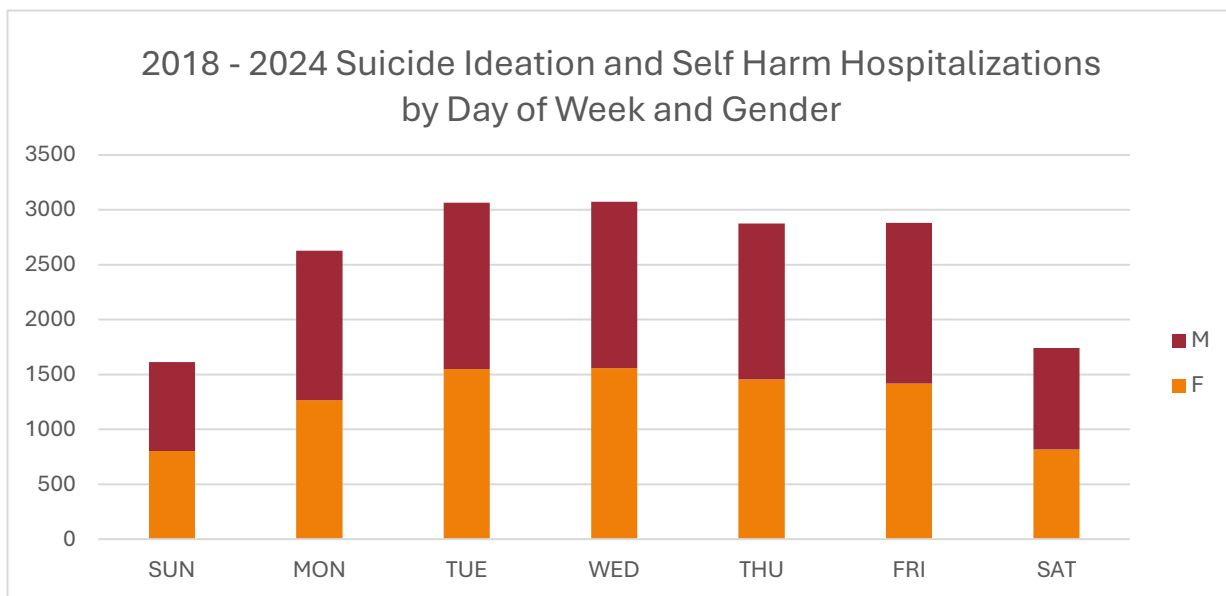


Figure 5: Males and females were both hospitalized more on a weekday than a weekend.

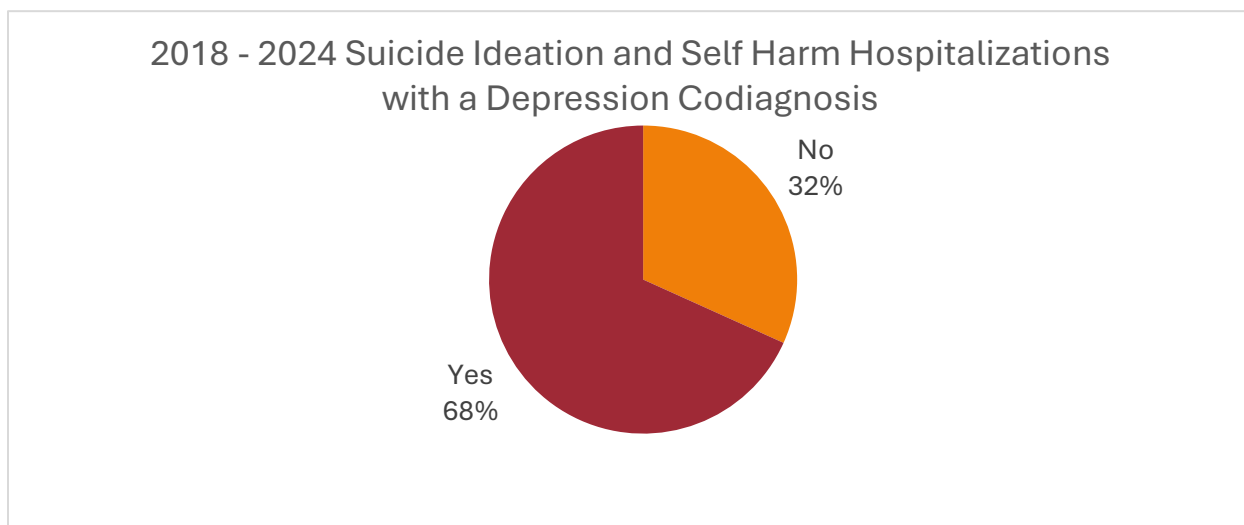


Figure 6: Of all hospitalizations with a suicide related or self-harm diagnosis, 68% also had a depression related, co-diagnosis.

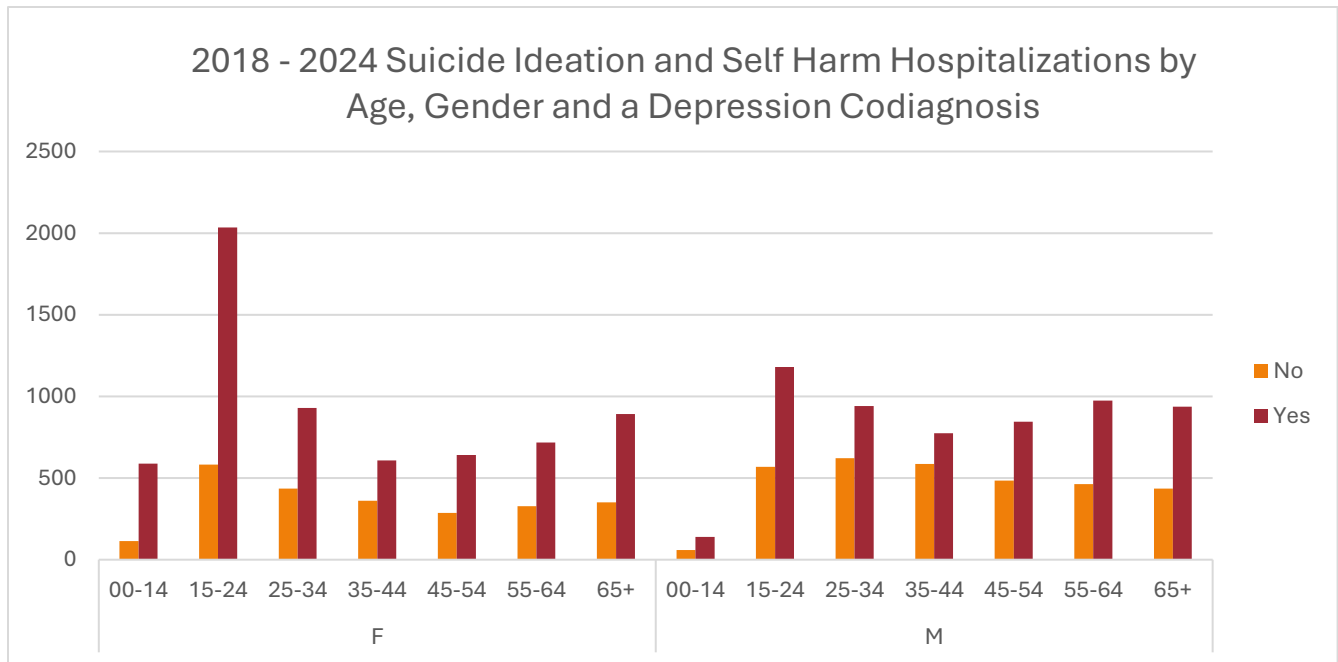


Figure 7: Most young males and females, those 24 and younger, also had a depression related diagnosis. In fact, around 68% of young males (1319 of 1947) and 79% of young females (2623 of 3319) had a depression related co-diagnosis.

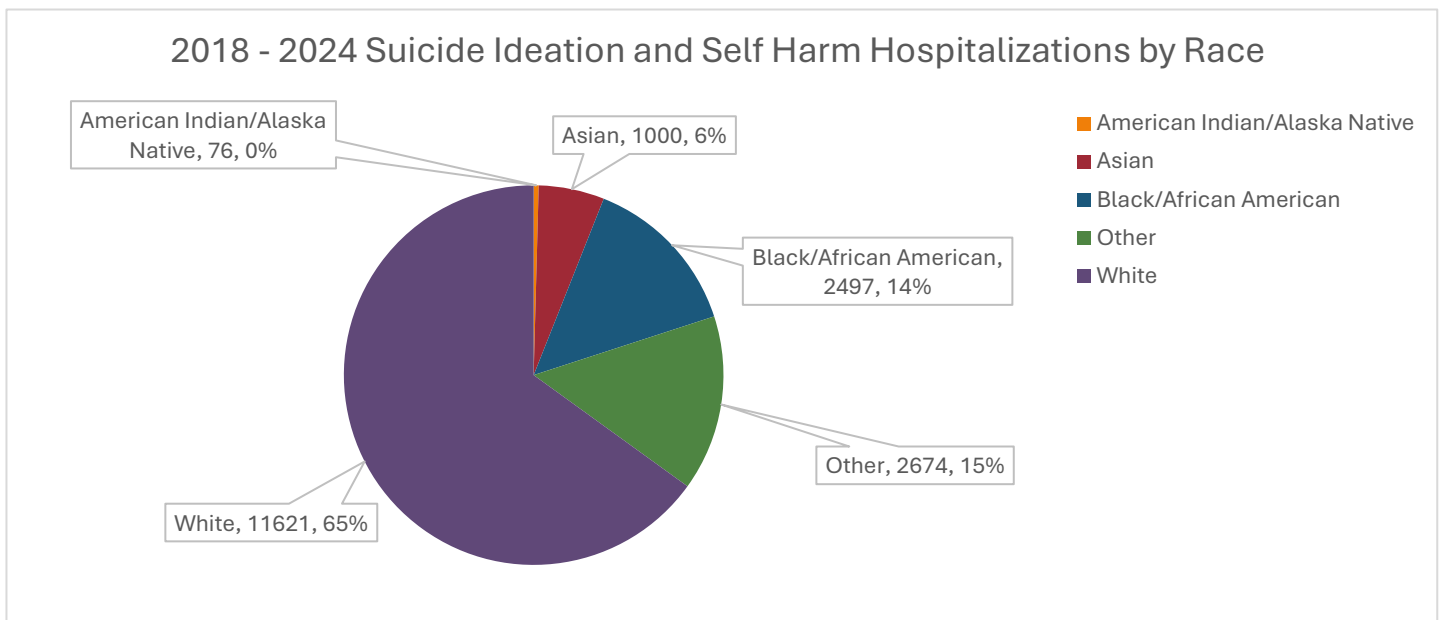


Figure 8: In total, most cases were white.

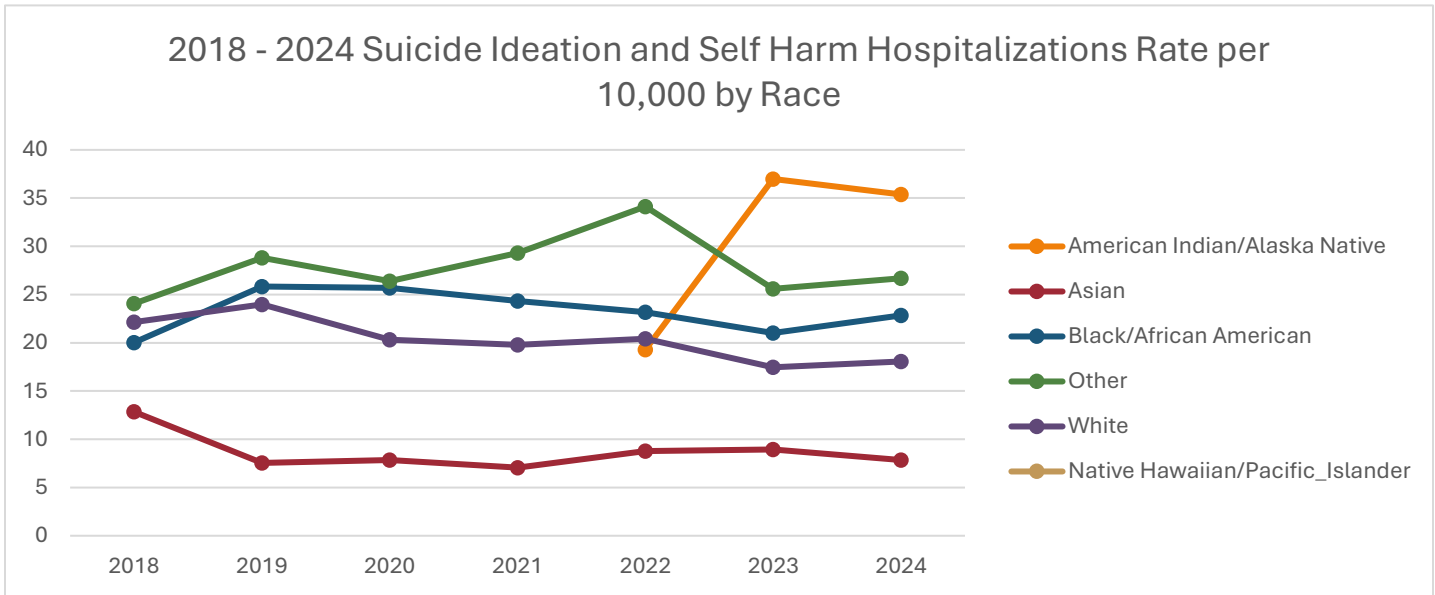


Figure 9: Other race had the highest rate for all years prior to 2023. In 2023, American Indian/Alaskan Natives had the highest rate. However, this population only had 23 hospitalizations in 2023 and 22 in 2024 while other race had 351 cases in 2023 and 366 in 2024. The rate for American Indian / Alaskan Native was suppressed from 2018 – 2021 because there were less than 11 hospitalizations for this population each year.

