HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Infection Prevention and Control Department		
Document:	Multidisciplinary Policy and Procedure (MPP)		
Title:	Care and Prevention of Central Line Associated Bloodstream Infection (CLABSI)		
Applies To:	Nurses and Technician		
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1. PURPOSE:

1.1 To provide guidelines regarding appropriate catheters and catheter sites, aseptic insertions, and Maintenance of catheter sites.

1.2 Patients' care bundles are the series of evidence-based practices / interventions related to devices or process of care that, when implemented together, will achieve significantly better outcomes than when implemented individually.

1.3 To reduce the risk of developing CLABSI.

2. DEFINITONS:

2.1 Central Line bundle: Central line bundle: It is a group of evidence-based interventions for patients with intravascular central catheters that, when implemented together, result in better outcomes (reduce BSI) than when implemented individually.

2.2 CLABSI —Central line associated bloodstream infection.

2.2.1 CLABSI is a primary bloodstream infection (BSI) in a patient who had a central line or umbilical catheter.

2.2.2 The central line or umbilical catheter has to be in place for >2 days and in place at the date of event or the day before.

2.2.3 Primary BSI is a laboratory-confirmed bloodstream infection (I-CBI) that is not secondary to an infection meeting CDC/NHSN criteria at another body site. Secondary BSI: A BSI that is thought to be seeded from a site –specific infection at another body site.

3. POLICY:

3.1 Surveillance can be done in any inpatient location where denominator data can be collected, this includes:• ICUs • NICUs • SCA • Other inpatient locations

3.2 Provides compliance audit feedback to the critical care unit's HCWs regarding their performance in insertion and maintenance of central catheter lines regularly and corrective actions are applied accordingly

3.3 CLABSI Rate Calculation:

$$\text{CLABSI Rate} = \frac{\text{Number of CLABSI (Numerator)}}{\text{Central line days (Denominator)}} \times 1000$$

3.4 IPC practitioners regularly conducting auditing round to monitor and document adherence to recommended practices for insertion and maintenance of central catheter lines in critical care units (weekly).

3.5 Compliance with the any bundle is defined as the percentage of patients who have received all elements of the bundle with documentation in daily goals sheets . bundle forms. and/or elsewhere in the medical record.

3.6 "ALL-OR-NONE" INDICATOR. If any of the elements are not documented, the patient is not counted in the numerator. If a bundle e element is contraindicated for a particular patient and this is documented appropriately in the medical record, then the patient is considered compliant with regard to that measure. Data Analysis FORMULA:

Central Line Bundle Compliance = (Number of patients on central line who have received all elements of the CL Bundle / Total number of patients with central line reviewed for bundle compliance) x 100

$$\text{Central line bundle compliance} = \frac{\text{Total number of patients with all compliant applicable bundle components}}{\text{Total number of patients reviewed for the bundle compliance}} \times 100$$

(Calculate Bundle compliance for individual element would guide towards targeted corrective interventions in case of low compliance).

3.7 Daily implementation of patient care bundles is the responsibility of nursing staff of critical care units.

3.8 Bundle review has to be started for every patient on Central Line Catheter in the critical care units and other areas where applicable.

4. PROCEDURE:

4.1 Central Line Catheter Insertion:

4.1.1 Central Line Type:

4.1.1.1 Choose the central line type (e.g., umbilical venous catheter (UVC), peripherally inserted central catheter (PICC), tunneled catheter, etc.) based on the clinical needs of the neonatal intensive care unit (NICU) patient.

4.1.1.2 The choice of central line type to insert in a neonatal intensive care unit (NICU) patient should not be based solely on central line-associated blood stream infection (CLABSI) prevention.

4.1.1.3 Consider choosing the minimum number of lumens based on the clinical needs of the neonatal intensive care unit patients.

4.1.2 Central Line Insertion Site:

4.1.2.1 Choose the insertion site appropriate to the central line type to be inserted in a neonatal intensive care unit (NICU) patient (e.g., UVC, PICC, etc.) based on the clinical needs of the patient and should not be based solely on central line 4 | Guidelines for Prevention and Control of Central Line Associated Blood Stream Infections (CLABSI) in Neonatal Intensive Care Unit (NICU) associated blood stream infection (CLABSI) prevention

4.1.2.2 Use the most appropriate site as per medically indicated

4.1.2.3 Weigh the risk and benefits of placing the device at a recommended site to reduce infectious complications against the risk of mechanical complications (e.g. pneumothorax, subclavian artery puncture, subclavian vein laceration, subclavian vein stenosis, hemothorax, thrombosis, air embolism, and catheter misplacement) .

