

September 28, 2017

Contact: Liz Dowling
Dowling & Dennis PR
415-388-2794

Liz@dowlingdennis.net

Vascular Access Educator's Survey Finds IV Tubing Dislodgement Occurs Frequently, Threatening Patient Safety

Scientific Poster Presented at AVA Meeting Highlights Clinically Significant Risk for Patients That May Be Preventable

HARTWELL, Georgia. – Accidental dislodgement of peripheral intravenous (PIV) devices may be more common than previously recognized, according to findings from a recent clinical survey. Dislodgement may also present a substantial risk to patient safety, the survey showed. The survey results were reported at the 31st Annual Scientific Meeting of the Association for Vascular Access (AVA).

The survey was described in a scientific poster by local clinical educator Nancy Moureau, PhD, RN, CRNI, CPUI, VA-BC. Dr. Moureau is an internationally recognized expert and educational consultant in vascular access.

The survey included responses from nearly 1,600 nurses and vascular access specialists who provide direct patient care. Among the survey's findings, 58% of respondents said that accidental dislodgement occurred "daily" or "very often" in their facilities.

For the vast majority of hospital patients, PIVs are life-saving devices that stay in place as intended. But data on dislodgements has not kept up with changing clinical practice and the growth of infusion therapies in both acute care and home care settings.

"I wanted to look at the issue of accidental dislodgement quantitatively," Dr. Moureau said. "I wanted to assess the actual prevalence of dislodgement today, to see how often clinicians actually believe it occurs and gauge their perceptions of its significance."

Insertion of a peripheral intravenous (PIV) device is the most common invasive medical procedure performed today. IV access is established in 70% to 90% of acute care patients in the US.¹ Over 200 billion PIVs are sold each year.²

Dr. Moureau's questionnaire received 1,567 responses, the majority from nurses on an IV team or otherwise specializing in vascular access. Most respondents had more than 20 years of clinical experience in such areas of expertise as anesthesiology, neonatology, and home health/infusion.

The survey showed that dislodgement occurs with all types of catheters, but is most prevalent with short peripheral catheters or PIVs, the form most patients receive in the emergency room or for outpatient surgery. Among survey respondents, nearly all (96.5%) said they had seen dislodgement occur with PIVs. Regarding peripherally inserted central catheters, nearly two-thirds (65%) said they had seen dislodgement occur with PICCs.

Data on dislodgement with PIVs was reinforced from another presentation at the same meeting. In the REPLACE study from the Alliance for Vascular Access Teaching And Research Group (AVATAR) in Australia, researchers reported that 10% of PIV failures were due to accidental removal.²

In Dr. Moureau's survey, the three most common contributors to accidental dislodgement include: "confused patient" (81%), "patient physically removes" (75%), and "IV catheter tape or securement is loose" (65%).

"It's important to note that stabilization devices are used in all of these situations," Dr. Moureau said. "But there are some problems, like tubing getting tangled in bedrails, that you just can't prevent with current means."

Among new technologies being developed to address accidental IV dislodgement is the [Orchid Safety Release Valve](#) from Linear Health Sciences.

When asked if accidental dislodgement is considered a safety risk for patients experiencing sudden (partial or complete) removal of a catheter, 96% of respondents reported their facilities did in fact consider dislodgement a safety risk.

The consequences of such dislodgements are wide-ranging, based on survey results. According to 97% of respondents, the most common consequence include the need to restart a PIV or perform another invasive procedure, as well as treatment interruptions/delays in receiving needed medications.

"The safety concerns focus on the complications from the dislodgement," Dr. Moureau said. "Those include non-receipt of medications; patient stress over having to get a second or third puncture; complications to veins, such as damage, thrombosis, or phlebitis; and vein depletion. Air emboli was also cited."

Stabilization devices meant to help keep PIVs in place are available, but survey respondents did not consider them an adequate solution. Nearly 70% of respondents reported that dislodgements occur even when a variety of these devices are used.

“Yes, stabilization devices do help, but they don’t prevent dislodgement,” said Dr. Moureau. “To prevent the complications of accidental dislodgement, you have to first prevent the dislodgement. And if a stabilization device isn’t enough, then we need to take further steps to prevent this risk to patient safety.”

The [Association for Vascular Access](#) annual meeting was held September 15-19, 2017 in Phoenix, Arizona.

Linear Health Sciences, which is pursuing FDA approval of a breakaway safety release valve, commissioned the IV dislodgement survey.

About Dr. Moureau and PICC Excellence

Nancy Moureau, PhD, RN, CRNI, CPUI, VA-BC, is the owner and president of PICC Excellence, a vascular access education and training service for clinicians. She is affiliated with Greenville Memorial and University Medical Center in South Carolina, and 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.

1. Helm RE, Klausner JD, Klemperer JD, Flint LM, Huang E. Accepted but unacceptable: peripheral IV catheter failure. *J Infus Nurs.* 2015;38(3):189-203.
2. Marsh N, Webster J, Larsen E, Cooke M, Mihala G, Rickard C. The peripheral intravenous catheter journey: a cohort study of 1000 patients: REPLACE Study (REplacing PeripheraL intrAvenous CathEters). Oral presentation presented at: 31st Annual Scientific Meeting of the Association for Vascular Access: September 15-19, 2017; Phoenix, Arizona.