

Antimicrobial Resistance (AMR) Surveillance on Stool Culture Specimen in Public Hospitals and Clinics - Hospital Authority AMR Data (2022)

April 2024



Contents Outline

- Results
 - Overview on patients with stool culture
 - Overview on WHO priority organisms isolates from stool
 - Antimicrobial susceptibility test result
 - Remarks on interpretation of results
 - Summary
 - Recommendations
- (Background, Data Scope, Definitions, Measurements, and Statistical Method remained unchanged compared to 2021, and can be referred in Supplementary slides)

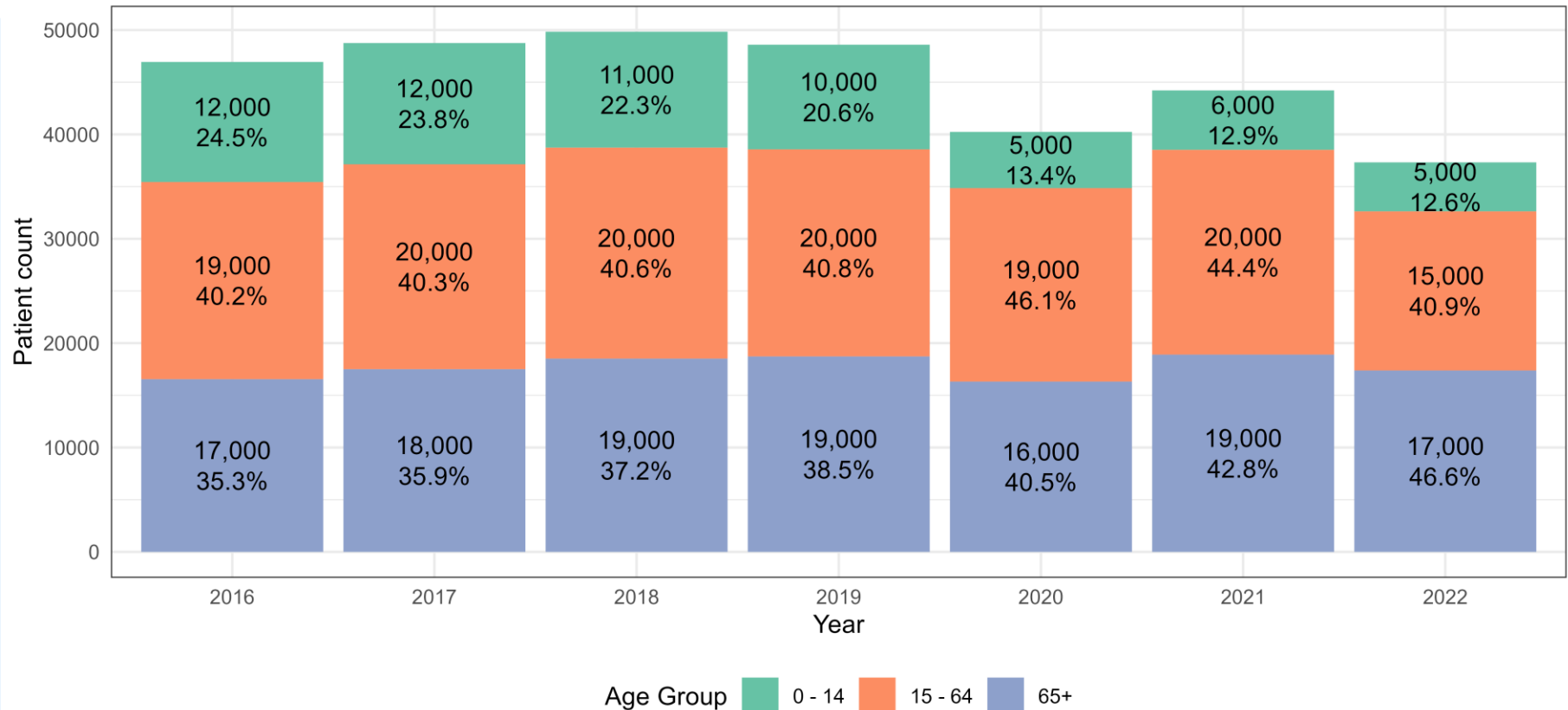


Results

Overview on patients with stool culture



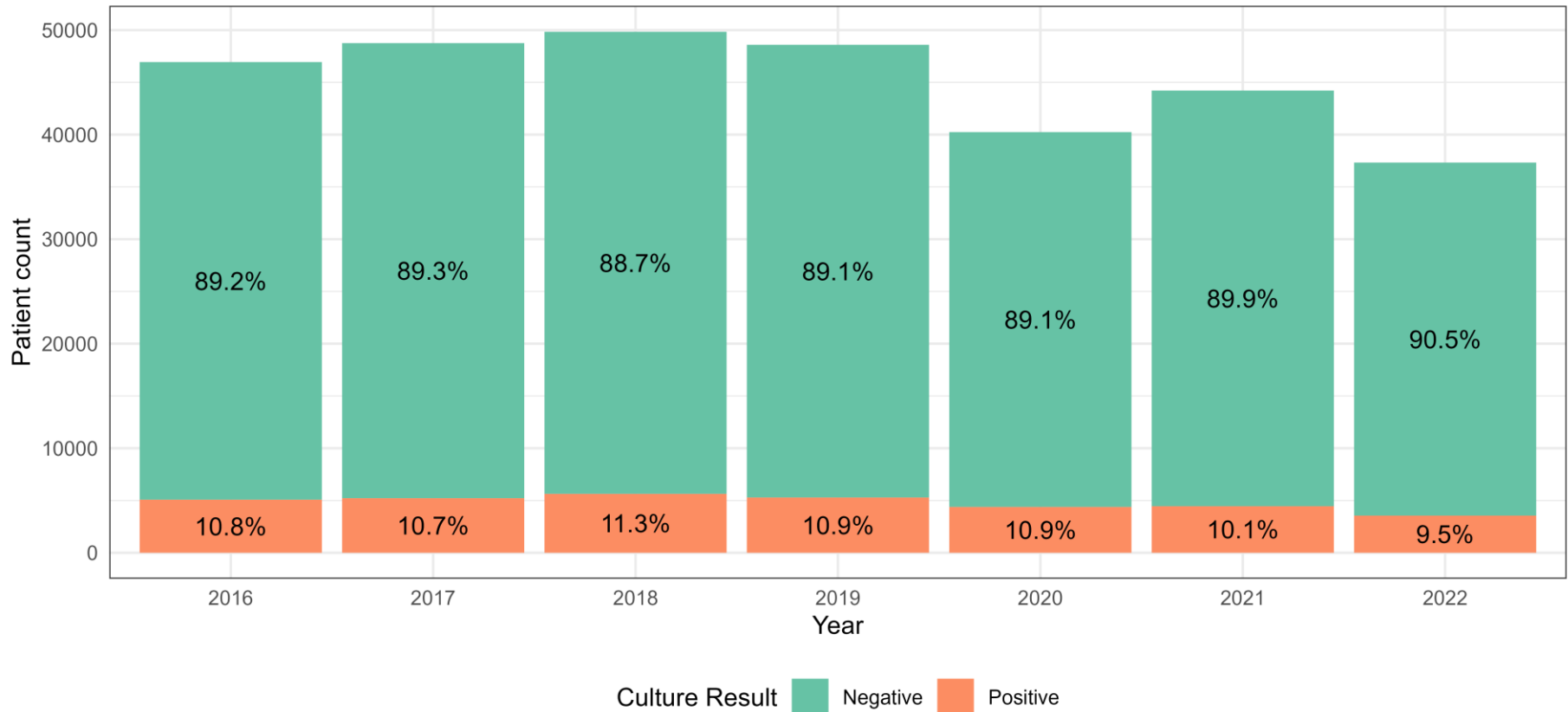
Age distribution of patients with stool culture



- No. of patients with stool culture decreased from 44,000 in 2021 to 37,000 in 2022 (15.9% decrease).



Percentage of patients with positive stool culture



- % patients with positive stool culture remained stable over the past years at around 10%.

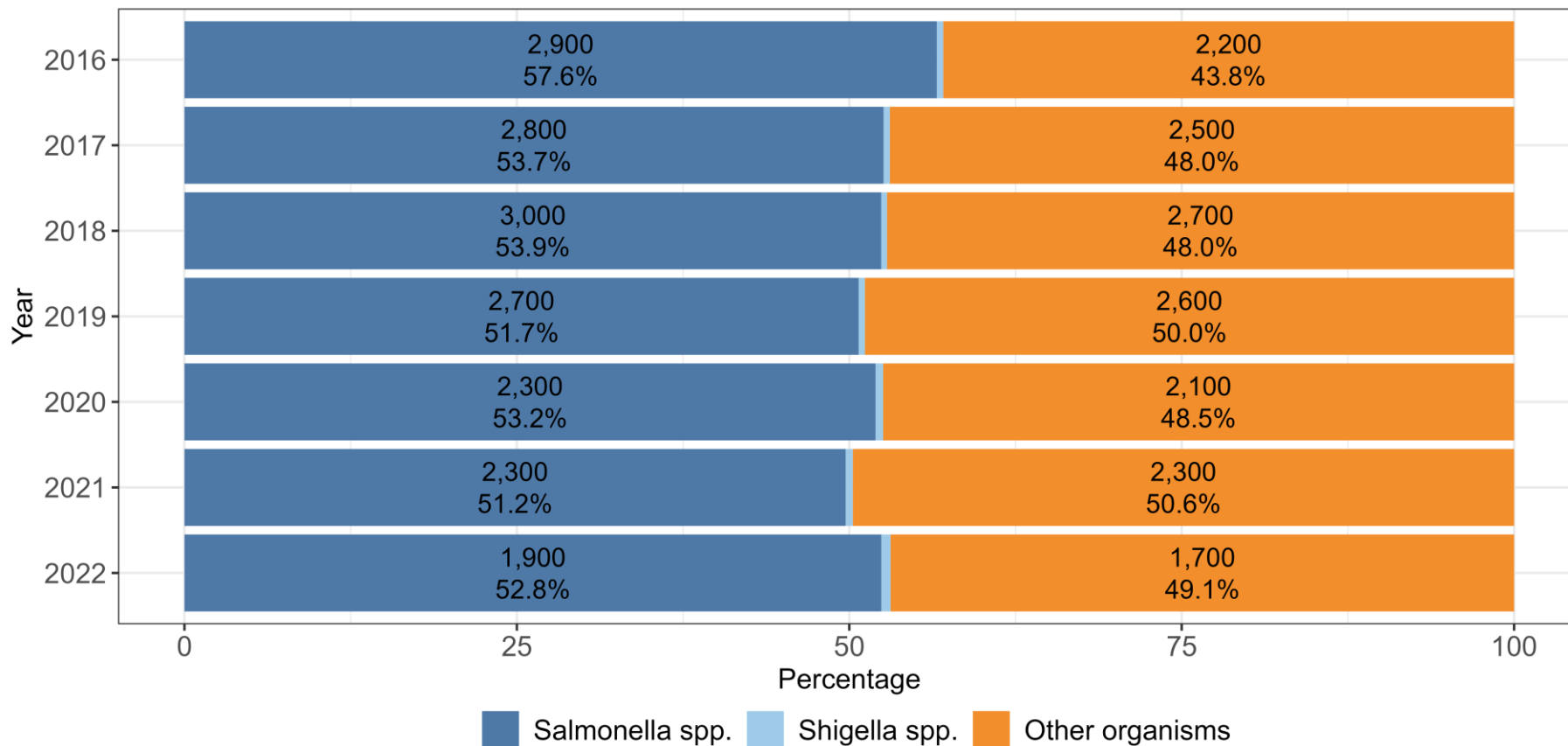


Results

Overview on WHO priority organisms isolated from stool



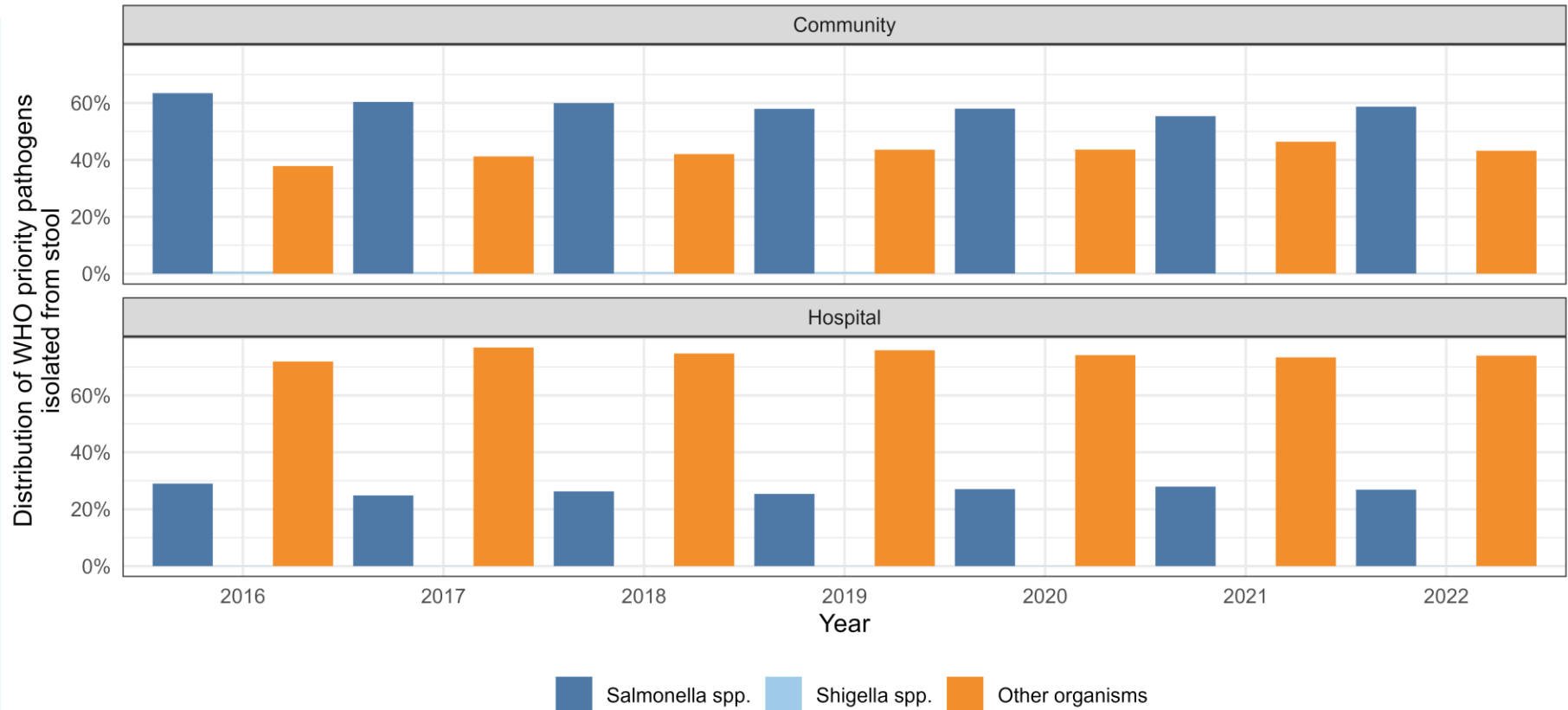
Distribution of organisms by year



- The most common WHO priority organisms cultured from stool remained to be *Salmonella* spp. from 2016 to 2022.



Distribution of organisms by location of onset



- Distribution of WHO priority organisms isolated from stool among patients remained stable for both community- and hospital-onset patients.

Distribution of organisms by location of onset



- The most common WHO priority organism cultured from stool remained to be *Salmonella* spp. from 2016 to 2022.

