Antibiotic Stewardship at MetroWest Medical Center

Colleen Grocer, RPh, BCOP
Co-Chair, Antibiotic Stewardship Committee

Antibiotic Stewardship Committee

- Subcommittee of Pharmacy and Therapeutics. Also reports to Infection Control Committee.
- Started July 2010
- Membership includes:
  - Infectious disease physicians
  - Pharmacists
  - Microbiologists
  - Infection Control Practitioners
  - Quality Management

Antibiotic Stewardship Committee

- Components of MWMC AS program
  - Development of guidelines, clinical pathways, standard order forms
  - Formulary restriction recommendations
  - Parenteral to oral therapy conversions
  - Clinical interventions (i.e., de-escalation)
  - Staff education
  - Monitor outcomes (i.e., C. difficile rate)

Antibiotic Stewardship Focus on C.Diff Infections

- Fluoroquinolone Restriction
  - Recommendations for alternative treatment
  - Education for physicians
  - Tracking fluoroquinolone use
    - 2010 vs 2009
      - Levofloxacin tablet usage decreased by 17%
      - Levofloxacin IV usage decreased by 30%
    - 2010 vs 2011

MWMC Pharmacy and Therapeutics Committee

Fluoroquinolone Alternative Recommendations

Infection	Severity	First Choice	Alternative
Pneumonia (non-HAP/VAP)	Mild (PSI 1,2)	Azithromycin*	Fluoroquinolone (FQ)
Pneumonia (non-HAP/VAP)	Moderate (PSI 3,4)	Ceftriaxone/Azithromycin	Fluoroquinolone for allergic patients
Legionella		Fluoroquinolone/Azithromycin	
Skin and Soft Tissue Infection		Beta lactams	• Vancomycin • Avoid FQ except animal bite in allergic patients • Clindamycin useful if necrotizing infection
Pyelonephritis**	Initial Therapy	Ceftriaxone	• Gentamicin a good initial choice as a single dose, especially in nursing home patients • Oral treatment depends on sensitivity
Intraabdominal Infection, biliary		Ampicillin/Sulbactam **or** Cefoxitin	Fluoroquinolone and Metronidazole undesirable except in allergic patients
Intraabdominal infection, peritonitis	Mild/Moderate	Cefoxitin (preferred) **or** Ceftriaxone/Metronidazole (2nd line) **or** Ertapenem (3rd line)	Fluoroquinolone and Metronidazole undesirable except in allergic patients
Intraabdominal infection, peritonitis	Severe	Piperacillin/Tazobactam **or** Imipenem **or** Ceftazidime/Metronidazole	• Gentamicin plus metronidazole if beta lactam allergy • Tigecycline is an option for allergic patients or resistant bugs

* Azithromycin monotherapy only for patients less than 65 years without comorbidities

** For uncomplicated UTIs – Sulfamethoxazole/trimethoprim (Bactrim), nitrofurantoin, FQ preferable over beta lactams (FQ preferred only in allergic patients or if bug only sensitive to FQ)

ID approval required for: Piperacillin/Tazobactam (Zosyn), Imipenem/Cilastatin (Primaxin), Tigecycline (Tygacil)

Antibiotic Stewardship Focus on C.Diff Infections

- Clostridium difficile surveillance letter to physicians
  - Developed as a means to educate about appropriate antibiotic use
- Reinforce use of bleach disinfectant in environmental cleaning and bedside curtain change at discharge of C. diff patients
- Reinforce hand hygiene with soap and water in addition to the hand sanitizer

METROWEST MEDICAL CENTER
Framingham Union Hospital • Leonard Morse Hospital

Memo

To:

From: Chinhak Chun MD., Karin Hjalmarson MD.
Co-Chairs, Infection Control Committee

Date:

Re: ***Clostridium difficile*** **Surveillance**

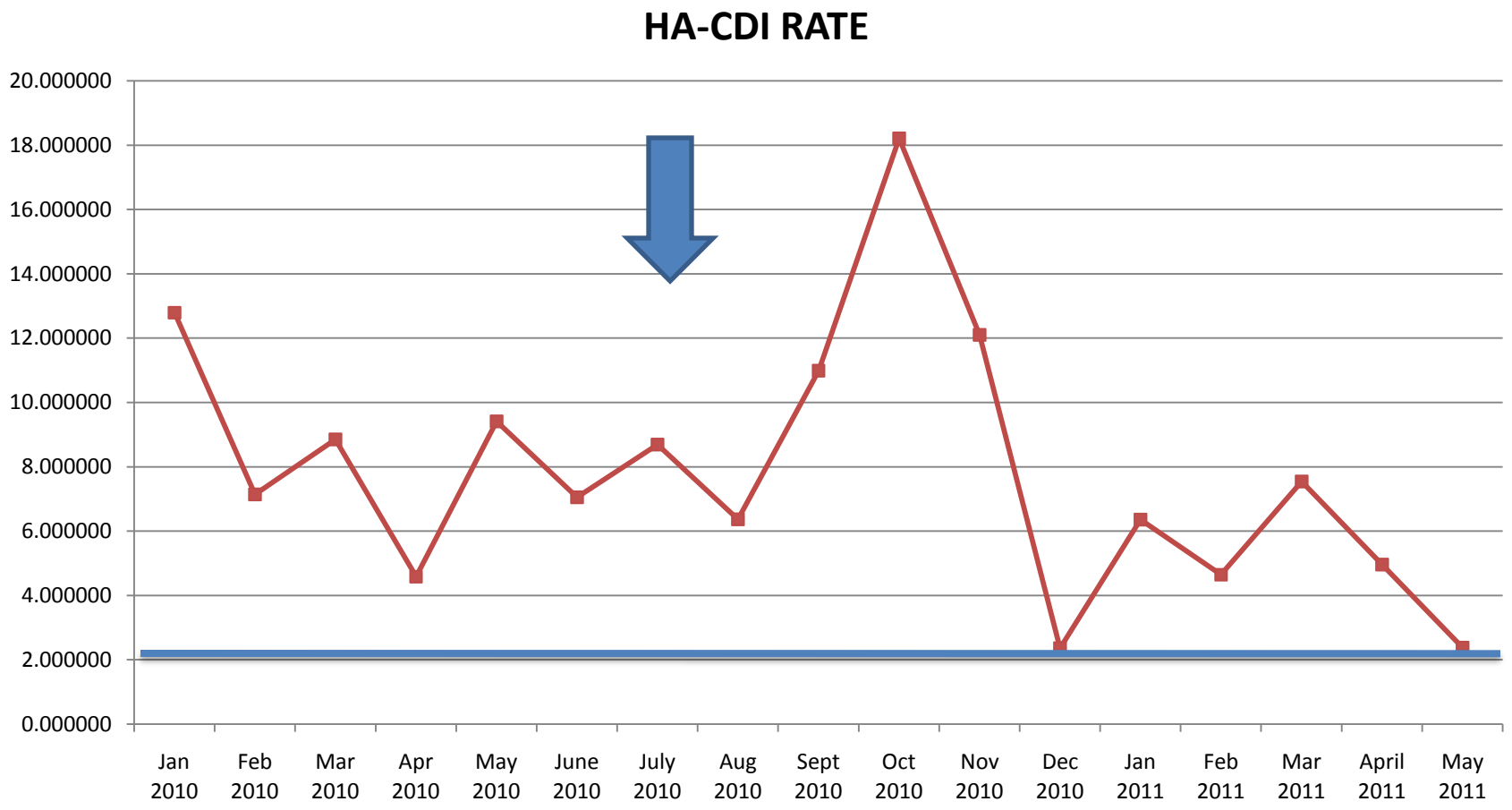
We are alerting you that your patient , **MRN: _____** was diagnosed with ***C. difficile*** **associated disease** on _____.

The Infection Control Department has determined that it was most likely associated with the antibiotic(s) treatment / prophylaxis administered on _____.

This information is being shared in hopes of providing a learning experience in prescribing antibiotics as well as an opportunity to improve our practices. Using antibiotics only when indicated and choosing narrow spectrum agents in as short a course as possible can minimize the risk of ***C. difficile*** associated disease.

Please do not hesitate to contact us for any question or suggestions.

Quinolone Restriction and CDAD



Education

- Reducing antibiotic use and duration of therapy
  - Urine culture (rather than symptoms)-directed “therapy” for UTI
  - Chest X-ray (rather than symptoms)-based “therapy” for pneumonia
  - Downgrading to monotherapy from the two-drug regimen for community acquired pneumonia
  - First generation cephalosporin + probenecid vs. Third generation cephalosporin
  - Three-day automatic stop for all antibiotic with notification to clinicians

Feedback

- Immediate feedback to the prescriber
  - By peers (chief resident, senior resident, etc.)
  - By ID specialists
  - By pharmacy
  - Dear Dr. letter
    - Antibiogram
    - Memo
    - Replacement table
    - Other references