Catheter associated blood stream infection (CABSI)

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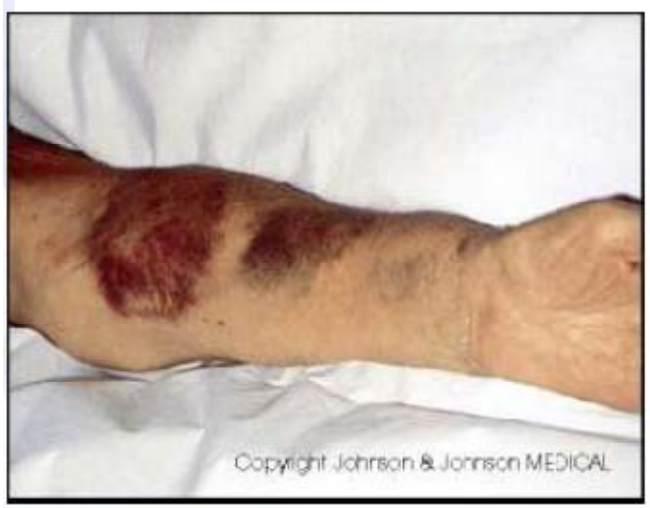
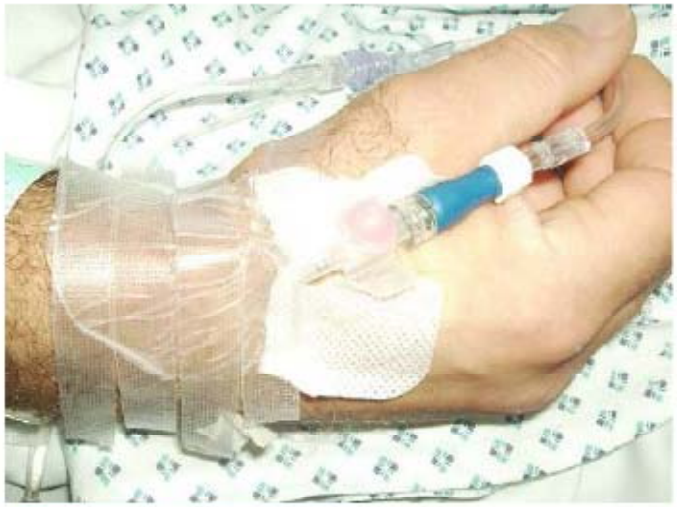
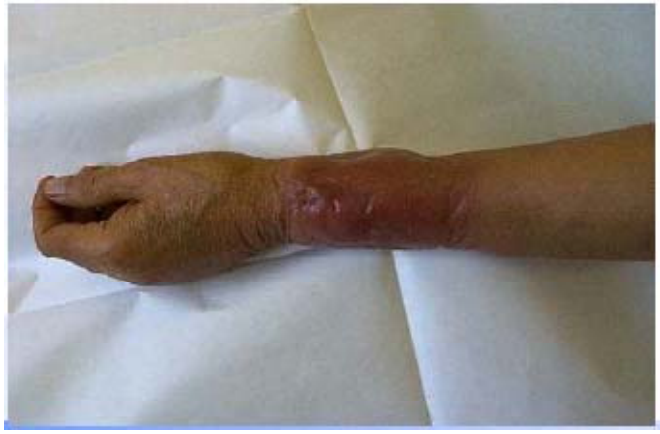
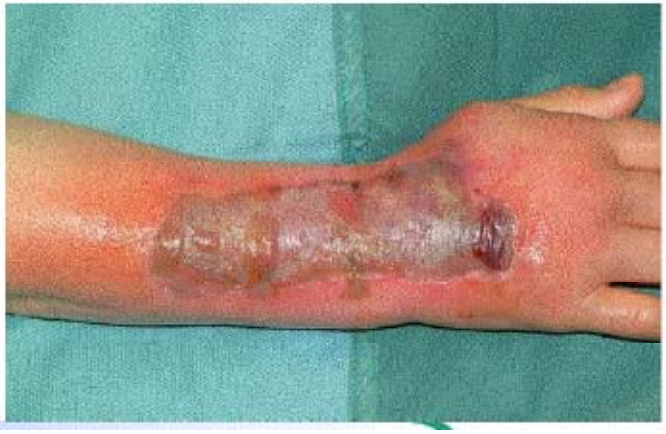
CABSI









CABSI

- Great emphasis
- Clearly written policies and guidelines
- Care-bundles
  - Central lines
  - Peripheral lines
  - Insertion and ongoing care

Central venous catheter care bundle

- Insertion
  - Catheter type
  - Insertion site
  - PPE
  - Skin preparation
  - Hand hygiene
  - Dressing
  - Safe disposal of sharps
  - Documentation

