

# Castile Soap for Indwelling Urinary Catheter Care in the Critically-ill Patient

**Teresa Panchisin MSN, APRN, ACNS-BC, CCRN**  
**Danielle Sofia BSN, RN, CCRN**



# Demographics

- **Christiana Care Health System is an 1100 bed, Magnet designated institution with hospitals located in Wilmington and Newark, Delaware**
- **The Surgical Critical Care (SCCC) unit is a 20 bed unit, that cares for surgical, trauma and neuro/surgical patients**

# Significance

- **Catheter-Associated Urinary Tract Infections (CAUTI) is the most common hospital acquired infection (HAI)**
- **Rates are increasing with more than 560,000 patients developing CAUTI each year. CAUTI can increase a patient's length of stay 2 to 4 days with an increased cost of \$0.4-0.5 billion per year nationally**
- **CMS will no longer reimburse for CAUTIs considering it a reasonably preventable condition**

# Significance



- **Nurses as frontline providers of care are challenged to decrease the use of urinary catheters, prevent CAUTI and the financial burden of this hospital acquired infection (HAI)**

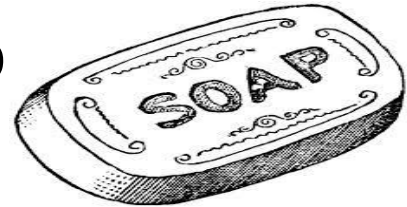


# Barriers to Care



SCCC nurses face barriers to peri care

- The use of a peri-area cleanser was discontinued for use by CCHS
- It was decided that soap and water would be used for indwelling urinary catheter care
- There was no consistent method for catheter care
- There was no dedicated, easily accessible soap product
- Complex, critically ill population with competing demands



# Castile Soap

- Castile soap packets and towelettes have always been a part of the SCCC par of patient care items and are used primarily for clean catch urine specimens and enemas
- Castile soap is an all natural mild product that can be used on all skin types



# Literature Review



- Review of the literature failed to produce information regarding routine catheter care using Castile soap
- Studies using Chlorhexidine solution or tap water produced no significant difference in prevention of bacteruria
- In other studies, routine care using soap and water was determined to be just as effective as more complex protocols using antiseptic cleanser, soaps, or creams

# Education and Implementation



- An education plan was developed
- Staff members were educated individually on the PI project and how to use the Castile soap products for indwelling catheter care
- Newsletters providing information about the project were distributed to the SCCC staff
- A supply of Castile soap, along with a tip sheet for providing indwelling catheter care, were easily accessible in every patient's room, serving as a reminder to provide catheter care



# SCCC/NCCU PERFORMANCE IMPROVEMENT PROJECT: CASTILE SOAP AS AN INTERVENTION IN CAUTI PREVENTION IN THE SCCC/NCCU PATIENT POPULATION



## DESCRIPTION OF PROBLEM

The SCCC/NCCU HAS HAD SEVERAL BARRIERS TO IN-DWELLING BLADDER CATHETER REMOVAL

- URINE RETENTION
  - STRICT INTAKE AND OUTPUT
  - TRAUMATIC INJURIES AND SKIN CONDITIONS THAT WARRANT USE OF FOLEYS
  - PARALYSIS
- INFECTION PREVENTION IN THIS PATIENT POPULATION HAS BEEN A CHALLENGE IN SOME INSTANCES DUE TO
- PERI AREA YEAST INFECTIONS
  - OPEN ABDOMENS
  - IMMUNOCOMPROMISED PATIENTS
  - FREQUENT STOOLING
  - WEEPING WOUNDS

## PURPOSE OF PI PROJECT

THE PURPOSE OF THIS PROJECT IS TO DETERMINE IF THE USE OF CASTILE SOAP FOR ROUTINE AND PRN URINARY CATHETER CARE WILL DECREASE THE CAUTI RATE IN THE CRITICALLY ILL SURGICAL/TRAUMA PATIENT POPULATION



## REVIEW OF LITERATURE

- STUDIES USING CHLORHEXIDINE SOLUTION OR TAP WATER PRODUCED NO STATISTICALLY DIFFERENT RESULTS IN THE PREVENTION OF BACTERIURIA
- STUDIES USING SOAP AND WATER AS ROUTINE CARE WERE DETERMINED TO BE JUST AS EFFECTIVE THAN MORE COMPLEX PROTOCOLS USING ANTISEPTIC CLEANSER, SOAPS OR CREAMS
- REVIEW OF LITERATURE FAILED TO PRODUCE INFORMATION REGARDING ROUTINE CATHETER CARE USING CASTILE SOAP
- RESEARCH INVOLVING USE OF CASTILE SOAP VS. CHLORHEXIDINE SHOWED A DECREASE OF BACTERIA LOAD AFTER SEVERAL DAYS OF

