



Baylor
College of
Medicine

City of Houston Antimicrobial Stewardship Project for Asymptomatic Bacteriuria

Progress Report, January 19, 2017

Barbara Trautner, MD, PhD

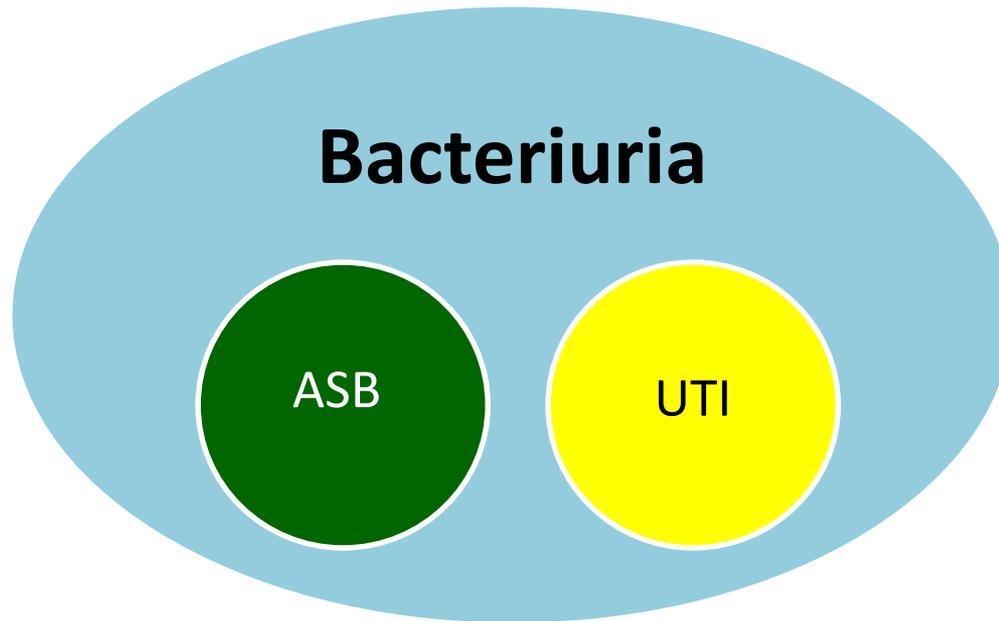
Purpose of this Stewardship Project

- Reduce unnecessary testing for asymptomatic bacteriuria
 - Urine cultures
- Reduce unnecessary treatment of asymptomatic bacteriuria
 - Inappropriate antibiotics
- Support City of Houston stewardship initiatives



Relationship of Bacteriuria to ASB and UTI

Bacteriuria means a positive urine culture



Home

Recommendations

*Published
Recommendations*

Recommendations in
Progress

Information for Health
Professionals

Information for
Consumers

Public Comments and
Nominations

Methods and Processes

About the USPSTF

Newsroom

Announcements

You are here: [Home](#) » [Recommendations for Primary Care Practice](#) » [Published Recommendations](#)

Asymptomatic Bacteriuria in Adults: Screening

Release Date: July 2008

Recommendation Summary

Summary of Recommendations

Population	Recommendation	Grade (What's This?)
Pregnant Women at 12 to 16 Weeks' Gestation	The USPSTF recommends screening for asymptomatic bacteriuria with urine culture for pregnant women at 12 to 16 weeks' gestation or at their first prenatal visit, if later.	A
Men and Nonpregnant Women	The USPSTF recommends against screening for asymptomatic bacteriuria in men and nonpregnant women.	D

[Read Full Recommendation Statement](#)

PDF Version ([PDF Help](#))

Intervention Leadership



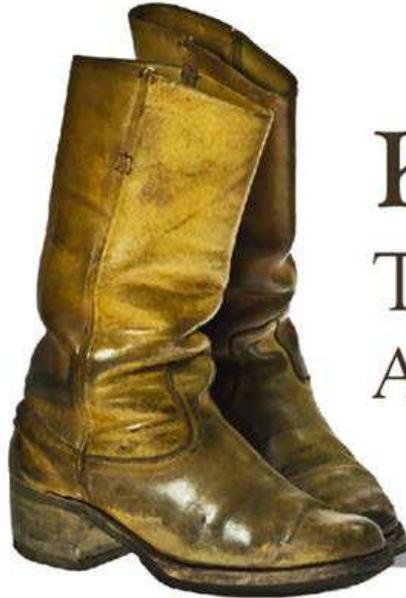
- Subject matter expert
 - Barbara Trautner, MD, PHD, Infectious Diseases



