



CENTER FOR  
STEWARDSHIP  
IN MEDICINE

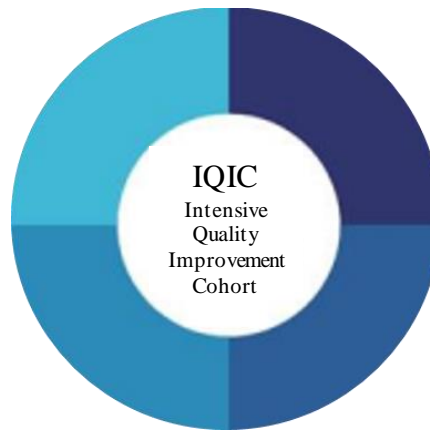
October 26, 2023

# IQIC 201 Session 2

Agenda:

Antimicrobial Stewardship Interventions for ASB

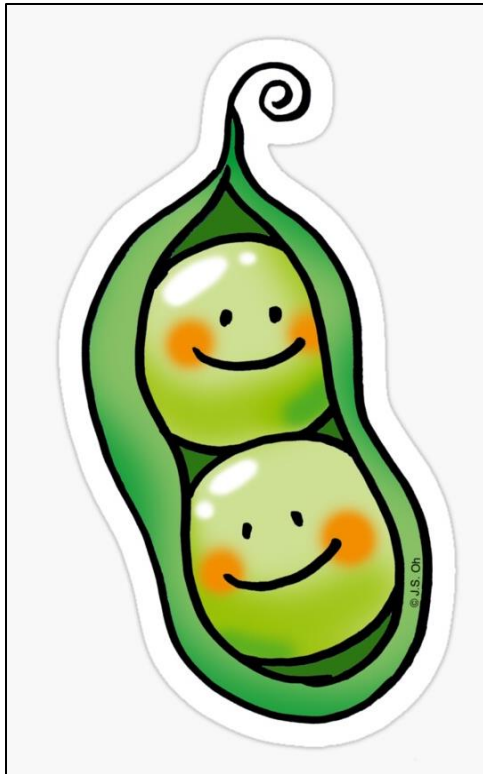
- Jamie Pomeroy, Copper Queen
- Whitney Hartlage



# Antimicrobial Stewardship Interventions for ASB

Whitney Hartlage, PharmD

# Improving antimicrobial use includes both antimicrobial and diagnostic stewardship



Antimicrobial stewardship  
interventions



Diagnostic stewardship  
interventions



Valerie Vaughn, MD  
Nov 30



# High area of focus = ED

- Based on IQIC 101 data from 2022-2023:

## Location of urine culture collection in patients with asymptomatic bacteriuria that received treatment

ED, then discharged	51%
ED, then admitted	24%
Ambulatory care clinic	16%
Inpatient	5%
Other outpatient	4%

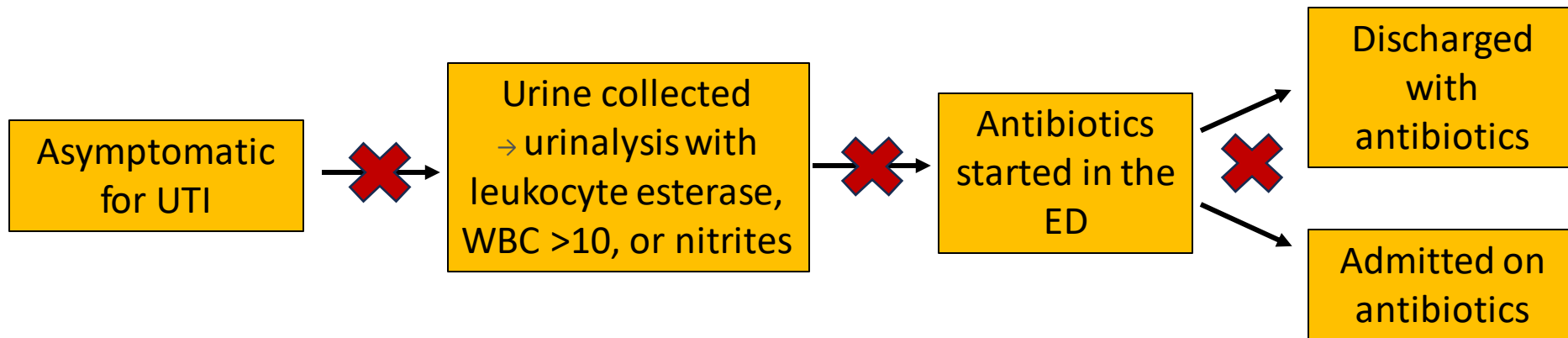
**Of the patients treated for ASB, 75% of urine cultures originated from the emergency department**



# Where are stewardship opportunities for UTI?

Diagnostic stewardship

Antimicrobial stewardship



- 1) How can we intervene in real time?
- 2) How can we influence future prescribing?



