Bugs, Drugs and UTI’s
The Battle Continues!!

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Infection Prevention and Control
Objectives

History of AB Stewardship

Brief overview of audit completed

What we hope to accomplish
History

- Accreditation 2013
- Formation of AB Stewardship Committee
- Goals and Objectives
- 10 LTC facilities
  Medical units at JPMHC and CNRHC
The Battle Begins

- Misuse of antibiotics and Misdiagnosis of UTI’s
- ABS and IPAC concern
- Surveillance (McGeer definitions)
Antibiotics in LTC, Why do we care???

- UTI is the most common infection in the LTC resident

- Nationally, 25%–75% of antibiotic prescriptions for long-term care residents have been found to be inappropriate. Effective Antimicrobial Stewardship in a Long-term Care Facility through an Infectious Disease Consultation Service. Infection Control and Hospital Epidemiology (2012)

- Routine screening and treatment of asymptomatic bacteriuria is not recommended in LTC residents

- 15-30% males and 25-50% of women have asymptomatic bacteriuria. Urinary Tract Infection in Long-Term-Care Facility Residents, Clinical Infectious Diseases (2000)

Treating asymptomatic bacteriuria is of no benefit and is actually harmful!!

A urine specimen should always be collected prior to initiating antibiotic therapy.
Without UTI symptoms, urine testing leads to . . .

False diagnosis of UTI and inappropriate treatment!!
Documentation

- 55% of charts had no documentation on UTI symptoms
- Patient should have documented symptoms before any urines sent
- Documentation is a high priority in diagnosing UTI’s
Unnecessary Rx and Missed Diagnoses Harm Patients

- Drug-drug interactions
- *C. difficile* infection
- Renal & other complications
- Nausea and vomiting
- Drug resistant bacteria in your community
- Drug allergies
- Missing the real dx

Threat to patient safety
Where did our information come from?

- 10 LTC facilities
- 2 medical units at referral centers
- Microbiology Reports
- Infection Control Report Forms
- Documentation
<table>
<thead>
<tr>
<th>Patient's Record Number</th>
<th>CAUTI or UTI - no cath</th>
<th>Symptoms Documented</th>
<th>Culture Date &amp; Results</th>
<th>Type of Specimen</th>
<th>AB prior to report</th>
<th>Appropriate Antibiotic?</th>
<th>Was AB changed according to report?</th>
<th>Route &amp; duration of antibiotic</th>
<th>Broad or Narrow Spectrum Abx</th>
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<td>No Growth on Urinalysis -OR- No Urinalysis Sent</td>
<td>Treated With Antibiotic That Bacteria Was Resistant to and Antibiotic Not Changed</td>
<td>Treated With no Documented Signs / Symptoms of Urinary Tract Infection</td>
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Antibiotic Use and Urinary Tract Infections: Treatment Conditions
A Brief Review of UTI Treatment in Central Health

Condition of Interest

- Negative or no Urinalysis: 14 patients, 15.0%
- Bacterial Resistance with no Antibiotic Change: 6 patients, 6.8%
- No Documentation of UTI Symptoms: 48 patients, 54.5%

Legend:
- Purple Bar: Applicable Patients/Residents
- Blue Bar: Size of Sample
- Yellow Line: Percentage
What to do?

What am I supposed to do with all of this information?
• Continue to collect all UTI infection information from ongoing surveillance (Labs, IC reports forms, AB usage, charting)

• Monitor trends

• Report stats

• Submit Report (MAC, P&T, AB, IP&C)

• Communicate results

• Follow up

• Provide updated education
Goals from Audit

• Increase awareness of drugs/bugs mismatch with UTI’s

• Improve documentation

• Improve specimen collection technique

• Prevent inappropriate antibiotic usage
Things to Remember:

• When symptoms are **absent:**
  – “Positive” urine dip is meaningless.
  – “Positive” urinalysis is meaningless.
  – “Positive” urine culture is just ASB.

• When symptoms are **present:**
  – Only urine culture can confirm UTI.

• Regardless of symptoms:
  – Poor urine collection technique causes false-positive urinalysis.
no
symptoms

non-specific
symptoms

specific
symptoms
Bad Bugs No Drugs

DECLINING ANTIBACTERIAL APPROVALS (PAST 25 YEARS)

- 1983-1987: 16
- 1993-1997: 10
- 1998-2002: 8
- 2008-2009: 4

Total # New Antibacterial Agents

Spellberg, CID 2004, Modified
What we hope to accomplish!!

End the battle and strive for better utilization of antibiotics therefore better patient/resident care!!!

Education!

Education!!

Education!!!
Questions????