- City of Houston Health Department
 - Charlene Offiong, PharmD



- Project support
 - Kristi Kuper, PharmD, BCPS



Kicking UTI

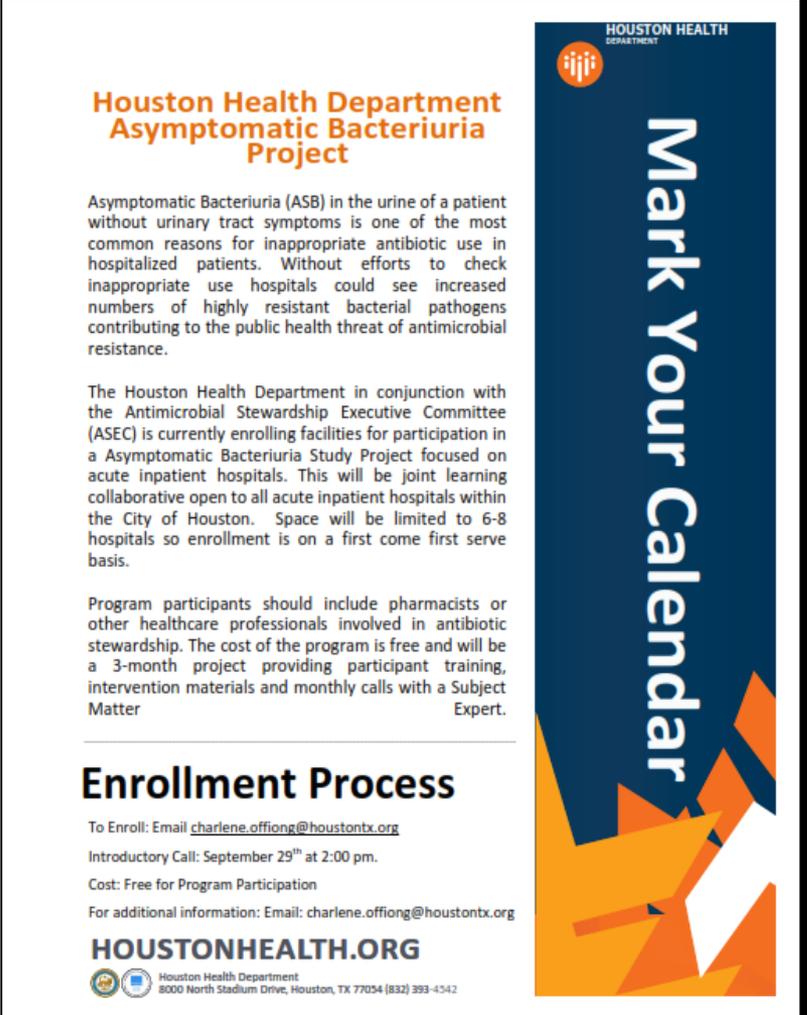
The No Knee-Jerk
Antibiotics Campaign

A Guidelines-Based Approach to Kicking CAUTI

Funded by VA HSR&D

City of Houston ASB Intervention Goals

- Test stewardship
 - Decrease unnecessary urine testing
- Antibiotic stewardship
 - Decrease unnecessary urine treatment



HOUSTON HEALTH DEPARTMENT

**Houston Health Department
Asymptomatic Bacteriuria
Project**

Asymptomatic Bacteriuria (ASB) in the urine of a patient without urinary tract symptoms is one of the most common reasons for inappropriate antibiotic use in hospitalized patients. Without efforts to check inappropriate use hospitals could see increased numbers of highly resistant bacterial pathogens contributing to the public health threat of antimicrobial resistance.

The Houston Health Department in conjunction with the Antimicrobial Stewardship Executive Committee (ASEC) is currently enrolling facilities for participation in a Asymptomatic Bacteriuria Study Project focused on acute inpatient hospitals. This will be joint learning collaborative open to all acute inpatient hospitals within the City of Houston. Space will be limited to 6-8 hospitals so enrollment is on a first come first serve basis.

