

# Adequacy of Advance Directives in Patients Admitted to the Intensive Care Unit

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## Introduction

- Advance directives (AD) allow patients to state their wishes regarding medical care when unable to do so by using a living will and/or power of attorney (POA).
- A recent study concluded that patients who have a Do Not Resuscitate (DNR) status and are admitted to the Intensive Care Unit (ICU) have a higher mortality rate.
- Research indicates that care received by patients in the ICU does not always align with their wishes.
- One study found that 11% of healthcare providers use chest compressions if a DNR patient sustains cardiopulmonary arrest.
- These results indicated that in-depth analysis of the frequency, adequacy, and efficacy of ICU admission for DNR patients could potentially improve the quality of ADs as well as the management of patients with ADs.

## Objectives

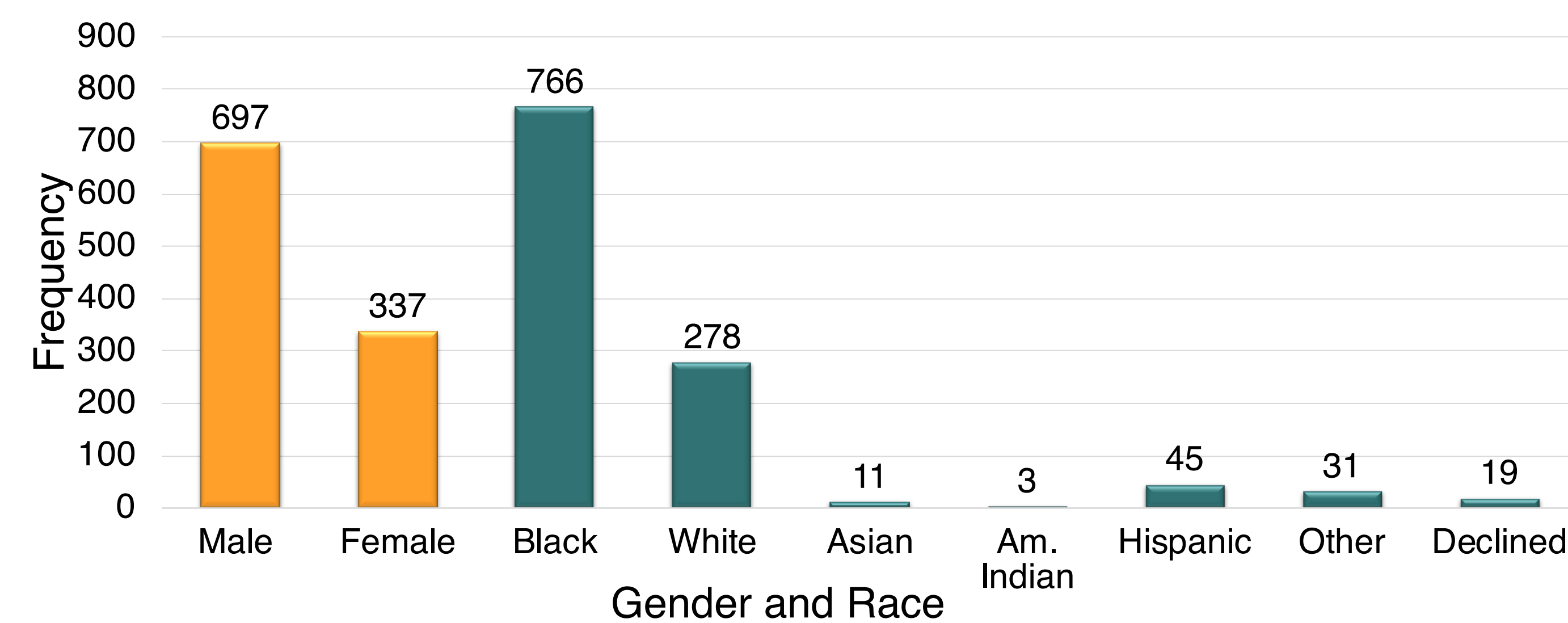
- Determine the number of patients admitted to the ICU with an AD
- Determine if the AD outlined specific wishes
- Observe life support measures given with regards to the AD
- Conclude if having an AD limits the number of life support procedures that the patients receive

