GOAL OF MANAGEMENT OF UTI	
To eradicate the offending organisms from the urinary bladder The main treatment of UTI is by antibiotics.	
CHOICE OF ANTIBIOTIC DEPENDS ON:	• **complicated or uncomplicated.** • **primary or recurrent.** • **Type of patient (pregnant ,child , hospitalized or not, diabetic patient,…..etc)** • **Bacterial count.** • **Presence of symptoms.**
Uncomplicated UTI	
Low-risk patient (woman) for recurrent infection: **3 days antibiotic without urine test.** Choice of antibiotic depend on susceptibility pattern of bacteria, it includes ;	
Amoxicillin	Cephalosporins
Fluoroquinolone (ciprofloxacin or norfloxacin) (**Not for pregnant women or children**), **first choice if other antibiotics are resistant.**	
TMP-SMX	Nitrofurantoin (for long term use)

Relapsing infection	**Recurrent infections**
Caused by treatment failure or structural abnormalities or abscesses. **Same ntibiotics used at the initial infection** **Treatment for 7-14 days.**	Patients with two or more symptomatic UTIs within 6 months or 3 or more over a year. **Need preventive therapy** Antibiotic taken as soon as symptoms develop.
When to consult the doctor ?	**Postcoital antibiotics**
symptoms persist or A change in symptoms Pregnant women More than 4 infections per year Impaired immune system Previous kidney infections Structural abnormalities of urinary tract History of antibiotic resistant bacterial infection.	If recurrent UTI is related to sexual activity, and episodes recur **more than 2 times within 6 months** A single preventive dose taken immediately after intercourse **Antibiotics include: TMP-SMX, Cephalexin or Ciprofloxacin**
Prophylactic antibiotics	**Uncomplicated pyelonephritis**
Optional for patients who do not respond to other measures. Reduces recurrence by up to 95% Low dose antibiotic taken continuously for 6 months or longer, it includes : **TMP-SMX, Nitrofurantoin, or Cephalexin**	Patients with fever, chills and flank pain, But they are healthy non-pregnant, not nauseous or vomiting with no signs of kidney involvement. Can be treated at home with oral antibiotics for 14 days with one of the followings: **Cephalosporins, Amoxicillin-Clavulanate, Ciprofloxacin or TMP-SMX.**

Moderate to sever pyelonephritis
Patients need hospitalization Antibiotic given by IV route for 3-5 days until symptoms relieved for 24-48 hrs. If fever and back pain continue after 72 hrs of antibiotic, imaging tests indicated to exclude abscesses, obstruction or other abnormality.
Chronic pyelonephritis
Those patients need long-term antibiotic treatment even when there is no symptoms.

Treatment of specific populations	
• **Pregnant women** High risk for UTI and complications Should be screened for UTI Antibiotics during pregnancy includes;; **Amoxicillin, Ampicillin, Cephalosporins, and Nitrofurantoin.** **Pregnant women should NOT take Quinolones.** Pregnant women with **asymptomatic bacteriuria** have 30% *risk for acute pyelonephritis* in the second or third trimester. Screening and **3-5 days antibiotic** needed. For uncomplicated UTI, need 7-10 days antibiotic treatment.	• **Diabetic patients** Have more frequent and **more sever UTIs**. **Treated for 7-14 days** with antibiotics even patients with uncomplicated infections. • **Urethritis in men** Require 7 days regimen of **Doxycycline**. **A single dose Azithromycine** may be effective but not recommended to avoid spread to the prostate gland. **Patients should also be tested for accompanying STD.**
• **Children with UTI** Usually treated with **TMP-SMX or Cephalexin**. **Gentamicin may be recommended as resistance to Cephalexin is increasing.**	• **Vesicoureteric reflux (VUR)** Common in children with UTI Can lead to **pyelonephritis and kidney damage**. Long-term antibiotic plus surgery used to correct VUR and prevent infections. **Acute kidney infection : use Cefixime (Suprax) or 2-4 days Gentamicin in a one daily dose.**

Management of catheter-induced UTI	Intermittent use of catheters
Very common Preventive measures important Catheter should not be used unless absolutely necessary and they should be removed as soon as possible.	If catheter is required for long periods, it is best to be used intermittently. May be **replaced every 2 weeks** to reduce risk of infection and irrigating bladder with antibiotics between replacements
Catheter induced infections	
Catheterized patients who develop UTI with symptoms or at risk for sepsis should be treated for each episode with antibiotics and catheter should be removed, if possible. Antibiotic use for prophylaxis is rarely recommended since high bacterial counts present and patients do not develop symptomatic UTI. Antibiotic therapy has little benefit if the catheter is to remain in place for long period.	

Asymptomatic bacteriuria is treated in 3 cases only:
Kidney transplant, Pregnant Ladies, Patients going for cystoscopy.