

How Do Age and Gender Affect COVID-19 Mortality?

Mortality by Three Age Groups

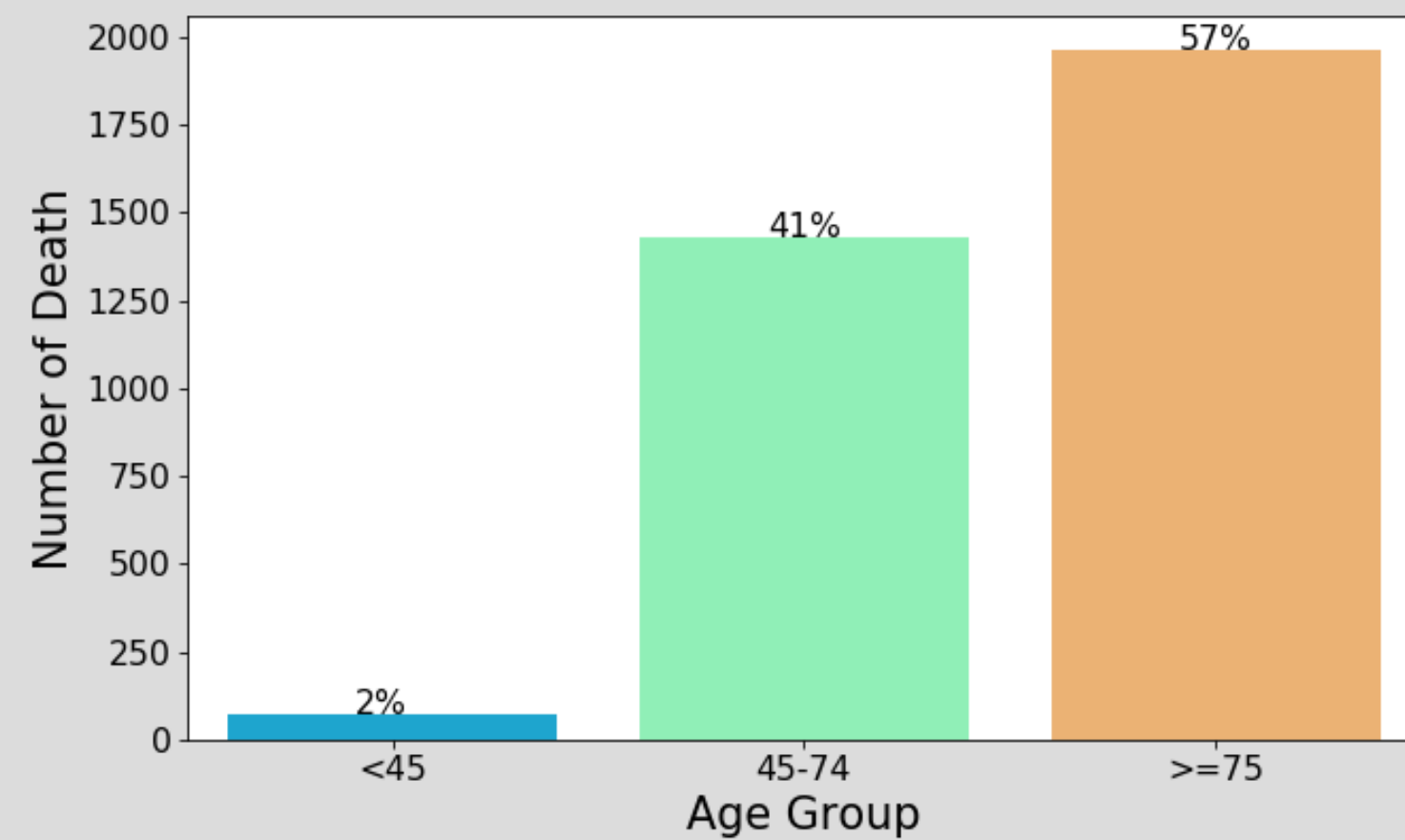


Fig 1: COVID-19 is substantially dangerous not only for the elderly but also for middle-aged and upper middle-aged adults. 41% of deaths are from age group 45-74, and 57% of deaths are from age group 75+.

Mortality by Gender

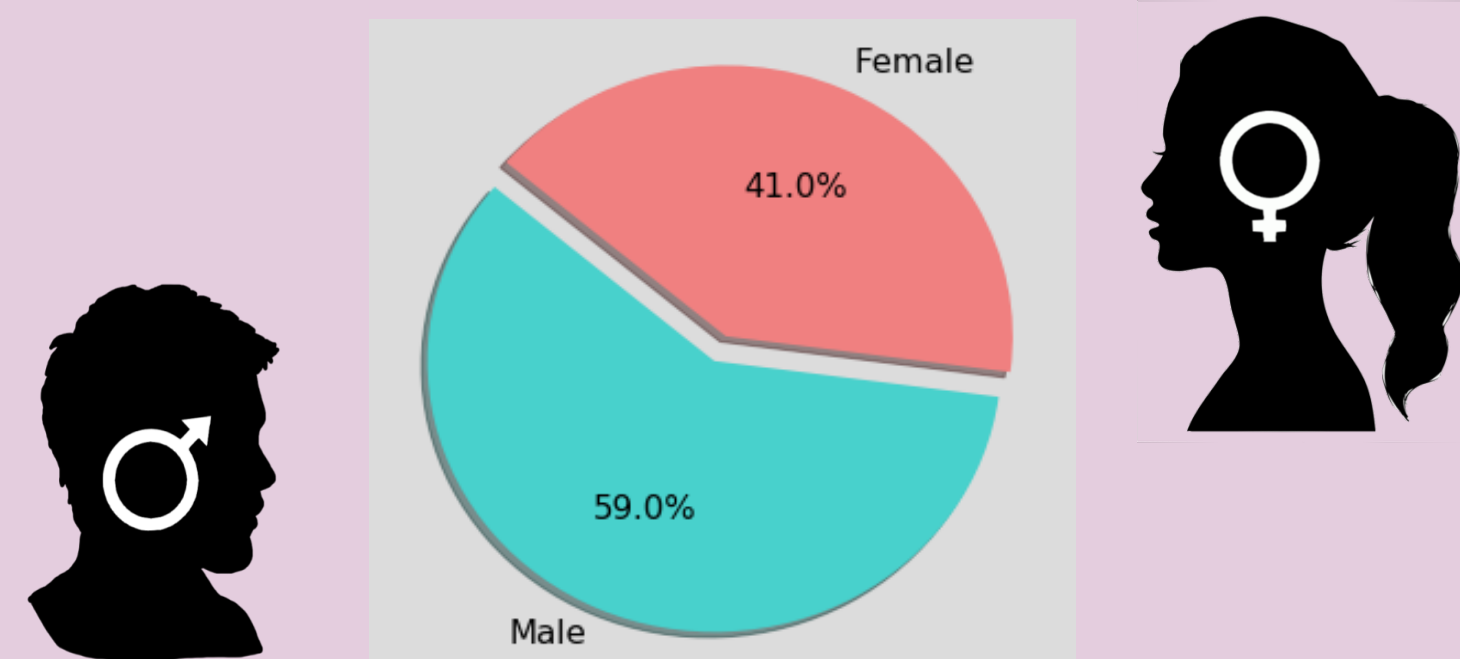


Fig 2: More men (59%) die due to COVID-19 than women (41%).