Program participants should include pharmacists or other healthcare professionals involved in antibiotic stewardship. The cost of the program is free and will be a 3-month project providing participant training, intervention materials and monthly calls with a Subject Matter Expert.

Mark Your Calendar

Enrollment Process

To Enroll: Email charlene.offiong@houstontx.org

Introductory Call: September 29th at 2:00 pm.

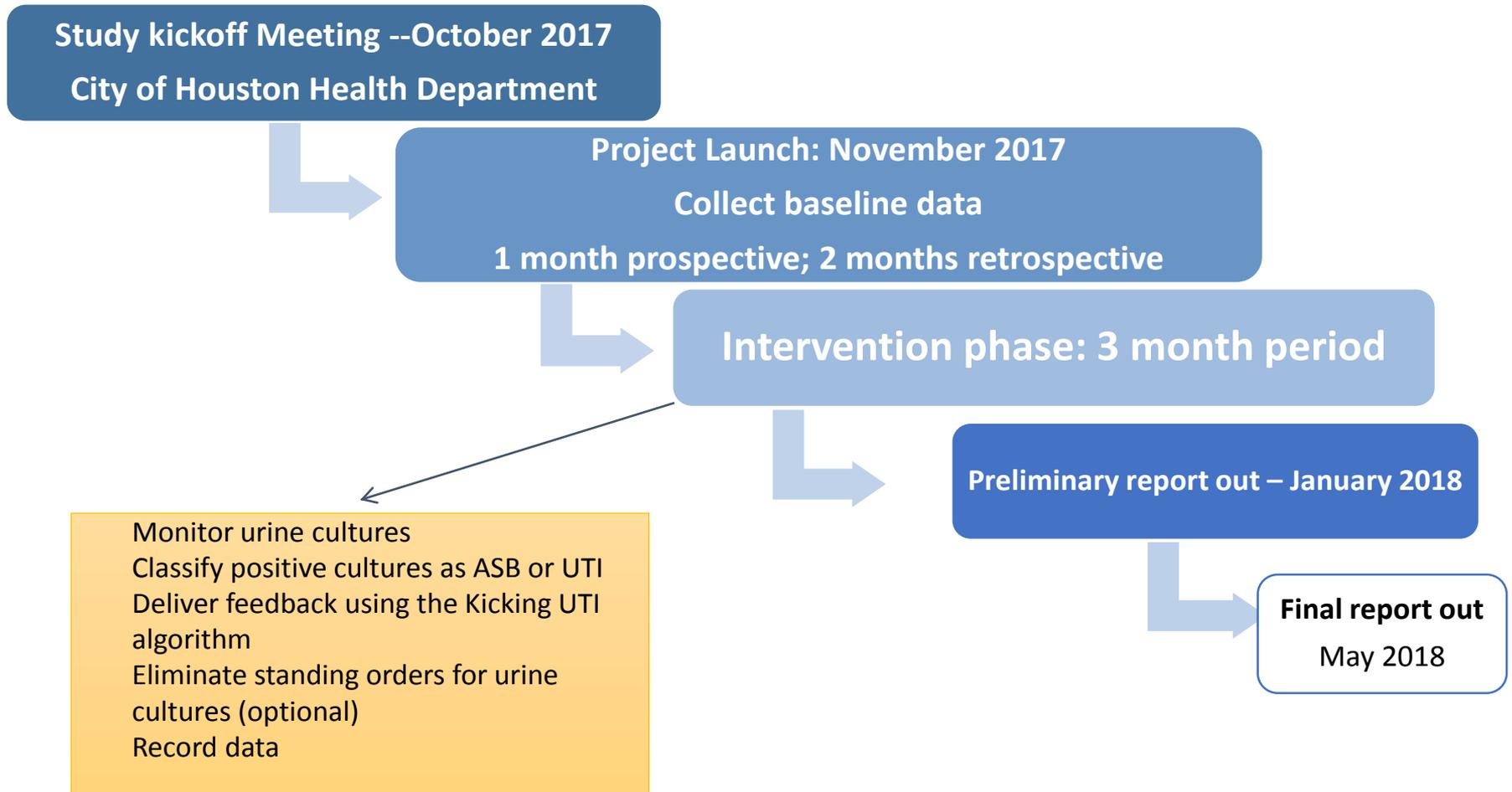
Cost: Free for Program Participation

For additional information: Email: charlene.offiong@houstontx.org

HOUSTONHEALTH.ORG

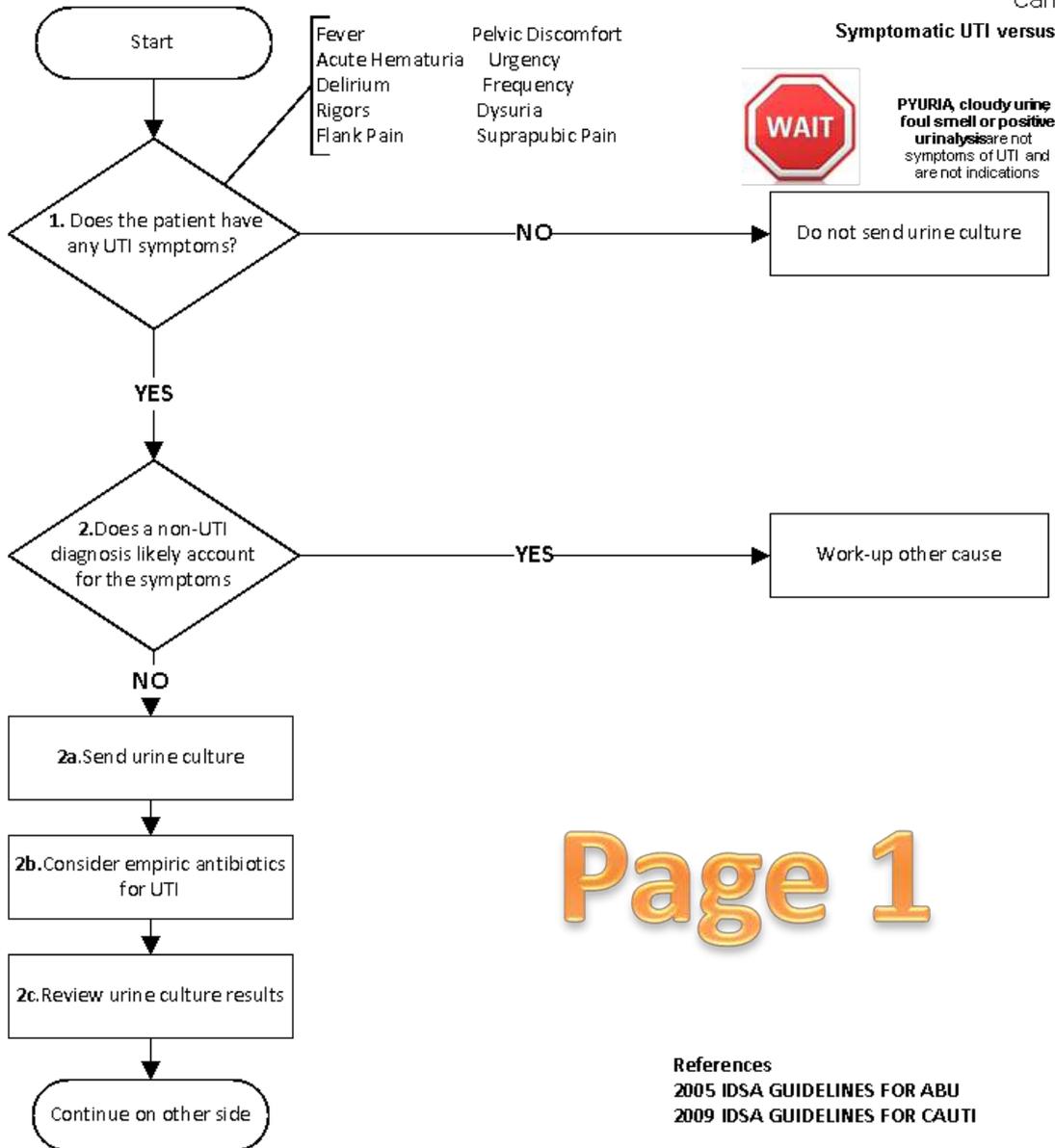
 Houston Health Department
8000 North Stadium Drive, Houston, TX 77054 (832) 393-4542

