Teleflex Reports Study Results of ARROWg+ard® Technology Effectiveness in Reducing Catheter Infections and Costs in Low Risk Population

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Peer-Reviewed, Published Research on Subclavian Insertion Site Expands Previous Studies, Documenting Clinical and Financial Benefits of Chlorhexidine/Silver Sulfadiazine-Impregnated CVC

WAYNE, Pa.--(BUSINESS WIRE)--Jul. 29, 2015-- Teleflex Incorporated (NYSE: TFX), a leading global provider of medical devices for critical care and surgery, announced that newly published research has further documented the ability of the Company's ARROW ® Central Venous Catheter (CVC) with ARROWg+ard® Blue Technology to reduce both catheter-related bloodstream infections (CRBSIs) and direct costs associated with treating those infections, even when the infection risk is already low.[1]

The peer-reviewed retrospective study examined CVC usage in the subclavian insertion site. That location has been shown to be associated with lower overall infection risk, compared to the jugular and femoral infection sites.[2] The study appears online in the respected *American Journal of Infection Control*, which is published by APIC, the Association for Professionals in Infection Control and Epidemiology.

The antimicrobial catheter with ARROWg+ard® Blue Technology outperformed an unprotected CVC in both infection reduction and total cost per patient. Within the study, the protected catheter achieved a zero infection rate of 0/1,000 catheter days. In contrast, the unprotected device was associated with a higher CRBSI rate of 2.12/1,000 catheter days (1.4% of cases). The results were statistically significant. The antimicrobial, protected catheter was also associated with prolonged CRBSI-free time compared to the unprotected catheter, including dwell times of up to 30 days without a bloodstream infection.

In addition to its superior clinical performance, the antimicrobial catheter with ARROWg+ard® Blue Technology had sharply lower CVC-related costs than those associated with the unprotected catheter. The cost per catheter day of the protected catheter was far lower than that of the unprotected catheter (€3.35 ± 3.75 vs €3.94 ± 9.95). This, too, was a statistically significant result. The cost was calculated in euros because the study was done in Spain.

The study focused only on CVCs inserted into the subclavian area, an insertion site associated with a low risk of CRBSI. The researchers compared infection rates and cost effectiveness of an unprotected CVC versus a catheter protected with ARROWg+ard® Technology. (ARROWg+ard® Technology is an antimicrobial protection of chlorhexidine and silver sulfadiazine (CHSS) bonded to the catheter's surface to reduce CRBSIs.)

The study involved patients admitted to the ICU of the Hospital Universitario de Canarias (Tenerife, Spain) who received one or more subclavian venous catheters. It examined a total of 871 catheters and 6,040 catheter days.

The study was a retrospective analysis performed and published by Leonardo Lorente, M.D., Ph.D. and colleagues, independent of Teleflex. Dr. Lorente works in the Department of Critical Care at Hospital Universitario de Canarias, in Tenerife, Spain.

The research goal was to determine if using a chlorhexidine/silver sulfadiazine CVC was clinically and financially efficient, even when the infection risk was low, given that the catheter has a somewhat higher initial cost than an unprotected CVC. In two previous studies, the authors determined that the use of CHSS-impregnated catheters successfully reduced healthcare costs when CVCs were inserted in the jugular and femoral veins–sites associated with a high risk of CRBSI and therefore higher overall treatment costs.[3,4]

For the current study, the authors included only the costs of CVCs, infection diagnosis and antimicrobials used to treat patients who developed infections. These direct expenses, they believed, provide a clearer picture of whether savings produced by the protected catheter offset its cost difference.

"Our research had previously established that the antimicrobial catheter justified itself both clinically and in cost-effectiveness when inserted in sites associated with higher CRBSI rates," said Lorente. "Would the same thing be true if the catheter was used in sites with a low risk of infection? The answer is 'yes' according to our data, making the protected catheter a prudent choice in many circumstances–especially for hospitals that have an above-benchmark rate of CRBSIs."

Lorente said the study results should be broadly useful in a variety of hospital settings. "When a hospital is trying to reduce its CRBSIs, our research shows that adopting an antimicrobial catheter can make an immediate, cost-effective impact. That is true even when hospital policy already dictates using the lowest risk insertion sites."

"This study, when combined with the two earlier independent studies by the same team, shows that using an ARROW ® CVC with antimicrobial protection from Teleflex makes sense from many perspectives," said Jay White, President of the Teleflex Vascular Access Division. "This study is further evidence that using an unprotected catheter may put both patients and a hospital's bottom line at unnecessary risk. The ARROW ® CVC with ARROWg+ard® Technology has been repeatedly shown to improve patient safety even when the risk of infection is low, and it more than pays for itself in the process."

More than 30 studies support the ability of ARROWg+ard® Technology to save lives and reduce costs by reducing infections. Additional information on the technology can be found at arrowgard.com and thearrowadvantage.com.

The authors and institution have no financial connection to Teleflex Incorporated. This study was conducted independent from Teleflex Incorporated.

About Teleflex Incorporated

Teleflex is a leading global provider of specialty medical devices for a range of procedures in critical care and surgery. Our mission is to provide solutions that enable healthcare providers to improve outcomes and enhance patient and provider safety. Headquartered in Wayne, PA, Teleflex employs approximately 12,200 people and serves healthcare providers worldwide. For additional information about Teleflex please refer to www.teleflex.com.

Forward-Looking Statements

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements. Any forward-looking statements contained herein are based on our management's current beliefs and expectations, but are subject to a number of risks, uncertainties and changes in circumstances, which may cause actual results or company actions to differ materially from what is expressed or implied by these statements. These risks and uncertainties are identified and described in more detail in our filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K.

References:

1. Lorente L, Lecuona M, Jiménez A, et al. Efficiency of chlorhexidine-silver sulfadiazine-impregnated venous catheters at subclavian sites. *American Journal of Infection Control*, 2015.

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4. Lorente L, Lecuona M, Jiménez A, et al. Cost/benefit analysis of chlorhexidine-silver sulfadiazine-impregnated venous catheters for femoral access. *American Journal of Infection Control*, 2014; 42: 1130-1132.

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Teleflex Incorporated
Jake Elguicze
Treasurer and Vice President, Investor Relations
610-948-2836
jake.elguicze@teleflex.com
www.teleflex.com