

Evidence Based Practice Template: Rotating PIV Sites in Adults

Statement of problem/issue:

Rotation of peripheral intravenous catheter sites in the adult population is no longer supported by the evidence

Scope of the problem/issue (is it local or universal; does it affect nursing only, or other disciplines?):

Adult care units within UVA Medical Center

What are the PICO Components?

In patients with a peripheral intravenous catheter, what is the effect of retaining the catheter beyond 96 hours if there is no clinical indication for change as evidenced by phlebitis or other signs of infection?

P-(Patient, Population or Problem)

Adult patients hospitalized at UVA Medical Center requiring a peripheral intravenous catheter

I- (Intervention)

Removal of peripheral intravenous catheter when clinically indicated

C-(Comparison with other treatments)

Rotation of peripheral intravenous catheter (usual care)

O-(Outcome(s))

Pain
Patient Satisfaction
Cost
Infection
Phlebitis
Infiltrate

Does the problem/issue require:

Change in Practice?

Describe: The recommendation is to no longer rotation PIV in the adult patient population

Collaboration/Communication with Interdisciplinary Teams?

The IV team is supportive of this change

What is the evidence/research that supports problem identification? * (SCROLL DOWN FOR THE EVIDENCE APPRAISAL FORM)

Infusion Nursing Society Standards of Practice (2011)

CDC guidelines (2011)

Cochrane Review (2013) *Clinically-indicated replacement versus routine replacement of peripheral venous catheters*

Recommendation:

The recommendation is to no longer rotate PIV in the adult patient population

Action Plan (Including timeline & person(s) responsible for each step): Inclusive of Communication Plan & Education Plan

Change the steps in Lippincott nursing procedure accordingly: "IV Therapy: Peripheral Lines (PIV), Adult". Communicate change to nursing staff via Practice News.

Follow-Up and Evaluation Plan (Including suggested outcome metrics, timeline & person(s) responsible for each step):

Periodically check if increased QRs or nursing documentation show indications of higher rates of infected PIV sites that were not rotated. Periodically check for changing INS standard/literature on this issue.

Your contact information, so the committee can follow up on your recommendation:

Name: David Strider, Barb Trotter, Lisa Letzkus Phone/PIC: Lisa Letzkus PIC 3836

Unit/Area: PNSO Central R3 committee

**Evidence Based Practice: Level and Quality of Evidence Appraisal
Inclusive Review of all Available Evidence on Topic Without Limitation on Year**
For assistance with a literature search, please contact:
Kelly Near, Health Sciences Library Nurse Liaison, kkn3u@virginia.edu, 924-1607

Article Title:

Clinically-indicated replacement versus routine replacement of peripheral venous catheters

Author(s):

Webster, J., Osborne, S., Rickard, C. M., & New, K

Journal:

Cochrane Systemic Review

Year:

2013

Source:

Non-Research

- Systematic Review**
- Clinical Practice Guidelines**
- Organizational (QI, Finance, etc)**
- Expert Opinion, Case Study, Lit Review**

Research

- Meta-Analysis**
 - Experimental**
 - Quasi-Experimental**
 - Non-Experimental**
- Qualitative**

Non-Research

Systematic Review	Yes	No
Is the question clearly stated?	X	
Did the article undergo peer review?	X	
Are the search strategies specified?	X	
Are the search strategies appropriate to include all pertinent studies?	X	
Are inclusion and exclusion criteria identified?	X	
Are details of design, method and analysis presented?	X	
Are limitations of the study disclosed?	X	
Are the studies appropriately combined (were the variables similar?)?	X	
Clinical Practice Guidelines	Yes	No
Are appropriate stakeholders involved in guideline development?		
Are applicable patient populations clearly defined?		
Are potential biases identified?		
Are guidelines valid? <ul style="list-style-type: none"> ◆ Reproducible search ◆ Expert consensus ◆ Independent review ◆ Current information ◆ LOE for each recommendation 		
Are recommendations clear?		

Organizational Experience	Yes	No
Is the project goal clearly stated?		
Is the setting similar to the setting of interest?		
Is the method adequately described?		
Are the measures identified?		
Are the results reported?		
Is the interpretation clear and appropriate?		
Individual Expert Opinion, Case Study, Literature Review	Yes	No
Is evidence based on opinion of one individual?		
Is the individual an expert on the topic?		
Is the author's opinion based on scientific evidence?		
Is the author's opinion clearly stated?		
Are potential biases acknowledged?		

Research

Strength of Study Design	Yes	No
Is the sample size adequate and appropriate?		
Are the study participants randomized?		
Is there an intervention group?		
Is there a control group?		
If there was more than one group, were groups equally treated, except for the intervention?		
Was there adequate description of the data collection methods?		
Study Results	Yes	No
Are the results clearly presented?		
Is there an interpretation/analysis?		
Conclusions	Yes	No
Are conclusions based on clearly presented results?		
Are study limitations identified and discussed?		

Pertinent Evidence Findings and Recommendations:

Evidence Rating ** (SCROLL DOWN FOR THE RATING SCALES)

Strength of Evidence: X Level 1 Level II Level III Level IV Level V
Quality of Evidence: X High(A) Good(B) Low (C)

Appraisal completed by:

Name: Kelly Near **Date:** 4/29/14

Adapted from Newhouse, R. P. et al (2007) *Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines*. Sigma Theta Tau International.

Professional Nursing Staff Organization EBP Evidence Rating Scales

Strength of Evidence

Level I	Experimental study/randomized controlled trial or meta analysis of RCT
Level II	Quasi-experimental study
Level III	Non-experimental study, qualitative study, or meta-synthesis
Level IV	Opinion of nationally recognized experts based on research evidence or expert consensus panel. (systematic review, clinical practice guidelines)
Level V	Opinion of individual expert based on non-research evidence (Includes case studies; literature review; organizational experience e.g. quality improvement and financial data; clinical expertise, or personal experience).

Quality of Evidence

A HIGH	Research	consistent results with sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence
	Summative Reviews	well-defined, reproducible search strategies; consistent results with sufficient numbers of well defined studies; criteria-based evaluation of overall scientific strength and quality of included studies; definitive conclusions
	Organizational	well-defined methods using a rigorous approach; consistent results with sufficient sample size; use of reliable AND valid measures
	Expert Opinion	expertise is clearly evident
B GOOD	Research	reasonably consistent results, sufficient sample size, some control, with fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence.
	Summative Reviews	reasonably thorough and appropriate search; reasonably consistent results with sufficient numbers of well defined studies; evaluation of strengths and limitations of included studies; fairly definitive conclusions
	Organizational	well defined methods; reasonably consistent results with sufficient numbers; use of reliable AND valid measures; reasonably consistent recommendations
	Expert Opinion	expertise appears to be credible
C LOW (MAJOR FLAWS)	Research	little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn.
	Summative Reviews	undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results; conclusions cannot be drawn
	Organizational	undefined OR poorly defined methods; insufficient sample size; inconsistent results; undefined, poorly defined or measures that lack adequate reliability or validity.
	Expert Opinion	expertise is not discernable or is dubious

Newhouse, R., Dearholt, S., Poe, S., Pugh, LC., & White, K. (2007). The Johns Hopkins Nursing Evidence Based Practice Rating Scale. Baltimore, MD: The Johns Hopkins Hospital, Johns Hopkins University School of Nursing. Appendix B