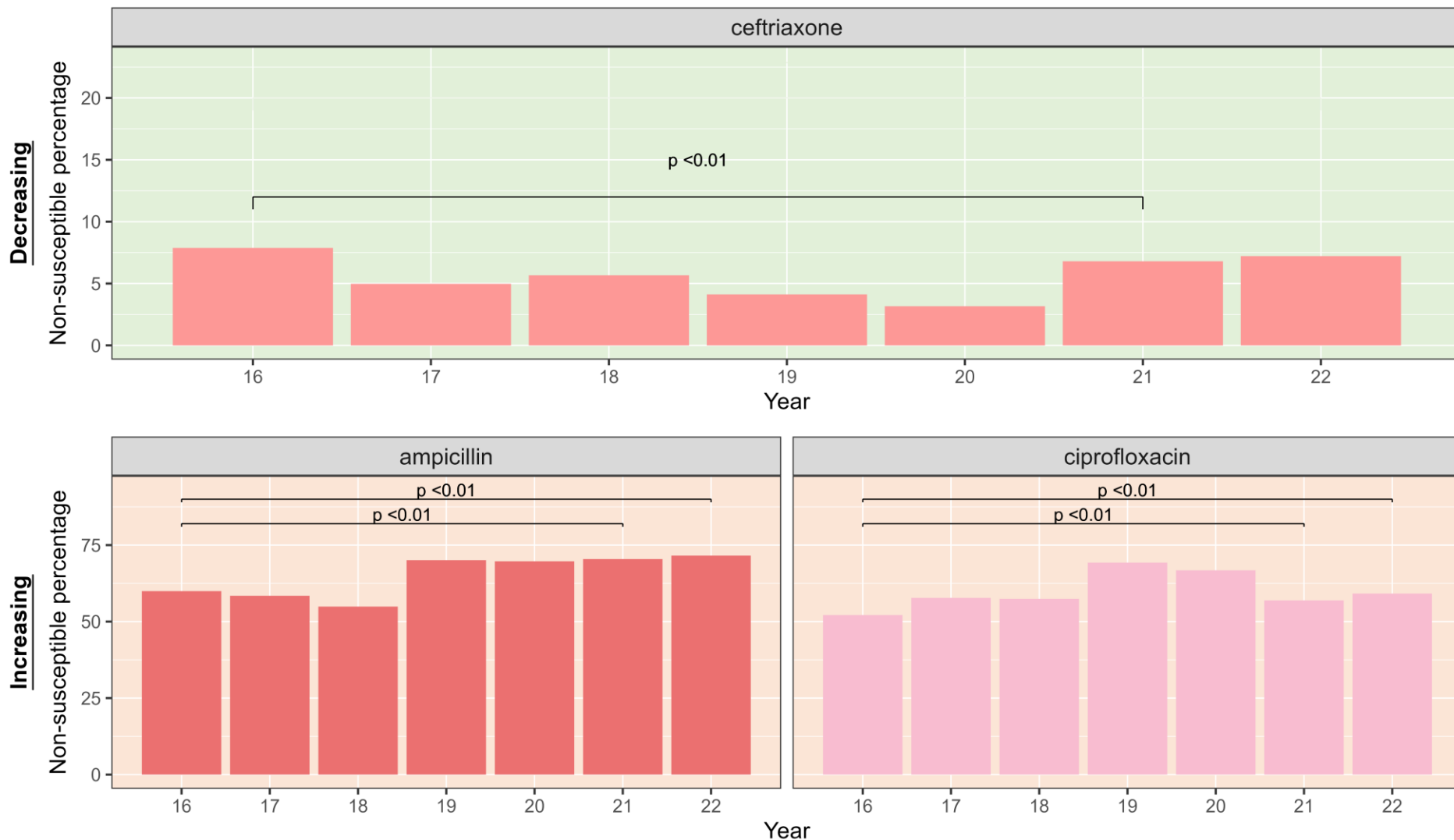
Results

AST results for WHO priority organisms isolated from stool



AST results with significant trend for *Salmonella* spp. (16 to 22)