4.1.2.4 Avoid use of previously damaged or sclerotic veins because of the increased risk of complications.

4.2 Components of central line (insertion) bundle:

4.2.1 Hand hygiene:

4.2.1.1 Perform hand hygiene procedures, either by washing hands with antimicrobial soap and water or with alcohol-based hand rubs (ABHR).

4.2.1.2 Perform hand hygiene procedures, either by washing hands with antimicrobial soap and water or with alcohol-based hand rubs (ABHR).

4.2.1.3 Before and after palpating catheter insertion sites (Palpation of the insertion site should not be performed after the application of antiseptic, unless aseptic technique is maintained.)

4.2.1.4 Before and after inserting, replacing, accessing, repairing, or dressing an intravascular catheter.

4.2.1.5 When hands are visibly soiled or if contamination is suspected

4.2.1.6 Before and after any invasive procedures are done

4.2.1.7 Before and after any invasive procedures are done In between the patients.Sterile gloves should be worn for the insertion of arterial, central, and midline catheters.

4.2.1.8 Before donning and after removing gloves.

4.2.2 Maximal barrier Precautions:

4.2.2.1 For the Provider:

4.2.2.1.1 Non-sterile cap and mask. The surgical cap should cover all hair or wear a hood if facial hair is present i.e.beards /moustache/side-burns. Mask should cover nose and mouth tightly.

4.2.2.1.2 Sterile gown and gloves. The Inserter and Assistant must wear a surgical cap, mask, sterile gown and sterile gloves.

4.2.2.1.3 The Circulating Nurse who has direct patient contact must wear a surgical cap, mask, sterile gown and clean gloves.

4.2.2.1.4 Cover the patient from head to toe with a sterile drape with only one small opening at the insertion site after skin disinfection.

4.2.2.1.5 Others have to wear at least a surgical mask; e.g. staff remaining in the room who are not directly involved in the procedure.A key change to decrease the likelihood of central line infections is to apply maximal barrier precautions in preparation for line insertion.

4.2.2.1.6 For the operator placing the central line and for those assisting in the procedure, maximal barrier precautions mean strict compliance with hand hygiene and wearing a cap, mask, sterile gown, and sterile gloves.

4.2.2.1.7 The cap should cover all hair and the mask should cover the nose and mouth tightly. These precautions are the same as for any other surgical procedure that carries a risk of infection.

4.2.2.1.8 For the patient, applying maximal barrier precautions means covering the patient from head to toe with a sterile drape, with a small opening for the site of insertion.

4.2.2.2 For the Patient:

4.2.2.2.1 Cover patient's head and body with a large

4.2.2.2.2 sterile drape (use more than one if needed for patients with large body size

4.2.3 Chlorhexidine skin antisepsis

4.2.3.1 Single-use antiseptic swabs/applicators should be used only, avoid use of multi-dose containers: The technique, for most kits, is as follows:

4.2.3.1.1 Prepare skin with antiseptic/detergent chlorhexidine 2% in 70% isopropyl alcohol (according to IHI recommendations).

4.2.3.1.2 Pinch wings on the chlorhexidine applicator to break open the ampule (when ampule is included).

4.2.3.1.3 Hold the applicator down to allow the solution to saturate the pad.

4.2.3.1.4 Press sponge against skin, and apply chlorhexidine solution using a back-and forth friction scrub for at least 30 seconds. Do not wipe or blot.

4.2.3.1.5 Allow antiseptic solution time to dry completely before puncturing the site (~ 2 minutes)

4.2.3.2 Type of antiseptic solution:

4.2.3.2.1 For Birth weight of ≤1,500 gm or aged less <4 weeks are using 2% aqueous chlorhexidine.

4.2.3.2.2 Birth weight of >1,500 gm and aged less >4 weeks are using 2% chlorhexidine in alcohol as adults and pediatrics

4.2.3.2 Nursing staff scrub the access port or hub with friction immediately prior to each use with an appropriate approved antiseptic for at least 15 seconds.