ED, then admitted  
interventions



# How can we steward admitted patients with ASB on antibiotics?

- Prospective audit and feedback\*
- Shortening duration of therapy
  - Stop following dose(s)
  - If clinician prefers to continue, decrease to 3 days<sup>1</sup>
- Antibiotic selection
  - Non-FQ agent
  - Transition from IV to PO



# Example:

## ASSESSMENT:

Patient presenting with acute AMS changes currently on day 3 of ceftriaxone for suspected UTI with noted hemodynamic stability throughout admission. Factors that could be contributing to AMS changes in this patient include labile blood sugar changes (prolonged history with multiple admissions to OSH for hypo/hyperglycemia events; variable diet noted per RN at veteran's home), medications (tramadol, gabapentin, and duloxetine), and dementia.

In older patients with functional and/or cognitive impairment with bacteriuria and delirium (acute mental status change, confusion) and without local genitourinary symptoms or other systemic signs of infection (eg, fever or hemodynamic instability), assessment for other causes and careful observation rather than antimicrobial treatment is recommended based on the IDSA 2019 Asymptomatic Bacteriuria (ASB) guidelines.

Current evidence does not suggest a causal relationship between bacteriuria and presentations without classic localizing UTI symptoms, such as changes in mental status or falls. Treatment of ASB in patients with delirium has not been shown to have any beneficial impact on clinical outcomes compared to no treatment, including reducing severity or duration of delirium and reducing sepsis, death, or hospitalizations. There is high certainty that antimicrobials cause harm. Treatment increases the risk of antibiotic-associated diarrhea, including CDI, and increases the risk of antimicrobial resistance for the individual patient and the community. (Das R, Infect Control Hosp Epidemiol 2011; Rotjanapan P, Arch Intern Med 2011; Dasgupta M, Arch Gerontol Geriatr 2017).

## RECOMMENDATION:

1) AMS in the elderly without dysuria or fever is likely not a urinary tract infection. Would recommend discontinuing antibiotics at this time and monitoring the patient off treatment.

Discussed with Medicine Team 2. Contact myself, Dr. Emily Spivak, or Dr. Hannah Imlay via SmartWeb for additional questions.

Whitney Hartlage, PharmD  
Antimicrobial Stewardship Pharmacist

1) Identify team concern:  
AMS in elderly due to UTI

2) Address team concern

3) Educate for future

4) Rec: decreased DOT,  
monitor other reasons for AMS

5) Show support from  
stewardship champions





ED, then discharge  
interventions



# Recognize that antimicrobial stewardship in the emergency department is challenging

- Challenges
  - EDs are busy
  - Diagnostic uncertainty
  - Lack of stewardship representation
  - Delay in urine culture results



- Focus on changing behavior and future prescribing practices
  - Most effective and sustainable changes = successful integration of **cultural, regulatory, and individual change**



# What influences clinician behavior?

- Data (usually)
- Ease of use
- Peers (esp. Influential ones)
- Outcomes (the heart and the head)



# Influencing behavior: the MINDSPACE way

<b>Messenger</b>	We are heavily influenced by who communicates information
<b>Incentives</b>	Our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
<b>Norms</b>	We are strongly influenced by what others do
<b>Defaults</b>	We 'go with the flow' of pre-set options
<b>Salience</b>	Our attention is drawn to what is novel and seems relevant to us
<b>Priming</b>	Our acts are influenced by sub-conscious cues
<b>Affect</b>	Our emotional associations can powerfully shape our actions
<b>Commitments</b>	We seek to be consistent with our public promises, and reciprocate acts
<b>Ego</b>	We act in ways that make us feel better about ourselves



# We are heavily influenced by who communicates information



A Taylor Swift Instagram post helped drive a surge in voter registration

September 22, 2023 · 4:19 PM ET

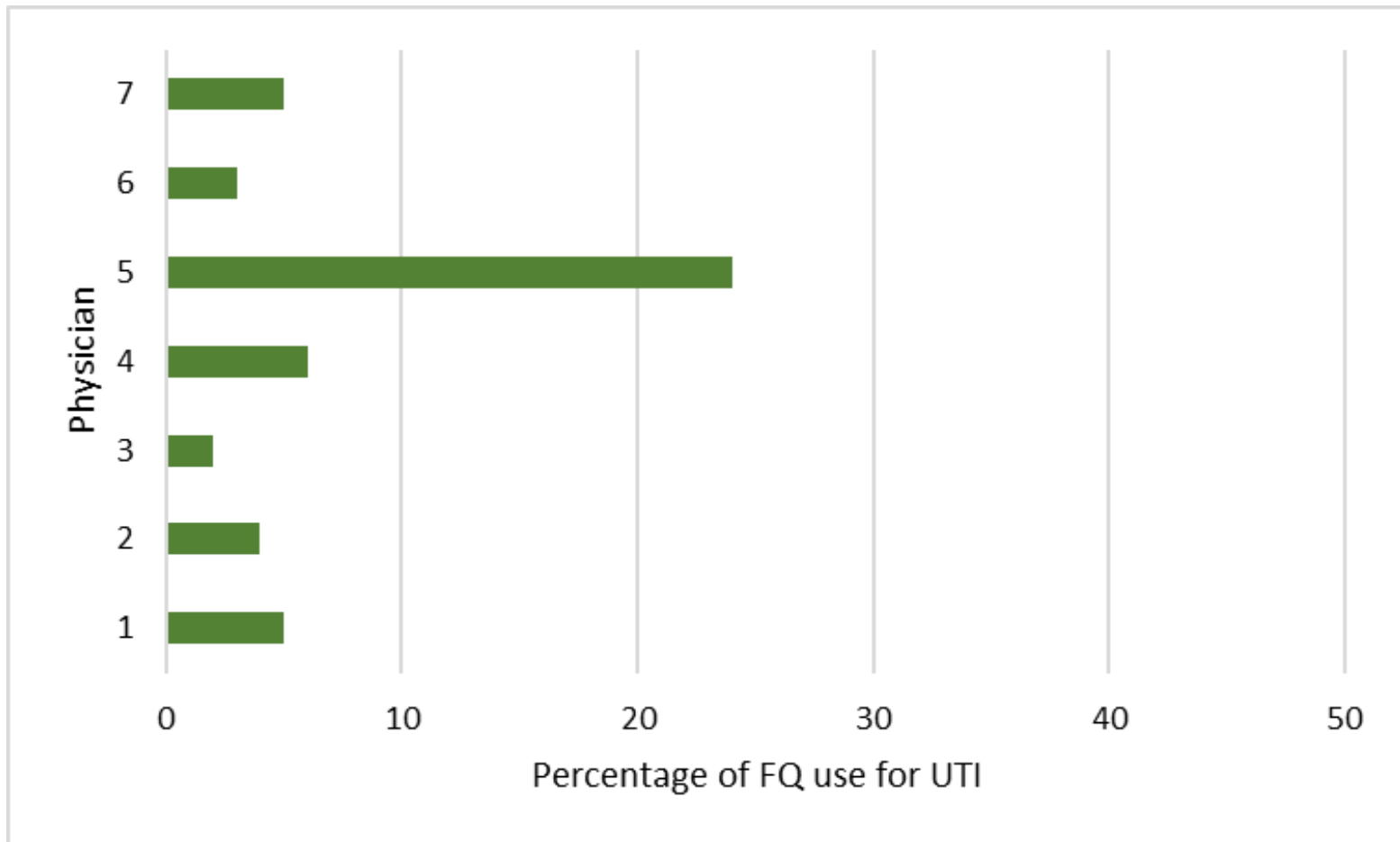


- Taylor Swift's Instagram post:
  - "I've been so lucky to see so many of you guys at my U.S. shows recently. I've heard you raise your voices, and I know how powerful they are. Make sure you're ready to use them in our elections this year!"
  - Post included link to register at Vote.org
- Vote.org reported a **1,226% jump in registration participation in the hour after the post**.
- "When Taylor Swift speaks, people listen."

