

## **Clinical Study Shows BD Cato Medication Workflow Solution Detected and Helped to Prevent Potentially Life-Threatening Medication Compounding Errors**

***Study in Journal of Clinical Pharmacy and Therapeutics shows nearly 8 percent of anti-cancer drug doses prepared for patients were shown to be outside of the accepted tolerance range***

**NYON-EYSINS, Switzerland, 18<sup>h</sup> of September 2017** – A [clinical study published in the Journal of Clinical Pharmacy and Therapeutics](#) has revealed the scale of potentially life-threatening medication errors which may occur during preparation of individual preparations for antineoplastic therapy and how the introduction of a gravimetric IV workflow system can help prevent this threat.

In the study, a retrospective analysis of data was conducted for anti-cancer medication errors detected by the BD Cato™ medication workflow solution in a total of 759,060 unique preparations by 245 technicians, across 10 pharmacy centres, in five European countries. The study showed that the BD Cato medication workflow solution detected that 7.89 percent of the drugs (59889 drugs preparation) prepared had error levels outside the accepted tolerance range and prevented these incorrect and potentially life-threatening doses from reaching patients.<sup>1</sup> The study analysed anti-cancer drugs prepared at participating centres in Austria, Czech Republic, Denmark, Germany and Switzerland between July 2011 and October 2015.

Joan Peppard, president of the European Association of Hospital Pharmacists says: “The findings of this study are concerning, especially in relation to antineoplastic drugs with high levels of toxicity; but the positive side of this is that these errors were detected and the doses prevented from reaching patients. Hospital pharmacy administrators and technicians are facing ever increasing workloads as the volume of patients and complexity of drug therapies increases and unfortunately a small risk of human error is always present. We welcome any technology that reduces this risk during IV preparation.”

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<sup>1</sup> Terkola R, Czejka M, Bérubé J, Evaluation of real time data obtained from gravimetric preparation of antineoplastic agents show otherwise undetected dimensions of medication errors with possible critical therapeutic impact; results of a large scale, multicentre, multinational, retrospective study, 2017

The study, supported by a grant from BD (Becton, Dickinson and Company) for the Austrian Society of Oncology Pharmacy (ASOP), concluded that the introduction of a gravimetric preparation system (such as the BD Cato medication workflow solution) for anti-cancer drugs detected and prevented dosing errors that would not have been recognised using traditional methods, which could have resulted in patient harm or suboptimal therapeutic outcomes for patients undergoing cancer treatment.

The principal investigator of the study, Robert Terkola, MSc, PhD, aHPH, said: "Our aim was to detect medication errors with possible critical therapeutic impact as determined by the rate of prevented medication errors in chemotherapy compounding after implementation of gravimetric measurement. Our findings are relevant both to centres that have already implemented a gravimetric measurement system and to those still using traditional volumetric systems for preparing antineoplastic drugs especially including preparations still executed in a decentralized manner at the ward, which may not achieve effective recognition of medication errors."

The findings reinforces that the European Society of Oncology Pharmacy (ESOP) "Quality Standard for the Oncology Pharmacy Service (QUAPOS)" has already enforced the implementation of the gravimetric preparation as a standard in its first edition.

BD Cato™ medication workflow solutions were developed to advance the process of IV compounding. The system streamlines hospital pharmacy medication preparation using gravimetric verification and bar code verification, in tandem with a step-by-step guidance system, to help detect wrong dose and wrong drug errors in real-time to provide efficiency and cost savings. One survey showed an increase in the productivity levels of pharmacy compounding staff by more than 50 percent.<sup>2</sup> More than 250 hospitals worldwide currently use BD Cato™ automated solutions for safe IV compounding.

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### **About BD**

BD is a global medical technology company that is *advancing the world of health* by improving medical discovery, diagnostics and the delivery of care. BD leads in patient and health care worker safety and the technologies that enable medical research and clinical laboratories. The company provides innovative solutions that help advance medical research and genomics, enhance the diagnosis of infectious disease and cancer, improve medication management, promote infection prevention, equip surgical and interventional procedures, and support the management of diabetes. The company partners with organizations around the world to address some of the most challenging global health issues. BD has nearly 50,000 associates across 50 countries who work in close collaboration with customers and partners to help enhance outcomes, lower health care delivery costs, increase efficiencies,

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<sup>2</sup> TechValidate. BD Cato Survey November 2016. TechValidate Content Library. <https://www.techvalidate.com/tvld/E4F-8BE-750>. Accessed February 24, 2017.

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