4.2.3.3 Proper dressing choice: Use transparent semipermeable dressing Use gauze only if the site is bleeding or oozing. Proper frequency of dressing change:

4.2.3.3.1 Replace transparent dressing every 7 days

4.2.3.3.2 Replace gauze dressing every 48 hours Replace immediately any dressing that is soiled, dampened, or loosened

4.2.3.4 Chlorhexidine Bathing:

4.2.3.4.1 Consider use of 2% chlorhexidine bathing to prevent central line-associated blood stream infection (CLABSI) in neonatal intensive care unit (NICU) patients in whom the benefits are judged to outweigh the potential risks.

4.2.3.4.2 Gestational age, chronologic age, and skin maturity should be considered when assessing risks and benefits of chlorhexidine-containing agents in determining eligible patients

4.2.4 Optimal catheter site selection, with subclavian vein as the preferred site for non-tunneled catheters

4.2.4.1 Assess which site is frequently used - Subclavian is the preferred & femoral the least choice with more risk of CLABSI.

4.2.4.2 The femoral site is associated with greater risk of infection in adults; specially in overweight adult patients.

4.2.4.3 Absolute contraindications to subclavian approach

4.2.4.3.1 Trauma to the ipsilateral clavicle, anterior proximal rib, or subclavian vessels

4.2.4.3.2 Anticoagulation therapy or bleeding disorder (Inability to do direct pressure tostop bleeding)

4.2.4.3.3 Distorted local anatomy (e.g., vascular injury, prior surgery, radiation history)

4.2.4.3.4 Infection at insertion site

4.2.4.3.5 Inexperienced operator

4.2.4.3.6 Uncooperative patient

4.2.4.3.7 Patients with higher risks for pneumothorax or inability to tolerate pneumothorax

4.2.5 Ultrasound guidance to place central venous catheters

4.2.5.1 Complete aseptic technique including antimicrobial handwashing, & use of maximum barrier precautions (sterile gloves, mask, sterile gown, and sterile full body drape)

4.2.5.2 Use of ultrasound guidance to place central venous catheters can reduce the number of cannulation attempts and mechanical complications.

4.2.5.3 Steps of performing ultrasound-guided central venous catheter placement:

4.2.5.3.1 Identify anatomy of the insertion site and localization of the vein. Check for anatomic variations o Use short axis (transverse; A) and long axis (longitudinal; B) view . Perform this step before prepping and draping of the puncture site

4.2.5.3.2 Confirm patency of the vein. Use compression ultrasound to exclude venous thrombosis . Use color Doppler imaging and Doppler flow measurements to confirm the patency of the vein and to quantify blood flow

4.2.5.3.3 Use real-time US guidance for puncture of the vein. Use an aseptic approach . Use a short axis/out-of-plane (A) or a long axis/in-plane (B) approach . Try to constantly identify the tip of the needle during the needle approach to the vein and puncture of the vein

4.2.5.3.4 Confirm needle position in the vein. Confirm that the needle tip is placed centrally in the vein before approaching the guide wire

4.2.5.3.5 Confirm wire position in the vein. Confirm the correct position of the guide wire in a short axis (A) and a long axis (B) view

4.2.5.3.6 Confirm catheter position in the vein. Confirm the correct position of the central venous catheter in the vein in a short axis (A) and a long axis (B) view

4.3 Central line Maintenance Bundle. It is a group of evidence-based interventions for patients with intravascular central catheters that, when implemented together, result in better outcomes (reduce CLABSI) than when implemented individually. Components of central line maintenance bundle:

4.3.1 Hand Hygiene and aseptic technique

4.3.1.1 Hand hygiene before catheter access/manipulation.

4.3.1.2 Scrub the access port with an appropriate antiseptic (chlorhexidine, povidone iodine, or 70% alcohol) and access the port only with sterile devices.

4.3.1.3 Bathe ICU patients >2 months of age with a chlorhexidine preparation on a daily basis

4.3.2 Daily review / assessment of catheter necessity with prompt removal of unnecessary lines.

4.3.2.1 Nursing staff review daily the ongoing need of central venous catheter and the possibility of discontinuation with the treating physician

4.3.2.2 Daily review of line necessity. Remove promptly when no longer needed. Many times, central lines remain in place simply because they provide reliable access and because personnel have not considered removing them.

4.3.3 Proper dressing choice:

4.3.3.1 Use chlorhexidine-impregnated dressings only for adult patients (but not pediatric patients) with short term non-tunneled catheters.