Mortality Age by Gender

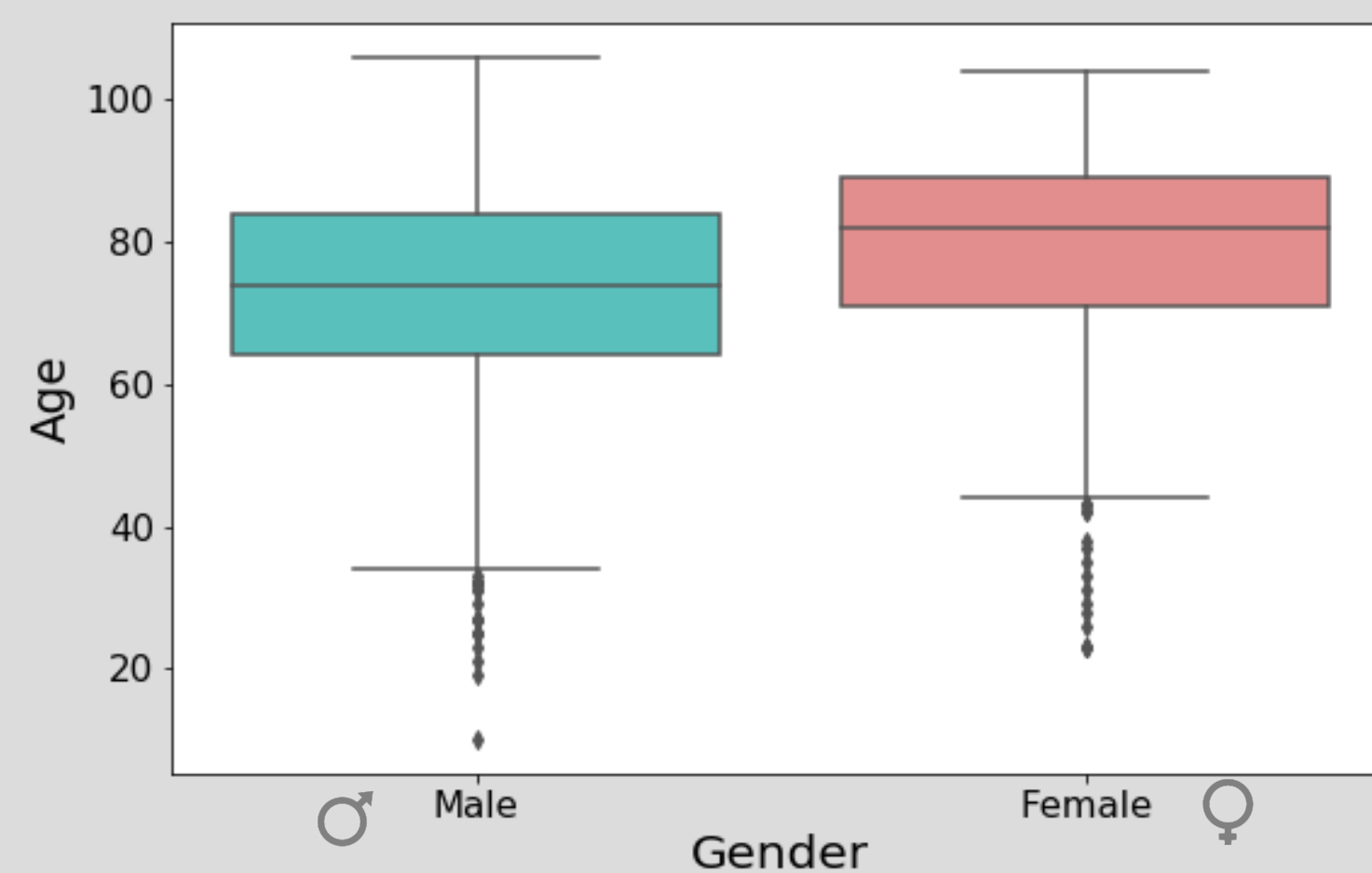


Fig 3: Men who die due to COVID-19 are younger than women. Men median age: 74 years, IQR: [64-84] vs. Women median age: 82 years, IQR: [71-89]

Introduction

As of 3/11/2021, one year has passed since the first COVID-19 case reported in San Diego county, and there have been a total of 3,462 COVID-19 deaths in the community. Now, there is sufficient individual data to establish key facts about the age and gender perspective on COVID-19 mortality. The purpose of this study is to examine and analyze the effects of age and gender on COVID-19 mortality by using data of individuals in San Diego county. Obtaining insight in these factors will help identify the most vulnerable populations, ensuring the better targeting of prevention efforts to protect these high-risk groups. San Diego COVID-19 individual mortality data with corresponding demographic information (age and gender) used in this study were collected from San Diego County Government for an entire year (3/11/2020 to 3/11/2021).

Mortality Gender Distribution by Age Group

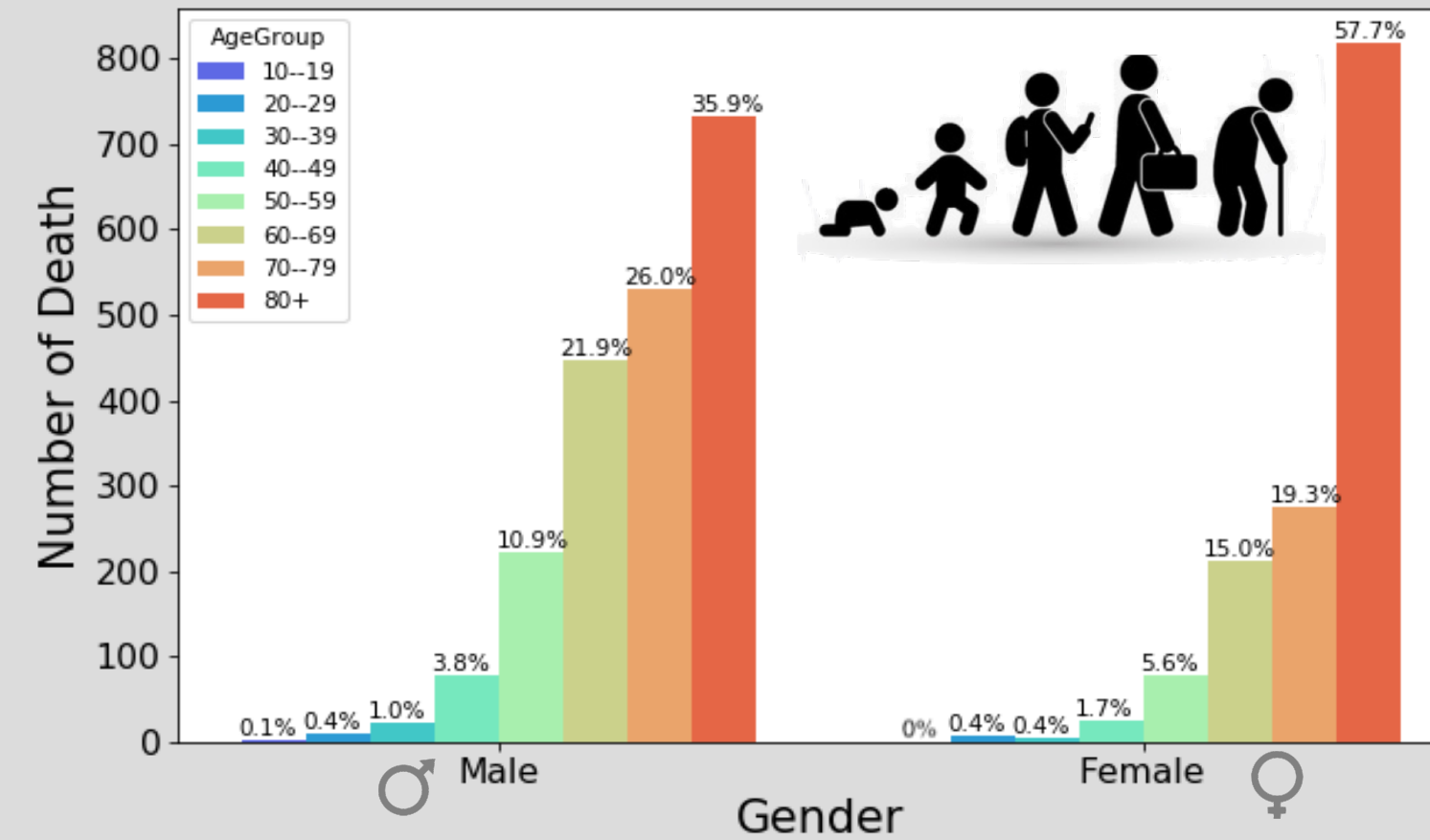


Fig 4: There is a steeper progression of mortality with age. COVID-19 has strong age gradient in risk of death for both men and women.

