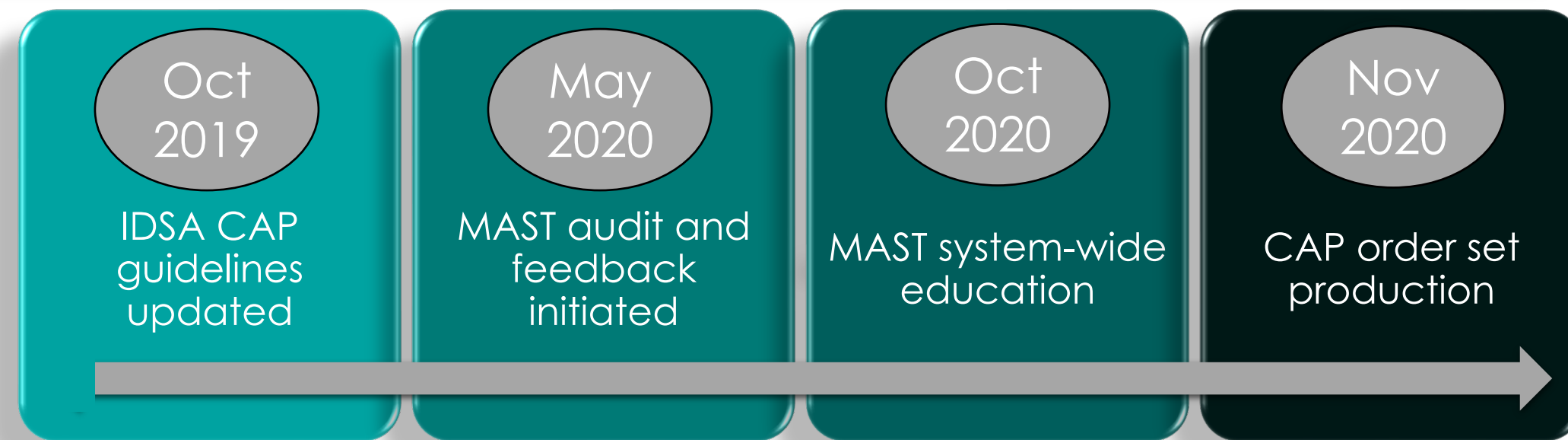


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## Background

- Use of empiric antimicrobial therapies which include both anti-methicillin resistant *Staphylococcus aureus* (MRSA) and antipseudomonal coverage is common and often unnecessary.
- The 2019 updated community acquired pneumonia (CAP) guidelines highlight indications for empiric anti-MRSA and antipseudomonal antibiotics and use of MRSA nasal screens.

## Intervention Timeline



## Objectives

### Primary objectives:

- To assess the appropriateness of anti-MRSA and antipseudomonal therapy
- To assess the appropriateness of MRSA nasal screening during the study period

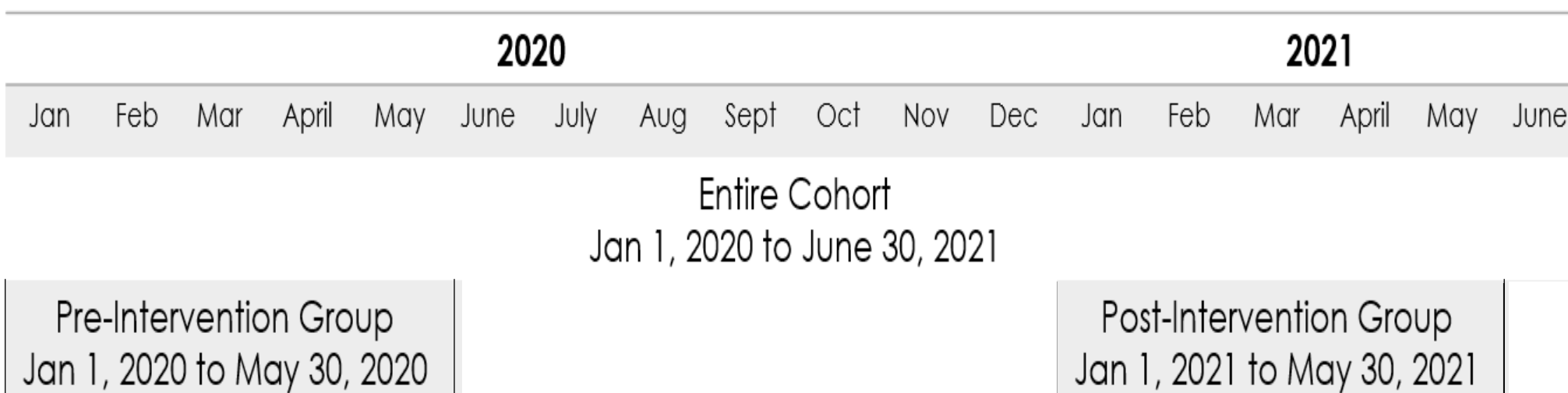
### Secondary objectives:

- To assess the total length of antibiotic therapy for CAP
- To assess the inappropriate MRSA and antipseudomonal length of empiric therapy
- To assess 30-day readmission rates and death

## Methods

### Design:

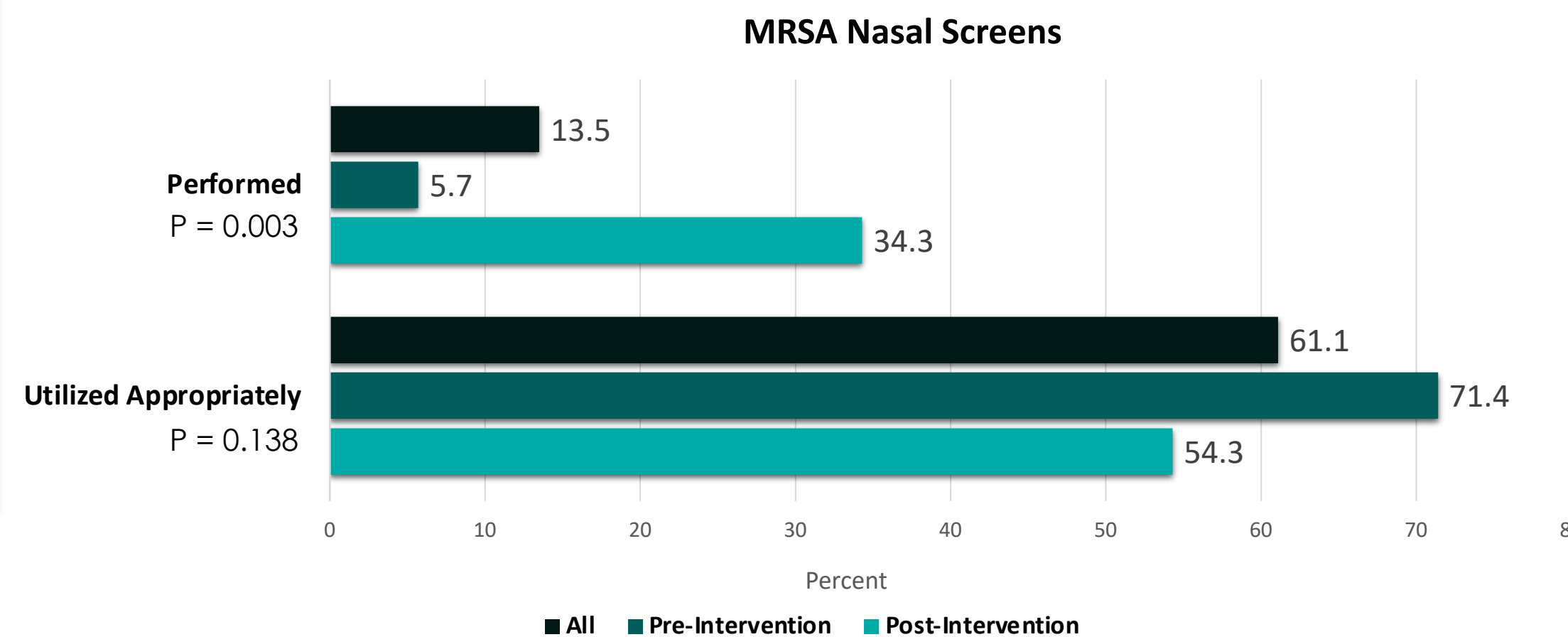
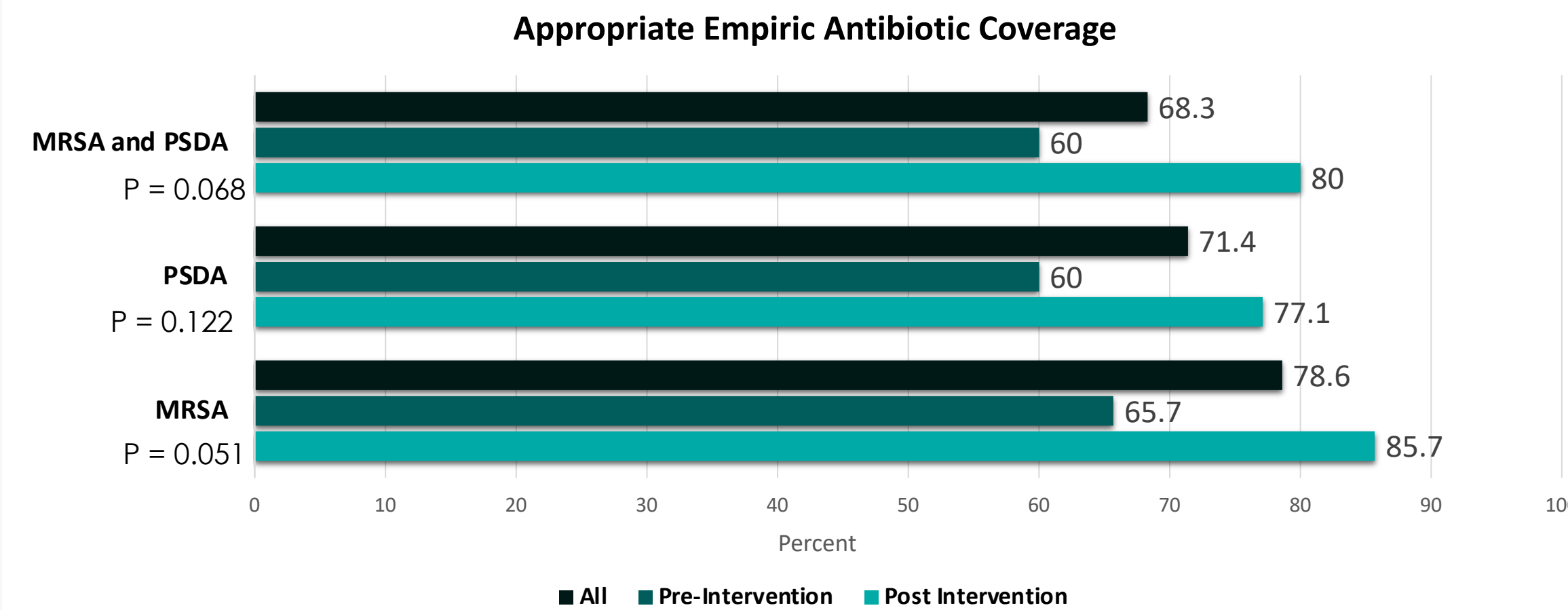
- Quality Improvement Study
- Retrospective chart review
- Academic urban county hospital



## Results

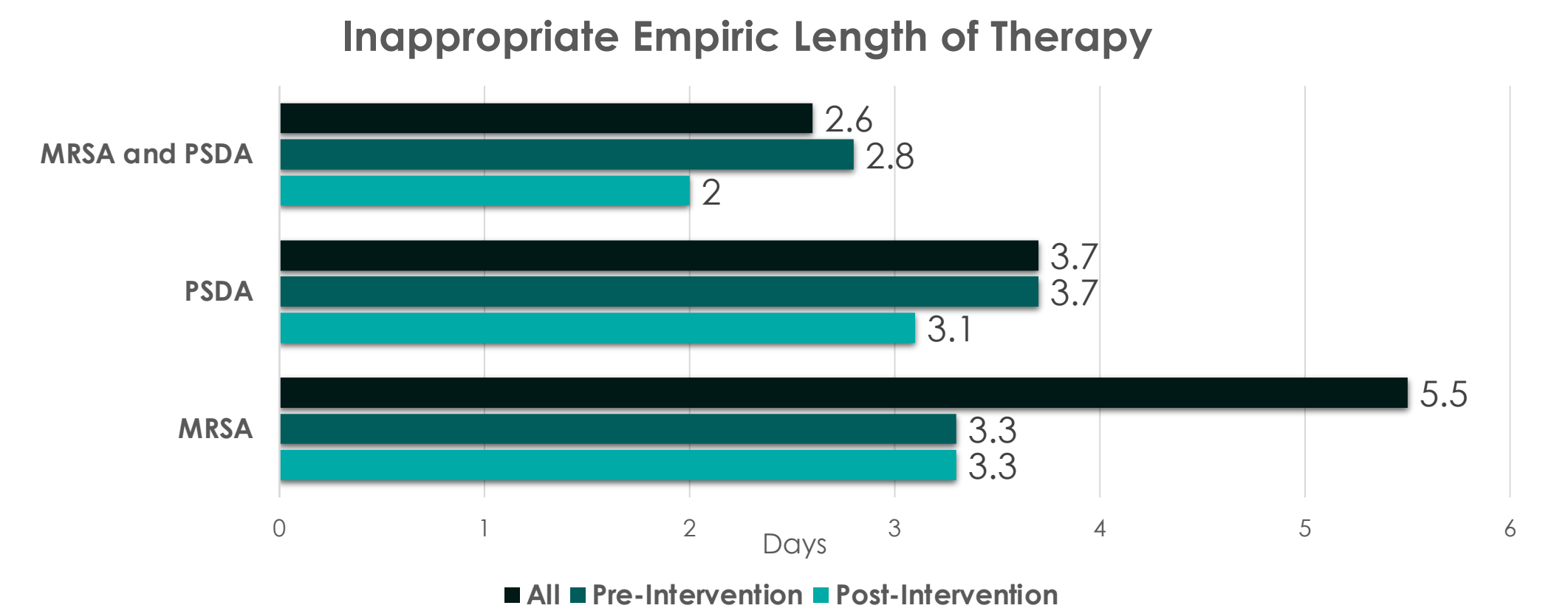
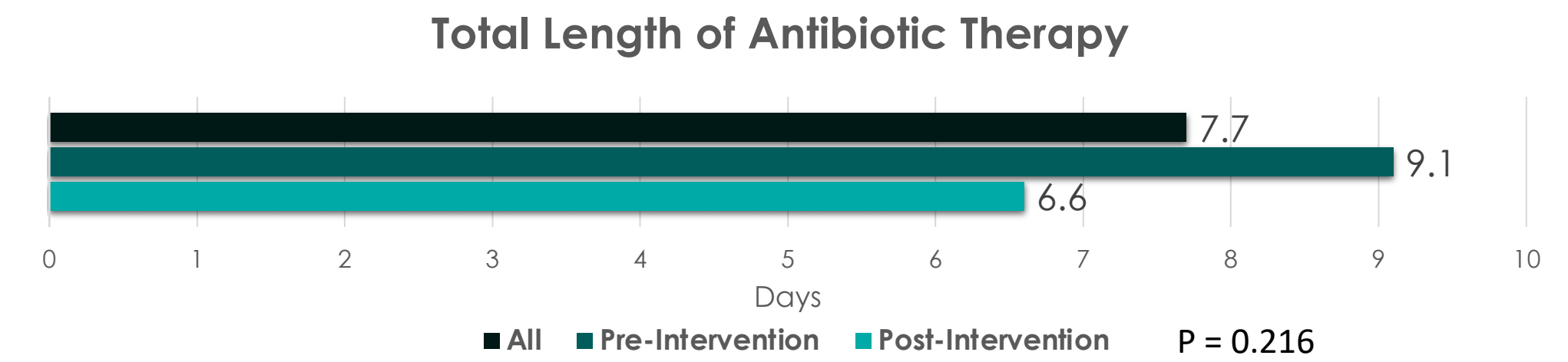
Baseline Characteristics	All N=126	Pre (n=35)	Post (n=35)	p value
Age (years)	58.6	59.5	54.2	0.215
Sex, F, n (%)	60 (47.6)	15 (42.9)	20 (57.1)	0.232
PMH, n (%)				
Severe COPD/structural lung disease	16 (12.7)	4 (11.4)	3 (8.6)	1.000
IVDU	5 (4.0)	1 (2.9)	2 (5.7)	1.000
Hemodialysis	2 (1.6)	0 (0)	1 (2.9)	1.000
Non-severe COPD	29 (23.0)	13 (37.1)	6 (17.1)	0.060
Admitted within 90 days, n (%)	39 (31.0)	6 (17.1)	11 (31.4)	0.163
SNF within 90 days, n (%)	7 (5.6)	3 (8.6)	1 (2.9)	0.614
IV antibiotics within 90 days, n (%)	31 (24.6)	6 (17.1)	9 (25.7)	0.382
MRSA culture within 12 months, n (%)	8 (6.3)	4 (11.4)	2 (5.7)	0.673
PSDA culture within 12 months, n (%)	3 (2.4)	2 (5.7)	0	0.493
Pneumonia severity, n (%)				1.000
Non-severe	91 (72)	24 (68.6)	24 (68.6)	-
Severe	35 (28)	11 (31.4)	11 (31.4)	-

### Primary Outcomes:



## Results (continued)

### Secondary Outcomes:



Patient Outcomes	All N=126	Pre (n=35)	Post (n=35)	p value
Readmission within 30d, n (%)	25 (19.8)	6 (17.1)	8 (22.9)	0.550
Readmission within 30d for pneumonia, n (%)	7 (5.6)	1 (2.9)	3 (8.6)	0.614
Death, n (%)	6 (4.8)	1 (2.9)	3 (8.6)	0.614

## Conclusion

After the multifaceted intervention:

- The percentage of patients who received empiric MRSA and pseudomonal coverage for CAP improved
- The percentage of patients for whom MRSA nasal screens were performed increased significantly.
- The percentage of patients for whom MRSA nasal screens were appropriately performed significantly worsened.

## References

- Metlay J, Waterer G, Long A, et al. Diagnosis and treatment of adults with community-acquired pneumonia. An official clinical practice guideline of the American thoracic society and infectious disease society of America. Am J Respir Crit Care. 2019;200:45-67.