  - http://hcai.dh.gov.uk/files/2011/03/2011-03-14-HII-Central-Venous-Catheter-Care-Bundle-FINAL.pdf

- Ongoing Care
  - Hand hygiene
  - Site inspection
  - Dressing
  - Catheter injection ports
  - Catheter access
  - Administration set replacement
  - Catheter replacement

Central venous catheter care bundle

Insertion
1.Catheter type ▪ Single lumen catheter is used unless otherwise indicated. ▪ Antimicrobial impregnated catheter is used if the duration is estimated to be of 1-3 weeks and the risk of CR BSI high.
2. Insertion site ▪ Catheter is inserted into the subclavian or internal jugular.
3. Personal protective equipment ▪ Maximal sterile barriers and aseptic technique, including a sterile gown, sterile gloves, and a large sterile drape, used for the insertion of a central venous access device. ▪ Eye/full protection is worn if there is a risk of splashed blood or other bodily fluids.
4. Skin preparation ▪ 2% chlorhexidine gluconate in 70% isopropyl alcohol is used and allowed to dry for at least 30 seconds. *If a patient has a sensitivity use a single patient use povidone–iodine application.* ▪ In line with local policy for neonates.
5. Hand hygiene ▪ Hands are decontaminated immediately before and after each episode of patient contact using the correct hand hygiene technique. (*Use of the World Health Organizations '5 moments of hand hygiene' or the NPSA 'Clean you hands campaign' is recommended).*
6. Dressing ▪ A sterile, transparent, semi permeable dressing is used which allows observation of insertion site.
7. Safe disposal of sharps ▪ Sharps disposed of safely at the point of care and in line with local policy
8. Documentation ▪ Details of insertion are documented in the records (including date, location, catheter lot number and signature and name of operator undertaking insertion).

Central venous catheter care bundle

Ongoing care actions
1. Hand hygiene ▪ Hands are decontaminated immediately before and after each episode of patient contact using the correct hand hygiene technique. (*Use of the World Health Organizations '5 moments of hand hygiene' or the NPSA 'Clean you hands campaign' is recommended*).
2. Site inspection ▪ Site is inspected daily for signs of infection and is recorded in the patient's record.
3. Dressing ▪ An intact, dry, adherent transparent dressing, is present. ▪ Insertion site should be cleaned with 2% chlorhexidine gluconate in 70% isopropyl alcohol prior to if dressing changed.
4. Catheter injection ports ▪ Injection ports are covered by caps or valved connectors.
5. Catheter access ▪ Aseptic techniques are used for all access to the line. ▪ Ports or hubs are cleaned with 2% chlorhexidine gluconate in 70% isopropyl alcohol prior to catheter access. ▪ Flush line with 0.9% sodium chloride for lumens in frequent use.
6. Administration set replacement ▪ Set is replaced immediately after administration of blood/blood products. ▪ Set is replaced after 24 hours following total parenteral nutrition (if it contains lipids). ▪ Set is replaced within 72 hours of all other fluid sets.
7. Catheter replacement ▪ Catheter is removed if no longer required or decision not to remove is recorded. ▪ Details of removal are documented in the records (including date, location, and signature and name of operator undertaking removal).

Peripheral intravenous cannula care bundle

- Insertion
  - Aseptic techniques
  - Hand hygiene
  - PPE
  - Skin preparation
  - Dressing
  - Documentation

- http://hcai.dh.gov.uk/files/2011/03/2011-03-14-HII-Peripheral-intravenous-cannula-bundle-FIN....pdf

- Ongoing care
  - Hand hygiene
  - Continuing clinical indication
  - Site inspection
  - Dressing
  - Cannula access
  - Administration set replacement
  - Cannula replacement
  - Documentation

Peripheral intravenous cannula care bundle

Insertion actions

1. Aseptic Technique

- Procedure is carried out using a recognised aseptic technique.
- Needle free device used when available.
- A new cannula is used for each attempt.
- Cannula is flushed in line with local policy.

2. Hand hygiene

- Hands are decontaminated immediately before and after each cannula insertion contact using the correct hand hygiene technique. *Use of the World Health Organizations '5 moments of hand hygiene' or the National Patient Safety Agency (NPSA) 'Clean you hands campaign' is recommended.*

3. Personal protective equipment

- Disposable apron and gloves to be worn and disposed of following use and between patients.

4. Skin preparation

- 2% chlorhexidine gluconate in 70% isopropyl alcohol is used and allowed to dry for at least 30 seconds. *If a patient has a sensitivity use a single patient use povidone–iodine application.*
- In line with local policy for neonates.

5. Dressing

- A sterile, semi-permeable, transparent dressing is used allowing observation of insertion site.