## Methods

- A retrospective chart review of 1134 patients admitted to University Medical Center of New Orleans (UMCNO) was completed.
- Inclusion criteria:
  1. Patients age 18 or older
  2. Patients treated in the UMCNO ICU between August 2015 and March 2019
- Data collected:
  1. If the patient had an AD, POA, or both
  2. Demographic information of gender and race
  3. Specific wishes regarding life support measures
- All statistical analyses were carried out in SAS 9.4.
  1. Fisher's exact and Pearson chi-square tests were used to assess the associations between presence of ADs and demographic factors
  2. Logistic regression was carried out and odds ratios (OR) calculated to assess potential the relation between ADs and sociodemographic factors (e.g. gender, race)

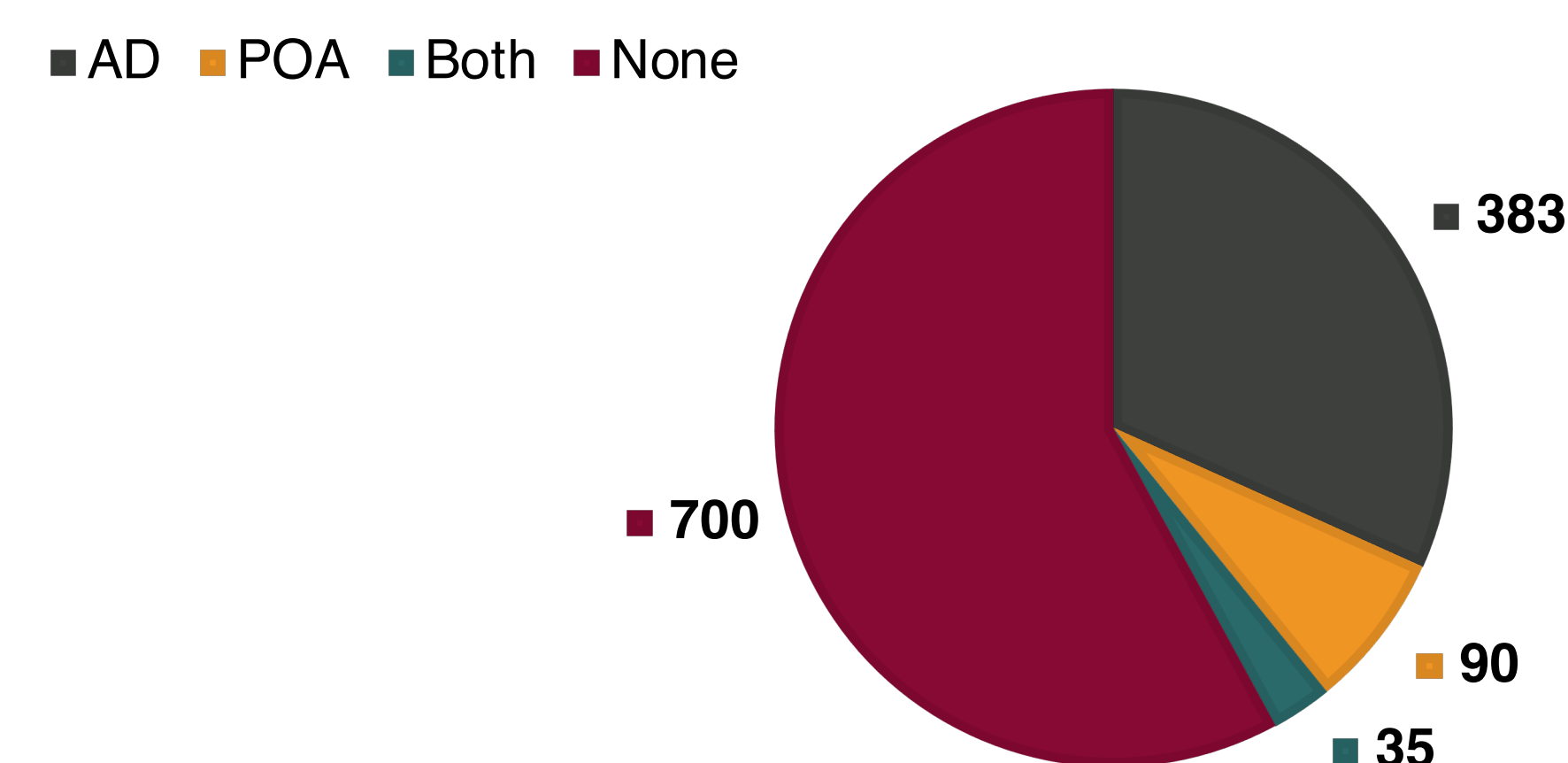
## Demographics

Gender and Race vs. Frequency



## Amount of AD and POA Present

Frequency of AD and POA



## Specific Wishes

Specificity vs. Frequency



## Life Support Measures

	Yes Life Support	No Life Support	Total
Yes AD	153	230	383
No AD	188	562	750

## Results and Conclusions

### Results

- Our study population consisted of 1134 patients
  - 697 patients were males and 437 females
  - There were 68% Black, 25% White, 4% Hispanic, <1% Asian, <1% American Indian, 2.7% other, and 1.6% declined.
  - The odds of having an AD for Blacks vs. Whites were 1.742 with a CI of 1.272 to 2.386
- At time of admission to the ICU, 383 had an AD and 90 had a POA but only 24 AD and 46 POA stated specific wishes.
- Life support measures were given to 153 patients with an AD and 188 out of 750 without an AD. Chi-squared analysis showed that the chi-square value was 26.6859; p-value was 2.39392e-7.
- Among patients with ADs, 26.3% received care aligning with their wishes compared to the 27.63% that did not receive care aligning with their wishes

### Conclusions

Comparing the demographic information, it was found that blacks were more likely to have an AD than whites. We also found that patients with an AD were more likely to not receive life support measures. However, about one fourth of patients did receive care aligning with their wishes. Low numbers of ADs and POAs suggest that patients should be educated and encouraged to put in place such documents prior to experiencing life threatening conditions.

## Limitations and Future Studies

### Limitations

The interface where the data was apprehended (Epic) was difficult to navigate due to the poor quality of the data storage, resulting in inter-rater reliability. The interface where the data was stored (RedCap) was not entirely clear either and could lead to further inter-rater reliability.

### Potential Future Studies

1. There were a vast amount of a document signed by patients that indicated that they were aware of ADs, but the patient never created an AD. Why is this the case?
2. Why do many patients lack an AD?
3. Why do most of the ADs not state specific needs?