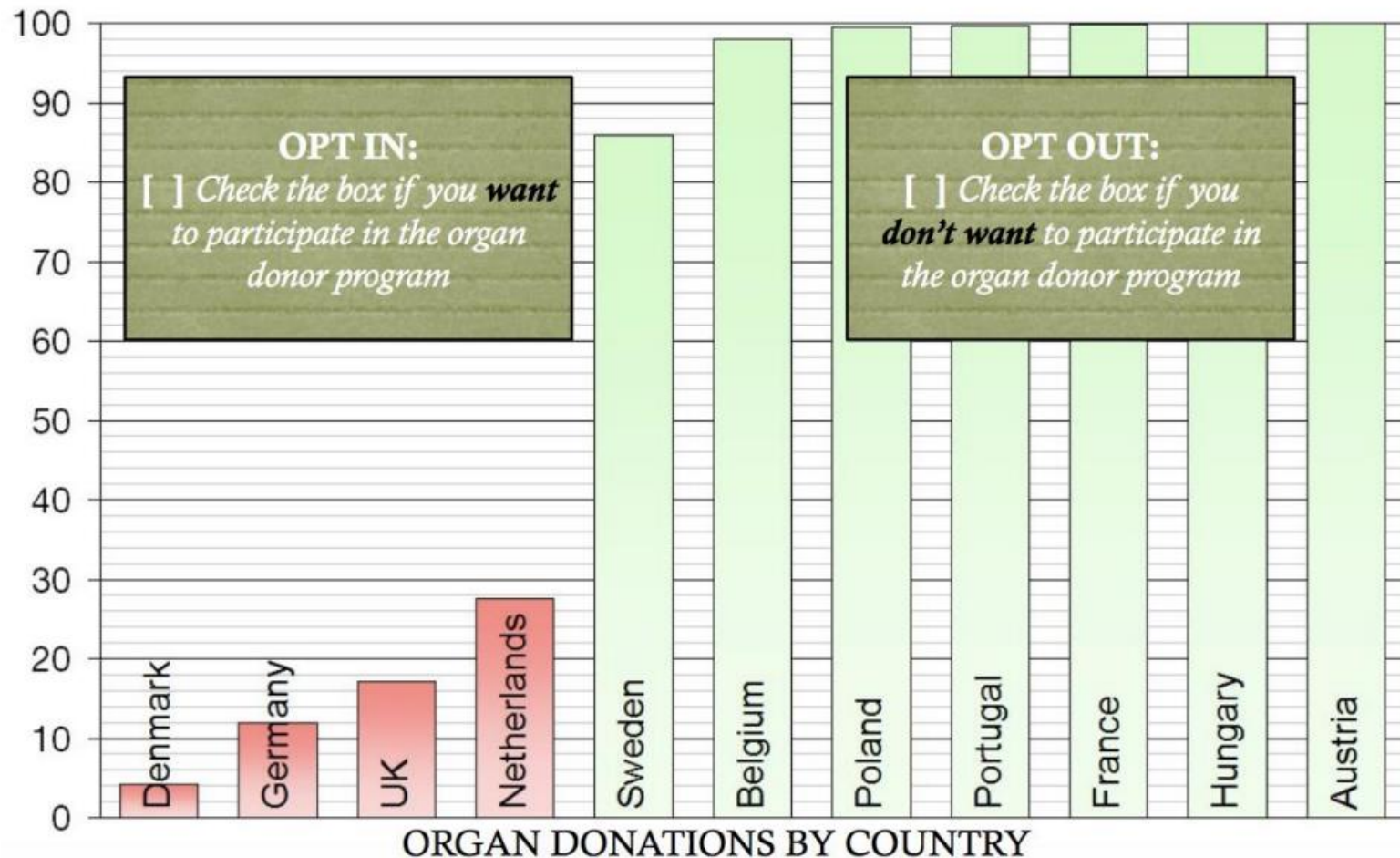


# We tend to do what others around us are doing

- If the norm is desirable, let people know about it



# We 'go with the flow' of pre-set options



# Opt-out approach decreases antimicrobial use

## BestPractice Advisory - Amethyst,Angela

### ▼ Care Guidance (Advisory: 1)

Recommendations will be implemented in 24 hours if no provider declines.

This is a recommendation from the antimicrobial stewardship program to reduce the incidence of MDRO and *C. difficile* infection.

Current antibiotics: pip/tazo day 3

Indication: cystitis

Antibiotic recommendation: de-escalate to cephalexin 500 mg PO TID to complete 7 days of therapy

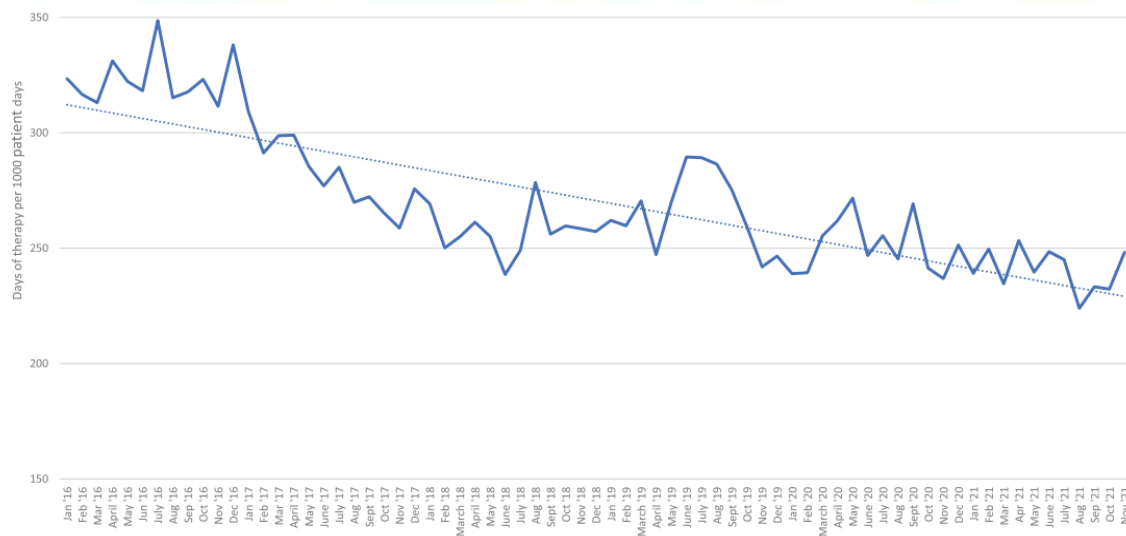
Clinical reasoning: narrowing spectrum

Please select defer if you are not managing these antibiotics.

These recommendations are ready to be signed or edited in manage orders.

