Investigating *Clostridium difficile* Infections Across the U.S.

Emerging Infections Program - Healthcare-Associated Infections Community Interface Activity

CDC: the Scientific Core of HAI Prevention

⇒**HAI Tracking/ Reporting—NHSN**
- National
- State and
- Facility levels

⇒**Guidelines**
- Foundation for clinical practice

⇒**Outbreaks**
- Stopping infections at point of care

⇒**State Support**
- Coordinating and funding state activity

⇒**Research**
- Identifying
- prevention strategies of tomorrow

⇒**Technical Expertise that fuels Federal efforts**
- CMS Conditions of Participation
- CMS Facility
- Inspections
- CMS Pay for
- Reporting/ Performance
- Standards
- HHS HAI Prevention Action Plan
- FDA Recalls
- AHRQ Prevention Projects (CUSP)

Clostridium Difficile (C. difficile)

Clostridium difficile is a bacterium that causes diarrhea and more serious intestinal conditions. The organism is responsible for 337,000 infections and 14,000 deaths every year. *C. difficile* infections are almost always linked to medical care; people who take antibiotics and also receive medical care are most at risk.

States have reported increased rates of *C. difficile* infection, noting more severe disease and an increase in mortality. Death rates due to *C. difficile* are highest in the elderly, however, almost half of infections occur in people younger than 65. These changes may be largely due to the emergence of a stronger *C. difficile* strain. This strain spread widely after first being found in early 2000s; it appears more virulent and is more resistant to antibiotics traditionally used to treat *C. difficile*.

Measuring the Scope of *C. difficile* Infection in the United States

C. difficile infections are a leading cause of patient harm in the U.S. medical system. Data from this project will help inform future policy and prevention strategies to reduce *C. difficile* disease.

Specifically, the EIP *C. difficile* surveillance project will:

√ Determine the burden of *C. difficile* disease in the U.S.

√ Identify proportion of infections associated with medical care

√ Measure trends of disease over time

√ Determine which strains of *C. difficile* are causing disease, and in what proportions

In addition, the project provides infrastructure for further research including studies to identify risk factors, to determine population targets for vaccines, and to monitor the efficacy of prevention strategies.

Data will begin to be published in 2012.

Partners

This project is being completed through the Emerging Infections Program, a network of state health departments and academic medical centers dedicated to improving surveillance, prevention, and control of emerging infectious diseases. EIP participants in the *C. difficile* project include partners from California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New Mexico, New York, Oregon, and Tennessee.