Pediatric IV Infiltrates: Using the Benchmarks to get to Zero
Background

- Fairview Hospital is a 400 bed community hospital on the west side of Cleveland, Ohio and is a part of the Cleveland Clinic Health System.
- Pediatrics is a 24 bed community based medical surgical unit. Primary diagnoses includes, but are not limited to respiratory conditions, management of dehydration, fever in newborns, postoperative care of surgical patients and the treatment and management of viral or bacterial processes. Patient age ranges from newborn through 20 years of age.
- The unit staff consists of 19 RNs (4 of which are professional Certified Pediatric Nurses), 1 LPN, 2 Patient Care Assistants, 1 Secretary and 7 Child Life Specialists.
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Introduction

• Intravenous (IV) needle placement in hospitalized children is a common procedure. Not only are there inherent risks of IV infiltration and medication extravasation affecting patient safety, but parents and children exhibit a great amount of anxiety related to the IV placement and stability during the child’s stay. Utilizing the Infusion Nurses Society (INS) evidence-based guidelines and standards our organization has had two consecutive years of zero IV infiltrate prevalence according to NDNQI data definitions.
Methodology

- Quarterly prevalence studies done per NDNQI guidelines are completed randomly each quarter by the nursing quality department of our organization. Data collected is entered into the NDNQI database for benchmarking. Ongoing evaluation of outcome data and sharing it with staff and celebrating the high quality outcomes keeps the momentum and sustains success.
Methodology cont.

• Implementation of the INS guidelines are the key to success for zero IV infiltrates. The guidelines employed by our facility are:
• Topical anesthetic use every time an IV is started to ensure proper placement and minimize trauma
• Use of the smallest-sized and shortest-length catheter possible.
• After age 10, no lower extremity sites are utilized. The rate of phlebitis becomes similar to the adult.
• Scalp sites are rarely used, they are more difficult to stabilize and infiltrate easily.
Sites are taped and secured using opsite dressing on insertion site to allow for ease in visibility and assessment.

All sites are checked hourly and prn by the RN and documentation is completed.
Nursing Documentation
• Sites are flushed with 1-3cc of NS prior to starting any meds to ensure patency.
• Parents are educated on admission on what symptoms regarding the IV site would warrant immediate attention by the nursing staff.
• (INS, 2006)
IV Site Distribution
## Outcome Data

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<th>Quarter</th>
<th>Fairview Prevalence</th>
<th>N size</th>
<th>National Benchmark – teaching facility</th>
<th>National Benchmark, Bed size 400</th>
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Conclusion:

- Our low rate of IV infiltrates is the result of the nursing staff recognizing the inherent risks of IV therapy in children, as well as being diligent in their work performance. Pediatric nurses use their skills daily to perform assessments of IV sites, as most pediatric admissions involve the use of IV therapy throughout a child’s hospitalization. Caring for IV lines is a basic principle in pediatric nursing and frequent documentation, along with adequate assessment skills is an acceptable practice.
• Fairview Hospital policy requires that pediatric nurses perform hourly IV site checks, along with IV fluid totals every 2 hours. Documentation is done by the RN, assessing the site for any signs of infiltration or phlebitis. It has always been our practice to check sites hourly, as well as to educate the parents on any early signs that may indicate infiltration. More frequent monitoring of IV sites may be needed in the case of a child whose site was difficult to establish. All infusions are monitored by use of an infusion pump.
• Fairview Hospital does an excellent job in maintaining and managing IV lines in children as evidenced by our prevalent studies and quarterly data. Providing high quality care to our patients assures patient safety and produces high quality outcomes.
References: