



CENTER FOR
STEWARDSHIP
IN MEDICINE

January 25, 2024

IQIC 201 Session 5

Agenda:

- ASB in challenging population: catheter associated
– Chloe Bryson-Cahn, MD
- DATA – Whitney Hartlage, PharmD
- Wrap-up

Thank you, Maria!!



Outcomes Assessed

- 1) Prevalence and treatment rate of asymptomatic bacteriuria (ASB)

- 2) The Inappropriate Diagnosis of UTI Measure
 - Percentage of patients treated for a UTI who actually had ASB, over time

Assessment of Inappropriate Prescribing for Non-UTIs

Study Population

9 CAHs across five states participated

9/1/2023 - 12/31/2023

7 CAHs submitted data

419 total cases submitted

4 cases excluded:

- Concomitant bacterial infection: 2
- Age <18 years: 0
- Pregnant women: 2

415 cases included

342 positive urine cultures analyzed

Study Population

Definitions

- **Positive urine culture:**

- Any growth on culture

- **Asymptomatic bacteriuria:**

- A positive urine culture without any documented signs or symptoms of UTI per National Hospital Safety Network (NHSN) definition and Infectious Diseases Society of America (IDSA)

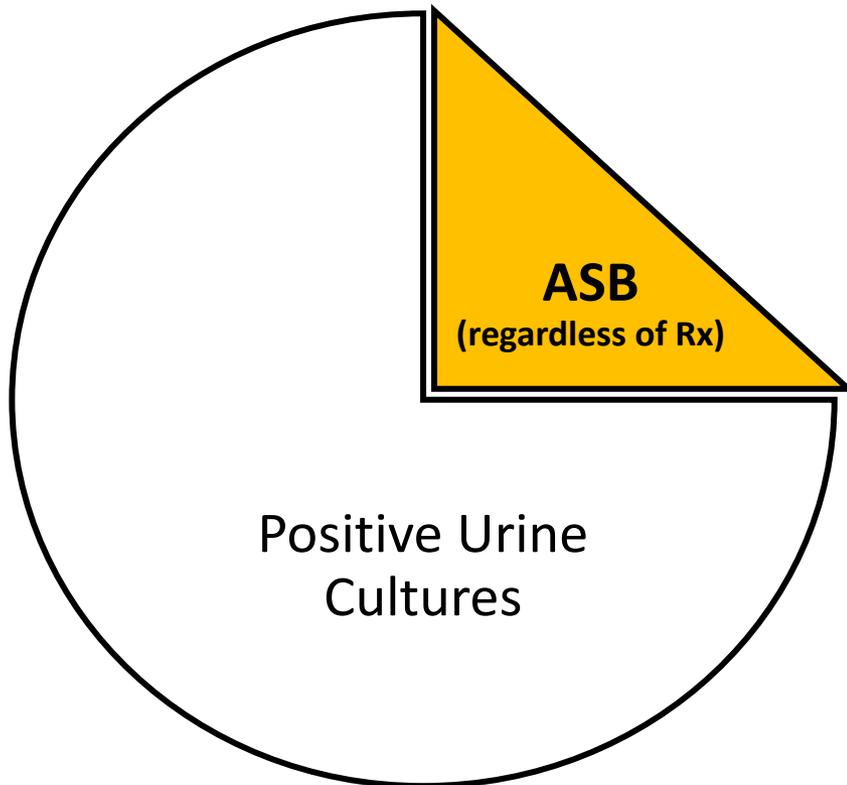
Guidelines

- Temperature $> 38.0^{\circ}\text{C}$
- Suprapubic tenderness
- Costovertebral angle pain or tenderness
- Urinary urgency or frequency
- Dysuria
- Altered mental status plus ≥ 2 criteria for systemic inflammatory response syndrome [SIRS]