USING CASTILE SOAP IN TRAUMATIC FIELD INJURIES THAT OCCURRED DURING COMBAT. AN INCREASE OF BACTERIA LOAD OCCURRED WITH CHORHEXIDINE

## STUDY POPULATION

### INCLUSION CRITERIA

- SCCC/NCCU PTS 18 AND OVER
- HAVE AN INDWELLING CLOSED SYSTEM CATHETER
- MUST BE LEUKOCYTE NEG PRIOR TO START OF DATA COLLECTION EITHER BY UA OR POC LEUKOCYTE TESTING

### EXCLUSION CRITERIA

- LEUKOCYTE +
- KNOWN UTI
- ALLERGY TO SOAP/COCONUT/SOY

## Project Protocol

- ALL PATIENTS WITH AN INDWELLING URINARY CATHETER WILL RECEIVE PERICARE USING CASTILE TOWELETTES FOR ROUTINE AND PRN FOLEY CARE
- FOR INCONTINENCE EPISODES CASTLE SOAP LIQUID PACKETS WILL BE UTILIZED



## CONCLUSION OF PROJECT

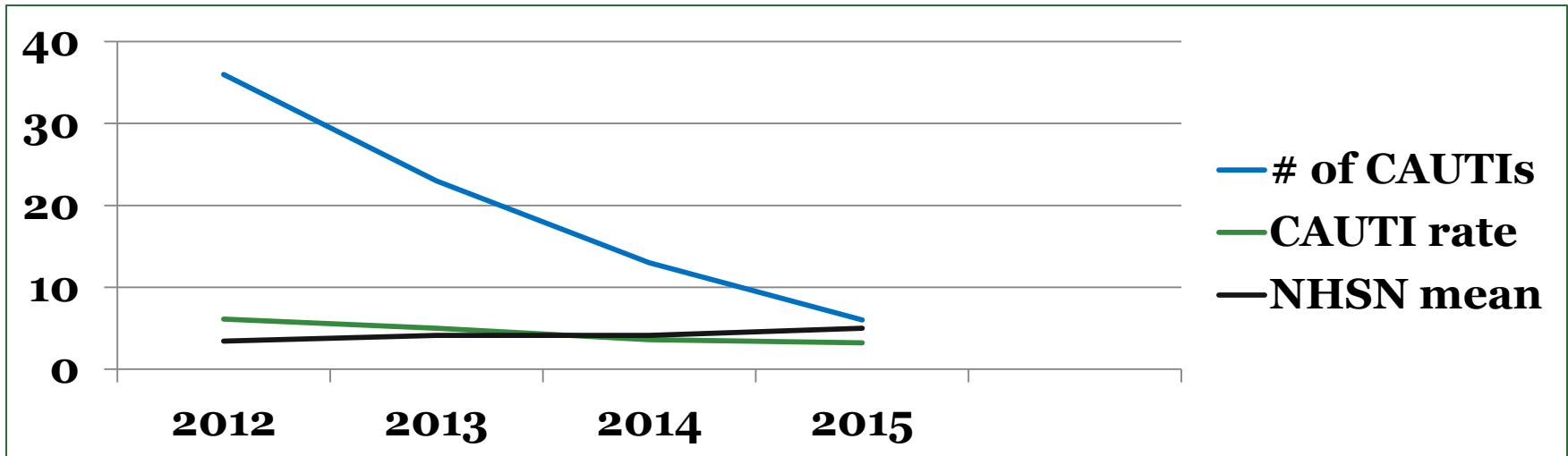
- PROJECT WILL BE CONCLUDED AFTER 60 DAYS OR IF;
- CAUTI OCCURS DURING PATIENT'S INVOLVEMENT IN STUDY OR 48 HOURS AFTER CATHETER REMOVED
- CONCLUDES IF ADVERSE EVENT OCCURS AS A RESULT OF THE CASTILE SOAP