6. Documentation

- Document date, reason for insertion, catheter size, operator undertaking insertion and if insertion was high risk with signature.

Peripheral intravenous cannula care bundle

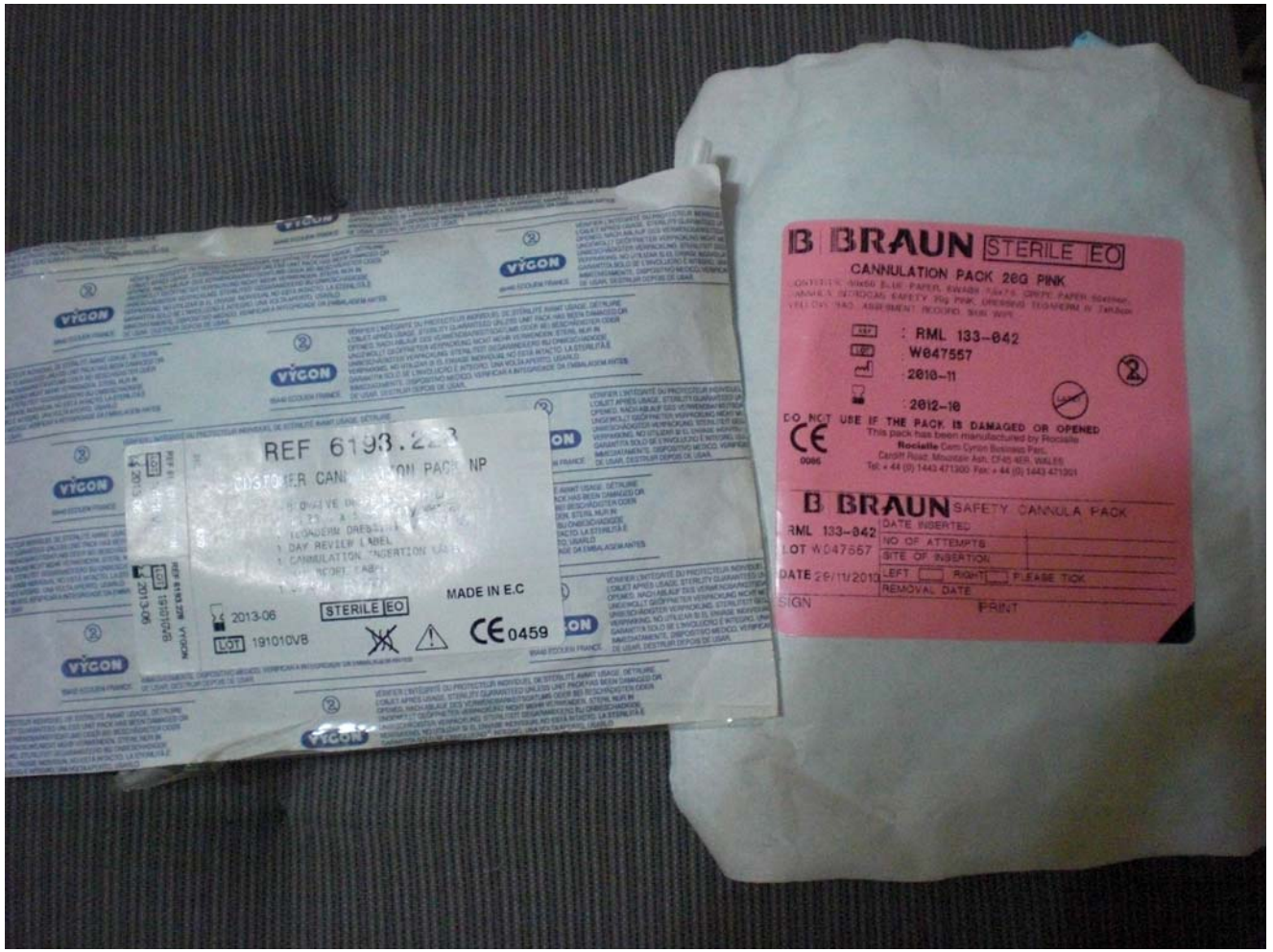
Ongoing care actions
1. Hand hygiene ▪ Hands are decontaminated immediately before and after each episode of patient contact using the correct hand hygiene technique. *Use of the World Health Organizations '5 moments of hand hygiene' or the NPSA 'Clean you hands campaign' is recommended.*
2. Continuing clinical indication ▪ Indication for intravenous cannulae is assessed twice daily and cannulae is removed where it is no longer indicated.
3. Site inspection ▪ Documented review of cannula site for signs of infection i.e. (VIP Scoring) at least daily.
4. Dressing ▪ A sterile, semi-permeable, transparent dressing is used allowing observation of insertion site.
5. Cannula access ▪ 2% chlorhexidine gluconate in 70% isopropyl alcohol is used to decontaminate port and surrounding area, and allowed to dry prior to the administering fluid or injections via the cannulae. *If a patient has a sensitivity use a single patient use povidone–iodine application.* ▪ Patency is maintained
6. Administration set replacement ▪ Immediately after administration of blood, blood products, lipids and TPN. ▪ In line with local single use item policy, for intermittent administration All other fluid sets after 72 hours.
7. Cannula replacement ▪ Cannula re- sited before 72 hours or before if high risk insertion or clinically indicated. ▪ Documented review of cannula site i.e. (VIP Scoring) at least daily. ▪ Where venous access is limited, the cannula can remain in situ if there are no signs of infection and risk assessment undertaken.
8. Documentation ▪ Document in notes details of date and time of removal of cannula, operator undertaking removal with signature.

Like!!

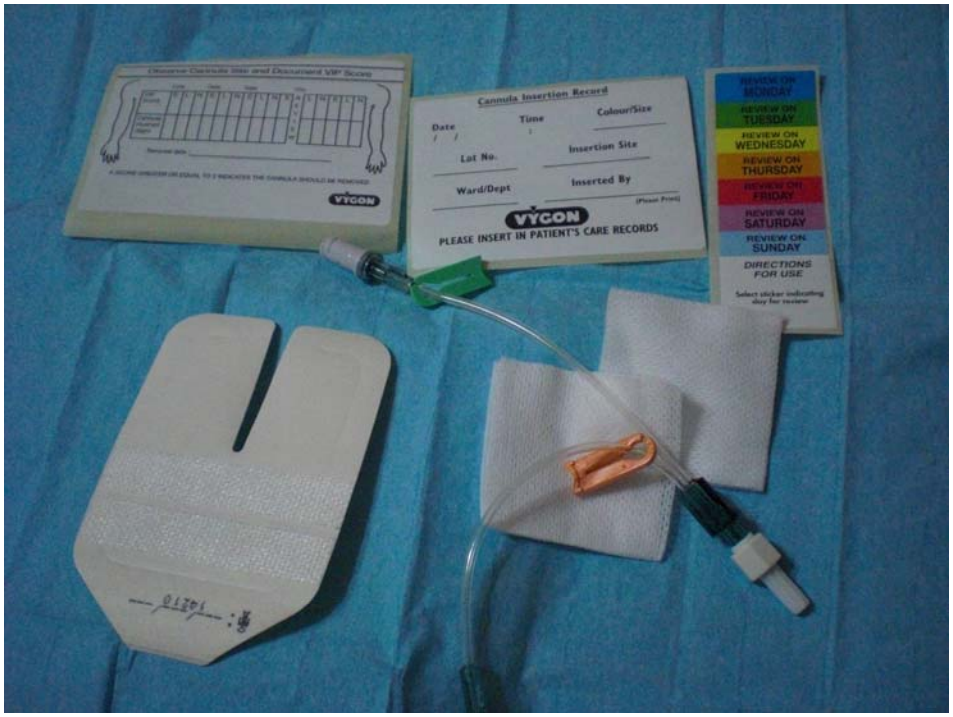
- Training
- Easily accessible resources via internet/ intranet
- http://hcai.dh.gov.uk/
- Educational Videos: Aseptic non-touch techniques, hand hygiene, etc.

Like!!

