



To determine the range and heterogeneity of VA outcome measures or quality indicators reported in randomized controlled trials (RCTs) and clinical registries, to inform development of a homogeneous, reliable, minimum dataset for a pediatric VA registry” Schults et al (2019).

Abstract:

BACKGROUND: Internationally, there is a lack of comparative vascular access (VA) data for pediatric clinicians and organizations to benchmark outcomes, evaluate quality initiatives, and improve practice. A VA registry is needed to address these knowledge and data capture gaps.

OBJECTIVES: To determine the range and heterogeneity of VA outcome measures or quality indicators reported in randomized controlled trials (RCTs) and clinical registries, to inform development of a homogeneous, reliable, minimum dataset for a pediatric VA registry.

METHODS: Scoping review framework. A systematic search for RCTs reporting VA outcomes in pediatrics and neonates was undertaken in the Cochrane library, EMBASE, CINAHL, PubMed, MEDLINE, and EBSCO using a medical subject headings and key words related to VA and pediatrics. We included RCTs of children (0-18 years) reporting any VA outcome. We identified clinical registries reporting VA data in children (0-18) through web-based searches

using key words related to VA and clinical or quality registries. Additional registries were identified through peer consultation. The frequency and scope of outcome measures and quality indicators were extracted from trials and registries and evaluated.

RESULTS: From 93 RCTs included, 214 different VA measures were reported, reflecting 14 outcome domains. The most commonly reported outcome domains were insertion (44 RCTs; 47%), noninfectious complications (33 RCTs; 35%), and infectious complications (30 RCTs; 32%). Of the 22 registries identified, VA-associated infection was the main quality indicator routinely collected (12 registries; 55%). Outcomes such as mechanical complications and patient-reported outcomes were infrequently collected.

LINKING EVIDENCE TO ACTION: Vascular access outcomes reported in pediatric and neonatal RCTs are highly heterogeneous. Internationally, clinical registries currently collect minimal VA data with the exception of infection outcomes. A core dataset of reliable, relevant measures to children and clinicians for VA device quality is needed. This will enable a VA registry that facilitates inter-institutional and international benchmarking.

You may also be interested in...

Vascular access initiatives require robust research and careful data analysis

Pediatric Hemophilia care and vascular access devices

Quality improvement in vascular access and electronic care records

Reference:

Schults, J.A., Rickard, C.M., Kleidon, T., Hughes, R., Macfarlane, F., Hung, J. and Ullman, A.J. (2019) Building a Global, Pediatric Vascular Access Registry: A Scoping Review of Trial Outcomes and Quality Indicators to Inform Evidence-Based Practice. *Worldviews on Evidence-Based Nursing*. January 2nd. .

doi: 10.1111/wvn.12339.



Comparative vascular access data for pediatric clinicians and organizations | 3

