Nurse-Led Team for Insertion of Central Lines

Presented by:
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PART 1
Objectives

- Nurse placement of CVCs (IJs)
- Ultrasound use
- Bundle implementation
- Patient Safety
- Cost effective
Reason for change from Physician to Nurse insertions

- **More timely** placed lines
  - Dedicated team of skilled nurses
  - Less workflow than physicians

- **Safer** for patients by using portable ultrasound (US) 100% of time
  - Research shows approximately only 30% of physicians use US routinely
  - Decrease complications, less attempts

Casey & Elliott, 2010
McGrattan et al., 2008
Implementation & documentation on Central Line Bundle

Decrease infections

CHG skin prep

Full Barrier Precautions

35% mortality rates are associated with central line infections

Casey & Elliott, 2010
Most Appropriate Line for Therapy

- Assessment
- Best Line for Therapy
- Obtain order
- Obtain consent
- Nurse to place determined line
Implementation

• PICC nurses skilled in Ultrasound use
• Specialty Certification
  - INS – CRNI
  - AVA – VA-BC
  - ACLS
• Didactic 8 hour course
• Preceptorship
Evaluations

- Nurse & Physician surveys
  - Are lines placed timely?
  - Is there a decrease in CLABSI?
  - Do patients receive appropriate line?
- Less complications with line insertions
- Money savings by utilizing specialty nurses
- Decreased length of stay?
Outcomes

• SPECIALTY RNS placing central venous catheters within **2 hours** of order

• Patients venous anatomy PRESERVED by earlier line placement

• DECREASED COMPLICATIONS from use of ultrasound 100% of insertions

• DECREASED LINE INFECTIONS by following evidence based practice, guidelines, and standards of practice
Part 2
Objectives

- Multidisciplinary Team members
- Competency and Expertise
- Patient Safety
- Case Scenarios
Multidisciplinary Team Member

- Advanced Registered Respiratory Therapist
- Critical care experience
- ACLS
- 3 months of aggressive training with Infusion Nurse
  - Sterile Technique
  - Previous art line experience
Differences in Respiratory Therapists

- CRT (diff between LPN and RN)

- Respiratory Therapist - Associate degree

- Registered Respiratory Therapist
  - Pass National Boards Test

- **RRT-Advanced** (facility determined)
  - Specially selected, demonstrated skills, tested and checked off by management
  - Lead responsibilities, able to run the shift
  - Line Team
    - 8 hr didactic PICC - 10 PICCs
    - 8 hr didactic CVCs - 25 IJs
    - Arterial Lines - 5
Must have Infusion RN educate, mentor & evaluate

Reasons:

- Experience
- Certified in Vascular/Infusion Specialty
- Vast knowledge
- Troubleshooting
- Sterile Technique
Case #1

Case scenario - picc pulled back during the night and redressed by RN

- Action by vascular access multidisciplinary team
- Assessment by Infusion/Vascular RN Team Member
- Recommendations for Treatment
Case #2

Port-a-cath not giving a blood return

- Action by multidisciplinary team

- Assessment by Infusion/Vascular RN Team Member

- Recommendations
Case #3

Newly placed port with on and off blood return

- Questions to Team
  - Cathflo or not
  - To refer or not

- Chest x-ray results
- New port
- Educational opportunities

Lining Up to Infuse Excellence
Case #4

PICC line difficulty with drawing lab

- Multiple hemolyzed lab results
  - More flushing, better?
  - Cathflo?
- Assessment by Infusion/Vascular RN Team Member
  - Valved catheter
- Recommendations for Treatment
The Value of the RN

This patient scenario represented a change in practice at our facility. The RN team member recognized the hemolysis issue as a global wide issue and took the necessary steps to assess, implement a plan, and evaluate the changes.

- Assessed
- Cost (lab/RN time, tubes, patient’s blood)
- Plan
- Supply need / Education need
- Evaluated
Necessity of the RN

• RN has *phlebotomy* knowledge and experience
• Assessment piece of the entire picture
• Catheter, connector, vacutainer, or education problem
• RN quickly recognized this is a global issue and planned the necessary steps by developing work group
• RN telephoned other facilities to inquire if others are having troubles with the connector or catheter that they were using.
Costs

- BMP $10.90
- CBC $10.01
- Blood Cultures $13.30
- Flush $ 0.27/syringe (2 after lab draws)
- RN wages average wasted time … *RN Pay Range $25.47-$40.69*

Nurse Poll: RN lab draw time to check order, gather supplies, draw sample, flush, label, send to lab
  - 15 minutes

- Cathflo patient cost of med $277.20, our cost to instill $428.20
Patient Outcomes

- Measureable in cost and patient outcomes

- Certified RNs add a tremendous value of expertise, education, and competency to the team!

- Multidisciplinary team members benefit from infusion knowledge.

- Better patient outcomes from certified Nurses!
NURSING is a vital piece of the puzzle

Nursing over site of patient care

Infusion Nurses have 8 core competencies

Nurses are the key to success and safe patient outcomes
QUESTIONS?

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References


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