



Document 2, July Coaching Call

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## ***CUSP/Stop BSI Collaborative of Kansas and Missouri***

***July Coaching Call:***  
Learning from a Defect Continued  
July 7, 2011

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## **Before We Get Started . . . A Brief Recap of June Coaching Call (6/2/2011)**

- Step 4 of CUSP: Prioritize Defects
- Step 5 of CUSP: Learn From One Defect Per Quarter
  - Example: Medication Errors in PeriOperative department
- June Coaching Call Team Leader Checklist
  - Finish performing the Staff Safety Assessment on your unit
  - Collate results of the Staff Safety Assessment
  - Prioritize results of the Staff Safety Assessment
  - Choose a defect to take through the Learning from a Defect Tool
  - If your CUSP team is ready, begin working through the Learning from a Defect Tool
  - Facilitate June CUSP Team Meeting
  - Enter your CLABSI and MTCT data into the Care Counts database



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2

## The “Secret Ingredient” Comprehensive Unit-Based Patient Safety Program

1. Form a unit CUSP team with executive sponsorship
2. Measure unit culture
3. Educate staff on Science of Safety
4. Identify defects using the Staff Safety Assessment; prioritize defects
- 5. Learn from one defect per quarter**
6. Implement team/communication tools



3

## Step 5: Learn from a Defect



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4

## Learn from a Defect

- Designed to rigorously analyze the various components and conditions that contributed to an adverse event and is likely to be successful in the elimination of future occurrences.
- Tool can serve to organize factors that may have contributed to the defect and provides a logical approach to breaking down faulty system issues



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5

## Learn from a Defect

- **Select a specific defect**
  - What happened?
  - Why did it happen (system lenses) ?
  - What could you do to reduce risk ?
  - How do you know risk was reduced ?
- **Creates early wins for the project**



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6

## Another LFD Example: CLABSI Prevention Bundle

1. Remove Unnecessary Lines
2. Wash Hands Prior to Procedure
3. Use Maximal Barrier Precautions
4. Clean Skin with Chlorhexidine
5. Avoid Femoral Lines



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7

## Expectations Weren't Met

- SICU continued to have 1-2 BSI per month—  
inconsistent with other units
- Why is this happening in SICU??
- SICU's line days are greater than all the other  
units combined monthly

*Further analysis/investigation was needed*



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8

## SICU Initial Analysis

- **Infection Control Department**
  - length of time catheter in place an issue for infections: > 7days
  - Majority of infected catheters were Internal Jugular
  - Baseline information—90% of all central lines are placed in the OR
  - Where infected lines were placed: 50% SICU; 50% OR
- **Critical Care Committee**
  - Reviewed data and recommended that the problem was related to line insertion in SICU



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9

## SICU Initial Analysis

- **SICU Practice Council**
  - Walked through the Learn from a Defect Tool



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10

## Learn from a Defect Tool

- Divided into three sections:
- **Section 1** asks the users to identify what happened or the defect they want to investigate
- **Section 2** is a framework provided for the investigators to identify any contributing factors. These factors include: patient, task, caregiver, and team related, training and education, local environment, information technology and institutional environment.
- **Section 3** asks participants to develop an action plan with assigned responsibility for task completion and follow up dates for each item.



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11

## Section 1: What happened?

- Asks the users to identify what happened or the defect they want to investigate

**Continued CLABSI in SICU even after best practices in place**



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12

## Section 2: Why did it happen?

### Factors contributing to the defect

1. High patient acuity with many co-morbidities increasing risk for infection
2. Lack of clarity in the new procedure for line insertion and sterile technique
3. Caregiver fatigue
4. RN confidence and comfort in stopping procedure when break in sterile technique occurred
5. Insufficient communication (verbal/written) amongst the team
6. Insufficient support for residents during line insertion at bedside
7. Insufficient training for residents related to line insertion
8. Line cart not restocked regularly
9. Unit workload didn't always allow nurse to be in attendance through entire procedure



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13

## What will you do to reduce risk ?

- Prioritize most important contributing factors and most beneficial interventions
- Safe design principles
  - Standardize what we do
    - Eliminate defect
  - Create independent check
  - Make it visible
- Safe design applies to technical and team work



