

## INTRODUCTION

Portal vein thrombosis is a relatively rare disease, it is however becoming increasingly recognized in developed countries. Reliable data on epidemiological trends and outcomes of hospitalization is lacking. This study aimed to describe the epidemiological trends and the sociodemographic factors that affect outcomes of PVT hospitalization.

## METHODS AND MATERIALS

This was a retrospective longitudinal study involving hospitalizations with portal vein thrombosis (PVT) in the US from 2010 to 2019. We sourced data from the Nationwide Inpatient Sample databases from 2010 through to 2019. The study involved two cohorts of hospitalizations; any hospitalization with PVT, and hospitalizations with a principal discharge diagnosis of PVT. We calculated the admission rate and the incidence of PVT per million adult hospitalizations during each calendar year. We used multivariable regression trend analysis to obtain trends in mortality, length of stay (LOS), and total hospital charges (THC) adjusted for age categories, sex, and race.

## RESULTS

The adjusted incidence rate of PVT per million hospitalizations increased from 666 in 2010 to 1898 in 2019, with an annual percentage change (APC) of 13.8% ( $p < 0.001$ ). PVT admission rate per million hospitalizations increased from 68 in 2010, to 189 in 2019, with an average APC of 14.8% ( $p < 0.001$ ). There was a statistically significant reduction in trends of mortality rate from 9.5% to 7.9% over the decade ( $p < 0.017$ ). We also noticed a gradual decline in LOS, from 9.2 days in 2010 to 8.0 days in 2019.

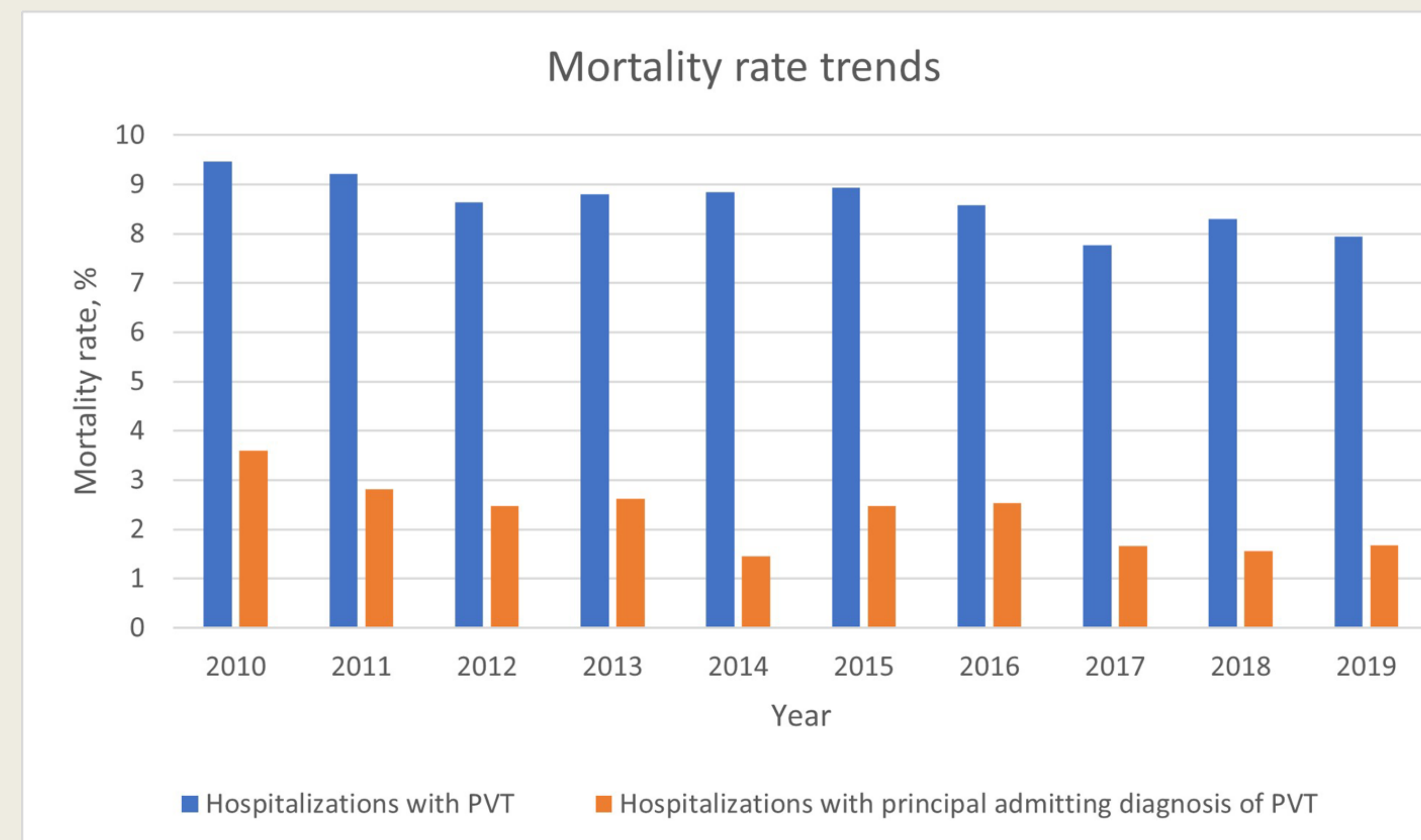


Figure 1: Trends in mortality rates among total hospitalizations with PVT and admissions with PVT as principal diagnosis.

## RESULTS – cont’d

There was a significant uptrend in the mean THC over the decade from 99,626\$ to 109,558\$. Multivariate analysis showed that middle-aged and the elderly compared to young patients were more likely to have higher mortality rates. There was no significant difference observed in mortality rates, LOS and THC when both genders were compared. The black race had a 30% higher odds of mortality over the period compared to Whites ( $p < 0.001$ ). The THC was significantly higher in Hispanics compared to Whites ( $p < 0.001$ ).

## DISCUSSION

While the crude incidence rate significantly increased over the years, we also noticed a gradual decline in the mortality rates over the same period; this observation is likely due to the advancements in the diagnosis and management of PVT over the decade. The middle-aged, elderly, Black and Hispanic populations are often associated with adverse outcomes during hospitalization for PVT. Additional studies are needed to further explore these findings.