Intervention Timeline





Symptomatic UTI versus Asymptomatic Bacteriuria



Page 1

References
2005 IDSA GUIDELINES FOR ABU
2009 IDSA GUIDELINES FOR CAUTI

Teaching Case: Dreaded ER Call Back

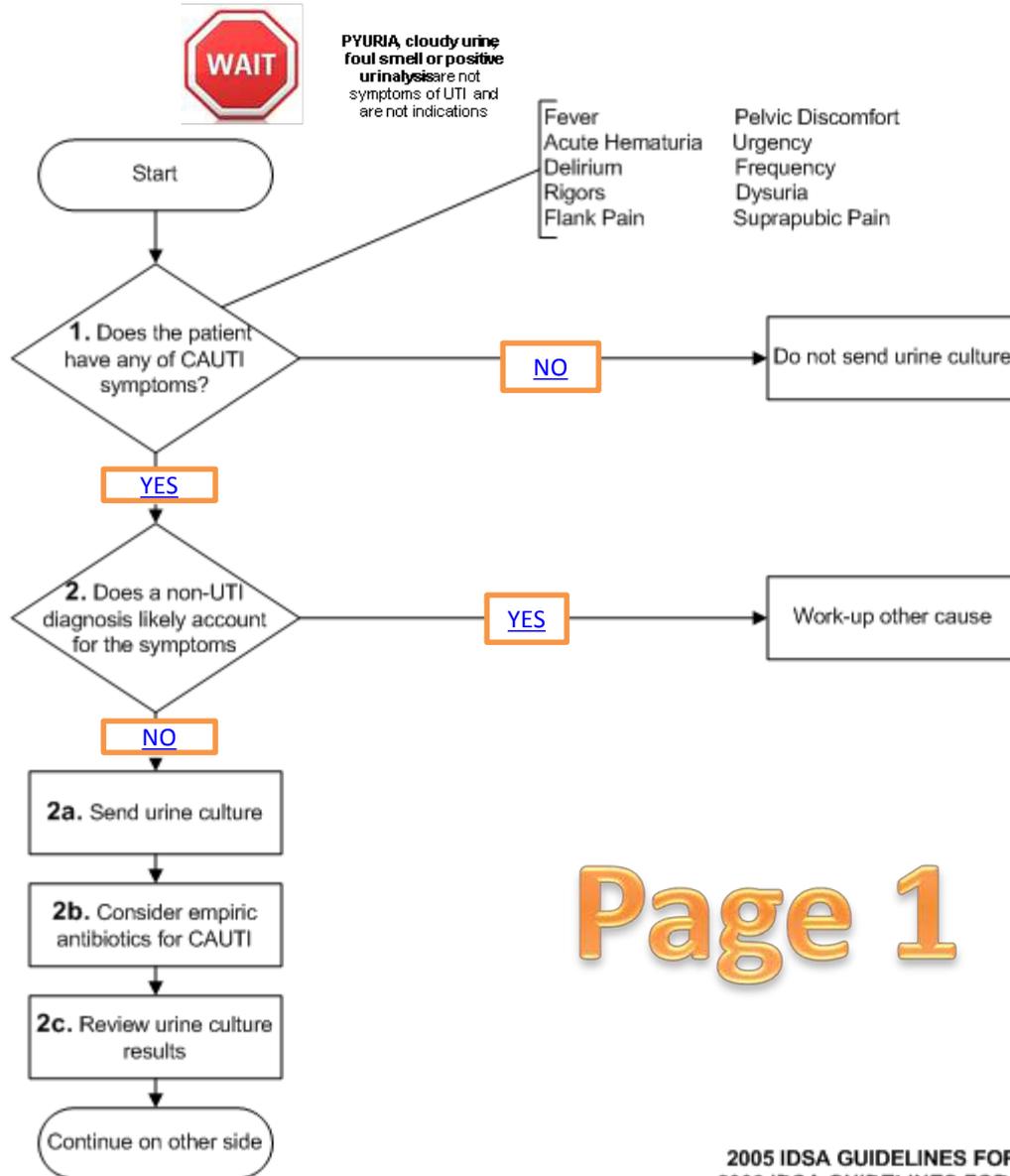
- A 48 year-old woman, otherwise healthy, comes to the ER with nausea and vomiting
 - Acute onset 6 hours prior
- No dysuria, fever, chills, or flank pain
- Urinalysis shows + nitrite and 3 WBC
- Improves with IV fluids
- Discharged on cefpodoxime



