Developing the Role of the Clinical Nurse Specialist as an Internal IV Therapy Consultant

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Purpose/Objectives: The purpose of this presentation is to provide information for the CNS whose goal is to become a consultant in a specialized area of nursing. The CNS developed a new role as IV Therapy Consultant after identifying clinical problems and learning of the unacceptable Catheter Associated Blood Stream Infection (CLABSI) rate in an acute care facility.

Significance: Each year an estimated 250,000 cases of CLABSI occur in the United States, leading to at least 30,000 deaths. The additional cost for each infection is over $36,000. The CNS is responsible for benchmarking this nursing-sensitive indicator and can improve outcomes. The CNS provides consultation to influence the identified plan, enhances the abilities of others, and effects change. The CNS must possess skill, expertise and knowledge in the particular area of consultation to navigate a struggling system.

Background/Rationale: Prior to the development of the CNS role of IV Therapy Consultant, the CLABSI rate at Albert Einstein Healthcare Network (AEHN) was 6.5%, above benchmark. The IV team was the only resource for nurses. Clinical practice was guided by tradition and nurses were reluctant to change.

Description: The CNS reviewed the literature and collaborated with nursing staff, physicians, interventional radiology, and national IV consultants, to develop evidence-based policies. Products were piloted to determine efficacy and a new central line dressing kit was designed. House wide education and a mandatory bedside competency were completed. An audit tool was developed for monitoring compliance. Additionally, an IV “super user” group was created to support staff. Data was analyzed in collaboration with the infection control department.

Outcome: One year following the development of the role of the IV Therapy Consultant, the CLABSI rate for AEHN had decreased to 2.27%. Bedside audits revealed 90% compliance with changing CVC dressings and discontinuing CVCs when no longer clinically indicated.

Interpretation/Conclusion: Engaging in the consulting process requires multidirectional analyses. Navigating a healthcare facility system is daunting but can be very informative especially for the new CNS.

Implications for Practice: Current health care affords opportunities for CNSs to serve as consultants. Problem identification, action planning, and evaluation are key components to successful consultation.
The CNS as Internal IV Consultant

Dolores Morrison, MSN, ACNS-BS
Objectives

The learner will:

- Define an Internal Consultation
- Describe the core CNS practice competencies in three spheres of influence
- Discuss skills needed to become an Internal IV Consultant
- Describe the process of using the Iowa Model of Evidence-Based Practice to decrease CLABSI rates
- List the barriers Consultation work
What Is An Internal Consultation?

CNS works as an employee for a healthcare facility; provides services within the organization as per job description and/or request; most common type of CNS consultation.

Zuzelo, p.200
CNS Consultation Work

CNS Consultation work crosses all 3 Spheres of Influence
CNS Spheres of Influence

Client Direct Care

Nurses & Nursing Practice

Organizations & Systems

5 Areas of CNS Practice

- Clinical Practice
- Education
- Leadership
- Research
- Consultation
CNS Skill Set

- Leadership skills
- Collaborative skills
- Professional attributes
- Consultative skills
CNS Skill Set

- As a Consultant the CNS will need to utilize:
  - Leadership skills
    - Communicator/net worker
    - Educator/public speaker
    - Problem solver
    - Time management skills
CNS Skill Set

Professional attributes

- Confident/Credible
- Willing to take risks
- Honest
- Assertive
- Motivated
CNS Skills Set

- Collaboration skills
  - Work jointly with colleagues
  - Learn all the stakeholders & key players in the healthcare system
    - Directors of: Nursing, Storeroom, Purchasing, Print shop
    - Pharmacy, Infection Control
    - Physician leaders
    - Nurses leaders
CNS Skill Set

- Consultation skills
  - INFLUENTIAL
  - Autonomous
  - Independent
  - Accountable
New CNS Role in 2007

CNS identified problem with IV practices/polices

- Disconnecting IVs
- IVs left in too long
- Equipment was outdated
- Use of heparin to flush all CVCs
- Outdated policies – not evidence-based
- IV dressings falling off
- CVCs left in place too long
Iowa Model of Evidence-Based Practice

- Used Iowa Model of Evidence-Based Practice to guide the process
- Gained credibility as expert on IV care
- Made changes and became the Internal IV Consultant
Triggers

1. **Problem focus**
   - Identification of clinical Problem – CLABSI -16.68%
   - External Benchmarking Data - 4.68 %

2. **Knowledge Focused**
   - New Research or other Literature - Microclave® (heparin free), Statlock®, Procedures, Dressing kits
Is the Topic a priority for the organization?

