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A model for improving and assessing outpatient antibiotic stewardship interventions for common upper respiratory tract infections and UTI, to improve appropriate outpatient antibiotic prescribing in order to improve patient safety, patient cost, and reduce antimicrobial resistance in accordance with the Joint Commission goal of reducing outpatient antibiotic prescriptions for 2020.

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Recommended Citation

Garcia, Jennifer; Jasmina Demirovic; Melinda Montoya; Niraj Ganjawala; Michael Palestine; Abhishek Tomar; and William Bowen. "A model for improving and assessing outpatient antibiotic stewardship interventions for common upper respiratory tract infections and UTI, to improve appropriate outpatient antibiotic prescribing in order to improve patient safety, patient cost, and reduce antimicrobial resistance in accordance with the Joint Commission goal of reducing outpatient antibiotic prescriptions for 2020.." (2020). https://digitalrepository.unm.edu/hsc_qips/12

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A Pilot Program to Assess and Improve Outpatient Antibiotic Prescribing for Common Upper Respiratory Tract Infections and UTIs at CHRISTUS St. Vincent Regional Medical Center

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Background/Purpose

- According to data from the CDC
 - $\geq 30\%$ of outpatient antibiotic prescriptions are unnecessary
 - Antibiotic complications result in 143,000 ED visits annually
 - Antibiotic resistance leads to approximately 23,000 deaths annually
- Joint Commission
 - New standards for outpatient antimicrobial stewardship programs to be implemented by 2020
- Study objective
 - Decrease inappropriate outpatient antibiotic prescribing for upper respiratory tract infections (URIs) and UTIs by 20%

Methods

- A quasi-experimental design, interventional study identified patients diagnosed with URIs or UTI in six ambulatory care settings.
- Inclusion criteria
 - Diagnosis of bronchitis, sinusitis, or UTI
 - Timeframe: December 1, 2018 through March 31, 2019
- Exclusion criteria
 - Requirement for antibiotics for other indication(s)
 - Immunocompromising conditions
 - Presence of COPD, cystic fibrosis or bronchiectasis
- The following data points were analyzed
 - Total number of antibiotics prescribed
 - Number of inappropriate antibiotic prescriptions based on:
 - Antibiotic initiation
 - Antibiotic choice
 - Antibiotic duration
- Interventions that have been implemented as of December 1, 2019
 - Education (provider and patient)
 - Material from the CDC are posted in clinics for patients
 - Re-educated providers on updated guidelines
 - Audit and Feedback on a monthly basis
 - Peer comparison method with areas for improvement
- Post interventional data: December 1, 2019 through March 31, 2020

Baseline Data

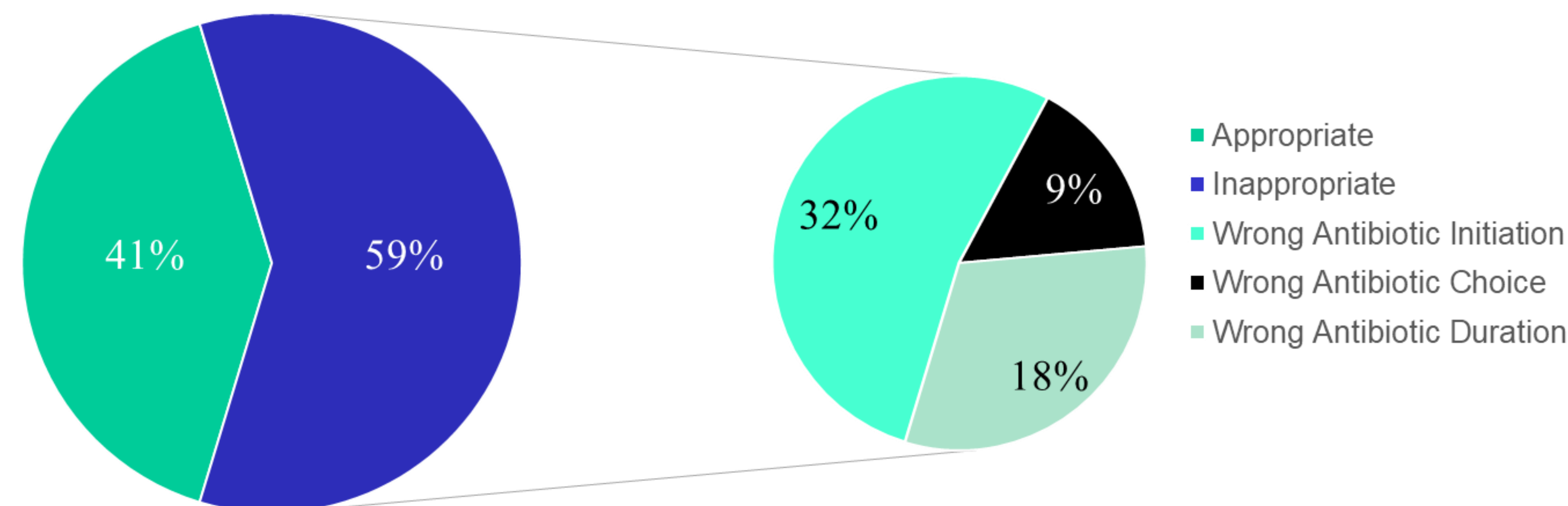
Table 1 Baseline Characteristics (n=450)

Average age (range)	56 (18-97)
Age ≥ 60	44%
Male	28%
β -lactam allergy	20%
Severe	3%
Non-severe	13%
Not-specified	4%

