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Use of the DIVA Scale to Decrease IV Sticks in the Acute Care Unit (ACU)

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Disclosures

This author declares that she has no relevant or material financial interests that relate to this abstract.

Purpose

- Find a scale that can identify patients with difficult intravenous access (DIVA) in an acute care unit (ACU).
- Once identified, the DIVA patient is referred to a specialist skilled in the use of advanced techniques like ultrasound (US)-guidance for peripheral venous catheter (PVC) insertion ensuring success.

Background

- Patients in ACU may experience multiple PVC attempts unnecessarily. Two nurses can attempt up to four before calling the Vascular Access Team (VAT). Patients were in pain and frustrated by the time VAT came.
- Attempting PVCs took nurses away from other duties. Cost of supplies added up.
- A report from Nov. 1, 2022 to Jan. 31, 2023 showed 3.05% of patients were stuck 3x and 1.21% were stuck 4x.

DiVA Scale

CRITERIA	Present	Absent
Past H/O difficult peripheral venous cannulation	3	0
Vascular depletion * Previous use of chemotherapeutic agents or IV drug abuse, previous venipunctures	2	0
Coagulative disorder &/or intake of anticoagulant or antiplatelet drugs	1	0
Neurovascular disease *Peripheral neuropathy &/or vasculopathy	1	0
Clinical examination of skin *Dark, thick/fragile skin	1	0
Overweight (BMI >25)	1	0
Vein evaluation * Not visible/palpable, rolling/winding vein	2	0
One-side only availability	1	0
Total		

If total is >8, please use advanced techniques or refer to Specialist for Evaluation.

From "EA-DIVA score (Enhanced Adult DIVA score): A new scale to predict difficult preoperative venous cannulation in adult surgical patients," by Civetta, et al, 2016, *The Journal of Vascular Access, 20(3),* 281–289

Results

- ACU nurses used the DIVA Scale badge buddies. DIVA patients were referred to the VAT.
- After implementation, the report run from February 13, 2023 to May 13, 2023 showed 2.6% of patients were stuck 3x times and none of the patients were stuck 4x.

Before the DIVA Scale	
Attempts	%
3	3.05
4	1.21

After the DIVA Scale	
Attempts	%
3	2.6
4	0

Conclusion

- The use of the DIVA Scale has helped ACU nurses in assessing their patients' risk for difficult intravenous access using a reliable, standardized tool.
- The DIVA Scale reduced the number of missed attempts and eliminated a fourth attempt before referring to a specialist.
- The change in practice called for more nurses to be proficient in the US and the infrared vein finder in PVC insertion.
- Patient satisfaction may increase due to the reduction of insertion attempts.

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