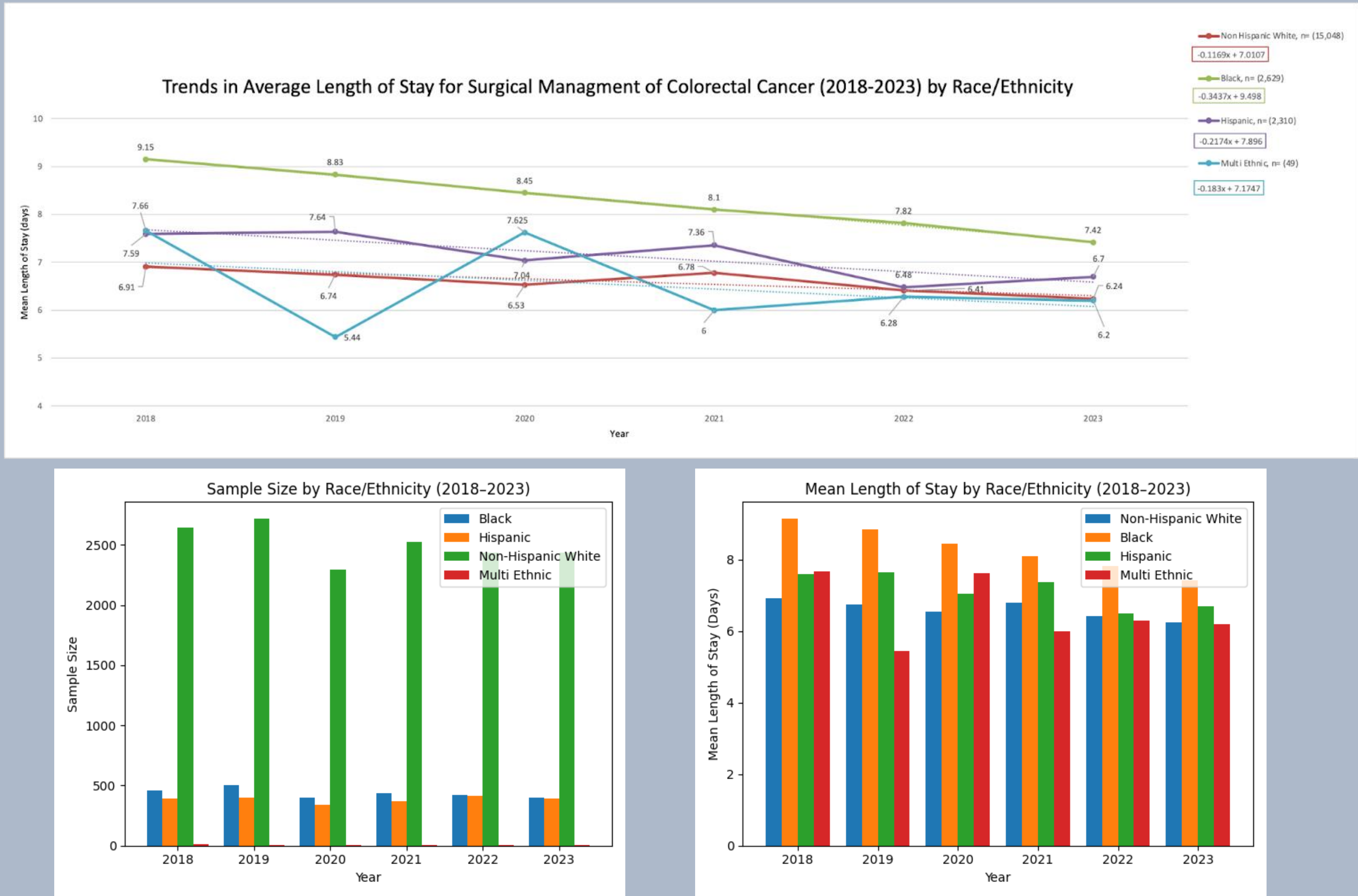


ABSTRACT
Background: Colorectal cancer (CRC) is the second leading cause of cancer-related death in the United States. The incidence rates of CRC have risen, leading to the recommended screening age decreasing from 50 to 45. However, disparities in screening and access to care continue to persist, particularly in underserved communities, often leading to later-stage diagnoses and worse surgical outcomes. This study examines racial and ethnic disparities in hospital length of stay (LOS) for surgical management of CRC in New York State (NYS) from 2018–2023, a period also shaped by the COVID-19 pandemic, which disrupted preventive care and may have influenced LOS. Methods: We conducted a retrospective analysis of the NYS Statewide Planning and Research Cooperative System (SPARCS) Inpatient De-Identified discharge data set from 2018-2023. Adult patients undergoing surgical management of colorectal cancer were identified using the Clinical Classifications Software Refined (CCSR) diagnosis code “Gastrointestinal Cancers-Colorectal” and the CCSR procedure code, “Colorectal”. Only surgical treatments were included for analysis. Patients were categorized by race/ethnicity, and the mean LOS was calculated annually. Linear trends were evaluated across groups. Results: Black/African American patients consistently had the longest hospitalizations, with a mean LOS of 8.3 days, decreasing from 9.15 in 2018 to 7.42 in 2023. The slope showed a decrease of -0.34. Spanish/Hispanic patients averaged 7.1 days, declining from 7.59 to 6.70 (slope: -0.22). Multi-Ethnic patients demonstrated variability per year (mean 6.5 days, slope: -0.18). Non-Hispanic (NH) White patients, however, had the shortest duration of hospital stay with a mean of 6.6 days and slope of - 0.12. From 2018-2023, the data showed a statistically significant difference in LOS between Black/African American patients and NH White patients, with p values less than 0.05 per year for those two groups. Discussion: This analysis highlights persistent racial and ethnic disparities in LOS following colectomy for colorectal cancer. Longer hospitalizations among Black and Hispanic patients may reflect later-stage presentation due to limited access to comprehensive medical care and higher comorbidities. The COVID-19 pandemic likely exacerbated existing inequities by disrupting screening and delaying diagnosis, particularly in underserved communities. Although overall LOS declined across all groups, the persistent gap underscores the need for targeted public health interventions to improve access to timely screening, surgical care, and support in vulnerable populations.
BACKGROUND

Colorectal cancer (CRC) is one of the most common malignancies worldwide and remains a leading cause of cancer-related mortality in the United States. Around 150,000 people are diagnosed with CRC annually in the US. Despite advances in screening and treatment, CRC continues to pose a significant public health burden, particularly among historically marginalized populations.

- Black patients experience higher CRC incidence and mortality compared with White patients. Black patients 32% more likely to die from CRC than White patients. These disparities have persisted despite overall improvements in cancer outcomes over recent decades.
