Evaluation of Methods Predicting and Preventing Clostridium Difficile Infection

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Introduction

Background
- Clostridium difficile1,2
  - Spore forming, anaerobic gram positive bacillus
  - Spread via fecal-oral route
  - Produces and releases toxins A and B
  - Symptoms ranging from asymptomatic carrier, to diarrhea, to colitis, or to pseudomembranous colitis.
- Clostridium difficile infection (CDI)
  - Rising concern in hospitals and long term care facilities due to patients being prescribed antimicrobial(s) and exposure to organisms

Risk factors
- Exposure to broad-spectrum antibiotics¹,²
- Exposure to the organism¹,²
- Other risk factors: reduced gastric acid, immunosuppressive therapy, serious underlying illness and co-morbidities, gastrointestinal surgery, long duration of hospitalization, advanced age, etc.¹,²

Prevention Strategies
- Antibiotic Stewardship¹,²
- Hand hygiene and barrier precautions¹,²
- Discontinue proton pump inhibitors (PPIs) to prevent CDI recurrence.²
- American Society of Health System Pharmacists (ASHP) Guidelines 4
  - Recommends stress ulcer prophylaxis (SUP) with gastric acid suppressants for patients in the intensive care unit (ICU) meeting specific criteria
  - SUP for adult patients in non-ICU settings are not recommended
- Probiotics may have moderate effectiveness in primary prevention of CDI.⁵

Objective
The purpose of this study is to appropriately evaluate patients at risk of developing CDI, and to appropriately discontinue offending agents, if warranted, for patients identified as being high risk for developing CDI.

Data Collection Sheet

Study Design
- Three month pilot study from September 2015 to December 2015
- An electronic medical record system, Vigilanz™, provided daily reports scoring patients based on risk factors shown under Data Collection Sheet
- Patients with a score of three or higher were defined high risk
- High risk patients were reviewed by the pharmacist and appropriate CDI preventative recommendations were noted in the patient’s chart or via recommendations to attending physicians during multidisciplinary rounds

Data that will be collected
- Percentage of high risk patients on the floor
- Cases of hospital onset CDI
- Percentage of pharmacist interventions accepted
  - Type and method of intervention accepted
- Percentage of inappropriate PPI use

Methods

References

Disclosure
Authors of this presentation have nothing to disclose concerning financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.