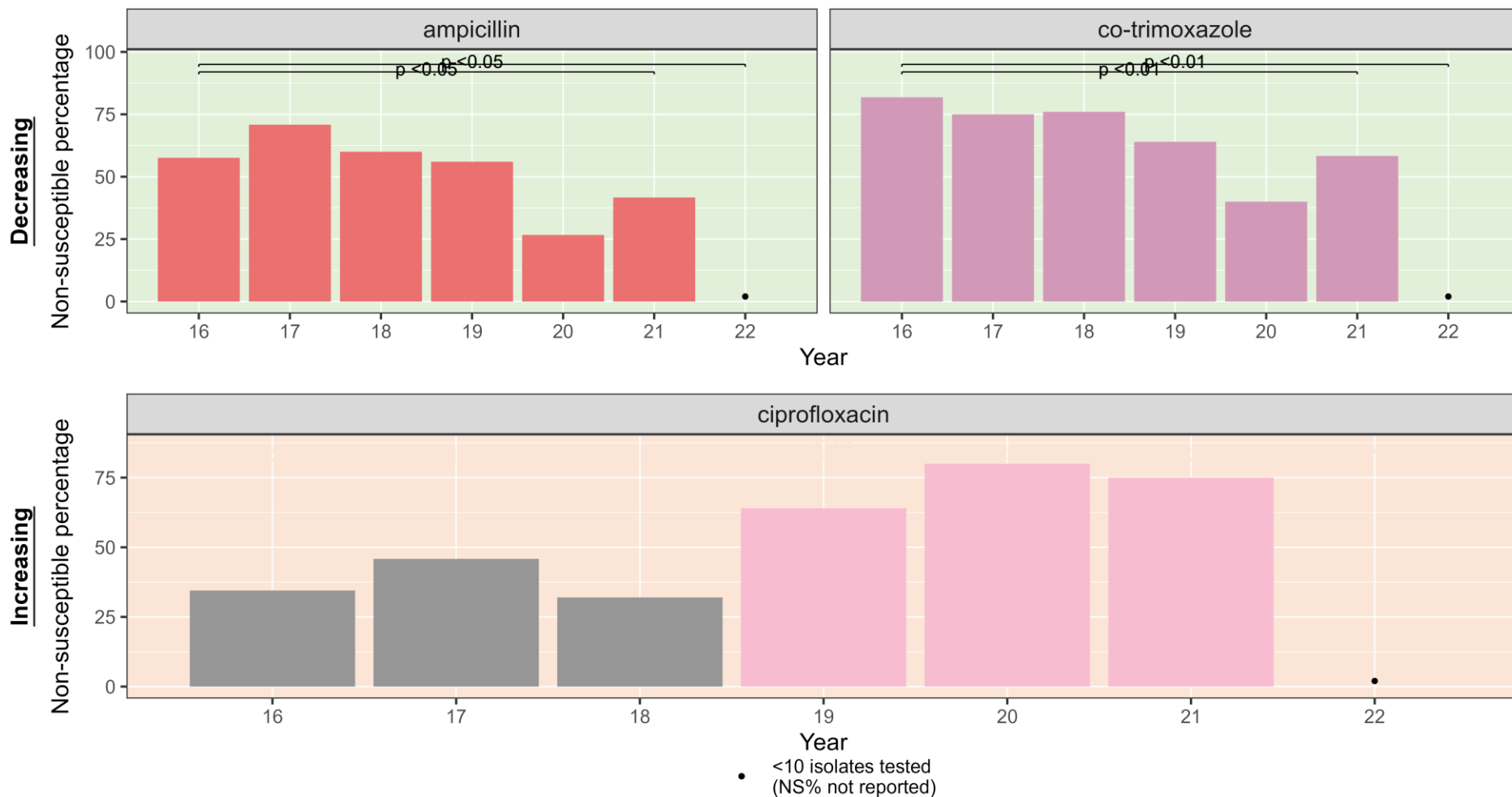
Community (Undifferentiated-onset)



- Increasing trend for NS% ampicillin and ciprofloxacin were seen in 16-21 and 16-22. NS% for ceftriaxone rebounded in 2022.

AST results with significant trend for *Shigella* spp. (16 to 22)

Community (Undifferentiated-onset)



Note:

The CLSI released revised fluoroquinolones interpretive criteria for Enterobacteriaceae (excluding *Salmonella* spp.) in 2019. These updates may have contributed to the observed increase in subsequent years compared to the years prior to the criteria changes.

- Decreasing trend for NS% ampicillin and co-trimoxazole were seen in 16-21 and 16-22.

Summary Table on Key Findings

WHO priority organism	Proportion of isolates being non-susceptible to antimicrobials, 2016 vs 2022	
	Community (Undifferentiated)-onset	
<i>Salmonella</i> spp.	↑ ampicillin 59.9% → 71.6%	↑ ciprofloxacin 52.1% → 59.1%
<i>Shigella</i> spp.	↓ ampicillin 57.6% → 0%	↓ co-trimoxazole 81.8% → 0%



Summary on findings



Summary

- 👍 Upward trend continued in 16-22 but showed sign of decrease:
Salmonella spp. – ciprofloxacin



Recommendations

- Continue ASP in public hospitals
- Attention needed on emerging drug-bug combinations shows increasing resistance