Acknowledge Reason

☒ Agree ☐ Defer to another provider ☐ Decline some or all recommendations ☐ Review chart then manage orders

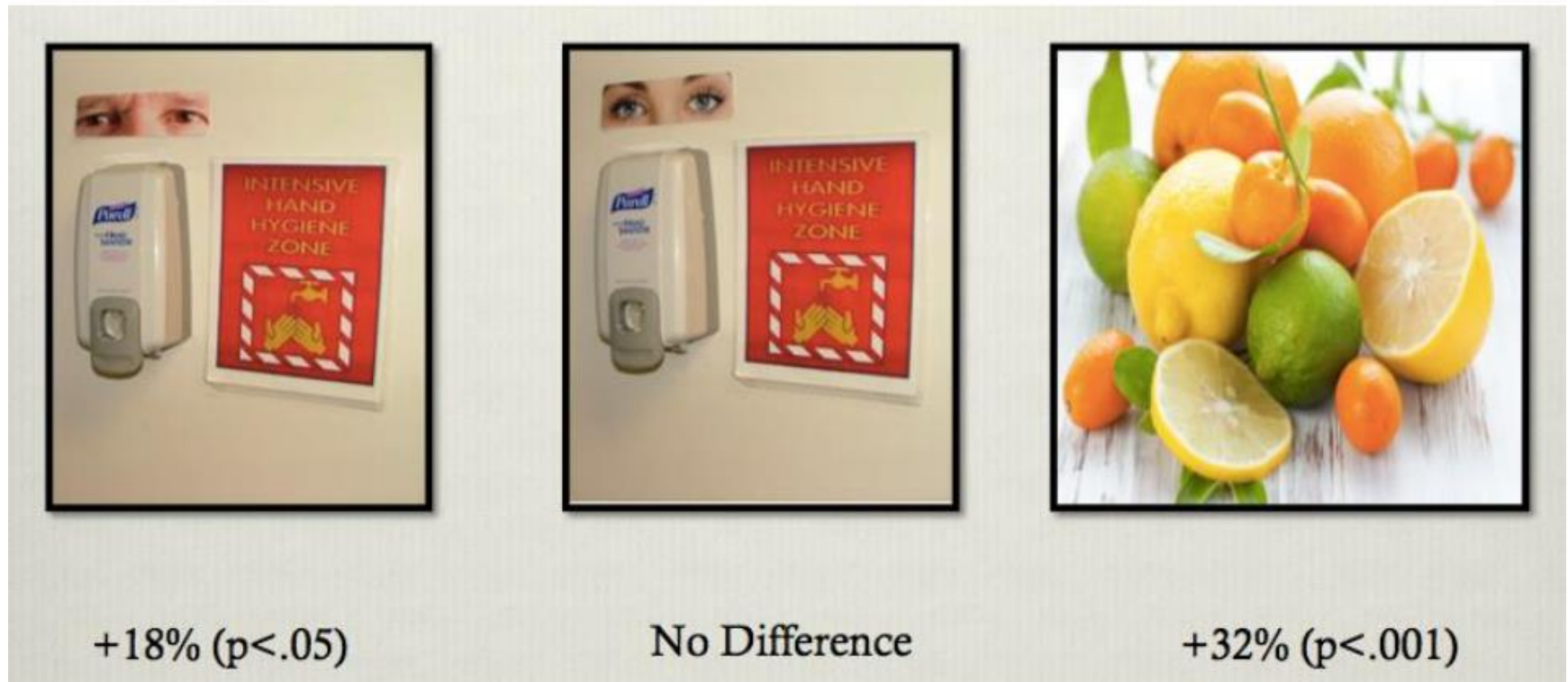


**25% reduction in target antimicrobial use was achieved and sustained with the program.**





# Our acts are influenced by sub-conscious cues



# Our emotional associations can powerfully shape our actions

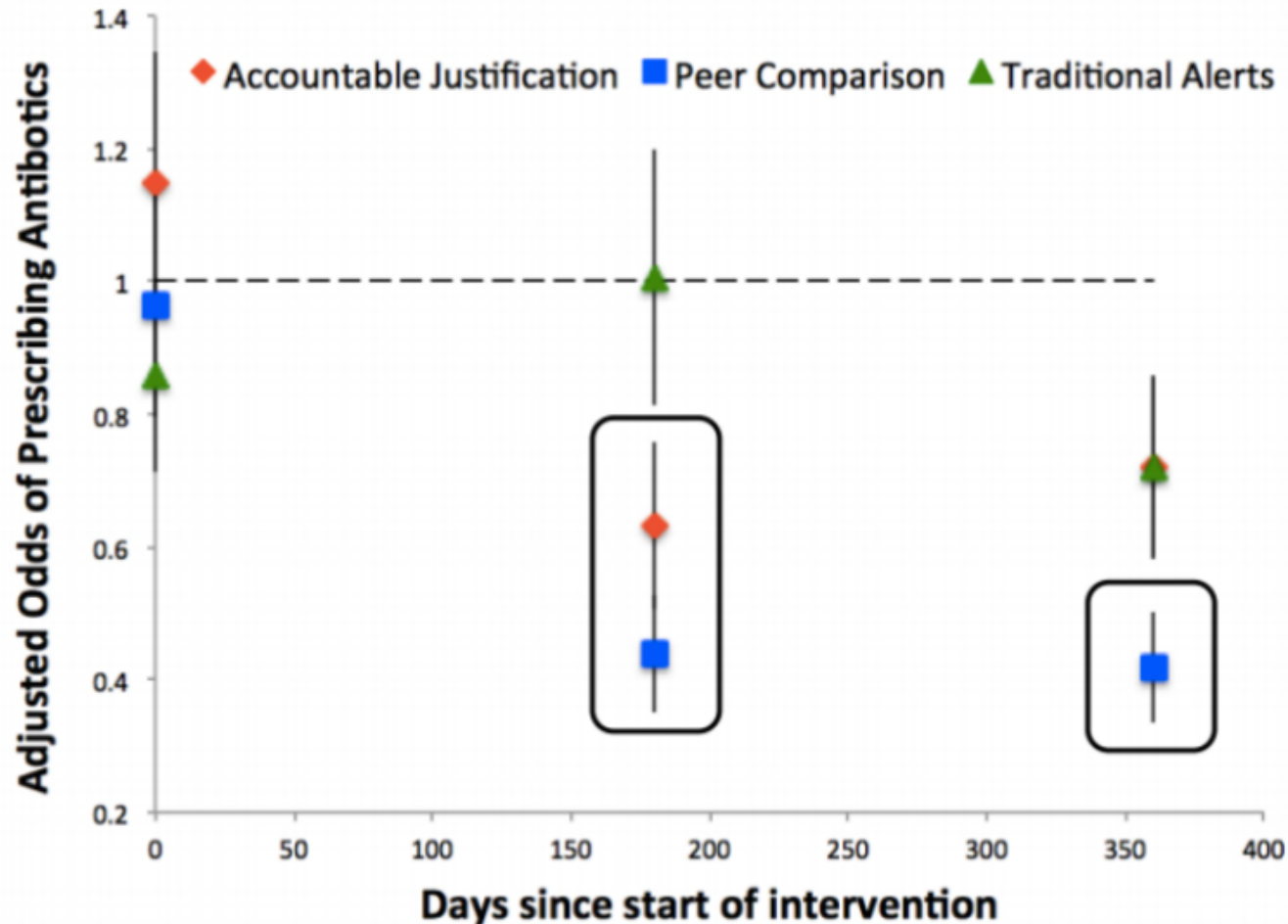
Affect

- Stories and individuals
  - Misdiagnosis of UTI
  - Harm from unnecessary antibiotic use



