UW TASP
tele-antimicrobial stewardship program

UTI… or ABU?

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UW-TASP
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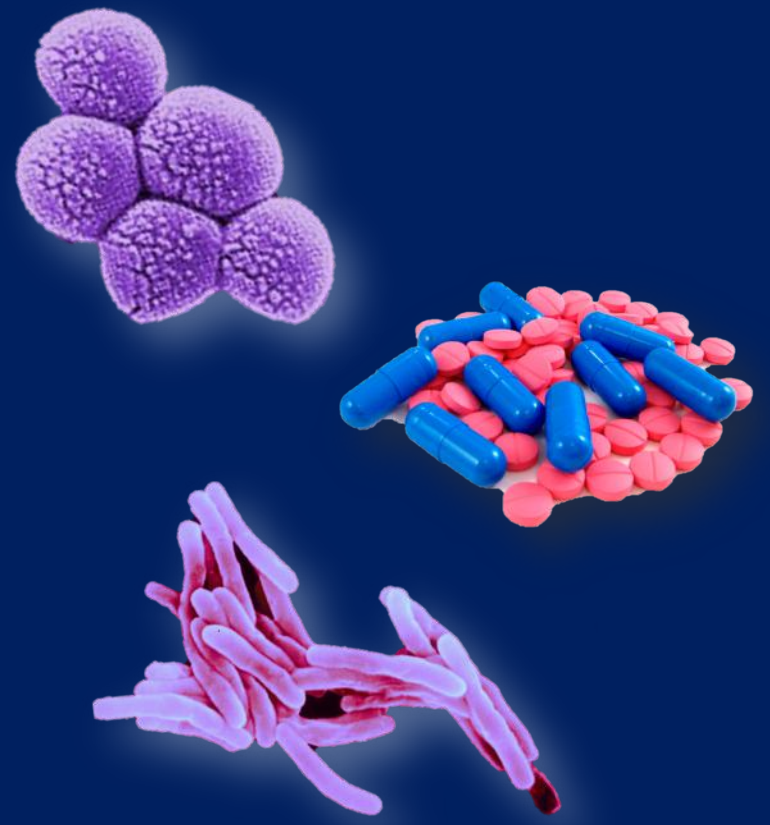
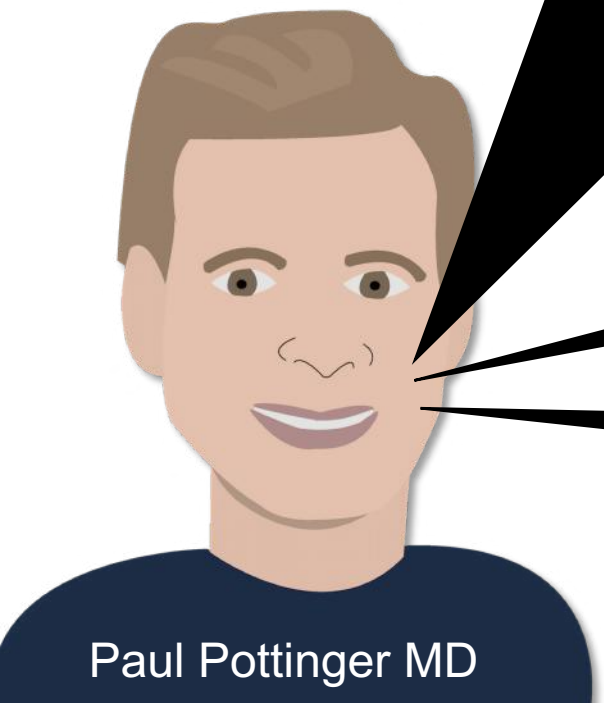


UTI… or ABU: *Objectives*

Disclosures
- No financial conflicts of interest

Objective
- Increase your comfort & skill working up possible UTI

Scope
- Hospital & Primary Care



Paul Pottinger MD

UTI… or ABU: *Question*

How commonly does this question come up in your practice?

A. Daily
B. 1-2 / week
C. Less often
D. I have no idea

UTI… or ABU: *Outpatient*

Important to get this right!

- Vaginal discharge rarely UTI
- PPV for urgency falls with age… bladders may become "twitchy" in seniors… *not all that's "urgent" is UTI!*
- Delirium rarely caused by UTI... *Look for other sources!*
- Surveillance cultures rarely recommended (except before GU surgery or in pregnancy)
- *Only test when you suspect true UTI!*

UTI… or ABU: *Inpatient*

Really important to get this right!

Foley Catheters!

- "One-Point Restraint"
- "WTF?"
- Beware the Auto-TURP…
- Colonization approaches 100% after a week…

Delirium!

- *Rarely caused by UTI… even if culture is positive*

4 Moments of AMS: *Overview*

Boil our approach into 4 moments...

1. Does my pt have an infection that needs abx?

2. If so... have I ordered cultures before abx? And what empiric abx should I choose?

3. It's a new day... Can I stop abx, or deescalate spectrum, or convert IV to PO?

4. If abx still needed... how long should I treat?

Tamma *JAMA* 2019

Moment #1: *Does my pt need abx?*

UTI... or ABU?

- Colonization (asymptomatic bacteriuria): Endogenous flora ascends urethra (common in elderly). Abx NOT indicated.
- Infection (UTI): Inflammatory response to invasive bugs (rare). Abx for this subset only.


