Simple UTIs are Not Complex
Summary

Simple UTI

- Differential includes UTI, STI, urethritis, interstitial cystitis (non-infectious), balanitis, vaginitis
- Symptoms localized to lower GI tract
- You can diagnose based on history alone
- If in doubt, obtain POC UA.
- + Leukocyte esterase suggestive, but not diagnostic
- - Leukocyte esterase has high negative predictive value
- + Nitrite highly suggestive if LE also positive.
    - Phenazopyridine and beets can cause false positive
    - It takes 4 hrs for Nitrates to convert to Nitrites in bladder. Early morning sample increases diagnostic yield.
- 1st line Selection of ABX
    - Nitrofurantoin – Bacteriostatic. Spares the microbiome. Concentrates in Urine. Does not have good tissue penetration
        - 100 mg BID x 5-7 days
        - Package insert – Contraindicated in CrCl < 60
        - Beers list states ok to use in elderly if CrCl >30 (short term use)
    - TMP-SMX – Bactericidal. Good tissue penetration. Spares the microbiome.
        - 160/800 BID x 3 days
    - Fosfomycin - $$$. Spares the microbiome. Concentrates in urine. Single Dose. Often Reserved for ESBL.
- Avoid as first line. May be appropriate as 2nd or 3rd line.
    - Fluoroquinolones
        - Often high community resistance. High collateral damage to microbiome. Risk of tendonitis, QTc prolongation, C. Difficile.
    - Cephalosporins
        - Variable community resistance. Collateral damage to microbiome.

Recurrent Simple UTI

- Generally treat as isolated UTI, but warrant UCx/S
- An ABX rx with refills for the trusted patient is reasonable. Fill Rx at 1st sign of symptoms
- Avoid prophylactic ABX for frequent recurrent UTIs. It is good antibiotic stewardship
- Preventative strategies: 2-3 L water daily.
- Cranberry products, probiotics, antiseptics, and D-Mannose do not have good evidence, but are probably not harmful.
- Methenamine is converted into formaldehyde in the urinary tract. Not great evidence.
- In postmenopausal women consider atrophic vaginitis and vaginal estrogen cream

Complicated UTI

- Symptoms of UTI plus systemic symptoms (Fevers/Chills) or upper GU tract (Flank pain)

- Immunosuppressed or poorly controlled diabetics are at increased risk for progression.
- Can be treated as outpatient if you can ensure good follow up and the patient is not septic.
    - Follow up should be within 48 hrs.
    - Send a culture to ensure appropriate ABX.
- Ceftriaxone 1 gm IV or IM followed by abx with good tissue penetration
    - Bactrim DS BID x 7-10 days
    - Levofloxacin 750 mg QD or ciprofloxacin 500 BID x 5-7 days
    - Augmentin, cefpodoxime, cefdinir, cefadroxil x 10-14 days also reasonable
- Levofloxacin or ciprofloxacin alone is appropriate if community resistance is <10%
    - Oral levofloxacin has equivalent bioavailability to IV formulation
- Refer to ED if patient has si/sx of sepsis: High fever, tachycardia, hypotension.
- If you are going to worry about the patient as you are falling asleep that night. Refer.

UTI in a Male

- Experts are divided on whether to consider all UTIs in a male as complicated or simple
- I generally treat with ABX with good tissue penetration for 5-7 days.
- Acute bacterial prostatitis will look sick. + perineal pain. Prostate will be exquisitely tender.

Delirium in the elderly

- UTIs can cause delirium in the elderly, but so can a lot of other illnesses.
- If there is any doubt about cause, send to the ED for thorough evaluation.
- Only treat as outpatient if UA is suggestive of UTI, patient has had similar symptoms of confusion with UTI in the past, AND the patient has dependable family staying with them. Have follow up in 1-2 days.

Key things to include in your note:

- Presence/absence of fevers
- Presence/absence of flank pain (No costovertebral angle tenderness bilaterally)
- Nontoxic appearing

For complicated UTI if you send them home include the following:
"Risks and benefits of outpatient treatment of complicated UTI reviewed. Via shared medical decision making, pt opts for outpatient treatment. Patient understands that if symptoms do not improve or are worsening, despite treatment they will present directly to the ED "

Take Home Points:
-Do not use fluroquinolones or cephalosporins as first line therapy for simple UTIs
-Do use Macrobid as first line therapy.
- Recurrent UTIs should generally be treated prn rather than with suppressive therapy
- Do not use Macrobid for complicated UTIs
-Do not assume that delirium in the elderly is a UTI
-Document well