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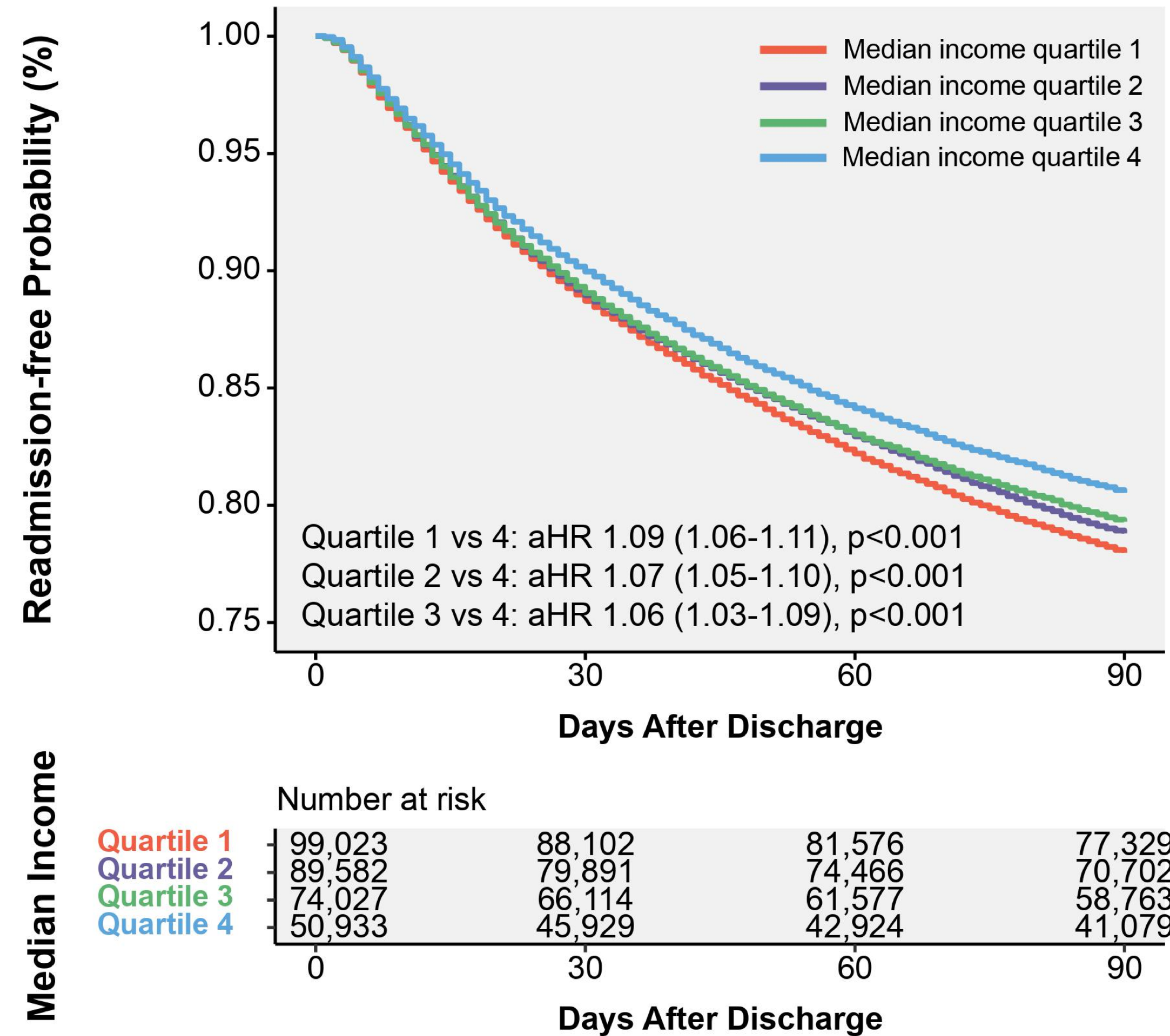Cook County Hospital, Chicago[1], Dow Medical College[2]

Introduction

Acute pancreatitis (AP) is one of the leading causes of hospitalization in the United States. Patients with AP frequently get readmitted and that proves to be a great burden on our healthcare system. Age, male sex, tobacco use, alcohol use, and necrotizing pancreatitis have been linked to a higher readmission rate in AP patients. However, studies on the impact of socioeconomic status are lacking. Our study attempts to find the impact of income on the readmission rates in patients admitted for AP.

Methods

We queried the National Readmission Database (NRD) from 2017 to 2018 to identify patients with a primary diagnosis of AP. Those who died during the index hospitalization were excluded when examining readmission rates. Multivariable Cox proportional-hazards regression was used to study the impact of income on 90-day readmission adjusted for age, sex, comorbidities, hospital characteristics, and primary payer.

Kaplan-Meier curves of readmissions after acute pancreatitis stratified to median income quartile

Results

A total of 313,565 AP patients were identified, 99,023 of whom belonged to median income quartile 1, 89,582 to quartile 2, 74,027 to quartile 3, and 50,933 to quartile 4 with quartile 4 having the highest income. Slightly more than half of each quartile group were men (53.1%, 52.8%, 53.0%, 53.5%, respectively). Patients with lower income had higher prevalence of comorbidities. When compared with the highest income quartile (quartile 4), patients in quartiles 1, 2, and 3 were associated with an increasingly higher hazard of readmission (quartile 1, aHR 1.09, p< 0.001; quartile 2, aHR 1.07, p< 0.001; quartile 3, aHR 1.06, p< 0.001).

Conclusion

Our study finds a positive correlation between poverty and the 90-day readmission rate in AP patients. Alcohol use is one of the top causes of pancreatitis in the US. It would be interesting to investigate if there is a difference in the prevalence of substance use in patients of various economic strata that could be impacting the readmission. Furthermore, it is imperative that we bring reforms in our financial and health policy to make it more equitable in order to alleviate some of the disparities we see.