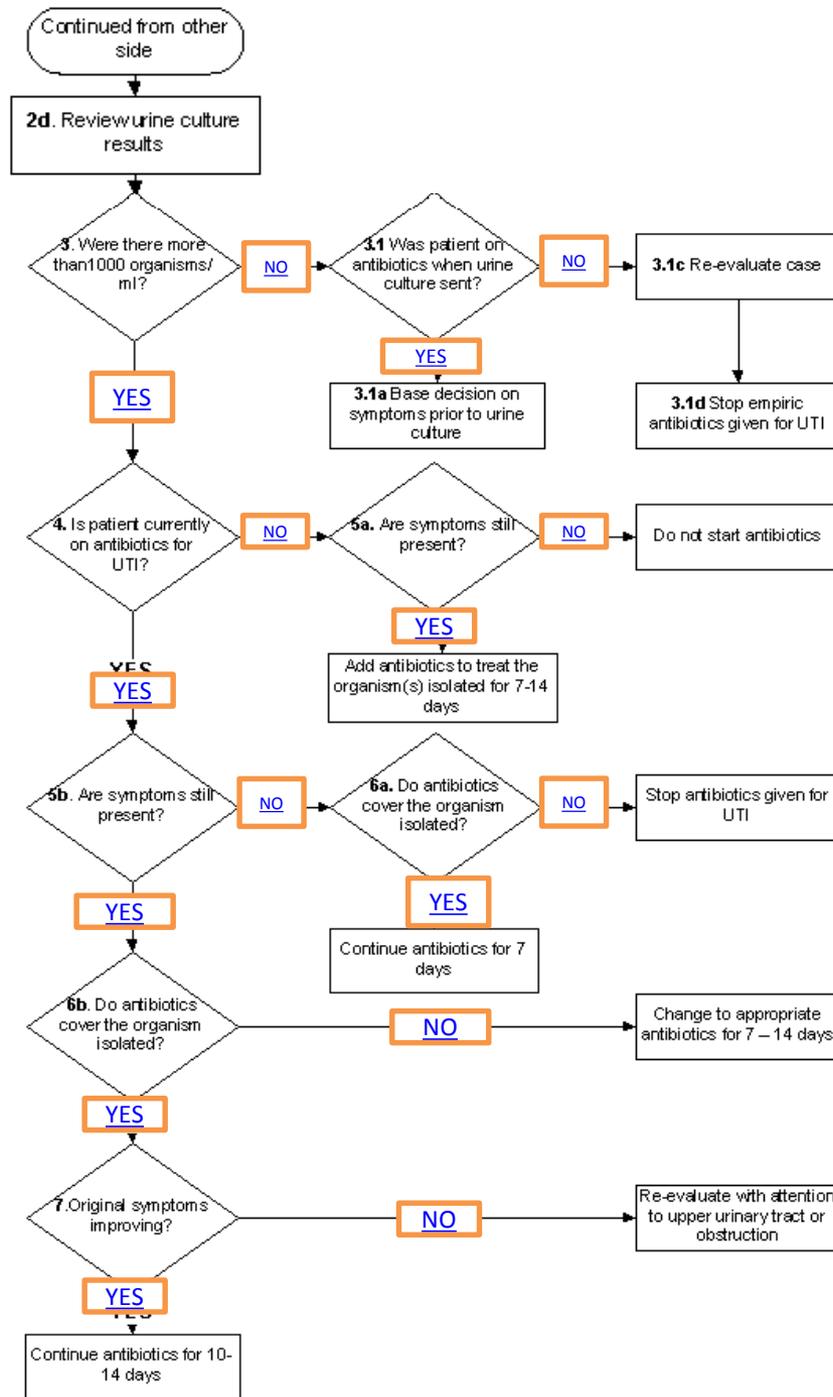
The Big Reveal:

- Urine culture report 2 days later
 - >100,000 *E. coli*, ESBL+
 - Resistant to cefpodoxime
- Pharmacist calls the patient
 - Doing well at home, no fevers
- Admitted for IV meropenem
- How could all of this have been avoided?