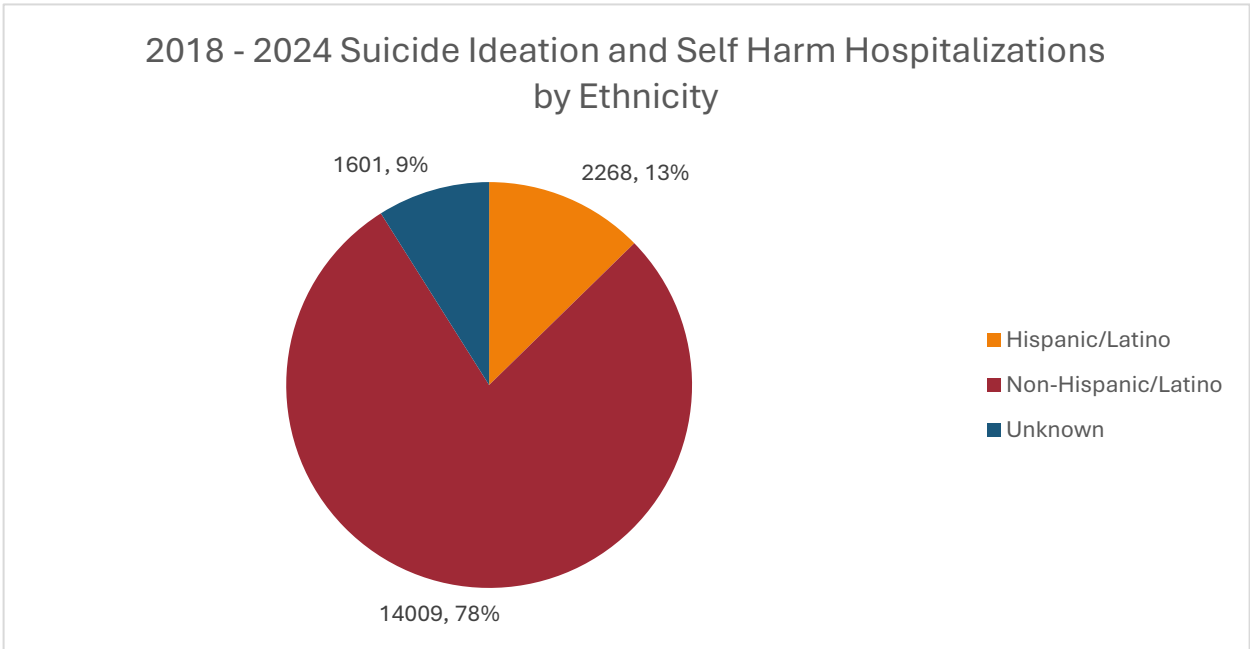


Figure 10: In total, most cases were non-Hispanic.

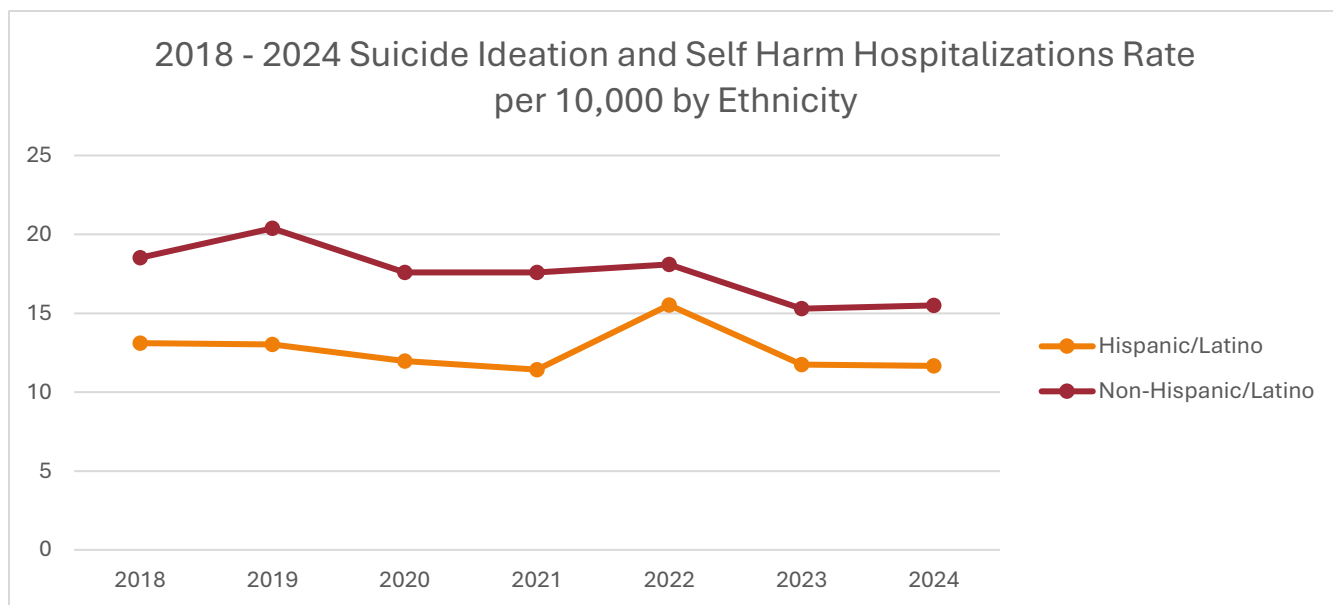


Figure 11: The rate amongst non-Hispanics was higher for all years.

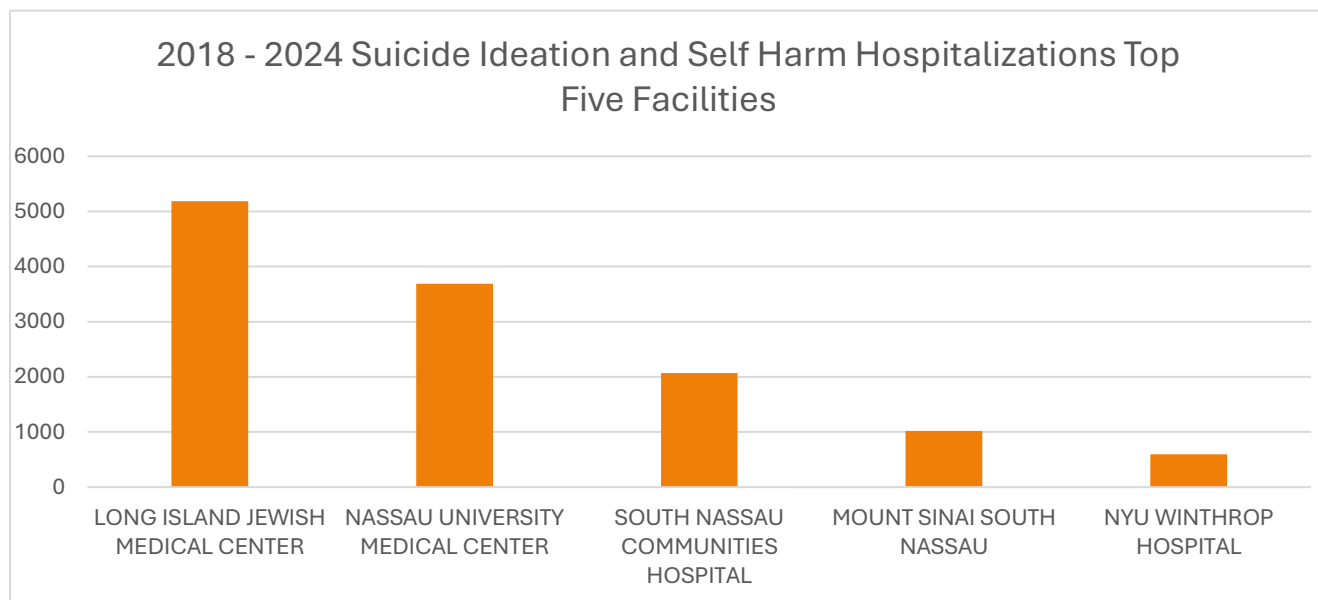


Figure 12: Around 29% of all hospitalizations occurred at Long Island Jewish Medical Center (5183 of 17,878). The top 5 facilities accounted for 70% of all hospitalizations (12,551 of 17,878).

Suicide Ideation and Self Harm Hospitalizations - 2018 - 2024

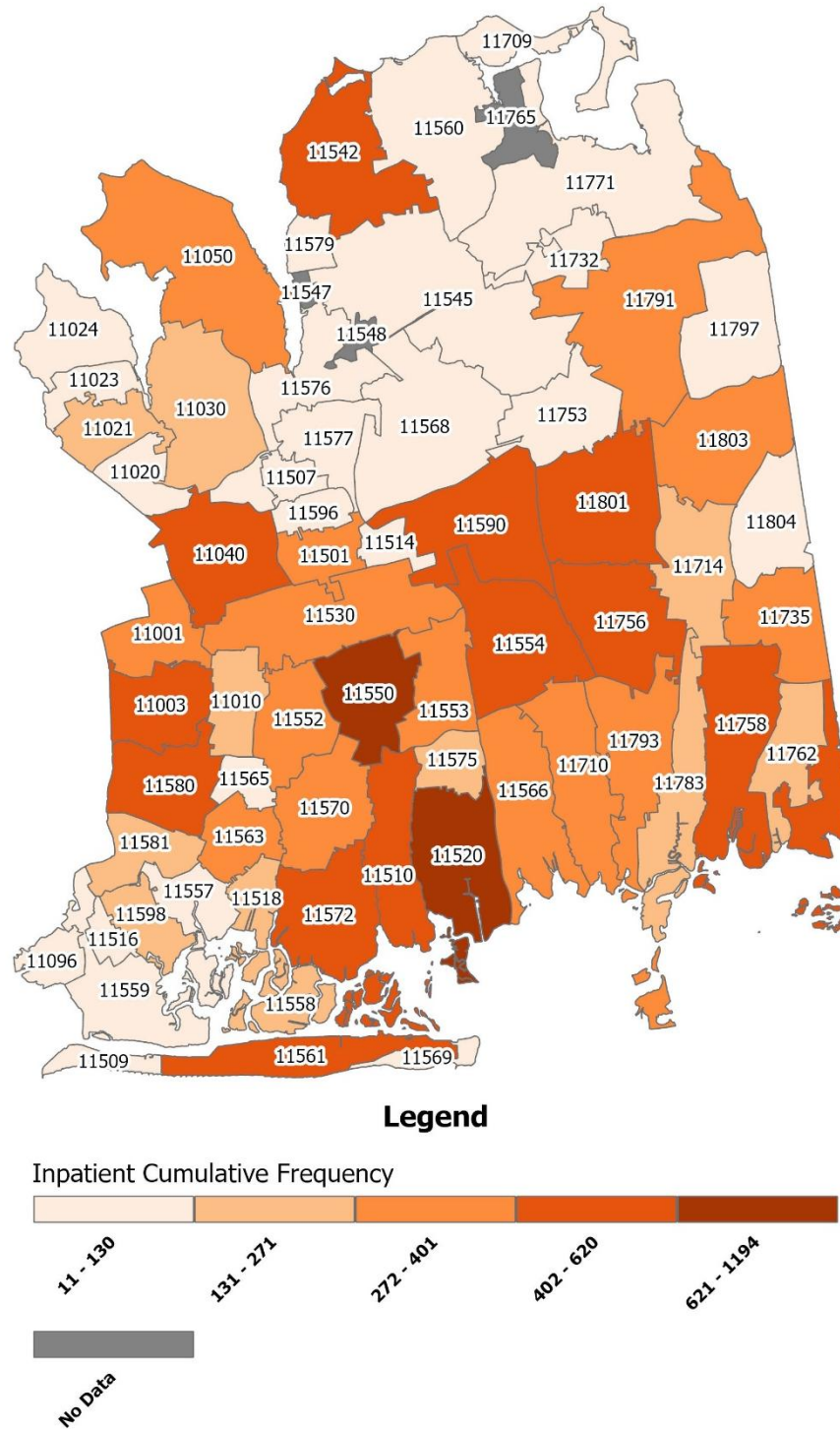


Figure 13: Frequency was highest in Hempstead and Freeport

Suicide Ideation and Self Harm Hospitalization Rate - 2018 - 2024

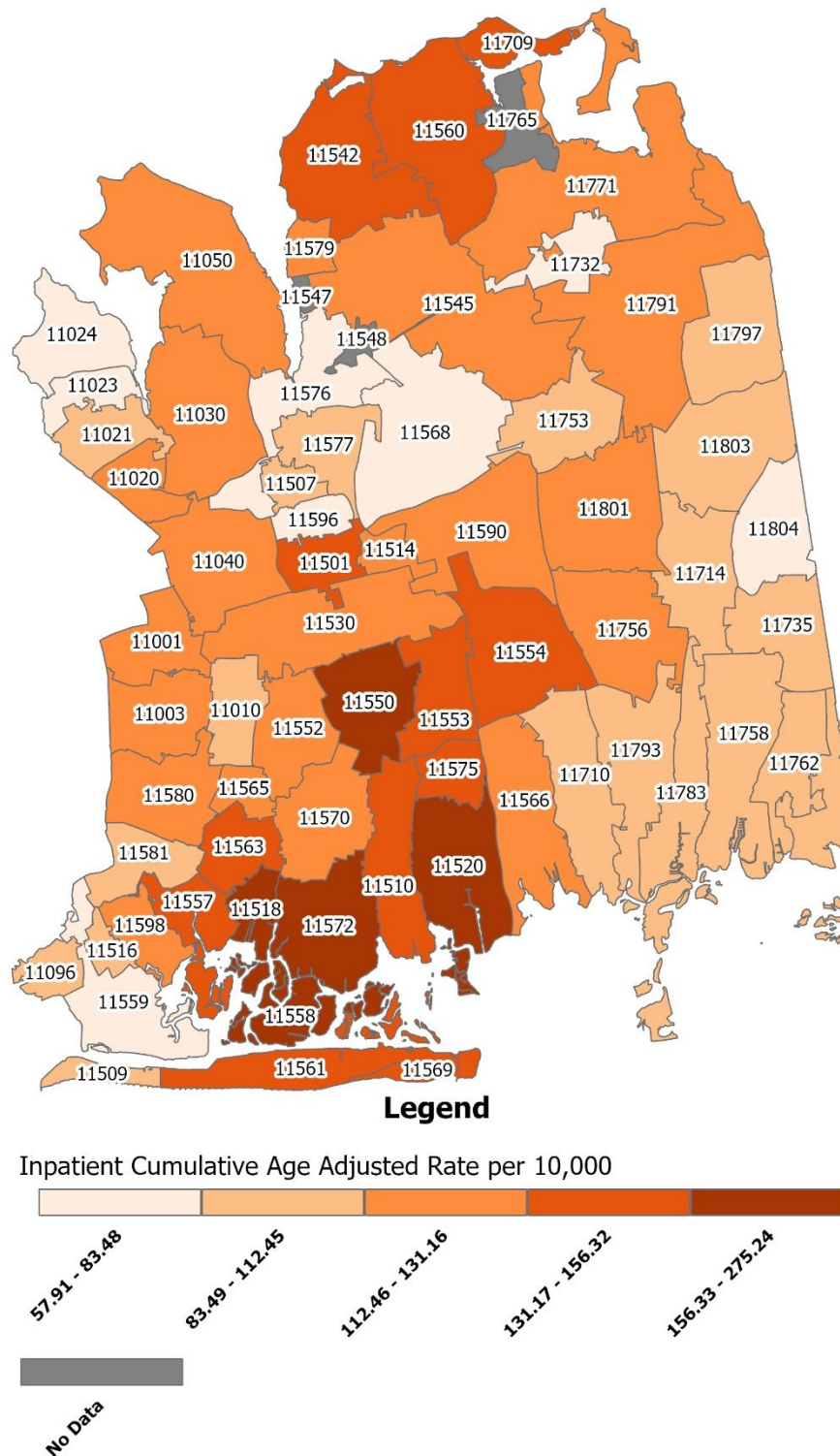


Figure 14: Island Park had the highest cumulative age adjusted rate per 10,000.