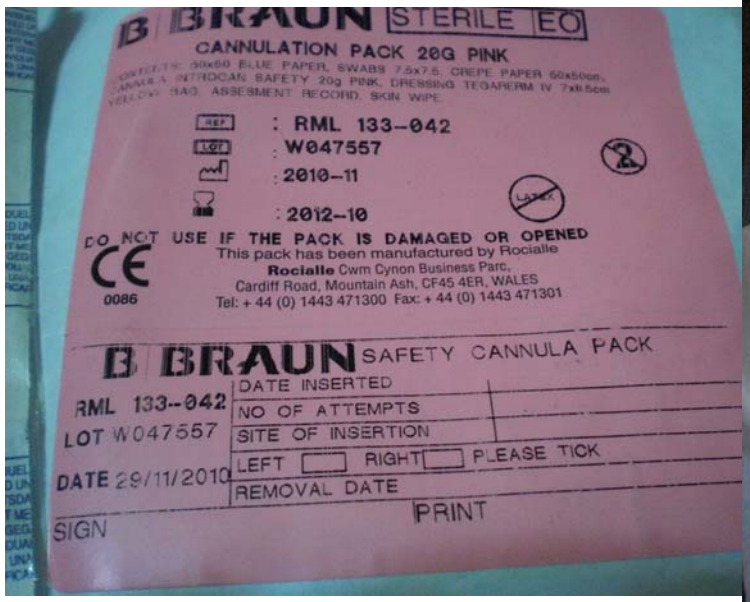
- Cannulation pack

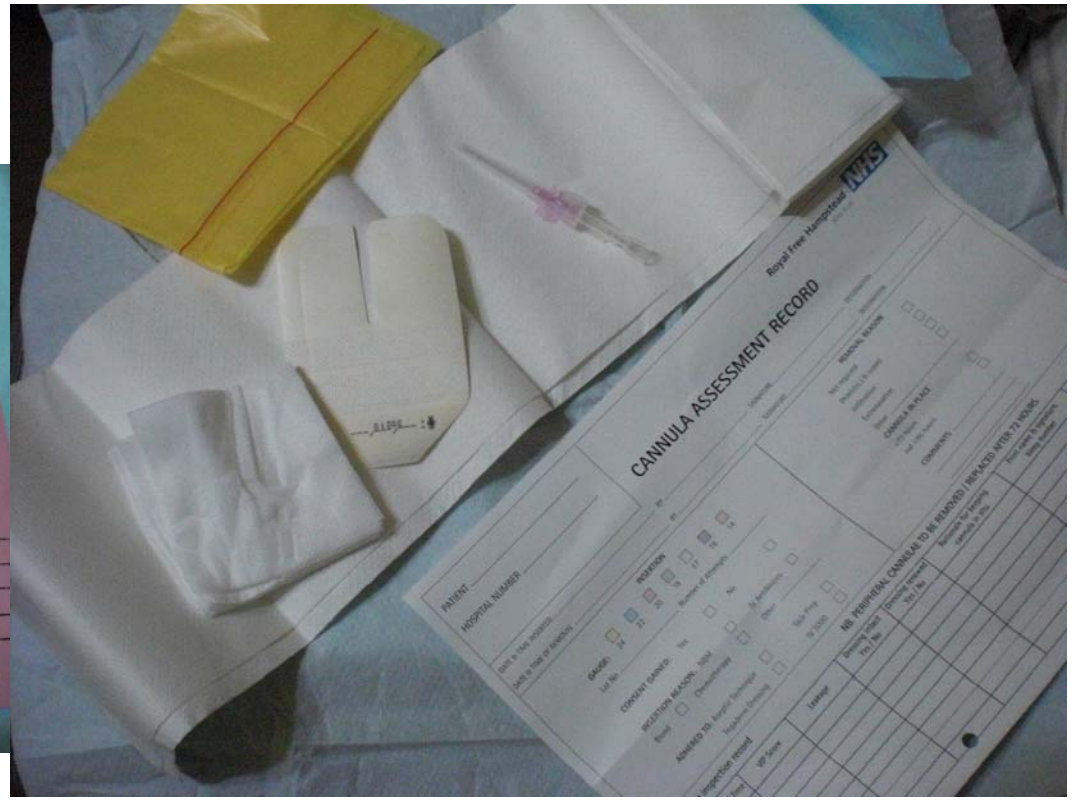


- Cannulation pack



