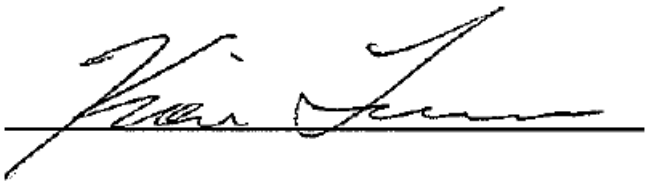
COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

EFFECTIVE JANUARY 2015

APPROVED BY:



KIEU X. LUU, M.D./PH.D.
CHIEF OF ANESTHESIA

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER
ANESTHESIOLOGY POLICIES & PROCEDURES

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TITLE: **MISSION STATEMENT**	
EFFECTIVE DATE: MARCH 2010	**NUMBER: CAA-01**
REVIEW/REVISION DATES: 01/2015	

The mission of Commonwealth Anesthesia Associates is to provide safe, effective, and ethical care to our patients. To accomplish this mission, our group of board-certified anesthesiologists works in a care-team model with certified registered nurse anesthetists.

We are committed to providing advocacy and education for our patients. We strive to create a fulfilling work environment for all CAA members by developing innovative care-plan strategies, providing ethical leadership for operating room and practice management and providing market responsive perioperative services.

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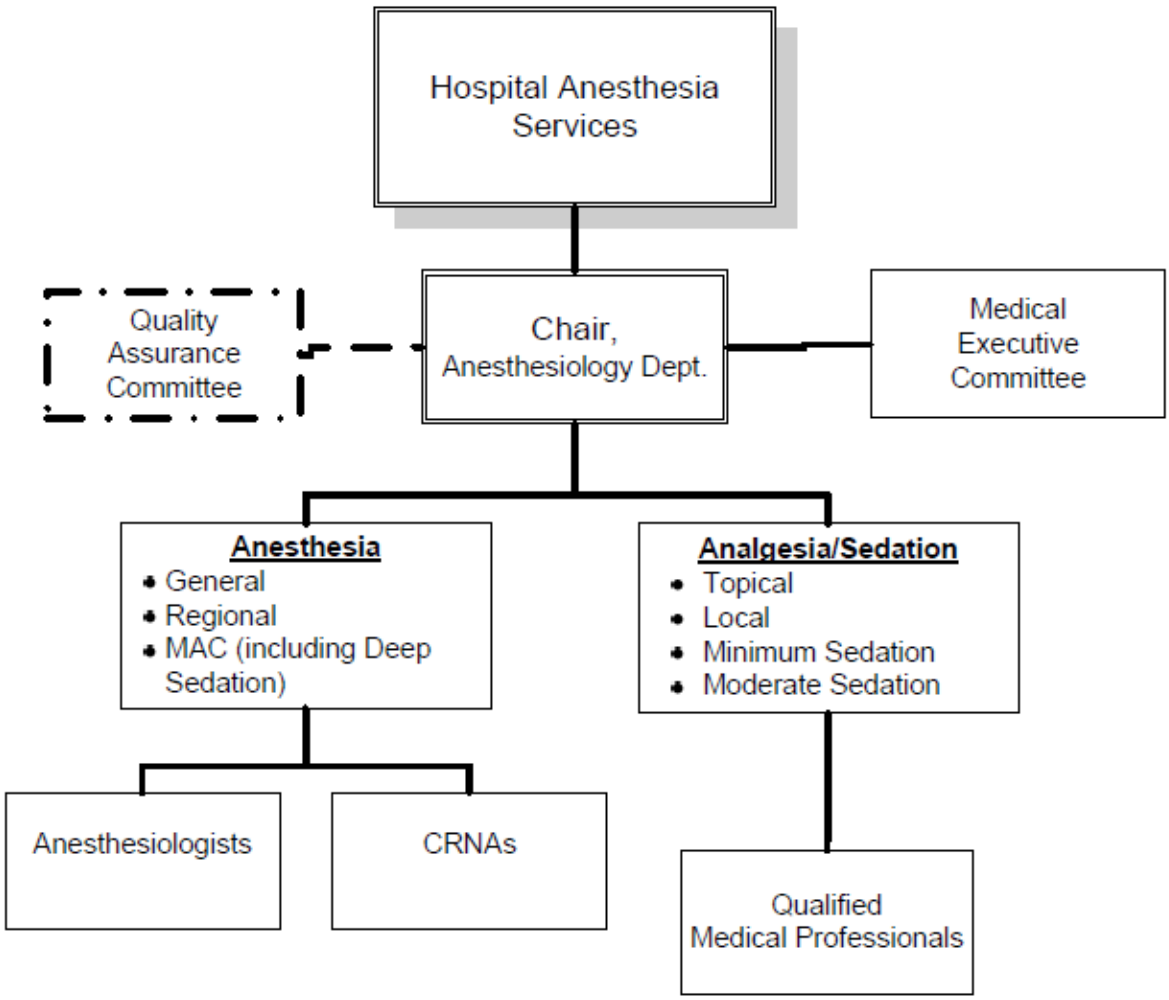
ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: ORGANIZATIONAL CHART	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-02
REVIEW/REVISION DATES: 01/15	



COMMONWEALTH ANESTHESIA ASSOCIATES

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: CHIEF OF ANESTHESIOLOGY'S RESPONSIBILITIES	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-03
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

The Chief of Anesthesiology is a board certified doctor of medicine or osteopathy whose responsibilities include, but are not limited to, the following:

1. **Planning, directing and supervising all activities of the hospital's anesthesia services in all locations;**

2. **Recommending privileges for all individuals who have responsibility for providing anesthesia services. These privileges are processed through the Credentials Committee of the Medical Staff of the Hospital.**