4.3.3.2 Use transparent semipermeable dressing. Use gauze only if the site is bleeding or oozing or the patient is diaphoretic.

4.3.4 Proper frequency of dressing change:

4.3.4.1 Replace transparent dressing every 7 days (except in those pediatric patients in which the risk for dislodging the catheter may outweigh the benefit of changing the dressing)

4.3.4.2 Replace gauze dressing every 2 days .

4.3.4.3 Replace immediately dressing that becomes damp, loosened, or visibly soiled

4.3.5 Proper replacement of administrative sets:

4.3.5.1 In patients not receiving blood, blood products or fat emulsions, replace administration sets that are continuously used, including secondary sets and add on devices no more frequently than every 4 days, but at least every 7 days.

4.3.5.2 If blood or blood products or fat emulsions are administered, change tubing within 24 hours of initiating the infusion.

4.3.5.3 If propofol is administered, replace tubing used to administer propofol infusions every 6 or 12 hours or when the vial is changed.

4.4 **Other Recommendations for Prevention and Control of Central Line-associated Blood Stream Infections (CLABSIs) in Neonatal Intensive Care Unit (NICU) Patients:**

4.4.1 Hubs Access and Blood Sampling:

4.4.1.1 Minimize the number of times central line hubs are accessed and minimize blood sampling through central lines to decrease the risk for central line-associated blood stream infection (CLABSI) in neonatal intensive care unit (NICU) patients.

4.4.1.2 The evidence suggested an association between increased catheter manipulations and an increase in catheter-associated bloodstream infections.

4.4.2 Use of Central Line Antimicrobial Locks:

4.4.2.1 Consider central line antimicrobial locks for neonatal intensive care unit (NICU) patients in addition to core infection prevention and control strategies when a unit is experiencing ongoing central line-associated blood stream infection (CLABSIs).

4.4.2.2 Some NICU patients require continuous infusions that cannot be interrupted and no need for central line antimicrobial locks.

4.4.3 Removal of Umbilical Venous and Umbilical Arterial Catheters if Not Needed:

4.4.3.1 Remove umbilical venous and umbilical arterial catheters (UVCs) in neonatal intensive care unit (NICU) patients as soon as possible and when no longer needed.

4.4.3.2 Suggesting a benefit to removing UVCs at the earliest opportunity.

4.4.3.3 Consider removal of umbilical artery catheters and umbilical venous catheters at or before 7 days of dwell time in neonatal intensive care unit (NICU) patients.

4.4.3.4 Consider removal of umbilical venous catheters and inserting a peripherally inserted central catheter (PICC) or other long-term central venous catheter at or before 7 days of umbilical venous catheter dwell time for neonatal intensive care unit (NICU) patients requiring long-term central venous access.

4.4.4 Removal of Peripherally Inserted Central Catheter (PICC) if Not Needed:

4.4.4.1 Remove as soon as possible and when no longer needed due to the concern for increasing risk of central line-associated blood stream infection (CLABSI) associated with increasing dwell time.

4.4.5 Use of Prophylactic Anticoagulant:

4.4.5.1 Do not use prophylactic anticoagulant infusions for the purposes of preventing central line-associated blood stream infection (CLABSI) in neonatal intensive care unit (NICU) patients.

4.4.6 Systemic Antibiotic Prophylaxis:

4.4.6.1 Do not use prophylactic antimicrobial infusions routinely to decrease the risk of bacterial central line-associated blood stream infection (CLABSI) in neonatal intensive care unit (NICU) patients.

4.4.7 Develop a Dedicated Catheter Care Team:

4.4.7.1 Consider implementing a dedicated catheter care team to prevent central line associated blood stream infection (CLABSI) in neonatal intensive care unit (NICU) patients.

4.4.8 Catheter Site Dressing:

4.4.8.1 Use either sterile gauze or sterile transparent, semipermeable dressing to cover the catheter site.

4.4.8.2 If the patient is diaphoretic or if the site is bleeding or oozing, use a gauze dressing until this is resolved.

4.4.8.3 Do not use topical antibiotic ointment or creams on insertion sites because of their potential to promote fungal infections and antimicrobial resistance.

4.4.8.4 Chlorhexidine-impregnated dressings are NOT recommended to protect the site of short-term, non-tunneled central venous catheters for premature neonates due to risk of serious adverse skin reactions.

