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## **Survey Shows Patient Safety Is Improved by Reducing Variability in Ultrasound-Guided PIV Insertions**

*Unique sterile barrier dressing facilitates standardized aseptic insertion at lower cost*

HARTWELL, Georgia. – A sterile barrier dressing can improve patient safety while lowering costs up to 67 percent, when used as part of a standardized process for placing ultrasound-guided peripheral IV (UGPIV) catheters, according to a new study from PICC Excellence and Sharp HealthCare (San Diego). The results will be presented as a poster at the upcoming meeting of the Association for Vascular Access (AVA).

A multi-center prospective survey was designed to evaluate the barrier and securement dressing (UltraDrape™, Parker Laboratories) and establish a consistent, cost-effective UGPIV procedure across three hospitals within the Sharp system. Prior to the study, an analysis showed a high level of variability in UGPIV practices among the hospitals. This variability included inconsistent use of probe covers, transparent dressings and ultrasound gel (both sterile and non-sterile).

“We can minimize contamination during PIV insertions through proper aseptic technique, but its effectiveness is diminished if it’s not done consistently,” said study co-author and PICC Excellence CEO Nancy Moureau, RN, PhD, CRNI, CPUI, VA-BC. “By separating the ultrasound probe and gel from the skin, the sterile barrier dressing standardizes the procedure in a way that promotes a better aseptic non-touch insertion technique.”

This standardization is the key to making UGPIV procedures safer, faster and more cost effective, she said. Dr. Moureau is an internationally recognized expert and consultant in vascular access.

Of the Sharp clinicians surveyed after 210 UGPIV insertions, 99 percent recommended adoption of the new standardized procedure and use of the barrier dressing. Respondents also expressed a strong preference for the dressing over traditional sterile probe covers. Overall, there were high levels of agreement that the dressing provided a sufficient barrier against site contamination, and improved patient care by facilitating better aseptic technique.

“The innovative design of the sterile barrier dressing helps us perform cleaner insertions by keeping the gel separate from the probe and the insertion site,” said a clinician involved in the study. “Since the evaluation, we’ve continued to use UltraDrape for many of our ultrasound-guided PIV insertions because it provides excellent aseptic protection for our patients while being easier to use than a regular probe cover.”

In addition, the study showed a significant cost savings with the sterile barrier dressing. An economic analysis found that by eliminating the need for additional securement dressings, sterile gels and probe covers, the dressing reduced the cost of a UGPIV insertion by 55 percent compared to the system's previous procedure and 67 percent compared to use of a full sterile UGPIV kit.

"Patient safety concerns are causing many facilities to move toward a full sterile insertion, but the cost increase is significant," said Dr. Moureau. "This dressing allows hospitals to make the procedure more cost-effective without sacrificing proper aseptic technique."

Dr. Moureau said there is agreement among clinicians that using ultrasound increases contamination risk due to the extended procedure time and presence of the probe and gel in the sterile insertion site. But she noted there is still a lot of inconsistency in methods for ensuring aseptic technique to protect patients.

The design of the UltraDrape is vastly different to standard probe covers and lends itself to an efficient and speedy 1-2-3 standardized procedure. With 4 layers of material (9 mils thick) between the probe and the site, the dressing prevents accidental penetration or contamination of insertion needles. Use of the UltraDrape ensures an aseptic procedure by maintaining sterility at the insertion site.

A previous national survey of more than 1,200 nurses on current UGPIV practices revealed this tremendous amount of variability in how the insertions are performed. While 92 percent of vascular access nurses in the survey identified aseptic technique as "very important," only 82 percent reported actually using it. In addition, only 63 percent said they use a probe cover during UGPIV procedures.

Nearly 60 percent of patients who require IV therapy are considered to have difficult vascular access (DiVA), which necessitates the use of ultrasound guidance in order to successfully achieve peripheral access. It is estimated that there are 12 million UGPIV insertions performed annually in North America.

The 33rd annual AVA scientific meeting will take place October 4-7, 2019, in Las Vegas. For more information on the study, AVA attendees can visit PICC Excellence at Booth #223.

#### **About Dr. Nancy Moureau and PICC Excellence**

Nancy Moureau, RN, PhD, CRNI, CPUI, VA-BC, is the owner and president of PICC Excellence, a vascular access education and training service for clinicians. She is a member of the Alliance for Vascular Access Teaching and Research Group (AVATAR) based in Australia. Recognized as an international expert in vascular access education and training, she is widely published in the [medical literature](#), including recent [guidelines](#) that defined appropriate indications for insertion, maintenance, and care of PICCs. PICC Excellence provides effective, easy-to-understand in-person and web-based education and training for clinicians worldwide.

For more information about PICC Excellence, visit [www.piccexcellence.com](http://www.piccexcellence.com).

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