3. **Assuring that the quality and appropriateness of the hospital's anesthesia services are monitored and evaluated; including the development of clinical criteria to be used for quality assurance purposes and that appropriate actions based on the findings are taken. The Department of Anesthesia services is integrated into the Hospital's overall QAPI program and anesthesia services to be monitored are provided by any anesthesia provider in any department or location in the Hospital, including the Operating Room Suites, Emergency Department, Radiology Department, Intensive Care, Obstetrical Suites, the Cardiac Catheterization Lab, etc.**

4. **Recommending to the Hospital's Administration and Medical Staff the type and amount of equipment required to provide the necessary scope of service.**

5. **Developing guidelines for anesthesia safety.**

6. **Reviewing, when appropriate, procedures performed by anesthesia providers, patient management issues, consultation issues, pain management issues, and quality assurance information to help ensure the best care for our patients.**

7. **Assigning or designating the assignment of room coverage and on-call responsibilities of anesthesia providers.**

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: STAFFING FOR DELIVERY OF ANESTHESIA CARE	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-04
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

Anesthesia services will be available 24 hours a day, 365 days a year.

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: ANESTHESIOLOGISTS' RESPONSIBILITIES	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-05
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

Anesthesiologists will be able to perform all of the independent services usually required in the practice of anesthesiology; including accepted procedures commonly used to make the patient insensitive to pain during the performance of surgical and pain-producing clinical maneuvers; to relieve pain-associated medical syndromes; to support life functions during the administration of anesthesia, to provide appropriate pre-anesthesia and post-anesthesia management of the patient; to provide consultation services related to other types of patient care, such as respiratory therapy, cardio-pulmonary resuscitation, and special problems in pain relief.

The anesthesiologist will be:

1. **Educated at an accredited medical school;**
2. **Trained at an accredited anesthesiology residency program;**
3. **Licensed by the Commonwealth of Virginia;**
4. **Licensed by the United States Department of Justice Drug Enforcement Administration with a Controlled Substance Registration Certificate;**
5. **Board Certified and/or Board Eligible by either the American Board of Anesthesiologists or the American Osteopathic Board of Anesthesiologists;**
    a. **This requirement may be waived in an individual circumstance if agreed to by Hospital Administration and CAA, as long as it is in compliance with existing by-laws;**
6. **Qualified for Medical Staff privileges at the Hospital;**
7. **Responsible for the personal provision of an anesthetic or medical direction or supervision of CRNAs.**
8. **Physically present at the facility, available by the anesthesia-specific communication device and immediately available if needed by the CRNA. Immediately available means the anesthesiologist is in or near the physical site where the CRNA is providing anesthetic care.**

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: CERTIFIED REGISTERED NURSE ANESTHETISTS (CRNA) – DUTIES AND RESPONSIBILITIES	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-06
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

1. **The CRNA will be:**

    a. **Licensed as a Registered Nurse in the Commonwealth of Virginia;**
    b. **Certified by the American Association of Nurse Anesthetists.**

2. **The CRNA will provide anesthesia services under the medical direction or supervision of an Anesthesiologist on the staff of the Hospital. A CRNA may not provide anesthesia services without the medical direction or supervision of a staff Anesthesiologist.**

3. **The CRNA is responsible to the Anesthesiologist in all things pertinent to the anesthetic.**

4. **The CRNA may provide post-anesthetic patient care in the PACU or hospital as necessary, document the problems and treatment initiated, but will inform the supervising or directing Anesthesiologist as early and appropriate as determined by the clinical condition of the patient.**

5. **The CRNA may establish airways in emergency situations anywhere in the hospital.**

6. **The CRNA is responsible for preparing anesthesia related medication and for verifying functioning of all equipment that would ordinarily be used in a proposed anesthetic.**

7. **Evaluations and care delivered by the CRNA will be documented in the patient's record.**

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE:	ORIENTATION
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-07
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1. **Orientation for CAA's anesthesia personnel working at the Hospital is the responsibility of Commonwealth Anesthesia Associates, P.C.**

2. **Department orientation will include, but not be limited to, the following elements;**

    a. **Anesthesia Department's policy and procedures manual.**

    b. **Tour of the physical locations of the different departments utilizing anesthesia services including, but not limited to, Operating Suites, Cardiac Catheterization Lab, Obstetrical suites, Emergency Department, Radiology Department, etc.**

    c. **Familiarization with the location of drugs, equipment and supplies.**

    d. **Instructions on the following:**

        i. **Proper blood sample drawing, labeling and specimen dispatch to appropriate labs.**

        ii. **Controlled substance procurement and documentation**

    e. **Documentation requirements for anesthetic patient care.**

    f. **Government and medical-legal compliance procedures and documentation.**

COMMONWEALTH ANESTHESIA ASSOCIATES

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: PRE-ANESTHESIA EVALUATION - DELINEATION OF ANESTHESIA CARE	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-08
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

1. **A pre-anesthesia evaluation will be performed by an anesthesia provider on every inpatient or outpatient receiving anesthesia services, and will be documented in the patient's medical record. This evaluation, for elective surgery patients, will take place within 48 hours prior to pre-operative medication being administered, unless the circumstances of the particular situation would dictate otherwise. If the pre-anesthesia evaluation is performed by a CRNA, it must be reviewed and confirmed by the Anesthesiologist on duty.**

2. **Pre-Anesthesia Care Standards**
   a. **Determine medical, anesthetic, drug, and allergy history.**
   b. **Perform any examinations that would provide information that might assist in the decision regarding anesthetic risks and management. Indicate physical status (ASA definition).**
   c. **Order or review pertinent diagnostic tests.**
   d. **Identify potential anesthesia problems (e.g., difficult airway, ongoing infection, limited vascular access).**
   e. **Obtain consultation as necessary.**
   f. **Formulate an anesthetic plan and discuss risk/benefits of the plan with the patient or the patient's legal representative.**

