A Collaborative EBP Project to Decrease Peripheral IV Restarts

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Problem:
While tracing the source of beeping IVs, it was identified that 74% of patients admitted from the Emergency Room to a Medical-Surgical Unit arrived with an antecubital peripheral intravenous [PIV] site with 38% requiring restart within 24-hours of admission.

Evidence:
Although the antecubital area is easy and convenient for PIV access, it is frequently associated with infiltration, phlebitis, pain and discomfort.

Strategy:
A collaborative workgroup comprised of Medical-Surgical Unit and Emergency Center [EC] nurses conducted an EBP project by forming a PICO question, gathering and appraising evidence, implementing best practice recommendations and evaluating for improvements in nursing practice and patient outcomes.

Practice Change:
An educational intervention reviewed Infusion Nursing Standards of Practice and advocated that site selection should begin in the distal areas of the upper extremities whenever possible. When the catheter must be placed in an area of flexion for emergency access, splinting is necessary to reduce the risk of thrombus, infiltration, and catheter dislodgment.

Evaluation:
Data were collected regarding the number of patients admitted from EC, the IV site location, and number and dates of IV restarts.

Results:
Over six months, the total number of IV restarts within 24 hours of admission from EC decreased from 38% to 5%. EC nurse selection of the antecubital site for IV starts decreased from 74% to 48% while use of the hand and forearm increased from 11% to 26.
**Recommendation:**
Risks associated with peripheral intravenous catheters are minimized when nurses understand and follow basic principles in choosing appropriate sites of placement. Veins that should be considered include those found on the dorsal and ventral surfaces of the upper extremities including the metacarpal, cephalic, and basilic veins.

**Lessons Learned:**
IV site location is a major contributing factor to IV restart within 24 hours. Collaboration between the inpatient and the emergency department using the EBP process improved IV site selection using Infusion Nursing Standards of Practice to improve patient outcomes.

**Bibliography:**
