Competency Verification Record (CVR)
UVA Health
EtCO2/Capnography Monitoring RN, RT, CNA & PCT

Employee Name:_____**Employee ID #:**_____**Date:**_____

Disclaimer: Competency Verification Records (CVR) are temporarily stored in the Department's competency filing system until completion has been recorded on a permanent competency form (e.g., OCA, ACR). The CVR requires a validator's signature.

Transfer of CVR to Permanent Record: With this record of a validated competency, the preceptor, Dept. NEC, CNL, manager, or their designee locates the matching competency statement on the Annual Competency Record (ACR), Orientation Competency Assessment (OCA) Regional Competency Assessment (RCA), or Department Specific Competency (DSC) form. *(If the statement is not present, it can be written-in*.) The competency statement is then initialed and dated as complete.

Competency Statement:	**CNA/PCT:** Demonstrates proper set up and use of capnography equipment to obtain and document accurate etCO2 measurement. **RN/RT:** Demonstrates patient monitoring of end-tidal carbon dioxide (etCO2) by assessment and use of physiologic equipment.
Validator(s):	RNs are qualified to sign the competency statement on the CNA/PCT Competency Addendum, ACR or Department Specific Competency Forms
Validator Documentation Instructions:	Validator documents method of validation (below) and initials each skill box once completed **and** places their full name, signature, and completion date at the end of the document.
Method of Validation:	DO – Direct Observation – Return demonstration or evidence of daily work. T – Test: Written or oral assessments, surveys or worksheets, passing grade on a CBL test. S – Simulation C – Case Study/ Scenarios: Create/share a story of a situation then ask questions that capture the nature of the competency that is being referenced. D – Discussion: Identify questions related to a competency and ask orientee to provide an example of their real-life experiences. R – Reflection: A debriefing of an actual event or a discussion of a hypothetical situation. QI – Quality Improvement Monitoring: Audits or compliance checks on actual work or documentation to ensure the competency is completed. N/A – If the specific product or process step is not used in the respective area or by the respective role, then this step is deemed N/A.
Validation Instructions:	Each skill should be observed or discussed with an RN/RT and documented on this form. Sections pertaining only to registered nurses and respiratory therapists are designed with **(RN/RT only)**.

Demonstrated Skill: Behaviors for Competency for CNA/PCT/RN/RT except where otherwise noted	**Method of Validation**	**Evaluator's Initials**
Defines capnography and purpose for utilizing it.		
Identifies maximum O2 flow via nasal cannula that can be used with Capnography. • Use with O2 (≤5 L/min) or room air.		
Describes where to obtain Capnography/Carbon Dioxide (CO_2)/Respiratory module, water trap, sidestream cannula, and bedside monitor.		

Competency Verification Record (CVR)
UVA Health
EtCO2/Capnography Monitoring RN, RT, CNA & PCT

Demonstrates proper set up of equipment: • Slide end-tidal CO_2 ($etCO_2$) module into bedside monitor until it clicks. • Place water trap into $etCO_2$ module until it clicks. • Identifies on the bedside monitor when calibration is complete. • After calibration is complete, connects sidestream cannula to the water trap. • Demonstrates proper application of the sidestream cannula. Identifies a waveform is present on display screen.		
Demonstrates documentation of $etCO_2$ measurement in EPIC. Verbalizes normal $etCO_2$ range (35-45 mmHg)		
(RN/RT only) Describes troubleshooting interventions for alerts and alarms: • Identifies when green water trap is full and replaces the trap (or replaces the trap at least every 24 hours) • If water trap error occurs and water trap is empty, check for condensation in sidestream cannula. Change the sidestream cannula, leave the water trap. • Describes causes of apnea alarms and when to respond.		
(RN/RT only) Identifies normal wave form pattern and location of $etCO_2$ in waveform		
(RN/RT only) Identifies two patient conditions (below) that may benefit from Capnography monitoring (indications listed in *Adult Inpatient Levels of Care Guideline)*: • Chest Wall Trauma • High work of breathing or rapid respiratory rate ≥ 30 and requiring supplemental O2. • Acute or exacerbating neuromuscular weakness disorder requiring supplemental O2. • Active obstructive lung disease or pneumonia with increased risk of hypoventilation. • Obesity/Hypoventilation or OSA and receiving sedating medications. • Active sepsis, responsive to 1 hour goals, with hypoxemia. • Drug/alcohol overdose or demonstration of withdrawal symptom (may include delirium tremens) requiring medications. • Risk for opioid induced respiratory depression. • Procedural sedation Identifies a phase of care when 24 hour Capnography monitoring is required: • Post-operative procedures with specific criteria.		
(RN/RT only) Describes how the use of Capnography assists with assessing ventilation • Defines Ventilation • Describes breathing patterns and $etCO_2$ values of patients with hypoventilation and hyperventilation with normal perfusion and metabolism • Defines types of apnea and causes		

Bin Numbers:
End-Tidal CO_2 Water Trap Bin Number: 97567
Capnography Cannula with Oxygen Cannula: 97399
Capnography Cannula with Oxygen Connector: 97352

Competency Verified by:

_____ Date: _____

Validator's Name (printed) *Validator's signature*

References:
GE Carescape B450 User Manual: https://hit.healthsystem.virginia.edu/departments/clinical-engineering/operator-manuals1/ge-carescape-b450-user-manual-pdf/

Adult Inpatient Levels of Care Guideline