



Teleflex Reports Study Results of ARROWg+ard® Technology Effectiveness in Preventing Infections and Associated Costs in an Infection-Prone Insertion Site

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Peer-Reviewed Published Research Reconfirms Clinical Benefits and Cost-Effectiveness of Chlorhexidine/Silver Sulfadiazine-Impregnated CVC

WAYNE, Pa.--(BUSINESS WIRE)--Jan. 13, 2015-- Teleflex Incorporated (NYSE: TFX), a leading global provider of medical devices for critical care and surgery, announced that newly published research has reaffirmed the ability of catheters protected with ARROWg+ard® Technology to reduce both bloodstream infections and direct costs associated with treating those infections.¹

The ARROW® CVC with ARROWg+ard® Technology outperformed the unprotected CVC in both infection reduction and total cost per patient. Within the study, the protected catheter achieved a zero infection rate per 1,000 catheter days. In contrast, the unprotected device was associated with a much higher CRBSI rate of 8.61/1,000 catheter days (7.4% of cases). The results were statistically significant. Additionally, the antimicrobial protected catheter was also associated with prolonged CRBSI-free time compared to the unprotected catheter, including dwell times of up to 25 days without a bloodstream infection.

The study focused only on Central Venous Catheters (CVCs) inserted into the femoral area. The researchers compared infection rates and cost-effectiveness of an unprotected CVC versus a catheter protected with ARROWg+ard® Technology inserted into this infection-prone region. (ARROWg+ard® Technology is an antimicrobial protection of chlorhexidine and silver sulfadiazine bonded to the catheter's surface to reduce catheter-related bloodstream infections [CRBSIs]). The research goal was to determine if the chlorhexidine/silver sulfadiazine CVC could reduce bloodstream infection rates and reduce the cost of diagnosing and treating an infection.

The authors undertook the study because previous cost-effectiveness analyses of [antimicrobial catheters](#) included the cost of extended hospital stays. This cost varies widely from institution to institution and country to country, limiting the applicability of the results. 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 the ultimate cost-effectiveness of the protected, antimicrobial catheter, given its somewhat higher initial cost.

The ARROW® CVC with ARROWg+ard® Technology had sharply lower CVC-related costs than those associated with the unprotected catheter. Notably, the cost of an ARROW® CVC with ARROWg+ard® Technology was 15 times less expensive than an unprotected catheter. (The cost per catheter day of the protected catheter was €2.92 ± €1.77 vs. the cost of an unprotected catheter at €18.22 ± €53.13. The cost was calculated in euros because the study was done in Spain. As of the press release date, the conversions to dollars would be \$3.48 ± \$2.11 vs. \$21.70 ± \$63.27.)

The study involved patients admitted to the ICU of the Hospital Universitario de Canarias (Tenerife, Spain) who received one or more femoral venous catheters. It examined a total of 254 catheters and 2,195 catheter days. Each patient's physician made the decision about whether to use a protected or unprotected catheter and whether to insert the catheter in the femoral vein.

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 peer-reviewed paper appears in the October 2014 issue of the [American Journal of Infection Control](#), which is published by [APIC](#), the Association for Professionals in Infection Control and Epidemiology.

"We report that the antimicrobial catheter eliminated infections even though it was used in the femoral access site, which is typically associated with higher infection rates," said Lorente. "This suggests the device might be similarly effective when used in other sites with high infection risk or with vulnerable patient populations such as immunocompromised patients."

Lorente said the results could be helpful to other institutions, adding, "These findings may interest hospitals who are evaluating antimicrobial catheters to reduce their bloodstream infection rates. The fact that the antimicrobial catheter was shown to be cost-effective should also reassure those institutions about the economics of antimicrobial CVCs."

"This study underscores the fact that hospitals can benefit by looking beyond up-front costs to total treatment costs when selecting a central venous catheter," said Jay White, President of the Teleflex Vascular Access Division. "In the study, the total costs of using an unprotected catheter were extremely high because of the infections and related treatment costs. In contrast, the ARROWg+ard® Technology improved both outcomes and cost-effectiveness. This study demonstrates that Teleflex can help hospitals protect their patients and their bottom line."

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](#).

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 11,500 people worldwide and serves healthcare providers in more than 150 countries. Additional information about Teleflex can be obtained from the company's website at [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.

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References:

1. 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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