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New Study Shows Higher Rates of C. difficile Infection in Hospitals that Use Reusable Sharps Containers

Results from independent analysis of survey of more than 600 hospitals presented today at the 42nd Annual APIC Conference

FRANKLIN LAKES, N.J., June 27, 2015 /PRNewswire/ -- BD Medical, a segment of BD (Becton, Dickinson and Company) (NYSE: BDX), a leading global medical technology company, today announced that results from a new independent study of acute care hospitals shows higher rates of C. difficile (C. diff) infection among hospitals that use reusable sharps containers. A poster presentation on the results of the analysis will be presented today by Monika Pogorzelska-Maziarz, PhD, MPH, assistant professor at the Jefferson School of Nursing, at the 42nd Annual Conference of the Association for Professionals in Infection Control and Epidemiology (APIC), taking place June 27-29 at the Music City Center in Nashville, Tenn.

The study analyzed data from the results of a national survey of hospitals in the U.S. conducted in December 2013, with survey responses linked to the FY2012 Medicare Provider Analysis and Review (MedPAR) data set¹. According to the analysis, hospitals that used single-use containers had significantly lower rates of C. diff as compared to those using reusable containers, with an Incidence Rate Ratio (IRR)=0.870¹ (which translates to nearly a 15 percent difference in the prevalence of C. diff infection rates).

The study was based on completed surveys from more than 600 U.S. hospitals. In multivariable regression, data showed that hospitals with single-use sharps disposal containers had significantly lower rates of C. diff infections versus hospitals with reusable containers after controlling for several hospital characteristics¹.

"The use of containers to properly dispose of sharps in the health care setting is a critical component of most occupational safety programs in health care settings," said Dr. Pogorzelska-Maziarz. "These findings, while they do not confirm a direct correlation between protocols for sharps disposal and risk of health care associated infection, do raise important questions about the potential role that reusable sharps containers may play in pathogen transmission."

The burden associated with C. diff infections is at a historic high, with an attributable mortality of more than 29,000 deaths in 2011, according to the Center for Disease Control² and an estimated annual cost to the U.S. health care system of \$4.8 billion. C. diff was selected by Dr. Pogorzelska-Maziarz as the organism of interest for this study due to the high morbidity, mortality and costs, as well as the acknowledged role that environmental contamination plays in its transmission.

"Given the widespread use of sharps containers in the health care setting, we applaud Dr. Pogorzelska-Maziarz's dedication in working to identify and assess a possible link between the use of single-use containers and lower hospital-wide C. diff infection rates," said Lynne Kelley, MD, FACS, vice president, worldwide medical affairs, BD Medication & Procedural Solutions, BD Medical. "At BD we are continuing to work to identify effective strategies to reduce health care-associated infections. This study provides very compelling new insights demonstrating where infection control protocols might be modified to reduce risk."

BD Medical's portfolio of single-use sharps disposal solutions will also be on display at the APIC conference at booth **#509**. For more information visit <http://www.bd.com/sharps/>.

About BD

BD is a leading medical technology company that partners with customers and stakeholders to address many of the world's most pressing and evolving health needs. Our innovative solutions are focused on improving medication management and patient safety; supporting infection prevention practices; equipping surgical and interventional procedures; improving drug delivery; aiding anesthesiology and respiratory care; advancing cellular research and applications; enhancing the diagnosis of infectious diseases and cancers; and supporting the management of diabetes. We are more than 45,000 associates in 50 countries who strive to fulfill our purpose of "Helping all people live healthy lives" by advancing the quality, accessibility, safety and affordability of healthcare around the world. In 2015, BD welcomed CareFusion and its products into the BD family of solutions. For more information on BD, please visit www.bd.com.

DISCLOSURE: *This study was commissioned and funded by BD. The design and development of the study were determined by Monika Pogorzelska-Maziarz, PhD, MPH, the results of which are based on Dr. Pogorzelska-Maziarz's analysis of independent data.*

¹ Pogorzelska-Maziarz, M. The Relationship between Different Types of Sharps Containers and C. difficile Infections Rates in Acute Care Hospitals. Paper presented at: the 42nd Annual Conference of the Association for Professionals in Infection Control and Epidemiology (APIC); June 27-29; Nashville, TN.

² Center for Disease Control. Burden of Clostridium difficile Infection in the United States. The New England Journal of Medicine. 2015; 372:825-834 February 26, 2015

³ Dubberke ER, Olsen MA. Burden of Clostridium difficile on the healthcare system. Clinical Infectious Diseases, 2012 Aug 1; 55(Suppl 2): S88–S92.

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