Mortality Age Group Distribution by Gender

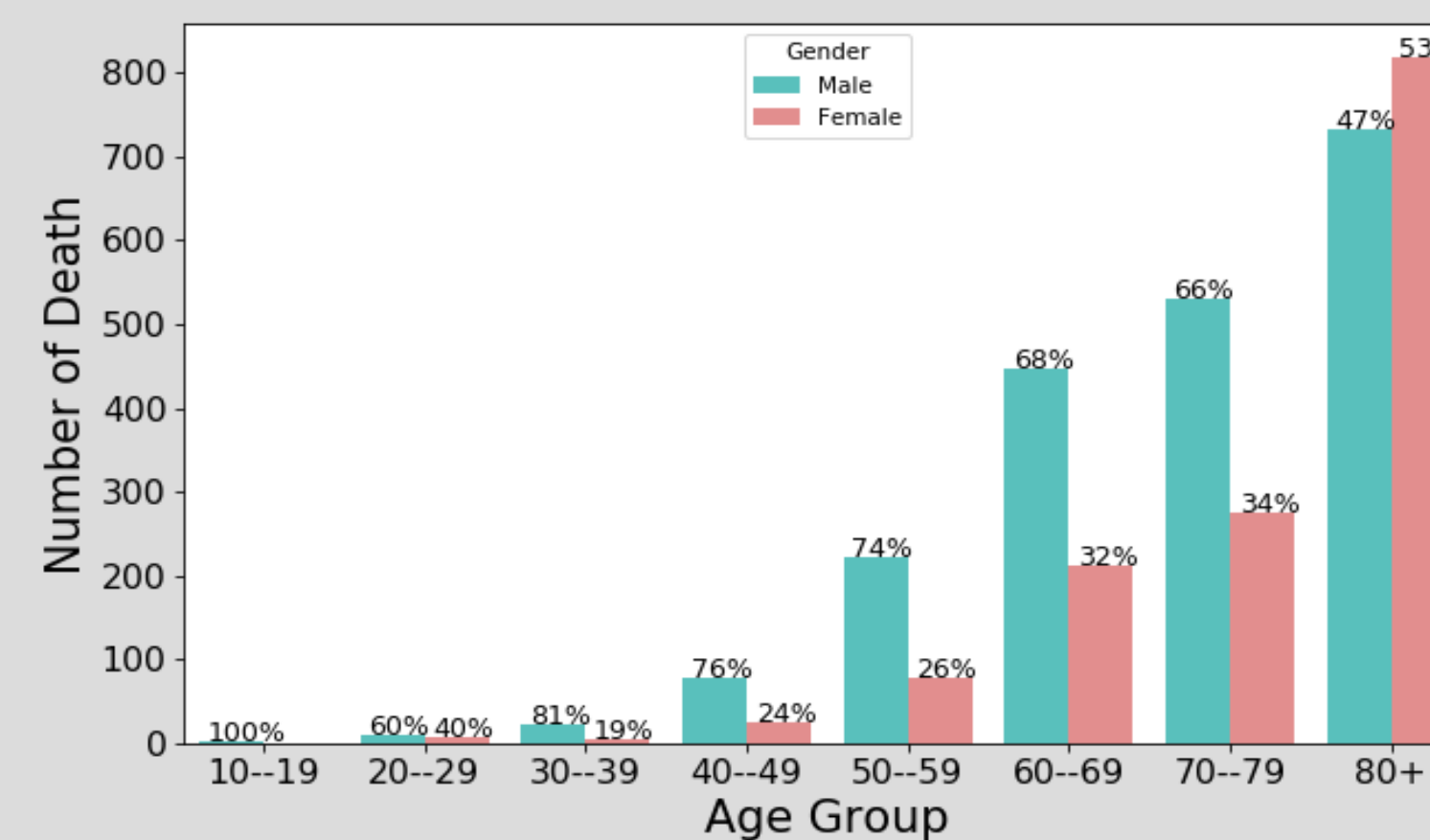


Fig 5: The proportion of male deaths are higher than that of female deaths across all age groups except 80+.