3. **The pre-anesthesia medical record entry will ordinarily indicate the planned technique of anesthesia (i.e., general, spinal, or other regional). Exceptions to this can be made whenever the precise technique of anesthesia might be more appropriately determined in the operating suite where the precise immediate pre-operative status of the patient can be re-evaluated.**

COMMONWEALTH ANESTHESIA ASSOCIATES

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: ASA CLASSIFICATION SYSTEM	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-09
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The ASA classifications are as follows:

- **ASA I** — **No organic, physiologic, biochemical or psychiatric disturbance. Normal healthy patient.**
- **ASA II** — **Mild-moderate systemic disturbance; may or may not be related to reason for surgery (i.e., hypertension, diabetes mellitus)**
- **ASA III** — **Severe systemic disturbance (i.e., heart disease, poorly controlled hypertension)**
- **ASA IV** — **Life threatening systemic disturbance (i.e., congestive heart failure, persistent angina pectoris)**
- **ASA V** — **Moribund patient, little chance for survival, surgery is last resort (i.e., uncontrolled bleeding, ruptured abdominal aortic aneurysm)**
- **ASA VI** — **Declared brain dead patient whose organs are being removed for donor purposes.**
- **E** — **Patient requires emergency procedure (i.e., appendectomy, D&C for uncontrolled bleeding)**

COMMONWEALTH ANESTHESIA ASSOCIATES

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: INTRAOPERATIVE ANESTHESIA MONITORING AND DOCUMENTATION	
EFFECTIVE DATE: JULY 2011	NUMBER: CAA-10
REVIEW/REVISION DATES: 3/10, 7/11, 01/15	PAGE 1 OF 1

1. **A careful and thorough check of all anesthesia equipment and supplies will be done by the anesthesia provider prior to use on each case.**

2. **All reusable anesthesia equipment in direct contact with patient will be checked for cleanliness prior to use.**

3. **Each patient's vital signs will be evaluated and documented immediately prior to the induction of anesthesia.**

4. **Intraoperative monitoring will be consistent with "Standards for Basic Monitoring" published and affirmed by the American Society of Anesthesiologists (see attached).**

5. **An operative anesthesia record will be kept and will include documentation indicating:**
   a. **Name and hospital identification number of the patient;**
   b. **Name(s) of practitioner who administered anesthesia, and as applicable, the name and profession of the supervising anesthesiologist or operating practitioner;**
   c. **Name, dosage, route and time of administration of drugs and anesthesia agents;**
   d. **Technique(s) used and patient position(s), including the insertion/use of any intravascular or airway devices;**
   e. **Name and amounts of intravenous fluids, including blood or blood products if applicable;**
   f. **Time-based documentation of vital signs as well as oxygenation and ventiliation parameters;**
   g. **Any complications, adverse reactions, or problems occurring during anesthesia, including time and description of symptoms, vital signs, treatments rendered, and patient's response to treatment.**

STANDARDS FOR BASIC ANESTHETIC MONITORING

Committee of Origin: Standards and Practice Parameters

(Approved by the ASA House of Delegates on October 21, 1986, and last amended on October 20, 2010 with an effective date of July 1, 2011)

These standards apply to all anesthesia care although, in emergency circumstances, appropriate life support measures take precedence. These standards may be exceeded at any time based on the judgment of the responsible anesthesiologist. They are intended to encourage quality patient care, but observing them cannot guarantee any specific patient outcome. They are subject to revision from time to time, as warranted by the evolution of technology and practice. They apply to all general anesthetics, regional anesthetics and monitored anesthesia care. This set of standards addresses only the issue of basic anesthetic monitoring, which is one component of anesthesia care. In certain rare or unusual circumstances, 1) some of these methods of monitoring may be clinically impractical, and 2) appropriate use of the described monitoring methods may fail to detect untoward clinical developments. Brief interruptions of continual† monitoring may be unavoidable. These standards are not intended for application to the care of the obstetrical patient in labor or in the conduct of pain management.

1. STANDARD I

Qualified anesthesia personnel shall be present in the room throughout the conduct of all general anesthetics, regional anesthetics and monitored anesthesia care.

1.1 Objective –

Because of the rapid changes in patient status during anesthesia, qualified anesthesia personnel shall be continuously present to monitor the patient and provide anesthesia care. In the event there is a direct known hazard, e.g., radiation, to the anesthesia personnel which might require intermittent remote observation of the patient, some provision for monitoring the patient must be made. In the event that an emergency requires the temporary absence of the person primarily responsible for the anesthetic, the best judgment of the anesthesiologist will be exercised in comparing the emergency with the anesthetized patient's condition and in the selection of the person left responsible for the anesthetic during the temporary absence.

2. STANDARD II

During all anesthetics, the patient's oxygenation, ventilation, circulation and temperature shall be continually evaluated.

2.1 Oxygenation –

2.1.1 Objective –

To ensure adequate oxygen concentration in the inspired gas and the blood during all anesthetics.

2.2 Methods –

2.2.1 Inspired gas: During every administration of general anesthesia using an anesthesia machine, the concentration of oxygen in the patient breathing system shall be measured by an oxygen analyzer with a low oxygen concentration limit alarm in use.*

2.2.2 Blood oxygenation: During all anesthetics, a quantitative method of assessing oxygenation such as pulse oximetry shall be employed.* When the pulse oximeter is utilized, the variable pitch pulse tone and the low threshold alarm shall be audible to the anesthesiologist or the anesthesia care team personnel.* Adequate illumination and exposure of the patient are necessary to assess color.*

3. VENTILATION

3.1 Objective –

To ensure adequate ventilation of the patient during all anesthetics.

