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INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY™

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of catheter-rela

ARROWg+ard™*. The first and only central ven

Complications due to catheter-related bacteremla are medically unacceptabie when the causes are preventable. And in today's health-care climate, the monetary cost of treating nosocomial infection versus the cost of prevention is similarly unacceptable.

Fortunately, the forces of prevention have gamed a new weapon.

ARROWg+ard™ is a patented colonization-resistant chlorhexidine and silver sulfadiazine antiseptic surface molecullariy bonded into the polyurethane catheter material along the entire indwelling length of each ARROWg+ard™ blue line CVC.

A recent study indicates that catheters with ARROWg+ard™ protection were twofold less likely to be colonized than control catheters *and fourfold less likely toproduce bacteremia. The* study also noted a considerable lengthening of the safe indwelling period for ARROWg+ard™ catheters compared to control catheters."

ARROWg+ard™ infection protection is presently available in select multi-lumen** and single-lumen CVC kits. It will soon be available on other Arrow critical-care products.

The benefits of CVCs are not without risk

There is no question that central venous catheterization (CVC) represents a significant medical advancement, particuiariy in treatment of the critically ill. However, with increased usage there is an increased risk of CVC-related infection.

The reported frequency of intravascular device-associated bacteremia is between 0.2% and 0.5% for IV peripheral catheters, up to 7.0% for central parenterainutritioncatheters—*and from* **3.8% to** *12.0% for central venous catheters.*[2] In short, 80% to 90% of each year's cases of intravascular-related bloodstream infection arise from the use of CVCs.[3] Moreover, a 10% to 20% case fatality rate has been associated with catheter-related bacteremia?

In an address to the Third International Conference on Nosocomial Infections,[4] Dr. Dennis Maki stated that *one-third of nosocomial infections are preventable,* especially the 50,000 cases a year that develop from CVCs. Some 80% of these catheter-related infections arise from bacteria found on the skin that migrate down the catheter track, Dr. Maki noted.

Awareness is, of course, part of the battle. But more ammunition is needed. And that's why we developed ARROWg+ard™.

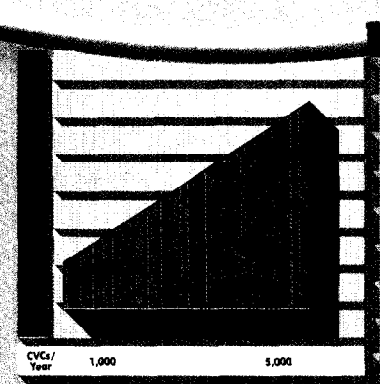
More infection control means more financial control

In a study published in 1988 reporting **1986** results, Hampton and Sheretz determined that nosocomial infection added a mean of seven days to a normal hospital stay and increased ***the cost by a mean*** *of more* than *$6,000!*[5] An additional downside: Medicare reimburses very little of the cost if a hospital stay is extended to treat bacteremia.

When you add the increases in cost since these studies were made, the economic impact of CVC-related infection is even more severe. And while new drugs to fight septic infections offer hope of better management in some crisis cases, the extreme costs pose. a clinical dilemma for caregivers.

But ARROWg+ard™ can help reverse those spiraling figures,

Let's say that a hospital places 500 multi-lumen CVCs a year. If the infection rate is 4%, 20 infections result. By



**4% Infection Rate and $6,000 Mean Cost.*[3,5]

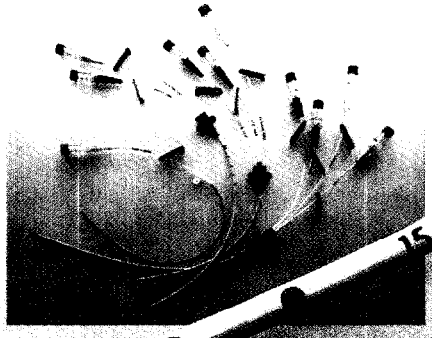
Clinical and Publication References: 'Maki, DG, Wheeler, SJ, Stolz, SM, Mermel, LA: Clinical trial of a novel antiseptic-coated central venous catheter. Abstract of paper presented at 31st ICAAC Clinical Infections, October 1, 1991. 'Elliott, TSJ: Intravascular-device infections. J. Med. Microbiol., 27:161-167, 1988. 'Corona, MI, *et al*: Infections related to central venous catheters. Mayo Proc., 65:979-986, 1990. 'Maki, DG: Nosocomial bloodstream infections. Address, 3d Int. Conf. on Nosocomial Infections, Atlanta, July, 1990. 'Hampton, AO, Sheretz, RJ: Vascular-access infections in hospitalized patients. Surg. Clin. North Am., 68:57-71, February, 1988.

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5@ning of the end
ed bacteremia.

s catheters with built-in infection protection.

bringing the infection rate down to 2%, 10 cases would be avoided-and, at the figure of $6,000 per case for added hospitalization, the added cost for infection would be cut in half, from $120,000 to $60,000. At a cost of $68.20 per ARROWg'ard™ multi-lumen CVC kit, or $34,100 for 500 multi-lumen CVCs, the hospital retains over half the savings*



even after subtracting the catheter cost. Even more important than the economics, potentially, lives may be saved.[3] Further, you must consider the unnecessary expenditure of time and energy on the part of your staff and the trauma and suffering of the patient.

Additional patient and physician benefits.

Select Arrow multi-lumen and single-lumen central venous catheters now carry ARROWg'ard™ protection. And there are other impressive benefits built into select ARROWg'ard™ CVC kits and sets. These features add up to better patient care with every use.