II. Emergency Department

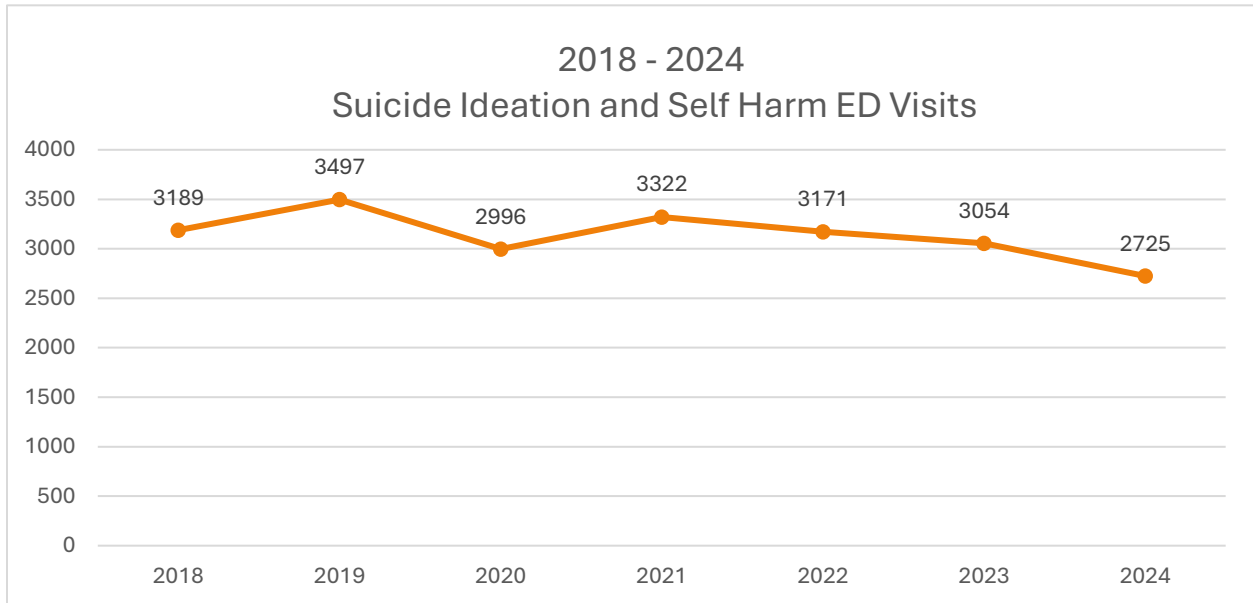


Figure 15: Visits to the emergency department with a suicide related or self-harm diagnosis peaked in 2019. There was a noticeable drop in 2020. Since, ED visits have steadily decreased between 2021 – 2024. From peak to 2024, ED visits have decreased by 22%.

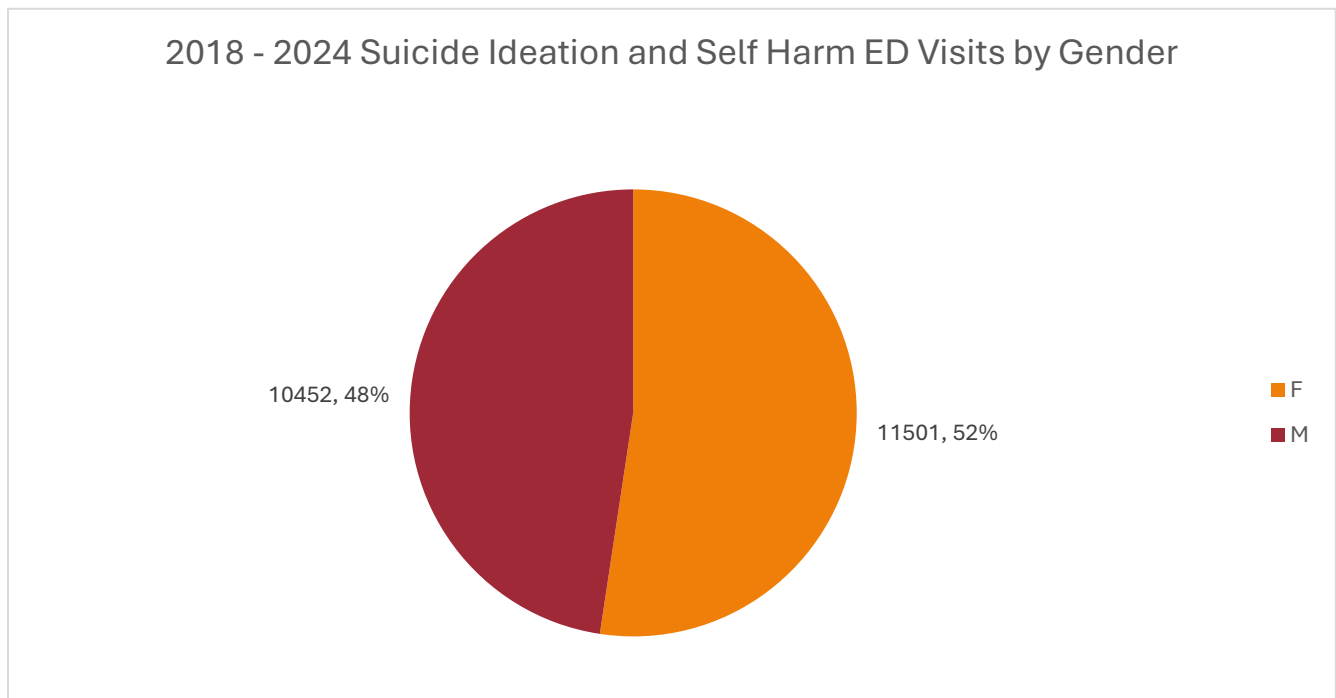


Figure 16: More females visited the emergency department.

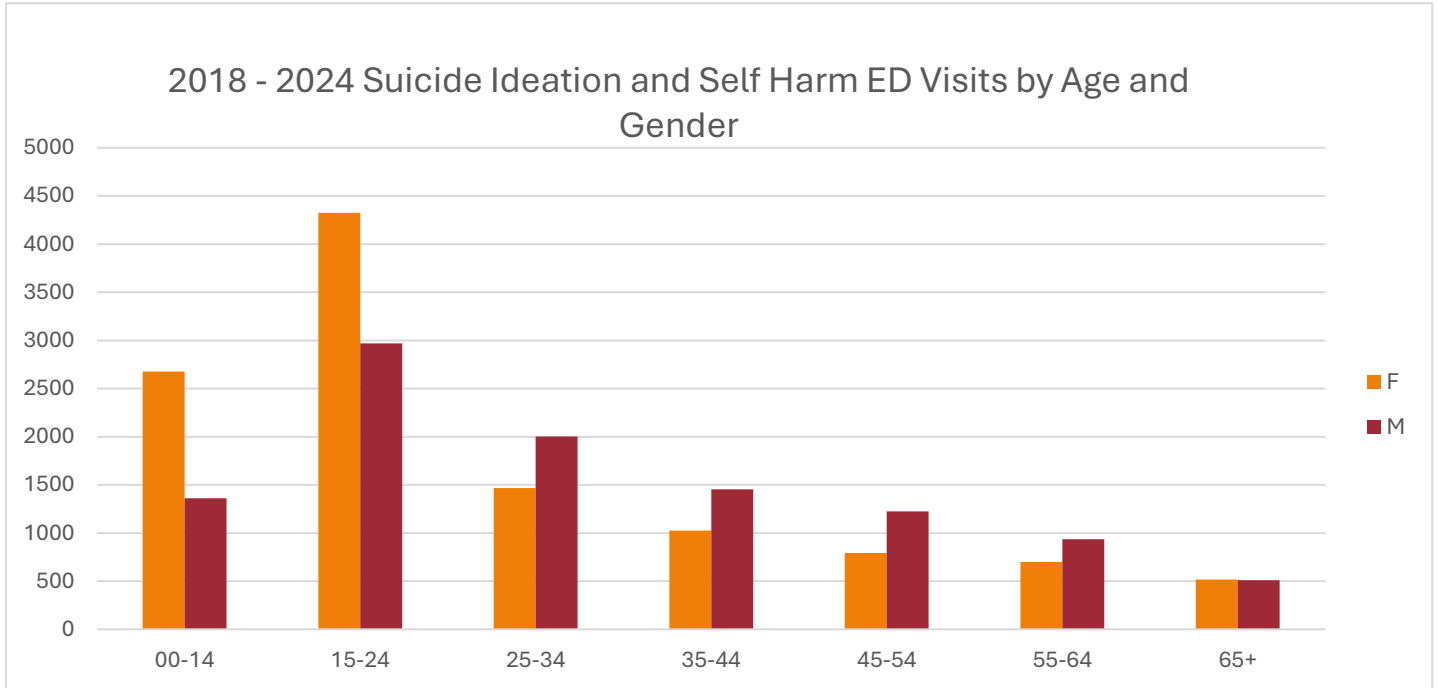


Figure 17: Even though the total number of ED visits between men and women were similar, there were differences within age groups. Around 62% of those 24 and younger were female. Around 57% of those over the age of 24 were male.

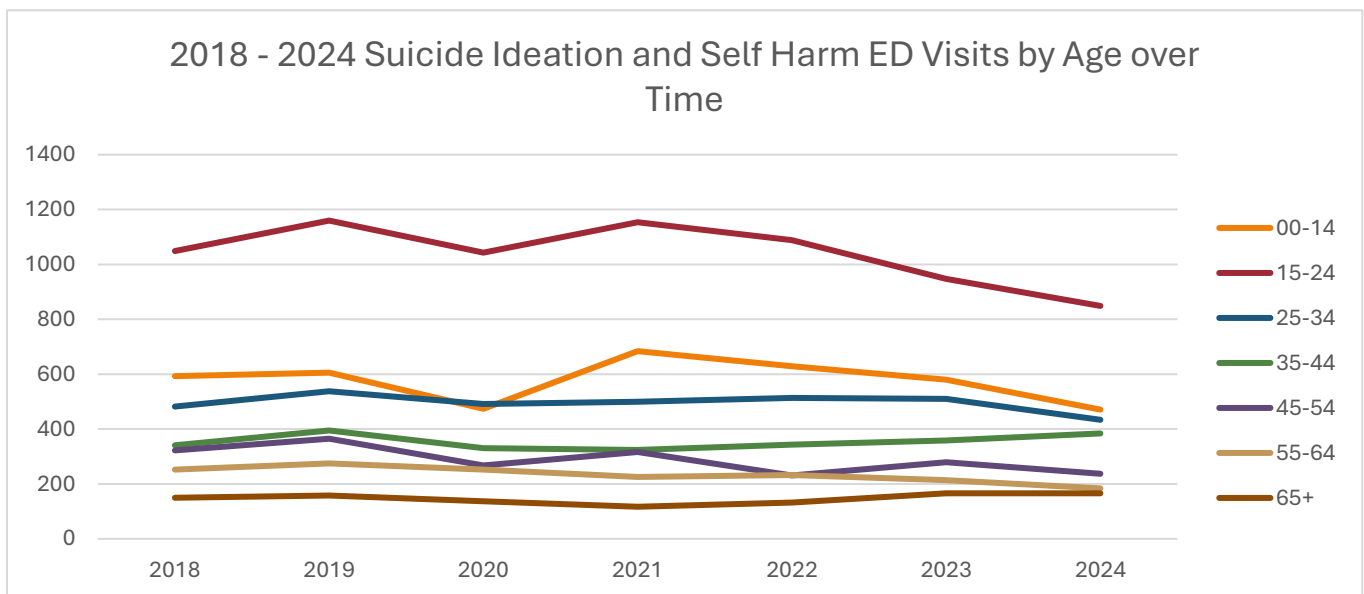


Figure 18: Over the years, emergency department visits for suicide ideation or self-harm have slightly fluctuated for all age groups. There has been a noticeable decline for those 15-24.

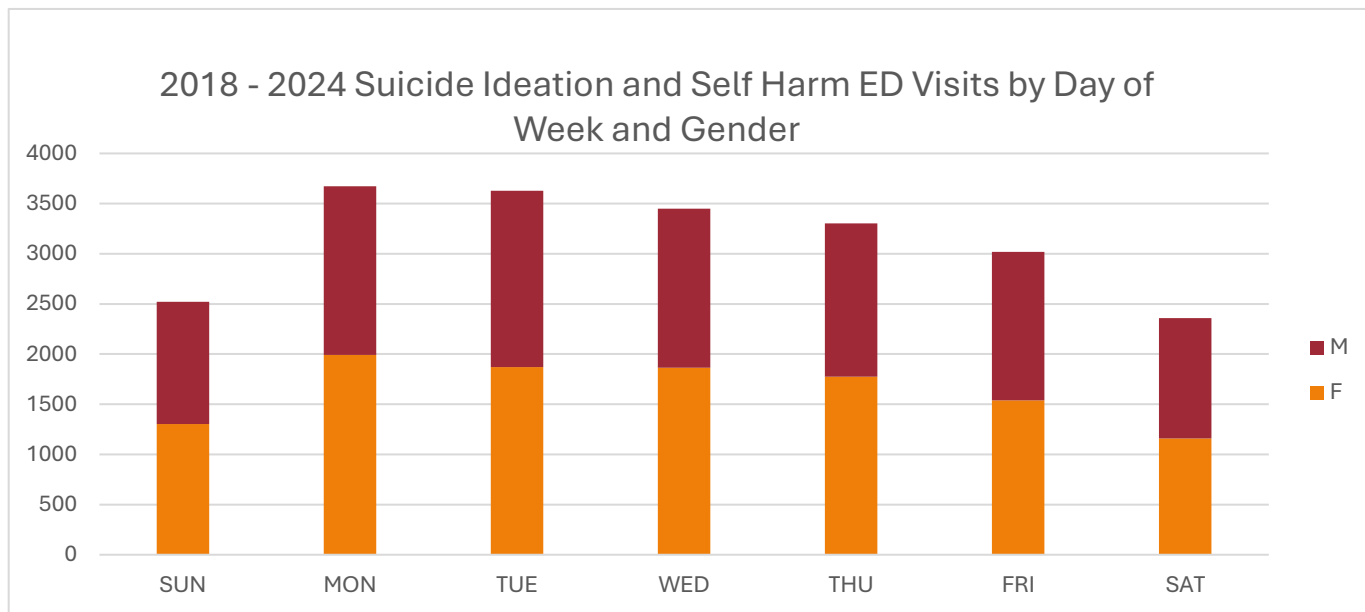


Figure 19: The total number of emergency department visits peaked on Monday, followed by a steady decline into the weekend. Weekend daily totals were less than the weekly daily totals.

