



London Health Sciences Centre



THE CRITICAL CARE TRAUMA CENTRE: DOCUMENTATION

CRITICAL CARE NURSING
PROGRAM ORIENTATION

SEPT 2019

CCTC Nurses Worksheet

Daily Checklist / Reminders	Rounds Tool						
<input type="checkbox"/> Dietary blood work and 24hr urine q Monday AM <input type="checkbox"/> Enteral Feeding bag changed q48 hours (closed system) q4 hours (open system) <input type="checkbox"/> MRSA Swabs: on admission or transfer and q 2 weeks <input type="checkbox"/> IV Tubing change q4 days (continuous infusion) q24 hours (intermittent infusion) <input type="checkbox"/> Insulin/Vasopressin bag change daily at 1600 and Insulin tubing daily <input type="checkbox"/> TPN Tubing change at 2200 <input type="checkbox"/> Propofol Tubing change q12 hours <input type="checkbox"/> Art/Central lines: dsg change q7days <input type="checkbox"/> Update Kardex <input type="checkbox"/> Check and Clear Task List	<p>Reporting in rounds should be on abnormal findings, response to treatment and trends (improving, deteriorating).</p> <p>If no issues, provide an overview of the patient's status e.g. "awake and alert, hemodynamically stable, urine output satisfactory, enterally fed.</p>	<p>Ventilation (set provide this rep if RRT is called)</p> <p>_____</p> <p>_____</p>	<p>Neuro (LOC, V, Delirium Screen response to we)</p> <p>_____</p> <p>_____</p>	<p>CV (rhythm issu CVP/ScvO2 ant)</p> <p>_____</p> <p>_____</p>	<p>CCTC NURSES WORKSHEET</p> <p>DATE: _____</p>	PATIENT INFORMATION	
<p>Past Medical Hx:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Patient Initials: _____ Age: _____ Code Status: <input type="text"/></p> <p>Reason for Admission: _____</p> <p>_____</p> <p>Infection Control: <input type="text"/> Allergies: <input type="text"/></p>						
<p>Meds/Task List:</p> <p>_____</p>	<p>Plan of Care:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Neuro:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Ventilation:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>CVS/Lines/IVs:</p>						

1. [Maintain Patient Safety](#)
2. [Demonstrate Accountability](#)
3. [Assess Patient](#)
4. [Participate in Care Planning](#)
5. [Communicate Findings](#)
6. [Monitor Vital Signs](#)
7. [Monitor Temperature](#)
8. [Promote Integumentary Integrity](#)
9. [Promote Buccal Integrity](#)
10. [Promote Oral Hygiene](#)
11. [Promote Hygiene](#)
12. [Continuous IV Infusions](#)
13. [Verify IVs](#)
14. [Independent Safety Check](#)
15. [Change IV Tubing](#)
16. [Filter IV Meds](#)
17. [Filter or Vent Micro Air \(Special Circumstances\)](#)
18. [Change Dressings](#)
19. [Change Foley Catheter](#)
20. [Review Orders](#)

- Standards of Nursing Care
- Procedures

including: Western University, Fanshawe College and partnering academic institutions. Many members of the critical care team are academically affiliated with faculties at Western University.

and educational institutions

CCTC: 24 Hour Flowsheet



London Health
Sciences Centre

Critical Care Trauma Centre
CCTC FLOWSHEET

James Whitlock
1234 56 78 1C

DATE: _____ CCTC DAY NO: _____
(YYYY/MMDD)

NURSING INTERVENTIONS (✓ = Care completed WDL; Initial when completed/assessed)																								
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
POSITIONING	Activity Code: C = Chair CC = Cardiac Chair D = Dangle W = Stand with Weight Bearing A = Ambulation RT = Reverse Trendelenburg																							
Degree HOB elevation																								
Supine/Prone/Right/Left																								
Right sided wedge (OB)																								
Activity (Use Code)																								
PULMONARY BEDS	Code: L = Left R = Right B = Both P = Percussion Mode V = Vibration Mode R = Rotation (° in brackets)																							
Time in Minutes																								
Percuss/Vibrate/Rotate																								
HYGIENE	CB = Complete Bath PB = Partial Bath S = Shower HW = Hair Wash																							
Skin Inspection																								
Bathing/Hair Washing																								
Pericare																								
Linen Change																								
Facial Shave																								

Graphic Record

- Time scale is in half hour increments, starting at 0700
- Temp – numeric
- SpO₂ – triangle
- MAP is numeric
- Use \wedge \vee for BP (N for NIBP and A for Art Line)

HEMO-DYNAMICS		BP	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130
TEMP °C		Esoph/Oral/ Rectal/PA/Bladder										
Cooling / Warming												
N (NIBP)	100	220										
A (Art Line)	95	210										
SBP \vee	90	200										
	85	190										
	80	180										
DBP \wedge	75	170										
	70	160										
	65	150										
	60	140										
	55	130										
	50	120										
		110										
		100										
		90										
		80										
		70										
		60										
		50										
MAP												
Pacemaker: P=Paced												
I=Intermittent Ø=None paced												
ALARM _____ ECG												
RANGE _____ BP												
P-Positional _____ SpO ₂												
ZERO (Z) LEVEL (L)												
PAP S/D M												

Graphic Record

HEMO-DYNAMICS		BP	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130
TEMP °C Esoph/Oral/ Rectal/PA/Bladder												
Cooling / Warming												
N (NIBP)	100	220										
A (Art Line)	95	200										
SBP ∇	90	180										
	85	170										
DBP ^	80	160										
	75	150										
PULSE •	70	140										
	65	130										
SpO ₂ ▲	60	120										
	55	110										
	50	100										
		90										
		80										
		70										
		60										
		50										
MAP												
Pacemaker: P=Paced I=Intermittent Ø=None paced												
ALARM _____ ECG												
RANGE _____ BP												
P=Positional _____ SpO ₂												
ZERO (Z) LEVEL (L)												
PAP S/D M												

Standards:

- Chart abnormal results more frequently to reflect changes
- If VS are outside the patient's acceptable limits, a DAR note must be written

Graphic Record

HEMO-DYNAMICS		BP	0730	0800	0830	0900
TEMP °C	Esoph/Oral/ Rectal/PA/Bladder					
	Cooling / Warming					
N (NIBP)	100 220					
A (Art Line)	95 200					
SBP ∇	90 180					
	85 170					
DBP ^	80 160					
	75 150					
PULSE •	70 140					
	65 130					
SpO ₂ ▲	60 120					
	55 110					
	50 100					
	45 90					
	40 80					
	35 70					
	30 60					
	25 50					
	20 40					
	15 30					
	10 20					
	5 10					
	0 0					
	MAP					
	Pacemaker: P=Paced I=Intermittent Ø=None paced					
	ALARM _____ ECG					
	RANGE _____ BP					
	P-Positional _____ SpO ₂					
	ZERO (Z) LEVEL (L)					
	PAP S/D M					

Key Points:

- Document cooling or warming blanket on/off
- Distinguish where temperature measurement is obtained
- Hourly temp documentation is required:
Cooling/warming blanket use
Hypothermia protocol
Massive transfusion protocol (MTP)

Hemodynamic Measurements & Calculations

PULSE CODE: R = Radial B = Brachial A = Axilla F = Femoral Pop = Popliteal DP = Dorsalis Pedis Tibialis	MAP								
	Pacemaker: P=Paced I=Intermittent Ø=None paced								
	ALARM _____ ECG								
	RANGE _____ BP								
	P=Positional _____ SpO ₂								
	ZERO (Z) LEVEL (L)								
	PAP S/D M								
	CVP / PWP								
	SVI / CI / PPV								
	SVV / SVRI / PVRI								
SvO ₂ / ScvO ₂									
Lactate									
PULSES: Right									
Left									
BLADDER PRESSURE									

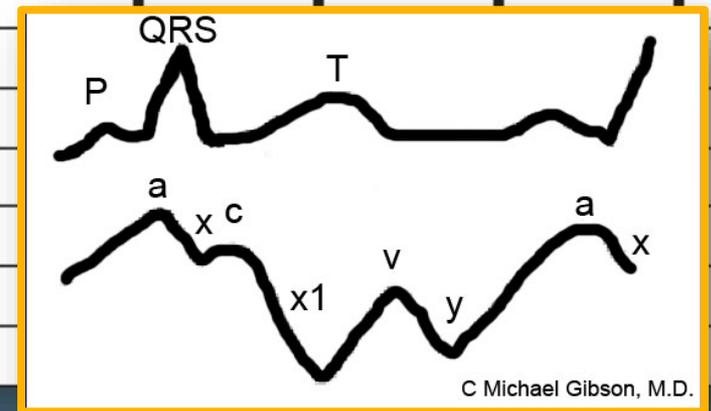
CO₂ **6.3** **80** ΔScvO₂

CI 3.2 l/min/m ²	SV 90 ml/m ²
SVV 7.7 %	SVI 45 ml/m ²



Central Venous Pressure:

PULSE CODE: R = Radial B = Brachial A = Axilla F = Femoral Pop = Popliteal DP = Dorsalis Pedis PT = Posterior Tibialus	MAP																				
	Pacemaker: P=Paced I=Intermittent Ø=None paced																				
	ALARM _____ ECG																				
	RANGE _____ BP																				
	P=Positional _____ SpO ₂																				
	ZERO (Z) LEVEL (L)																				
	PAP S/D M																				
	CVP / PWP	6																			
	SVI / CI / PPV																				
	SVV / SVRI / PVRI																				
	SvO ₂ / ScvO ₂																				
	Lactate																				
	PULSES: Right																				
	Left																				
	BLADDER PRESSURE																				



C Michael Gibson, M.D.

Mixed Venous/Central Venous Blood Gases

PULSE CODE: R = Radial B = Brachial A = Axilla F = Femoral Pop = Popliteal DP = Dorsalis Pedis PT = Posterior Tibialus	MAP								
	Pacemaker: P=Paced I=Intermittent Ø=None paced								
	ALARM _____ ECG								
	RANGE _____ BP								
	P=Positional _____ SpO ₂								
	ZERO (Z) LEVEL (L)								
	PAP S/D M								
	CVP / PWP								
	SVI / CI / PPV								
	SVV / SVRI / PVRI								
	SvO ₂ / ScvO ₂	75%							
	Lactate								
	PULSES: Right _____ Left _____								
	BLADDER PRESSURE								



Pulses



PULSE CODE: R = Radial B = Brachial A = Axilla F = Femoral Pop = Popliteal DP = Dorsalis Pedis PT = Posterior Tibialus	MAP							
	Pacemaker: P=Paced I=Intermittent Ø=None paced							
	ALARM _____ ECG							
	RANGE _____ BP							
	P=Positional _____ SpO ₂							
	ZERO (Z) LEVEL (L)							
	PAP S/D M							
	CVP / PWP							
	SVI / CI / PPV							
	SVV / SVRI / PVRI							
	SvO ₂ / ScvO ₂							
	Lactate							
	PULSES: Right	R/DP ✓						
	Left	R/DP ✓						
	BLADDER PRESSURE							

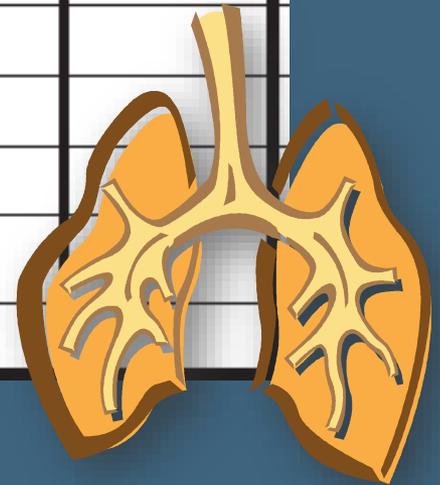
Pulses



PULSE CODE: R = Radial B = Brachial A = Axilla F = Femoral Pop = Popliteal DP = Dorsalis Pedis PT = Posterior Tibialis	MAP						
	Pacemaker: P=Paced I=Intermittent Ø=None paced						
	ALARM _____ ECG						
	RANGE _____ BP						
	P=Positional _____ SpO ₂						
	ZERO (Z) LEVEL (L)						
	PAP S/D M						
	CVP / PWP						
	SVI / CI / PPV						
	SVV / SVRI / PVRI						
	SvO ₂ / ScvO ₂						
	Lactate						
	PULSES: Right	R/DP ✓	→	→	R ✓ DP*		
	Left	R/DP ✓	→	→	R/DP ✓		
	BLADDER PRESSURE						

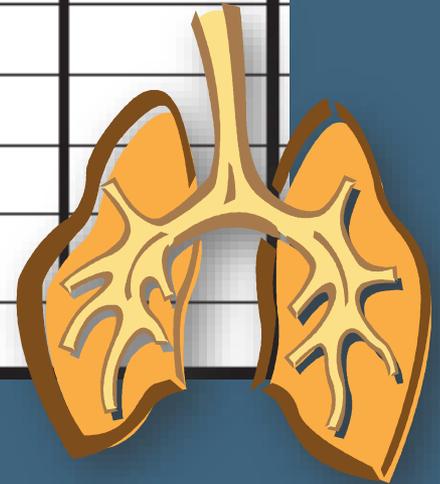
Ventilator Settings

SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M = Mucous P = Purulent B = Blood	TOTAL RATE					
	MASK / NP / HF					
	FiO ₂ / PEEP					
	Mode:					
	MINUTE VOLUME					
	EtCO ₂					
	VENT. PRESSURES					
	Preoxygenate / Hyperventilate					
SUCTION:						



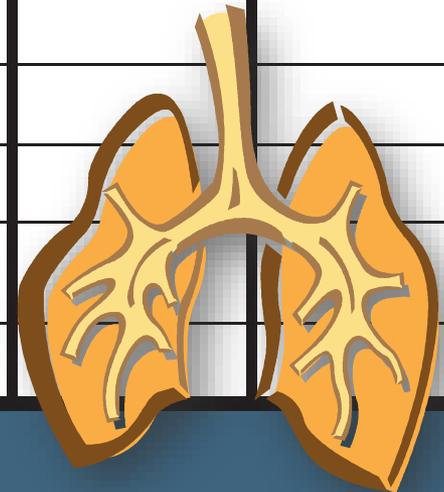
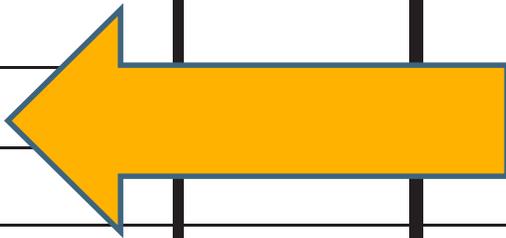
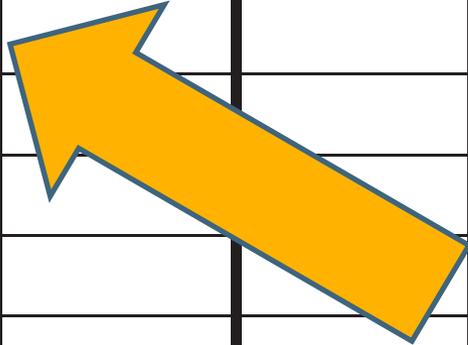
Ventilator Settings

SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M = Mucous P = Purulent B = Blood	TOTAL RATE					
	MASK / NP / HF	}				
	FiO ₂ / PEEP					
	Mode:					
	MINUTE VOLUME					
	EtCO ₂					
	VENT. PRESSURES					
	Preoxygenate / Hyperventilate					
	SUCTION:					



Respiratory Monitoring

SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M= Mucous P = Purulent B = Blood	TOTAL RATE					
	MASK / NP / HF					
	FiO ₂ / PEEP					
	Mode:					
	MINUTE VOLUME					
	EtCO ₂					
	VENT. PRESSURES					
	Preoxygenate / Hyperventilate					
	SUCTION:					



2018-10-02 06:26:04

INTELLIVENT

SPONT Adult

Patient Additions Modes

29
12

45 fTotal
b/min

44.0
3.0

17.1 ExpMinVol
l/min

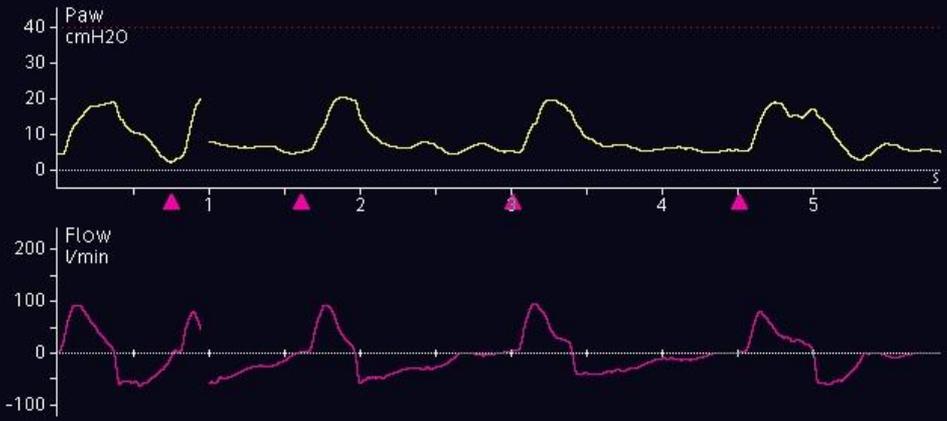
1650
130

296 VTE
ml

40
10

19 Ppeak
cmH2O

5.0 VT/IBW
ml/kg



Trend

IntelliCuff

10
cmH2O
Psupport

5
cmH2O
PEEP/CPAP

50
%
Oxygen

Controls

Alarms

Adult Male
162 cm
IBW = 59 kg

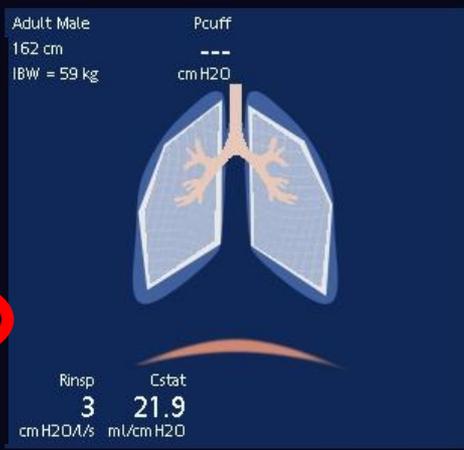
39 Ppeak
cmH2O

30 Pplateau
cmH2O

13 Pmean
cmH2O

4.5 PEEP/CPAP
cmH2O

3.1 Pminimum
cmH2O



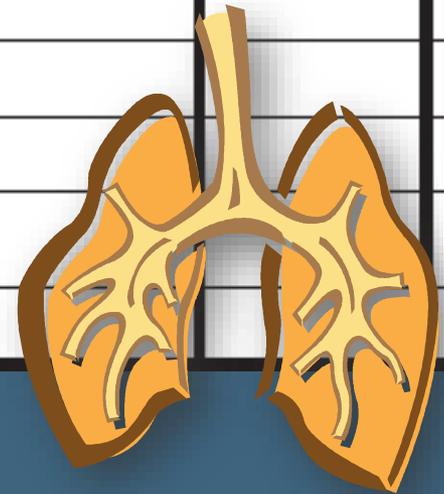
Oxygenation	CO2 elimination	Spont/Activity
40	8	11.8
21	0	2.9
00:10	0	00:01
Oxygen 50 %	PEEP 5 cmH2O	MinVol 17.1 l/min
		Pinsp 10 cmH2O
		RSB 152 l/(l*min)
		%Spont 100 %

Monitoring Graphics Tools Events System

INT AC

SPONT

SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M= Mucous P = Purulent B = Blood	TOTAL RATE	45				
	MASK / NP / HF					
	FiO ₂ / PEEP	0.5 / 5				
	Mode: SPONT	10				
	MINUTE VOLUME	17.1				
	EtCO ₂					
	VENT. PRESSURES	39 / 4.5				
	Preoxygenate / Hyperventilate					
	SUCTION:					



Patient

Additions

Modes

46
7 **18** fTotal b/min

27.0
1.0 **9.0** ExpMinVol l/min

1500
240 **499** VTE ml

77
10 **39** Ppeak cmH2O

6.9 VT/IBW ml/kg

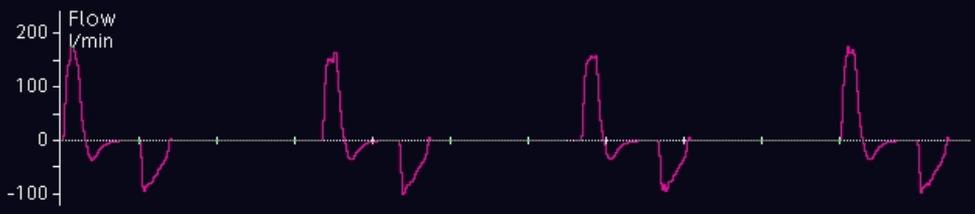
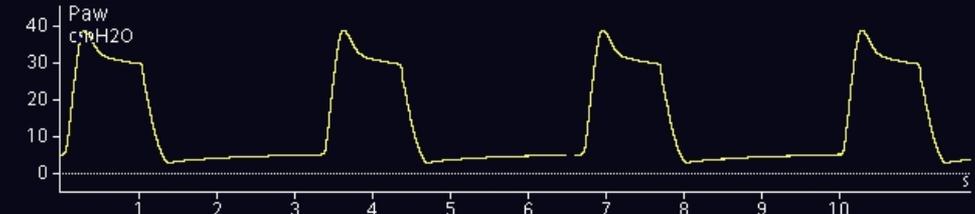
39 Ppeak cmH2O

30 Pplateau cmH2O

13 Pmean cmH2O

4.5 PEEP/CPAP cmH2O

3.1 Pminimum cmH2O



Adult Male
176 cm
IBW = 72 kg

Pcuff

cm H2O

Rinsp 0 Cstat 14.6
cm H2O/l/s ml/cm H2O

Oxygenation	CO2 elimination	Spont/Activity
40	8	14.4
21	0	3.6
00:01	00:01	0
Oxygen 100 %	PEEP 5 cm H2O	MinVol 9.0 l/min
		Pinsp 20 cm H2O
		RSB --- 1/(l*min)
		%fSpont --- %

Trend

IntelliCuff

18 b/min Rate

20 cmH2O Pcontrol

5 cmH2O PEEP/CPAP

100 % Oxygen

Controls

Alarms

Monitoring

Graphics

Tools

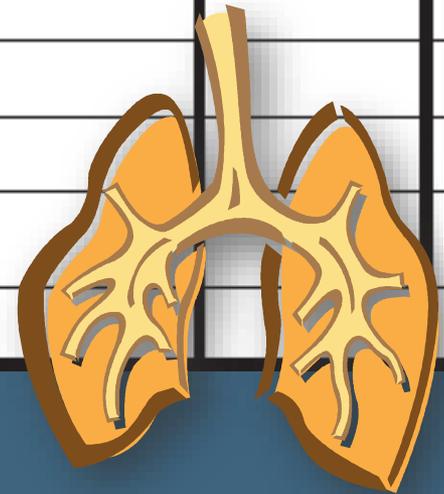
Events

System



P-CMV

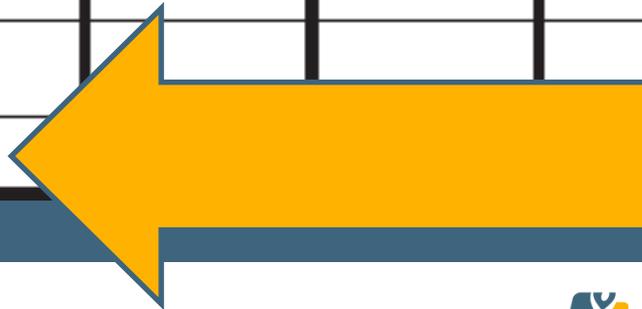
SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M= Mucous P = Purulent B = Blood	TOTAL RATE	18				
	MASK / NP / HF					
	FiO ₂ / PEEP	1.0 / 5				
	Mode: P-CMV Rate	18				
	PC	20				
	MINUTE VOLUME	9.0				
	EtCO ₂					
	VENT. PRESSURES	39 / 4.5				
	Preoxygenate / Hyperventilate					
	SUCTION:					



Suctioning



SUCTION CODE: 1 = Small 2 = Mod 3 = Copious M = Mucous P = Purulent B = Blood	TOTAL RATE					
	MASK / NP / HF					
	FiO ₂ / PEEP					
	Mode:					
	MINUTE VOLUME					
	EtCO ₂					
	VENT. PRESSURES					
	Preoxygenate / Hyperventilate					
	SUCTION:					



Infusions



Glucose

Insulin units/hour or Dextrose

Heparin bolus (units) or PTT

Heparin units/kg/hour

Independent check

VASOACTIVE MEDS
CHART DOSE/HOUR
Weight ___ kg

INITIALS

0700

0730

0800

0830

0900

0930

1000

1030

1100

1130

Glucose Control



VASOACTIVE MEDS CHART DOSE/HOUR Weight _____ kg	Glucose	6.4			7.3								
	Insulin u/hr or Dextrose	2	→	→	↑ 3								
	Heparin bolus (units) or PTT												
	Heparin units/kg/hour												
	Independent check												
	INITIALS												
	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300

Vasoactive Medications

VASOACTIVE MEDS CHART DOSE/HOUR Weight <u>75</u> kg	Glucose																	
	Insulin u/hr or Dextrose																	
	Heparin bolus (units) or PTT																	
	Heparin units/kg/hour																	
	Independent check																	
	Norepinephrine mcg/min	5	→	7														
	Vasopressin units/hr	1.8	→															
	INITIALS																	
	0700	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300					





Brain
Breaks

Glascow Coma Scale (GCS)

NEUROLOGICAL RECORD

Code: ALERT (1) = Awake DROWSY (2) = Oriented-sleepy CONFUSED (3) = Confused STUPOROUS (4) = Eye opening to pain COMATOSE (5) = No eye opening

TIME	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04
Level of Consciousness	4																					
GLASGOW COMA SCALE	Eye Opening																					
	Verbal																					
	Motor																					
	TOTAL																					

Code: = Fixed ≠ = Sluggish ✓ = Brisk U/A = Unable to Assess

PUPILS	RIGHT																						
	SIZE																						
	REACTION																						
	LEFT																						
SIZE																							
REACTION																							



Pupil Assessment

1 NEUROLOGICAL RECORD										
2 Code: ALERT (1) = Awake DROWSY (2) = Oriented-sleepy CONFUSED										
		TIME	07	08	09	10	11	12	13	14
3	Level of Consciousness									
4	GLASCOW COMA SCALE	Eye Opening								
5		Verbal								
6		Motor								
7		TOTAL								
Code: = Fixed ≠ = Sluggish ✓ = Brisk U/A = Unable to Assess										
8	P U P I L S	RIGHT SIZE								
		REACTION								
		LEFT SIZE								
		REACTION								

- All neurological assessments
- Document the size and reaction for each pupil
- Check for consensual response

Motor Assessment

MOTOR ASSESSMENT: Patients unable to obey commands													
Code: L = Localizes F = Flexes W = Withdraws E = Extends O = None U = Upgoing D = Downgoing													
* Record response to central pain													
Response to Central Pain	Arms R/L	/	/	/	/	/	/	/	/	/	/	/	/
	Legs R/L	/	/	/	/	/	/	/	/	/	/	/	/
Spontaneous Movement	Arms R/L	/	/	/	/	/	/	/	/	/	/	/	/
	Legs R/L	/	/	/	/	/	/	/	/	/	/	/	/
Upgoing/Downgoing Toe	R/L	/	/	/	/	/	/	/	/	/	/	/	/

- Minimum q shift for all patients until awake and findings normal
- With every neurological assessment
- Increase monitoring for any neurological change PRN

Spinal Cord Assessment

SPINAL CORD ASSESSMENT: Patients able to obey commands

Motor Function: 0-5/5	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L
Shoulder: Shrugs (C4)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Abducts (C5)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Elbow: Bends (C5)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Straightens (C7)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Wrist: Straightens (C6)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Flex toward palm (C7)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Fingers: Bends first digits (C8)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Spreads apart (T1)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Hips: Flexes (L2, L3)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Knees: Straightens (L3, L4)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Feet: Flex toes to nose (L4, L5)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Flex toes down (S1, S2)	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Sensory Function: Refer to dermatome chart and record the lowest level for both upper and lower limbs																
Upper limbs to pin	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Upper limbs to light touch	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Lower limbs to pin	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Lower limbs to light touch	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Rectal tone Present / Absent	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/



Bedside Resources

Neurological Assessment Tools

Glasgow Coma Scale

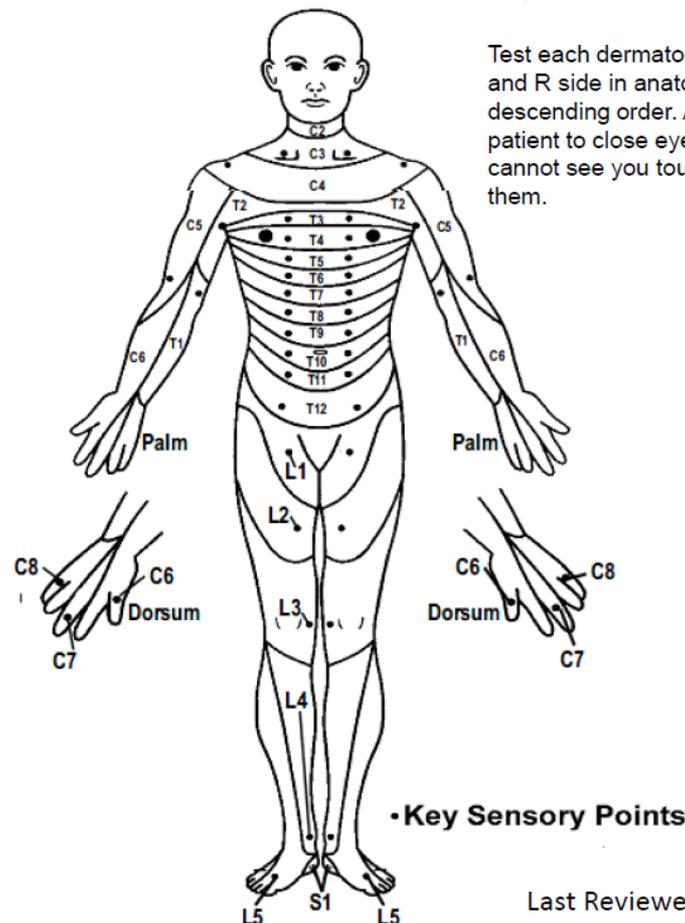
Eye Opening	Verbal Response	Motor Response	Score
		Obeys	6
	Oriented	Localizes	5
Spontaneously	Confused	Withdraws	4
To voice	Inappropriate	Abnormal Flexion	3
To pain	Incomprehensible	Abnormal Extension	2
No eye opening	No vocalization	No Movement	1
___/4	___/5	___/6	___/15

Motor Scoring Scale

5	Able to overcome strong resistance (normal strength)
4	Able to overcome mild resistance (mild weakness)
3	Supports limb against gravity but not resistance
2	Moves but not against gravity
1	Muscle flicker but no movement
0	No muscle movement
___/5	Score

Sensory Assessment/Spinal Cord Testing

Test sensation twice, once for pin and once for light touch . Use a whip of tissue for light touch and blunt end needle for pain/pin. Record the highest level of sensation using the dermatome chart below.



Last Reviewed April 16, 2014

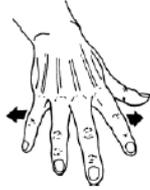
Motor Assessment/Spinal Cord Testing

Level of Function:

C8: Bend fingers toward palm at first digit joint



T1: Spread fingers apart



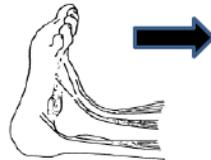
L2, L3: Bend hip



L3, L4: Straighten knee



L4, L5: Dorsiflexion (pull toes toward nose)



S1, S2: Plantar flexion (point toes downward)



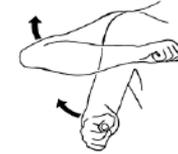
Motor Assessment/Spinal Cord Testing

Level of Function:

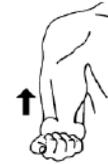
C4: Shrug shoulder



C4, C5: Abduct shoulder



C5: Bend elbow



C6, C7: Extend wrist



C7: Straighten elbow



C7, C8: Bend wrist toward palm



Pain Assessment: Unable to Self-Report Critical-Care Pain Observation Tool (CPOT)

Score each item 0, 1 or 2 out of 2. Total the sum of the four items to produce a CPOT score of 0-8/8

Indicator	Assessment	Score	Description
Facial Expression (score 0, 1 or 2)	Relaxed, Neutral	0	• No muscle tension observed
	Tense	1	• Presence of frowning, brow lowering, orbit tightening or contraction of upper eyelid; or, • Any other change (e.g., opening eyes or tearing during noxious procedures)
	Grimacing	2	• All above facial movements plus eyelids tightly closed (may present with mouth open or biting ETT)
Body Movement (score 0, 1 or 2)	Absence of movement/normal position	0	• Does not move at all (doesn't necessarily mean absence of pain); or, normal position (movements not aimed toward the pain site or not made for the purpose of protection)
	Protection	1	• Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements
	Restlessness	2	• Pulling tube, attempting to sit up, moving limbs/thrashing, not following commands, striking at staff, trying to climb out of bed
Ventilator Compliance (ventilated patient) OR Vocalization (non-intubated) (score 0, 1 or 2)	Tolerating ventilator or movement; or, <i>talking in normal tone or no verbal sound</i>	0	• Alarms not activated, easy ventilation; or, <i>Talking in normal tone or no sound</i>
	Coughing but tolerating ventilator; or, <i>sighing or moaning</i>	1	• Coughing, alarms may be activated but stop spontaneously; or, <i>Sighing, moaning</i>
	Fighting ventilator; or, <i>crying out or sobbing</i>	2	• Asynchrony, blocking ventilator, alarms frequently activated; or, <i>Crying out, sobbing</i>
Muscle Tension (evaluate by passive flexion and extension of upper limbs when patient is at rest or during turning) (score 0, 1 or 2)	Relaxed	0	• No resistance to passive movements
	Tense, rigid	1	• Resistance to passive movements
	Very Tense or rigid	2	• Strong resistance to passive movements, incapacity to complete them
TOTAL SCORE		___/8	Sum of scores from each of the 4 categories.

Sedation Assessment: VAMAAS

Ventilator Adjusted: Motor Activity Assessment Scale
For unventilated patients, score MAAS only. If MAAS ≥ 2 , screen for delirium.

MAAS Score	Description of MAAS	VA Score	Description of VA
0	Unresponsive to pain Does not move to noxious stimulus.	A	Minimal coughing; few alarms; tolerates movement
1	Opens eyes and/or moves to pain only Opens eyes OR raises eyebrows OR turns head towards stimulus OR moves limbs with noxious stimulus.	B	Coughing, frequent alarms when stimulated; settles with voice or removal of stimulus
2	Opens eyes and/or moves to voice Opens eyes OR raises eyebrows OR turns head towards stimulus OR moves limbs when touched or name is spoken.	C	Distressed, frequent coughing or alarms; high RR with normal/ low PaCO ₂
3	Calm and cooperative No external stimulus is required to elicit movement AND patient is adjusting sheets or clothes purposefully and follows commands.	D	Unable to control ventilation; difficulty delivering volumes; prolonged coughing
4	Restless but cooperative; follows commands No external stimulus is required to elicit movement AND patient is picking at sheets or tubes OR uncovering self & follows commands		
5	Agitated; attempts to get out of bed; may stop behaviour when requested but reverts back No external stimulus is required to elicit movement AND patient is attempting to sit up OR moves limbs out of bed AND does not consistently follow commands (e.g. will lie down when asked but soon reverts back to the attempts to sit up or move limbs out of bed).		
6	Dangerously agitated; pulling at tubes or lines, thrashing about; does not obey commands No external stimulus is required to elicit movement AND patient is attempting to sit up OR thrashing side to side OR striking staff OR trying to climb out of bed AND doesn't calm down when asked.		

Pain Assessment: Able to Self-Report

PQRST Mnemonic for Pain Assessment

P (provokes, precipitates):

- Location of pain
- What brings it on (e.g., activity, specific movement, eating, breathing)?
- What relieves it?

Q (quality):

- What is the quality of the pain (in the patient's own words)?
- Prompt only if necessary, to determine if pain is dull, sharp, stabbing, pins and needles, "electrical", etc.

R (radiation, referral):

- Does the pain move to any other spot?
- Are there any other symptoms with the pain (e.g., nausea, vomiting, shortness of breath)?

S (severity):

- How does the patient rate the severity of the pain on a scale of 1-10?

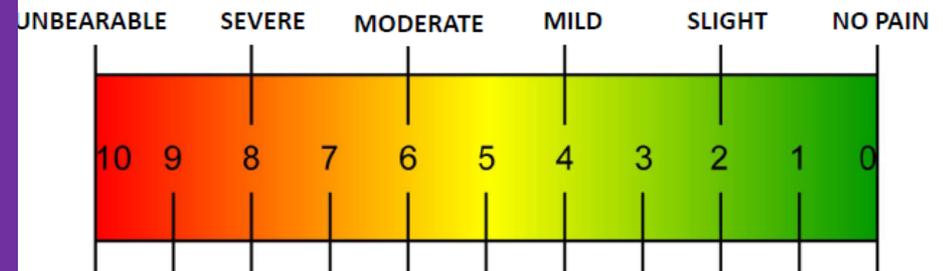
T (time):

- When did the pain start?
- Has this pain occurred before?
- Is the pain intermittent or constant?

Pain Assessment: Able to Self-Report

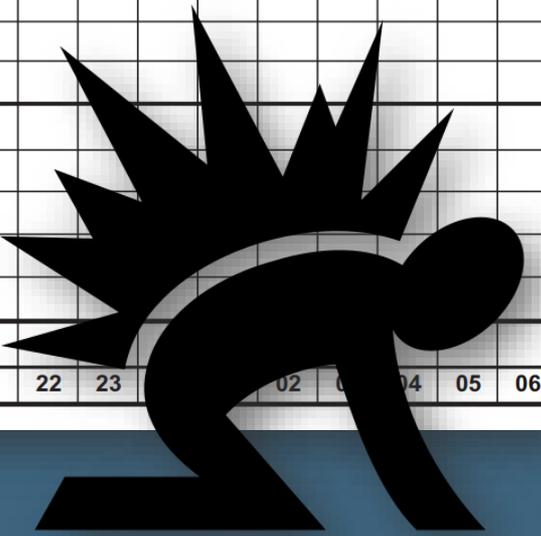
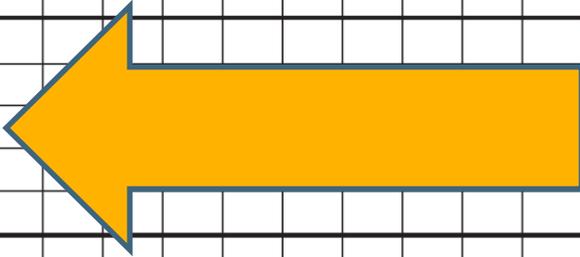
An individual's self-report provides is the primary evidence for the determination of pain.

- The numeric (0-10 out of 10) or visual analogue (shown below) should be included in the pain assessment whenever the patient can self-report.
 - The actual score is not as important as the patient's perception of change during reassessment (worse or better).
 - When pain is reported by the patient, the characteristics of the pain should be evaluated using the PQRST mnemonic (next page). This will help to identify the cause of the pain and the most appropriate treatment plan.



Comfort & Central Nervous System: Infusions

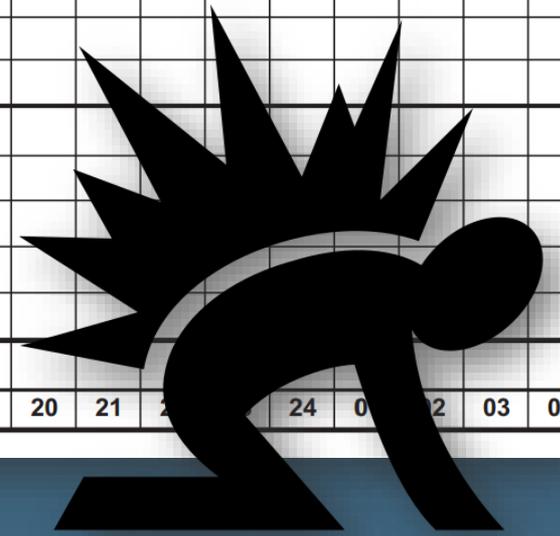
		Comfort: Refer to pain, sedation and delirium scales. Sleep Codes: Identify periods when patient appears to be sleeping. QS = Quiet Sleep RS = Restless Sleep A = Awake																											
		NSR (0-10) or CPOT (0-8)		VAMAAS		SLEEP																							
CNS/NMB Drugs Chart dose/hour Propofol mg/kg/hr	ICP Monitoring: ICP CPP (MAP - ICP) ZERO (Z) LEVEL (L) Drain level CSF drained Diuretic administered CEEG	Z = Zero L = Level M = Mannitol HS = Hypertonic saline																											
				Infusions: _____ _____ _____ _____ Independent check																									
INITIALS		07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	02	03	04	05	06						



Comfort & Central Nervous System: Infusions

Comfort: Refer to pain, sedation and delirium scales. Sleep Codes: Identify periods when patient appears to be sleeping. QS = Quiet Sleep RS = Restless Sleep A =																									
NSR (0-10) or CPOT (0-8)																									
VAMAAS																									
SLEEP																									
ICP Monitoring: ICP CPP (MAP - ICP) ZERO (Z) LEVEL (L) Drain level CSF drained Diuretic administered CEEG																									
Infusions: <i>Propofol</i> mg/kg/h <i>Rocuronium</i> mg/h <i>Hydromorphone</i> mg/h Independent check	3	→	→	2																					
	45	→	→	→																					
	1.5	→	→	→																					
INITIALS		07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04		

CNS/NMB DRUGS
 Chart dose/hour
 Propofol mg/kg/hr



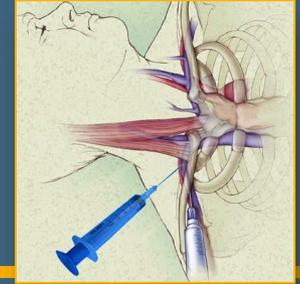
Intracranial Pressure Monitoring:

Z = Zero L = Level M = Mannitol
HS = Hypertonic saline

ICP Monitoring:	ICP	19																	
	CPP (MAP - ICP)	60																	
	ZERO (Z) LEVEL (L)	L/Z																	
	Drain level	10																	
	CSF drained	12																	
	Diuretic administered	M																	
	CEEG	✓																	



Intravascular Device Monitoring: Initial Documentation



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 <u>ALL</u> NEW ARTERIAL, CENTRAL VENOUS AND PERIPHERAL LINES	INSERT LOCATION	COMPLIANCE DOCUMENTED	OBSERVED BREAK	WAVEFORM / ScvO ₂ CONFIRMATION

○ Central line placement must be confirmed with an ScVO₂

○ All central lines must be connected to a closed pressure monitor system at time of insertion and have waveform confirmation

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 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 <u>ALL</u> NEW ARTERIAL, CENTRAL VENOUS AND PERIPHERAL LINES	INSERT LOCATION	COMPLIANCE DOCUMENTED	OBSERVED BREAK	WAVEFORM / ScvO2 CONFIRMATION	INSERTER'S NAME	LINE ISSUES
Jun 17	1715	R I/J Triple Lumen Cath	CCTC	Yes	No	✓	Dr D. Houser	No

Intravascular Device Monitoring: Ongoing Monitoring

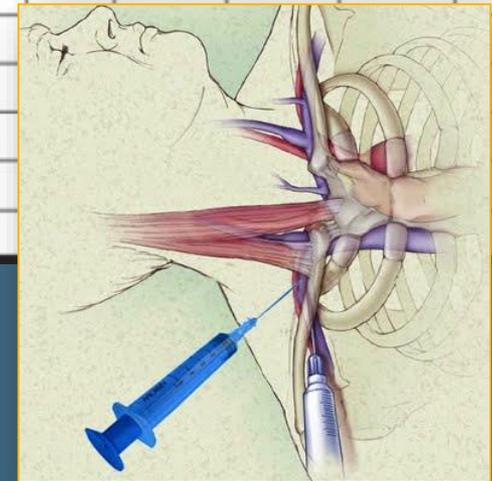
C. ONGOING MONITORING OF INTRAVASCULAR LINES: Document Q shift assessment, starting on shift after initial documentation.

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	0800		LINE ISSUES	WAVE POSTED		
Jun 17	Rt I/J Triple Lumen Cath		✓	✓					
Jun 17	Lt Radial Art Line		✓	✓					
Jun 16	Lt hand 20 g PIV			Δ					
Jun 16	Rt hand 18 g PIV			* D/C					
INITIAL COMPLETION									



Intravascular Device Monitoring: Peripheral IV

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

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: <input type="checkbox"/> Yes <input type="checkbox"/> No									
✓ Blood Return																									
Phlebitis Scale																									
Infiltration Scale																									
Consultant/Senior																									

Indications for Central Venous Catheter (CVC)

A CVC is required for the administration of vasopressors or vesicants that do not meet criteria for peripheral vasopressor protocol. During acute resuscitation, placement can be deferred for up to 2 hours to facilitate insertion safety and prompt reversal of shock. If appropriate vascular access can not be established within 5 minutes, intraosseous insertion should be considered.

A Central Venous Line is required in the following situations:

1. More than one vasopressor is required
2. Maximum dose of single agent norepinephrine or dopamine has been reached, dosing requirements increasing/patient is unstable or required longer than 24 hours
3. Unable to establish or maintain two peripheral IVs that comply with peripheral vasopressor protocol
4. Additional access sites are needed for fluid or medications
5. Concern over IV site quality exists
6. Recommended for medications that are hypertonic, high or low pH or concentrated electrolyte solutions
7. PICC lines are not suitable replacements for central venous lines in patients requiring multiple agents, ongoing resuscitation, vasopressors use or frequent blood sampling

Arterial Lines

1. Required when continuous IV infusions of vasoactive drugs are used
2. An exception to the arterial line policy **can be considered** for patients who meet peripheral vasopressor protocol; arterial lines are preferred for accurate and frequent BP measurements
3. Order must be entered with the name of the approving Consultant entered into Power Chart **using the Crit Care Peripheral Vasopressor power plan**. The order will task to the nurse for renewal every 12 hours. All documentation confirming this review is required every shift.

Protocol for Peripheral Vasopressors

Acceptable Indications:

- Vasopressor use expected to be short
- Single agent norepinephrine (maximum 12 mcg) or dopamine (maximum 10 mcg/kg/min) for a maximum 24 hours
- **Must be ordered via Crit Care Peripheral Vasopressor order set and approved by CCTC Consultant (days) or Senior (nights)**. The order will task to the nurse to review every 12 hours. All documentation confirming the review is required.
- Notify Charge Nurse if a vasopressor is infusing peripherally

Site Requirements:

- Forearm or upper arm only (no lower extremity /hand/antecubital fossa)
- Minimum 20 gauge with blood return; assess before starting and Q shift
- Must have second back up line that meets same criteria
- No other medication can be administered in same line

Monitoring Requirements:

- Assess and document Infiltration and Phlebitis Scales Q1H and PRN
- Initiate Extravasation Protocol/notify MD **immediately for all site concerns**
- Complete AEMS for **ALL** site or insertion complications for PERIPHERAL or CENTRAL VENOUS LINE adverse events

Peripheral IV Insertion Standards

VEIN LEVEL ASSESSMENT

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

Peripheral IV Insertion 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. Ensure **no touch after cleaning** (if touch is required, sterile gloves must be worn and aseptic technique maintained).
8. Document in graphic record. Include confirmation of compliance (aseptic) bundle.
9. If inserted under imperfect conditions (e.g. resuscitation), * and DAR and notify team to change site as soon as possible
10. Access all ports and maintain dressings 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 impairment, moderate – severe pain, infiltration of any amount of blood product, irritant, or vesicant

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



Brain
Breaks

Restraints

RESTRAINTS	Code: + = On - = Off															
Wrist ✓ CSM R / L	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Ankle ✓ CSM R / L	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Magnetic Restraint																



Nursing Interventions

(Panel 5)



London Health Sciences Centre
Critical Care Trauma Centre
CCTC FLOWSHEET

DATE: _____ CCTC DAY NO: _____

NURSING INTERVENTIONS (✓ = Care completed WDL; Initial when completed/assessed)

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
Activity Code:	C = Chair CC = Cardiac Chair D = Dangle W = Stand with Weight Bearing A = Ambulation RT = Reverse Trendelenburg																							
Position																								
Side																								
Wound																								
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Nursing Interventions



London Health
Sciences Centre

Critical Care Trauma Centre
CCTC FLOWSHEET



DATE: _____ (YYYY/MM/DD) CCTC DAY NO: _____

NURSING INTERVENTIONS (✓ = Care completed WDL; Initial when completed/assessed)

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	
POSITIONING	Activity Code: C = Chair CC = Cardiac Chair D = Dangle W = Stand with Weight Bearing A = Ambulation RT = Reverse Trendelenburg																								
Degree HOB elevation																									
Supine/Prone/Right/Left																									
Right sided wedge (OB)																									
Activity (Use Code)																									
PULMONARY BEDS	Code: L = Left R = Right B = Both P = Percussion Mode V = Vibration Mode R = Rotation (° in brackets)																								
Time in Minutes																									
Percuss/Vibrate/Rotate																									

Nursing Interventions



London Health
Sciences Centre

Critical Care Trauma Centre
CCTC FLOWSHEET

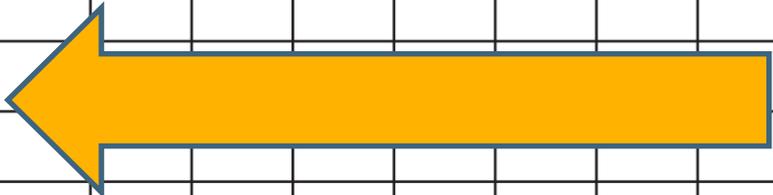
DATE: _____ (YYYY/MM/DD) CCTC DAY NO: _____



NURSING INTERVENTIONS (✓ = Care completed WDL; Initial when completed/assessed)																									
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	
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Time in Minutes																									
Percuss/Vibrate/Rotate																									

Nursing Interventions Hygiene

HYGIENE	CB = Complete Bath PB = Partial Bath S = Shower HW = Hair Wash											
Skin Inspection												
Bathing/Hair Washing												
Pericare												
Linen Change												
Facial Shave												
Collar Care												
ORAL CARE	TB = Teeth Brushed S = Oral care with sw											
Oral Inspection												
Oral Care (use code)												
EYE CARE	Code: D = Drops O = Ointments C =											
Lubricant												



Nursing Interventions Hygiene

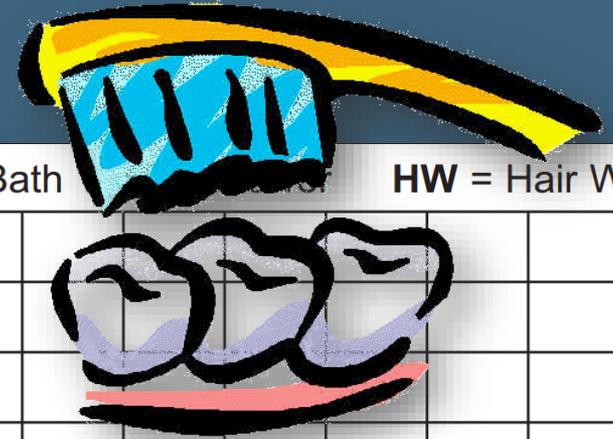
HYGIENE		CB = Complete Bath	PB = Partial Bath	S = Shower	HW = Hair Wash
Skin Inspection	*				
Bathing/Hair Washing	CB/HW				
Pericare	✓				
Linen Change	✓				
Facial Shave	✓				
Collar Care	✓				
ORAL CARE		TB = Teeth Brushed	D = Drops	S = Lubricant	
Oral Inspection					
Oral Care (use code)					
EYE CARE		Code: D = Drops		O =	
Lubricant					

○ Spinal collars are removed q shift for skin care and inspection

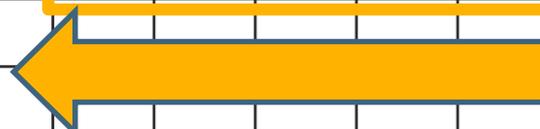
○ Findings not WDL are documented in the AI record.

