The purpose of this evaluation was to assess the process and pediatric patient outcomes associated with use of EPIVs and with peripherally inserted central catheters (PICCs)” Anderson et al (2016).

Abstract:

Background: Insertion of extended dwell/midline peripheral intravenous (EPIVs) catheters is not common practice in pediatric hospitals. An interdisciplinary team in 1 pediatric hospital developed a venous access decision tree based on current standards that included EPIVs. The purpose of this evaluation was to assess the process and pediatric patient outcomes associated with use of EPIVs and with peripherally inserted central catheters (PICCs).

Methods: A retrospective record review over 22 months was conducted for 375 patients who received either a PICC (67.5%) or EPIV (32.5%). Data collected included patient demographic characteristics, diagnosis category, type and purpose of the line, insertion and removal dates, catheter size, placement location, and complications encountered.

Results: EPIVs were inserted with a 1.9F or 3F catheter, whereas PICCs generally used a 3F or
4F catheter. EPIVS were more commonly inserted in children younger than age 1 year, whereas children aged ≥ 11 years more often had a PICC inserted. EPIVs remained in place an average of 9 days compared with 20 days for PICC lines. Significantly more complications occurred during the placement of PICCs, whereas EPIVs had more complications during use such as leakage, dislodging, and infiltration.

Conclusions: EPIVs were a successful alternative to PICC or peripherally inserted venous catheters for children in an inpatient acute-care facility who need 30 days or fewer of nonvesicant intravenous therapy. The venous access decision tree provided useful guidance in determining the appropriate venous access device for pediatric patients and the decision tree was adhered to by the vascular access team.

Reference:

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