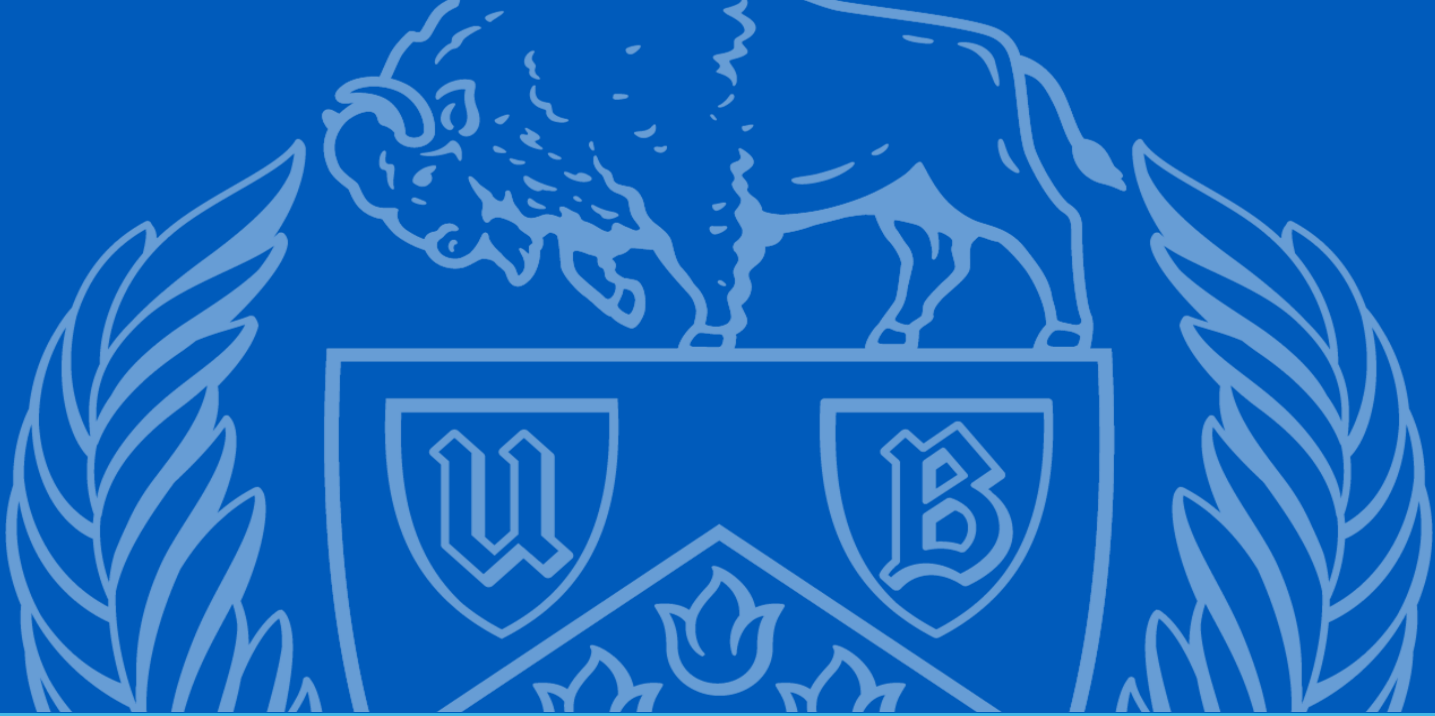


Acute Care Surgery vs. Standard Emergency Department Surgery: Comparison of Hospital Models for Management of Acute Biliary Pathology

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INTRODUCTION

- Acute biliary conditions involving acute cholecystitis, choledocholithiasis, and cholelithiasis potentially require timely cholecystectomy as the definitive management.
- Surgical management in the emergency department (ED) for patients with these conditions may depend on surgeon and operating room availability.
- Hospitals may have a standard emergency department (SED) model with referrals to available private practice surgeons or an Acute Care Surgery (ACS) unit with 24/7 surgeon and OR availability.
- AIM:** To assess access to surgery and outcomes in patients who presented with acute biliary conditions to hospitals with ACS vs. those with SED model of emergency care.

