

## Welcome to Critical Care

This list of competency statements has been developed to facilitate the new nurse's acquisition of technical skills, and subsequent integration into Critical Care at the Brant Community Healthcare System. It is the responsibility of the orientee to have the preceptor/mentor sign the competency statement list, which will be reviewed at intervals during the orientation process.

Please have this orientation package with you when completing your clinical hours. This will help both the orientee and the preceptor/mentor assess your learning needs and ensure advanced competencies are completed.

The goal is to be assigned to one or two preceptors for the entire orientation process. Please try to schedule orientation shifts around your assigned preceptors/mentors. This will ensure a consistent and successful orientation.

Please submit completed checklists and competencies to the CRN.

### **Competency Based Orientation Program Objectives**

- Clear expectations of competence for new and experienced staff
- Clarity for the preceptor, and orientee of their roles and expected time lines.
- Consistency in the orientation process.
- Ability to individualize orientation to meet specific individual needs.
- Decreased unproductive time in unnecessary learning experiences.
- Development of learning resources that support orientation and ongoing education for nursing staff.
- Encouragement for nurses to take responsibility for their own educational needs.
- Ease in objectively identifying why an individual does not meet expectations.
- Ease in justifying an extension of orientation and identify goals to be met.

## THE ORIENTATION PROCESS

After the new nurse is hired, she/he meets with the clinician to receive the orientation folder and schedule

- Clinical Resource Nurse explains the orientation program and answers questions

The new staff member, preceptor and Clinical Resource Nurse will establish a plan for orientation based on the identified learning needs.

The length of orientation is based on:

- Previous experience + length of time to complete identified learning needs

## MID-ORIENTATION EVALUATION

The Clinical Resource Nurse meets with the new staff member and preceptor to:

- Review the learning needs assessment and identify barriers to meeting the learning needs
- Assist new staff member and preceptor to develop strategies to meet learning needs

## END OF ORIENTATION

The Clinical Resource Nurse meets with the new staff member to:

- Review the learning needs assessment for incomplete items and establish a learning plan for meeting learning needs.
- Evaluate the need for further orientation
- Offer further resources based on continuing learning needs

### Skills and Advanced Competencies Checklist for New Staff

Name: \_\_\_\_\_ Dates of Orientation: \_\_\_\_\_

Precepted By: \_\_\_\_\_ # Hours: \_\_\_\_\_

*Please ensure checklist is handed in to Clinical Resource Nurse once completed, to be placed in individual education record file.*

Self-Directed Learning Package	Date Package Received	Test Completed Date / Initial	Skill Checklist Completed Date / Initial
Basic Cardiac Arrhythmias			
Venipuncture			
IV			
Central Venous Access Devices			
CVP Monitoring			
Arterial Lines			
Epidural			
12 and 15 lead ECG			
BIPAP/CPAP			
Mechanical Ventilation			
Neuromuscular Blocking Agents			
Pacemakers			
Lifesaving drugs			
Defibrillation			

All nurses at BCHS are also responsible for maintaining their BCLS Glucometer certification (done annually), and all hospital medworxx requirements.

### Orientation to Critical Care

Name: \_\_\_\_\_ Date Orientation begins: \_\_\_\_\_ (150 hrs)

BLS Expiry date: \_\_\_\_\_ ACLS expiry date: \_\_\_\_\_

Critical Care Certificate: \_\_\_\_\_

*Depending on level of the orientee, the timelines may be negotiated as necessary. Please fill in anticipated date of completion in the first column. Orientee and Mentor to initial each step in the third column as completed. The CCU Orientation Manual can be accessed as PDF files on the N drive (VS\_Clinical) under Critical Care → Orientation Package → Critical Care Orientation Package 1- 3.*

Timeline	Orientation goal to be met	Date completed, initials
Initial day in CCU Date: _____	Meet with CRN to discuss orientation plan, timeline, and assess learning needs Pre-assigned Mentors by CRN: Try to align clinical hours in advanced	Date: _____ _____/____
After 2 weeks Date: _____	Venipuncture certification complete	Date: _____ _____/____
	IV start certification complete	Date: _____ _____/____
	Trillium Gift of Life education provided by CRN	Date: _____ _____/____
After 1 month Date: _____	Competency Statement #1: Describe the organization of the CCU complete	Date: _____ _____/____
	Competency Statement #2: Demonstrate Effective Communication Skills Appropriate to the Critical Care Environment complete	Date: _____ _____/____
After 3 months/150 hours Date: _____	Self-directed learning package Basic Cardiac Arrhythmias complete	Date: _____ _____/____
	Self-directed learning package Central Venous Access Devices	Date: _____ _____/____

	Self-directed learning package for Arterial Lines complete	Date: ____/____/____
	Self-directed learning package for CVP Monitoring and CVAD complete	Date: ____/____/____
	Self-directed learning package for Neuromuscular Blocking Agents complete	Date: ____/____/____
	Self-directed learning package for Epidurals complete	Date: ____/____/____
	Competency Statement #3: Provides comprehensive care in the following areas complete	Date: ____/____/____
	3 month performance evaluation complete	Date: ____/____/____
After 6 months Date: _____	Mechanical ventilation certification for both invasive and non-invasive ventilation complete (includes self-directed learning package, formal session with RRT and hands-on learning)	Date: ____/____/____
	6 month performance evaluation complete	Date: ____/____/____
After 12 months Date: _____	Initial delegation with physician for pacemakers, defibrillation and lifesaving drugs complete	Date: ____/____/____

## Critical Care Unit Competencies

*It is the responsibility of the individual nurse to inform the Central Resource Nurse that he or she is not competent to perform the skill in question and to participate in educational arrangements made to help maintain or gain competency in the skill.*

### Competency Statement #1: Describe the organization of the CCU

1. Locate emergency equipment: <ul style="list-style-type: none"> <li>- Defibrillator</li> <li>- Airway, central line, special procedure carts</li> <li>- Fire extinguishers and alarms</li> <li>- Oxygen and air shut off valves</li> </ul>	Orientee/Preceptor Initials: ____/____	Additional Requirements:
2. Locate: <ul style="list-style-type: none"> <li>- Sign-in sheets and staffing rotors</li> <li>- Huddle board, Rapid Rounds board</li> <li>- Staff assignment record and board</li> <li>- Unit manuals</li> <li>- Medication room</li> <li>- Clean and dirty utility rooms</li> <li>- Visitor waiting room, quiet room</li> <li>- CRN office</li> </ul>	Orientee/Preceptor Initials: ____/____	
3. Locate equipment in patient room: <ul style="list-style-type: none"> <li>- Suction</li> <li>- Oxygen</li> <li>- Call bell</li> <li>- Code Blue button</li> </ul>	Orientee/Preceptor Initials: ____/____	
4. Demonstrate use of the computer to obtain lab results, results of diagnostic tests, prior patient visits, etc.	Orientee/Preceptor Initials: ____/____	
5. Operate CCU equipment: <ul style="list-style-type: none"> <li>- Critical Care bed and lift equipment</li> <li>- Glucometer</li> <li>- Bedside monitor, transport monitors</li> <li>- Sigma IV pump,</li> <li>- Central monitoring system</li> <li>- PCA/epidural pump</li> <li>- Hypo/hyperthermia blanket</li> <li>- Pneumatic tube system</li> </ul>	Orientee/Preceptor Initials: ____/____	

6. Describe the roles of: <ul style="list-style-type: none"> <li>- Group Lead and CRN</li> <li>- Unit Clerk</li> <li>- Most Responsible Physician (MRP)</li> <li>- After hours on call physicians</li> <li>- Healthcare team: RRT, dietician, social work, physio, Navigator, CCAC, pharmacy, etc.</li> </ul>	Orientee/Preceptor Initials: ____/____	
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**Competency Statement #2: Demonstrate effective communication skills appropriate to the CCU environment**

1. Clearly and concisely report to oncoming shift, during bedside rounds and at Rapid Rounds.	Orientee/Preceptor Initials: ____/____	
2. Accurately document using: <ul style="list-style-type: none"> <li>- PCS, eMAR</li> <li>- Order transcription and entry</li> <li>- Downtime paper charting</li> <li>- Transfer sheets</li> </ul>	Orientee/Preceptor Initials: ____/____	
3. Describe communication via: <ul style="list-style-type: none"> <li>- Huddle board</li> <li>- Email and staff mailboxes</li> <li>- Staff meetings, bulletin boards</li> </ul>	Orientee/Preceptor Initials: ____/____	
4. Recognize and develop strategies to resolve interpersonal conflicts with External (i.e. patient) and Internal (i.e. staff members) sources	Orientee/Preceptor Initials: ____/____	Additional Requirements:

**Competency Statement #3: Provides comprehensive care in the following areas:**

<b>Neurology</b>		
1. Interprets and evaluates data including: <ul style="list-style-type: none"> <li>- Physical assessment</li> <li>- Glasgow coma, Canadian neurological scales</li> <li>- CAM-ICU</li> <li>- Lab and diagnostic results</li> </ul>	Orientee/Preceptor Initials: ____/____	
2. Recognizes actual or potential life-threatening alterations in function (ineffective thermoregulation, motor and/or sensory impairments, cerebral tissue perfusion)	Orientee/Preceptor Initials: ____/____	

impairments - stroke, meningitis, seizures)		
3. Identifies and/or demonstrates appropriate nursing interventions to correct alterations in cerebral tissue perfusion (anticonvulsants, diuretics, sedatives, neuromuscular blocking agents, TPA)	Orientee/Preceptor Initials: ____/____	
4. Identifies and/or demonstrates knowledge of stroke protocol care path and preprinted order sets.	Orientee/Preceptor Initials: ____/____	
<b>Cardiovascular</b>		
1. Interprets and evaluates data including: - Physical assessment (BP, pulses, skin temp, heart sounds, JVP) - Lab results (CK, troponin, CBC, coagulation, electrolytes, drug levels) and cardiac tests (echo, stress test, MIBI, angios) - Technological supports(cardiac monitors, 12/15 lead ECG, pacemakers, arterial/CVP lines)	Orientee/Preceptor Initials: ____/____	Additional Requirements:
2. Recognizes actual or potential life-threatening situations (cardiogenic/hypovolemic shock, ACS, cardiac tamponade, pulmonary edema, hypertension, thoracic/abdominal aneurysm, thrombosis, embolus, valvular disease)	Orientee/Preceptor Initials: ____/____	
3. Identifies and/or demonstrates appropriate intervention(s) to correct alterations in perfusion, output (inotropes, vasopressors, vasodilators, thrombolytics, antiplatelets, anticoagulents, fluid, electrolytes, blood, blood products, antiarrhythmics, antihypertensives, temporary transvenous or external pacing)	Orientee/Preceptor Initials: ____/____	



4. Demonstrates knowledge of: <ul style="list-style-type: none"> <li>- Cardiac arrest and arrhythmia protocols</li> <li>- Defibrillation and cardioversion protocols</li> <li>- Code Blue resuscitation</li> </ul>	Orientee/Preceptor Initials: _____/_____ 	Additional Requirements:
5. Assisting with and/or performing: <ul style="list-style-type: none"> <li>- Arterial line maintenance and removal</li> <li>- Elective cardioversions</li> </ul>	Orientee/Preceptor Initials: _____/_____ 	
<b>Respiratory</b>		
1. Interprets and evaluates data including: <ul style="list-style-type: none"> <li>- Physical assessment, pulse oximetry</li> <li>- Lab results (inc. arterial blood gases) and diagnostic tests (CXR, peak flows, PFT's)</li> <li>- Mechanical ventilator weaning parameters</li> <li>- Ventilation info (parameters, modes, pressures)</li> </ul>	Orientee/Preceptor Initials: _____/_____ 	
2. Recognizes actual or potential life-threatening alterations (ineffective airway, asthma, COPD, pneumo/hemothorax, impaired gas exchange, ARDS, pulmonary embolism, pneumonia)	Orientee/Preceptor Initials: _____/_____ 	
3. Identifies and/or assists with or performs appropriate interventions to correct alterations in function (bag/valve mask, oral or nasal airway, positioning, suctioning, chest tubes, ETT, trach tubes)	Orientee/Preceptor Initials: _____/_____ 	
4. Administering and/or monitoring pharmacological agents (O2 administration, analgesics, sedatives, bronchodilators, steroids, neuromuscular blocking agents)	Orientee/Preceptor Initials: _____/_____ 	Additional Requirements:

5. Care of the intubated mechanically ventilated patient (indications, airway management, ETT, trachs, oxygenation, PEEP, FiO2, modes, rates, volumes, troubleshooting, ventilation/ weaning promotion, nutrition, pain, sedation, rest)	Orientee/Preceptor Initials: ____/____	
6. Care of patients with non-invasive ventilation techniques (BiPAP, CPAP)	Orientee/Preceptor Initials: ____/____	
<b>Gastrointestinal</b>		
1. Interprets and evaluates data including: - Physical assessment - Lab and diagnostic results (amylase, lipase, liver profile, ultrasound, CT)	Orientee/Preceptor Initials: ____/____	
2. Recognize actual or potential life-threatening alterations (ischemic/infarcted bowel, hepatic failure, peritonitis, pancreatitis, GI bleed, complex surgical interventions)	Orientee/Preceptor Initials: ____/____	
3. Identifies and/or demonstrates appropriate interventions to correct alterations in gastrointestinal function (TPN, enteral feeding, abdominal drainage, complex wounds)	Orientee/Preceptor Initials: ____/____	
4. Administer and monitor pharmacological agents (motility agents, proton pump inhibitors, antiemetics, GI vasoconstrictors)	Orientee/Preceptor Initials: ____/____	Additional Requirements:
<b>Genitourinary/Renal</b>		
1. Monitors and evaluates data including: - Physical assessment (edema, urine output) - History - Lab and diagnostic results (electrolytes, eGFR, fluid balance, weight, drug levels)	Orientee/Preceptor Initials: ____/____	