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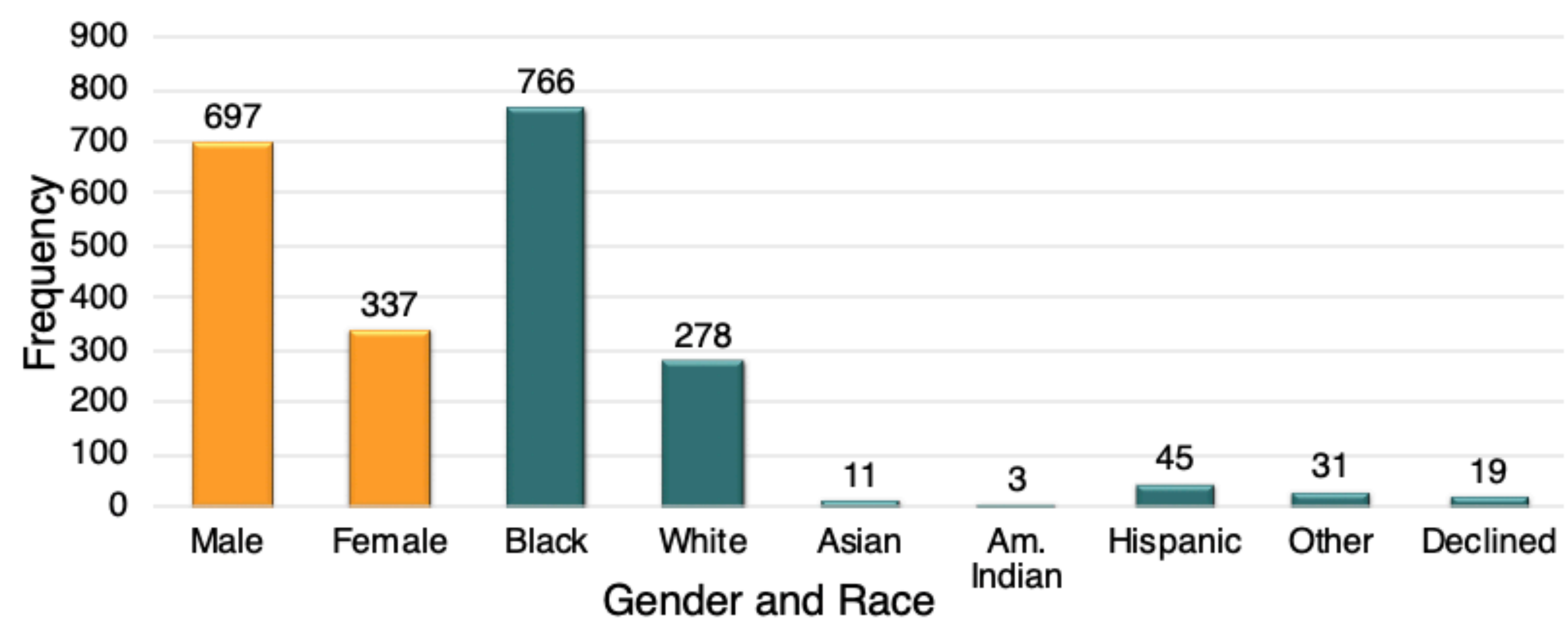
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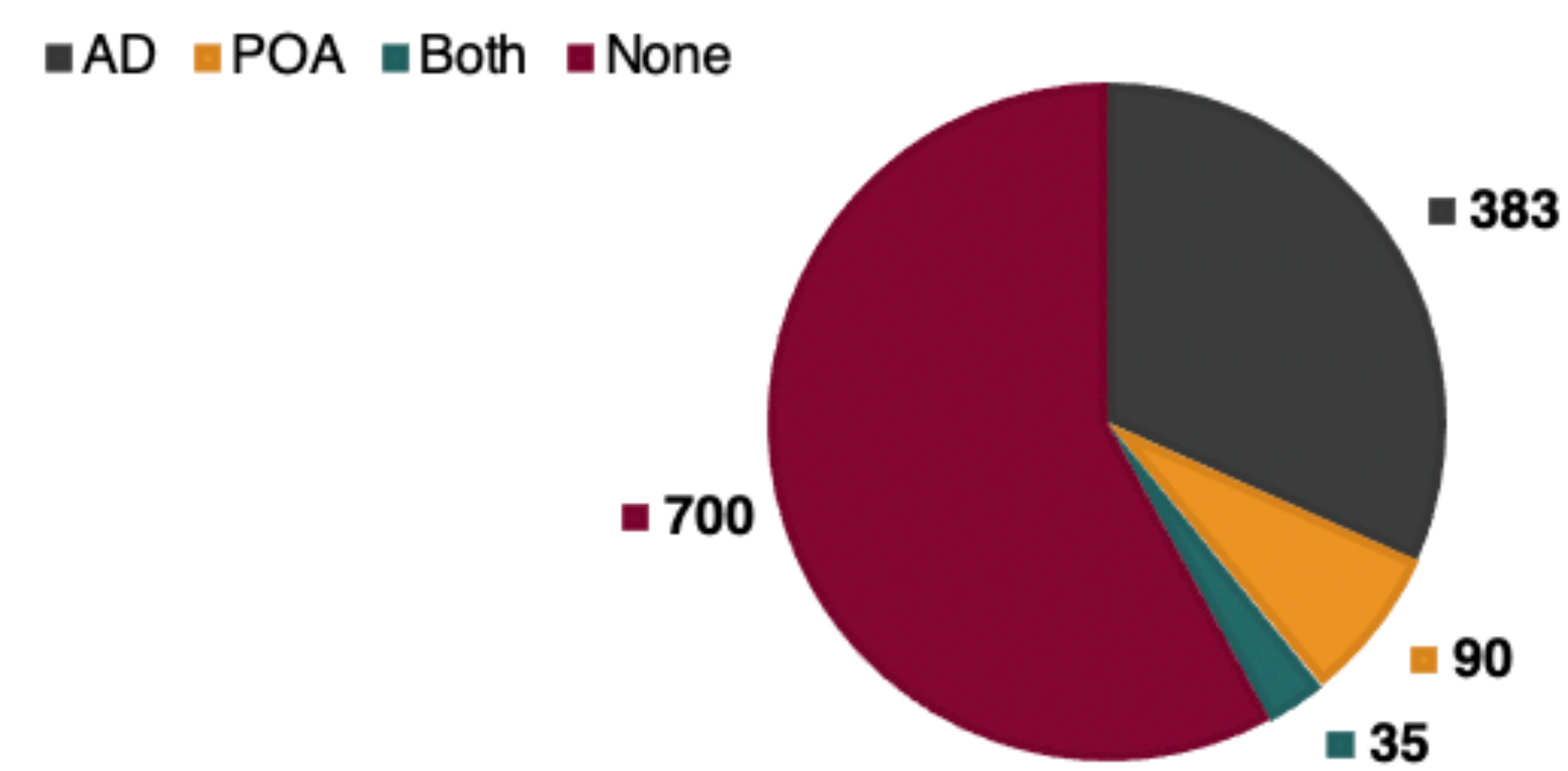
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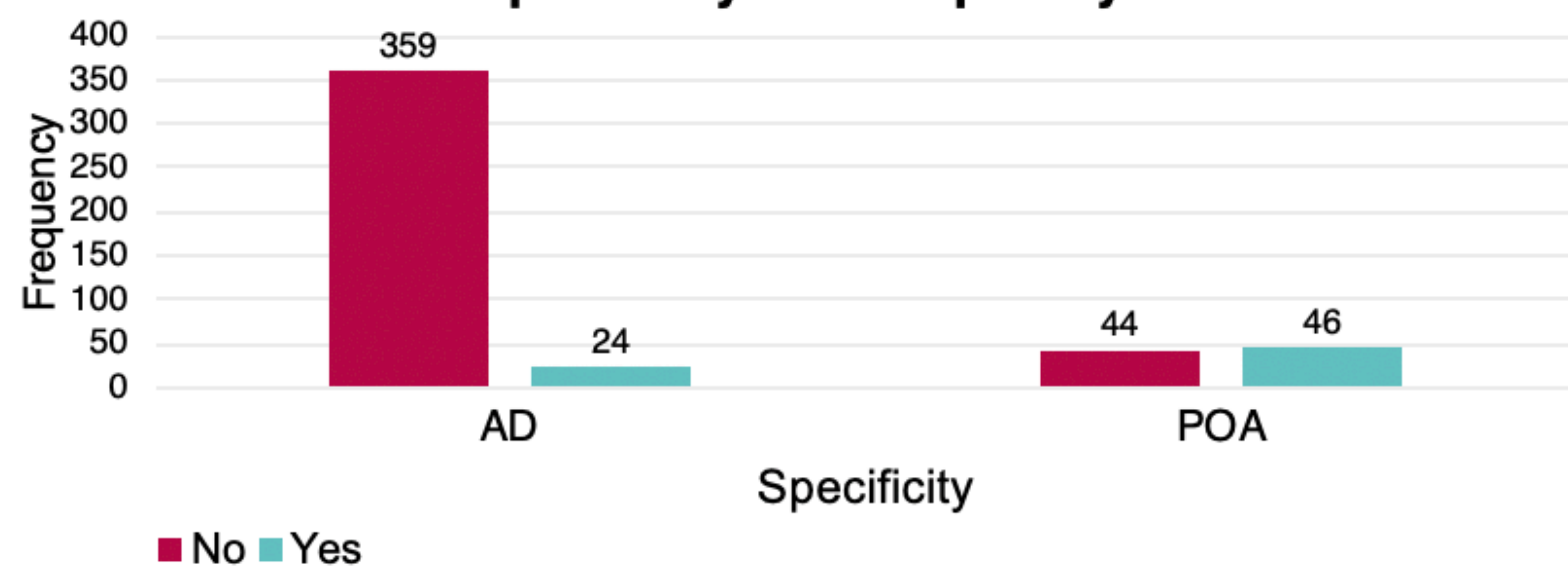
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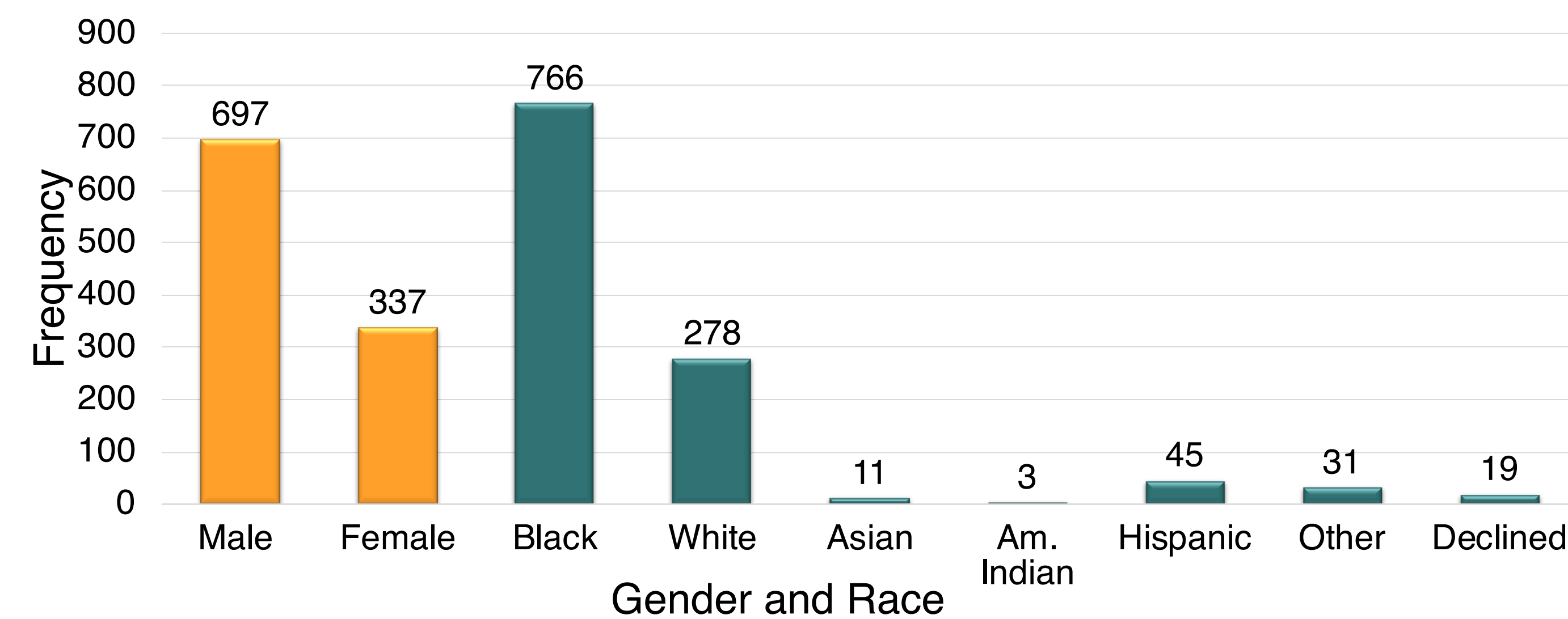
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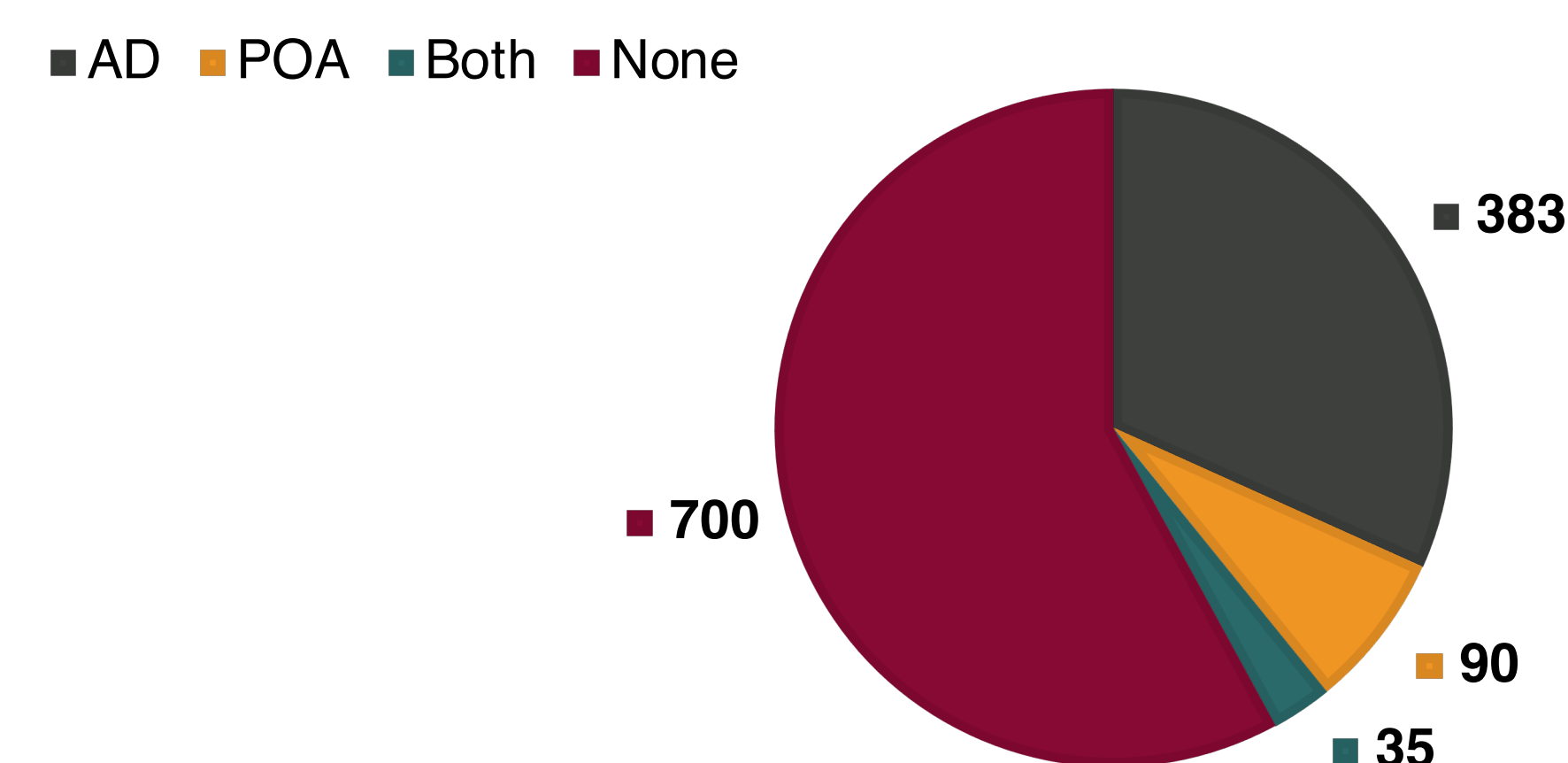
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## Results and Conclusions

### Results

- Our study population consisted of 1134 patients
- 697 patients were males and 437 females; the odds of having an AD were 0.742 with a CI 0.584 to 1.454
- There were 68% Black, 25% White, 4% Hispanic, <1% Asian, 3 <1% American Indian, 2.7% other, and 1.6% declined.
- The odds of having an AD for Blacks vs. Whites were 0.743 with a CI of 0.451 to 1.224
- At time of admission to the ICU, 383 had an AD and 90 had a POA but only 24 AD and 46 POA stated specific wishes.
- Out of 383 patients with an AD, 47 received care aligned with their wishes and 2 did not.
- Life support measures were given to 153 patients with an AD and 188 out of 750 without an AD. Chi-squared analysis showed that the chi-square value was 26.6859; p-value was 2.39392e-7.

### Conclusions

Almost all the patients that required a more intense level of care received exactly as desired. It was found that males were more likely to have an AD than females and blacks were more likely to have an AD than whites. We also found that patients with an AD were are more likely to not receive life support measures. Low numbers of ADs and POAs suggest that patients should be educated and encouraged to put in place such documents prior to experiencing life threatening conditions.

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