OPTIMISTIC
TRANSFORMING CARE

OPTIMISTIC UTI Protocol

Recommendations for Provider

Provider notified of change in condition and you suspect UTI.

UTI New or Worsening Signs & Symptoms

- Dysuria
- Hematuria
- Suprapubic or costrovertebral pain or tenderness
- New or increased frequency/urgency/ incontinence
- Flank pain
- Pelvic discomfort
- Leukocytosis
- Fever

Differential Diagnosis

- Pyelonephritis
- Nephrolithiasis
- Urethritis
- Prostatitis
- Vaginitis
- BPH
- Dermatitis
- Bladder cancer

Tests to Consider

- U/A with culture (cannot certify for enhanced billing without culture)
- CBC with diff.
- BMP

Initiate monitoring orders: vital signs 3 times daily throughout diagnosis and treatment periods, with daily nursing assessments.
- Encourage hydration

Certify for OPTIMISTIC enhanced billing using CMS criteria (see back)

Treat according to urine culture results

Potential Antibiotics
(see back for renal dosing)

- **Nitrofurantoin** 100 mg Q12H
- **TMP-SMX DS** 160/800 mg Q12H
- **Fosfomycin** 3 mg PO x 1 dose

  - Note: if using fosfomycin may need a second dose

- **Beta-lactam**
  - ***Amoxicillin/Clavulanate*** 500-875 mg PO Q12H
  - ***Cephalexin*** 500 mg PO Q12H
  - ***Cefdinir*** 100 mg PO Q12H
- **Fluoroquinolones**
  - ***Ciprofloxacin*** 500-750 mg Q12H
  - ***Levofloxacin*** 500-750 mg Q24H

- Based on 2011 IDSA Practice Guidelines

Principles of Treatment

- Principles of effective antibiotic treatment and antibiotic stewardship:
  - Use the highest safe dose
  - Prescribe for the shortest reasonable duration, generally 5-7 days
  - Use narrow spectrum antibiotics based on likely pathogens
- Minimum duration of treatment:
  - ⇒ Uncomplicated: 3-5 days
  - ⇒ Complicated: 7 days
  - ⇒ CAUTI: 7 days
- Unless acutely ill, do not start antibiotics until the urine culture results are back.
- Once the culture results are back, prescribe antibiotics according to susceptibilities.
- The most common pathogens are: E.coli, klebsiella, proteus, enterobacter, enterococcus, staphylococcus, pseudomonas
- Before prescribing a fluoroquinolone recall the FDA warning about their use: neuropathy, tendonitis/tendon rupture, increased QT interval, arthropathy

OPTIMISTIC UTI Protocol

Recommendations for Provider

Special Considerations

- Do not treat asymptomatic bacteria.
- CMS does not distinguish CAUTI from non-catheter associated UTI
- There is little evidence for cranberry supplements
- Topical vaginal estrogen may be preventative in some women
- Do not put patients on suppressive/ preventative antibiotic therapy.
- Confirm proper collection technique ("clean catch")
- Send urine specimen ASAP (urine that sits around can produce erroneous results)
- Review patient's goals of care including POST form and hospitalization preferences

Antibiotics Renal Dosing Adjustments

- **Amoxicillin/Clavulanate < 30 ml/min**
- **Cefdinir < 30 ml/min**
- **Cephalexin < 30 ml/min**
- **Ciprofloxacin < 50 ml/min**
- **Levofloxacin < 50 ml/min**
- **Nitrofurantoin < 30 ml/min**
- **TMP-SMX DS < 30 ml/min**

* Note: You will need to make dose adjustments at the levels of creatinine clearance listed above. If antibiotic not on list, there are no dosage adjustments provided in the manufacturer's labeling.

CMS Certification Criteria for UTI

Urinary Tract Infection (up to 7 days)	**MUST have:** □ ≥ 100,000 colonies of bacteria growing in urine with no more than 2 species of microorganisms. **AND One or more of the following:** □ Fever ≥ 100°F (oral) or two degrees above baseline □ Peripheral WBC count ≥ 12,000 □ In the case of catheter-associated UTI's: acute back pain, flank pain, epididymis pain, purulent exudate from catheter insertion site, or prostate pain. □ Symptoms: dysuria, new or increased urinary frequency, new or increased urinary incontinence, gross hematuria, or acute costovertebral angle pain or tenderness

These are recommendations from expert consensus and an extensive literature review, including the AMDA Clinical Practice Guidelines. In practice, use your clinical judgements for individual patient care.

http://optimistic-care.org/ The OPTIMISTIC Project is a long term care quality initiative of the Indiana University Center for Aging Research, Regenstrief Institute and Division of General Internal Medicine and Geriatrics and the University of Indianapolis Center for Aging & Community. Funding is provided through the Centers for Medicare and Medicaid Services.