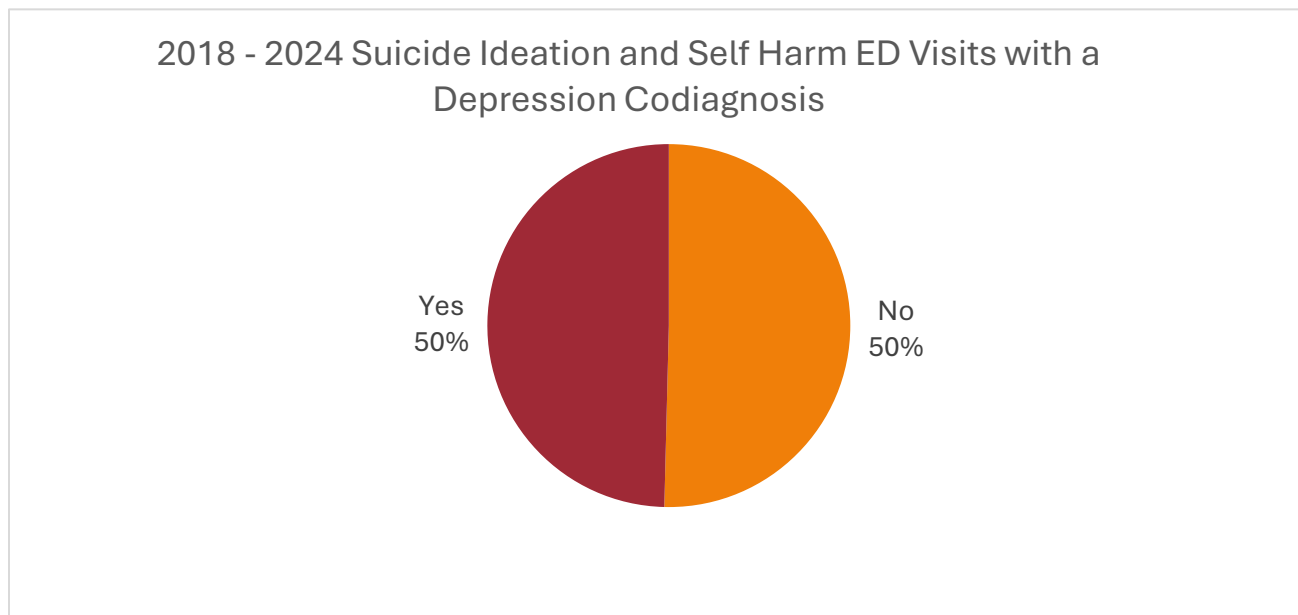


Figure 20: 50% of visitors to an emergency department had depression co-diagnosis.

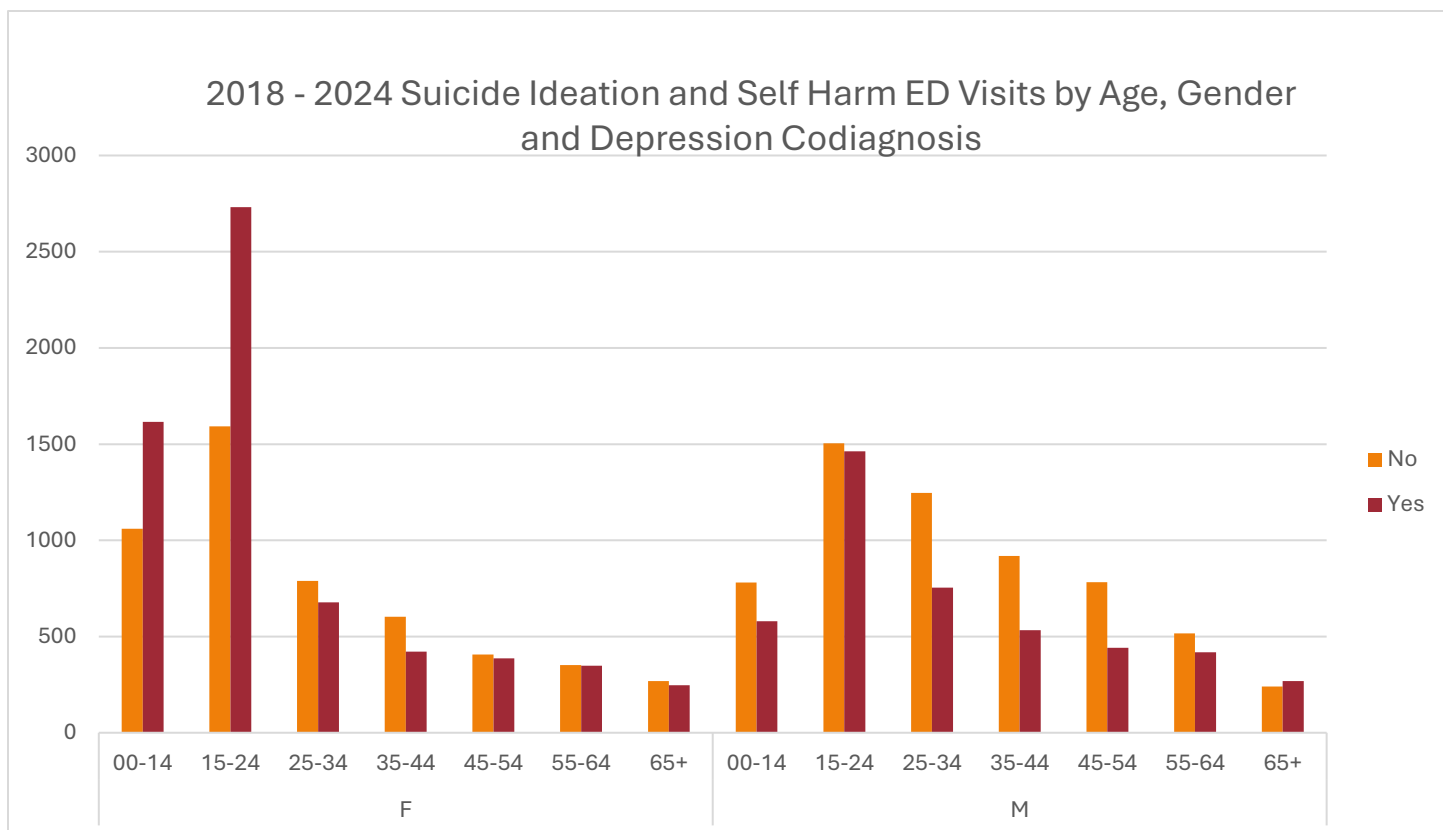


Figure 21: Around 63% of females between the ages of 15 – 24 had a depression co-diagnosis.

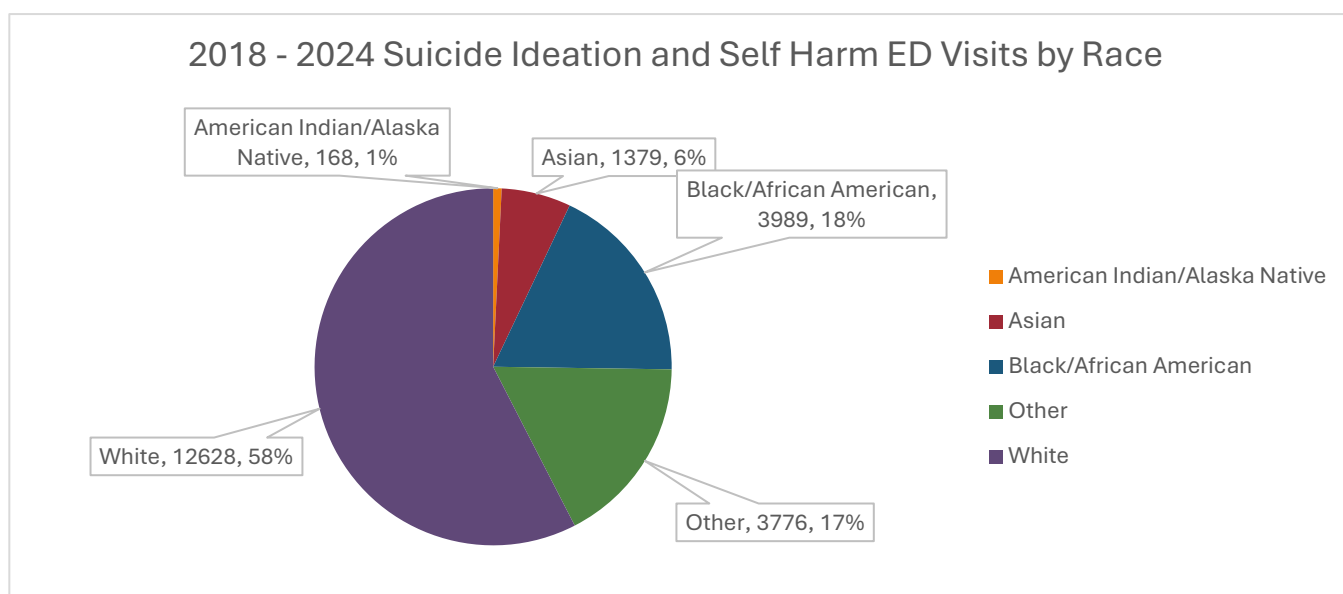


Figure 22: Whites had the highest total frequency of suicide ideation or self-harm emergency department visits.

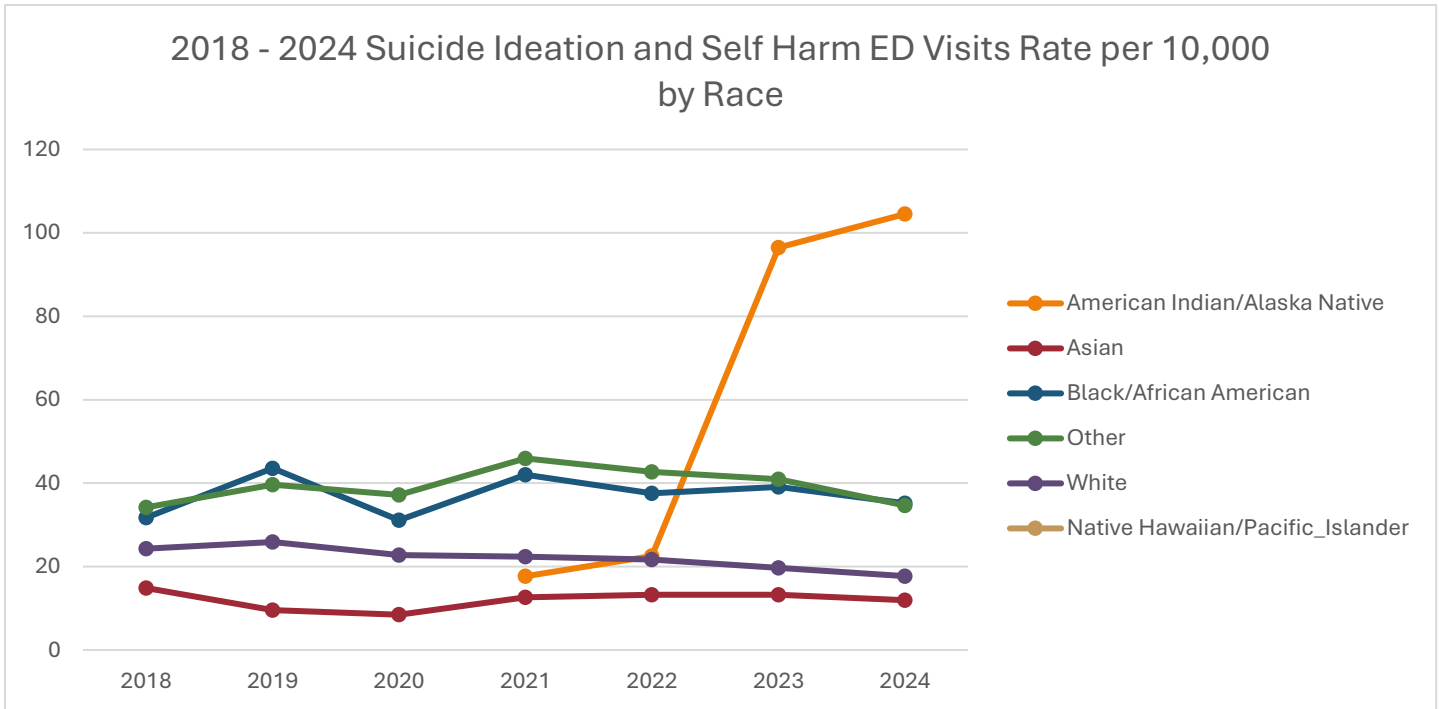


Figure 23: Asians had the lowest rate of emergency department visits for all years. Other Race and Black or African American had the highest rates of emergency department visits for most years. In 2023, the rate for American Indian or Alaskan Native jumped to 96.47 per 10,000 population, from 11 cases in 2021 to 60 in 2023. In 2024, the rate increased again to 104.52 per 10,000, a total of 65 cases.

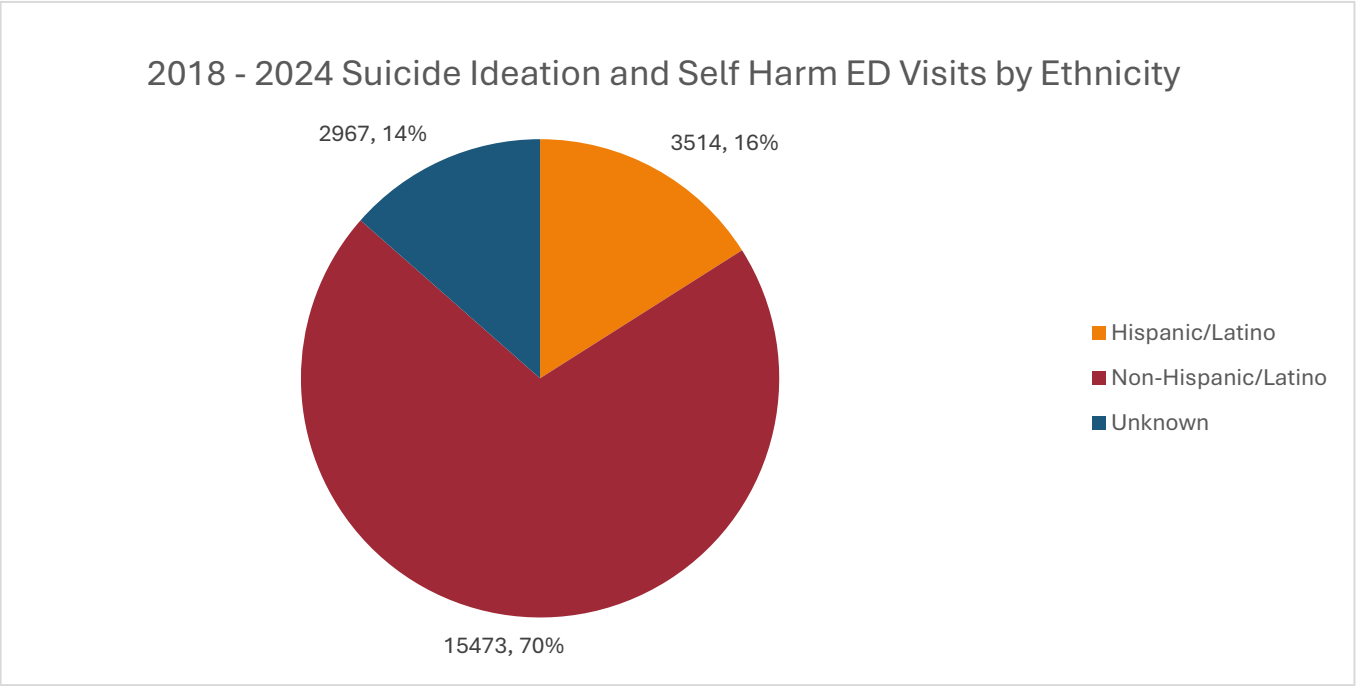


Figure 24: Non-Hispanics had the largest total frequency of emergency department visits.

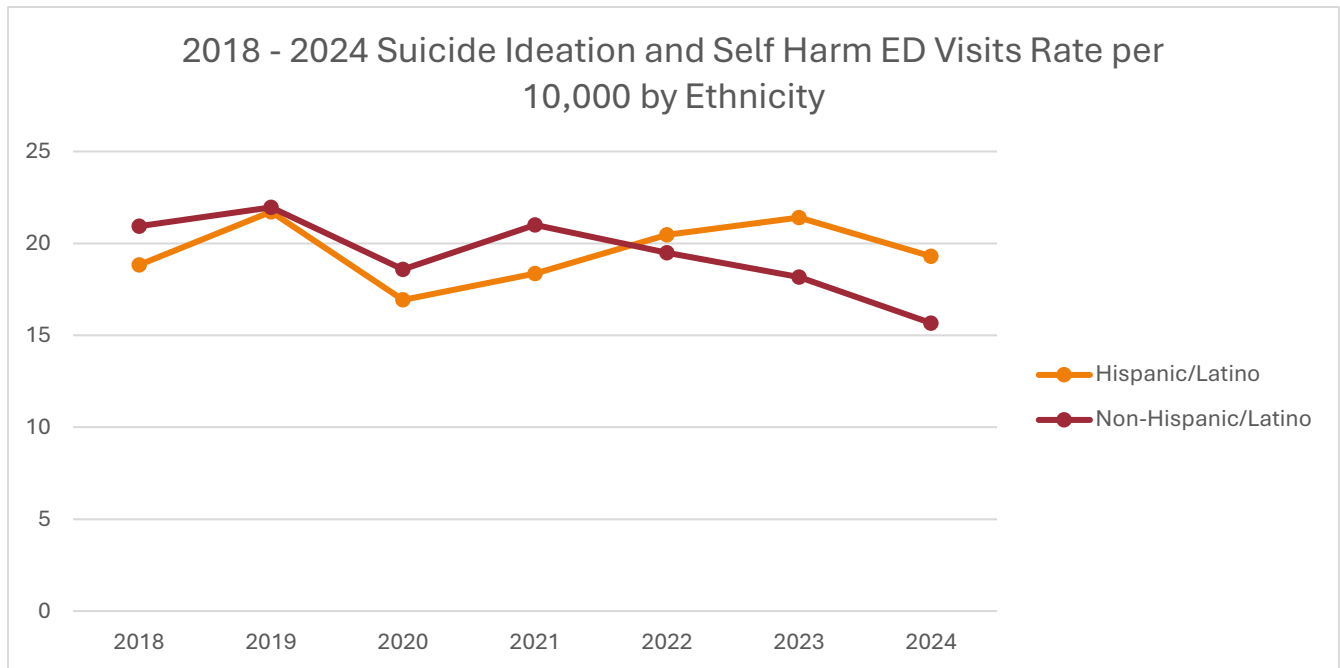


Figure 25: Between 2018 – 2021, non-Hispanics had higher rates of emergency department visits. Since 2022, the rate was higher for those Hispanic or Latino.

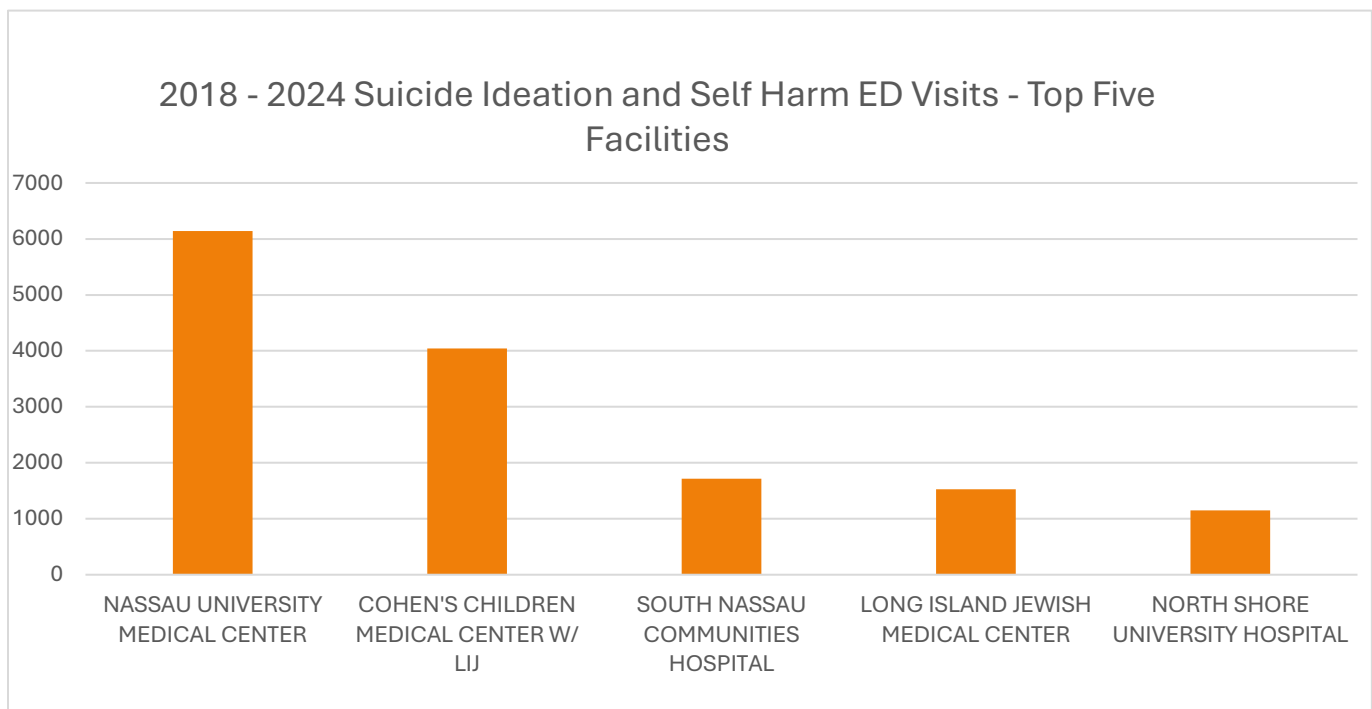


Figure 26: Nassau University Medical Center received around 28% of the total number of visitors over the 7-year span.

Suicide Ideation and Self Harm Emergency Department Visits - 2018 - 2024

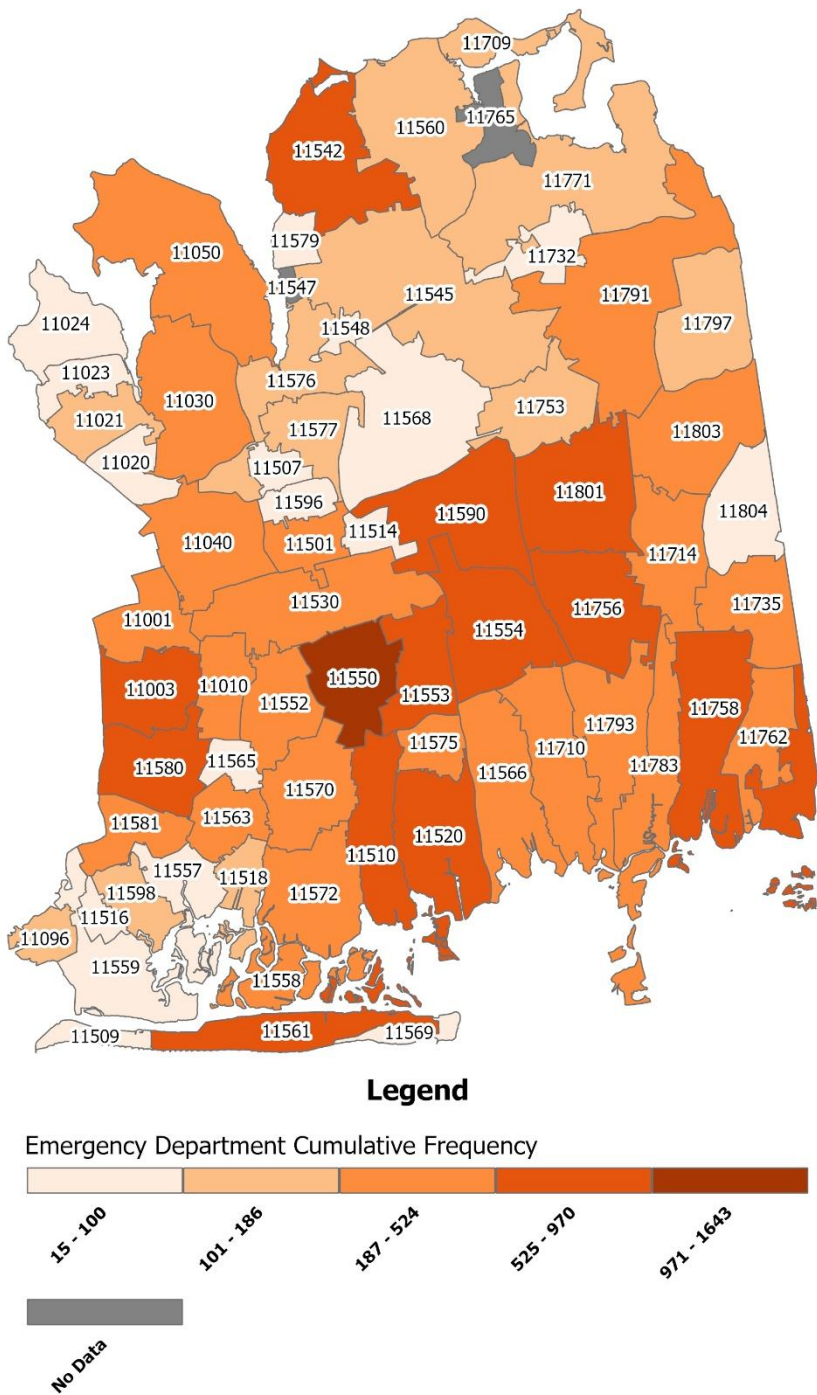


Figure 27: Frequency was highest in Hempstead

Suicide Ideation and Self Harm Emergency Department Rate - 2018 - 2024

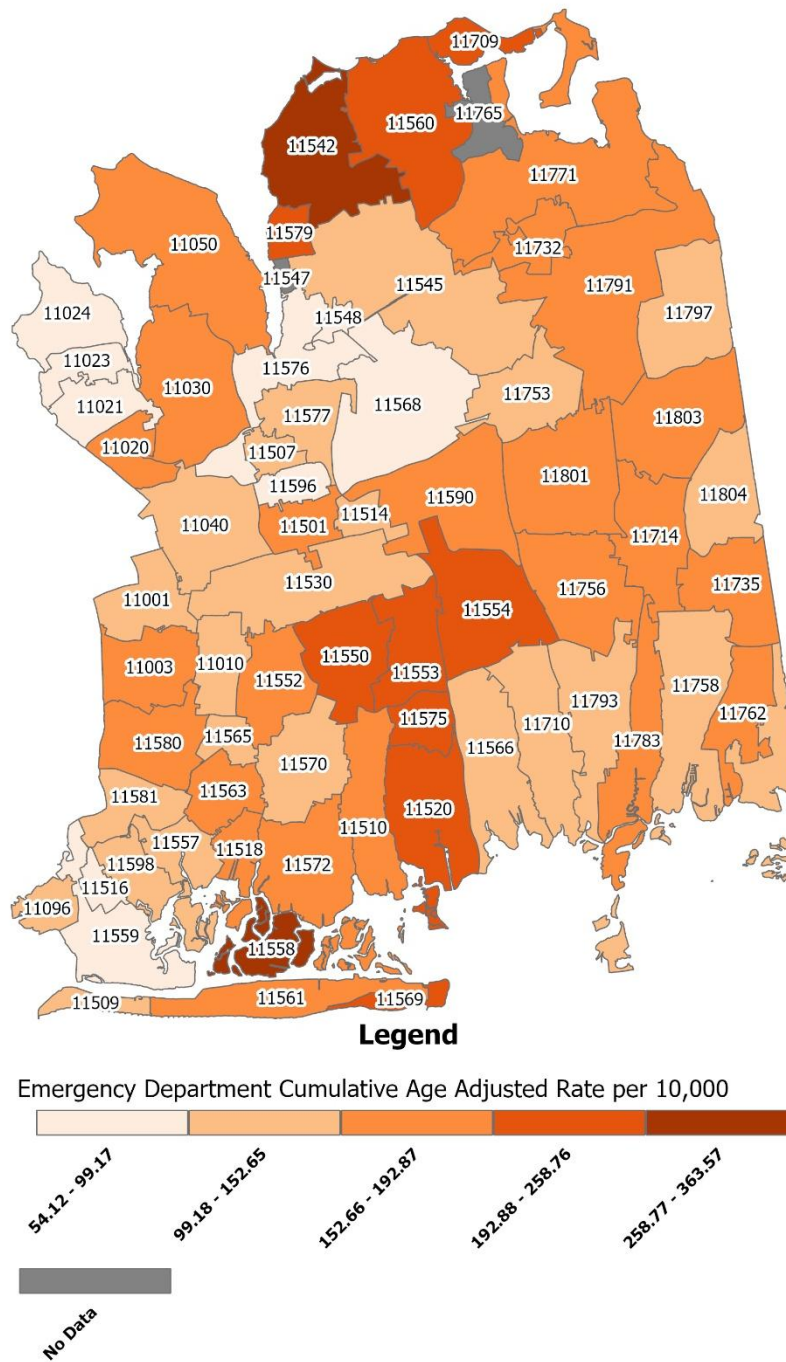


Figure 28: Cumulative age adjusted rate per 10,000 across Nassau County. Island Park and Glen Cove had the highest rates per 10,000.

III. Suicide Mortality

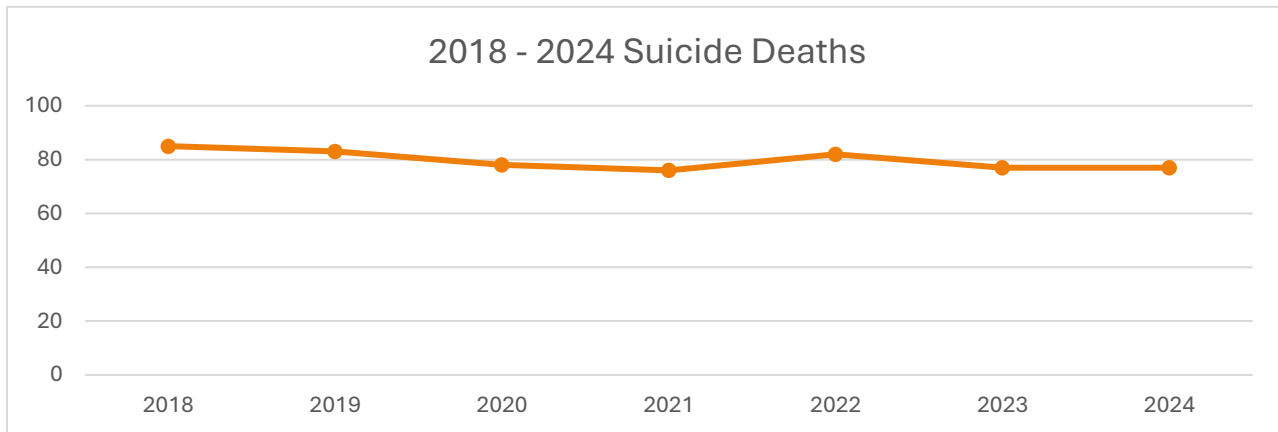


Figure 29: Suicide deaths have stayed between 74 – 85 per year between 2018 – 2024. In this time, there have been 558 suicides.

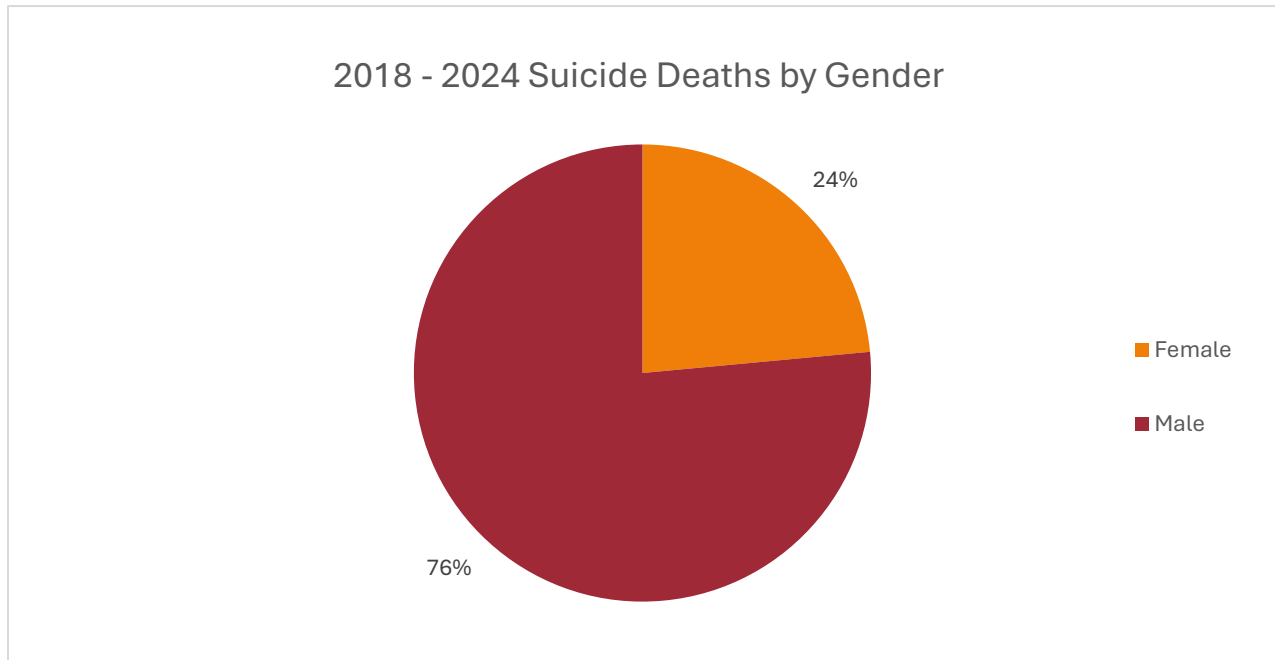


Figure 30: 76% of those who committed suicide were male.

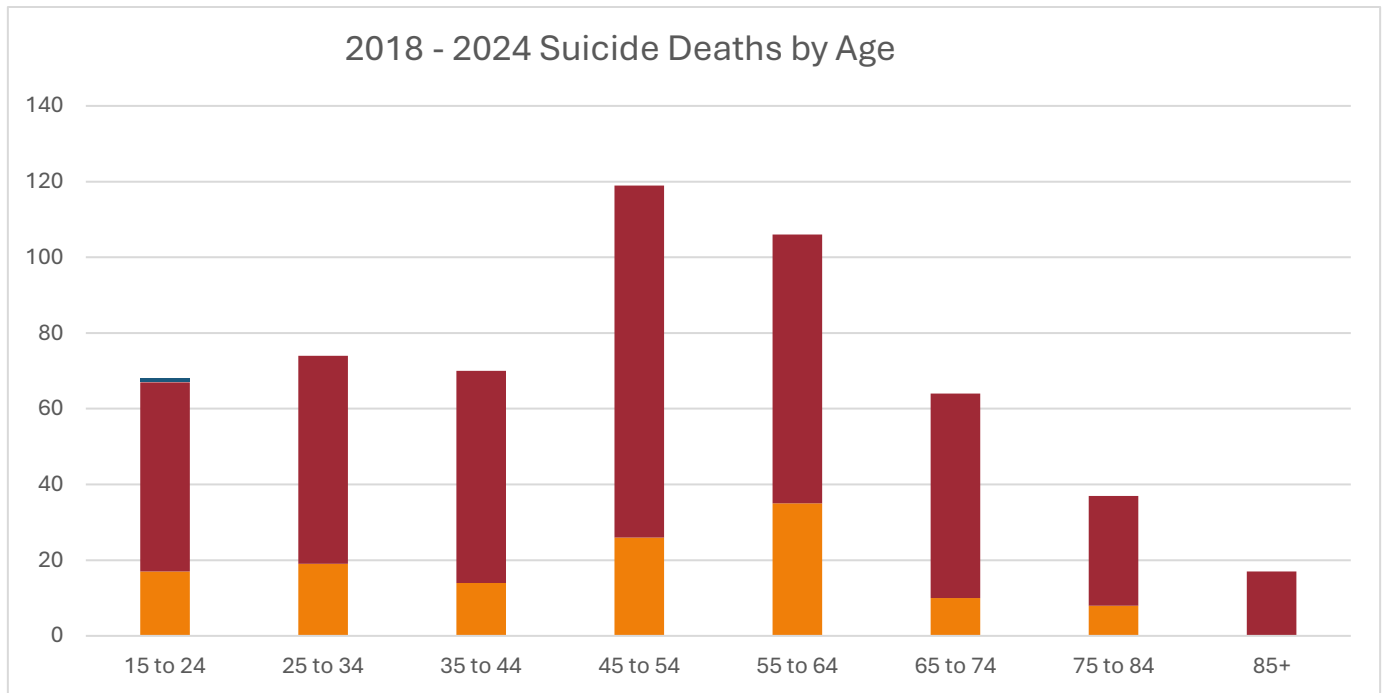


Figure 31: Around 40% of those who committed suicide were between the ages of 45 – 64.

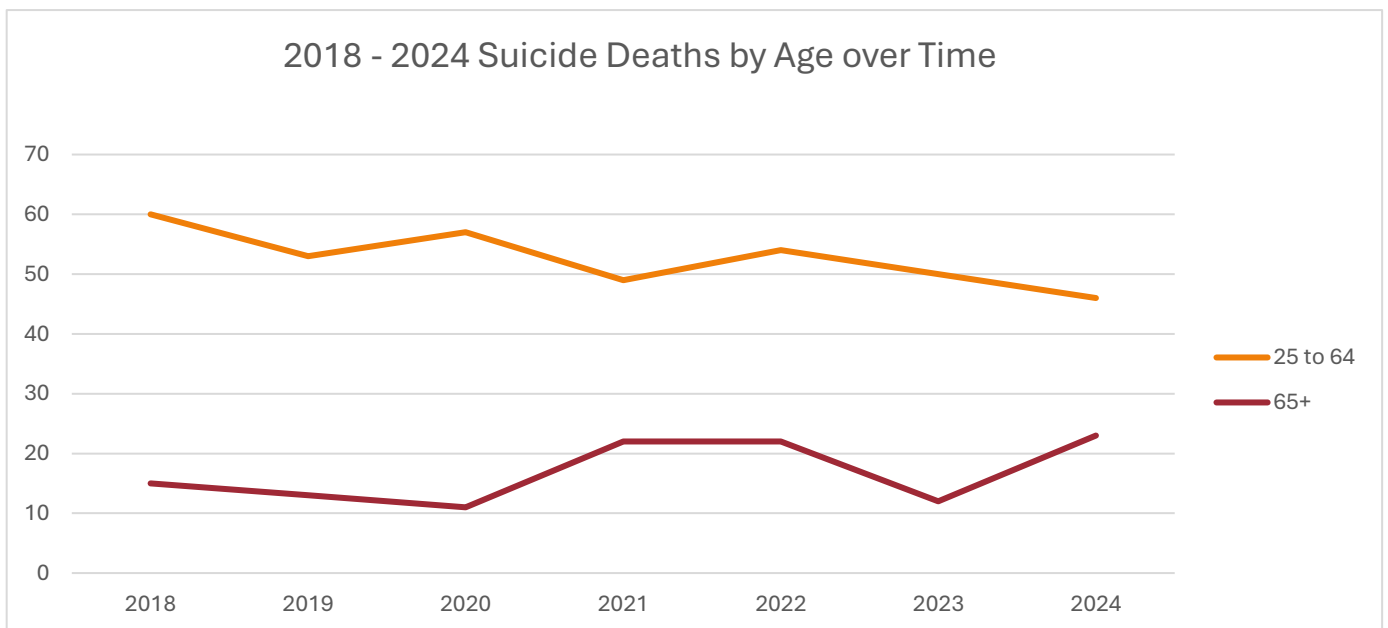


Figure 32: For those 65 and older, between 2018 – 2024 there was a 53% increase in suicides per year.

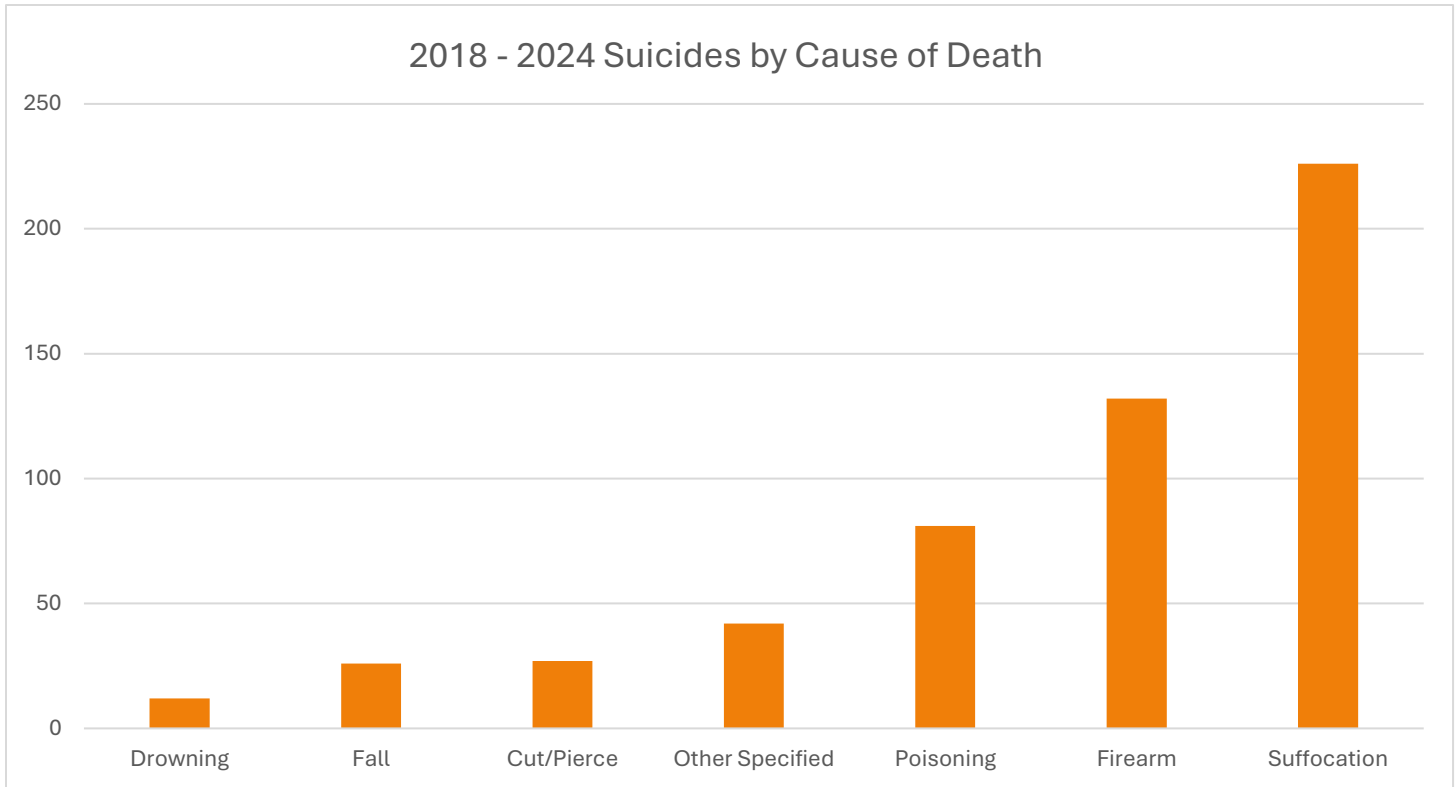


Figure 33: 47% of women committed suicide by hanging, strangulation, or suffocation (X70). For those who committed suicide by firearm, nearly all were male.