Nursing Interventions

Oral Care



HYGIENE		CB = Complete Bath			PB = Partial Bath			HW = Hair Wash		
Skin Inspection										
Bathing/Hair Washing										
Pericare										
Linen Change										
Facial Shave										
Collar Care										
ORAL CARE		TB = Teeth Brushed			S = Oral care with swab			L = Lubricant		
Oral Inspection										
Oral Care (use code)										
EYE CARE		Code: D = Drops			O = Ointments			C = Eyelids Closed		
Lubricant										



Nursing Interventions

Eye Care



HYGIENE	CB = Complete Bath				PB = Partial Bath				Hair Wash			
Skin Inspection												
Bathing/Hair Washing												
Pericare												
Linen Change												
Facial Shave												
Collar Care												
ORAL CARE	TB = Teeth Brushed				S = Oral care with swab				L = Lubricant			
Oral Inspection												
Oral Care (use code)												
EYE CARE	Code: D = Drops O = Ointments C = Eyelids Closed											
Lubricant	←											

Nursing Interventions Bowel Routine

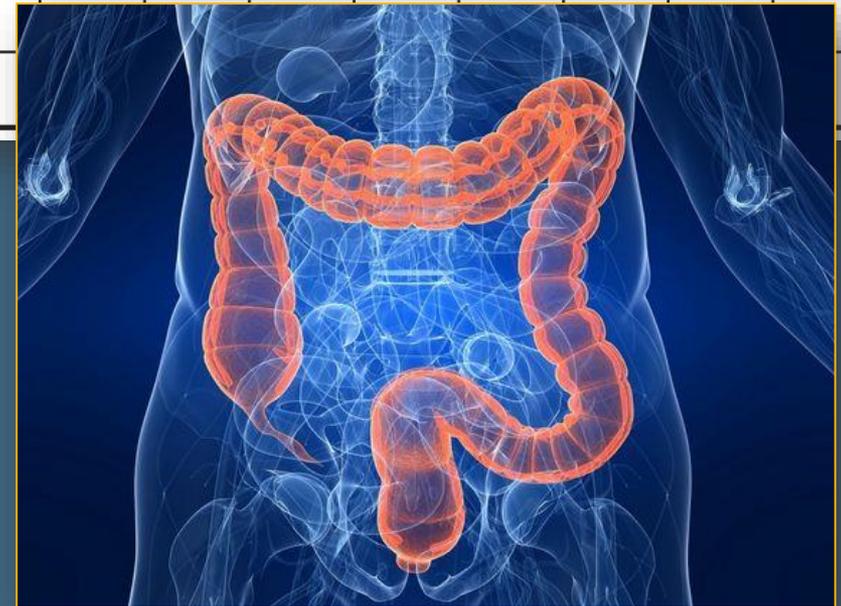
BOWEL ROUTINE

Stool Code: - = Small + = Large S = Soft D= Diarrhea H = Hard

Stool Record

Impaction ✓

Fecal Drainage:
Tubing Flush



Chest Tube Drainage

OUTPUT

HOUR	URINE		L CT #1	Drain	L CT #2	Drain			
0600 0700			(850)	0	(675)	0			
0700 0800									
0800 0900			(900)	50	(750)	75			
0900 1000									
1000 1100			(920)	20	(800)	50			
1100 1200									
1200 1300									
1300									



Nursing Interventions: VTE Prophylaxis (Venous ThromboEmbolism)

VTE PROPHYLAXIS		Code: + = On - = Off		GCS = Graduated Compression Stockings						IPC = Intermittent Pneumatic Compression							
Mechanical Compression Devices																	
* Skin ✓ Legs																	
MUSCULOSKELETAL		Code: + = On - = Off															
Splints	Upper Extremities																
	Lower Extremities																
ROM	Leg																
	Arm																
CATHETER CHANGE		Code: R = Regular Foley S = Silicone T = Thermistor															
Catheter Change																	
Drainage Bag Change																	
INITIALS																	
		07	08	09	10	11	12										



Nursing Interventions: Catheter Change



VTE PROPHYLAXIS		Code: + = On - = Off										GCS = Graduated Compression										
Mechanical Compression Devices																						
* Skin ✓ Legs																						
MUSCULOSKELETAL		Code: + = On - = Off																				
Splints	Upper Extremities																					
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CATHETER CHANGE		Code: R = Regular Foley S = Silicone T = Thermistor																				
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		07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03

Prevention of Catheter Associated Urinary Tract Infection (CAUTI): Maintenance Bundle

- Reassess need for bladder catheter Q shift.
- Secure catheter to thigh to prevent trauma.
- Disinfect drainage tube connection before reconnection if system is inadvertently disconnected.
- Ensure that urine is draining without obstruction or kink.
- Maintain drainage bag below the level of the bladder without contacting the floor.
- Protect drainage bag valve from contamination when bag is emptied.
- Maintain perineal hygiene routine.
- Change Foley catheter if positive urine culture obtained.

Fluid Balance

FLUID BALANCE KEY: T = Tubing Change (IV and Enteral) P = protein bolus given G = glutamine bolus given O = other* dietary supplement

Previous 24 Hour Balance: _____ Cumulative Balance: _____

INTAKE										OUTPUT										
Maintenance	IV Meds					P.O.	Tube Feeds	Meds & Flush P/G/O	HOUR	URINE										
									0600											
									0700											
									0800											
									0900											
									1000											
									1100											
									1200											
									1300											
									1400											
									1500											
									1600											
									1700											
									1800											
									TOTAL											

▷ 0600-1800 Intake: _____ Output: _____ Net 12 Hour Balance: _____



Fluid Balance

FLUID BALANCE														
KEY: T = Tubing Change (IV and Enteral) P = protein bolus given G = glutamine bolus given O = other* dietary supplement														
Previous 24 Hour Balance: _____ Cumulative Balance: _____														
INTAKE										OUTPUT				
Maintenance	IV Meds					P.O.	Tube Feeds	Meds & Flush P/G/O	HOUR	URINE				
									0600					
									0700					
									0800					
									0900					
									1000					
									1100					
									1200					
									1300					
									1400					
									0300					
									0400					
									0500					
									0600					
									TOTAL					
▷ 1800-0600 Intake: _____ Output: _____ Net 12 Hour Balance: _____														
NET 24 HOUR BALANCE: _____														



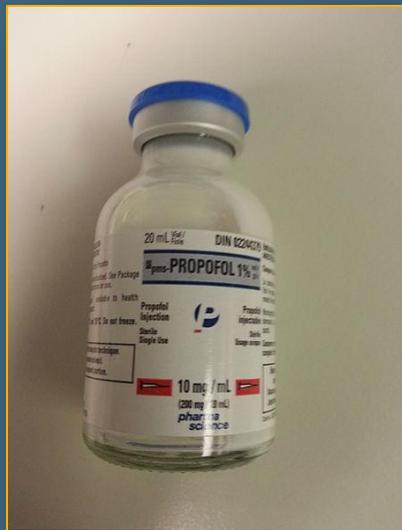
IV Tubing Change

- For continuous infusions, we change IV tubing every 96 hours.
- Insulin bags and Vasopressin bags and tubing are to be changed every 24 hours (at 1600).



IV Tubing Change

- Change vented Propofol tubing every 12 hours
- Change TPN bags & tubing every 24 hours (at 2200)



TPN Tubing

2-in-1 Lipids separate

For the amino acid/dextrose component, use 0.2 or 0.22 micron in-line filter (2C8571 or 2C8858)



For the lipid component, use a non-DEHP set (2C1145)



You may continue to use this Y-extension to connect the 2 solutions together to connect to one lumen
It is non-DEHP



3-in-1 Lipids included (one bag)

For the SmofKabiven product, use non-DEHP 1.2 micron with in-line filter (2H8486)

