Session Content

- Prevention:
- Source Control: Why?
- Reducing Patient Load: Preventing Infection Through Creative Care Strategies
It is Time to Change!!

- 44,000 to 98,000 preventable death in hospitals related to medical errors annually (IOM report, 1999)
- 92,888 deaths directly attributable to safety indicators between 2005-2007 (HealthGrades 2009)
  - Failure to rescue, pressure ulcers and post-op infections (VAP)
- Professional Nursing: Back to the Basics
- Quality organizations
  - WHO, Safer HealthCare Now (SHN) & IHI
  - Australian Patient Safety Foundation (1989)/Safety &Quality Council (2000)/New Zealand part of Quality Network
  - Best Care Always (South Africa)
- Preventable injury is expensive

Advocacy Starts with Us
K1. See if Hong Kong has a patient safety institute

Kathle, 8/18/2012
Notes on Hospitals: 1859

“It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm.”

Florence Nightingale

Advocacy = Safety

### Health Care Acquired Infection Data

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>CLA-BSI/per 1000 cath days</td>
<td>6.8</td>
<td>2.0</td>
</tr>
<tr>
<td>VAP/per 1000 vent days</td>
<td>15.8</td>
<td></td>
</tr>
<tr>
<td>CA-UTI/per 1000 cath days</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Staph aureus Resistance/VRE</td>
<td>84.4%/lower VRE</td>
<td>56.8%/33%</td>
</tr>
</tbody>
</table>

INICC Rates 2 to 3x higher than those reported in North America, Western Europe and Australian ICUs.

Consequences of HAI’s

- Higher mortality rates
- Prolonged hospital stays
- Excess costs
- Increased microorganism resistance to antimicrobials


Why Source Control

- 1.7 million HAI’s year/USA
- Everyday, 247 people die in the USA as a result of a HAI
- 5-10% of all patients admitted to US hospital annually contract HAI’s (1 of every 10-20 patients)
- Worldwide, at least 1 in 4 patients in ICU will acquire a HAI during their stay
- 70% preventable
- Higher nurse staffing results in lower HAI’s*
- Estimated 31.5 billion

WHO 2005
*Hospira and Other educational meetings
Pronovost PJ et al JAMA 1999;281:1310-1317
Hand Hygiene is the Single Most Important Factor in Preventing the Spread of Infection

WHO 1st Worldwide Patient Safety Campaign: Hand Hygiene

DECONTAMINATION OF THE PATIENT
Environmental Contamination as a Source of Health Care Acquired Pathogens

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Survival</th>
<th>Data</th>
<th>Transmission Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. difficile</td>
<td>Months</td>
<td>3+</td>
<td>Healthcare facilities</td>
</tr>
<tr>
<td>MRSA</td>
<td>d-weeks</td>
<td>3+</td>
<td>Burn units</td>
</tr>
<tr>
<td>VRE</td>
<td>d-weeks</td>
<td>3+</td>
<td>Healthcare facilities</td>
</tr>
<tr>
<td>Acinetobacter</td>
<td>33 d</td>
<td>2/3+</td>
<td>ICUs</td>
</tr>
<tr>
<td>P. aeruginosa</td>
<td>7 h</td>
<td>1+</td>
<td>Wet environments</td>
</tr>
</tbody>
</table>


Traditional Bathing

Why are there so many bugs in here?

Spreading Microorganism
Bath Basins: Potential Source of Infection

- Multicenter sampling study (3 ICU’s) of 92 bath basins
- Identify & quantify bacteria in patients basins
- Sampling done on basins used > 2x in patients hospitalized > 48 hours & performed 2 hours post bath
- Cultures sent to outside laboratory
- Qualitative vs. quantitative measures used to exclude growth that may have occurred in transport
- Bathing practices not controlled & no antiseptic soaps used to bathe


Bath Basins: Potential Source of Infection

Results

- 98% of all cultures grew some form of bacteria after plating or enrichment

Enrichment Results

- 54% enterococci. 32% for gram -, 23% for S aureus and 13% VRE (statistically significant)
- <10% growth rates for: MRSA 8%, P aeruginosa 5%, C albicans 3% & E coli 2%

Large Multi-Center Basin Evaluation For Presence of MDRO’s

Methodology
- 88 hospitals from US & Canada
- From July 2007 to February 2011
- Randomly selected basins for damp swab culture
- External lab tested for MRSA & VRE & gram – bacilli
- All basins were clean & were not visibly soiled

Results:
- 1103 basins: 63.2% contaminated
- 385 basins (34.9%) from 80 hospitals were colonized with VRE
- 495 basins (44.9% ) from 86 hospitals had gram-negative bacilli
- 36 basins (3.3%) from 28 hospitals had MRSA


Waterborne Infections Study

- Hospital tap water is the most overlooked source for Health-care associated pathogens
- 29 evidenced-based studies present solid evidence of waterborne Health-care associated infections
- Transmission occurs via drinking, bathing, items rinsed with tap water and contaminated environmental surfaces
- Immunocompromised patients are at the greatest risk
- Recommendation I: Minimize patient exposure to hospital tap water via bottled water and pre-packaged, disposable bathing sponges

Bacteria Biofilm

- Organized communities of viable & non-viable microorganisms protected within a matrix of extracellular polysaccharides, nutrients & entrained particles
- Adhere to inert material (plumbing)
- Bacteria contain within Biofilm may be transmitted to at risk patients by direct contact with water used for ingestion, ice, washing


Reducing UTIs Through Basinless Bathing

CA-UTI 7.5 per 1000 catheter days to 4.42 per 1000 catheter days, then to .46 per 1000 catheter days

Impact on UTI with Basin Bathing

UTI Rate- Removal of Prepackaged Bath Product QTR 3 FY05


The Effect of Bathing with Basin and Water and UTI Rate, LOS and Costs

<table>
<thead>
<tr>
<th>Unit Census: 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phases</td>
</tr>
<tr>
<td>I- Pre-Packaged Bathing Washcloths (9 months)</td>
</tr>
<tr>
<td>II- Basin/Water (9 months)</td>
</tr>
<tr>
<td>III- Additional Product Cost, UTI, LOS, COSTS</td>
</tr>
</tbody>
</table>

^1based on 3 packages of 8 towels each  
^2based on product cost of towels, soap, and basin  
^3difference between phase I pre-package/phase II basin water  

Pre-Op Prep

- Antisepsis must demonstrate a $3.0 \log_{10}$ from baseline in groin, $2.0 \log_{10}$ reduction on the abdomen and maintain effectiveness for minimum of 6 hrs.
- CHG shower/bathing versus soap & water showed no difference in SSI (Cochrane EBR: 2007:CD004985)
- 2% prep cloth more effective in reducing bacterial load than 4% CHG solution that must be rinsed off/Inguinal sites sustained action at 10min, 30 min, 6 hrs > than 4% (Edmiston CE. Et al AJIC, 2007;35:89-96)
- CDC recommends must bathe or shower night before
  - Compliance issues, consistency in application, unable to bathe self

Bathing with CHG Basinless Cloths

- Prospective sequential group single arm clinical trial
- 1787 patients bathed
  - Period 1: soap & water
  - Period 2: CHG basinless cloth bath
  - Period 3: non-medicated basinless cloth bath

Veron MO et al. Archives Internal Med 2006;166:306-312
26 colonization's with VRE per 1000 patients days vs. 9 colonization's per 1000 patient days with CHG bath

Table 3. Percentage of Environmental Surface Culture Specimens That Were Positive for Vancomycin-Resistant Enterococci During the 3 Study Periods*

<table>
<thead>
<tr>
<th>Site Where Culture Specimen Was Obtained</th>
<th>Study Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Soap and Water (n = 311)</td>
</tr>
<tr>
<td>Table</td>
<td>10 (3)</td>
</tr>
<tr>
<td>Bed rail</td>
<td>33 (11)</td>
</tr>
<tr>
<td>Pull sheet</td>
<td>63 (20)</td>
</tr>
</tbody>
</table>

Veron MO et al. Archives Internal Med 2006;166:306-312
CHG Bathing Reduces CLA-BSIs

