



Evaluation of Antibiotic Durations after Hospital Discharge from a Community Hospital

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BACKGROUND

- Effective **antibiotic stewardship** is vital to preventing resistance, reducing adverse effects, and ensuring optimal clinical outcomes. Recent literature suggests that excessive antimicrobial durations are often prescribed at discharge.¹
- **Discharge prescriptions** for antibiotics are a key focus, as inappropriate durations can lead to overuse, resistance, and poor patient care. These prescriptions are not reviewed by the antimicrobial stewardship team prior to discharge.
- National and hospital **guidelines** provide evidence-based recommendations for antibiotic durations tailored to conditions such as **community acquired bacterial pneumonia (CABP), uncomplicated urinary tract infections (UTI), complicated UTI, and chronic pulmonary obstructive disease (COPD) exacerbations**, aiming to maximize treatment efficacy while minimizing unnecessary exposure.

OBJECTIVES

- To determine the total duration of therapy for patients discharged on oral antibiotics due to UTI, CABP, or COPD exacerbation at a large community teaching hospital in Northeast Georgia and compare the observed duration of therapy to guideline recommendations to identify antibiotic stewardship opportunities.

METHODS AND DESIGN

- A retrospective review of electronic health records (EHR) was conducted to analyze antibiotic durations in adults discharged on oral antibiotics for acute uncomplicated UTI, complicated UTI, CABP afebrile by 48h, CABP febrile after 48h, and COPD exacerbations between September 1, 2023, and August 31, 2024.

PRIMARY ENDPOINT

- To assess the appropriateness of antibiotic duration

SECONDARY ENDPOINT

- To evaluate adherence to hospital guidelines for antibiotic duration

RESULTS

Figure 1. Antibiotic Use by Indication

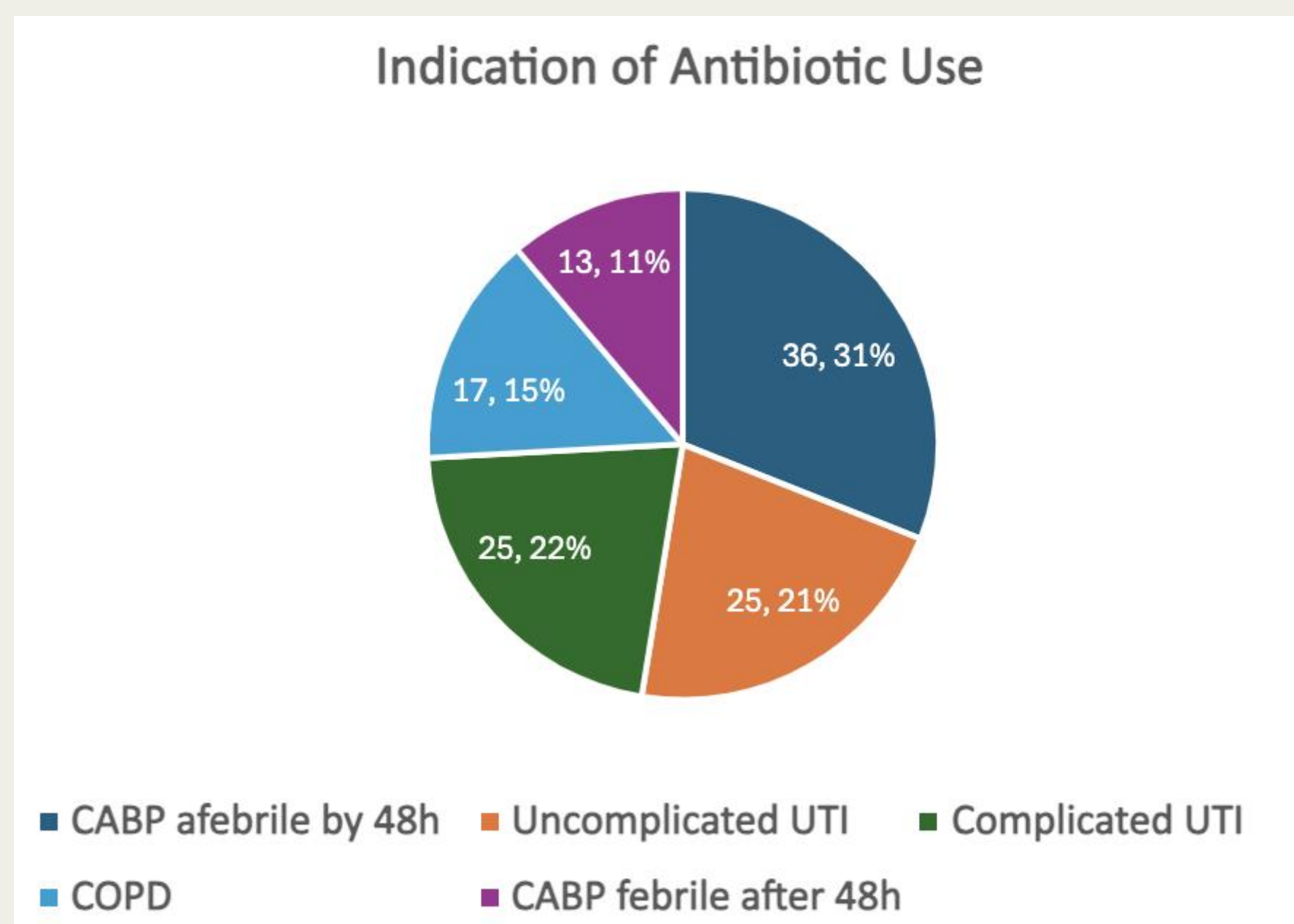
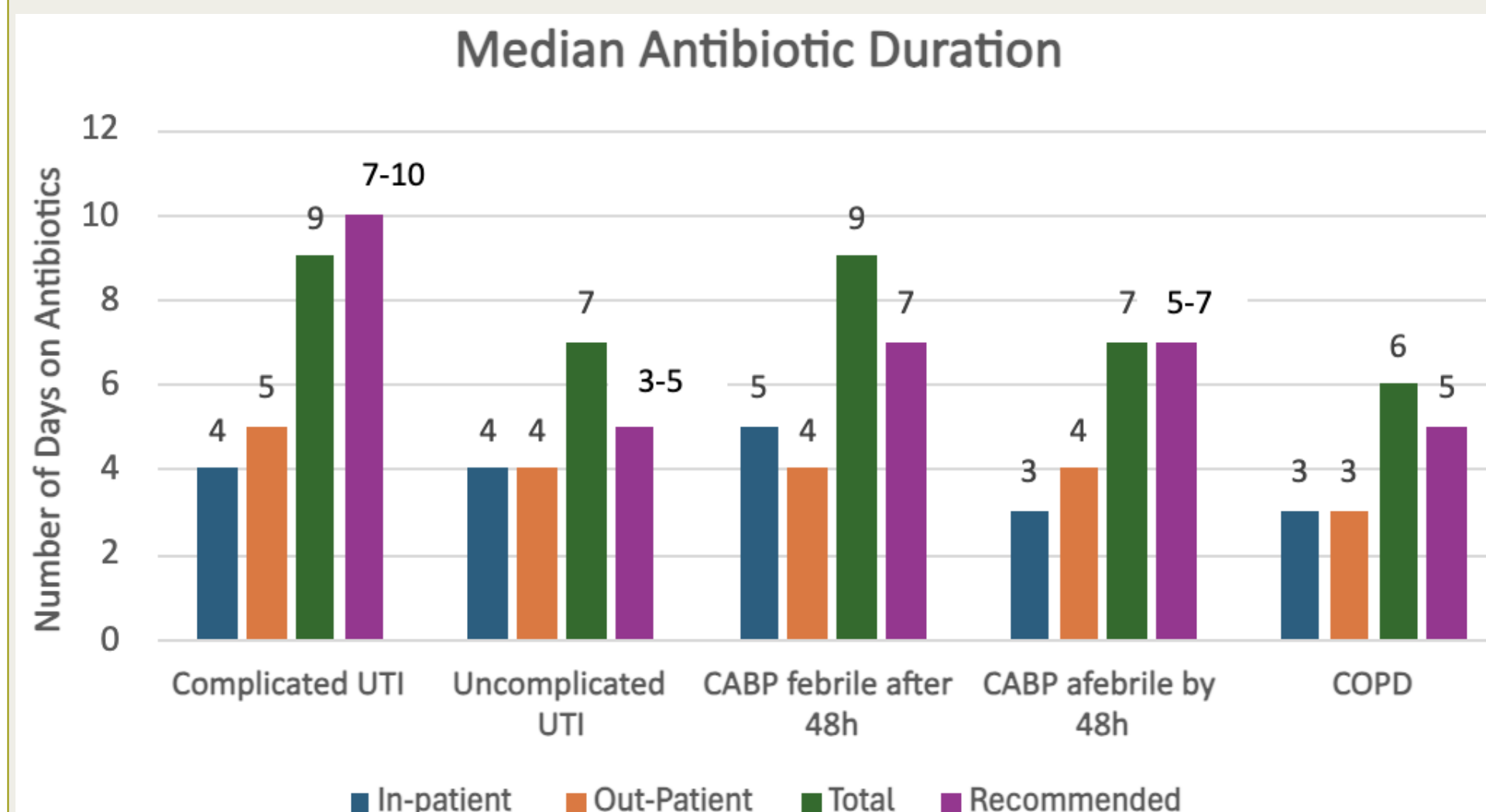


