New Changes to Line Tracking

A. INTRAVASCULAR DEVICE MONITORING: Record all peripheral, central venous and arterial devices in place at admission here
Document the insertion of all CENTRAL VENOUS and ARTERIAL lines here. Document the insertion of PERIPHERAL IVs in Section B.

Insert Time = CCTC insertion time or NA if unknown **Insert Location** = Location of insertion (e.g., CCTC, ED) or NA if unknown/unsure.
Compliance Documented = Y or N. Only record Y if sterile technique documented by checklist or progress note.
Observed Break: DAR note to describe break is required if YES (e.g., femoral line inserted during CPR, field disrupted).
Printed Waveform/ScvO2: REQUIRED upon insertion AND admission for all IJ, SC and femoral lines. ✓ to confirm completion.
Print Inserter's Name: MD, RRT or RN **Line Issues:** enter * in column and DAR if compliance unknown, break in technique occurs or other line concerns exist.

INSERT DATE	INSERT TIME	LIST ALL NEW ARTERIAL, CENTRAL VENOUS AND PERIPHERAL LINES	INSERT LOCATION	COMPLIANCE DOCUMENTED	OBSERVED BREAK	WAVEFORM / ScvO2 CONFIRMATION	INSERTER'S NAME	LINE ISSUES

SECTION A:

1. **Continue** to document **ALL** central, arterial **and** peripheral lines that are in place upon admission in Section A.
2. **Continue** to document the **CCTC insertion** of all **central venous and arterial lines.**
3. **Change:** Document the **CCTC insertion** of peripheral IVs in **Section B** below.

****Be sure to FLAG *all* lines if you are unable to confirm insertion bundle compliance (including peripheral IVs).** If you cannot confirm insertion technique, FLAG the line by entering (*) in the final column and recording a DAR note. Communicate to the oncoming shift. Continue to flag and report each day ***until resolution is DOCUMENTED***. Resolution is accomplished either by the inserter or an observer documenting that technique was maintained or the line has been removed/changed.

New Changes to Line Tracking

SECTION B:

1. **Change:** Document all peripheral IV's inserted in CCTC in Section B
2. **Change:** This new section includes the mandatory LHSC standards for insertion and documentation. The inserter signature is confirmation that **aseptic technique was maintained** as per LHSC standards (Slide 9).

   If a break in technique occurs during the placement of a peripheral IV in an emergency, document the loss of compliance. Communicate the need to change the line as soon as feasible and flag the line until resolution (like central and arterial lines).

B. Documentation of peripheral IV insertion in CCTC * DAR complications for unsuccessful/successful attempts; use Peripheral IV Insertion Protocol.

INSERT DATE	INSERT TIME	VEIN LEVEL	SITE	GAUGE	# ATTEMPTS	BLOOD RETURN	NAME AND INITIAL CONFIRMING COMPLIANCE

C. ONGOING MONITORING OF INTRAVASCULAR LINES: Document Q shift assessment, starting on shift after initial documentation.

Line Code: ✓ = WDL D/C = Discontinued **Dressing Code:** ✓ = D&I D = Loss of integrity S = Soiled Δ = Changed

* **and DAR** in AI record for any site or patency issue or if accidental dislodgement. **Line Issue:** * and DAR if identified on previous/current shift. Continue * and DAR until resolution is documented.

Waveforms: Post arterial and CL waveform at the start of each shift to document waveform quality and confirm vascular placement for all arterial and IJ, SC and femoral venous lines.

INSERT DATE	LIST ALL ARTERIAL, CENTRAL VENOUS AND PERIPHERAL IVs	ASSESSMENT TIME AND CODE (Days)						ASSESSMENT TIME AND CODE (Nights)					
		LINE ISSUES	WAVE POSTED					LINE ISSUES	WAVE POSTED				
INITIAL COMPLETION													

SECTION C:

1. Continue to list **ALL** central, arterial **and** peripheral lines in this section to document ongoing assessment and monitoring.
2. Be sure to carry any flags * over from the previous shift. Continue to flag **AND** report each shift until resolution is documented. Ensure that you know the status of your lines when you present in rounds.
3. Confirm all IV solutions are correct and assess all sites at the start of your shift , and Q4 H and PRN (e.g., more frequently when patients are confused, before administering a bolus medication etc).
4. ✓ indicates that: a) the IV is infusing well, b) the Infiltrate scale is "0" AND, b) the Phlebitis scale is "0" (Slide 7 and 8).
5. Continue to ensure that you assess the waveform AND place a waveform printout in the chart at the start of each shift and PRN.

