

BACKGROUND

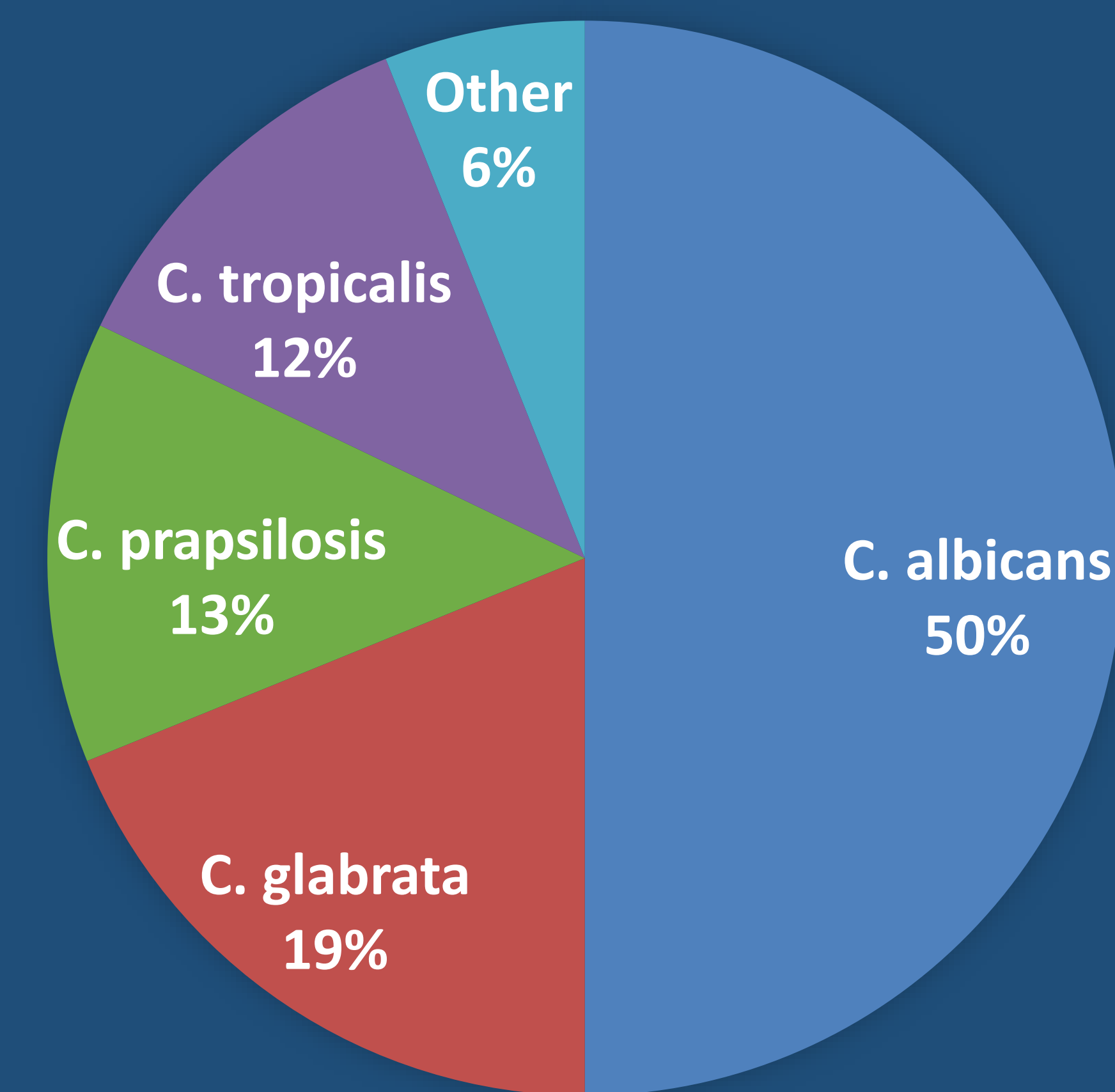
- Candidemia is the fourth most common blood stream infection in hospitalized patients in the United States, with an attributable mortality rate between 30-50%⁽³⁾.
- Understanding candidemia epidemiology is critical due to its prevalence and association with extended hospital stays, high treatment cost, and significant morbidity and mortality⁽¹⁾.
- The goal of this study is to compare state-wide Connecticut EIP candidemia data from two time periods (1998-2000 and 2019-2020) to identify trends in infections and incidence, providing insight for potential improvements to current prevention measures and treatments.