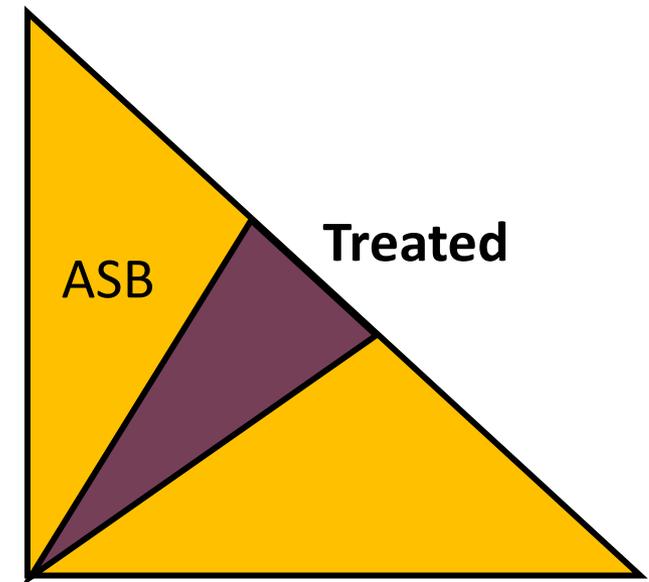
Results

Prevalence of ASB and Proportion of ASB Treated

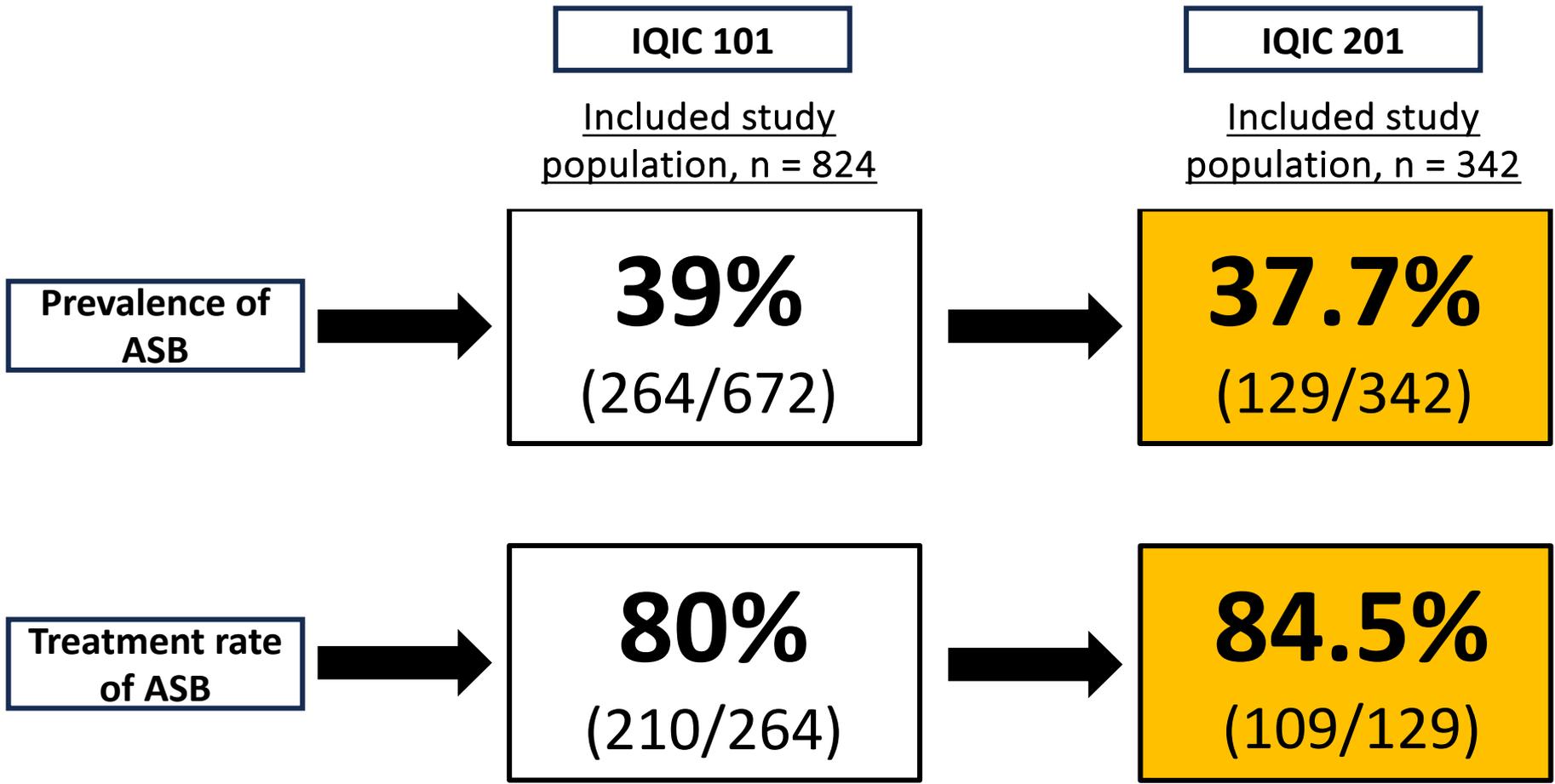
Prevalence of ASB



Treatment rate of ASB



Prevalence and Treatment Rate of ASB



Study Population Baseline and Clinical Characteristics Continued

Table 1: Study Population Characteristics

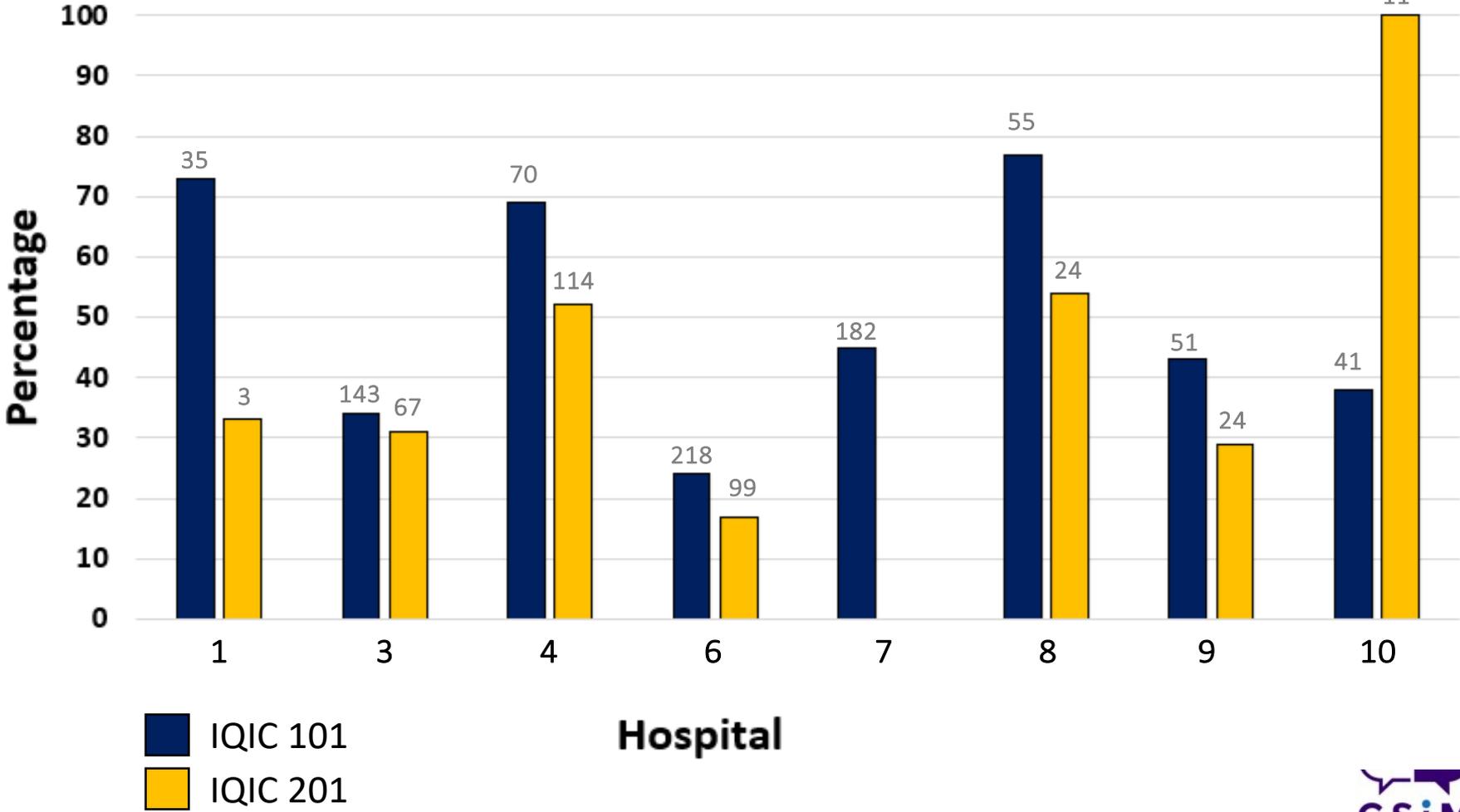
Characteristic: n (%)	All Cases, N= 342	ASB	
		All, n= 129	Treated, n=109
Setting where culture was obtained			
ED, then admitted	56 (16.4)	34 (26.4)	30 (27.5)
ED, then discharged	158 (46.2)	74 (57.4)	61 (56.0)
Ambulatory care clinic	109 (31.9)	12 (9.3)	11 (10.1)
Inpatient	6 (1.8)	5 (3.9)	4 (3.7)
Other	13 (3.8)	4 (3.1)	3 (2.8)
From reflex test	276 (80.7)	109 (84.5)	92 (84.4)
Men	64 (18.7)	27 (20.9)	23 (21.1)
Age >75	136 (39.8)	56 (43.4)	47 (43.1)
Acute altered mental status changes alone	33 (9.6)	25 (19.4)	24 (22.0)
Being treated for sepsis	23 (6.7)	8 (6.2)	8 (7.3)