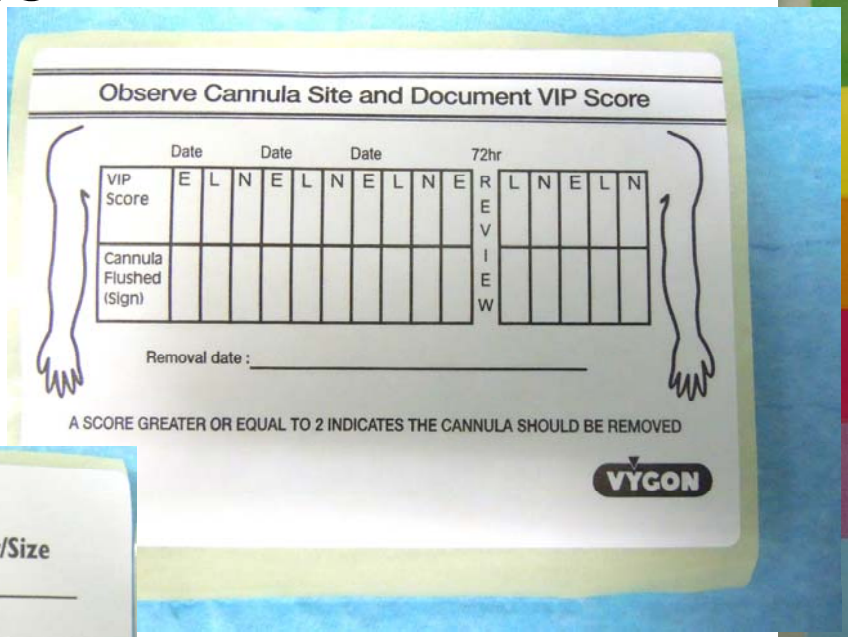
- Cannulation pack

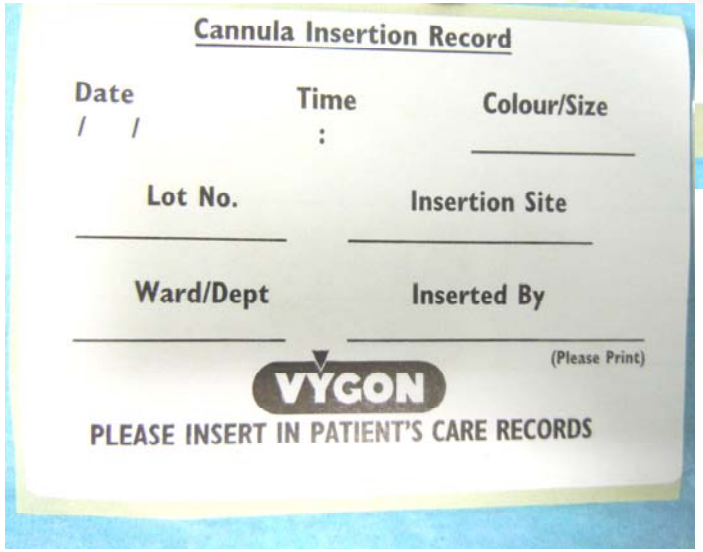




Like!!