C. ONGOING MONITORING OF INTRAVASCULAR LINES: Document Q shift assessment, starting on shift after initial documentation.

Line Code: ✓ = WDL D/C = Discontinued **Dressing Code:** ✓ = D&I D = Loss of integrity S = Soiled Δ = Changed

* **and DAR** in AI record for any site or patency issue or if accidental dislodgement. **Line Issue:** * and DAR if identified on previous/current shift. Continue * and DAR until resolution is documented.

Waveforms: Post arterial and CL waveform at the start of each shift to document waveform quality and confirm vascular placement for all arterial and IJ, SC and femoral venous lines.

INSERT DATE	LIST ALL ARTERIAL, CENTRAL VENOUS AND PERIPHERAL IVs	ASSESSMENT TIME AND CODE (Days)						ASSESSMENT TIME AND CODE (Nights)					
		LINE ISSUES	WAVE POSTED					LINE ISSUES	WAVE POSTED				
INITIAL COMPLETION													

Peripheral Vasopressors

NURSING INTERVENTIONS (initial when completed/assessed; *significant findings and document on A/I Flowsheet)

TIME	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
Peripherally Infusing Vasoactive Medications: _____ Date Started: _____ Time started: _____																								
Site: _____ Gauge: _____ Medication: _____ Ultrasound Confirmed: ☐ Yes ☐ No																								
✓ Blood Return																								
Phlebitis Scale																								

XXX duplicated question was in error

Current Practice Pending DTC Policy Implementation

The administration of peripheral vasopressors carries risk for serious tissue injury. Close site monitoring is essential as early detection and intervention is the best way to mitigate injury. An AEMS should be completed for any adverse event related to peripheral vasopressor administration OR central venous catheter insertion, removal or maintenance. This will help us to track the frequency and identify harm reduction strategies.

Change: If a patient has peripheral vasopressors running temporarily, use this section to document your assessment (there is a duplication of the line for recording the medication).

Ultrasound Confirmed only applies if ultrasound was used to insert the catheter. This would be appropriate in a long upper extremity peripheral IV. We will begin stocking longer IV catheters for ultrasound guided placement ***by the physician*** (these are long peripheral catheters, not midline).

Peripheral Vasopressors

NURSING INTERVENTIONS (initial when completed/assessed; *significant findings and document on A/I Flowsheet)

TIME	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
Peripherally Infusing Vasoactive Medications: _____ Date Started: _____ Time started: _____																								
Site: _____ Gauge: _____ Medication: _____ Ultrasound Confirmed: ☐ Yes ☐ No																								
✓ Blood Return																								
Phlebitis Scale																								
Infiltration Scale																								
Consultant/Senior																								
RESTRAINTS Code: + = On - = Off																								

New Section for Monitoring Peripheral Vasopressors

Currently, the LHSC policy for continuous vasopressor infusions includes the administration via a central venous catheter and the placement of an intraarterial line.

Recent changes to the Parenteral Drug Administration manual indicate that these drugs can be ***temporarily*** administered during an emergency until a CVC can be established. There is evidence to support that mortality is reduced when hypotension is corrected more quickly), and the temporary administration of a vasopressor through a peripheral catheter may resolve hypotension faster.

We are currently attempting to define acceptable criteria for the administration of vasopressors peripherally. A proposed policy has been submitted to Drug and Therapeutics Committee and we hope to have details finalized soon.

Peripheral Vasopressors

NURSING INTERVENTIONS (initial when completed/assessed; *significant findings and document on A/I Flowsheet)

TIME	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
Peripherally Infusing Vasoactive Medications: _____ Date Started: _____ Time started: _____																								
Site: _____ Gauge: _____ Medication: _____ Ultrasound Confirmed: ☐ Yes ☐ No																								
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Infiltration Scale																								
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RESTRAINTS	**Code: + = On - = Off**																							

<u>Current Practice Pending DTC Policy Implementation</u>

Assess the site Q1H and PRN using the Phlebitis and Infiltration Scale. A score greater than "0" on either scale, requires immediate physician notification for assessment.

The Consultant must be notified every shift of the continued use of peripheral vasopressor infusions or of any adverse findings.

Current Recommendations until DTC review completed

- Central line is still required for continued vasoactive drug administration.
- In emergency situations, “short term” initiation of peripheral vasopressors until central venous access can be established is acceptable in order to facilitate prompt treatment of shock
- If vasopressors are being infused peripherally, assess AND document the assessment Q1H and PRN using the Infiltration and Phlebitis Scales
- Notify the Consultant each shift of continued peripheral vasopressor use and if ***any*** of the following occurs (document notification):
  - IV diameter is smaller than 20 gauge (anticubital fossa, feet or hands should *not* be used for the infusion for peripheral vasopressors)
  - More than one vasopressor is required, a vasopressor other than norepinephrine or dopamine is needed or ongoing clinical deterioration
  - Norepinephrine dose greater than 12 mcg/min or dopamine greater than 10 mcg/kg/min
  - Unable to initiate a second peripheral IV for maintenance and backup
- Complete AEMS if infiltration or adverse events occur
- Initiate infiltration treatment promptly (see phentolamine monograph)

Vein Assessment

VEIN LEVEL

Level 1: Visible, easy to palpate, large in size

Level 2: Visible, easy to palpate, moderate in size, previous IV site

Level 3: Visible, easy to palpate, small size, previous IV site, limited veins (some sclerosed)

Level 4: Difficult to see, can be palpated, age > 70, previous therapy has resulted in poor veins

Level 5: Vein not visible, cannot be palpated, may require multiple techniques

PHLEBITIS SCALE

1+ Pain at Site

2+ Pain and redness at Site

3+ Pain, redness and swelling at site with palpable cord of less than 7.5 cm

4+ Pain, redness and swelling at site with palpable cord of 7.5 cm or greater

Peripheral IV Insertion Compliance Bundle

1. Match operator skill to vein level assessment
2. Change operator after 2 attempts
3. Wear gloves (PPE)
4. Clip hair (don’t shave) if necessary
5. 30 second scrub: 2% chlorhexidine/70% alcohol
6. Air dry one minute
7. No touch after cleaning (or non-contaminated sterile gloves)
8. Maintain all IV ports and connections aseptically

Infiltration Scale *DAR if >0

0 No symptoms

1 Skin blanched

Edema < 2.5 cm in any direction
Cool to touch
With or without pain

2 Skin blanched

Edema 2.5 – 15 cm in any direction
Cool to touch
With or without pain

3 Skin blanched, translucent

Gross Edema > 15 cm in any direction
Cool to touch
Mild – moderate pain
Possible numbness

4 Skin blanched, translucent

Skin tight, leaking
Skin discolored, bruised, swollen, gross edema > 15 cm in any direction
Deep pitting tissue edema
Circulatory impariment
Moderate – severe pain
Infiltration of any amount of blood product, irritant, vesicant

Lewis et al. 2017. Journal of ICM. Adapted from Society of Infusion Nursing

What Does Δ Mean?

The following code appears at the top of the new AI record. It is a standard LHSC code used to define greater than, less than and increased or decreased symbols. The delta symbol means change. When used with either of these symbols, the Δ indicates by "how much". Example "MAP ↑Δ 10" to indicate an increase in MAP by 10 .

DATE: _____ CCTC DAY NO: _____

(YYYY/MM/DD)

TIME OF ASSESSMENT: _____

KEY: *= Significant Findings

> = Greater than < = Less than ↑ = Increased ↓ = Decreased Δ = Increment

What Does Δ Mean?

There would be few reasons to use these symbols on a graphic record where you can readily see how the numbers compare. The use of this code is more appropriate for AI documentation. A verbal description is always acceptable.

What Does Δ Mean?

There is duplication within the document of the meaning of the delta (Δ) symbol. It has been used for years to indicate that a "dressing was changed" and continues to appear in sections for IV tracking.

In these areas where a different definition for Δ is provided, Δ corresponds to the code at the top of the section.

NES: Document Q shift assessment, starting on shift after initial doc

Loss of integrity S = Soiled Δ = Changed

. **Line Issue:** * and DAR if identified on previous/current shift. Continue * and DAR until resolut

waveform quality and confirm vascular placement for all arterial and IJ, SC and femoral venous