"...eight-step tool derived from international vascular access guidelines into a structured mnemonic for device assessment and decision-making" Ray-Barruel et al (2020).

Abstract:

OBJECTIVE: To describe the clinimetric validation of the I-DECIDED tool for peripheral intravenous catheter assessment and decision-making. DESIGN AND SETTING: I-DECIDED is an eight-step tool derived from international vascular access guidelines into a structured mnemonic for device assessment and decision-making. The clinimetric evaluation process was conducted in three distinct phases. METHODS: Initial face validity was confirmed with a vascular access working group. Next, content validity testing was conducted via online survey with vascular access experts and clinicians from Australia, the UK, the USA and Canada. Finally, inter-rater reliability was conducted between 34 pairs of assessors for a total of 68 peripheral intravenous catheter (PIVC) assessments. Assessments were timed to ensure feasibility, and the second rater was blinded to the first’s findings. Content validity index (CVI), mean item-level CVI (I-CVI), internal consistency, mean proportion of agreement, observed and expected inter-rater agreements, and prevalence-adjusted bias-adjusted kappas (PABAK) were calculated. Ethics approvals were obtained from university and hospital ethics committees. RESULTS: The I-DECIDED tool demonstrated strong content validity among international vascular access experts (n=7; mean I-CVI=0.91; mean proportion of agreement=0.91) and clinicians (n=11; mean I-CVI=0.93; mean proportion of agreement=0.94), and high inter-rater reliability in seven adult medical-surgical wards of three Australian hospitals. Overall, inter-rater reliability was 87.13%, with PABAK for each
principle ranging from 0.5882 (‘patient education’) to 1.0000 (‘document the decision’). Time to complete assessments averaged 2 min, and nurse-reported acceptability was high.

CONCLUSION: This is the first comprehensive, evidence-based, valid and reliable PIVC assessment and decision tool. We recommend studies to evaluate the outcome of implementing this tool in clinical practice. TRIAL REGISTRATION NUMBER: 12617000067370.

The future of peripheral intravenous catheter assessment
Peripheral intravenous catheter clinical decision-making aid
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