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14

## What will you do to reduce risk?

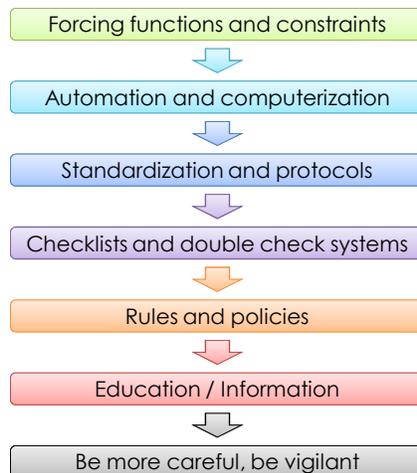
- Develop list of interventions
- For each Intervention rate
  - How well the intervention solves or reduces the problem
  - The team belief that the intervention will be used as intended
- Select top interventions (2 to 5) and develop intervention plan
  - Assign person, task follow up date



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15

## Rank Order of Error Reduction Strategies



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## Section 3: Action Plan

### What can you do to reduce the risk?

1. Survey residents and PAs regarding central line placement process and elicit their suggestions for improvement
2. Chart review of all patients with CR-BSI in SICU since new protocol in place. Components included number of blood products received, mean /median blood glucose levels and line insertion process documentation.
3. Reform BSI checklist to ensure proper sequence of line insertion procedure
4. Provide re-education to staff on surgical asepsis.
5. Educate staff on pre-procedure briefing process
6. Review current line cart restocking process
7. Order vein finder



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17

## Resident/PA Survey Results

- The line cart was very helpful, but often not stocked.
- Felt that the nurse's presence in the room was valuable, but not consistently happening.
- Additional support and training was needed for them.



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18

## Chart Review

- No excess blood products given on these patients
- Median blood glucose was <140 mg/dl
- All of the patients that had CLABSI had a slick catheter that had been placed by the nursing staff into an existing cordis introducer.
- Further discussion identified that maximal barrier precautions were not being used during slick catheter placement



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19

## How do you know risks were reduced?

- Did you create a policy or procedure (weak)?
- Do staff know about policy or procedure?
- Are staff using the procedure as intended?
  - Behavior observations, audits
- Do staff believe risks were reduced?



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## Summarize and Share Findings

- Summarize findings
  - 1 page summary of 4 questions
  - Learning from defect figure
  
- Share within your organizations
  
- Share de-identified with others in collaborative (pending institutional approval)



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### Safety Tip: Follow established procedure for all central lines

#### Case in point:

Catheter related blood stream infection prevention best practices have been in place since August, 2004. There have been minimal infections in most of the ICU units since implementation. Though SICU's total incidence of BSIs dropped by greater than 60%, SICU continued to have 1- 2 infections per month. It was decided to take a deeper look at potential causes. Ninety percent of all central lines in SICU are placed in the OR, and 10% are placed in SICU, yet half of all the infected lines came from those placed in the SICU.

#### System Failures

Lack of knowledge by RN related to slick catheters

Line cart stocking process

Skill of residents

#### Opportunities for Improvement:

Educate RN related to use of maximal barrier precautions during slick catheter insertion

Formalized twice a day stocking

Educate residents on use of vein finder, recommend increased mentorship of residents during line insertion

#### ACTIONS TAKEN TO PREVENT HARM

- Re-educate nursing staff on use of maximal barrier precautions during slick catheter insertion
- Reformat BSI checklist so that it is in proper sequence of how the procedure should be done
- Provide education to staff on surgical asepsis
- Order vein finder to assist with central line placement
- Provide feedback from resident survey and chart review to medical and nursing leadership
- Display case summary tool in all ICUs for shared learning

## What are your next steps?

- Apply Learn from a Defect Tool to defect selected by CUSP Team (from Staff Safety Assessment data)
- After completing the Learn from a Defect Process, complete Case Summary Form (Document 5)
- Send completed Case Summary form to Tonya Crawford or Kimberly O'Brien by **Monday, August 15, 2011**



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23

## Questions?



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24