Mortality Rate (Per 100,000 Population) by Age Group and Gender

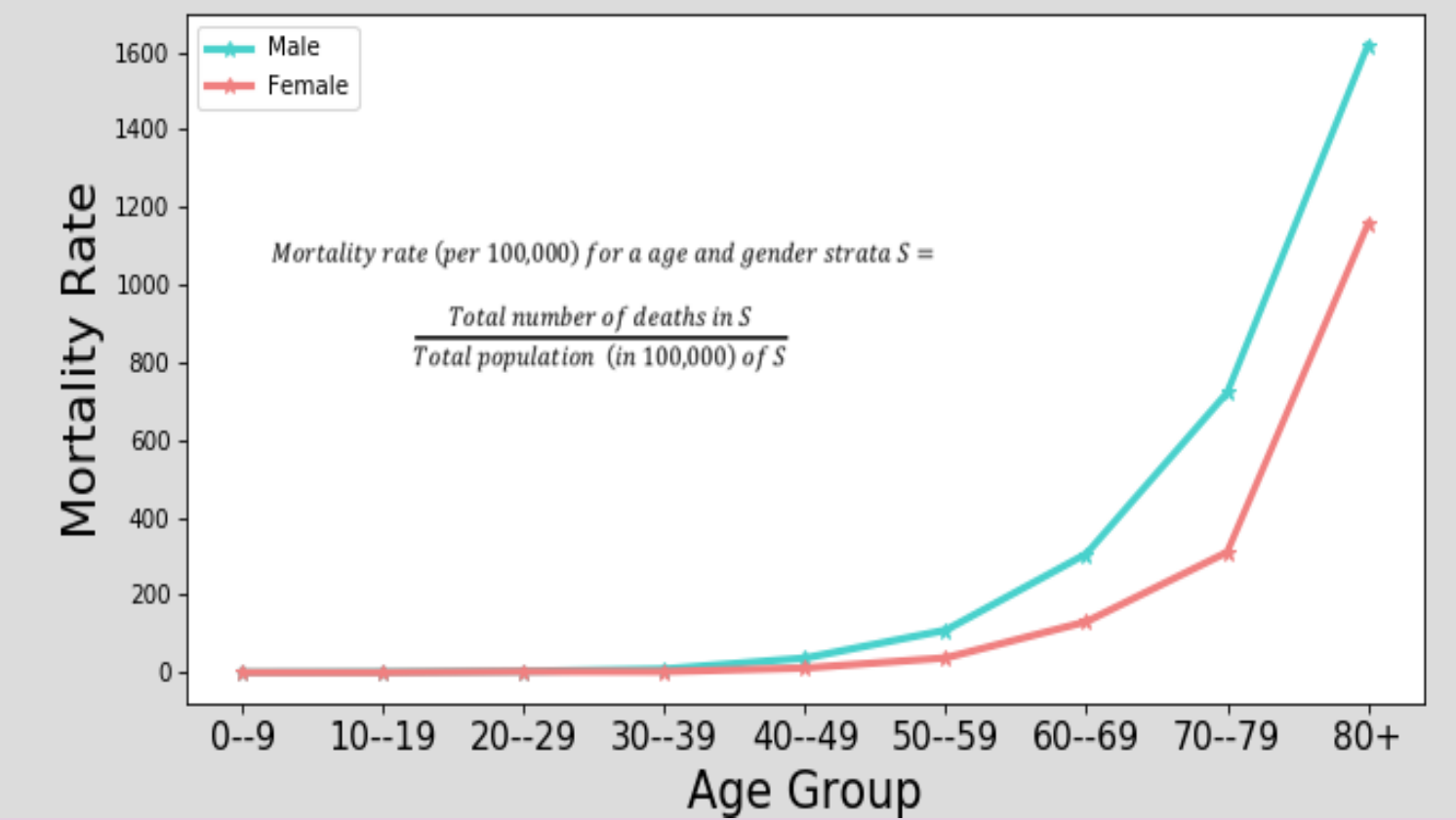


Fig 6: Male COVID-19 mortality rates are consistently higher than female mortality rates across all age groups.