Prevalence of ASB and Proportion of ASB Treated

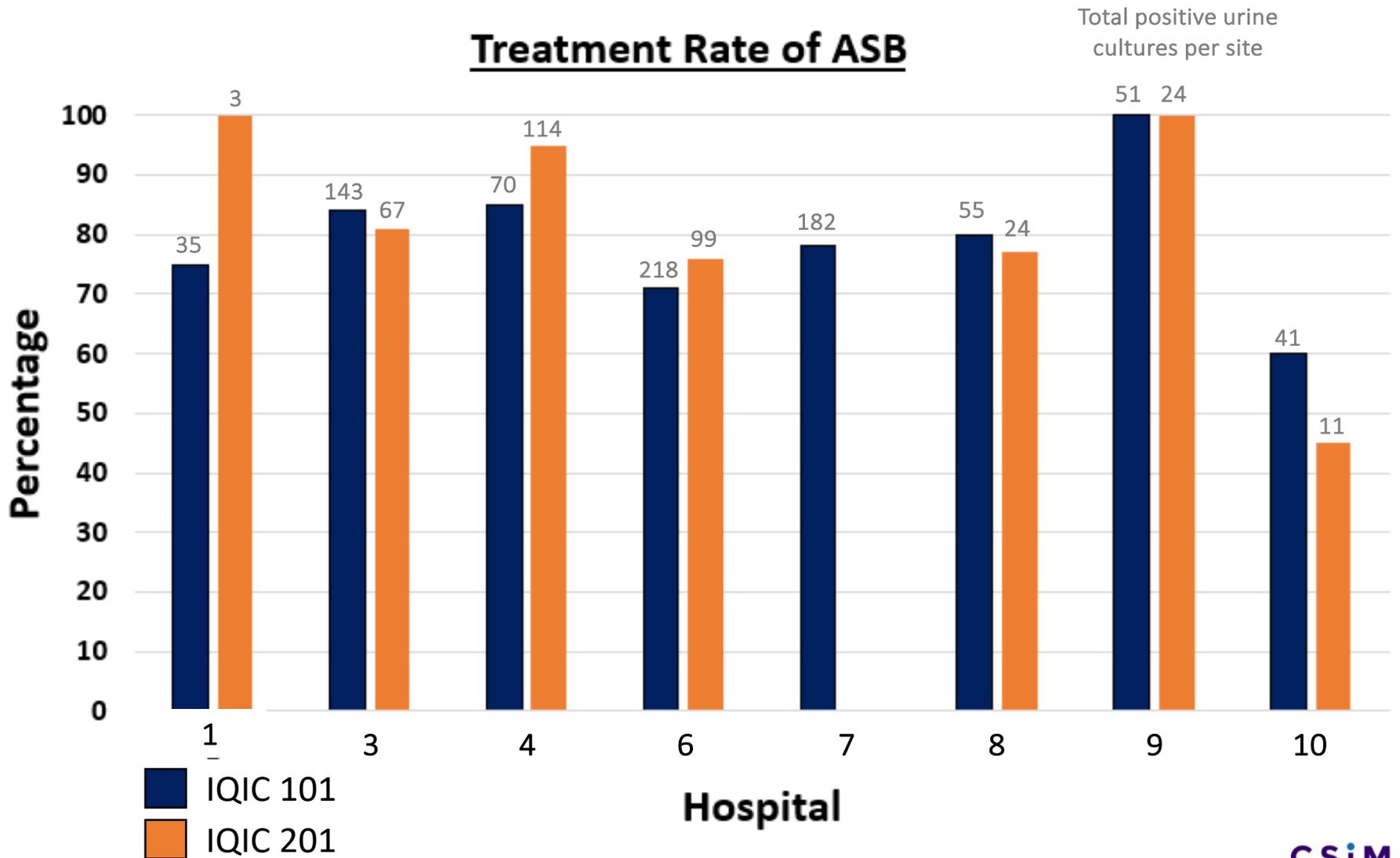
Prevalence of ASB at your Sites

Prevalence of ASB

Total positive urine cultures per site



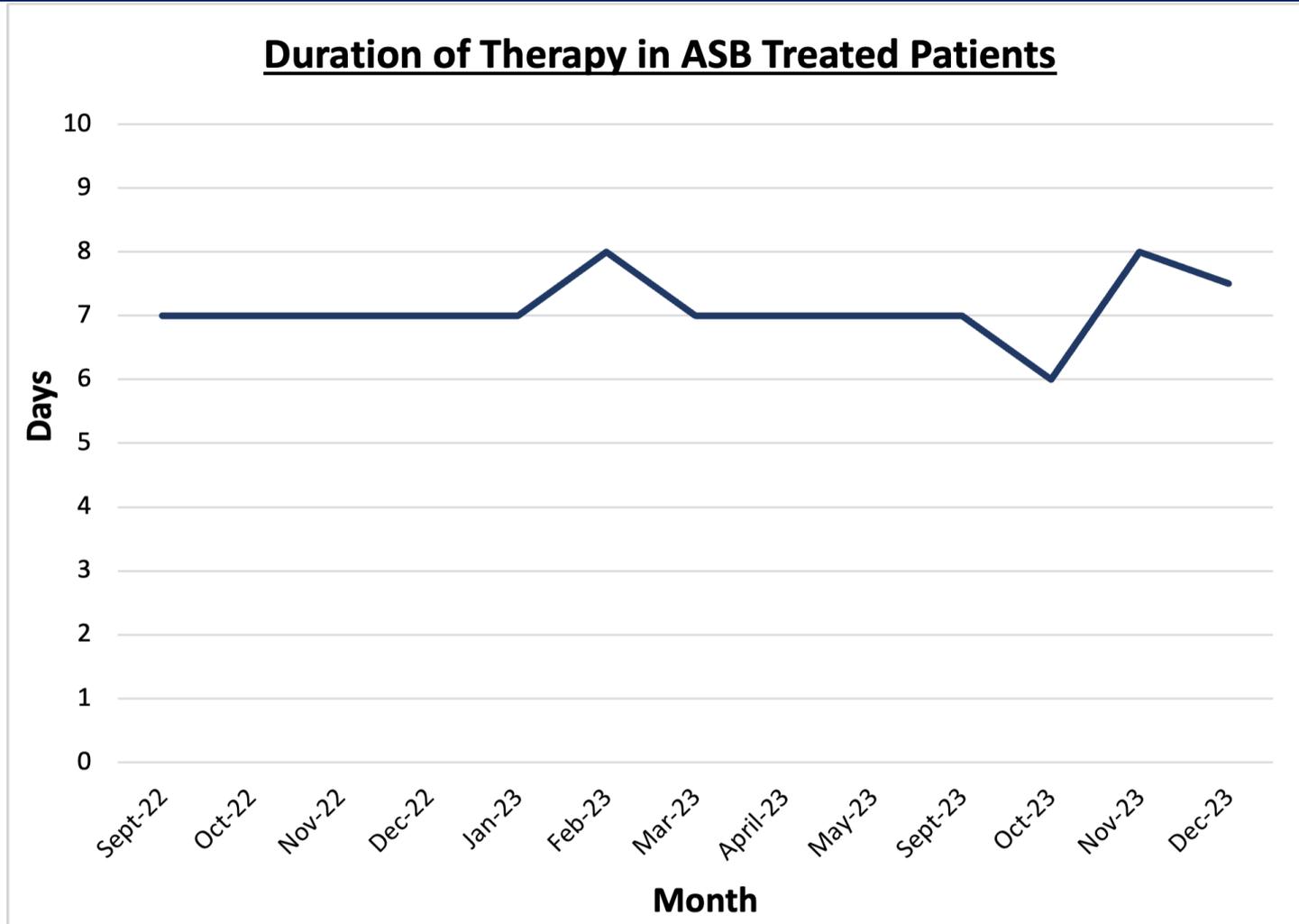
Treatment Rate of ASB at your Sites



Antibiotic Durations

Table 2: Antibiotic Duration		
	UTI, n = 204	ASB, n = 109
Total Antibiotic Duration; median (IQR)	7 (5-8.25)	7 (5-8)
Number of Cases Receiving >7 days; n (%)	73 (35.8)	41 (37.6)

