A MULTIDISCIPLINARY APPROACH TO REDUCING HOSPITAL-ACQUIRED CLOSTRIDIUM DIFFICILE

ATLANTIC GENERAL HOSPITAL

PRESENTED BY

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PROBLEM IDENTIFICATION

- Nation-wide increase in incidence of clostridium difficile
- Cases of toxic mega colon reported
- Bacteria is easily transmitted among patients, visitors and hospital staff
- No EPA disinfectant to effectively eliminate the spores

GOALS

- Assure the judicious use of antibiotics
- Decrease the risk to patients of developing a hospital-acquired infection
- Develop effective precautions to prevent transmission
PROCESS

- All *Clostridium difficile* isolates reported to Infection Control
- Chart review to evaluate encounters & antibiotic use
- Data showed increasing incidence of hospital & community acquired infections

PROCESS

- Concerns brought to the attention of the Pharmacy & Therapeutics committee
- Literature review conducted to determine prevailing knowledge and best practices
- Action plans developed
SOLUTIONS

HAND HYGIENE
- Policy changed according to CDC recommendations
- Use soap and water for all hand hygiene related to care of C-diff patient
- Organization-wide education on this change

DAILY & TERMINAL CLEANING
- Housekeeping staff contacts charge nurse to verify rooms needing special cleaning.
- Don protective gown, mask and gloves
- Use 1:10 bleach solution to spray all room surfaces
SOLUTIONS

DAILY & TERMINAL CLEANING

- Mop floor with a “Swiffer-type” mop head and replace between rooms.
- Staff education using a vacant room as a training lab.

USE OF LEVAQUIN

- Pharmacy & Therapeutics Committee approved a change in the recommended dose of Levaquin from 500mg X 7 days to 750mg X 5 days.
- Changes were added to the pre-printed order sheets for pneumonia.
- Physician education during department meetings, newsletter & one-to-one discussion
**SOLUTION**

**PATIENT INFORMATION**
- Information Services added a trigger to the computer patient information screen alerting staff that patient requires Contact Precautions.
- This information populates that screen each time the patient is admitted.

**SOLUTIONS**

**CONTACT PRECAUTIONS**
- Placed on contact precautions.
- Remain on contact precautions until there are 3 negative cultures.
- Precaution signs placed by door providing clear instructions for anyone entering the room.
- Visitors instructed on correct use of personal protective equipment.
- C-diff educational materials given to patient and family.
SOLUTIONS

CONTACT
PRECAUTIONS

- Isolation caddy hangs over the door
- Affords ease in re-stocking
- Improves compliance with precautions
- Prevents hallway clutter

RESULTS

INCIDENCE OF CLOSTRIDIUM DIFFICILE

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Qtr 2006</td>
<td>5</td>
</tr>
<tr>
<td>2nd Qtr 2006</td>
<td>10</td>
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<td>3rd Qtr 2006</td>
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<tr>
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<td>30</td>
</tr>
<tr>
<td>3rd Qtr 2007</td>
<td>25</td>
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</tbody>
</table>

- Hospital-acquired
- Community-acquired
4th quarter data showed an increase

INCIDENCE OF CLOSTRIDIUM DIFFICILE

FOLLOW UP

- Upon investigation it was determined that the pneumonia order sheets were revised to assure compliance with the antibiotic requirements of the National Hospital Quality Measures (core measures) and antibiotic doses were omitted from the form.
- This oversight was corrected.
LESSONS LEARNED

- Be careful that in solving one problem you don’t create another.
- Staff from all departments is committed to this improvement effort.
- Continued monitoring is required in order to assure sustained improvement.