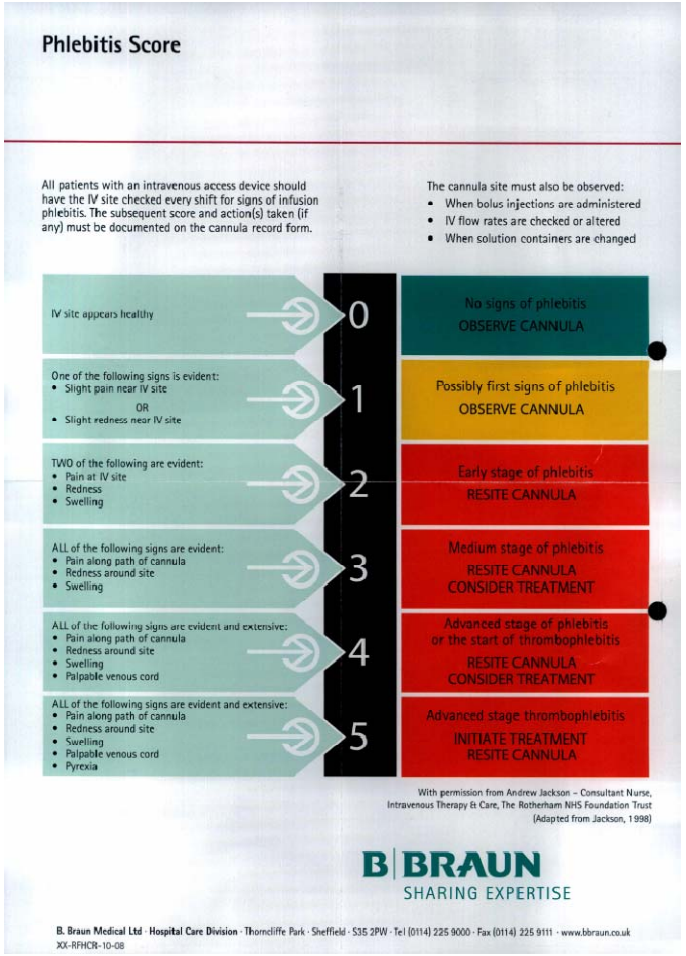
- Various stickers





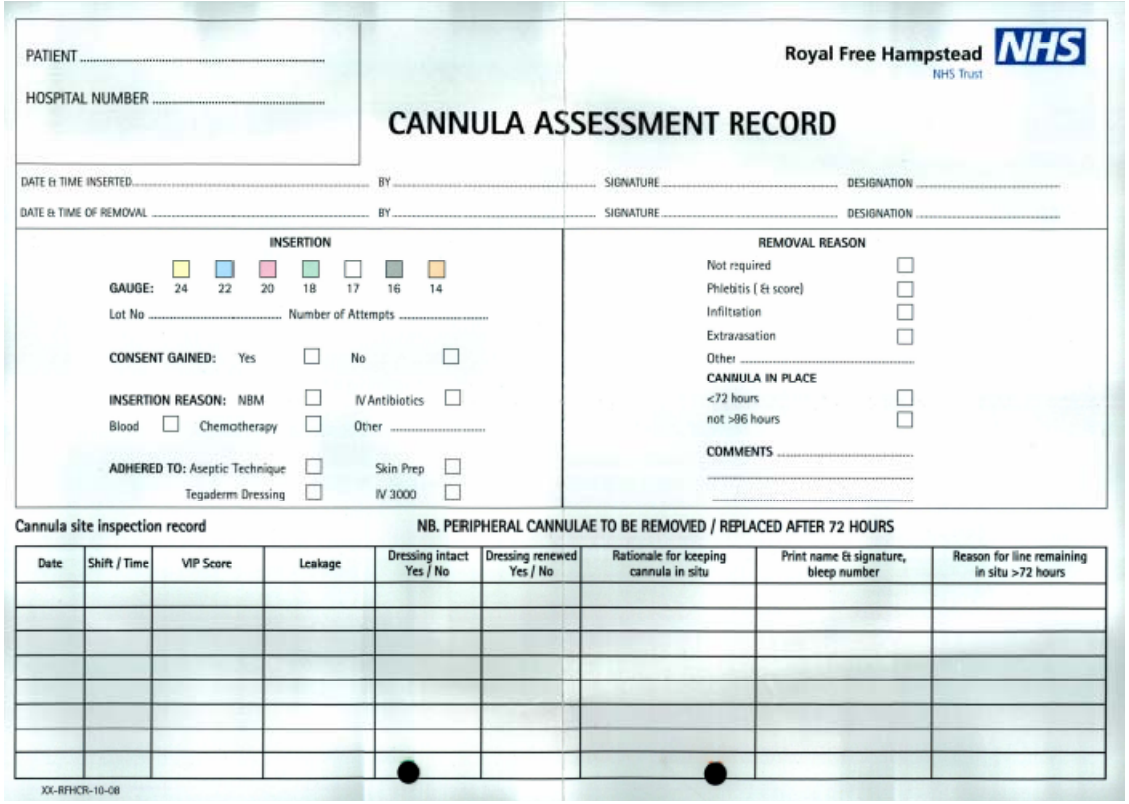
Like!!

- Phebitis score
- Visual Infusion Phlebitis score



Like!!

- Cannula assessment record
  - WWWW insertion/ removal the line
  - Lot no. and No. of attempts
  - Daily assessment/ scoring
  - Reasons for keeping the line />72 hrs



PATIENT .....

HOSPITAL NUMBER .....

Royal Free Hampstead NHS
NHS Trust

CANNULA ASSESSMENT RECORD

DATE & TIME INSERTED..... BY ..... SIGNATURE ..... DESIGNATION .....

DATE & TIME OF REMOVAL ..... BY ..... SIGNATURE ..... DESIGNATION .....

INSERTION

GAUGE: 24 22 20 18 17 16 14

Lot No ..... Number of Attempts .....

CONSENT GAINED: Yes ☐ No ☐

INSERTION REASON: NBM ☐ IV Antibiotics ☐
Blood ☐ Chemotherapy ☐ Other .....

ADHERED TO: Aseptic Technique ☐ Skin Prep ☐
Tegaderm Dressing ☐ IV 3000 ☐

REMOVAL REASON

Not required ☐
Phlebitis (& score) ☐
Infiltration ☐
Extravasation ☐
Other .....

CANNULA IN PLACE
<72 hours ☐
not >96 hours ☐

COMMENTS .....

