EXPANDING THE *C. difficile* INFECTION PREVENTION BUNDLE TO INCLUDE PATIENT HAND HYGIENE

**ABSTRACT**

The incidence of *C. difficile* (CD) disease in the UPMC Shady Side Hospital (SSH) has been monitored since 1990. *C. difficile* infection (CDI) is now the most frequent healthcare-associated infection (HAI) in many acute care hospitals in the United States. CDI has a significant impact on patient care, hospital resources, and staff.

**THE PROJECT**

The University of Pittsburgh Medical Center (UPMC) Shady Side Hospital is a 331 bed tertiary care and teaching facility with a specialty in cancer and bone transplant and a history of proactive infection initiatives including hospital acquired infection (HAI) surveillance. Strategies to control and decrease *C. difficile* infections has been implemented as an "Evidence based bundle". Interventions included early detection of any patient too busy or too tired to wash their hands with soap and water due to their current medical condition, electronic alert to the provider if the wash protocol was not completed. A recent study has been completed at SSH to monitor the incidence of CDI and to determine the effectiveness of the implemented interventions.

**BACKGROUND**

*C. difficile* is a Gram-positive, spore-bearing, obligate anaerobe that is found in the normal flora of the large intestine of 15-20% of the population. *C. difficile* infection (CDI) is the most frequent healthcare-associated infection (HAI). CDI is the most frequently reported HAI in the United States, with an estimated 500,000 cases annually (CDC, 2010). In 2011 the incidence rate of *C. difficile* infection (CDI) was 6.95 per 10,000 patient days (116 cases / 166,838 patient days) in comparison to the FY09 rate of 10.45 per 10,000 patient days (164 cases/156,956 patient days). Application of a patient HH intervention resulted in a decrease in the *C. difficile* infection rate. In early 2009 the CD Prevention Team began to discuss ideas to enhance the prevention of CDI.

A multidisciplinary team including infection prevention/control, clinical nursing, pharmacy, housekeeping, microbiology laboratory, nursing administration and infectious disease physicians were identified to study factors affecting fecal oral transmission of CD in the hospital and identify interventions to prevent CDI infection.

**METHODS**

The multidisciplinary team study to evaluate effective local control algorithm: transmission of CDI from the hospital environment to the susceptible patient.

**DATA**

**BASELINE DATA**

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<th>CD Incidence Rolling 12 months Period</th>
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**RESULTS**

**OUTCOMES**

The incidence of *C. difficile* infection rate decreased from 11.7 to 7.6 per 10,000 patient days from FY09 to FY10. This 33.5% decrease was significant at p<0.001. The percentage of patients in isolation decreased slightly from 11% in FY09 to 9.4% in FY10.

**SUSTAINABILITY**

The success of the patient HH program cannot be continued without continued education and reminders to encourage patient HH. All metrics for this program will be monitored to ensure continued success.

**REFERENCES**


**Pilot survey information obtained from the hospital environment due to an unexpected staff shortage by adding patient hand hygiene to the prevention bundle**

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