Figure 2. Duration of Antibiotic Use



RESULTS

Table 1. Baseline Demographics

Indication	Baseline Demographics	N=116
Uncomplicated UTI	Mean Age (years): 48.9 Female (%): 100%	25
Complicated UTI	Mean Age (years): 61.2 Female (%): 40%	25
COPD	Mean Age (years): 67.2 Female (%): 58.8%	17
CABP	Mean Age (years): 66.7 Female (%): 51%	49

Values reported in number (N) and percentage (%)

DISCUSSION

- Overall, the duration of antibiotic use was appropriately aligned with clinical guidelines for certain indications.
- Median duration of antibiotics for uncomplicated UTI was 7 days, which exceeds the recommended 3-5-days guideline.
- Median treatment duration for cUTI was 9 days, which falls within the recommended 7-10 days of therapy.
- Median treatment duration for COPD exacerbations was 6 days, exceeding the 5-day guideline.
- Patients with CABP and fever by 48 hours received ~2 additional days of antibiotics (9 vs. 7 days) compared to those without fever, exceeding the recommended 5-7 days of treatment for CABP.

CONCLUSION

- This retrospective review suggests that antibiotic utilization was generally appropriate, but there are opportunities to shorten treatment durations, particularly for uncomplicated UTI, CABP febrile after 48h, and COPD exacerbations.
- Educating healthcare providers on current guidelines for antibiotic therapy duration is critical to reduce unnecessary antibiotic exposure and mitigate risks like antimicrobial resistance.

REFERENCES

- 1) Conner M, Harris WH, Bomkamp JP. ADD It Up: An Evaluation of Antibiotic Duration at Hospital Discharge at a Community Hospital. Open Forum Infect Dis. 2021 Jul 24;8(8):ofab399. doi: 10.1093/ofid/ofab399. PMID: 34631927; PMCID: PMC8496735.

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