METHODS

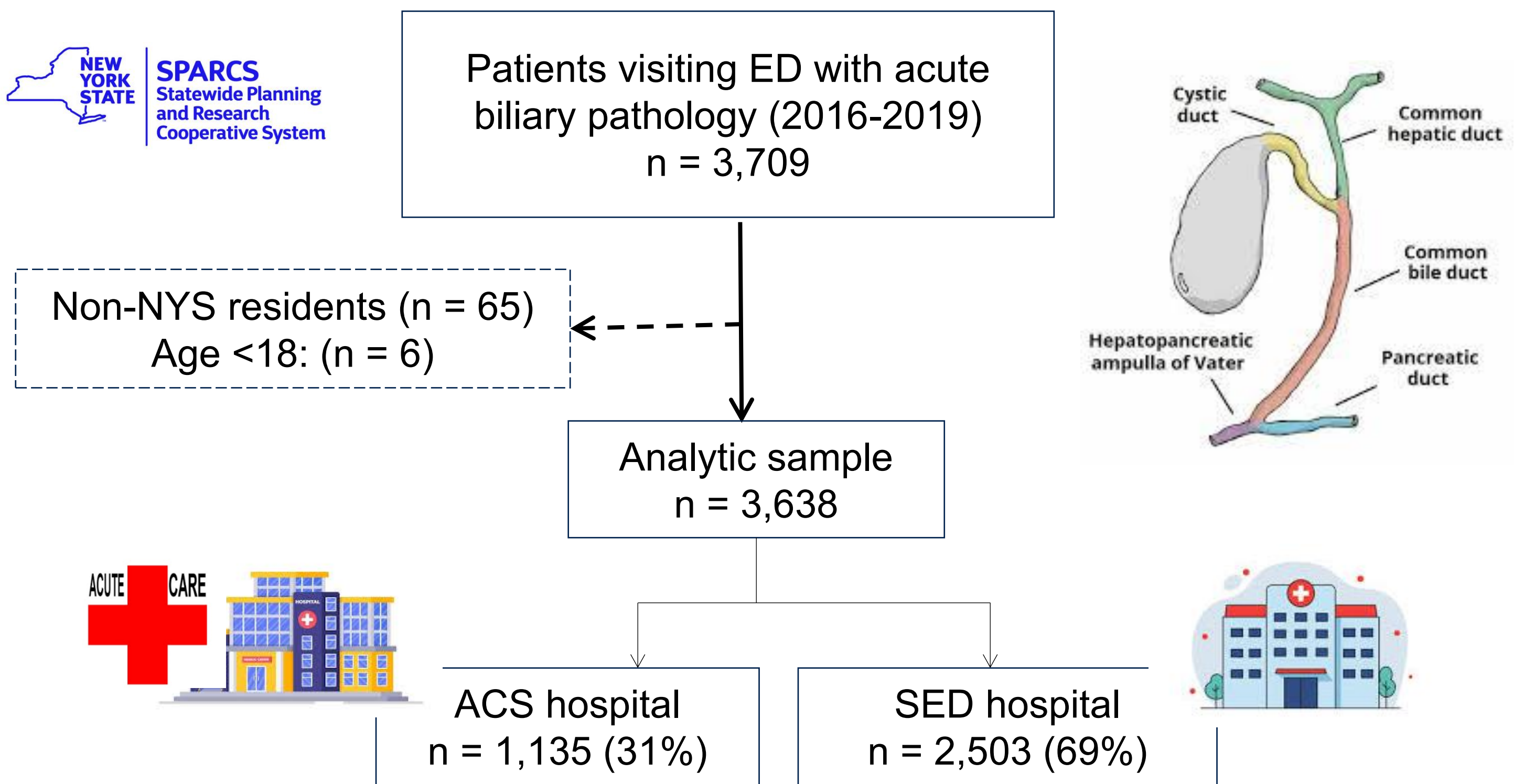
Data source: New York State (NYS) all-hospital, all-payer data (SPARCS), 2016–2019.