Long Median Duration of Therapy in Treated ASB Patients Overtime

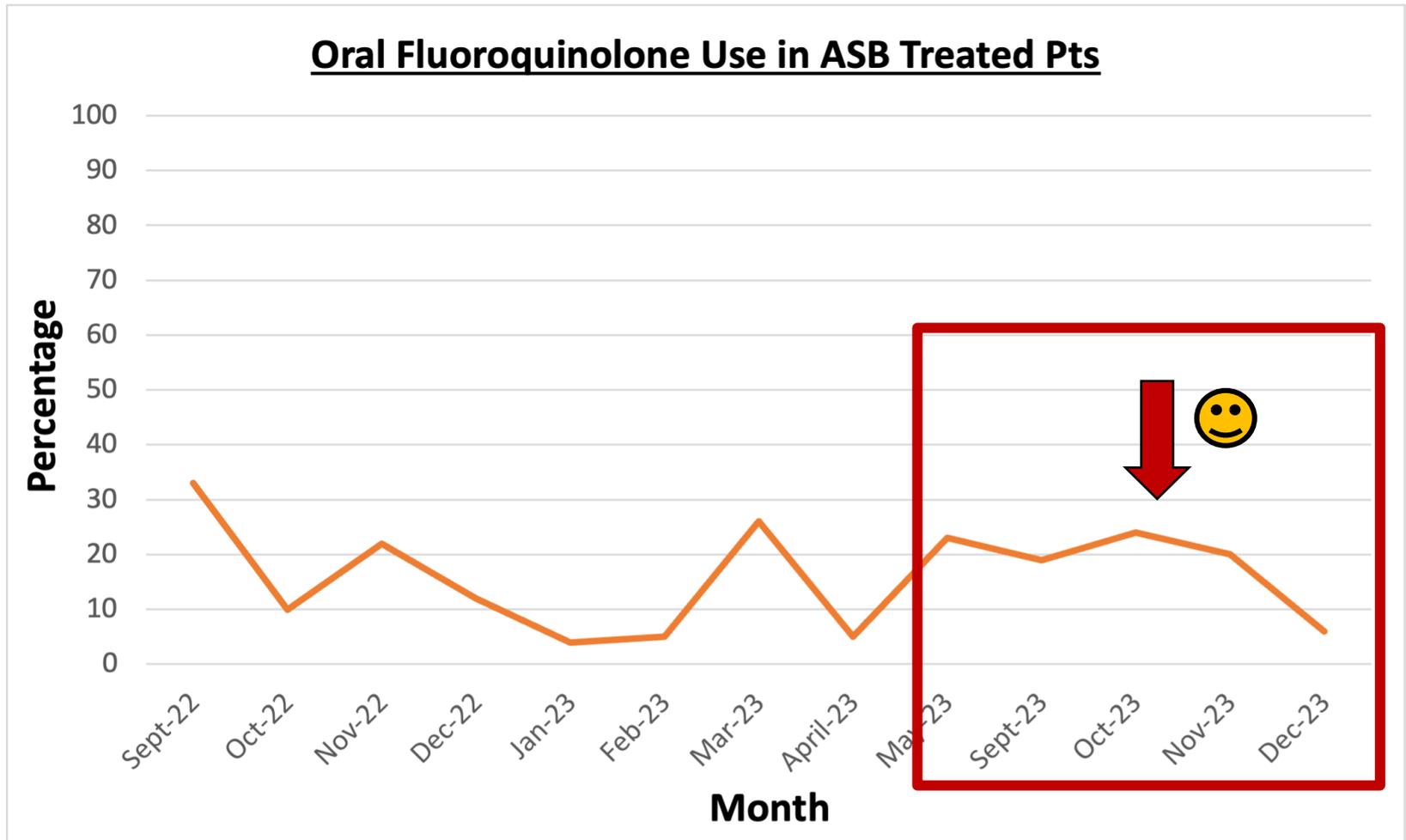


*Please note there is no data for June-August of 2023

Grouped Antibiotic Prescribing for Treated ASB Patients

Table 3A: Grouped Antibiotic Prescribing	
Variable, n (%)	ASB, n= 129
Treated with antibiotic (IV or PO)	109 (84.5)
Received any oral therapy	98
Beta-lactam	36 (36.7)
Fluoroquinolone	19 (19.4)
Nitrofurantoin	22 (22.4)
Trimethoprim-sulfamethoxazole	16 (16.3)
Received IV therapy	55
Beta-lactam	50 (90.9)
Fluoroquinolone	2 (3.6)

Oral Fluoroquinolone use in ASB Treated Patients Overtime



*Please note there is no data for June-August of 2023

Prescriber Characteristics