# We act in a way that supports the impression of a positive and consistent self-image

Ego



# We act in a way that supports the impression of a positive and consistent self-image

Ego

## ***“You are a Top Performer”***

You are in the top 10% of clinicians. You wrote 0 prescriptions out of 21 acute respiratory infection cases that did not warrant antibiotics.

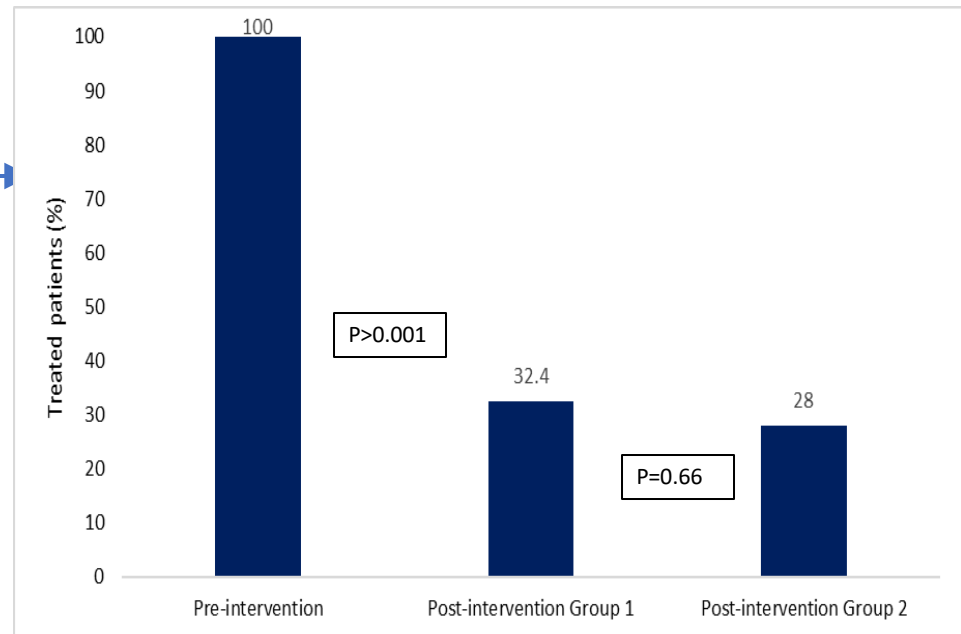
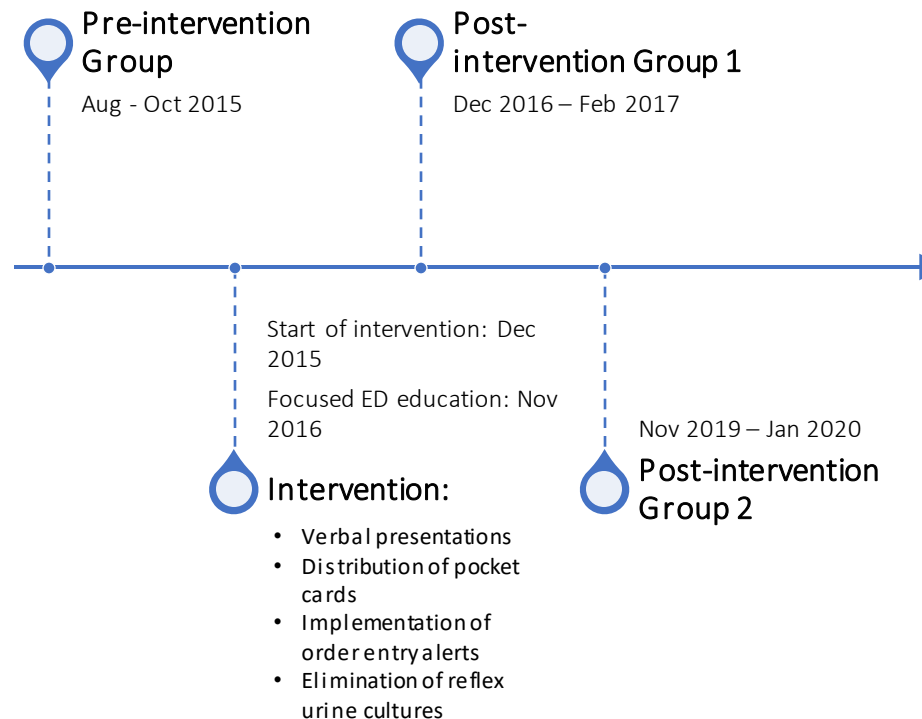
## ***“You are not a Top Performer”***