3.2 Methods –

3.2.1 Every patient receiving general anesthesia shall have the adequacy of ventilation continually evaluated. Qualitative clinical signs such as chest excursion, observation of the reservoir breathing bag and auscultation of breath sounds are useful. Continual monitoring for the presence of expired carbon dioxide shall be performed unless invalidated by the nature of the patient, procedure or equipment. Quantitative monitoring of the volume of expired gas is strongly encouraged.*

3.2.2 When an endotracheal tube or laryngeal mask is inserted, its correct positioning must be verified by clinical assessment and by identification of carbon dioxide in the expired gas. Continual end-tidal carbon dioxide analysis, in use from the time of endotracheal tube/laryngeal mask placement, until extubation/removal or initiating transfer to a postoperative care location, shall be performed using a quantitative method such as capnography, capnometry or mass spectroscopy.* When capnography or capnometry is utilized, the end tidal CO2 alarm shall be audible to the anesthesiologist or the anesthesia care team personnel.*

3.2.3 When ventilation is controlled by a mechanical ventilator, there shall be in continuous use a device that is capable of detecting disconnection of components of the breathing system. The device must give an audible signal when its alarm threshold is exceeded.

3.2.4 During regional anesthesia (with no sedation) or local anesthesia (with no sedation), the adequacy of ventilation shall be evaluated by continual observation of qualitative clinical signs. During moderate or deep sedation the adequacy of ventilation shall be evaluated by continual observation of qualitative clinical signs and monitoring for the presence of exhaled carbon dioxide unless precluded or invalidated by the nature of the patient, procedure, or equipment.

STANDARDS FOR BASIC ANESTHETIC MONITORING

4. CIRCULATION

4.1 Objective –

To ensure the adequacy of the patient's circulatory function during all anesthetics.

4.2 Methods –

4.2.1 Every patient receiving anesthesia shall have the electrocardiogram continuously displayed from the beginning of anesthesia until preparing to leave the anesthetizing location.*

4.2.2 Every patient receiving anesthesia shall have arterial blood pressure and heart rate determined and evaluated at least every five minutes.*

4.2.3 Every patient receiving general anesthesia shall have, in addition to the above, circulatory function continually evaluated by at least one of the following: palpation of a pulse, auscultation of heart sounds, monitoring of a tracing of intra-arterial pressure, ultrasound peripheral pulse monitoring, or pulse plethysmography or oximetry.

5. BODY TEMPERATURE

5.1 Objective –

To aid in the maintenance of appropriate body temperature during all anesthetics.

5.2 Methods –

Every patient receiving anesthesia shall have temperature monitored when clinically significant changes in body temperature are intended, anticipated or suspected.

† Note that "continual" is defined as "repeated regularly and frequently in steady rapid succession" whereas "continuous" means "prolonged without any interruption at any time."

* Under extenuating circumstances, the responsible anesthesiologist may waive the requirements marked with an asterisk (*); it is recommended that when this is done, it should be so stated (including the reasons) in a note in the patient's medical record.

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: POST ANESTHESIA CARE	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-11
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 2

1. Patients having general anesthesia or central neuraxial anesthesia (epidural/spinal) will go to the Post Anesthesia Recovery Unit (PACU) or to a Special Care Unit for their initial recovery. The attending Anesthesiologist may transfer a patient directly to Phase II Recovery if discharge criteria are documented prior to the patient leaving the Operating Suite.

2. Patients undergoing other anesthetic techniques may go to the Post Anesthesia Recovery Unit (PACU), or may be transferred directly to Phase Two Recovery in Outpatient Surgery or to a Special Care Unit. Variations in this routine will be determined by a member of the Anesthesia Care Team (ACT – Anesthesiologist or CRNA) along with the surgeon based on the specifics of the case.

3. When discharge criteria have been met, a patient may be released from the Post Anesthesia Care Unit (PACU) by an Anesthesiologist's written or verbal order.

4. Obstetrical patients requiring anesthesia services will be recovered by the primary nurse, under the supervision of the attending Anesthesiologist and/or CRNA.

5. Patients receiving anesthesia services outside the Surgical Suite or the Obstetrical Suite may be recovered in their respective procedural recovery area or transferred to the PACU under the supervision of a member of the Anesthesia Care Team.

6. **The patient's post-anesthesia follow-up report will be written by an anesthesia provider within 48 hours and will document the following:**
    a. **Respiratory function, including respiratory rate, airway patency, and oxygen saturation;**
    b. **Cardiovascular function, including pulse rate and blood pressure;**
    c. **Mental status;**
    d. **Temperature;**
    e. **Pain**
    f. **Nausea and vomiting, and**
    g. **Postoperative hydration**
    h. **Any complications occurring during post-anesthesia recovery;**
    i. **Any follow-up care and/or observations and/or patient instructions given;**

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ANESTHESIOLOGY POLICIES & PROCEDURES

TITLE: INFECTION CONTROL RESPONSIBILITIES	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-12
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1. Anesthesia personnel will follow all appropriate infection control measures for the Operating Suites (OR) and the Post Anesthesia Recovery Unit (PACU).
2. Strict hand-washing will be observed at all times between different patient contacts.
3. Anesthesia personnel will abide by the scrub suit dress code of the Operating Suites (OR).
4. Disposable anesthesia patient care supplies will be used whenever possible.
5. Reusable items will be properly high-level disinfected or steamed, gas or cold sterilized prior to reuse.
6. Anesthesia machines will be cleaned with a hospital approved germicide at the completion of each case and when soiled during a procedure.
7. Patients with active airborne communicable disease processes (MRSA, TB, Varicella, etc.) will be cared for and appropriately isolated, based on the specific organism suspected or diagnosed.
8. Standard precautions will be observed at all times and there will not be any direct contact with a patient's blood, body fluids and/or excretions.
9. Central Lines will be placed in accordance with CDC guidelines, as follows:
    a. Appropriate Skin Preparation
        i. Chlorhexidene gluconate (CHG) for patients ≥ 2 months old (completely dry before Central Line insertion)
        ii. Povidone iodine, alcohol, CHG or other specified for children <2 months old (completely dry before Central Line insertion)
    b. Appropriate Hand Hygiene will be performed by provider
    c. All 5 maximal sterile barriers will be used:
        i. Sterile gloves
        ii. Sterile gown
        iii. Cap
        iv. Mask
        v. Large sterile body drape