• The Arrow Blue FlexTip® is an integral catheter tip which is more pliant than the body. It remains patent yet deflects in case of inadvertent contact with the vessel walls to reduce perforation risk.

• Flexible thromoboresistant polyurethane material softens in situ for excellent indwelling characteristics.

• The Arrow® Raulerson Introducer Syringe*** has a hollow plunger rod containing a patented valving system. It allows a spring-wire guide to be placed directly into the vessel lumen so there's less trauma, less contamination risk, and virtually no chance for air embolism.

• The Arrow Advancer™ saves you time by helping you to easily straighten the "J"-tip spring-wire guide and insert it with one hand, advancing it to the proper position with your thumb.

• A centimeter-marked spring-wire guide (.025" and .035" diameters available) aids in accurate and positive catheter placement.

Not only does Arrow offer more benefits, but you have a wider choice of kits, sets, and accessories for central venous catheterization from Arrow than from any other source.

Ask for our free infection-control information packet

We have prepared a helpful packet on infection control. It contains many of the articles referenced in this brochure and CVC informational literature. For your *free* packet, call your Arrow representative, or contact us directly by calling 1 800 233-3187, Ext. 3294, and ask for Joanne.

Refer to package insert for current warnings, precautions, and instructions for use.

* ARROWg'ard™ is a joint development of Deltec Medical Sciences, Inc., and Arrow International, Inc., using technology developed by Dr. Seama Mickiel and colleagues, in the Department of Surgery, Columbia University. U.S. Patent Numbers 4,612,337, 4,563,485, 4,581,028, 5,019,096 apply. Other U.S. and foreign patents pending.

** U.S. Patent Number RE 31873. Canadian Patent Number 1,312,538. Foreign patents pending and issued. The Arrow-Howes™ Multi-Lumen Central Venous Catheter is a joint development of Randolph Howes, M.D., Ph.D., and Arrow International, Inc.

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† Contact your Arrow representative for full explanation of this program.

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SHEA *The Society for Hospital Epidemiology of America*

1992 SHEA/CDC/AHA Hospital Epidemiology Training Program
Scholarships for Infectious Disease Fellows

Call for Nominations

Program

The programs will be held September 17-20 in Atlanta, Georgia, and November 19-22 in Salt Lake City, Utah. Donald A. Goldmann, MD, William Mar-tone, MD, John P. Burke, MD, and Gina Pugliese, RN, MS, will co-chair the program. Enrollment in the programs is limited to 120.

Purpose

These programs, developed by the Society for Hospital Epidemiology of America (SHEA). the Centers for Disease Control (CDC), and the American Hospital Association (AHA), are intended for infectious disease fellows and new hospital epidemiologists. They emphasize hands-on exercises in which participants work in small groups to detect, investigate, and control epidemiological problems encountered in the hospital setting. These work sessions are supplemented with lectures and seminars covering fundamental aspects of hospital epidemiology including epidemiology and surveillance, epidemic investigation, transmission and control of nosocomial infections, disinfection and sterilization, employee health, isolation systems, regulatory compliance, and quality improvement.

Awards

Scholarships in the amount of $1,000 will be awarded to five infectious disease fellows for each program to defray the special course fee for fellows of $350 and expenses incurred in attending the training program.

Interested fellows must submit a letter of no more than one page describing why they would like to have additional training in hospital epidemiology. A letter from the fellow's program director outlining the applicant's qualifications and suitability for the course also is required The letters should be received by July 17,192. Please specify the program dates (September 17-20, November 19-22, or both) for which you would like to be considered.

The SHEA Educational Activities Committee will select the scholarship recipients based on review of these letters. Winners will be notified in mid-August 1992 for both courses.

Nominations

Please send scholarship applications to:

Donald A. Goldmann. MD
Division of Infectious Diseases
Children's Hospital
300 Longwood Avenue
Boston, MA 02115

General Course Information

Information regarding the schedule, hotel and travel accommodations, discount airfare, and course fees are available from the AHA. Contact Brooke Baron at (3 12) 2804460. Note that application for a scholarship does not constitute enrollment in the program. This must be done separately.

Scholarship awards provided by MERCK Human Health Division

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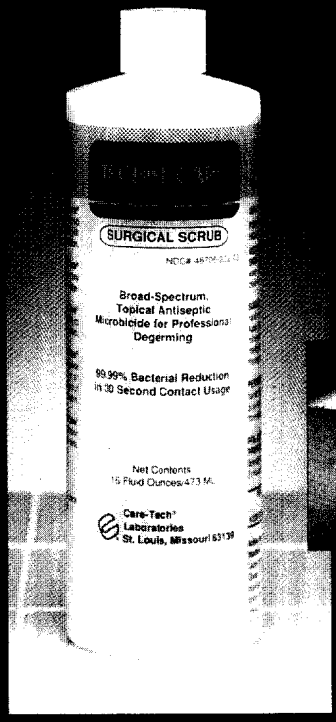


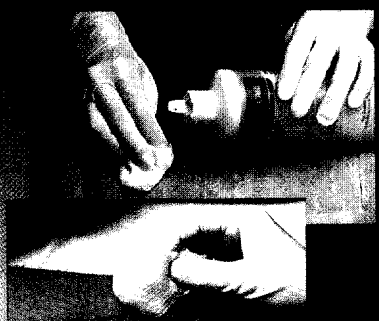
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