2. Recognizes actual or potential life threatening alterations including: - Nephrotoxic agents (contrast agents, drugs, poisons, diuretics, vasopressors, antibodies) - Electrolyte and acid/base imbalance	Orientee/Preceptor Initials: ____/____	
3. Administer and monitor pharmacological agents (diuretics, vasodilators, nephroprotective agents, treating hyperkalemia)	Orientee/Preceptor Initials: ____/____	
<b>Endocrine</b>		
1. Interprets and evaluates data including: - Lab and diagnostic results (blood sugar, osmolality, TSH, electrolytes)	Orientee/Preceptor Initials: ____/____	
2. Recognizes actual or potential life threatening alterations (ADH, SIADH, DKA, HHNK, adrenal insufficiency, hyper or hypothyroidism) Protocols reviewed	Orientee/Preceptor Initials: ____/____	
3. Identifies and/or demonstrates appropriate interventions to correct alterations in endocrine function (insulin infusion, hormone replacement, electrolyte balance, fluid management)	Orientee/Preceptor Initials: ____/____	
<b>Reproductive</b>		
1. Monitors and evaluates data including: - History - Lab and diagnostic results - Sexual assault/domestic violence protocol	Orientee/Preceptor Initials: ____/____	
2. Recognizes actual or potential life threatening (infection, complex surgery)	Orientee/Preceptor Initials: ____/____	
<b>Musculoskeletal and Integumentary</b>		
1. Monitors and evaluates data including:	Orientee/Preceptor Initials: ____/____	

<ul style="list-style-type: none"> <li>- Physical assessment (skin integrity, ROM, circulation, temperature, sensation)</li> <li>- Lab results (cultures, CK, myoglobin)</li> <li>- Diagnostic tests (XR, CT, MRI)</li> <li>- Braden scale, wound assessment</li> </ul>		
2. Recognizes potential or actual life threatening alterations (malignant hyperthermia, compartment syndrome, complex wounds, rhabdomyelosis, fractures, amputations, infection)	Orientee/Preceptor Initials: ____/____	Additional Requirements:
3. Identifies and/or demonstrates appropriate interventions related to alterations in function (splints, immobilizers, traction, prevention of complications r/t immobility, complex woundst, use of therapeutic surfaces)	Orientee/Preceptor Initials: ____/____	
<b>Immunological and Hematological</b>		
1. Monitors and evaluates data including: <ul style="list-style-type: none"> <li>- Physical assessment (invasive sites or devices)</li> <li>- Lab results</li> </ul>	Orientee/Preceptor Initials: ____/____	
2. Recognizes actual or potential life threatening alterations (Sepsis, DIC, DVT)	Orientee/Preceptor Initials: ____/____	
3. Identifies and/or demonstrates appropriate interventions to correct alterations (aseptic technique, protective isolation, nutritional support, administration of blood products and/or pharmacological agents)	Orientee/Preceptor Initials: ____/____	
<b>Psychosocial</b>		
1. Monitors and evaluates data including:	Orientee/Preceptor Initials: ____/____	

<ul style="list-style-type: none"> <li>- Coping skills</li> <li>- Pain and anxiety</li> <li>- Current and past experiences in the healthcare system</li> </ul>		Additional Requirements:
2. Selects appropriate interventions (involving patient and family, facilitating communication, facilitating and supporting end of life choices and advanced directives)	Orientee/Preceptor Initials: ____/____	
3. Selecting appropriate interventions to prevent or minimize delirium (CAM-ICU tool, managing environment, identifying triggers, promoting sleep, managing pain)	Orientee/Preceptor Initials: ____/____	

The Brant Community Health Care System  
**RN Skill Competency Checklist for Venipuncture**

	Attempt #1	Attempt #2	Attempt #3
1. Verifies orders & checks labels, gathers equipment, washes hands			
2. Greets patient, introduces self, verifies correct patient by checking armband.			
3. Explains procedure and obtains verbal consent			
4. Instructs or assists patient with proper positioning			
5. Applies gloves and other PPE as required			
6. Positions patients arm comfortably			
7. Prepares equipment			
8. Apply tourniquet 2-4 inches above the site (bicep) and instruct patient to make a fist			
9. Assess for vein sites by palpation and/or running fingers up forearm			
10. Cleanses site with 70% isopropyl alcohol in a circular motion-central to periphery			
11. Allow alcohol to air dry			
12. Inspects needle for burrs, hooks or other defects			
13. Anchor vein and inserts needle bevel up			
14. Remove tourniquet when blood flow is established/instructs patient to relax fist			
15. Collects blood specimens correct order of the draw with minimal/optimal volumes			
16. After last tube collected, removes tube from holder & removes needle from patient.			
17. Applies pressure to puncture site with cotton ball (2-3 min. or until blood stops flowing)			
18. Labels specimen with date, time, first initial, last name and title.			
19. Checks site for bleeding, instructs patient to apply pressure to site if needed.			
20. Disposes of equipment appropriately and DOES NOT RECAP NEEDLES.			
21. Sends blood to lab using biohazard precautions.			
22. Removes gloves & washes hands			
23. Documents according to policy			
Preceptor's Initials:			
Date:			

## IV Insertion

*Competency is complete after the orientee has successfully initiated five (5) IV starts under supervision according to the following steps.*

	IV #1	IV #2	IV #3	IV #4	IV #5	Comments
1. Verify doctor's order						
2. Check patient allergies						
3. Verify patient's identity using 2 unique patient identifiers						
4. Performs Hand Hygiene and applies appropriate PPE.						
5. Introduce self, designation and skill/task to be performed and obtain verbal consent.						
6. Assesses potential IV sites						
7. Chooses appropriate site apply tourniquet, select site and remove tourniquet						
8. Select appropriate gauge size						
9. Applies clean gloves						
10. Apply tourniquet						
11. Cleanse site with 5% chlorhexidine gluconate and 70% alcohol swab. Allow to dry						
12. Stabilize vein, insert and advance catheter						
13. Releases tourniquet						
14. Applies dressing						
15. Connects IV tubing or primed saline lock						
16. Securely tapes device and indicates date, time, initials and gauge.						
17. Remove PPE						
18. Performs Hand Hygiene						
19. Document						
Supervisor's Initials						
Date of Insertion						

### 12 and 15 Lead ECG Performance Checklist

Criteria	Preceptor Initials when Criteria Met
<b>12 Lead:</b>	
Obtain an order, gather equipment, enter data in ECG machine	
Wash hands	
Verify patient identification, identify self and purpose of ECG	
Correctly place ECG leads on limbs and torso	
Obtain 12-lead ECG	
Print, transmit and save ECG	
Remove leads if indicated	
Place copy of ECG on patient chart, document according to policy	
<b>15 Lead:</b>	
As above, but including leads V4R, V8, V9	
Obtain 15-lead ECG	
Print, transmit and save ECG	
Comments:	



## Written Test for Epidural Pain Management, Including Intermittent Epidural Narcotic Injection

Date: \_\_\_\_\_ Name: \_\_\_\_\_

1. The spinal cord extends to the level of the:

- a) Sacrum
- b) Upper lumbar vertebrae
- c) Mid-thorax
- d) 5<sup>th</sup> lumbar vertebrae
- e) Coccyx

2. Match the layer of the spinal cord with its correct definition:

_____ Dura mater	a) Tough, fibrous outermost membrane which covers the brain, spinal cord and nerve roots like a protective sac
_____ Arachnoid membrane	b) Lies outside the dura mater, and contains blood vessels and fat tissue
_____ Epidural space	c) The thin middle membrane that is located beneath the dura mater, enclosing the arachnoid space
_____ Subarachnoid space	d) Lies between the arachnoid membrane and pia mater; is filled with cerebral spinal fluid
	e) Lies between the arachnoid membrane and dura mater; is filled with cerebral spinal fluid

3. What is the correct placement of an epidural catheter?

- a) Between the spinal cord and dura mater
- b) Between the dura mater and the bony vertebral arch
- c) In the subarachnoid space in the spinal cord
- d) In the ventral nerve root of the spinal cord

4. TRUE or FALSE: The spaces between L2-L3 and L3-L4 are most commonly used for epidural catheter placement.

5. Which of the following is contained within the epidural space? (Circle all that apply)

- a) Fatty tissue
- b) Nerves
- c) Cerebral spinal fluid
- d) Lymphatics
- e) Blood vessels

6. Identify the correct statements regarding epidural narcotics:

- a) They provide regional pain control by inhibiting the release of Substance P, thereby blocking the transmission of pain impulses to the cerebral cortex.
- b) They prevent uptake of acetylcholine by the postsynaptic neuron
- c) They act directly on the parasympathetic system
- d) They provide analgesia with no motor block
- e) They may cause respiratory depression

7. TRUE or FALSE: Epidural narcotics bind to opiate receptors in the substantia gelatinosa within the dorsal horn of the spinal cord.
8. Epidural narcotics offer advantages over the parenteral route. (Circle all that apply)
- a) No risk of respiratory depression
  - b) Less potential for CNS affects – BP changes, sedation, disorientation, muscle weakness
  - c) A reduced frequency in dosing
  - d) Pain relief is better and lasts longer
  - e) Improved ventilation and earlier mobilization
  - f) Reduced incidence of urinary retention
9. Which statement regarding epidural analgesia is true?
- a) Narcotics given through an epidural catheter diffuse slowly from the epidural space, through the dural membrane and into the CSF in the subarachnoid space.
  - b) Narcotics given through an epidural catheter are injected directly into the CSF in the subarachnoid space.
  - c) Narcotics given through an epidural can only be administered as intermittent bolus injections.
  - d) Sensory and motor assessments must be done for patients receiving epidural analgesia.
10. In which of the following conditions is epidural analgesia contraindicated for pain relief? (Circle all that apply)
- a) A patient with a pelvic sepsis
  - b) A motor vehicle accident patient who has a suspected spinal injury
  - c) A patient who has undergone a right hemicolectomy
  - d) A patient who has intractable pain related to a metastatic bowel cancer
  - e) A patient who is taking Coumadin for his “heart condition”
  - f) An elderly patient who has had an ORIF of a left hip fracture
11. Patients receiving epidural narcotics for analgesia should be:
- a) Permitted to mobilize about the unit as tolerated and encouraged to do their post-op respiratory exercises
  - b) Confined to their beds, catheterized Q2H and sedated with Ativan PRN
  - c) Made to walk from the elevator to their beds on return from PACU
  - d) Left alone except for routine post-op vital monitoring
12. TRUE or FALSE: Sensory, motor and sympathetic involvement is associated with epidural narcotics.
13. TRUE or FALSE: Early respiratory depression can occur as early as 1 hour post-injection and may be secondary to the rapid systemic absorption of a narcotic from the epidural space.
14. TRUE or FALSE: Morphine is a highly lipophilic drug with a rapid onset and short duration of action.

15. Symptoms of late respiratory depression are:
- a) Changes in level of consciousness, convulsions, tachycardia
  - b) Changes in level of consciousness, markedly reduced rate and depth of respirations, O<sub>2</sub> sat <90%
  - c) Increased temperature, decreased BP and respiratory rate < 12/min
16. Side effects of epidural narcotics most commonly include: (Circle all that apply)
- a) Pruritis
  - b) Tinnitus and metallic taste in mouth
  - c) Respiratory depression
  - d) Nausea and vomiting
  - e) Sensory and motor block
  - f) Hypotension
17. TRUE or FALSE: Respiratory depression can occur as early as 1 hour and as late as 24 hours after an epidural narcotic bolus injection.
18. TRUE or FALSE: Intravenous naloxone should be given if the respiratory rate is < 8 breaths per minute.
19. Patient health teaching related to epidural analgesia will include: (Circle all that apply)
- a) Explaining the monitoring routine used.
  - b) What the possible side effects are.
  - c) The importance of notifying a nurse if any side effects occur.
  - d) The importance of letting the nurse know about any increased pain.
  - e) Both the patient and their family.
20. Mrs S. is a 42 year old female patient who underwent a total abdominal hysterectomy and who just arrived to your unit from PACU. She received Epimorph intra-op.
- a) What is the monitoring protocol for the first 24 hours?
  - b) You have noticed from the intake and output record that Mrs S. has not yet voided. What are the actions that you will take to address this problem?
  - c) Three hours after Mrs S. received her Epimorph, she is complaining of "itching" around her mouth, nose and neck. What actions will you take to address this problem?
  - d) What is the most serious side effect of epidural narcotics after the first 1 to 2 hours post-injection?
  - e) What assessment parameters will you use to monitor for this potential problem?

21. When caring for a patient who has received epidural narcotics, the following are all nursing responsibilities except:
- a) Monitoring the patients O2 saturation levels
  - b) Ensuring that naloxone is readily available
  - c) Notifying the surgeon if comfort level is not adequately controlled
  - d) Administering IV narcotics, as ordered if the patient complains of pain
  - e) Documenting the patient's response to epidural analgesia
22. TRUE or FALSE: 24 hours have passed since your patient has received epidural narcotics, and he is now complaining of nausea. You administer an antiemetic as ordered on the Epidural/Spinal protocol.
23. You noted blood returning during your pre-injection withdrawal through the epidural catheter. What does this indicate?
24. You note clear, colourless liquid returning during your pre-injection withdrawal through the epidural catheter. What does this indicate?
25. For the above two situations, you will:
- a) Continue with your injection.
  - b) Stop what you are doing, replace the cap on the catheter and call the anesthesiologist.
  - c) Inject half the dose and withdraw again to see what return you will get.
  - d) Pull the catheter out and call the anesthesiologist.
26. TRUE or FALSE: A doctor's order is required for the removal of an epidural catheter.
27. What position will you place your patient in when removing the epidural catheter?
- a) Lying supine with head off pillow.
  - b) Left lateral side-lying position in Trendelenburg
  - c) In the fetal position with legs drawn up to the chest
28. If significant resistance is felt on the catheter after your second attempt at removal, you should:

### Epidural Top-Up Checklist

Name: \_\_\_\_\_

Procedure	Yes	No
1. Check physician's order		
2. Ensure patent IV site		
3. Perform hand hygiene		
4. Prepare epidural injection using aseptic technique and double check with a 2 <sup>nd</sup> RN		
5. Explain the procedure to the patient		
6. Monitor and record baseline vitals (BP, HR, RR, SaO2, sedation level, pain score)		
7. Assess epidural catheter insertion site, check for presence of filter, adapter and epidural label		
8. Check epidural catheter marking level to ensure that the catheter has not migrated		
9. Remove cap from epidural catheter, connect syringe via filter and gently aspirate <ul style="list-style-type: none"> <li>- If blood or excess fluid comes back easily when pulling back on the syringe, DO NOT INJECT</li> <li>- If no blood or excess fluid comes back, inject medication at a rate of &lt; 1 ml/sec</li> </ul>		
10. Remove syringe and replace cap		
11. Document in eMAR and in PCS appropriately		

Preceptor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Epidural Continuous Infusion Skill Checklist

Name: \_\_\_\_\_

Procedure	Yes	No
1. Checks physician's order		
2. Ensure patent IV site		
3. Perform hand hygiene		
4. Prepare epidural infusion bag using aseptic technique and double check with a 2 <sup>nd</sup> RN		
5. Prime epidural tubing with no injection ports		
6. Program epidural infusion pump according to physician's orders and double check with 2 <sup>nd</sup> RN		
7. Explain procedure to patient		
8. Monitor and record baseline vitals (BP, HR, RR, SaO2, sedation level, pain score)		
9. Assess epidural catheter insertion site, check for presence of filter, adapter and epidural label		
10. Check epidural catheter marking level to ensure that the catheter has not migrated		
11. Remove cap from epidural catheter, connect syringe via filter and gently aspirate <ul style="list-style-type: none"> <li>- If blood or excess fluid comes back easily when pulling back on the syringe, DO NOT INJECT</li> <li>- If no blood or excess fluid comes back, connect epidural tubing to leur lock connector on filter of epidural catheter</li> </ul>		
12. Initiate infusion according to orders		
13. Document on MAR and in PCS appropriately		

Preceptor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Epidural Catheter Removal Checklist

Name: \_\_\_\_\_

Procedure	Yes	No
1. Checks physician's order for epidural catheter removal		
2. Check MAR. If on anticoagulant therapy, follow guidelines for epidural catheter removal according to anticoagulant		
3. Explain procedure to patient		
4. Perform hand hygiene		
5. Position patient on side with knees drawn tightly to chest		
6. Remove transparent dressing		
7. Gently and evenly pull catheter until it is removed. If resistance is felt, reposition patient and try again. If resistance is still felt, leave catheter in situ and contact anesthesiologist		
8. Check markings on catheter to ensure the catheter has been removed intact		
9. Apply small dressing to insertion site		
10. Send catheter tip for culture and sensitivity if clinically warranted and ordered		
11. Document appropriately		

Preceptor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Non Invasive Positive Pressure Ventilation (NPPV) Quiz

1. TRUE or FALSE: NPPV provides the patient with respiratory assistance through positive pressure airway pressure support.
2. List the four diseases known to respond to NPPV:
3. List eight contraindications to NPPV:
4. Why would you want to use NPPV over invasive ventilation?
5. When you are first starting someone on NPPV in the acute situation, what settings are generally used?  
IPAP \_\_\_\_\_ EPAP \_\_\_\_\_
6. IPAP means:
  - a) Initial positive airway pressure
  - b) Inspiratory positive airway pressure
  - c) Intended positive airway pressure
7. EPAP means:
  - a) Expiratory positive airway pressure
  - b) End tidal positive airway pressure
  - c) Expiratory phase airway pressure
8. Which statement(s) about CPAP is true?
  - a) It applies negative pressure throughout the respiratory cycle
  - b) It doesn't allow spontaneous breaths
  - c) It helps keep the alveoli open during the end expiratory phase
  - d) It increases resistance for spontaneous breathing
9. NPPV results in:
  - a) Reduced CO<sub>2</sub> levels as alveolar ventilation is improved
  - b) Increased O<sub>2</sub> levels due to increased functional residual capacity
  - c) Increased CO<sub>2</sub> levels as alveolar ventilation is improved
  - d) Reduced O<sub>2</sub> levels due to increased functional residual capacity
10. One of the risk factors for patients on NPPV is the development of skin irritation or breakdown. List interventions you could initiated to prevent this:



### **Arterial Pressure Line Theory Quiz**

1. State three indications for the use of arterial lines.
2. Draw an arterial pressure waveform and label the following: systolic peak, diastole, diacritic notch
3. What test must be done prior to the insertion of a radial artery catheter and why?
4. Describe how to do the above test.
5. How do you know if the above test is normal or abnormal?
6. List three potential complications of arterial lines.
7. Why is the square wave test done?
8. How do you do the square wave test?
9. Draw the optimal dynamic response for a square wave test.

### Arterial Line/CVP Monitoring Checklist

Name: \_\_\_\_\_

Criteria	Preceptor Initials when Criteria Met	
	Arterial Line	Central Line
Collects appropriate equipment (500 ml bag NS, pressure infuser, pressure tubing, transducer)		
Verbalizes Allen's test and abnormal findings		
Locates the phlebostatic axis and verbalizes significance		
Identifies the waveform's systolic peak, diastole, diastolic notch		
Zeros and calibrates the transducer, including the square wave test		
Verbalizes why square wave test is done, including optimum response		
Demonstrates drawing blood samples from arterial and central line (for central line, both with and without a transducer)		
Verbalizes the monitoring requirements for the arterial line		
Demonstrates a dressing change and tubing change for an arterial line		
Demonstrates a dressing change and tubing change for a central line		
Demonstrates the removal of an arterial line		
Demonstrates the removal of a central line		
Documents appropriately		

Preceptor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Neuromuscular Blocking Agents Quiz

Date: \_\_\_\_\_ Name: \_\_\_\_\_

1. Neuromuscular Blocking Agents are classified as which kind of muscle relaxant?
  - a) Cardiac
  - b) Skeletal
  - c) Smooth
  - d) Respiratory
2. Organize the physiological events that happen when you administer a non-depolarizing neuromuscular blocking agent.
  - A. The muscle is unable to contract.
  - B. The muscle cannot receive an impulse from a neuron.
  - C. Neuromuscular blocking agent competes with the acetylcholine (Ach) for the receptor site on the muscle cell.
  - a) A., B., then C.
  - b) C., B., then A
  - c) B., C., then A
3. Which of the following drugs are used to reverse the paralyzing effects of non-depolarizing skeletal muscle relaxants.
  - A. Neostigmine
  - B. Atropine
  - C. Endrophonium
  - D. Pyridostigmine
  - a) A., C., & D
  - b) A. & B
  - c) All of the above
  - d) B
4. What is the most important nursing consideration when using neuromuscular blocking agents?
  - a) Monitor for decreased lymphatic flow and impaired respiratory clearance
  - b) Turn patient q2h and prn
  - c) The patient must be given sedation/analgesics since NMB agents do not produce these effects.
  - d) High protein diet with lots of fiber.
5. Using the peripheral nerve stimulator, you would place the electrodes along the \_\_\_\_\_ nerve.
  - a) Radial
  - b) Ulnar

6. Optimum response using the peripheral nerve stimulator and neuromuscular blockade includes:
- a) 4 twitches of the baby finger
  - b) 1 twitch of the middle finger
  - c) 1 twitch of the thumb
  - d) Random movement of any finger
  - e) No twitching of any fingers
7. Strength of the current of the peripheral nerve stimulator should be:
- a) Set at 2 and no higher
  - b) High enough to feel uncomfortable to the user.
  - c) >30 mAmps – or enough to elicit a 4/4 muscle twitch response prior to the administration of a neuromuscular blocking agent.
  - d) Always at 10
8. What are the clinical indications for NMB Agents?
- a) To manage the negative effects of oxygen supply / demand imbalance.
  - b) To limit metabolic energy expenditure in shock states.
  - c) To optimize procedures such as intubation.
  - d) All of the above
9. Which neuromuscular agent has no antidote?
- a) Cisatracurium
  - b) Vecuronium
  - c) Succinylcholine
  - d) Rocuronium
10. When using Rocuronium (Zemuron) at BCHS the nurse must remember:
- a) First dose to be given by a physician
  - b) First dose usually 0.6 mg/kg IV push
  - c) Onset of action in bolus dose is usually 60-90 seconds and lasts ~30 minutes
  - d) It is a depolarizing neuromuscular blocking agent
11. Reassessment for the need of neuromuscular blocking agents should occur:
- a) When the patient's condition is stable.
  - b) Every Shift
  - c) Daily
  - d) Weekly