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: THE SAFE ADMINISTRATION OF ANESTHETIC AGENTS	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-13
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1. **Anesthesia equipment will be inspected and tested by an anesthesia provider before patient use. If a defect that might materially affect the safe functioning of the equipment is observed, the equipment is not used until the fault is repaired. Equipment that might have a defect of this sort will be clearly tagged with the noted defect and the date, and the appropriate service individual (Biomed or Engineering) will be notified as soon as possible, and the repair effected as soon as possible.**

2. **No flammable anesthesia agents are to be used for anesthesia or the pre-operative preparation of the surgical field. If laser surgery is being performed, all the usual precautions to prevent unwanted combustion will be carried out within the limits of the equipment available.**

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ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE:	ANESTHESIA APPARATUS CHECK RECOMMENDATIONS
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-14
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

1. **It will be the responsibility of the anesthesia provider administering anesthesia to check all anesthesia equipment and supplies prior to use.**

2. **See attached checklist 14A – Anesthesia Apparatus Checklist.**

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ANESTHESIOLOGY POLICIES & PROCEDURES

TITLE: ANESTHESIA APPARATUS CHECKLIST	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-14A CHECKLIST
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ANESTHESIA APPARATUS CHECKLIST

Date: _____ **Location/OR Room:** _____

Anesthetist:_____ **Anesthesia Machine #:**_____

Emergency Ventilation Equipment:

- ❑ **Backup ventilation equipment is available and functioning**

High Pressure System:

- ❑ **Check oxygen cylinder supply**
  - ☐ **Open O_2 cylinder and verify at least half full (about 1000 psi)**
  - ☐ **Close cylinder**
  - ☐ **Replace any cylinder with less than 600 psi**
- ❑ **Check central pipeline supplies**
  - ☐ **Hoses are connected and pipeline gauges read about 50 psi**

Low Pressure System:

- ❑ **Check initial status of low pressure system**
  - ☐ **Close flow control valves and turn vaporizers off**
  - ☐ **Check full level and tighten vaporizers' filler caps**
- ❑ **Perform leak check of machine low pressure system**
  - ☐ **Verify that machine master switch and flow control valves are OFF**

- ☐ **Attach "suction bulb" to common fresh gas outlet**
- ☐ **Squeeze bulb repeatedly until fully collapsed**
- ☐ **Verify bulb stays collapsed for at least 10 seconds**
- ☐ **Open one vaporizer at a time and repeat the last two (2) steps above**
- ☐ **Remove suction bulb and reconnect fresh gas hose**

Turn on Machine Master Switch and All Other Necessary Electrical Equipment:

- ❑ **Inspired gas analyzer unit**
- ❑ **Pulse oximetry**
- ❑ **EKG/BP monitor, etc.**
- ❑ **Electrical equipment requiring warm-up**
- ❑ **Ensure undamaged flowmeters, vaporizers, gauges, breathing system and supply hoses**

Test Flow Meters:

- ❑ **Adjust flow of all gases through their full range, checking for smooth operation of floats and undamaged flowtubes**
- ❑ **Attempt to create a hypoxic O_2/N_2O mixture and verify correct changes in flow and/or alarms**
- ❑ **Check that the float is at the bottom of the tube with flow control valves closed (or at a minimum oxygen flow if so equipped)**

Adjust and Check Scavenging System:

- ❑ **Ensure proper connections between scavenging systems and both APL (pop-off) valve and ventilator relief valve**
- ❑ **Adjust waste gas vacuum (if possible)**
- ❑ **Fully open APL valve and occlude Y-piece**
- ❑ **With minimum O_2 flow, allow scavenger reservoir bag to collapse completely and verify that absorber pressure gauge reads about zero**
- ❑ **With O_2 flush activated, allow the scavenger reservoir bag to distend fully, and then verify that absorber pressure gauge reads less than 10 cm H_2O**

Calibrate O_2 Monitor:

- ❑ **Calibrate oxygen monitor to read 21% room air**

- ❑ **Low O_2 alarm is enabled and functioning**
- ❑ **Reinstall sensor in circuit and flush breathing system with 100% O_2**
- ❑ **Verify that monitor now reads greater than 90%**

Check Initial Status Breathing System:

- ❑ **Set selector switch to "bag" mode**
- ❑ **Check the breathing circuit is complete, undamaged, unobstructed**
- ❑ **Verify that CO_2 absorbent is adequate**
- ❑ **Install breathing circuit accessory equipment (i.e., humidifier, PEEP valve) to be used during the case**
- ❑ **Ensure correct mounting of cylinders in yokes and presence of cylinder wrench**

Perform Leak Check of the Breathing System:

- ❑ **Set all gas flows to zero (or minimum)**
- ❑ **Close APL (pop-off) valve and occlude Y-piece**
- ❑ **Pressurize breathing system to about 30 cm H_2O with O_2 flush**
- ❑ **Ensure that pressure remains fixed at least 10 seconds**
- ❑ **Open APL (pop-off) valve and ensure that pressure decreases**

Test Ventilation Systems and Unidirectional Valves:

- ❑ **Place a second breathing bag on Y-piece**
- ❑ **Set appropriate ventilator parameters for next patient**
- ❑ **Switch to automatic ventilation (ventilator) mode**
- ❑ **Fill bellows and breathing bag with O_2 flush and then turn ventilator ON**
- ❑ **Set O_2 flow to minimum, other gas flows to zero**
- ❑ **Verify that during inspiration, bellows delivers appropriate tidal volume and that during expiration, bellows fills completely**
- ❑ **Set fresh gas flow to about 5 liters per mm**
- ❑ **Verify that the ventilator bellows and simulated lungs fill and empty appropriately without sustained pressure at end expiration**

