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Virginia Health Information's Prevention Efforts for Clostridium Difficile Influenced by HCUP

Value, 2013

Impact Case Studies and Knowledge Transfer Case Studies.

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Virginia Health Information (VHI)—a nonprofit organization contracted by the Virginia Department of Health to assist with Virginia's health care data reporting—used one of AHRQ's Healthcare Cost and Utilization Project (HCUP) statistical briefs in its efforts to help bring down the increasingly high rates of *Clostridium difficile* infections in the Commonwealth.

Michael Lundberg, VHI Executive Director, says, "We developed a public health promotion flier because of the statistical brief 'Clostridium difficile Infections in Hospital Stays.' AHRQ's brief inspired us to create the flier to help consumers understand *C. difficile*. We believe consumers will benefit from information about how the infection develops, its symptoms, treatment, and most importantly, what can be done to prevent it."

The flier, "*Clostridium difficile* Prevention: Dodging a 'One-Two Punch,'" was incorporated as a resource into the 2012 Virginia Health Quality Center (VHQC) (Virginia's Quality Improvement Organization) quality conference for public health and health care practitioners. It is available at http://www.vhi.org/flyers/cdiff_vhi.pdf [Plugin Software Help]. The Virginia Department of Health Web site also links to the flier as a reference for morbidity and costs associated with *C. difficile* infections in Virginia.

The HCUP statistical brief used in developing the flier is based on data from the HCUP 2009 Nationwide Inpatient Sample (NIS), a database of hospital inpatient stays. The NIS is nationally representative of all community hospitals (i.e., short-term, nonfederal, and nonrehabilitation hospitals) and includes all patients from each hospital, regardless of payer.

In Virginia, hospitalizations for *C. difficile* infections between 2000 and 2010 have more than tripled—from 9 to 29 infections per 100,000 people. The Centers for Disease Control and Prevention report a similar increase nationwide and estimates that 14,000 deaths are linked to *C. difficile* infection each year in the United States.

Because of the quality of the flier, the Virginia Department of Health and the VHQC invited VHI to be a partner in the Virginia *Clostridium difficile* Collaborative. The Collaborative is using the VHI flier as part of its efforts to increase knowledge of *C. difficile* and prevention techniques and to integrate evidence-based practices over a 1-year period. Educational sessions for health care providers sponsored by the Collaborative began in October 2012. As of April 2013, 23 hospitals and 22 long-term care facilities were participating in the Collaborative.

The VHI flier has been disseminated to over 80 Virginia hospitals through organizations such as the Virginia Association of Nonprofit Homes for the Aging, Virginia Department of Health, Virginia Health Care Association, VHQC, Virginia Hospital and Healthcare Association, and Medical Society of Virginia.

The HCUP data also demonstrated that risk for acquiring *C. difficile* infection in Virginia increases with age and for women. For example, in 2010, older adults age 85 years and older were hospitalized with *C. difficile* infections more than twice as often as adults ages 65 to 84 years. Both age groups were hospitalized more often than younger age groups. Nationally, rates show the same rise in risk for a hospital stay in older age groups as in Virginia, and the rate of hospital stays of women with a *C. difficile* diagnosis was 30 percent higher than for men in 2010 in Virginia. Lundberg says, "We appreciate AHRQ's willingness to 'localize' this [information] to Virginia."

Other State-specific findings include the following:

- The total hospital cost for patients in the Commonwealth diagnosed with *C. difficile* infection was over \$157 million in 2009.
- The average hospital cost for patients with *C. difficile* infection was \$23,190 compared with \$8,860 for other hospitalized patients.
- On average, patients in Virginia hospitals diagnosed with *C. difficile* infection stayed over 13.2 days in the hospital in 2009, close to three times as long as the average stay of all other patients (4.6 days).

VHI was established in 1993 with private and public funding from the Commonwealth of Virginia. The organization has a variety of stakeholders, including businesses, consumers, health plans, hospitals, nursing homes, physicians, and Commonwealth representatives. The group's mission is to create and disseminate health care information to promote informed decisionmaking and enhance the quality of health care delivery. VHI is a member of the Virginia Health Care Alliance, established by the U.S. Department of Health and Human Services as a chartered value exchange in September 2008. More information about VHI is available at www.vhi.org.

Lucado J, Gould C, Elixhauser A. *Clostridium difficile* Infections (CDI) in Hospital Stays, 2009. HCUP Statistical Brief #124. January 2012. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb124.pdf> [Plugin Software Help].

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