Table 4: Prescriber Characteristics amongst Treated Cases

	UTI, n= 204	ASB, n = 109
Prescriber type, n (%)		
Physician	82 (40.2)	78 (71.6)
Physician Assistant	64 (31.4)	14 (12.8)
Nurse Practitioner	58 (28.4)	17 (15.6)
Contract of prescribing provider, n (%) (if available)		
Employed by hospital	121 (59.3)	56 (51.4)
Contracted from outside group/locum	66 (32.4)	36 (33.0)
Not sure	13 (6.4)	17 (15.6)

The Inappropriate Diagnosis of UTI Measure

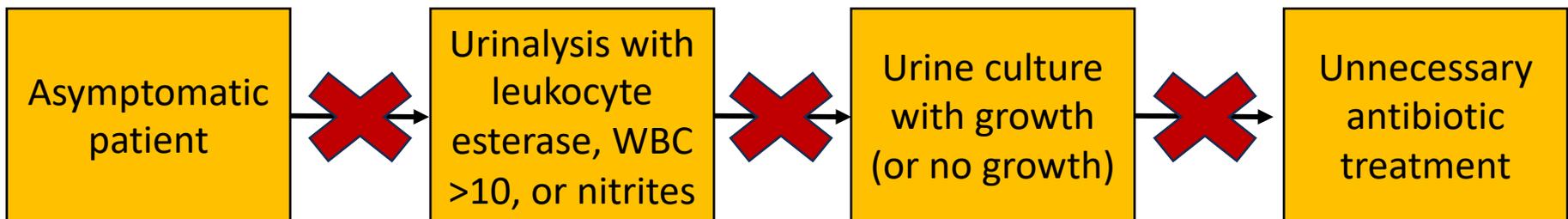
Percentage of patients treated for a UTI
who actually had ASB, over time

Outcome: percentage of patients treated for UTI who actually had ASB, overtime

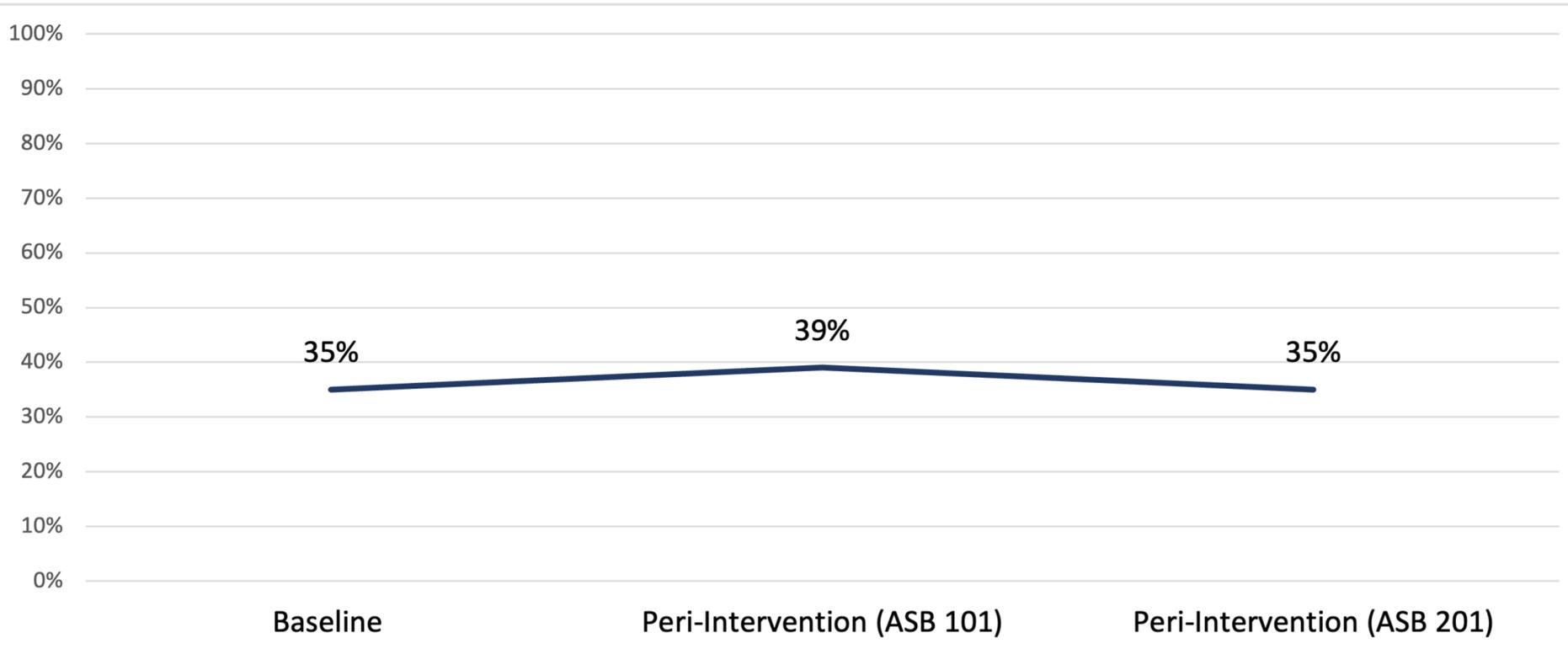
- **Goal:** lower is better
- Why use?