METHODS

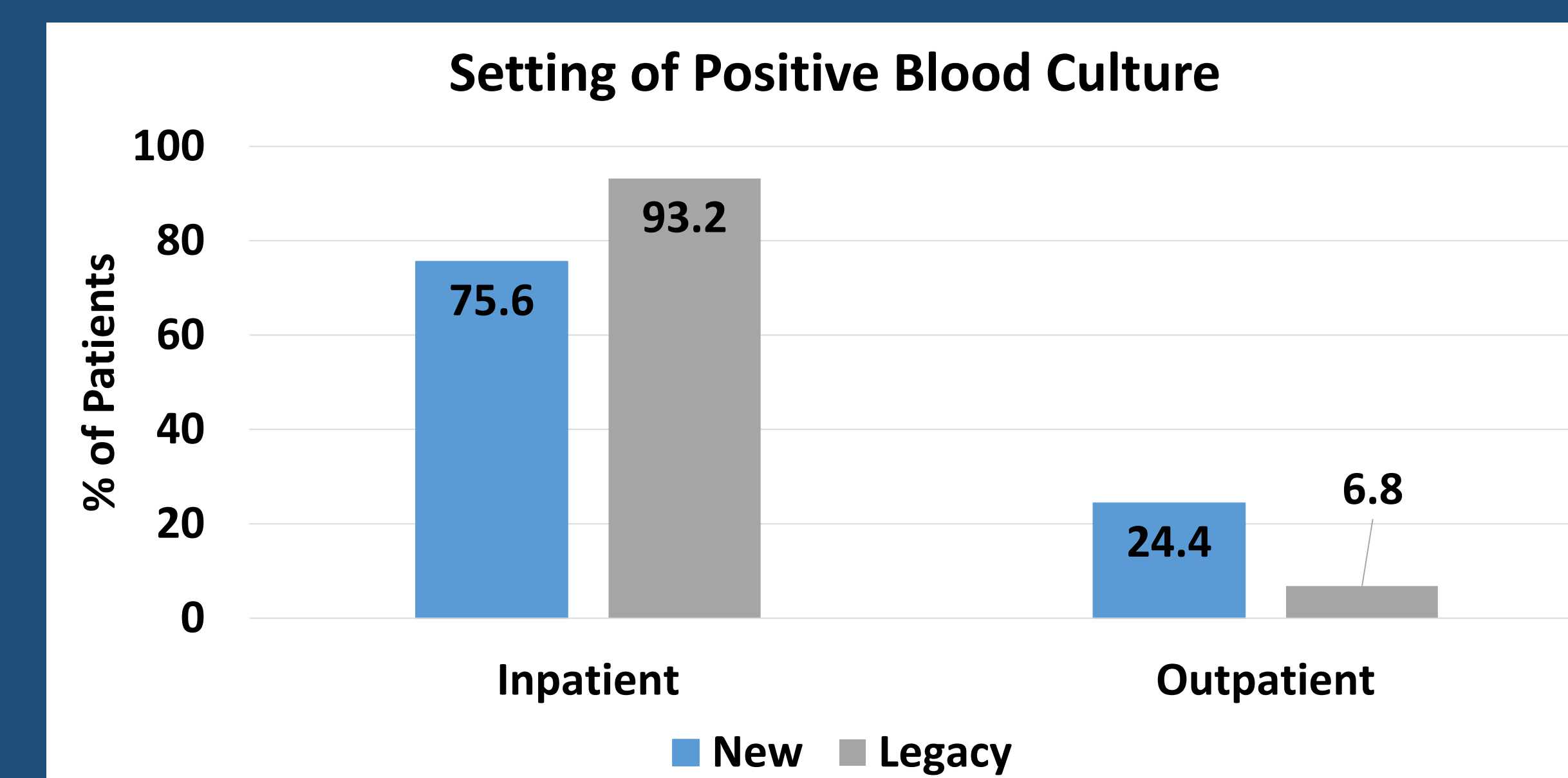
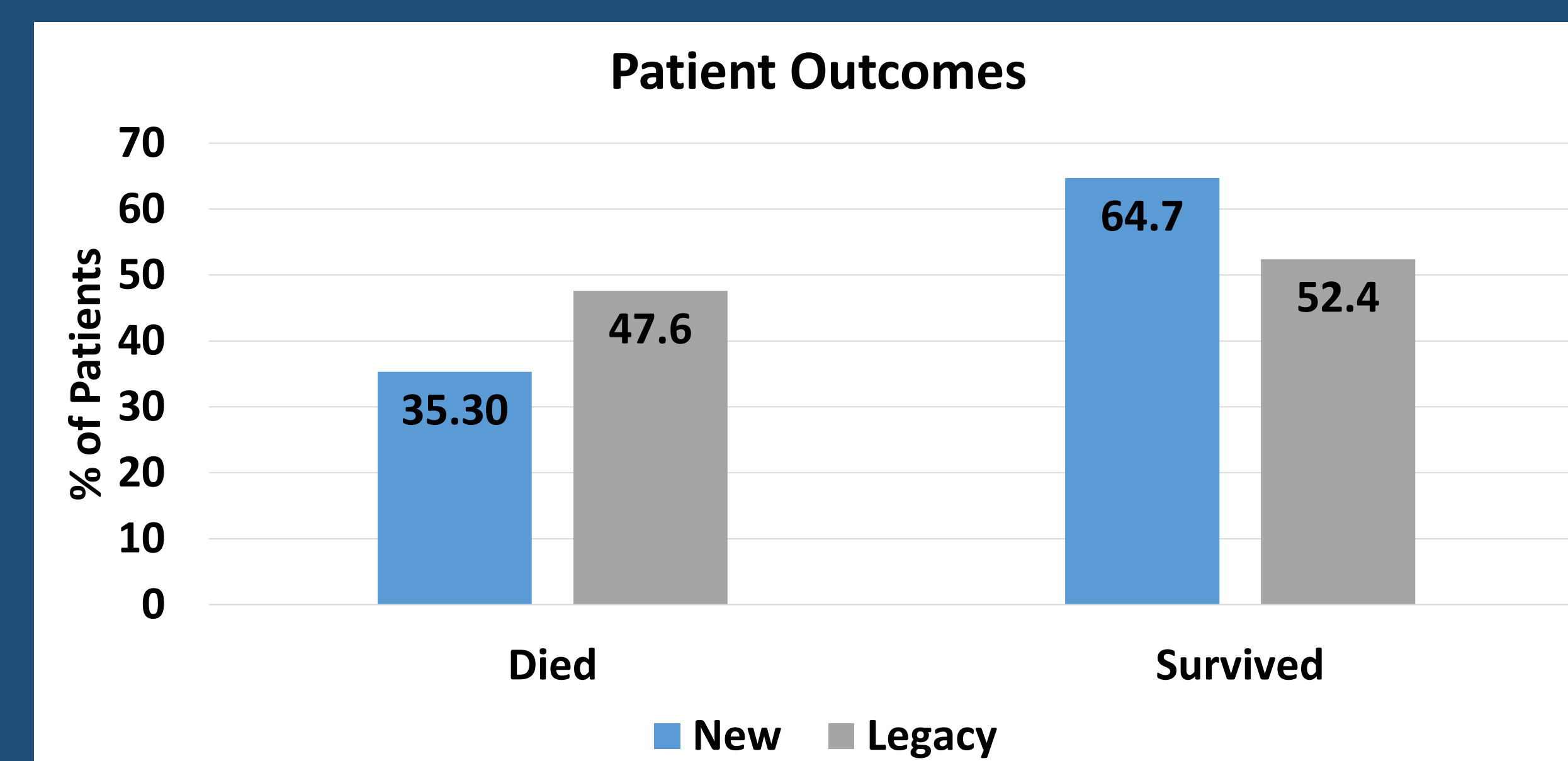
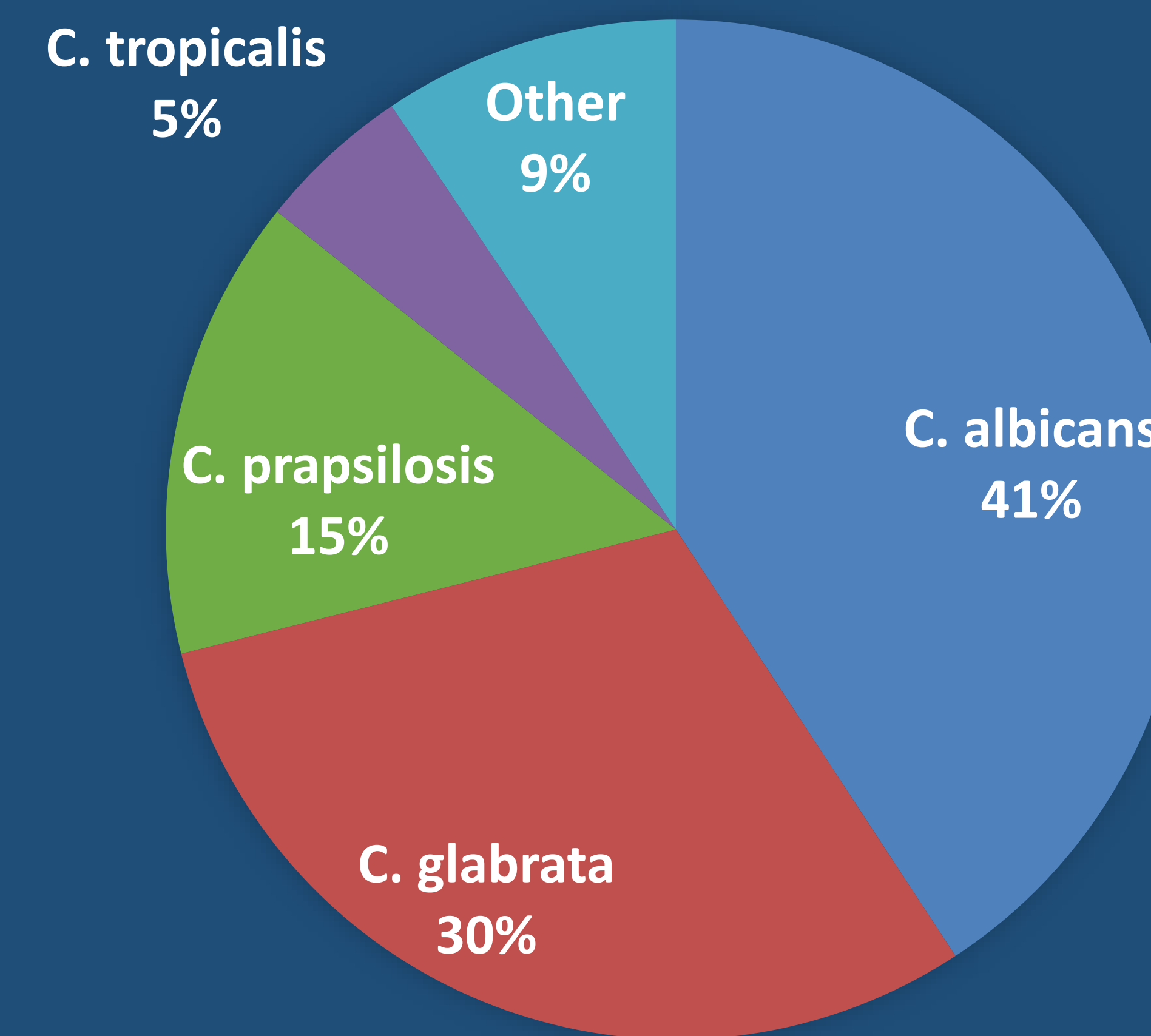
- The Connecticut Emerging Infections Program (EIP) conducted population-based surveillance for candidemia from 1998-2000.
- In 2019, the Connecticut Department of Public Health deemed candidemia a mandatory reportable condition and surveillance was initiated again.
- De-identified patient-level information was provided by the Connecticut EIP and relevant variables were organized and combined if necessary.
- Sample population: All Connecticut residents age ≥ 20 with *Candida* species identified from at least one blood culture during each time period.
- Chi-Square tests were the primary means of analyzing the difference in proportions between the two periods.
- Statistical analysis was performed with SPSS software where $p < 0.05$ was considered statistically significant.