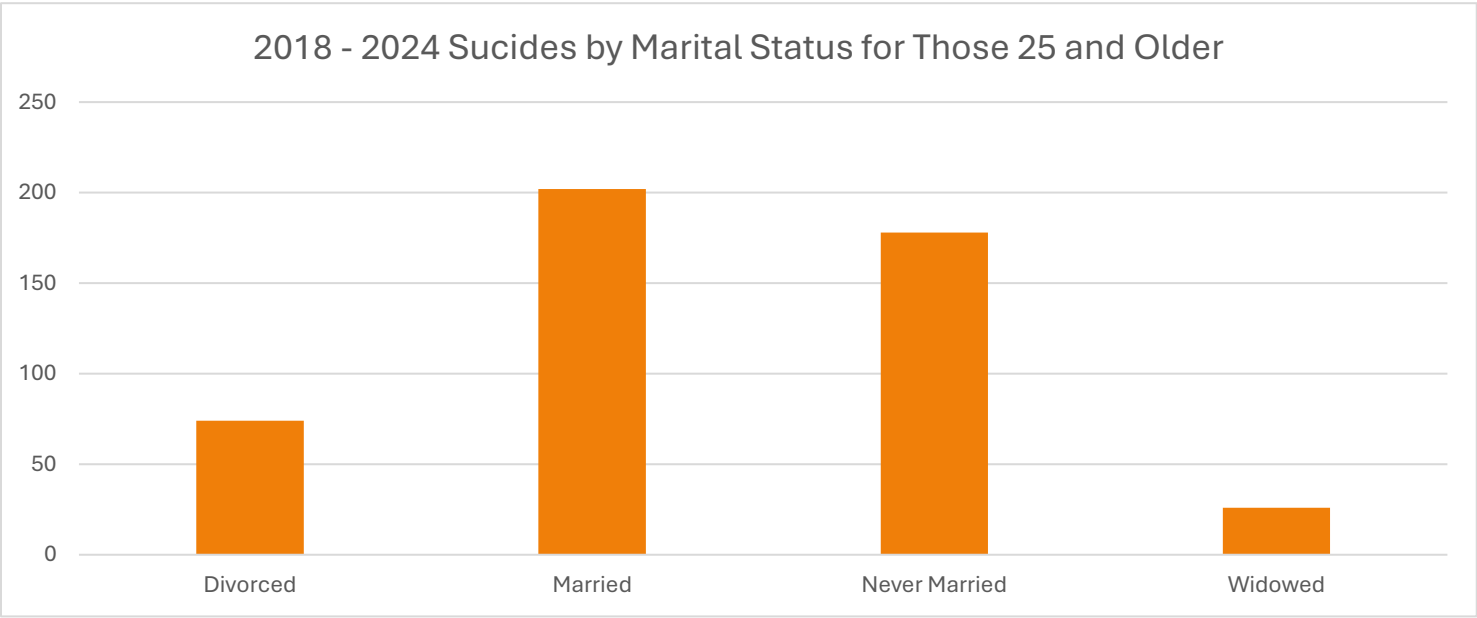


Figure 34: Of those 25 and older who committed suicide, 42% were married.

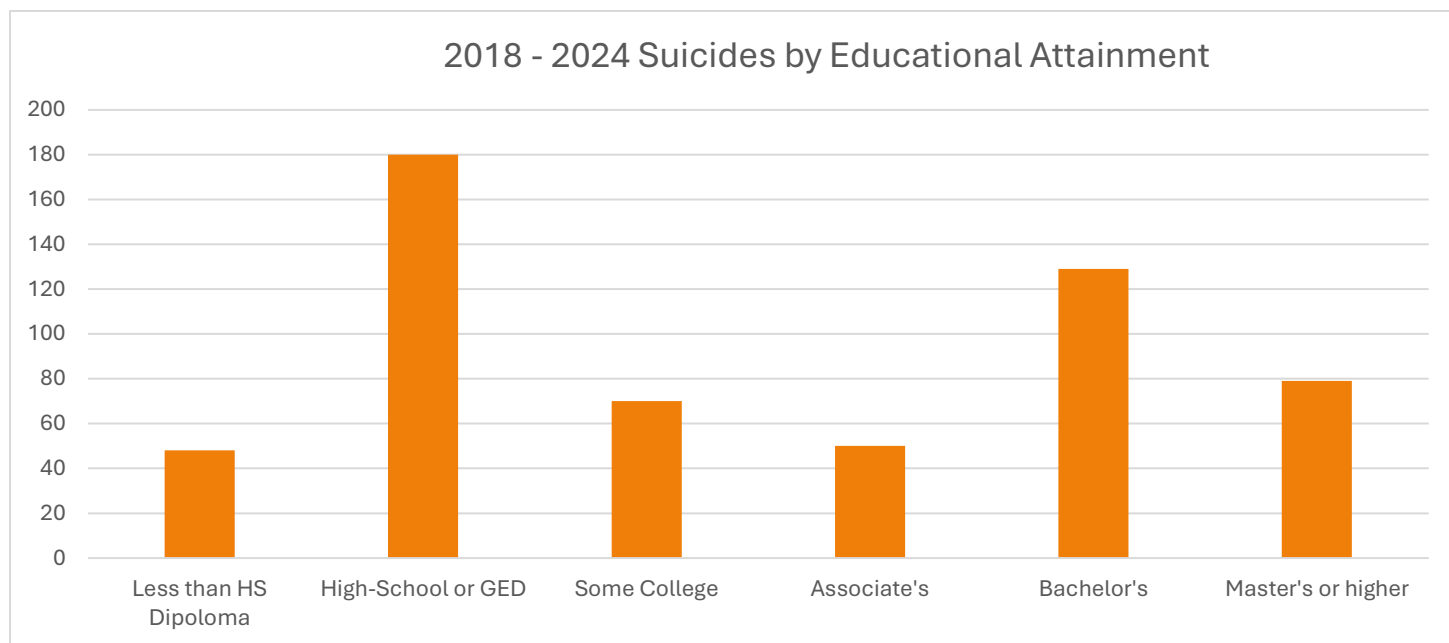


Figure 35: Around 32% of the population who committed suicide graduated High School or had a GED. This chart is for all age groups.

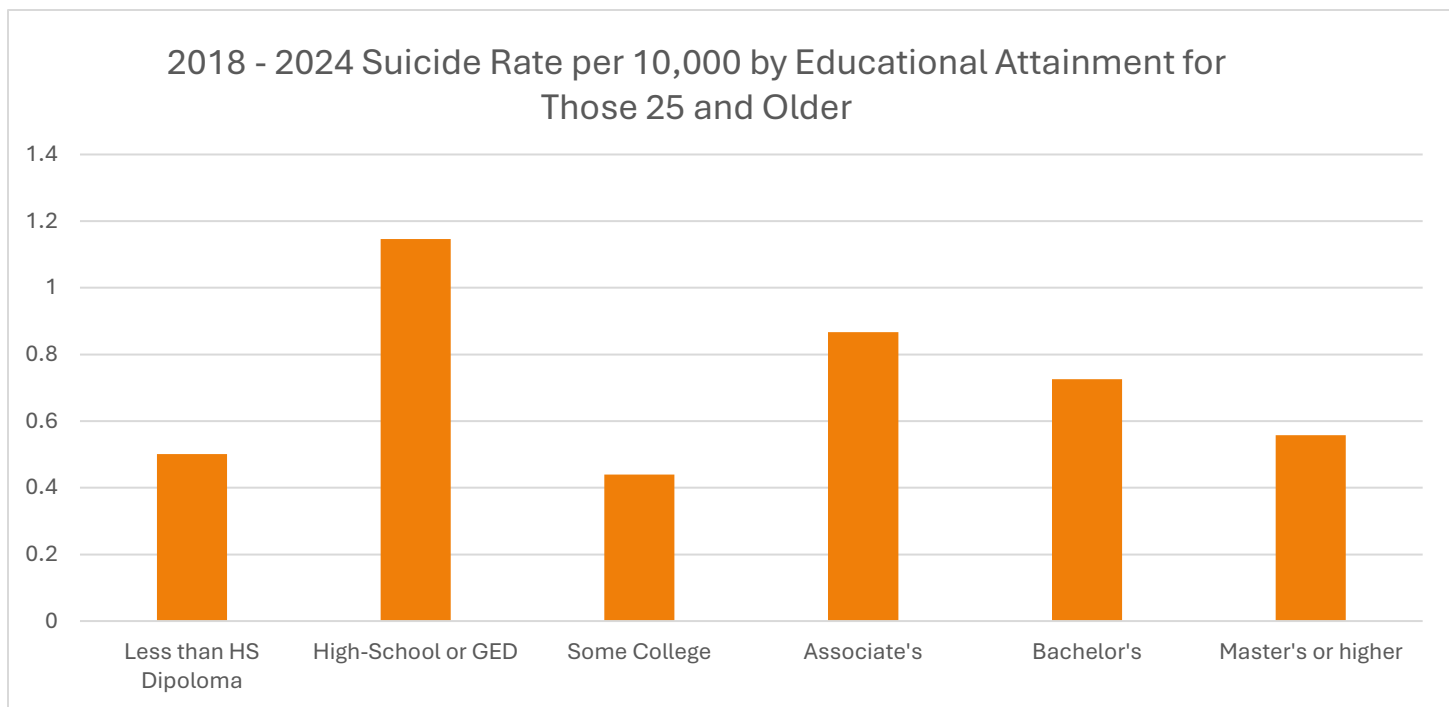


Figure 36: For those 25 and older, suicide rates were highest in the High-School or GED graduate group. 2020 ACS 5-year population estimates were used to calculate these rates.

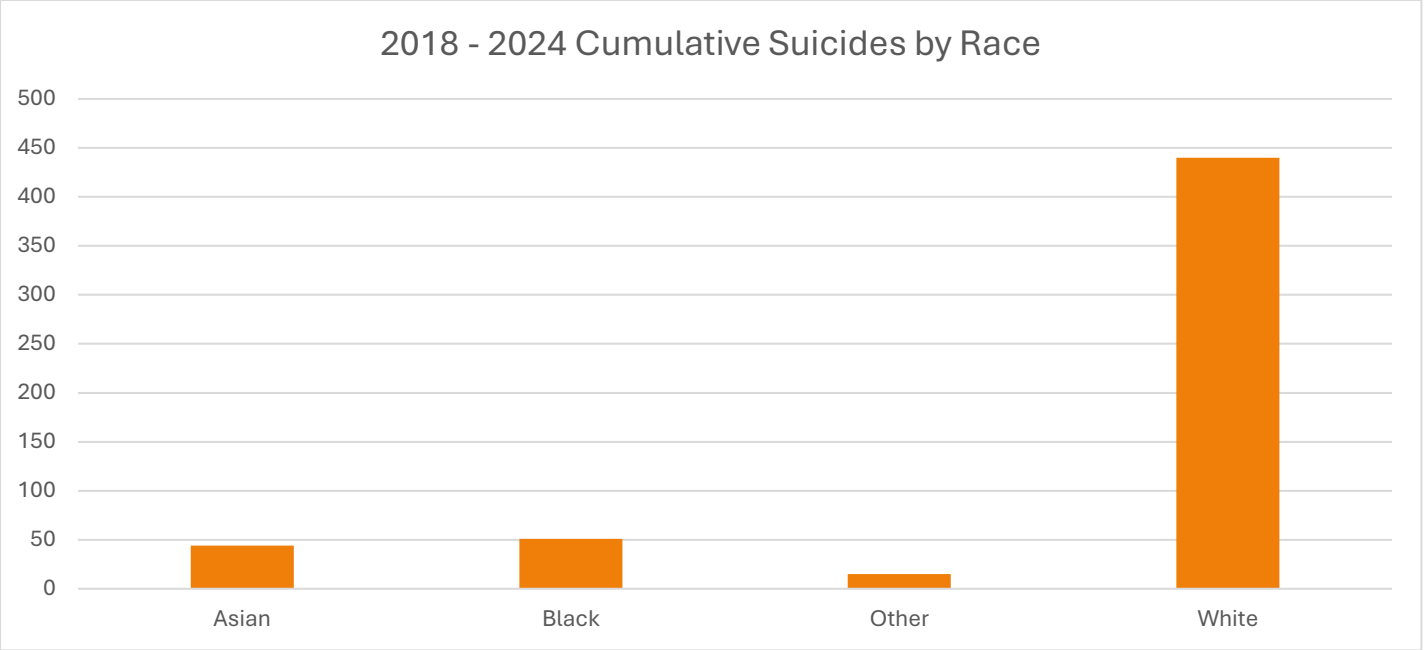


Figure 37: There were no suicides recorded for American Indian/Alaskan Natives and Native Hawaiian/Pacific Islander. 80% of those who committed suicide were white.