Your inappropriate antibiotic prescribing rate is 15%. Top performers' rate is 0%. You wrote 3 prescriptions out of 20 acute respiratory infection cases that did not warrant antibiotics.



# Multifaceted AMS intervention targeting ASB in the ED reduced inappropriate use of antibiotics

Multifaceted approach

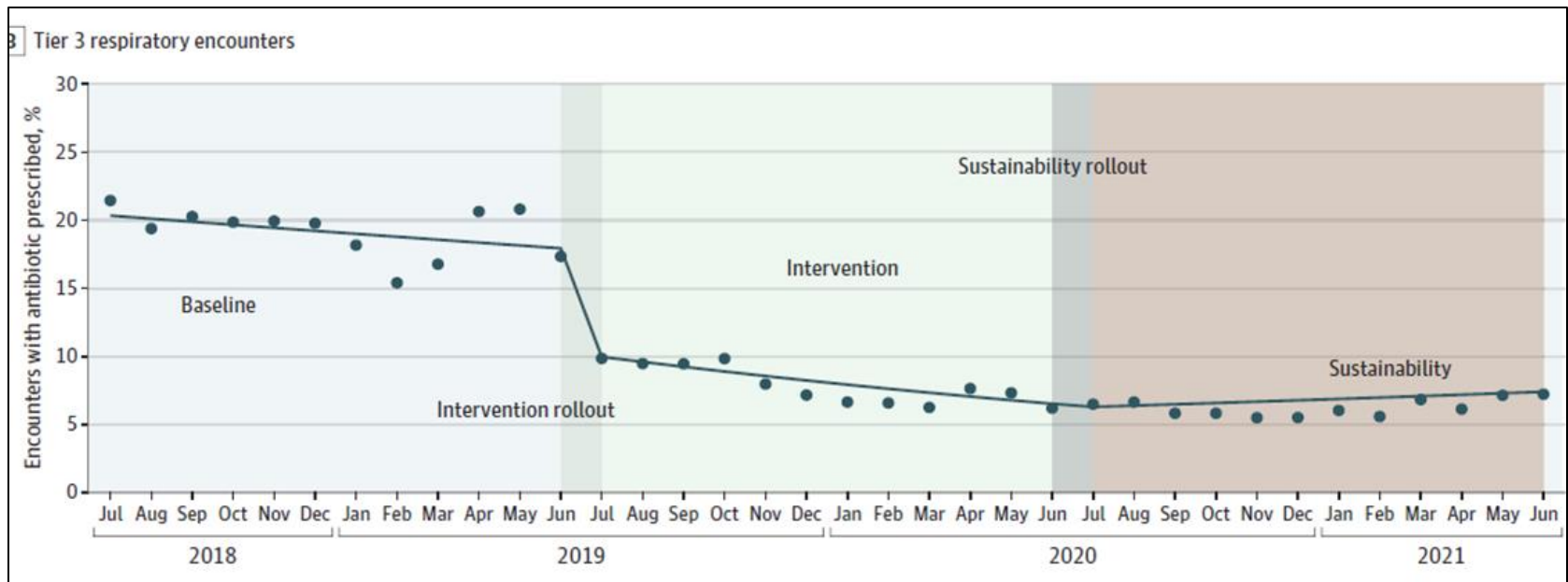


- Multifaceted intervention = decreased inappropriate antibiotics for asymptomatic pyuria or asymptomatic bacteriuria that was maintained 3 years after implementation

# Multifaceted AMS interventions work

Multifaceted approach

- Different target: respiratory conditions
- Interventions: 1) education for clinicians and patients, 2) electronic health record tools, 3) clinician benchmarking, 4) media (posters/waiting room stewardship messaging)
- Results:



# Final thoughts

- Know your stuff
- Make concrete recommendations
- Collaborate with stewardship champion
- Humility is key
- Keep the lines of communication open
- Focus on building long-term relationships\*

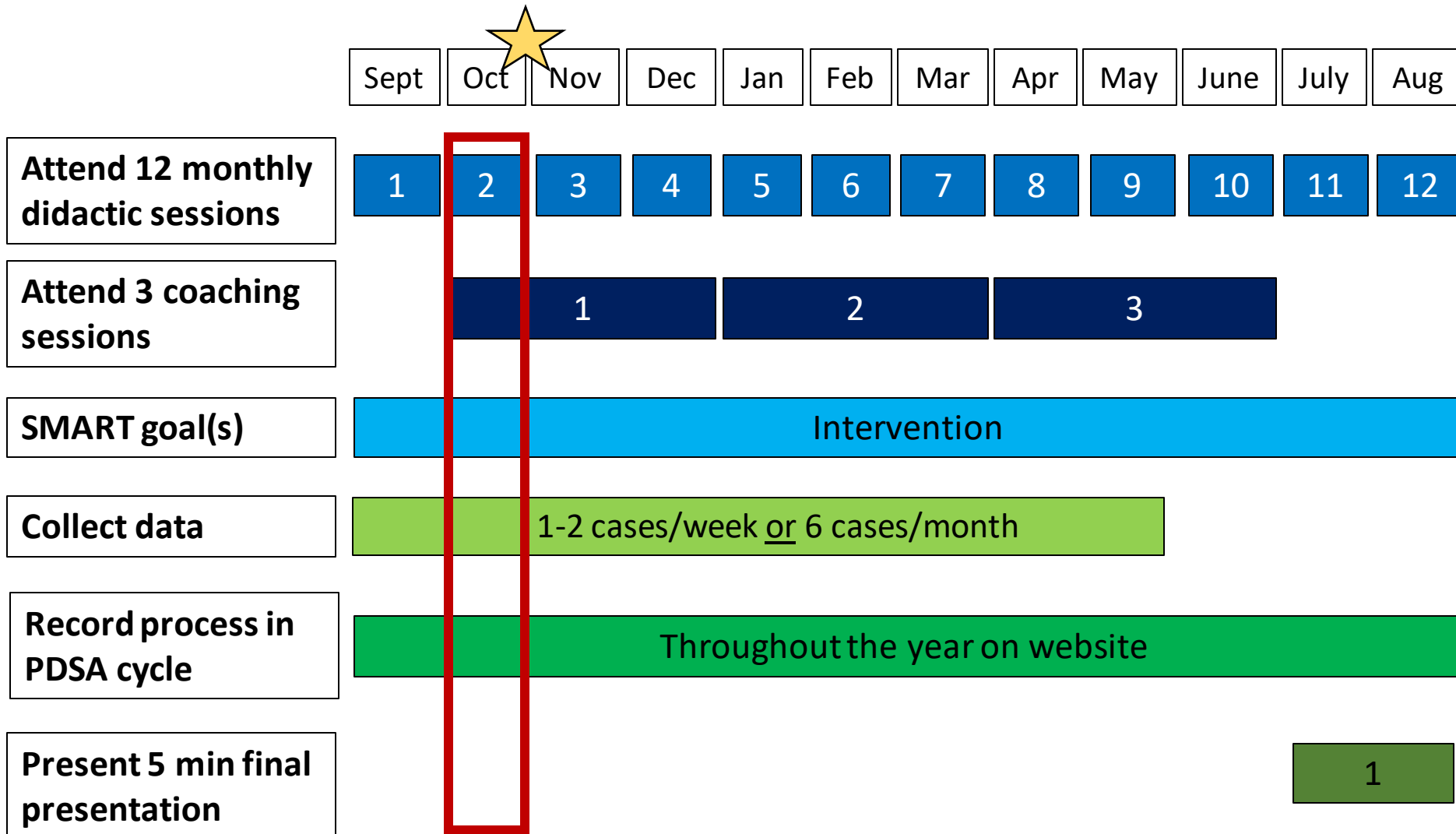


# Next Steps





# Review of Deliverable Goals



# Homework

## Attend 3 check-in sessions

- ☐ To-do: Schedule quarter 1 check-in (Oct-Dec) on website or using link

## Data collection

- ☐ To-do: submit cases; goal is at least 1-2 cases/week or 6 cases/month
  - Only 3 sites have submitted cases

## SMART goal

- ☐ To-do: what is your next goal? Finalize and start implementing! Will discuss progress in one-on-one sessions.

## Record process in PDSA cycle on website

- ☐ To-do: continue to track progress throughout the year



# The People Person's Paper People



**On what we face with implementing antimicrobial stewardship interventions:**

*“You know what, I am not going to give up that easy. I am going to make this way harder than it needs to be.”*

*- Michael Scott*

**Next Session: Thursday, November 30**

# Thank you!

## Questions?

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