
'One Stick Standard': vascular access using ultrasound



Executive Summary

The majority of critical care patients (80%) undergo central venous catheterisations (CVCs) for administration of fluids or blood products; haemodynamic monitoring; haemodialysis or transvenous pacing. In this upcoming article in HealthManagement the Journal, [Dr. Nidhi Nikhani](#), Assistant Medical Director at [Banner Telehealth Services](#), and professor at [David Geffen School of Medicine](#), at UCLA, Los Angeles, CA, explains how ultrasound visualisation can significantly reduce – or even eliminate – dangerous complications arising from this invasive procedure.

Procedural ultrasound, according to Dr. Nikhani, not only helps clinicians identify the relevant anatomy and pathology before proceeding with **invasive procedures**, but it also aids accurate execution through direct visualisation as the needle advances towards the target vessel. **"Quite simply, the effect is similar to turning on a car's headlights at night to navigate safely to the desired destination,"** Dr. Nikhani writes. The practice is also recommended by the [American College of Emergency Physicians](#) (ACEP) as this enables a **"one stick standard"** for faster, **safer vascular access** to accelerate **patient care**.

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In 2016, ACEP issued a policy statement highlighting that the **benefits** of **procedural ultrasound**, performed **at the bedside**, include "improved patient safety, decreased procedural attempts and decreased time to perform many procedures in patients whom the technique would otherwise be difficult."

Achieving **rapid vascular access** is particularly **critical** for **providing optimal care** for critically and **unstable patients**. Newer techniques now allow subclavian catheters to be placed under ultrasound guidance, though internal jugular vein access is the most commonly performed due to its ease. Of note, failure rates of emergent peripheral intravenous (PIV) access of 10-40% have been reported in the literature.

"However, ultrasound-guided PIV, which is a standard practice at the hospital where I work," the author says, **"can help such patients avoid unnecessary CVCs and their associated risks."** Furthermore, findings from a randomised trial of emergency department patients with difficult vascular access and other studies offer a powerful argument for widespread adoption of **ultrasound-guided PIV** as an evidence-based **safety practice** to **reduce costs** and **accelerate care for patients** who need it the most. **"And if you or a loved one ever needed a central or peripheral line for emergency treatment, wouldn't you want ultrasound at the bedside and a medical provider who was firmly committed to achieving the one-stick standard?"** said Dr. Nikhani.

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