Yes – Why?

- Quality of care (IV therapy) was not optimal at AEHN
- AEHN benchmarks with National Health and Safety Network (NHSN)
- Magnet Status – must be at or below benchmark
- CMS reimbursement guidelines October 2009
Form a System Team

Team
• Quality Department
• PICC Committee Representatives from various units
• Interventional Radiology
• Infection Control Department
• IV team
• P&P committee
• CNSs/Educators
• External IV Consultants - Lynn Hadaway
Assemble Research and Related Literature

- Infusion Nurses Society (INS) Standards
- Oncology Nursing Society (ONS) Standards
- Centers for Disease Control (CDC)
- Independent experts
Is There a Sufficient Research Base?

- Yes – no need to do research
- Pilot the changes instead
**Pilot the Change in Practice #1**

- PICC Committee – conducted a pilot on 4 inpatient units looking at:
  - No Looping, swabbing hubs with alcohol, using female luer caps on end of tubing
  - Goal was to decrease BSIs by 25% in 6 months
  - Outcome: exceeded the goal
No Looping
Pilot the Change in Practice #2

- **Microclave® Needleless valve** – piloted on 4 units and surveyed the staff:
  - Was this product easy to use?
  - Problems attaching a syringe or tubing to this product?
  - Experience line clotting with this product?

- **Outcome**: positive evaluation
Other Surveys

- IV team also collected baseline data on IV lines and sites

- Identified knowledge deficit related to various types of CVCs
Change in Practice Process

- Designed EBP Policies & Procedures after extensive literature search
- Consulted with external IV experts
Implementation Phase

- Implemented the EBP P&Ps by:
  - Network Education rollout (5 facilities) – poster boards, tutorial
  - IV grid disseminated to all units
  - 3 part IV therapy Competency
    - Knowledge – written exam
    - Technical – bedside
    - Critical Thinking - scenarios
  - CNS audit/ Quality audit
  - Presentation to Leadership Group
  - Management Audit
Is Change Appropriate for Change in Practice?

Yes, due to fact that CLABSI rates decreased after practice changes were implemented.
Monitor and Analyze Phase

- Utilized audit tools to monitor CVC dressing change, scrubbing hub, tubing changes
- Utilized IV super users to monitor practice at the bedside
- Measured Outcome data
Disseminate Results

- Results were disseminated from ID to the directors, managers, and staff
- Posted on all nursing units
Disseminate Results

Median = 4.69
AEMC Gen Med Surg CLABSI Matrix

# CLABSI

FY07  FY08  FY09  FY10 thru Oct

L7  T4  T5  T6  T8  L5E  EP5  EPCU  ECCU  WC2  WC3  WCM3  MRH

0  5  10  15  20  25
Overall Rate

Current Network CLABSI RATES for December 09 are 1.9%
Latest Development- 09

- Pilot in dialysis unit
- New TEGO® IV connector - does not require use of heparin
Barriers to Consultation Work

- Navigating unknown healthcare system
- Lack of support and buy-in
- Criticism from administration
- Time constraints related to CNS role
- Staff accountability at bedside
A nurse’s Personal Story
Are you up to the Challenge?

- Do I have the **skills** needed to be a consultant?
- What do I need to know to become effective?
- What are my **strengths and weaknesses**?
- Am I willing to make sacrifices and work hard?
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Questions?
References