Symptomatic UTI versus Asymptomatic Bacteriuria



Page 1



Page 2

Duration of antibiotic use
No catheter
 Cystitis in female: treat for 3-5 days
 Cystitis in male: treat for 7 days
 Pyelonephritis: treat for 7-14 days
Has urinary catheter
 Improving rapidly: treat for 7-10 days
 Slow improvement: treat for 10-14 days

Page 1

Conclusion

Please submit the following information

[Enter time period for data]

		Number
ASB	Treated	enter # here
	Not treated	enter # here
UTI	Treated	enter # here
	Not treated	enter # here
Urine cultures ordered		Enter # here
Bed-days or ER visits		Enter # here

Participants

Project Lead	Site
Susan Loughlin, PharmD, BCPS	Memorial Hermann- TIRR Rehabilitation Hospital
Ardath Mitchell, Pharm D, BCPS, RN	Memorial Hermann-Katy
Shimeka Edwards, PharmD	Memorial Hermann Rehabilitation-Katy
Christy Su, PharmD, BCPS	Memorial Hermann Greater Heights
Punit J. Shah, PharmD, BCPS	Houston Methodist Sugarland
Nancy N. Vuong, Pharm D, MBIOT, BCPS	Memorial Hermann Memorial City
Chris Huls, Pharm D, BCPS	Houston Methodist West
Shivani Patel, PharmD, BCPS	Memorial Hermann Southwest
Jennifer Parma, Pharm D, BCPS	Memorial Hermann Northeast

TIRR Memorial Hermann

- **Units targeted at TIRR Rehabilitation Hospital:** brain injury units
- **Team members**
 - **Susan Loughlin**, PharmD, BCPS (project lead)
 - Terree Funesti, BSN, RN, WCC, CRRN
 - Elise Waldron-Young, Pharmacist Intern
- **Planned Strategies/Interventions:** Monthly new resident orientation overview of ASB in addition to weekly reminders during pharmacy rounds
- **Current status:** Intervention launched 12/5/17
- **Project Barriers:**
 - Need to monitor weekend vs weekday antibiotic starts as covering physicians will at times start antibiotics as a convenience and then defer to primary team
 - Properly identifying ASB vs UTI in nonverbal patients
 - Rotating residents

TIRR Memorial Hermann Baseline Data

	Classification	Total number of cases Sept – Nov 2017
ASB	Treated	18
	Not treated	13
UTI	Treated	13
	Not treated	0

Memorial Hermann Katy

- **Wards or units targeted**
 - Emergency Department
- **Team members**
 - **Ardath Mitchell**, Pharm D, BCPS, RN (project lead)
 - Caitlin Freaney, PharmD, Emergency Department Clinical Pharmacist
- **Executive champion**
 - Physician Champion: Linda Yancey, MD (ASP Physician Memorial Hermann Katy)
- **Planned Strategies/Interventions:**
 - Introduction of ASB QI project at MD/Staff meetings
 - Dispersing algorithm card to physicians
- **Current status**
 - Collecting data from November for baseline
 - Plan to launch this month
- **Project Barriers:**
 - Seeking approval from ED to implement QI project
 - Possible exclusion of patients ≥ 65 yo

Memorial Hermann Rehabilitation Hospital - Katy

- **Wards or units targeted**
 - Inpatient Rehabilitation unit
- **Team members**
 - **Shimeka Edwards**, PharmD (Project Lead)
 - Ardath Mitchell, PharmD, BCPS, RN
- **Executive champion**
 - Physician Champion: Linda Yancey, MD (ASP Physician Memorial Hermann Katy)
- **Planned Strategies/Interventions:**
 - Introduction of ASB QI project at MD/Staff meetings
 - Dispersing algorithm card to physicians
- **Current status**
 - Collecting data from November for baseline
 - Plan to launch this month

Memorial Hermann Rehabilitation Hospital – Katy November 2017

		Total number patients
ASB	Treated	13
	Not treated	5
		Total number patients
UTI	Treated	3
	Not treated	0