Selection of hospitals: Tertiary hospitals in Buffalo, NY, with ACS and SED models of care

Patient sample: Adult NYS residents who presented to ED with acute biliary pathology

Biliary pathology: Cholecystitis, Choledocholithiasis, Cholelithiasis

Matched sample analysis: Patients in ACS and SED groups were matched on age, sex, race, insurance and Charlson Comorbidity Index (CCI) to evaluate outcomes



KEY FINDINGS

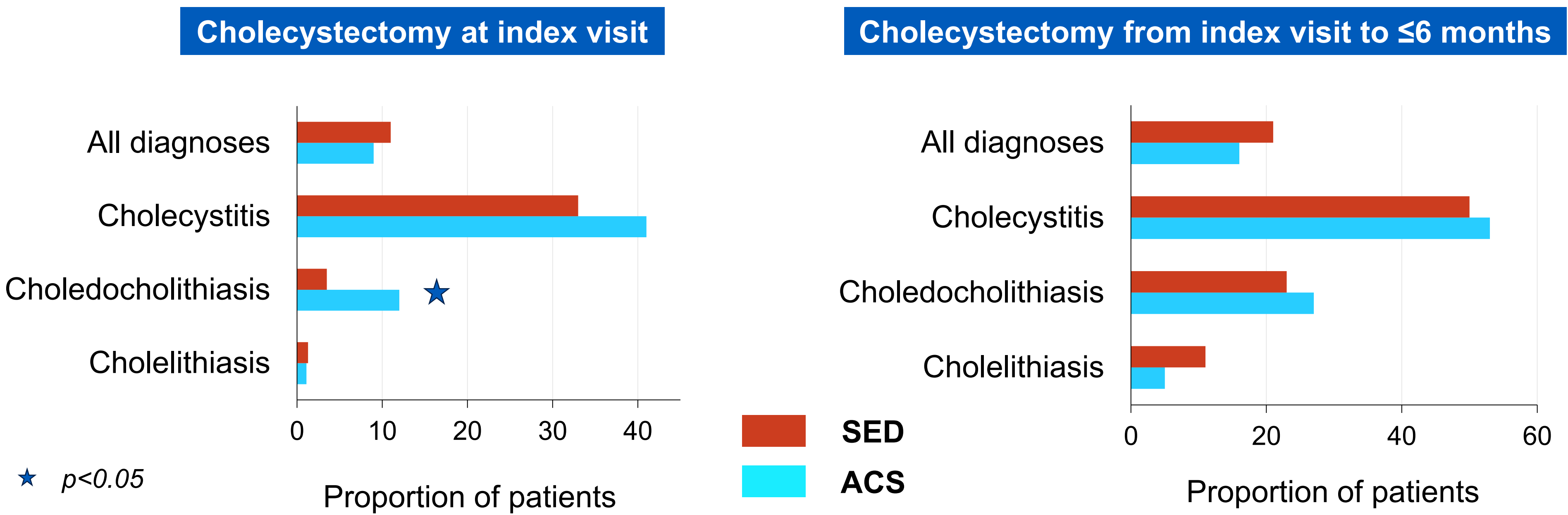
- Patients with Cholecystitis visiting ACS vs. SED facilities had shorter length of stay and less likely to have percutaneous cholecystostomy at index visit.
- Patients presenting with Choledocholithiasis were more likely to undergo cholecystectomy at index visit at ACS vs. SED facilities
- Under- and over-utilization of surgical management at ACS vs. SED facilities require further investigation to improve treatment decision-making.