- ❑ **Check for proper action of unidirectional valves**
- ❑ **Exercise breathing circuit accessories to ensure proper function**
- ❑ **Turn ventilator OFF and switch to manual ventilation (Bag/APL) mode**
- ❑ **Ventilate manually and assure inflation and deflation of artificial lungs and appropriate feel of system resistance and compliance**
- ❑ **Remove second breathing bag from Y-piece**

Check, Calibrate and/or Set Alarm Limits of All Monitors:

- ❑ **Capnometer**
- ❑ **Oxygen analyzer**
- ❑ **Pulse oximeter**
- ❑ **Respiratory volume monitor (spirometer)**
- ❑ **Pressure monitor with high and low airway alarms**
- ❑ **Temperature monitor**

Check Final Status of Machine:

- ❑ **Vaporizers off**
- ❑ **APL valve open**
- ❑ **Selector switch to "bag"**
- ❑ **All flowmeters to zero**
- ❑ **Patient suction level adequate**
- ❑ **Breathing system ready to use**

Note: If an anesthesia provider uses the same machine in successive cases, these steps need not be repeated or may be abbreviated after the initial checkout.

Anesthesia Equipment/Supplies:

- ❑ **Appropriate masks, breathing system, head strap available**
- ❑ **Appropriate airways**
- ❑ **Laryngoscopes and blades tested**
- ❑ **Appropriate tracheal tubes available with functioning cuffs**
- ❑ **Stylet available**

- ❑ **Availability of bottled inhalation anesthetics**
- ❑ **Appropriate hypnotics and muscle relaxants available**
- ❑ **Availability of emergency medications**
- ❑ **Availability of appropriate IV fluids**
- ❑ **Stethoscope**

Problems: _____

_____

_____

Follow-up: _____

_____

_____

_____

_____

_____

Reference: FDA "Anesthesia Apparatus Checkout Recommendations" 1993

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: ANESTHESIA QUALITY IMPROVEMENT	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-15
REVIEW/REVISION DATE: 01/15	PAGE 1 OF 1

OBJECTIVE:
To define the process for identifying, evaluating and trending adverse anesthesia events. To monitor adverse events/reversal cases from areas where Sedation Analgesia is administered.

POLICY STATEMENT:
The managing anesthesia person or PACU nurse completes an Anesthesia Quality Improvement forms for all patients.

RESPONSIBLE PERSON(S):
Anesthesia staff, Quality Management staff and PACU staff

PROCEDURE:
1. Anesthesia Quality Improvement sheet to be filled out on all cases.

2. Completed sheets sent to the Quality Improvement Manager (QIM).

3. Prior to the scheduled anesthesia meeting, completed sheets are sent to the Chair of Anesthesia or a QI designed physician (QIP) for review.

4. QIP notifies the responsible anesthesia provider about the review.

5. QIP or designee (not the responsible provider) reviews the cases and writes an account of the event.

6. QIP sends the completed, reviewed sheets back to the QIM.

7. QIM places these on the agenda and will bring the charts selected to the Quarterly Anesthesiology QI Meeting.

8. Selected cases are discussed in an educational forum at the QI meeting and the QIM is responsible for the minutes of the meeting.

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: ANESTHESIA QUALITY ASSURANCE INDICATOR SHEET PROCESS	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-16
REVIEW/REVISION DATE: 01/15	PAGE 1 OF 1

PURPOSE STATEMENT: To establish a consistent procedure for tracking and trending anesthesia quality indicators in the operative area.

RESPONSIBLE PERSON(S): Anesthesia staff and PACU nursing staff.

PROCEDURE:

1. The Commonwealth Anesthesia Associates Quality Assurance sheet will be printed on bright orange paper to indicate it is NOT a permanent part of the medical record.
2. A patient identification label is to be placed at the upper right hand corner.
3. The location should also be indicated by circling the appropriate campus.
4. A Quality Assurance sheet will be placed with the pre-op forms on each patient undergoing any type of anesthesia.
5. This includes: **inpatients**, **outpatients**, **patients that come from inpatient beds**, and **same day surgery patients**.
6. A CRNA or Anesthesiologist can fill out the sheet. A sheet should be filled out on every patient, whether there is an adverse event or not.
7. Mark the corresponding box if there was “No Adverse Event”.
8. After the patient has been signed out of the PACU, the sheet is to be removed from the chart and sent via interoffice mail with corresponding billing paperwork to the RESULT office, for processing.

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: MALIGNANT HYPERTHERMIA	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-17
REVIEW/REVISION DATE: 01/15	PAGE 1 OF 2

PURPOSE STATEMENT: Malignant Hyperthermia is a rare but potentially fatal complication of anesthesia. Prompt and aggressive therapy with Dantrolene Na and established protocols may produce, but cannot guarantee a favorable outcome.

RESPONSIBLE STAFF: Anesthesiologists, CRNAs, Surgery Staff with the case (RN, SA, Scrub Tech), Anesthesia Technicians and any other available surgery staff

POLICY STATEMENT: Anesthesia practitioners will make every attempt to reduce the likelihood of malignant hyperthermia, and should it occur, to manage the impact of malignant hyperthermia for the patient.

PROCEDURE:

An adequate supply of Dantrolene Na will be immediately available. The treatment protocol will be kept with the supply of Dantrolene Na. The equipment, drugs, and necessary fluids needed for reconstitution and administration will be kept together. All resuscitation drugs and equipment shall be readily available.