Relative Risk (Gender Mortality Ratio) (95% Confidence Interval)

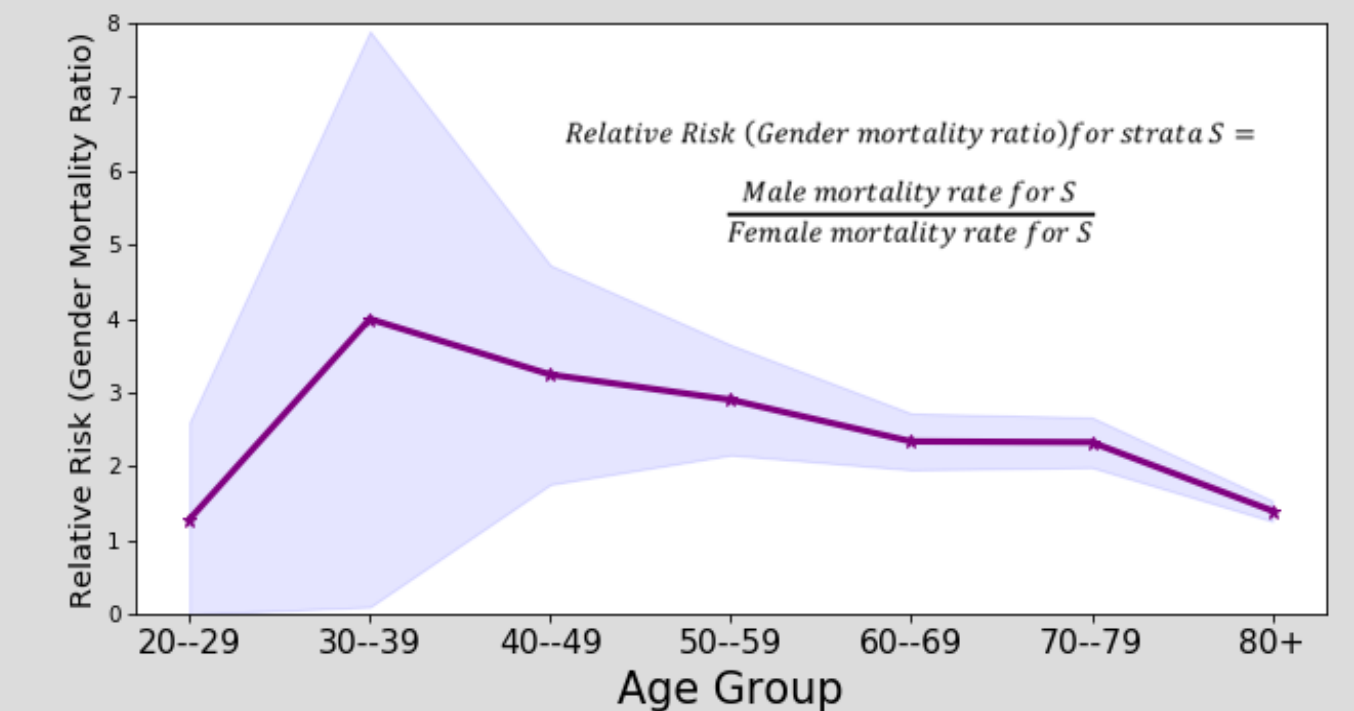


Fig 7: The relative risk of COVID-19 death is higher for men than women across all age groups, with the greatest gender difference at ages 30-39, decreasing thereafter with the smallest difference at 80+.

Conclusion

This study in San Diego County showed a similar pattern of COVID-19 mortality by age and gender with what the global data suggested:

1. COVID-19 is substantially more dangerous not only for the elderly but also for middle-aged and upper middle-aged adults.
2. COVID-19 mortality risk is higher for men than women.
3. COVID-19 mortality rates (per 100,000 population) in men are consistently higher than women across all age groups.

By identifying the most vulnerable populations in the community, healthcare personnel can ensure the better targeting of prevention and intervention efforts to improve chances of survival for these high-risk groups during the pandemic and beyond.