• 52 week, 2 arm, cross-over design clinical trial
• 22 bed MICU with 11 beds in 2 geographically separate areas in the same hospital
• 836 MICU patients
  • 1st 28 weeks: 1 hospital randomize to bathe with (Sage 2%) CHG cloths & the other unit bathe with soap & water
  • 2 week wash out period
  • 2nd 24 weeks: methods were crossed over
• Measured: Primary outcomes: incidence of CA-BSIs & clinical sepsis. Secondary: other infections


CHG Bathing Reduces CLA-BSIs

Results:
• CHG patients were significantly less likely to acquire a CA-BSI 4.1 vs. 10.4 infections per 1000 patient days
• Benefit against primary CA-BSIs by CHG cleansing after 5 days in MICU
• No difference in clinical sepsis or other infections

Daily CHG Bathing with 2% Cloths to Reduce CLA-BSI: Meta-Analysis

• Statistical significance in reducing CLA-BSI’s

• Limitations
  • Non-randomized
  • Before/after designs
  • Other data potentially impacting findings was not reported


The Efficacy of Daily Bathing with Chlorhexidine for Reducing Healthcare-Associated Bloodstream Infections: A Meta-analysis

John C. O’Horo, MD; Germana L. M. Silva, MD; L. Silvia Munoz-Price, MD; Nasia Safdar, MD, PhD

<table>
<thead>
<tr>
<th>Subgroup or Subgroup</th>
<th>Experimental Events</th>
<th>Control Events</th>
<th>Total Events</th>
<th>Weight</th>
<th>M-H, Random, 95% CI</th>
<th>M-H, Random, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHG bathing</td>
<td>2 212</td>
<td>22 2139</td>
<td>2211</td>
<td>0.03</td>
<td>0.19 (0.16, 0.21)</td>
<td>0.10 (0.07, 0.13)</td>
</tr>
<tr>
<td>CHG oral</td>
<td>2 212</td>
<td>22 2139</td>
<td>2211</td>
<td>0.03</td>
<td>0.19 (0.16, 0.21)</td>
<td>0.10 (0.07, 0.13)</td>
</tr>
<tr>
<td>CHG impregnated</td>
<td>2 212</td>
<td>22 2139</td>
<td>2211</td>
<td>0.03</td>
<td>0.19 (0.16, 0.21)</td>
<td>0.10 (0.07, 0.13)</td>
</tr>
<tr>
<td>CHG impregnated</td>
<td>2 212</td>
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<td>2211</td>
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<tr>
<td>Total events</td>
<td>2 212</td>
<td>22 2139</td>
<td>2211</td>
<td>0.03</td>
<td>0.19 (0.16, 0.21)</td>
<td>0.10 (0.07, 0.13)</td>
</tr>
</tbody>
</table>

Heterogeneity: Tau^2 = 0.13; Chi^2 = 26.82, df = 11 (p = 0.0000); I^2 = 58%

Test for overall effect: Z = 5.19 (p = 0.0000)

Total events: 2211

Heterogeneity: Tau^2 = 0.13; Chi^2 = 26.82, df = 11 (p = 0.0000); I^2 = 58%

Test for overall effect: Z = 5.19 (p = 0.0000)

Infect Control Hosp Epidemiol 2012;33(3):257-267
K2 Add the metaanalysis from Infection control & Hosp Epi
Kathle, 8/18/2012
2% CHG Cloth vs. Soap & Water Bathing for Reduction of HAI’s in Med-Surg

- Quasi-experimental study of 14,701 patients in 4 med-surg units (94 beds) in a 719 bed academic center
- Pre-post design: 7102 (control group soap & water) 7699 (experimental group 2% CHG cloth)
- Monitor hand hygiene and isolation compliance
- MRSA screening performed in both groups

Results
- 64% reduced risk of developing HAI’s from MRSA & VRE (hazard ratio, .36 [95% CI, 0.2-0.8]; P= .01)
- More + MRSA colonization in CHG group so > isolation & hand hygiene


VRE & MRSA: Colonization Reduction with 2% CHG cloth


<table>
<thead>
<tr>
<th>VRE</th>
<th>Reference</th>
<th>IRR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vernon</td>
<td>0.35 (0.21, 0.58)</td>
<td>36.38</td>
</tr>
<tr>
<td></td>
<td>Climo</td>
<td>0.48 (0.31, 0.75)</td>
<td>49.88</td>
</tr>
<tr>
<td></td>
<td>Basu</td>
<td>0.50 (0.22, 1.15)</td>
<td>13.74</td>
</tr>
<tr>
<td></td>
<td>Overall (I² = 0.0%, P = 0.582)</td>
<td>0.43 (0.32, 0.59)</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MRSA</th>
<th>IRR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climo</td>
<td>0.68 (0.47, 1.00)</td>
<td>49.14</td>
</tr>
<tr>
<td>Evans</td>
<td>0.34 (0.24, 0.47)</td>
<td>50.86</td>
</tr>
<tr>
<td>Overall (I² = 86.9%, P = 0.006)</td>
<td>0.48 (0.24, 0.95)</td>
<td>100.00</td>
</tr>
</tbody>
</table>

NOTE: Weights are from random effects analysis
VRE & MRSA: Infection Reduction not Seen with 2% CHG cloth


<table>
<thead>
<tr>
<th>VRE</th>
<th>IRR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popovich</td>
<td>0.60 (0.15, 2.40)</td>
<td>20.42</td>
</tr>
<tr>
<td>Popovich</td>
<td>2.12 (0.51, 8.86)</td>
<td>28.52</td>
</tr>
<tr>
<td>Kassabian</td>
<td>0.32 (0.06, 1.59)</td>
<td>22.81</td>
</tr>
<tr>
<td>Bass</td>
<td>1.69 (0.28, 10.14)</td>
<td>18.25</td>
</tr>
<tr>
<td>Overall</td>
<td>0.90 (0.42, 1.90)</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MRSA</th>
<th>IRR (95% CI)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popovich</td>
<td>0.87 (0.35, 2.17)</td>
<td>27.11</td>
</tr>
<tr>
<td>Popovich</td>
<td>1.52 (0.47, 4.99)</td>
<td>15.97</td>
</tr>
<tr>
<td>Kassabian</td>
<td>0.55 (0.23, 1.31)</td>
<td>29.80</td>
</tr>
<tr>
<td>Bass</td>
<td>0.82 (0.33, 2.04)</td>
<td>27.11</td>
</tr>
<tr>
<td>Overall</td>
<td>0.82 (0.51, 1.31)</td>
<td>100.00</td>
</tr>
</tbody>
</table>

CHG Daily Bath Reduces MRSA Bacteremia

Wyncoff D et al. Presented at SCCM 2009

- Guidelines & care of Central lines (2002)
- 2% CHG cloths (2007)
Effect of CHG Cloth Bath of HAI’s in Trauma Patients

- Retrospective analysis 6 months before and after institution of CHG bathing
- 12 bed level 1 trauma center
  - 286 severely injured patients bathes 2% CHG cloth
  - 253 severely injured patients bathed without CHG cloth
- Results: CHG bathed patients less likely to acquire a CLA BSI (2.1-vs. 8.4), MRSA VAP 1.6 vs. 5.7 & rate of colonization was significantly lowers; 23.2 vs.69.4 per 1000 patient days


Simple Cost Effective Strategies to Reduce HAIs

Implementation:
- Utilize daily 2% CHG cloths for cleansing at night in any patient with a central line or foley catheter
- Focused on areas most prone to bacterial colonization from the neck down

Was moved from the ICU to house-wide post initial project with similar results in Med-Surg

- Presented at APIC 2009
Factors Affecting Hong Kong Nurses in Providing Oral Care

- Exploratory Qualitative design
- 10 RN’s with 3-14yrs experience
- Influences on providing oral care
  - Their perceptions of oral care/comfort vs. therapy
  - Fears about providing oral care (ET dislodgement, departing from current practice)
  - Priority (ward culture hierarchy/low compared to other care)
  - Inadequate supplies (training and resources)
  - Need evidence based protocol to help drive oral care

check on any recent oral care studies
Kathle, 8/18/2012
Oral Cavity & VAP

- 89 critically ill patients
- Examined microbial colonization of the oropharynx throughout ICU stay
- Used pulse field gel electrophoresis to compare chromosomal DNA
- Results:
  - Diagnosed 31 VAPs
  - 28 of 31 VAPs the causative organism was identical via DNA analysis