Memorial Hermann Greater Heights Hospital

- **Units Targeted**
 - Adult Inpatient, Medical/Surgical Unit
- **Team members**
 - **Christy Su**, PharmD, BCPS, Infectious Diseases Clinical Pharmacist
- **Executive champion**
 - Jose Melendez, MD, ASP Physician Leader
- **Planned Strategies/Interventions:**
 - Department education (Medicine/Hospitalists)
 - Targeted education to individual providers
- **Current status:**
 - Baseline data collection

Houston Methodist Sugar Land

- **Units targeted:** med-surg unit
- **Team members**
 - **Punit J. Shah**, PharmD, BCPS (project lead)
 - Meghan Thibeaux, PharmD, BCPS
 - Chiamaka Ike, PharmD, BCCP, BCPS
 - Emilyn Rodriguez, MSN, RN, CMSRN
 - Shermel Edwards Maddox, MSN, RN, RN-BC
- **Planned Strategies/Interventions:**
 - Nursing education, physician education, post algorithm
- **Executive Champions:**
 - Dr. Sarfraz Aly (ID, medical director for the unit) and Dr. Nicolas Daoura
- **Current status**
 - IRB approved
 - Implementation/intervention phase: December 1, 2017-Feb 28, 2018
- **Project Barriers:**
 - Physician behavior, reflex urine cultures

Houston Methodist Sugar Land Pre-intervention Sept-Nov 2017

	Classification	Total number of cases Sept – Nov 2017
ASB	Treated	9
	Not treated	6
UTI	Treated	27
	Not treated	0

Memorial Hermann Memorial City Medical Center

- **Units targeted**
 - Emergency Department
- **Team members**
 - **Nancy N. Vuong**, Pharm D, MBIOT, BCPS (project lead)
 - Sapana Desai, PharmD, BCPS
 - Clinical Pharmacy Specialist – Emergency Medicine
- **Executive champion**
 - Dr. Todd Price (medical director)
- **Planned Strategies/Interventions:**
 - Provide formal and one-on-one education
- **Current status**
 - Presented practice case at Emergency Department Section Meeting
- **Project Barriers**
 - Regional ED Director uncomfortable with untreated ASB

Houston Methodist West Hospital

- **Intervention patient groups:**
 - Medical and surgical units
- **Team members**
 - **Chris Huls**, Pharm D, BCPS (project lead)
 - Courtney Brailsford, PharmD
 - Jimmy Do, PharmD, BCPS
- **Medical Director champion:** Linda Yancey, MD (ID)
- **Executive champion:** Carla Braxton, MD (Quality Department)
- **Planned Strategies/Interventions:**
 - Sharing algorithm at medical section meetings (Gen Med and ED)
 - ED Medical Director attend Gen Med meeting to discuss concerns
 - Posting algorithm in associated areas
 - One-on-one with selected MDs as identified through data collection
- **Project Barriers:**
 - ED screening of every patient as a Methodist system strategy

November 2017 Data

Houston Methodist West

	Classification	Total number of cases Sept – Nov 2017
ASB	Treated	13
	Not treated	1
UTI	Treated	13
	Not treated	0

Memorial Hermann Southwest

- **Units targeted:** Inpatient, general medicine units
- **Team members**
 - **Shivani Patel**, PharmD, BCPS (lead)
- **Executive champion**
 - MHSW Antimicrobial Stewardship Program - John Butler, MD and Ed Septimus, MD
- **Planned Strategies/Interventions:** Physician education with UTI management recommendations at medical staff meetings followed by active surveillance of positive urine cultures to assess for ASB versus active UTI with real time physician education when ASB cases are identified
- **Current status:** Intervention started 12/1/17, Data collection in progress
- **Project Barriers:**
 - Changing criteria for reflex cultures
 - Education surrounding the need to start antibiotics for + LE/Nitrites without regard to symptomology
 - Identifying patients started on antibiotics following +LE/Nitrites but no positive cultures

Barriers and Brainstorming

- IRB approval
- Time for data collection/chart review
- Competing demands on project leads
- ED practices: baseline urine testing
- Lab processes: reflex urine cultures
- Systemic policies for urine cultures
- “If it’s not broke, why fix it?”



Next Steps



- Data collection at each site
 - Retrospective
 - Prospective
- Continue monthly coaching calls
- Outreach to executive champions
- Site visits
- Intervention launch at all sites





HOUSTON HEALTH
DEPARTMENT

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