UTIData to Collect

Baseline Data:

1. Sex (male, female)
2. Age (If age<18, then Disclaimer: This algorithm is designed for evaluation of treatment of UTI in adults only. For children, please refer to the American Academy of Pediatrics (AAP) guidelines for UTI. *Reference:* https://publications.aap.org/pediatrics/article/128/3/595/30724/Urinary-Tract-Infection-Clinical-Practice?autologincheck=redirected)
3. Potassium serum level (mmol/L); normal range: 3.3 - 5.3
4. Creatinine Clearance (CrCl) (mL/minute) normal range 110-150 in males, 100-130 in females
5. Allergies - > Dropdown: Nitrofurantoin, Fosfomycin, Trimethoprim-Sulfamethoxazole, Penicillins, Cephalosporins, Ciprofloxacin, other sulfa containing medications). Disclaimer (triggered when Penicillins or Cephalosporins + mld allergy are selected): Less than 5% of persons with a remote and low-risk history of penicillin allergy are found to be truly allergic. Cross reactivity between Penicillins and Cephalosporins occurs in less than 5% of cases *Reference:* N Engl J Med 2019; 381:2338-2351. DOI: 10.1056/NEJMra1807761
    a. Add: Mild vs Moderate/Severe
6. Setting: Outpatient, hospital, nursing home
7. Able to take pills by mouth (PO) (yes/no)
8. Pregnant (yes/no)
9. Symptoms
    a. Typical, uncomplicated: dysuria, urinary frequency, urgency, suprapubic pain
    b. Atypical, uncomplicated: hematuria, cloudy urine, malodorous urine, urinary retention (Disclaimer: Evaluate for urinary retention with bladder scan and if present, consider urology consultation), altered mental status, vaginal or penile discharge (Disclaimer: Vaginal/penile discharge raises possibility of sexually transmitted diseases. Suggest obtaining relevant sexual history and consider testing as appropriate. *Reference:* https://www.cdc.gov/std/prevention/screeningreccs.htm)
    c. Typical, complicated: fever, chills, flank pain, costovertebral angle tenderness, pelvic pain or perineal pain
    d. Asymptomatic
10. Other patient characteristics
    a. Recurrent history of UTIs: Yes/No (Disclaimer: Consider evaluation for prostatic hypertrophy in male or other cause of urinary tract obstruction including nephrolithiasis; consider urology consultation):

b. Catheterized: Yes/No (Disclaimer: Consider removal or replacement of the catheter)
c. Immunocompromised patient: Yes/No (Disclaimer: Consider an infectious diseases consultation)
d. Anticipated upcoming urologic procedure: Yes/No

Algorithm

1. If any typical complicated or uncomplicated symptoms is present, result is: High clinical suspicion, testing for UTI is appropriate. (Disclaimer when complicated: Disclaimer: This is a complicated UTI with possible pyelonephritis. Consider specialist input and further evaluation as appropriate)
2. If only atypical symptoms are present (Disclaimer: This is not a typical presentation for UTI but could be early/brewing UTI. Recommend using clinical discretion.): Give user option to select between low clinical suspicion or ongoing high suspicion. If ongoing high suspicion, consider testing for UTI.
3. If altered mental status is selected without any concurrent typical symptoms (Disclaimer: Consider alternate causes such as hypercarbic respiratory failure, medications, polypharmacy, metabolic causes, other infections. If none of these are more likely, consider testing for UTI).
4. If no symptoms: Give user option to select to test if pregnant woman and screening, before urologic procedure (Disclaimer: consider discussion with urology), or immunocompromised (Disclaimer: consider discussion with Infectious Diseases). If none of the above present, add Disclaimer: Recommend not testing for UTI given lack of compatible symptomatology. Asymptomatic bacteriuria should not be treated in patients who are not pregnant, anticipating a urologic procedure or immunocompromised *Reference:* Lindsay E Nicolle, Kalpana Gupta, Suzanne F Bradley, Richard Colgan, Gregory P DeMuri, Dimitri Drekonja, Linda O Eckert, Suzanne E Geerlings, Béla Köves, Thomas M Hooton, Manisha Juthani-Mehta, Shandra L Knight, Sanjay Saint, Anthony J Schaeffer, Barbara Trautner, Bjorn Wullt, Reed Siemieniuk, Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America, *Clinical Infectious Diseases*, Volume 68, Issue 10, 15 May 2019, Pages e83–e110, https://doi.org/10.1093/cid/ciy1121