- 49 elderly nursing home residents admitted to the hospital
- Examined baseline dental plaque scores & microorganism within dental plaque
- Used pulse field gel electrophoresis to compare chromosomal DNA
- Results:
  - 14/49 adults developed pneumonia
  - 10 of 14 pneumonias, the causative organism was identical via DNA analysis

El-Solh AA. Chest. 2004;126:1575-1582

Role of Salivary Flow

- Provides mechanical removal of plaque and microorganisms
- Innate & specific immune components (IgA, cortisol, lactoferrin)
- Patients receiving mechanical ventilation have dry mouth which in turn contributes to accumulation of plaque & reduced distribution of salivary immune factors

Munro CL & Grap MJ. AJCC. 2004;13:25-34
What Does the Evidence Tell Us?

Brush
CHX rinse alone
CHX rinse in Combination
Swab/Clean/Moisturize
Suction

All of the above

H$_2$O$_2$, Cetylpyridium Chloride (CPC) & Biotene

H$_2$O$_2$
- >3% may cause harm, <1% no benefit in plaque removal.
- Must be diluted properly, not with normal saline.
- 3x a day mouth rinse with 1.5% H$_2$O$_2$ revealed no mucosal damage, improved plaque scores and overall gingival health.

CPC
- Cetylpyridium chloride had significant antigingivitis effects in several individual studies
- Used in some over the counter plaque reduction rinses (Crest rinse)

Biotene
- Contains salivary enzymes
- Moisturize, Some oral care kits

References:
Gunsolley JC. J Am Dent Assoc. 2006;137(12):1649-57
Tombes MA et.al. Nursing Research. 1993; 42(6):332-337
Recent Trials Reduction in VAP or Colonization with CHG or Povidone-iodine

- 2004: Grap (CHG via swab)
- 2005: Fourier (CHG) (negative trial)
- 2006: Koeman (CHG or CHG/colistin)
- 2006: Munro (CHG via swab & toothbrushing)
- 2006: Sequin (povidone-iodine)
- 2006: Mori (povidone-iodine)
- 2008: Tantipong (CHG)
- 2009, Sona (CHG)
- 2009, Panchabhai (CHG)—no decrease

Prevention of VAP with Oral Antisepsis: A Systematic Review & Meta-analysis

- 14 studies evaluated from 1996 to 2011
- 2481 patients
- All randomized trials
- 9/14 blinded
- 12 trials assessed the effectiveness of CHG (2341 patients, 941 were CABG)
- 2 trials evaluated Povidone-iodine (140pts)
- Variation of additional interventions;
  - toothbrushing,
  - oropharyngeal aspiration
  - mechanical cleaning of the mouth
  - Frequency of antiseptic

Comprehensive Oral Care Program/Bundle element

- Soft suction tooth brush x2 daily
- CHG rinse .12% 2x daily,
- Suction Oral Swab, use of a 1.5% \( \text{H}_2\text{O}_2 \) peroxide mouth rinse or CPC for in between cleaning,
- Deep oral suctioning catheter used 4x daily
- Covered yankauer for non-traumatic oral suctioning
- Dedicated oral suction line for infection control and ease of use.

Murray TM et al. AACN Advanced Critical Care. 2007;18(2):190-199

Frequency of Oral Care and Suctioning

- Process of giving oral care rather than specific agent has a greater influence on the general condition of the mouth.
- 2 to 4 hour interval tends to show a greater improvement in oral health.
- If oral care is omitted for a period of 4 to 6 hours the previous benefits are lost.

DeWalt EM. Nurs Research 1975; 24(2):104-108
Drimmelen and Rollins. Nurs Research 1969: 18; 327-332
Comprehensive Oral Care Protocol: The Good Shepherd Study

Methodology:

• Retrospective study 10 bed Med-Surg
• Protocol included: Covered Yankauer for non-traumatic oral suctioning, soft-suction toothbrush, Suction Oral Swab, use of a 1.5% H₂O₂ peroxide mouth rinse for cleansing, subglottic suction catheter used 4x daily, dedicated oral suction line for infection control and ease of use.
• Education provided and presence of clinical champion.


