Improving Securement and Visualization of Pediatric Peripheral Intravenous Catheters
Andrea B. Smith, PhD, RN, CPNP
Cook Children’s Medical Center
Terri Peary, Jill Isaacson, Suzanne Frey, Valerie Badgett, Shirley Martin, Leigh Anne Campbell, Melodie Davis, Robert E. Hill, Mollie Kuchta

**Problem:** Securement and visualization of peripheral intravenous catheter sites (PIV) is a common problem for pediatric nurses. Infiltration of IV fluid can lead to serious complications. Quality/Risk data, staff nurse, and nursing administration concerns about lack of visualization of PIV sites led to an EBP project to identify best evidence for securing PIVs so they could assessed easily.

**Evidence:** The EBP team conducted a comprehensive search of on-line databases for research and non-research articles. Following critique and synthesis, the team identified key EBP: 1) use of clear dressings & tape, 2) use of catheter stabilization devices, 3) use of IV protectors, 4) labeling of dressings, & 5) hourly rounding to assess PIVs.

**Strategy:** The IOWA Model of EBP (Titler et al, 2001) was used to guide the project.

**Practice Change:** Baseline audit of 90 PIVs identified current practice: 40% of the PIV sites were not visible, clear dressings were only used 40% of time, IV protectors were used in 11.7% of the PIVs, no catheter stabilization devices were used, and mean duration of PIV was 38.2 hrs. A pilot to test the evidence change bundle in practice was implemented on 2 medical surgical units using an IV start kit manufactured to contain the EBP materials

**Evaluation:** Following successful pilot testing improvement in baseline measures, staff satisfaction (98%) and decreased cost of IV kits ($1.29 less than purchasing items individually), a staff education program and the new EBP bundle were initiated on inpatient units house wide.

**Results:** Outcomes 6 months post implementation indicated strong improvement in practice – 95% of sites were visible, IV protectors used in 81%, clear dressings used 92%, catheter stabilization devices used 74%, and mean duration of IV increased to 62.9 hrs. Policy changed to incorporate EBP.

**Recommendations:** Incorporate pilot evaluation measures into on-going QI audits to determine long-term success.

**Lessons Learned:** “See Me See My IV” slogan, multiple learning opportunities, and feedback on specific results increased success.

**Bibliography**


