

FAST FACTS: Pain on Urination, Flank, and/or Suprapubic Pain and Urinary Tract Infections

Pain due to infection within the urinary tract can be with the passage of urine (dysuria) and/or felt over the bladder or flank area when bacteria enter the urine (bacteriuria) via the urethra (urethritis), bladder (cystitis), or kidneys (pyelonephritis). The spectrum of a urinary tract infection (UTI) varies from simple cystitis to potentially life-threatening pyelonephritis and sepsis.

UTIs are the second most frequent infection in long-term care (LTC) facilities and a common reason older adults present to the Emergency Department. UTIs are challenging to identify and treat because they can be asymptomatic (limited to bacteria in the urine) or symptomatic (bacteria in the urine with localizing genitourinary (GU) symptoms) whereby management is clearly different.

Older adults present with atypical nonspecific symptoms of:

- mental status changes
- fatigue
- irritability
- malaise
- nausea
- headache
- abdominal discomfort, flank, and or back pain
- often afebrile



UTIs may present with cloudy, dark, bloody, or foul-smelling urine, but any one of these factors alone should not automatically determine a UTI diagnosis.

Bacteriuria is the presence of a significant number of bacteria in the urine without reference to symptoms. Treatment of asymptomatic bacteriuria is not recommended as it increases the rate of antibiotic drug resistance. It can increase the rate of recurrent infections with multiple drug resistance and does not change survival, chronic GU symptoms, or the rate of symptomatic UTI. When nurses facilitate assessment of symptomatic versus asymptomatic bacteriuria, improved outcomes result.

Normal changes of aging/risks for UTI:

- General immunity wanes/worse with co-existing diabetes, cancer, or autoimmune disorders.
- Estrogen deficiency in women thins vaginal tissue/more vulnerable to bacterial invasion.
- Prostate hypertrophy → urinary retention/predisposes to chronic prostatitis/entrapped bacteria.
- Incontinence and functional decline → further weaken the individuals' ability to fight infection and skin breakdown.
- Multiple morbidities and serious illness.
- Indwelling urinary catheters (IUCs) increase the risk of Catheter-Associated UTIs, hospitalizations, antibiotic resistance, and mortality.
- Uncomplicated and or complicated UTIs, with a frequency of at least three UTIs/year or two UTIs in the last 6 months indicate recurrence UTIs.

Recognition/Assessment:

1. **Vital signs, mental status, and level of pain.**
2. Complete a skin, cardio/pulmonary, and abdominal/suprapubic/back exam.
3. Presence of back pain with tenderness (one side or both sides) is concerning for more severe infection extending to the kidney. See assessment tools linked below.
4. Review past history: UTIs or catheterizations, kidney stones (see FAST FACT: Kidney Stones), or recent dehydration.
5. Review for any behavioral, nutritional, or functional changes.
6. The urinalysis (UA) and urine culture are the most important laboratory findings used to determine if an individual has a UTI.

7. **NOTE: mental status change or acute confusion** is a MAJOR and common presenting symptom in older adults.

Assessment Tools:

Use the [Numeric Rating Scale \(NRS\)](#) and [FACES Pain Scale Revised \(FPS-R\)](#) assessment tools.

Interventions:

- Distinction between asymptomatic and symptomatic bacteriuria is extremely important.
- Mental status changes warrant rapid assessment for the possibility of infection and the prevention of delirium.
- Avoid the use of indwelling catheters whenever possible. If needed, use a male or female external catheter or straight catheterizations.
- Concur with the healthcare provider to obtain a urinalysis/urine culture per the organization's policy and protocol.
- Conduct frequent reassessment and attend to hydration, bowel habits, and sleep needs.
- Cranberry supplements have been studied with conflicting evidence of efficacy in treating complicated or recurrent UTIs.
- Reassure the older adult, provide education on prevention and treatment, daily hygiene and provide staff and or family support.
- If an antibiotic is needed discuss with the individual how to take the medication and any side effects and signs/symptoms to watch for.
- UTI prophylaxis is generally not recommended and leads to antibiotic resistance regardless of the older adult's catheter status or duration of catheterization.
- Local vaginal estrogen replacement may be indicated, if not contraindicated with cancer history.

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