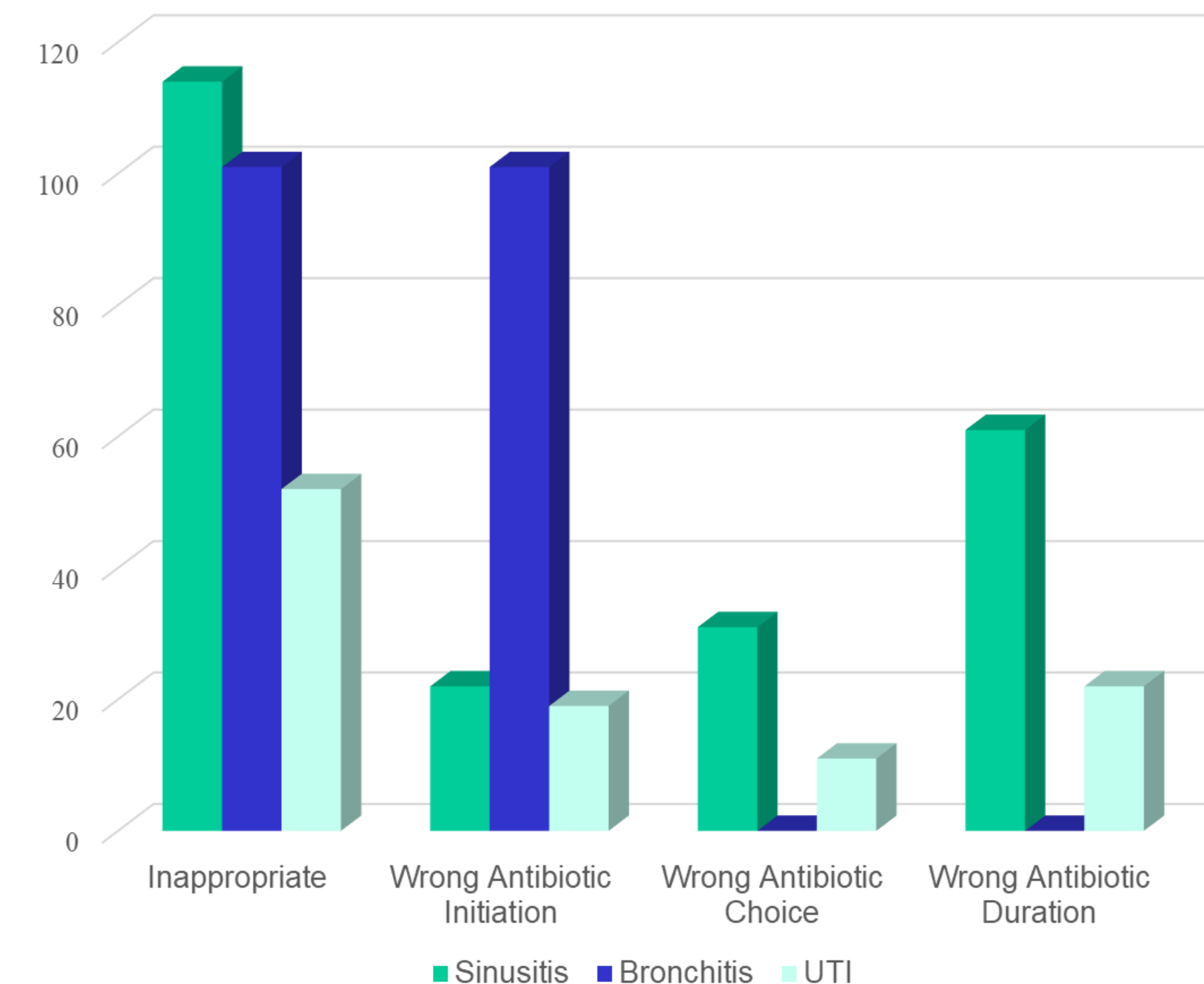
Table 2 Antibiotics Used (n=308)

Azithromycin	30.2%	Bactrim	3.2%
Augmentin	29.2%	Levofloxacin	1.3%
Nitrofurantoin	13.0%	Moxifloxacin	0.6%
Doxycycline	9.1%	Clarithromycin	0.6%
Cephalexin	6.5%	Amoxicillin	0.6%
Ciprofloxacin	4.9%	Other	0.6%

URTI and UTI Results Overview



Disease State



Conclusion

- Over half of outpatient antibiotic prescription are inappropriate
 - Initiation of antibiotics was inappropriate in 32% of the patients
 - Most patients were treated with antibiotics for more than 5-7 days
 - Based on this baseline data, evidence-based interventions of audit and feedback, peer comparison, and education have been implemented
- Final results will be presented at Western States Conference in May 2020

References

Sanchez, G.V., Fleming-Dutra, K.E., Roberts, R.M., Hicks, L.A. Core Elements of Outpatient Antibiotic Stewardship. MMWR Recomm Rep 2016;65(No. RR-6):1-12.

Disclosure

Authors of this presentation disclose the following relationship with commercial interests related to the subject of this poster:

- Jennifer Garcia, Pharm D: Nothing to disclose
- Niraj Ganjawala, MD: Nothing to disclose
- Melinda Montoya, Pharm D: Nothing to disclose
- Jasmina Demirovic, Pharm D., BCIDP: Nothing to disclose
- Michael Palestine, MD: Nothing to disclose