$$\frac{\text{Number of patients treated for ASB}}{\text{Number of patients treated for UTI/ASB}}$$

- You can lower this number by either reducing unnecessary urine cultures (**diagnostic stewardship**) or reducing antibiotic treatment when unnecessary cultures are obtained (**antibiotic stewardship**)



Outcome: percentage of patients treated for UTI who actually had ASB, overtime



Opportunities

- Target opportunities for stewardship interventions
 - Decrease number of inappropriate urine cultures being done
 - Decrease treatment in asymptomatic patients
 - Shorten duration of therapy
 - Decrease fluoroquinolone use
 - Use this information to help guide location and provider specific initiatives

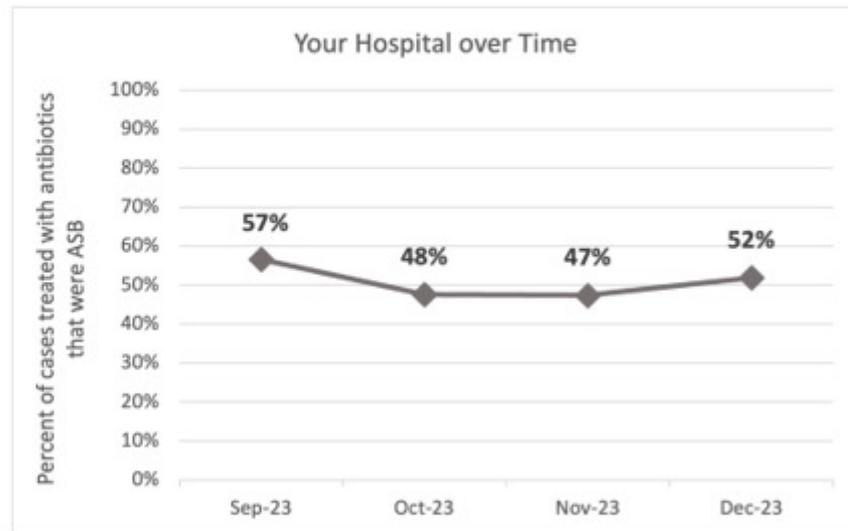
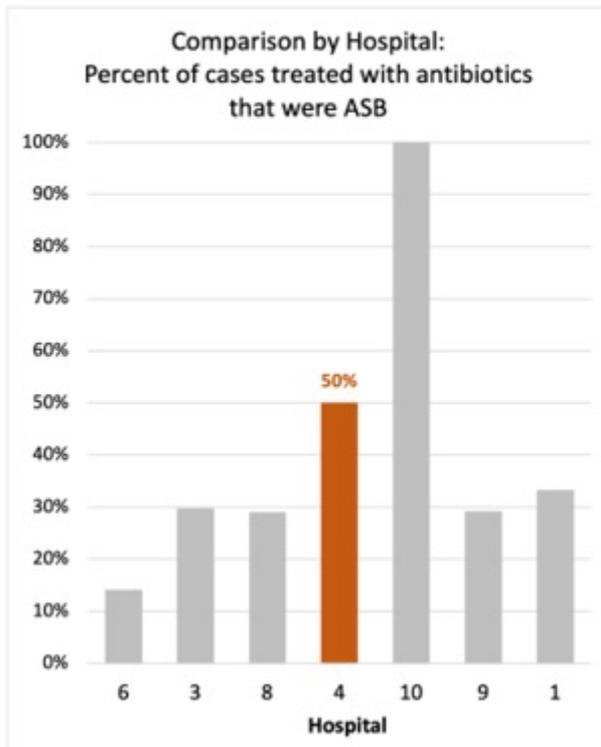


Thoughts from Maria

Reports will be on website

- Discuss at next check-in!

