Improving Outcomes: Standardizing a Process for Pediatric IV Insertion on a Sedation/Infusion Unit

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Introduction: Even in the most skilled hands, pediatric peripheral intravenous (PIV) placement offers many challenges. Literature states IV placement, even when successful on first attempt, may be stressful for patient/family. Relevant literature related to outcomes of success rates on the first attempt range from less than 50% to greater than 90%. A myriad of factors, ranging from body habitus, dehydration, and staff variables, influence whether an IV will require one attempt or more. We evaluated our current process for efficiency and success rate with the overall goal of identifying common barriers associated with multiple IV attempts, mitigate discomfort for patients, and improve outcomes.

Methods: A retrospective and prospective analysis of all patients requiring IV access in Sedation/Infusion Unit. Every aspect of our nursing practice related to PIV insertion, including significance of proper hydration, synergistic process of pairing ideal nurse and patient, and providing optimal pain/anxiety management strategies were evaluated. A staff survey was created to measure barriers related to placing IV on first attempt and an IV Process Improvement Committee was established with the purpose of identifying process improvement initiatives to increase success rates of first time IV starts to 90%.

Results: Via post sedation/infusion phone calls we determined that multiple IV sticks were the number one patient/family dissatisfier. Nursing survey results, 41% (n=34) response rate, reviewed. Multiple barriers identified: top 3 consistently recorded barriers included dehydration, patient anxiety/movement, and staff stress/time constraints.

Discussion: Continued process improvement techniques utilized to standardize process, workflows and communication methods. Established algorithm to increase first attempt success rates including self identification of “IV experts” and scripted verbiage reiterating importance and rationale of adequate hydration during pre-screening phone calls. Appropriate utilization of pharmacological and non-pharmacological modalities encouraged. Continued staff education regarding practice changes as well as ongoing evaluations and benchmarking will be utilized to determine best practices and patient/family satisfaction related to this process improvement initiative.

References: