Is there a benefit to vascular access specialist nurses placing peripheral intravenous catheters? A narrative review

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Purpose
Peripheral intravenous catheters (PIVCs) are a quick, effective means to gain access to a patient’s vasculature for the delivery of intravenous treatment. Although a frequently performed procedure, the skill and training for clinical staff to successfully place these catheters is often underestimated, with up to 50% of insertions requiring multiple attempts prior to successful placement. The purpose of this narrative review was to examine the benefit of vascular access specialists (VAS), often nurses, inserting PIVCs.

Methods
A detailed literature search was conducted in the Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, and EMBASE, on the 30th of November 2018. All studies that investigated the benefit of a VAS inserting a PIVC in any healthcare setting were eligible for inclusion. The methodological rigour of included studies was assessed as per the Mixed Methods Appraisal Tool.

Results
The search generated 708 records. Once titles, abstracts and reference lists were screened, ten studies were included in this review. Six studies compared outcomes resulting from PIVC insertion by a VAS team with insertion by other health professionals; four examined outcome improvements within their own VAS team. Outcomes considered included: PIVC failure; phlebitis; PIVC-related infection; and first-time insertion success. All included studies described positive VAS team outcomes, however, methods and results reporting varied greatly in outcome assessment and quality. Overall, the quality assessment of included studies (using the MMAT) was low, with 68% of criteria items scoring ‘not reported’ or unclear.

Conclusion
Reports on the use of a VAS for PIVC insertion to reduce PIVC failure and improve first-time insertion success are positive. Well conducted randomised control trials (RCTs) to compare VAS with the generalist PIVC insertion model are required.