- Refrigerated saline solutions will be immediately available.
- Operating Suite and PACU personnel should be familiar with MHS protocol.
- Stop inhalation agents/succinylcholine and terminate surgery as quickly as possible.
- Hyperventilate the patient with 100% oxygen at high flows.
- As quickly as possible, administer Dantrolene Na 2.5 mg/kg IV, repeat dose up to 10 mg/kg. Dissolve Dantrolene with 60 ml sterile water without preservatives for each vial.
- Cool the patient:
    - IV iced normal saline solution (not Ringers Lactate) to maintain urine output > 2ml/kg/hr.
    - Surface cooling with iced/hypothermia blanket.
    - Lavage stomach, rectum, peritoneal cavity, with iced saline (3-6 liters)
    - Correct acidosis in accordance with ABG's with $NaHCO_3$ or changes in ventilation
    - Procainamide 15 mg/kg IV for treatment of arrhythmias
    - Insulin 10 units/50%D/W to reduce serum K+

- **Secure Monitoring: EKG, B/P, Foley Cath., ETCO2, SAO2, A-Line, CVP if possible, temperature, large bore IV's**

- **MH will be diagnosed and managed according to the latest guidelines or recommendations of MHAUS. Questions regarding MH management should be referred to the MH Hotline (1-800-MH-HYPER, 1-800-644-9737) or on the Web at www.mhaus.org.**

Reference: MHAUS Emergency Therapy for Malignant Hyperthermia.

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES & PROCEDURES

TITLE: SENTINEL EVENT	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-18
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

Unexpected events or occurrences involving death or serious physical or psychological injury, or the risk thereof (i.e., sentinel events), are to be reported to the Quality Management Department immediately upon identification. Any sentinel event requires immediate action to examine, in-depth, the event to determine why the incident occurred and how to reduce the likelihood of recurrence.

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE:	CAA'S AUDIT AND REVIEW PROCESS
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-19
REVIEW/REVISION DATES: 3/10, 7/11, 01/15	PAGE 1 OF 1

PURPOSE STATEMENT: Define Audit and Review Process

RESPONSIBLE STAFF: All CAA Personnel

PROCEDURES:

Commonwealth Anesthesia Associates shall:

- Hold an annual compliance meeting for all employees
- Provide routine compliance updates at every Board meeting
- Have a compliance board available to all employees
- Perform an annual audit on each physician and employee and provide the results of the audit
- Maintain an open door policy and respond as appropriate to information received by the corporation.
- Review the compliance plan and policies within 60 days of hiring a new employee

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: CAA EMPLOYEES' RESPONSIBILITIES FOR COMPLIANCE	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA- 20
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 2

PURPOSE STATEMENT: To define responsibilities of CAA employees in providing accurate and complete patient information

RESPONSIBLE STAFF: All CAA Employees

PROCEDURE:

Commonwealth Anesthesia Associates' employees shall provide accurate and sufficient documentation by the following:

1. **Accurately record beginning and ending times of all procedures**
2. **Record all diagnoses and procedures**
3. **Perform all seven steps for medical direction**
    a. **Perform the pre-anesthetic examination**
    b. **Prescribe the anesthetic plan**
    c. **Personally participate in the most demanding portions of the case including induction and emergence, if applicable**
    d. **Ensure any procedures not performed by the anesthesiologist are performed by a qualified individual**
    e. **Monitor at frequent intervals**
    f. **Remain physically present and immediately available. Immediate area for John Randolph Medical Center or Colonial Heights Surgery Center shall be defined as present on the campus.**
    g. **Provide indicated post-anesthetic care**
4. **Bill for items and services actually provided to the patient**
5. **Provide diagnosis, procedure and patient information for coding by RESULT**
6. **Not providing medically unnecessary services**
7. **Not routinely waiving patient's co-payments and deductibles**
8. **Not conducting improper marketing activities**

COMMONWEALTH ANESTHESIA ASSOCIATES

CAA Employees' Responsibilities for Compliance Page 2 of 2

9. **All contracts will comply with federal and state regulations**
10. **Proper retention of records for seven (7) years for non-medical records including safe storage and the ability to retrieve records. After seven years non-medical records will be shredded prior to disposal. Incorporate compliance evaluation as part of the performance evaluation**

I have read the Employee Responsibilities and will comply with the responsibilities that pertain to my duties.

Printed Name: _____

Signature: _____

Date: _____

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES & PROCEDURES

TITLE: COMMONWEALTH ANESTHESIA ASSOCIATES CODE OF CONDUCT	
EFFECTIVE DATE: MARCH 2010	NUMBER: CAA-21
REVIEW/REVISION DATES: 01/15	PAGE 1 OF 1

POLICY:

Commonwealth Anesthesia Associates will maintain an appropriate level of care, service and confidentiality for our patients. The organization is guided at all times by the value of compassion, mercy and respect for the dignity of every patient. It is the responsibility of every person affiliated with Commonwealth Anesthesia Associates to observe all applicable laws and regulations in practice business dealings. Commonwealth Anesthesia Associates is committed to the accurate and proper submission of all insurance claims.

I have read and understand CAA's Code of Conduct

Name: _____

Signature: _____

Date: _____

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: CONSCIOUS SEDATION	
EFFECTIVE DATE: JANUARY 2015	NUMBER: JRMC-01
REVIEW/REVISION DATES: N/A	PAGE 1 OF 11

SCOPE: Anesthesiologists and Anesthetists, Medical Staff, and Registered Nurses.

PURPOSE:

A. To outline the management of patients receiving sedation and analgesia for any purpose, by any route, and in any setting, including defining which levels (deep sedation and anesthesia) are to be managed by qualified anesthesia caregivers.
B. To provide guidelines for clear delineation of the clinical privileges, responsibilities, and accountabilities of the medical staff participating in the administration of moderate sedation/analgesia.
C. To provide guidelines for clinical education, training, and experience in assuring competency of nursing staff in providing care to patients receiving moderate sedation/analgesia.