2006-09

Dipstick	Sensitivity	Specificity	+ Likelihood Ratio	- Likelihood Ratio
Positive Leukocyte-esterase (LE)*	0.62	0.70	2.01	0.54
Positive Nitrite**	0.50	0.82	2.78	0.61
Positive LE *OR* Nitrate**	0.75	0.70	2.50	0.36
Both LE *AND* Nitrate Positive**	0.45	0.99	45	

Table 2. The accuracy of dipstick for diagnosis of UTI. Table adapted from dat
Devillé et al.. *BMC Urol*. 2004;4:4. Likelihood ratios calculated from publish
data. *Non-urologic population. **General population.

These data from ambulatory voided urine, NOT catheterized pts!

Moment #1: *UTI Testing....*

Microscopic analysis

Pyuria: majority of symptomatic UTIs have pyuria…
but *lower PPV among catheterized pts*

Gram stain for bacteria: >1 organism per hpf on uncentrifuged urine is >10^5 on culture

Culture

Method: collect from mid-stream or sterilized tube port, not bag

Inoculate 1 to 10 μl onto agar plate

Criteria for *Enterobacteriaceae* UTI

- Symptomatic women
  - 10^2: sensitivity 95%, specificity 85% for cys
- Asymptomatic women
  - 10^5: used in high risk clinical settings & resea

These data from ambulatory voided urine, NOT catheterized pts!

Moment #2: *UTI Cultures....*

U/A with Reflexive Culture

1) Test shrewdly (look for other causes of fever or confusion)
2) U/A First
3) If U/A normal, no urine culture!
4) If U/A Abnormal, proceed to culture

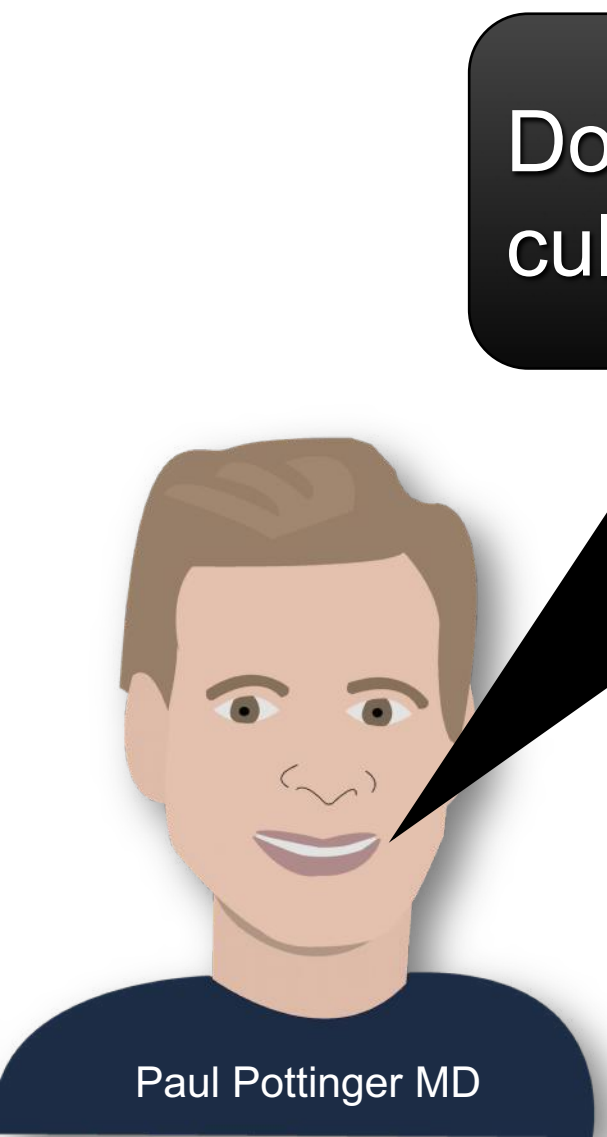
Benefits

1) Providers will not even see a culture, thus be less tempted to treat.

Caveats

1) Neutropenic
2) Screening in pregnant women, pre-urologic surgery
3) What is “abnormal” U/A…?

UTI… or ABU: *Question*



A. Yes
B. No
C. I’m not sure

Moment #2: *Uncomplicated Cystitis Empiric Rx....*

- Nitrofurantoin (*Macrobid*) 100mg PO BID x 5 days (caution in pyelo, GFR<30, age>

OR

- TMP/SMX (*Bactrim*) resistance <20%: 1 DS PO BID x 3 days

OR

- Fosfomycin (*Monurol*) 3gm PO x 1 dose (not for pyelo!)
- TMP/SMX resistance >20%:
  - ✓ Cipro 500mg PO QD x 3 days *OR*
  - ✓ Cefpodoxime 100mg PO BID x 7 days

Puget Sound: ~20% Resistance

Modified IDSA recommendations soon?

Moment #2: *Uncomplicated Cystitis Duration*

- Nitrofurantoin (*Macrobid*) 100mg PO BID x 5 days (caution in pyelo, GFR<30, age> 65)

OR

- TMP/SMX (*Bactrim*) resistance <20%: 1 DS PO BID x 3 days

OR

- Fosfomycin (*Monurol*) 3gm PO x 1 dose (not for pyelo!)
- TMP/SMX resistance >20%:
  - ✓ Cipro 500mg PO QD x 3 days *OR*
  - ✓ Cefpodoxime 100mg PO BID x 7 days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Not It's Easy

UTI… or ABU: *Conclusions*

- Asymptomatic bacteriuria is common, both outpt & inpt
- A leading reason for abx overuse….
- A leading opportunity for good AMS!
- Test only when suspicion is high, and consider U/A with reflexive culture
- True bacterial cystitis usually treated with short course abx… and usually not a FQ
- We appreciate all you are doing! Collaboration opportunity coming your way soon!

Truly… Thank You

Paul Pottinger MD