



Performance Measurement in PICC Insertion

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Financial Disclosures

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Disclosure of Relevant Financial Relationships

I have the following financial relationships to disclose:

- Consultant for: Analogic, Inc., PICC Excellence, Inc., Access Scientific, B. Braun, Infusion Ventures, Inc.
- Speaker's Bureau for: Genentech, Inc.
- Honoraria from: Medcomp, Inc.
- Employee of: PICC Academy, Concord Hospital

Background

- PICC insertion practice is variable as evidenced by the Zone Insertion Method
- Evidence based criteria do exist to guide quality PICC practice
- A conceptual framework will assist with systematic application of evidence to improve and sustain quality practice

Background

- Criteria that matter:
 - Location
 - Avoid flexion, trauma, and colonization
 - Blood flow
 - Minimize restriction to flow
 - Promote hemodilution
 - Tip position
 - Cavoatrial makes a difference

Conceptual Model for Vascular Access



(Dawson, 2012)

Sustaining Quality

- Performance measurement is a critical factor for improving care and sustaining quality
- Objective measures for PICC insertion include:
 - Zone Insertion Method – Location, Blood flow
 - Catheter Vein Ratio- Blood flow
 - Tip Position – Minimize vessel trauma, Blood flow

Scoring Template

CVR	< = 1:4	< = 1:3	< = 1:2	> 1:2 < 1:1	> = 1:1
Score	0	1	2	3	4
Zone of Insertion	Ideal (High Green)	Low Green	Yellow	Red	Other Non-ZIM
Score	0	1	2	3	4
Tip Position	Cavoatrial	Lower 1/3 SVC	Middle 1/3 SVC	Upper 1/3 SVC	Other Non-SVC
Score	0	1	2	3	4

Results

Sample: n = 83, Mean Raw Score = 3.1, Mode = 3, Max = 6, Min = 1

Complications: n = 17, Infection = 3, Occlusion = 8, Malposition = 4, DVT = 1, Early Removal = 1, Mean Raw Score = 3.5

PICC Raw Score	% Performance	Frequency	Complications	% Complication
0	100	0	0	0
1	92	2	0	0
2	84	20	2	10%
3	76	43	11	26%
4	68	7	0	0
5	60	6	2	33%
6	52	5	2	40%