Probiotic Protocol

Prevention of Hospital Acquired Clostridium difficile Associated Diarrhea

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Introduction

Antibiotic associated diarrhea, specifically Clostridium difficile, in the hospital setting is an increased medical concern. Implications of Clostridium difficile infections include but are not limited to, increased length of hospital stay, increased healthcare cost, and increased morbidity.

Antibiotic therapy is a known cause for disruption to intestinal microflora, and can result in C. diff overgrowth and pathogenesis. Studies are showing promise that probiotic therapy can prevent antibiotic associated diarrhea secondary to C. diff.

Due to this concern, Comanche County Memorial Hospital initiated a probiotic protocol for inpatients receiving antibiotic therapy.

Overview

CCMH experienced a higher than expected number of HA CDAD for the year 2017 and was trending toward the same for the year 2018. Baseline data source was NHSN, the national database for tracking CDAD in the United States. Data submission to CMS as part of the Value Based Purchasing program is also channeled through the NHSN on behalf of CCMH.

Goals

1. Reduce the incidence of Healthcare Associated CDAD.
2. Implement a Pharmacy driven probiotic protocol to occur simultaneously when starting certain antibiotics on inpatients.
3. Reduce the incidence of Antibiotic Diarrhea which can lead to artifactual CDAD.

Methods

Probiotic Protocol

When a patient is put on one of the following antibiotics:

- Clindamycin
- Broad spectrum penicillins (such as Zosyn)
- Fluoroquinolones
  - Levofloxacin, Ciprofloxacin, Moxifloxacin
- Cephalosporins (3rd and 4th gen)
  - Ceftriaxone, ceftazidime, cefdinir, cefepime
- Aztreonam
- Carbapenems
  - Imipenem, meropenem, ertapenem, doripenem

Unless the antibiotic is a one-time order (ER, pre-op)

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Pharmacy will order:

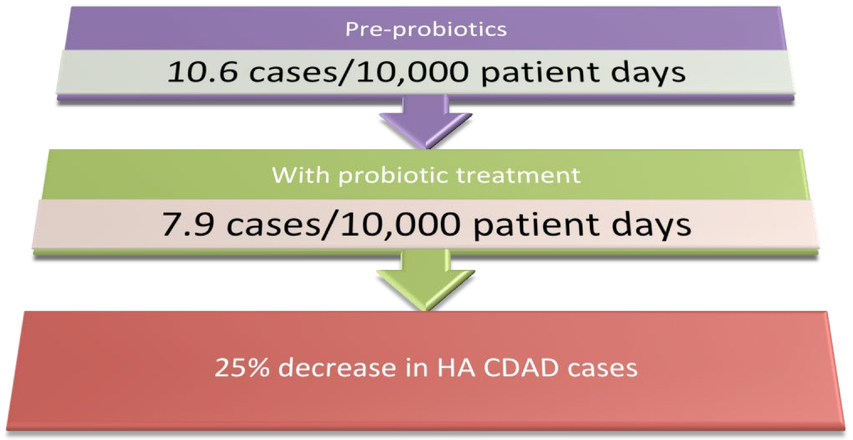
- Formulary probiotic 100 BC PO Daily
  - Currently, this is Bio-K+ (supplied as 50 BC per capsule - will give two capsules)
  - Can also be given via PEG or NG tube
- **VERY IMPORTANT** - Do not administer probiotics within two hours of antibiotics!

Patients who should not receive probiotics:

- Immunosuppression (WBC ≤2)
  - If WBC is between 2 and 3, call physician for guidance
- Premature infants*

* Pharmacy will not auto-order probiotics on any patients under the age of 18; physicians will have to manually order for any pediatric patients

Results



Discussion

Due to limited sample size and short duration of the study further implementation of the protocol is needed to show positive correlation. However, the implementation of this probiotic protocol resulted in a 25% decrease of hospital acquired clostridium difficile associated diarrhea at Comanche County Memorial Hospital.

Comanche County Memorial Hospital

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OSTEOPATHIC MEDICINE

Bibliography

1. https://www.cdc.gov/nhsn/index.html
2. https://www.biokplus.com/en_us/healthcare-professionals#Healthcare-Professionals