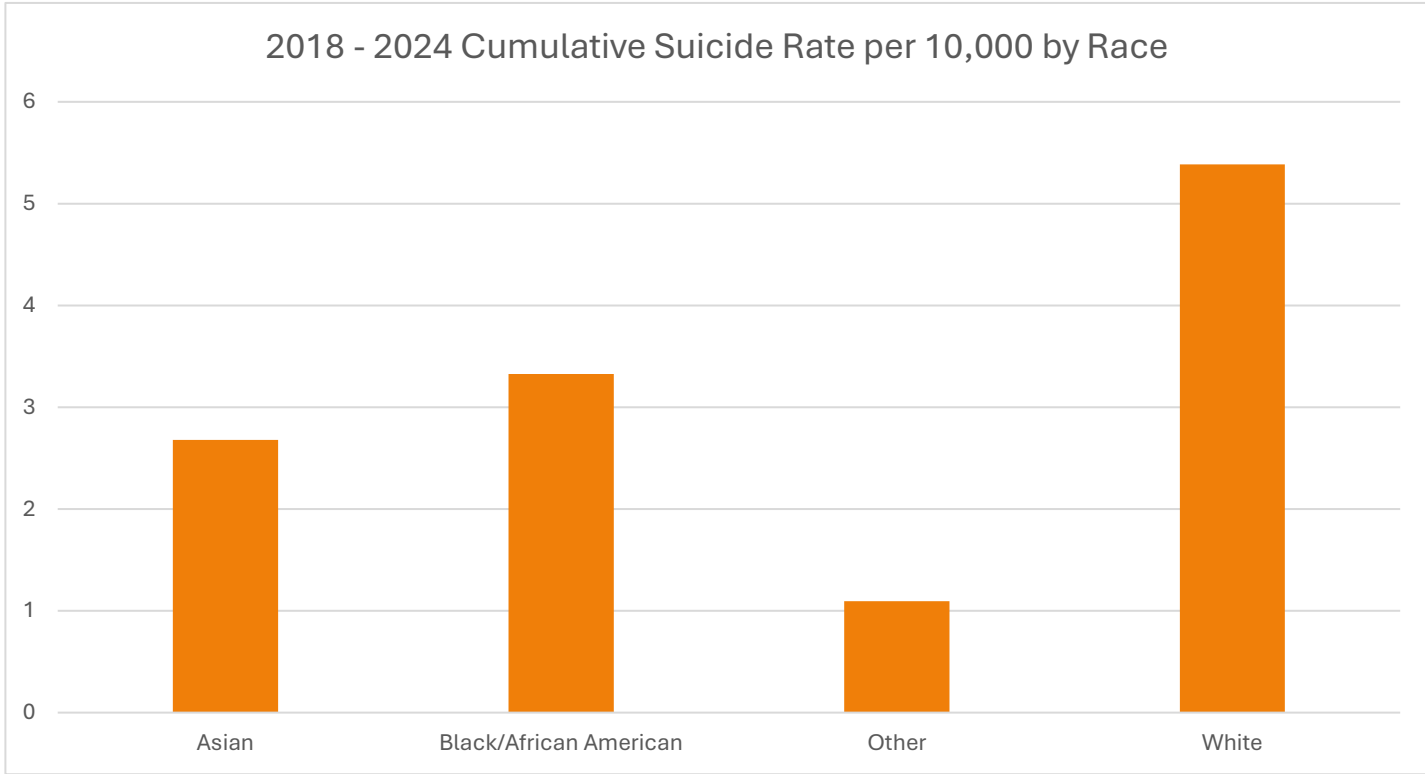


Figure 38: Whites also had the highest cumulative rate of suicide.

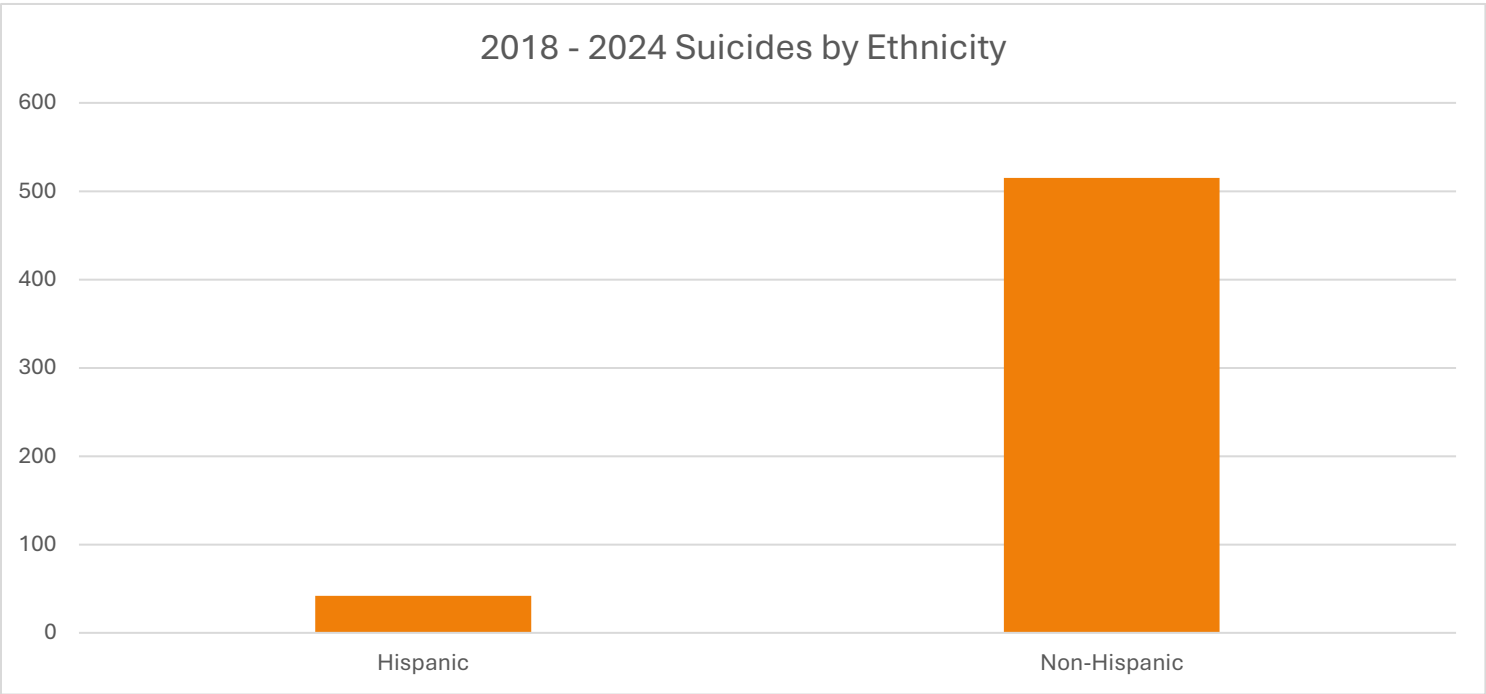


Figure 39: Around 92% of those who committed suicide were non-Hispanic.

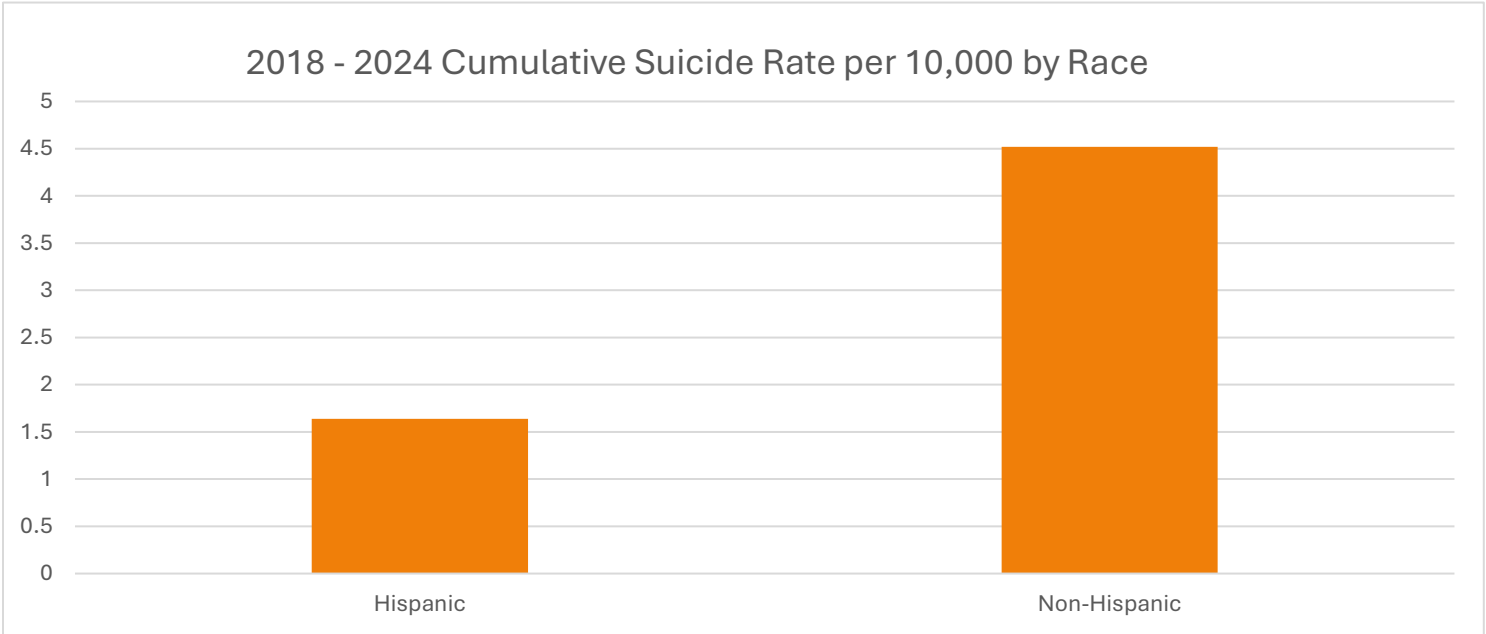
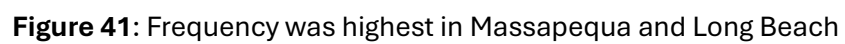


Figure 40: Rates were highest in non-Hispanics.

 11 - 14
 14 - 20
 20 - 31
 Suppressed



2018-2024 Suicide Crude Rate per 10,000 population

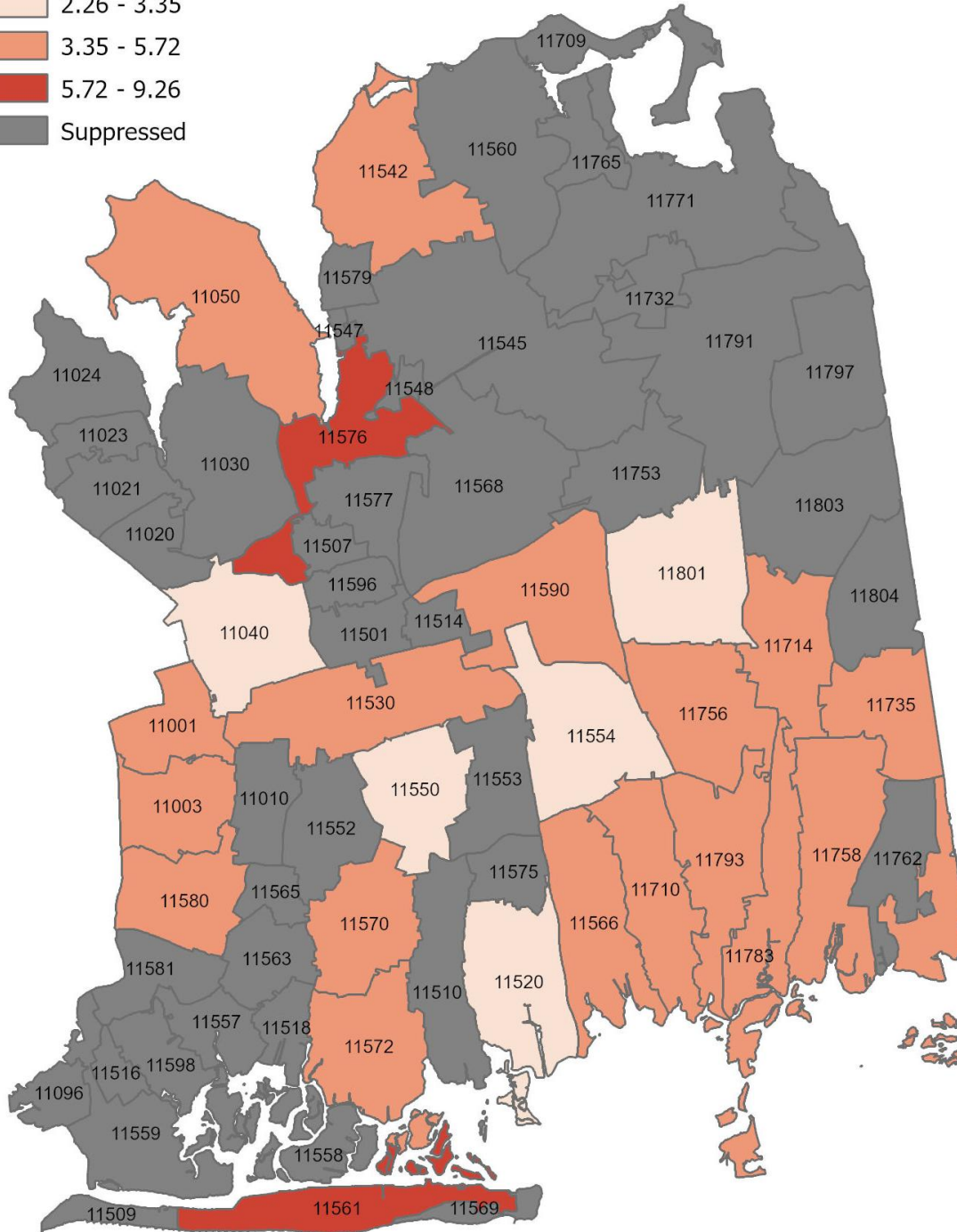
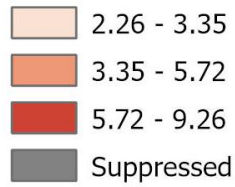


Figure 42: Of the unsuppressed zip codes, Roslyn and Long Beach had the highest rates per 10,000.

Methods

Data Source: NYS SPARCS, 2018 – 2024 and NYS Vital Statistics, 2018 – 2024 [\(Excluding NYC data in 2024\)](#)

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.

IV. Disclaimers

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Rates calculated using small numbers may be statistically unstable.