Inappropriate Diagnosis of UTI measure



Notable Changes from last year

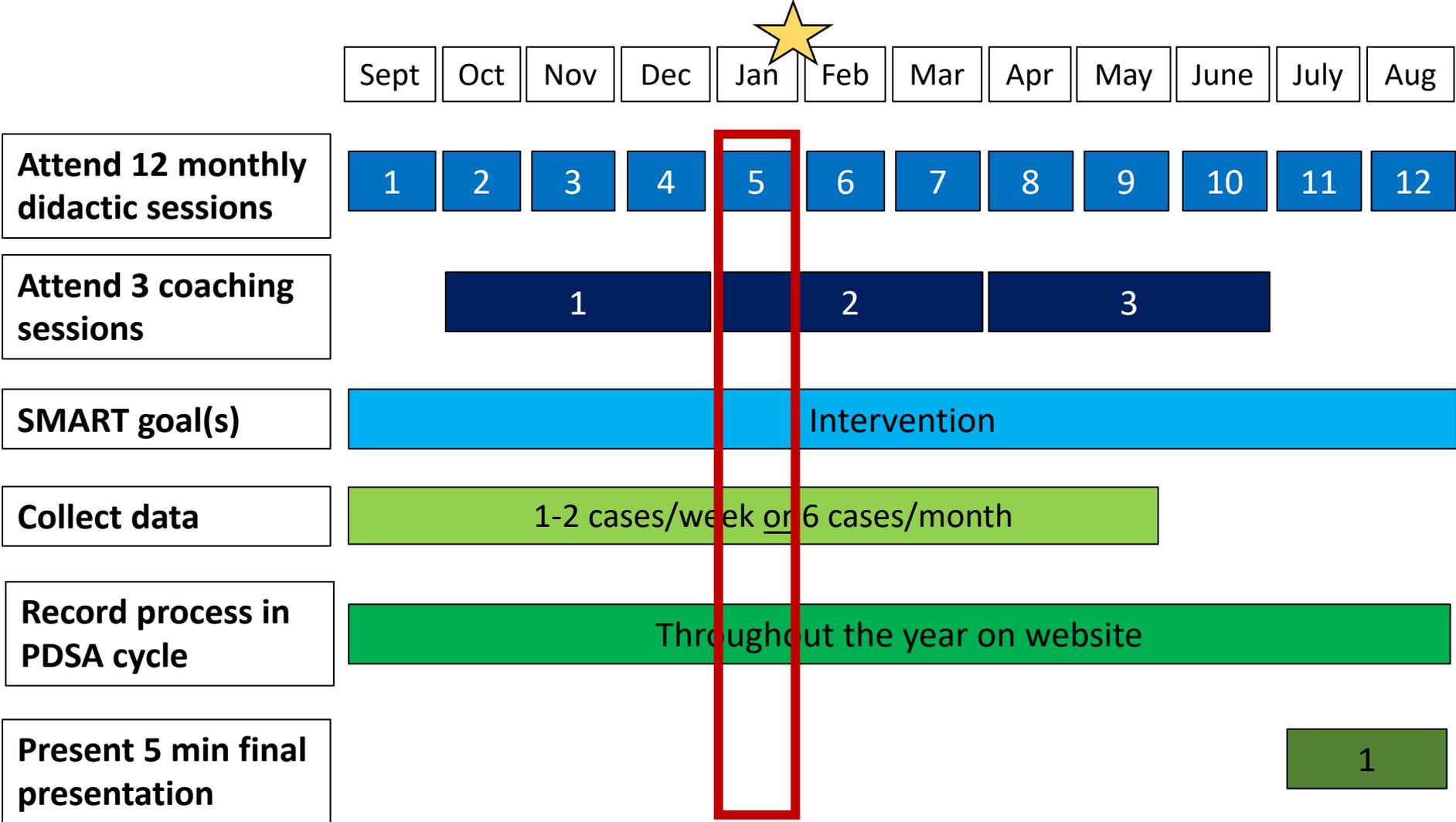
Table 4: Prescribing Characteristics	UTI, n=55	ASB, n=59
Top 3 Prescriber IDs (if available)		
Prescriber type, n (%)		
Physician	33 (60%)	49 (83.1%)
Physician Assistant	7 (12.7%)	4 (6.8%)
Nurse Practitioner	15 (27.3%)	6 (10.2%)
Contract of prescribing provider, n (%) (if available)		
Employed by hospital	19 (34.5%)	24 (40.7%)
Contracted from outside group/locum	23 (41.8%)	20 (33.9%)
Not sure	13 (23.6%)	15 (25.4%)

Prior is Sept - Nov 2023 & this month is Dec 2023

Case IDs for the treated ASB cases
 |*****| *****| *****|



Review of Deliverable Goals



The People Person's Paper People



“All you can do right now is put on a brave face and go out there and be their leader.”

- Michael Scott

Next Session: Thursday, February 29

Thank you!

Questions?

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