4.4.9 Catheter Securement:

4.4.9.1 Use a suture-less securement device to reduce the risk of infection for intravascular catheters

4.4.9.2 Use a suture-less securement device for PICCs and others as applicable to prevent skin breakdown and colonization around the catheter site.

4.4.10 Proper replacement of administrative sets:

4.4.10.1 In patients not receiving blood, blood products or fat emulsions, replace administration sets that are continuously used, including secondary sets and add-on devices no more frequently than every 4 days, but at least every 7 days.

4.4.10.2 If blood or blood products or fat emulsions are administered, change tubing within 24 hours of initiating the infusion.

4.4.11 Maintenance of Central Line:

4.4.11.1 Assess catheter insertion site daily by visual inspection, and palpation if required utilizing a sterile procedure. Document findings and any necessary interventions.

4.4.11.2 Do not routinely use antimicrobial or antiseptic flushes or lock to prevent CLABSIs.

4.4.11.3 Change dressing every 7 days if dry and intact, as clinically indicated when inspection of the site is necessary or immediately if it becomes soiled, moist, or un-occlusive.

4.4.11.4 Replace gauze dressing every 2 days.

4.4.11.5 Replace immediately dressing that becomes damp, loosened, or visibly soiled

4.4.11.6 Document dressing changes and site condition. Label dressing with date, time and initials.

4.4.12 **Specific Recommendations Regarding Umbilical Catheters:**

4.4.12.1 Remove and do not replace umbilical artery catheters if any signs of CRBSI, vascular insufficiency in the lower extremities, or thrombosis are present.

4.4.12.2 Remove and do not replace umbilical venous catheters if any signs of CRBSI or thrombosis are present.

4.4.12.3 Cleanse the umbilical insertion site with an antiseptic before catheter insertion. Avoid tincture of iodine because of the potential effect on the neonatal thyroid. Other iodine-containing products (e.g., povidone iodine) can be used.

4.4.12.4 Do not use topical antibiotic ointment or creams on umbilical catheter insertion sites because of the potential to promote fungal infections and antimicrobial resistance.

4.4.12.5 Add low-doses of heparin (0.25—1.0 U/ml) to the fluid infused through umbilical arterial catheters.

4.4.12.6 Remove umbilical catheters as soon as possible when no longer needed or when any sign of vascular insufficiency to the lower extremities is observed. Optimally, umbilical artery catheters should not be left in place >5 days.

4.4.12.7 Umbilical venous catheters should be removed as soon as possible when no longer needed, but can be used up to 14 days if managed aseptically.

4.4.12.8 An umbilical catheter may be replaced if it is malfunctioning, and there is no other indication for catheter removal, and the total duration of catheterization has not exceeded 5 days for an umbilical artery catheter or 14 days for an umbilical vein catheter.

4.5 Central line Associated Bloodstream Infection

4.5.1 Surveillance can be done in any inpatient location where denominator data can be collected, this includes:• ICUs • NICUs • SCA• Other inpatient locations. Inpatients receiving dialysis are included in any CLABSI surveillance in the location in which they are housed, regardless of whether or not the central line is the only central line and only accessed for dialysis.

4.5.2 Surveillance methodology :Active ,Patient based, Prospective, Priority-directed targeted,Yield risk-adjusted incidence rates.

4.5.3 Date of event (DOE): It is the date when the FIRST element used to meet the CLABSI criterion occurs for the first time within the 7-day infection window period.

4.5.4 Central line: The following are considered great vessels for the purpose of CLABSI surveillance:
• Aorta. • Pulmonary artery. • Superior vena cava. • Inferior vena cava.• Brachiocephalic veins.
• Internal jugular veins. • Subclavian veins.• External iliac veins. • Common iliac veins.
• Femoral veins. • In neonates, the umbilical artery/vein.

4.5.5 The following devices are not considered central lines:• Arterial catheters unless in the pulmonary artery, aorta or umbilical artery• Arteriovenous fistula • Arteriovenous graft
• Atrial catheters• Extracorporeal life support (ECMO) • Hemodialysis reliable outflow (HERO) dialysis catheter• Intra-aortic balloon pump (IABP) devices • Peripheral IV or Midlines
• Ventricular Assist Device (VAD)

4.5.6 Types of central lines:

4.5.6.1 Temporary central line: A non-tunneled, non-implanted catheter.

4.5.6.2 Permanent central line: Includes

4.5.6.2.1 Tunneled catheters, including certain dialysis catheters.

4.5.6.2.2 Implanted catheters (including ports).

4.5.6.3 Umbilical catheter: A central vascular device inserted through the umbilical artery or vein in a neonate

4.5.7 Counting central line days

4.5.7.1 If a patient has more than one temporary central line on a given day, this is counted only as one central line day

4.5.7.2 If a patient has both a temporary and a permanent central line on the same day, the day is counted as one temporary central line day.