RESULTS

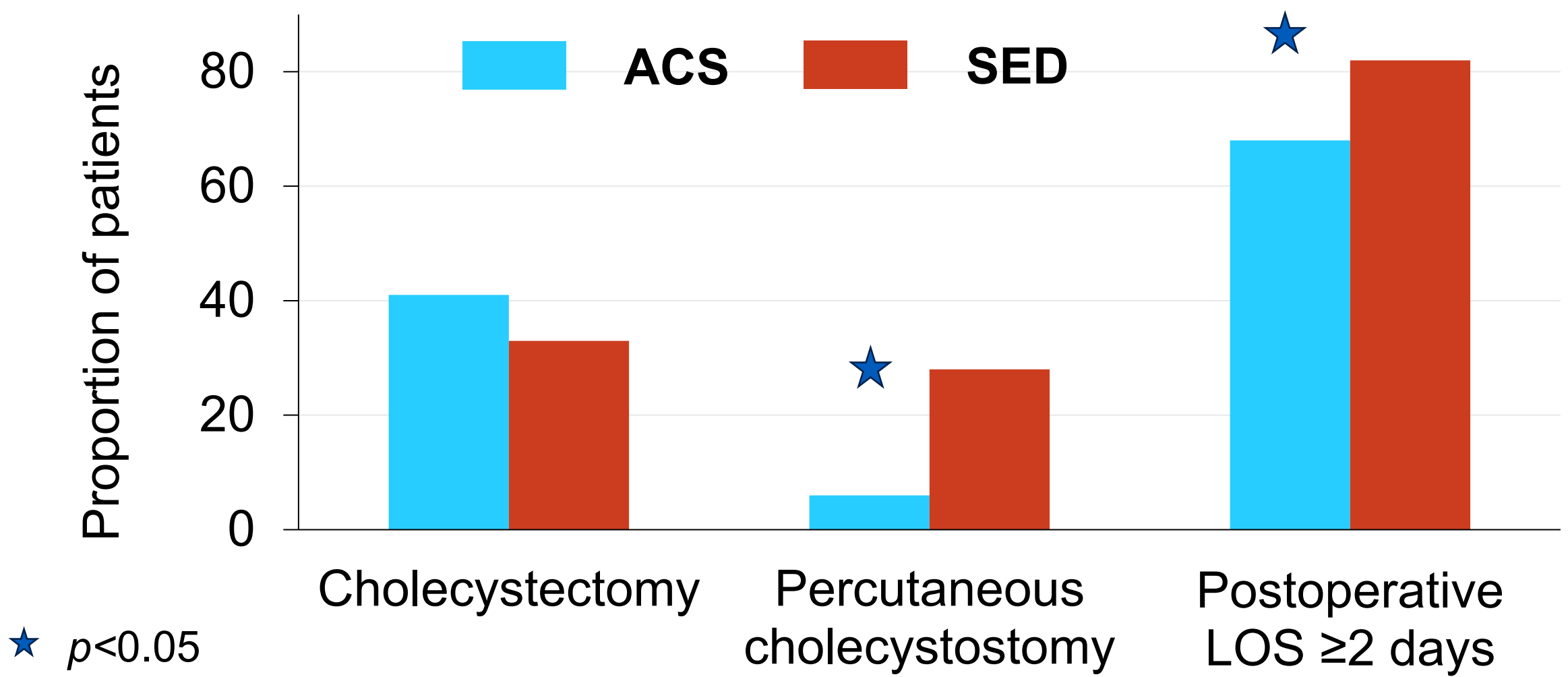
Variable	ACS %	SED %	p
Sample, n	1,135	2,503	
Age (years), mean (sd)	55 (18.1)	59 (19.1)	<0.01
Sex, females	53.7	59.8	<0.01
Race, whites	53.2	61.6	<0.01
Medicaid recipients	40.7	17.3	<0.01
CCI score., mean (sd)	1.7 (1.67)	2.1 (1.81)	<0.01

Patient characteristics among ACS and SED facilities: Compared to SED patients, ACS patients were younger, less likely to be females, whites and more likely to be Medicaid recipients. ACS patients had a lower comorbidity burden compared to SED patients. [CCI: Charlson Comorbidity Index]

RESULTS



Proportion of patients in a propensity score-matched sample who had Cholecystectomy at index visit and up to 6 months from index visit at ACS vs. SED facilities
Among those with cholecystitis or choledocholithiasis, ACS patients were more likely to have cholecystectomy at index visit than SED patients. There was a similar trend for having cholecystectomy up to 6 months from index visit, but these differences were not statistically significant.



Management of patients with Cholecystitis at index visit presenting visiting the ED at ACS and SED facilities: Compared to SED patients, ACS patients at index visit were more likely to have cholecystectomy and less likely to have percutaneous cholecystostomy and postoperative length of stay of 2 or more days.

ICD10-CM codes used to define the conditions Biliary pathology

Cholecystitis: K810, K811, K812, K819, K800, K8000, K8001, K801, K8010, K8011, K8012, K8013, K8018, K8019, K804, K8040, K8041, K8042, K8043, K8044, K8045, K8046, K8047, K806, K8060, K8061, K8062, K8063, K8064, K8065, K8066, K8067, K810, K811, K812, K819

Choledocholithiasis: K803, K8030, K8031, K8032, K8033, K8034, K8035, K8036, K8037, K805, K8050, K8051, K807, K8070, K8071

Cholelithiasis: K80, K82, K83, K802, K8020, K8021, K808, K8080, K8081

Reference: Mullens et. al. (2026); PMID: 41739485