The epidemiology of candidemia has changed over the past 20 years, with significant improvements in patient survival and a shift toward community-onset infections and non-albicans species.

1998-2000 *Candida* spp. (Legacy)
n = 414



2019-2020 *Candida* spp. (New)
n = 292



RESULTS

		DATASET		Chi-Square P-Value	
		NEW	LEGACY		
<i>Candida</i> species present in blood culture	<i>C. albicans</i>	117 (40.2%)	207 (50%)	0.010	
	Non- <i>C. albicans</i>	174 (59.8%)	207 (50%)		
	Total	291	414		
Patient Outcome	Died	103 (35.3%)	196 (47.6%)	0.001	
	Survived	189 (64.7%)	216 (52.4%)		
	Total	292	412		
Hospitalization 3 months preceding culture	No	136 (46.9%)	202 (49.4%)	0.516	
	Yes	154 (53.1%)	207 (50.6%)		
	Total	290	409		
Surgery 3 months preceding culture	No	210 (71.9%)	190 (46.8%)	<0.001	
	Yes	82 (28.1%)	216 (53.2%)		
	Total	292	406		
Did the patient have a catheter at time of candidemia episode	No	141 (48.5%)	29 (7.3%)	<0.001	
	Yes	150 (51.5%)	367 (92.7%)		
	Total	291	396		
Hospital ward of patient at time of candidemia episode	Inpatient	220 (75.6)	385 (93.2%)	<0.001	
	Outpatient	71 (24.4%)	28 (6.8%)		
	Total	291	413		
Any resistance on antifungal susceptibility testing	No	161 (62.4%)	52 (83.9%)	0.001	
	Yes	97 (37.6%)	10 (16.1%)		
	Total	258	62		
Sex	Female	120 (41.1%)	195 (47.1%)	0.114	
	Male	172 (58.9%)	219 (52.9%)		
	Total	292	414		
Age	20-44	48 (16.4%)	58 (14%)	0.374	
	Other	244 (83.6%)	356 (86%)		
	45-64	94 (32.3%)	108 (26.1%)		0.077
	Other	198 (67.8%)	306 (73.9%)		
	65+	150 (51.4%)	248 (59.9%)		
Other	142 (48.6)	166 (40.1%)	0.024		

DISCUSSION

- These findings have important implications in designing prevention strategies and optimizing candidemia management, particularly in the community setting where increased intravenous drug use and availability of home healthcare may be important factors.
- Additional research is needed to further elucidate the drivers of these epidemiological differences.
- Doing so may uncover valuable information necessary for preventing candidemia infection and improving outcomes.

REFERENCES:

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