Not Just Another Checklist: Using Technology to Implement the Time-Out in the Non-OR Setting

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Wrong-patient, wrong-site, wrong-procedure has been the most reported sentinel event over the last three years.

- Since 2004, it’s the most commonly reported sentinel event with over 1000 reported cases.
Examples of *Wrong Procedures In and Outside the OR*

- Stent placed in the wrong ureter
- Removal of the wrong tooth
- Hernia repair initiated on non-primary side
- Wrong Side Chest Tubes
- Steiman pin placed in wrong leg
- Wrong Side Pigtail Drain
- Initiation of incision on the wrong side
Procedural Time-Out Catches

- Pt. consented for R side surgery, but was booked as left side. Prepped left side and **consent read aloud as right side during time out.**

- Consent read partial amp right 2-4 fingers. Pt agreed with consent in pre-op area and R hand marked. **Consent reviewed in time out.** Surgeon discussion with patient had been fingers 2 and 4.
Components of the Time Out

1. Correct Patient Identity
2. Correct procedure
3. Correct Side and Site
4. Agreement on Procedure to be done
5. Availability of Implants, Special Equipment or Special Requirements
6. Correct Position
History of Time-out at HMC

- No Standardization across the institution outside the OR
  - Paper tool – QI project
    - EMR had place to check “Time-out done”
  - Stickers for the ED – included the elements of the time-out
  - Radiology areas – paper tool – charted “Time-out done”
    - Paper tool eventually became a checklist
  - Clinics developed a paper tool
Opportunities

- EMR provided an opportunity to develop an electronic tool to be used on inpatient side
- Central line bundle provided opportunity to look at all procedures
  - First electronic time-out note focused on central line insertion
  - Evolved to multiple procedures eventually becoming a nursing procedure note
Implementation

- Focused on Critical Care areas first
- Procedural areas now utilizing tool
- Currently rolling out to acute care areas
- Clinics currently rolling out electronic tool
- Radiology technologists will begin to document time-out in EMR
- ED still using paper tool
- Current Nursing Procedure/Time-out note has 37 different procedures and growing
Barriers

- Who’s responsible for initiating time-out?
- Some procedures involve only the provider
- Belief that many procedures are an emergency
- “Just more boxes to check”
Pre-Procedure Verification and Sterile Technique Care Team Checklist

**Purpose:**
To work as a team to decrease patient harm from invasive device associated infections and complications.

**When:**
During all invasive device insertions.

**Completed By:**
Bedside Nurse/Physician performing procedure.

**Approved By:**
Critical Care

<table>
<thead>
<tr>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Line</td>
</tr>
<tr>
<td>Invasive Cranial Device</td>
</tr>
<tr>
<td>Bone Marrow Bx</td>
</tr>
<tr>
<td>Thoracentesis</td>
</tr>
<tr>
<td>Paracentesis</td>
</tr>
<tr>
<td>Pericardiocentesis</td>
</tr>
<tr>
<td>Arterial Line</td>
</tr>
<tr>
<td>Steinman Pin</td>
</tr>
<tr>
<td>Lumbar Puncture</td>
</tr>
<tr>
<td>Chest Tube</td>
</tr>
</tbody>
</table>

**Pre-Procedure Verification Worksheet:**

- Correct patient identity
- Correct side and site
- Agreement on procedure to be done
- Availability of implants, special equipment or special requirements
- Correct patient positioning

(Medical record documentation of PPV is to be included in both physician procedure notes and nursing VB flow sheet.)

<table>
<thead>
<tr>
<th>BEFORE THE PROCEDURE, DID THE PHYSICIAN...</th>
<th>Yes</th>
<th>Yes, after prompting</th>
<th>Not Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash their hands (chlorhexidine or soap) immediately prior?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Sterilize the procedure site?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Drape entire patient in a sterile fashion (with armo drape)?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Small drape may be used for ICP, A-line, etc.</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DURING THE PROCEDURE DID THE PHYSICIAN...</th>
<th>Yes</th>
<th>Yes, after prompting</th>
<th>Not Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use sterile gloves?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>* Use hat, mask and sterile gown for central lines?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Maintain sterile field?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Did all personnel assisting follow the above precautions?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>Did the personnel assisting remain available throughout the procedure?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AFTER THE PROCEDURE...</th>
<th>Yes</th>
<th>Yes, after prompting</th>
<th>Not Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was a sterile dressing applied to the site?</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICIAN SIGNATURE</th>
<th>NURSE SIGNATURE</th>
<th>LPN</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
</table>

**PTN#**

**Name**

**Pre-Procedure Verification and Sterile Technique Care Team Checklist**

QA Document Not part of the Medical Record
Return to the Charge Nurse
ED TIME OUT and Procedure Checklist

PURPOSE: To work as a team to decrease patient harm from invasive device associated infections and complications.

WHEN: During all invasive device insertions.

COMPLETED BY: Bedside Nurse/Physician performing procedure.

EACH PROCEDURE REQUIRE A SEPARATE FORM

<table>
<thead>
<tr>
<th>Procedure:</th>
<th>Central Line</th>
<th>Invasive Cranial Device</th>
<th>DPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial Line</td>
<td>Thoracentesis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(check one box only)</td>
<td>Chest Tube</td>
<td>Paracentesis</td>
<td></td>
</tr>
<tr>
<td>Lumbar Puncture</td>
<td>Steinman Pin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TIME OUT

- Correct patient identity
- Correct side and site (circle) L R NA
- Agreement on procedure to be done
- Availability of implants, special equipment or special requirements
- Correct patient positioning

BEFORE THE PROCEDURE

- Wash hands (chlorhexidine or soap) immediately prior
- Chlorhexidine prep to site
- Drape entire patient in a sterile fashion (with angio drape)
- Smaller drops may be used for ICP, A-line, etc.
- Optimal Catheter Site Selection, with Avoidance of the Femoral Vein for Central Venous Access in Adult Patients

DURING THE PROCEDURE

- All involved wear Sterile gloves
- All involved wear hat, mask and sterile gown for procedure
- Maintain sterile field

AFTER THE PROCEDURE...

- Sterile dressing applied to the site

NURSING PHYSICIAN'S SIGNATURE | PRINT NAME | PAGER | UPIN/PNI | DATE | TIME
Angio Time-out

Mini Check

- **Mini check** is completed when patient enters the lab. *Anesthesia/RN* and *Rad tech* check patient's name, hospital number and date of birth against the consent and patient ID band.

Angio Time Out

- **The Time Out is to be conducted immediately prior to procedure.**
- **All Angio team members must be present for the Time Out.**
- *Rad tech* initiates the Time Out and facilitates Team Introductions.
- **All team members stop what they are doing and focus** on the Time Out. The Time Out will not continue until **all team members are paying attention.**
- *Anesthesia/RN* reads aloud and *Rad Tech* confirms that the patient's full name, hospital number and date of birth match on the consent, ID Sticker, and Docusys screen if anesthesia case.
- *Rad tech/RN* displays the consent to the *Physician*, reads aloud and confirms the procedure and **site**.
- *Anesthesia/radiology RN* confirm any allergies, pre-op antibiotics and blood product availability.
- *Anesthesia/radiology RN* confirm availability of special medications and fluids
- *Rad tech* confirms the availability and positioning of equipment, implants, and special devices
- *Rad tech/RN* or *Physician* confirm the location of family (for anesthesia cases)
- *Rad tech* asks the team: “Do we all agree?”

**The procedure will not begin until the time out is complete**

Post procedure

- **The primary team is called by physician at completion as required. Report is given to Rad RN by anesthesia if anesthesia case for recovery.**
- *Radiology RN* gives verbal report to ICU/AC/APA RN post procedure.
- **Post procedure orders are written by physician (and anesthesia if applicable)**
Example of Standardize Checklist

Central Line Insertion Checklist

- Computerized Time Out Note Open and Visible
- Allergies assessed.
- Pain and anxiety addressed.
- Cautious Feet
- Wash Hands

Pre-Procedure
- Active time out, Team Issue
- Circuits, Patient, Procedure, and Position
- Ultrasound Available
- All central lines labeled

Time Out
- Clean Site Skin Prep
- Prepared work field body drops
- Operative site, sterile gloves, sterile gloves, sterile gloves, sterile gloves, sterile gloves
- All persons in cover sterile procedure
- 3% X-ray contrast solution solution
- Catheter secured

During Procedure
- All Clean Site Skin Prep
- CNR securate preparation
- CVC dressing applied, dried and secured

After Procedure
- Catheter secured
- Catheter tied
- Catheter tied
- Catheter tied
### Nursing Documentation in ORCA

**Procedure** *(Hide Structure) (Use Free Text)*

<table>
<thead>
<tr>
<th>Prior to Procedure</th>
<th>Allergy profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergies? (heparin, latex, chlorhexidil): Unknown / Done / OTHER</td>
<td></td>
</tr>
<tr>
<td>Anticipated pain &amp; anxiety addressed: Done / OTHER</td>
<td></td>
</tr>
<tr>
<td>Consent form signed: Done / OTHER</td>
<td></td>
</tr>
<tr>
<td>Applicable test results available: Done / OTHER</td>
<td></td>
</tr>
<tr>
<td>Hands washed (clarify if not witnessed): Done / OTHER</td>
<td></td>
</tr>
</tbody>
</table>

**Time Out/Final Verification:**
- Active Time Out [all present & focused]?: Done / OTHER / Correct patient using 2 identifiers: Done / OTHER / Correct procedure: Done / OTHER / Correct Site/Side Marked: Done, R side / Done, L side / Not Applicable / OTHER / Correct patient position: Done / OTHER / Availability of special equip/meds/blood: Not applicable / Yes / OTHER / All syringes labeled with contents: Done / OTHER |

**Pt monitoring**
- EKG: Not applicable / Yes / No |
- O2 Saturation: Not applicable / Yes / No |
- VS q15 min during procedure: Yes / No / OTHER |

**Procedure Performed** *(Hide Structure) (Use Free Text)*

- **Angio**
- **Arterial Line**
- **Bone Marrow Biopsy**
Final View

Result Type: Nursing Record/Note
Service Date: November 12, 2008 4:23 PM
Result Status: Authenticated
Result Title: HMC RN Procedure Note v4
Performed By: [Redacted]
Verified By: [Redacted]
Encounter info: 8887APCD20080911, HMC, Inpatient, 9/12/2008

^ Final Report ^

HMC RN Procedure Note v4

Procedure
Prior to Procedure:
- Allergies assessed? Done.
- Consent obtained by physician? Done.
- Anticipated pain & anxiety addressed? Done.
- Wash hands? Done.
- Pre-Procedure Verification: Check patient ID x 2? Done, Active Time Out (all members present & focused)? Done.
- Mark/Assess site? Done, Correct patient position? Done, Availability of special equipment? Not applicable, All syringes labeled with contents? Done.
- Pt monitoring:
  - EKG: No.
  - O2 Saturation: No.
- Vital signs q15 minutes during procedure: Yes.

Procedure Performed
Central Line insertion:
- Start time: 11/12/2008 16:22:00.
- Stop time: 11/12/2008 16:30:00.
- Catheter type: Non-tunneled/non valved.
- Change over wire: No.
- Unit/Patient Location: 7E.
- Physician Inserting Line: Dr. Smith.
- Service: Surgery II.
- Lumens: double.
- Site: right.
- Location: subclavian.
- During Procedure: Antiseptic application: Chlorhexidine prep - 2 minute scrub + 1 minute dry time, Pt covered w/full body sterile drape. Done, All involved directly w/procedure wear: sterile gloves, sterile gown, mask, Catheter secured w/ suture, If greater than 3 attempts - senior resident contacted. Not applicable, CXR to verify tip placement? Done, Sterile dressing applied: Transparent, Dressing dated and timed. Done, All lumens flushed w/saline and capped w/needleless device. Done.
- After Procedure: Central Venous Catheter Post Insertion Orders H1888 completed: Done.
Next Steps

- Move beyond compliance audits and audit quality of time-out
- Standardize across UW Medicine
Quality of Time Out

- Observational audits to include
  - Was it done
  - Who led the time-out
  - All elements addressed
  - Input from all
  - Quiet
  - Full participation
Summary

- Physicians are actively searching out nurses to perform the time-out during bedside procedures.
- The development of the electronic Time-out/checklist has increased bundle and time-out compliance.
- The tool is user friendly, and documentation occurs in real time.
- We continue to standardized across the institution documenting the time out and procedures.
Thank You

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