Cannula site inspection record

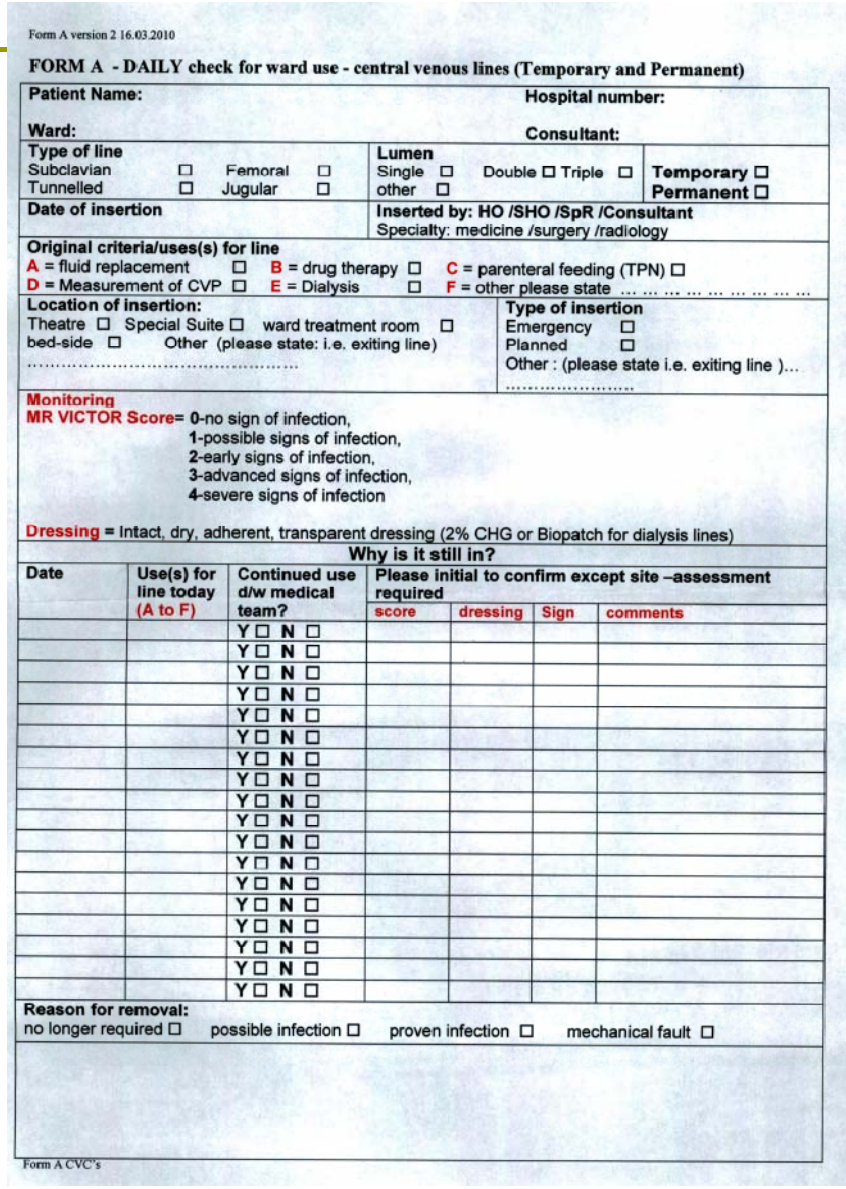
NB. PERIPHERAL CANNULAE TO BE REMOVED / REPLACED AFTER 72 HOURS

Date	Shift / Time	VIP Score	Leakage	Dressing intact Yes / No	Dressing renewed Yes / No	Rationale for keeping cannula in situ	Print name & signature, bleep number	Reason for line remaining in situ >72 hours

XX-RFHCR-10-08

Like!!

- Documentation



Form A version 2 16.03.2010

FORM A - DAILY check for ward use - central venous lines (Temporary and Permanent)

Patient Name: **Hospital number:**

Ward: **Consultant:**

Type of line
Subclavian ☐ Femoral ☐
Tunnelled ☐ Jugular ☐

Lumen
Single ☐ Double ☐ Triple ☐
other ☐

Temporary ☐
Permanent ☐

Date of insertion

Inserted by: HO /SHO /SpR /Consultant
Specialty: medicine /surgery /radiology

Original criteria/uses(s) for line
A = fluid replacement ☐ B = drug therapy ☐ C = parenteral feeding (TPN) ☐
D = Measurement of CVP ☐ E = Dialysis ☐ F = other please state ... ...

Location of insertion:
Theatre ☐ Special Suite ☐ ward treatment room ☐
bed-side ☐ Other (please state: i.e. exiting line)
.....

Type of insertion
Emergency ☐
Planned ☐
Other : (please state i.e. exiting line)...
.....

Monitoring
MR VICTOR Score= 0-no sign of infection,
1-possible signs of infection,
2-early signs of infection,
3-advanced signs of infection,
4-severe signs of infection

Dressing = Intact, dry, adherent, transparent dressing (2% CHG or Biopatch for dialysis lines)

Why is it still in?

Date	Use(s) for line today (A to F)	Continued use d/w medical team?	Please initial to confirm except site –assessment required			
			score	dressing	Sign	comments
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
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		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				
		Y ☐ N ☐				

Reason for removal:
no longer required ☐ possible infection ☐ proven infection ☐ mechanical fault ☐

Form A CVC's

Like!!

- Ready-to-use Audit Tools

Central Venous Catheter Care Bundle: Insertion Actions Review tool

Observation	Elements								
	Catheter type	Insertion site	Personal Protective Equipment	Skin Preparation	Hand Hygiene	Dressing	Safe Disposal of sharps	Documentation	Are all elements compliant
1									
2									
3									
4									

Others

- Regular review of indications for IV access
- Early switch to oral antibiotics
- Blood culture collection protocols, kits and forms

Successful factors

- Top management commitment (Board to ward)
- Staff buy in (HCAI is everyone's responsibility)
- Communication, continuous education, evaluation and feedback
- Policies, guidelines and protocols
- Facilitating tools

Road to Success