Critical Behaviors for Central Line Care
Please Implement by December 1, 2010

**IV Bag changes**
- Every 24 hours, except manufactured bags (unit specific)
- Apply 24 hour label to the IV bag when initiated

**IV Tubing changes**
- Every Wed and Sun for continuous (includes PCA tubing)
- Every 24 hours for intermittent
- Apply new label each tubing change
- **Do not routinely discontinue the patient from continuous IV fluids for procedures or activities, unless specifically ordered.**

**Dressing Changes, includes Stat Lock and Caps**
- Change Transparent dressings Every Wednesday
  **Includes Huber needle changes**
- Change Gauze dressings every 24 hours
- Prefilled saline syringes not packaged for sterile procedures. (Don’t throw on sterile fields).

**Cap Changes**
- Once a week on Wednesday with dressing change
- Keep system closed, change no more than every 72 hours
- Scrub hub under cap and threads with caps changes on Wednesdays
- Scrub caps minimum 10 seconds with each access
- Positive pressure caps do not require clamping
- Only use CLC2000 on central lines. No need to clamp
- **DO NOT USE Baxter CLEARLINK on central lines.**
  **These are negative pressure caps. Catheter will clot off. Increased risk of infection.**

**Blood Cultures**
- If central line used for blood cultures, remove old cap, scrub hub and threads with alcohol, apply new cap, then draw blood culture.
- Studies are showing high contamination from old caps, and growth under the caps.

**Flushing**
- Flush with 10ml Saline before and after meds
- Flush with 20ml Saline after blood draws, TPN tubing changes, and other viscous solutions
- Flush all lines at least once during your shift, 4, 8 or 12 hour shifts. (Exception, TPN, pressors)

**Future Goals**
- Zero central line infections
- One positive pressure cap
- Surveillance of central lines for compliance in practice-Shared Leadership Quality
- Do these changes to decrease infection-OUTCOMES!!
- Declotting Protocols
- Standing order sets for central line
- In line filter for TPN
- Pre-packaged Sterile Saline Flushes for procedures
- Utilization of AquaGuard to protect dressings during showers

Brought to you by Shared Leadership Practice Council. For any questions, Please contact Denice Gibson or Ann Earhart
10/7/10

Protect your dressings with AquaGuard
Significance
A goal of the Institute of Healthcare Improvement (IHI) and the Centers for Disease Control (CDC) is to eliminate all incidents of hospital acquired infections such as Central Line Associated Blood Stream Infections (CLABSI). In the United States, there are 15 million central vascular catheter (CVC) days (i.e., the total number of days of exposure to CVCs among all patients in just the intensive care population, while over 80,000 line infections occur in this same population. This is an estimate of up to 250,000 cases of central line infections annually with the bone marrow transplant (BMT) and oncology population. This is an estimate of up to 250,000 cases of central line infections annually with the bone marrow transplant (BMT) and oncology population. An estimated 250,000 line infections occur in this same population. This is an estimate of up to 250,000 cases of central line infections annually with the bone marrow transplant (BMT) and oncology population. This is an estimate of up to 250,000 cases of central line infections annually with the bone marrow transplant (BMT) and oncology population.

Interventions
The nursing process was utilized to review every aspect of a potential CLABSI to achieve zero infection rate.
1. Equipment was decreased 72 to 55 pieces and is still decreasing; caps and filters are next to decrease.
2. Nursing education and validation of skill for obtaining standardization
   • mandatory education
3. Blood cultures standardized
   • drawing of one peripheral and one central on multi lumen lines
   • technique of drawing peripheral and central line blood cultures was standardized utilizing criteria from laboratory standards and nursing best practice
   • reporting blood cultures was standardized
4. Individual evaluation of positive cultures results with multidisciplinary team – based on CDC guidelines

Evaluation
Following the successful implementation of the Central Line bundle insertion and maintenance of the bundle the unit met the original bench mark of 3 infections per 1,000 patient days.
1. Reinforced utilization of nursing process
2. The hospital has fallen well below the original benchmark and has achieved zero in several departments
3. Annual education of every nurse caring for central lines

Keys to elimination include
1. Evaluation of necessity of placement
2. Avoiding femoral site
3. Selection of subclavian over jugular site
4. Use of ultrasound or vein finder for placement
5. Minimize ports
6. Hand hygiene
7. Prevent catheter exposure to moisture at insertion
8. Daily review of line necessity
9. Follow insertion bundle

Purpose
A multidisciplinary team was established to pursue the quality issues surrounding a higher than desired CLABSI rate in the oncology and BMT population in a large community academic center. The team was led by the Clinical Nurse Specialist, and comprised of staff RNs, quality representative, laboratory personnel, educators, and leaders of BMT/Oncology, and epidemiology. All aspects of central line care were examined, review of all guidelines, benchmark practices, and review all pieces of equipment and tubing utilized in all lines. A goal of achieving zero CLABSI rate was set, knowing that in midyear 2009 CLABSI rate in this population was 4.5/1000 line days.

Discussion
Key to success of this process improvement was the commitment of the multidisciplinary team and open forums of the processes while establishing standards of care. The multiple variety of central lines in the BMT/oncology population has made it challenging to create processes to seek zero CLABSI, but with a team effort the zero rate can be achieved.

References