- Management of colorectal cancer depends on the stage of disease at diagnosis and may include surgery, chemotherapy, radiation therapy, or combinations of these modalities. Surgical resection remains the cornerstone of curative treatment for localized colorectal cancer and is often indicated for stages I–III disease.
- Hospital length of stay following colorectal surgery is an important measure of postoperative recovery. Prolonged LOS may reflect complications, delayed recovery, or structural barriers to discharge such as inadequate social support or access to post hospital care.

METHODS
Study design: Retrospective observational study Data source: SPARCS Inpatient Dataset (2018–2023) Study population: Adult patients undergoing surgical resection for colorectal cancer using CCSR diagnosis code “Gastrointestinal Cancers-Colorectal” and the CCSR procedure code “Colorectal” Exposure variable: Patient race/ethnicity - Nonhispanic White (n=15,048) - Black/African American (n=2,629) - Spanish/Hispanic (n= 2,310) - Multi-Ethnic (N=49) Primary outcome: Hospital length of stay (LOS) following surgical management - Annual length of stay (LOS) for each racial and ethnic group from 2018–2023 was analyzed using Microsoft Excel. Mean LOS values were calculated using the aggregation function within a PivotTable, stratified by race/ethnicity and year. - To assess variability within each group, the standard deviation (SD) of LOS was also calculated. This analysis produced a summary table containing the mean LOS and SD for each racial and ethnic group by year. - The summarized data were then used to construct a multi-series line graph to evaluate trends in LOS across racial and ethnic groups by year. In this figure, year was plotted on the x-axis and mean LOS on the y-axis, with each line representing a distinct racial or ethnic group. - To determine whether differences in LOS between groups were statistically significant, two-sample t-tests were performed to compare the mean LOS across racial and ethnic groups. Statistical significance was assessed using p-values, with p < 0.05 considered statistically significant.
RESULTS



CONCLUSIONS
This aim of this study is to examine the racial/ethnic disparities in the LOS among patients undergoing surgical management of colorectal cancer in NYS. - Our analysis revealed notable disparities in LOS across the observed racial and ethnic groups. Non-Hispanic White patients had an average LOS of 6.6 days, while Hispanic/Latino patients averaged 7.1 days, and multi-ethnic patients had an average LOS of 6.5 days. - Black/African American patients consistently exhibited the longest average LOS at 8.2 days across the 2018–2023 period. Comparisons of each group to their White counterparts showed that all differences were statistically significant, with p-values less than 0.05. - These findings are consistent with prior national studies and suggest that disparities continue to persist though the national average of LOS post surgical management of CRC has decreased from 2018-2023.
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