4.5.7.3 If an infant has both an umbilical catheter and a non-umbilical central line, count as an umbilical catheter day only

4.5.8 Central line removal and reinsertion:

4.5.8.1 If central line was removed and reinserted before a full calendar day without a central line, then continue the day count

4.5.8.2 Therefore if the patient is without a central line for at least one full calendar day (NOT to be read as 24 hours), then start a new day count.

4.5.9 Transfer Rule:

4.5.9.1 If the date of event for a CLABSI is the day of transfer or discharge, or the next day, the CLABSI is attributed to the transferring location.

4.5.9.2 Receiving facilities should share information about such HAIs with the transferring facility to enable reporting.

4.5.10 Multiple Transfers: If the patient has been transferred to more than one location on the date of CLABSI, or the day before, attribute the CLABSI to the first location in which the patient was housed the day before the CLABSI's date of event

5. MATERIALS AND EQUIPMENT:

5.1 **Forms and Records:**

5.1.1 N/A

5.2 **Materials and Equipment**

5.2.1 N/A

6. RESPONSIBILITIES:

6.1 IPC department hold responsibility to monitor and document HCWs' adherence to recommended practices for insertion and maintenance of Central Lines in critical care units.

7. APPENDICES:

7.1 Central line insertion and maintenance bundle form

8. REFERENCES:

8.1 Healthcare Associated Infections (HAIs) Second Edition. MOH Surveillance Manual. Last updated: November 2023

8.2 General Directorate of Infection Prevention and Control in Healthcare Facilities (GDIPC) Guidelines for Prevention and Control of Central Line Associated Blood Stream Infections (CLABSI) in Neonatal Intensive Care Unit (NICU). Version 1.1. 1445 – 2024

9. APPROVALS:

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7. APPENDICES:

7.1 CENTRAL LINE INSERTION AND MAINTENANCE BUNDLE FORM

PATIENT'S INFORMATION					
Patient name:			MRN:		
Unit: Bed No.			Age: M/F:		
Admission date:			Admission diagnosis:		
CL insertion date:			Type of Catheter: Permanent Temporary		
Type of Central line catheter used: ☐ CVC ☐ UVC ☐ UAC ☐ PICC line					
For neonates: (birth weight in gms) ☐ ≤750 ☐ 751-1000 ☐ 1001-1500 ☐ 1501-2500 ☐ > 2500					
INSERTION BUNDLE ELEMENTS			**Yes**	**No**	**N/A**
1. Hand hygiene	Do hand hygiene per indication				
2. Maximal barrier precautions:	a. For the operator: cap, mask, sterile gown, and sterile gloves				
	b. For the patient: Covering the patient from head to toe with a sterile drape, with a small opening for the site of insertion.				
3. Chlorhexidine skin antisepsis	a. 2% chlorhexidine in 70% alcohol for adults, pediatrics & neonates >4 wks. or >1500 gms				
	b. 2% aqueous chlorhexidine for Neonates < 4 wks. or <1500 gms				
4. Optimal catheter site selection, with subclavian vein as the preferred site for non-tunneled catheters	Femoral site is associated with greater risks				
5. Ultrasound guidance to place central venous catheters	Staff to do the procedure must be fully trained in its technique				

7.2 CENTRAL LINE INSERTION AND MAINTENANCE BUNDLE FORM

MAINTENANCE BUNDLE ELEMENTS															
Date	**Hand Hygiene**			**Daily assessment of catheter necessity with prompt removal of unnecessary lines**			**Proper dressing choice (Use transparent semipermeable dressing or Use gauze only if the site is bleeding or oozing)**			*** Proper frequency of dressing change**			**** Proper replacement of administrative sets**		
	YES	**No**	**N/A**	**YES**	**No**	**N/A**	**YES**	**No**	**N/A**	**YES**	**No**	**N/A**	**YES**	**No**	**N/A**