<table>
<thead>
<tr>
<th>Devices</th>
<th>Peripheral</th>
<th>Non-tunneled CVC (Subclavian, Internal Jugular, Femoral)</th>
<th>PICC (Tunneled &amp; non-tunneled)</th>
<th>Hickman (Tunneled)</th>
<th>Implanted Port (Tunneled)</th>
<th>Dialysis</th>
<th>Arterial</th>
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<tbody>
<tr>
<td>Access Site (Entry)</td>
<td>Replace to new site every 96 hours unless no other site available; document to that effect; remove when no longer clinically indicated</td>
<td>Daily assessment as to continued clinical need; remove when no longer clinically indicated. <strong>Note:</strong> replace in 24 hrs if inserted emergently without maximal sterile barriers</td>
<td>When accessed, change non-coring (Huber®) needle every 7 days</td>
<td>Dialysis Unit will perform assessments</td>
<td>Daily assessment re continued clinical need; remove when no longer clinically indicated</td>
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<td>Site Assessment</td>
<td>With each patient encounter</td>
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<td>Notify Dialysis Unit of changes at site</td>
<td>Assess at least Q 2 hours <strong>Note:</strong> Arterial lines are Critical Care only</td>
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<td>Dressings</td>
<td>Apply transparent dressing when catheter is inserted or replace when dressing becomes soiled, loose, wet or in any other way loses its protective function</td>
<td><strong>Transparent:</strong> change every 7 days on Tuesdays &amp; pm. <strong>IV securement device (Statlock®):</strong> change with each dressing change <strong>Gauze:</strong> change every 48 hours &amp; pm [Example: for patient who is diaphoretic or oozing at entry point, apply sterile gauze]</td>
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<td>Accessing IV via needleless valve</td>
<td>Scrub valve thoroughly with alcohol prior to each access &amp; allow to dry</td>
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<td>Access &amp; de-access of implanted port will be performed by persons who have completed the competency</td>
<td>Only Dialysis Unit staff will access dialysis lines</td>
<td>Scrub valve thoroughly with alcohol prior to each access &amp; allow to dry</td>
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<td>Change all IV tubing &amp; needleless valve</td>
<td><strong>Continuous:</strong> every 96 hours * Intermittent: every 24 hours (not valve)</td>
<td><strong>Continuous:</strong> Tuesdays and Fridays * Intermittent: every 24 hours</td>
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<td>Blood/blood products tubing &amp; valve</td>
<td><strong>New tubing</strong> for each unit (not valve)</td>
<td><strong>Tubing and valve</strong> every 24 hours <strong>Tubing &amp; valve</strong> for each unit</td>
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<td><strong>Routine Flush</strong></td>
<td>2 ml normal saline</td>
<td>10 ml normal saline before and after intermittent medication/fluid</td>
<td><strong>Routine Flush</strong> 10 ml normal saline before and after intermittent medication/fluid</td>
<td><strong>Access</strong> (nurses who have completed competency) 10 ml normal saline then 3 ml of 100 unit/ml heparin solution (if no fluids/meds ordered)</td>
<td>Only Dialysis Unit staff will access dialysis lines</td>
<td>No routine flush of arterial lines</td>
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<td>2 ml normal saline Before &amp; after intermittent medication/fluid</td>
<td>10 ml normal saline every 12 hours for each lumen not in use</td>
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<td><strong>Deaccess</strong> (nurses who have completed competency) 10 ml normal saline then 3 ml of 100 unit/ml heparin solution (if no fluids ordered)</td>
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<td></td>
<td>Every 12 hours if not in use</td>
<td>Note: always flush central venous catheters with 10 ml syringe</td>
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<td>100 unit/ml heparin solution or resume continuous infusion</td>
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</table>

**Blood draws via IV catheters** -

*Note: Drawing blood from peripheral and central venous catheters is highly discouraged.*

**Need physician order**

<table>
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<tr>
<th>Draw blood on insertion of catheter before anything has been infused through it (do not prime with normal saline prior to blood draw) If used for sole purpose of drawing blood label “blood draw only” then discontinue when no longer warranted</th>
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</thead>
</table>
| Using 10 ml diameter barrel syringe:  
-Flush with **10 ml normal saline**  
-Draw 5 ml blood & discard  
-Obtain specimen  
-Flush with **20 ml normal saline**  |
| Note: For PICCs only draw blood from catheters that are 4 Fr or larger |
| Performed only by persons who have completed competency. Using 10 ml diameter barrel syringe:  
-Flush with **10 ml of normal saline**  
-withdraw 5 ml blood & discard  
-Attach direct-draw luer adapter & obtain specimens  
-Detach luer adapter; flush with **20 ml normal saline**  
-Flush with 3 ml of 100 unit/ml heparin solution or resume continuous infusion |
| Only Dialysis Unit staff will access dialysis lines |
| Note: should not be used for sole purpose of obtaining routine blood specimens |

*A Intermittent tubing: tubing, which is disconnected from IV catheter or primary tubing and used again. A Female Luer Lock Cap must be used to keep end of intermittent tubing sterile.*