Oral Care Impact of VAP

Comprehensive Oral Care:

• Reduction in VAP from 5.6 to 2.2 (Schleder B. et al. J Advocate Health 2002;4(1):27-30)
• Reduction in VAP from 4.10 (2005) to (2.15) in 2006 with addition of CPC & comprehensive oral care. Vent bundle & rotational therapy already being performed
• Reduction in VAP from 12.0 to 8.0 (p=.060) with 80% compliance, vent bundle already being performed, 1538 patients randomized to control or study group, Additional outcomes; ↓ vent days (p=.05), ↓ ICU LOS (p=.05) ↓ time to VAP (p=<.001) & reduction in mortality (p=.05) (Garcia R et al AJCC, 2009;18:523-534)
Oral Care Impact of VAP

Comprehensive Oral Care & CHG:
- Reduction in VAP to zero for 2 years, vent bundle, mobility, oral care & CHG with comprehensive education performed (Murray TM et al. AACN Advanced Critical Care. 2007;18(2):190-199)

Dickinson S et al. SCCM Critical Connections, 02/2008
Heck K. et al. Presented at APIC 7/15/2010

Oral Suctioning with Position Change

- Prospective time sequenced non-randomized study
  - 237 control (observation phase 9 months)
  - 227 Interventional (7 months interventional)
  - Difference in nursing protocol was oral suctioning prior to position change (11 additional suctions)
  - All other nursing care the same

- Results:
  - VAP: 6.51 to 2.04 per 1000 ventilator days (p<0.002)
  - Vent days: 28.8 ± 17.2 vs. 20.2 ± 4.0 (p <0.009)
  - ICU LOS: 27.6 ± 17 vs. 20.3 ± 4.0 (p < 0.012)
  - Suctioning before positional change only independent factor responsible for VAP decrease (p=0.003)

Does Compliance Make A Difference?

Oral care compliance & use of the ventilator bundle resulted in a 89.7% reduction in VAP


Bugs Be Gone!!!!

How to Get Started
Achieving the Use of the Evidence

Factors Impacting the ability to Achieve Quality Outcomes at the Point of Care

Value
Attitude
& Accountability

Vollman KM. Australian Crit Care, 2009;22(4):152-154

4 E’s: Implementation Framework

<table>
<thead>
<tr>
<th>Frontline Staff</th>
<th>Team Leaders</th>
<th>Senior Executives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage</td>
<td>Ask, how does this make the world a better place?</td>
<td>Help staff understand the preventable harm</td>
</tr>
<tr>
<td>Educate</td>
<td>What do I need to do?</td>
<td>Convert evidence into behaviors;</td>
</tr>
<tr>
<td>Execute</td>
<td>How can I do it?</td>
<td>Listen to resisters</td>
</tr>
<tr>
<td>Evaluate</td>
<td>How do I know we made a difference?</td>
<td>Define measures</td>
</tr>
</tbody>
</table>
Potential Barriers

- Perception of lack of time or the importance
- Lack of evidence based education…just do it!!!!
- Absence of a define protocol/procedure
- Staff turnover/Replacement staff
- Inaccessibility of needed supplies
- No real clinical lead on the unit
- Lack of feedback on progress
- Lack of accountability/responsibility

Interventions To Ensure Patients Receive Evidence

- Evidence based education
- Recognition of value and reinforcement
- Products/Processes that make it easy for the frontline caregiver to provide the care (make it part of the bundle)
  - Bathing kits
  - Placement on the med record
  - Automated charting with flag reminders
- Frequent rounding/reinforcement of standard
- Multidisciplinary rounds/Checklists

Westwall S. Nursing in Critical Care, 2008;13(4):203-207
Abbott CA, et al. Worldviews on Evidence Based Practice, 2006:139-152

Interventions To Ensure Patients Receive Evidence

- Setting targets/Celebrating successes
- Placement of new practice/education in orientation
- Attractive signs to outline protocol in the patient rooms near the products
- Compliance program with feedback to all caregivers
- Outcome measurement/Feedback*

Westwall S. Nursing in Critical Care, 2008;13(4):203-207
Abbott CA, et al. Worldviews on Evidence Based Practice, 2006:139-152
Be Courageous

We all are responsible for the safety of our patients……Own the Issues

• “If not this, then what??”
• “If not now, then when?”
• “If not me, then who??”