New Clinical Use Study Finds BD Technology Can Help Reduce Hazardous Drug Contamination, Speed Up Sampling Times in Health Care Settings

Peer-Reviewed Study Supports Using BD PhaSeal™ Optima System and BD® HD Check System as part of Multifaceted Approach to a Safer Environment for Frontline Health Care Workers

FRANKLIN LAKES, N.J. (Feb. 23, 2023) – BD (Becton, Dickinson and Company) (NYSE: BDX), a leading global medical technology company, today announced the outcomes of a peer-reviewed study that showed BD technology can be used to significantly reduce hazardous drug surface contamination and provide pharmacies and health care facilities with real-time measures to more effectively monitor and improve the safety of health care workers and patients.

The study, published in the *American Journal of Health-System Pharmacy*, assessed changes in surface contamination by using a next-generation closed system drug-transfer device (CSTD) with the BD PhaSeal™ Optima System across two chemotherapy infusion centers, where health care workers are often at higher risk of exposure. The study took place at Emory Healthcare's Winship Cancer Institute prior to and a year following CSTD implementation. After incorporating the BD PhaSeal™ Optima System into clinical workflows, results showed a 46 percent reduction in hazardous drug surface contamination at the sites.

Health care workers may be exposed to hazardous drugs during drug transportation, preparation, administration or waste disposal. Research shows that the accidental spread of contamination in pharmacies and hospitals is widespread. According to the U.S. Centers for Disease Control and Prevention, about 8 million health care workers are potentially exposed to hazardous drugs.[1] Even at small concentrations this exposure puts workers at risk of short- and long-term health issues such as headaches, hair loss, nausea, organ damage, reproductive problems, developmental impairments, genetic issues and even cancer. [2-4]

"At a time when health care workers are facing unprecedented demands, it's more important than ever to provide peace of mind that their working environments are safe," said study author Erich Brechtelsbauer, PharmD, MS, Assistant Director of Pharmacy at Emory Healthcare and the Winship Cancer Institute. "With a diligent and focused approach on hazardous drug safety using the latest technologies available, we can significantly reduce contamination in our facilities and take a proactive approach to monitoring to protect patients and providers."

The study also compared conventional wipe sampling methods, which may take weeks for facilities to receive results, against a qualitative, rapid, point-of-care test, the BD® HD Check System, which provides results within 10 minutes. The BD® HD Check System was 91 percent consistent with traditional quantitative analyses in reporting contamination and 98 percent accurate within its limits of detection – bringing reliability and speed to the sampling process.

"Quantitative wipe sampling presents a significant time and cost barrier, resulting in routine monitoring adherence rates around 25 percent," said Brechtelsbauer. "Having a rapid test that can identify the presence of hazardous drug residue in real-time may help health care workers quickly implement corrective action planning to reduce contamination and potential exposure while also minimizing costly quantitative testing and improving routine monitoring."

Routine monitoring is beneficial in identifying and correcting safety practices, allowing institutions to proactively minimize hazardous drug contamination.[5,6] Current guidelines and standards, including those in the 2020 Safe to Touch Consensus Conference and the Spanish Society of Hospital Pharmacists (SEFH), recommend routine monitoring for hazardous drug surface contamination.[7,8]

"Hazardous drugs are by nature harmful to anyone who comes into contact with them, but they are also a necessary part of health care to treat patients fighting cancer and other deadly diseases," said Dr. Klaus Hoerauf, vice president of global medical affairs for Medication Delivery Solutions at BD. "Through our latest innovations in CSTD technology and rapid monitoring programs in hazardous drug solutions, we can help facilities protect their greatest assets – their teams of health care workers – while improving clinical workflow."

To learn more about the AJHP published study, join us for a webinar on March 16 at 2 p.m. EST: https://go.bd.com/brechtelsbauer-webinar.html.

About the BD PhaSeal™ Optima System: The BD PhaSeal™ Optima System is a next-generation closed system drug-transfer device (CSTD) with design innovations based on user feedback to optimize every device within the system. The result advances hazardous drug safety, ergonomics, ease of use and performance for facilities and their health care workers.

About the BD® HD Check System: The BD® HD Check System is the first and only rapid hazardous drug (HD) detection* system that provides surface contamination results within 10 minutes, enabling immediate corrective action.

*The BD® HD Check System tests for select hazardous drugs—cyclophosphamide, doxorubicin and methotrexate. Surfaces with contamination at or above the limits of detection have 95% specificity and sensitivity.

About BD
BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its 77,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com or connect with us on LinkedIn at www.linkedin.com/company/bd1/ and Twitter @BDandCo.

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