## Castile Soap Project Tips

- **Use Castile Soap towelette for routine (Q 8 hrs) and prn Foley Care**
- **Follow cleaning with Castile towelette with a water only cloth to remove soap residue**
- **Document care as you normally would on flow sheet**
- **Use Castile liquid soap for incontinence episodes. Avoid using other cleaning products in the peri area during the project. Remember women wipe front to back**
- **Continue to use skin protectant as indicated**
- **In uncircumcised men cleanse under foreskin.**
- **Remember Foley cleanse area surrounding Foley then Foley from meatus down avoid pulling on Foley**
- **Exclude patient from study if allergic to soap, coconut or soy**
- **Monitor for allergic reactions to peri area. If allergy develops do not use soap on patient**
- **Keep containers on counter in view for refills**
- **Please let Teresa Panchisin or CAUTI VIT know if you have any questions or concerns.**

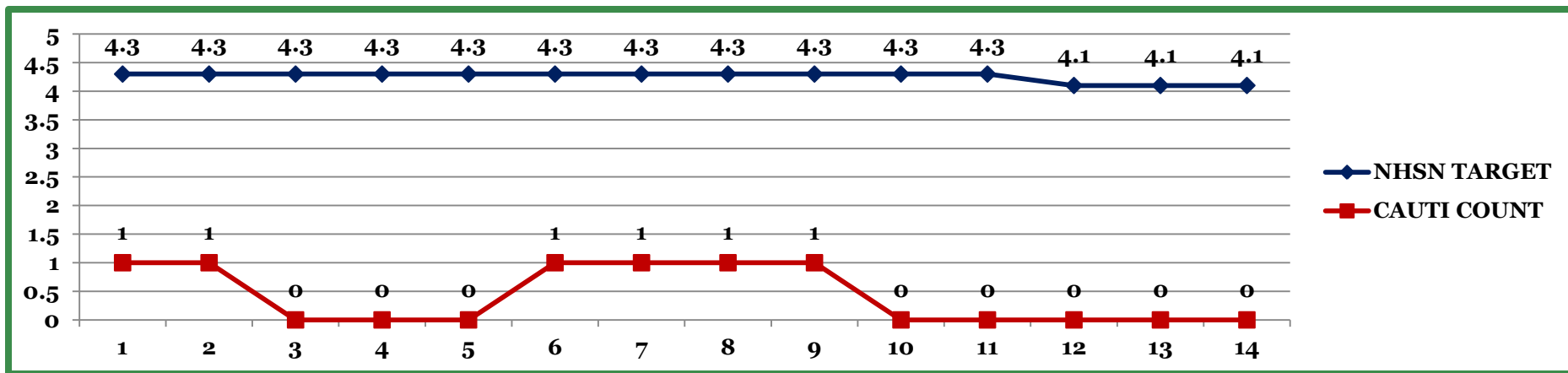
# Results

SCCC	2012	2013	2014	2015
Number CAUTIs	36	23	13	6
Infection Rate	6.1	5	3.6	3.2
NHSN Mean for Trauma Units	3.4	4.1	4.1	4.3



# Results

## SCCC CAUTI DATA

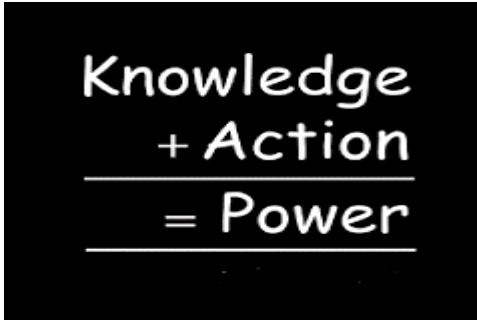


	Jan-15	Feb-15	Mar-15	April-15	May-15	June-15	July-15	Aug-15	Sept-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16
CAUTI COUNT	1	1	0	0	0	1	1	1	1	0	0	0	0	0
CAUTI RATE	3.0	3.5	0.0	0.0	0.0	3.3	3.1	3.5	2.8	0.0	0.0	0.0	0.0	0.0
NHSN TARGET	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.1	4.1	4.1

# Outcomes

Staff have an improved knowledge of:

- **Appropriate indwelling urinary catheter usage**
- **Proper catheter care**
- **Contributing factors of CAUTI**
- **Indwelling urinary catheter removal expectations**



Knowledge  
+ Action  
= Power

# Outcomes

- **Ultimately, reducing CAUTI rates results in improved outcomes for our patients and decreases costs associated with treatment of CAUTIs**

