Reduce PIVC Complications and Costs Using the Five Rights Approach
A Randomized, Controlled Trial
Lee Steere, RN, CRNI, VA-BC and David M. O’Sullivan, PhD
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**PURPOSE**
Hartford Hospital set a goal to achieve 1 PIVC per patient visit.

<table>
<thead>
<tr>
<th>Catheters Purchased</th>
<th>Patient admit</th>
<th>Length of Stay</th>
<th>Catheters/patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>247,000</td>
<td>43,835</td>
<td>5.5d</td>
<td>5.8 1/3rd day</td>
</tr>
</tbody>
</table>

IV Time
- HH Nurse Minutes
- HH Nurse Hours
- HH Nurse PTE equivalent

20 Minutes: 4,940,000, 82,100, 40

**DESCRIPTION**
A randomized, controlled, two-arm, single blinded study (N=207) was conducted in a 47-bed Medical Surgical Unit. Randomization by bed in unit.

Current IV standard (SoC) practice (Control) was compared to the PIV Five Rights (PIV5R) approach (Experimental) with an IV Team.

The PIV5R includes: 1. RIGHT Proficiency 2. RIGHT Insertion 3. RIGHT Vein & Catheter 4. RIGHT Supplies & Technologies 5. RIGHT Review & assessment. Dwell times, complications, and costs were tracked for both groups.

**CONCLUSIONS**
89% of catheters in the Experimental (PIV5R) arm lasted from insertion until therapy completion. The Experimental (PIV5R) approach was associated with a significantly lower complication rate. A PIVSR Approach resulted in the following positive outcomes: Savings of ~$6100 per bed per year, PIVC Dwell Times were significantly extended, AND Few (statistically lower) PIVC Complications.

**FINANCIAL RESULTS**
$5.3M Savings
Our IV Team received HHC C-Suite approval to centralize and grow its IV Services as a result of $5.3M in annualized savings from implementation of the PIVSR Approach.
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PATIENT EXPERIENCE

CASE STUDY: PATIENT 84

62 year old FEMALE admitted to the ER

diagnosis: alcohol withdrawal

drugs: "IVF Maintenance Yes X - 1 999"

total IV duration: 3.91 DAYS

ER catheter duration: 0.86 days

PIVC removed for infiltration, occlusion, phlebitis, pump alarm, dressing soiled

new IV duration: 3.05 days

Losted until therapy complete; no complications

REFERENCES


METHODOLOGY, CNTD.

➢ Photos were captured to support every data record entered
  ▪ PIVC Insertion (54 inputs)
  ▪ Site assessment (21 inputs)
➢ Data was sent to the cloud secured by AWS (HIPAA)

DISCLOSURES

Disclosures: Author Lee Steere discloses the following relationships:
*Sponsorship provided by Nexus Medical, LLC; entrotech life sciences
*Clinical Advisory Group: 3M