POLICY:

A. The continuum of care, across settings, will be outlined by the Medical Director by his/her review of both Anesthesia Policies and Procedures, and selected Administrative and Nursing Policies and Procedures.
B. These Policies and Procedures address, but are not limited to: planning and patient selection, informed consent, assessment and reassessment, monitoring and equipment, documentation, discharge criteria, and quality indicators.
C. This policy applies predominantly to the administration of moderate sedation/analgesia.

PROCEDURE:

A. DEFINITIONS

The purpose of providing these definitions is to adequately educate responsible parties about the varying levels of patient response.

1) Minimal sedation
   a) A drug-induced state during which patients respond normally to verbal commands.
      (i) Although cognitive function and coordination may be impaired, ventilatory and cardiovascular function is unaffected.
2) Moderate sedation/analgesia (conscious sedation)
   a) A drug-induced depression of consciousness during which patients

respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation.
   (i) No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate.
   (ii) Cardiovascular function is usually maintained.
3) Deep sedation/analgesia
   a) A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation.
      (i) The ability to independently maintain ventilatory function may be impaired.
      (ii) Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate.
      (iii) Cardiovascular function is usually maintained.
4) Anesthesia
   a) Consists of general anesthesia and spinal or major regional anesthesia.
   b) It does not include local anesthesia.
   c) General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation.
   d) The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function.
   e) Cardiovascular function may be impaired.

B. PHYSICIAN CREDENTIALING
1) Physician credentialing is directed by Governing Body. Physicians who order and/or administer moderate sedation/analgesia should have specific procedure and sedation/analgesia privileges, which are applied for during the overall credentialing process. The exam that these physicians are required to pass is attached to this policy. An up-to-date list of sedation/analgesia credentialed physicians is available to all staff, across settings.
2) Administration of moderate sedation/analgesia by physicians is directed by the Medical Executive Committee. However, the Medical Director is ultimately responsible for participating in the development of polices and procedures for the continuum of care (from minimal sedation to anesthesia) in order to provide consistent, safe care in meeting each patient's needs. Measurement of the practices across the continuum will be achieved through continuous monitoring of care provided by each specialty service, with final review and evaluation performed by the Medical Director.

3) Complications occurring during administration of moderate sedation/analgesia are reported to the Medical Executive Committee using AdvantX. Trends are identified and forwarded to the Medical Director, and then reported to the Medical Executive Committee.
4) Complications during the administration of deep sedation and anesthesia, as well as those during minimal sedation, are reported to the Medical Executive Committee through current reporting mechanisms in accordance with the Performance Improvement Plan.

C. QUALIFICATIONS FOR ADMINISTERING MODERATE SEDATION/ANALGESIA
1) Only a credentialed physician is qualified to order the medications, route and rate, used to achieve the desired patient response.
2) Administering and/or monitoring may be performed by a credentialed physician, or by a qualified RN who is functioning under the direction of this physician.
3) Appropriate nursing education and training related to minimal sedation and moderate sedation/analgesia includes:
   a) Knowledge of proper medication dosages, administration, adverse reactions, and interventions for adverse reactions and overdoses.
   b) Recognition of deep sedation and anesthesia levels in the patient, and demonstrated skill in airway management and resuscitation, evidenced by current Basic Life Support certification.
   c) Assessment of total patient care requirements / parameters, including, but not limited to: respiratory rate, oxygen saturation, blood pressure, cardiac rate and rhythm, and level of consciousness.
   d) Knowledge and skills to intervene appropriately in the event of complications.
4) Documentation of initial education, training, and demonstrated skills is done using the Sedation/Analgesia Competency Checklist. On-going education is done on an annual basis using the same.

D) CARE OF PATIENTS
1) <u>Minimal Sedation</u>
   a) The care of patients receiving medications to achieve light or minimal sedation is provided in accordance with the hospital Medication Administration Policy and Procedure. Vital signs and other assessment data are collected, by the nursing staff, as outlined in the policy.
   b) Thus, this policy and procedure is not intended for the minimal sedative effects seen in:
      (i) patients receiving narcotics strictly for analgesia
      (ii) patients receiving preoperative medication

(iii) *If, at any point, the patient response is found to be consistent with the definition of moderate sedation/analgesia, the care of the patient is to be adjusted to the level outlined in this policy*

2) Moderate Sedation/Analgesia
   a) In accordance with this policy and procedure, credentialed physicians and competent RNs or LPNs provide the care of patients requiring moderate sedation/analgesia for invasive, diagnostic, or manipulative procedures, or for any other clinical reason,
   b) Moderate sedation/analgesia may be ordered by a credentialed physician and administered during special procedures, and for other clinical purposes, to:
      (i) alleviate physical discomfort or pain
      (ii) minimize risk factors
      (iii) provide partial amnesia
      (iv) allay anxiety and fear of the patient
      (v) enhance patient cooperation
   c) The administration of sedation/analgesia depends on individual patient response and the total dose of medication administered.
      (i) Varied patient response and/or overuse of a drug-administration technique may predispose the patient to reach a deeper level, i.e. deep sedation/analgesia.
      (ii) The most commonly used pharmacological agents and dosages used to produce minimally and moderately depressed level of consciousness are attached to this policy
   d) Physicians and nurses providing care to these patients must also be able to care for the unintentional deep sedation/analgesia response
   e) *Should a patient exhibit responses constituting anesthesia, a credentialed anesthesia provider should be consulted.*
   f) Moderate sedation/analgesia may be administered in the following clinical settings:
      (i) Operating Room
      (ii) Procedure Room
3) Deep Sedation and Anesthesia
   a) The care of patients requiring deep sedation/analgesia and/or anesthesia for invasive, diagnostic, or manipulative procedures, or for any other clinical reason, is provided by credentialed anesthesia providers, specifically: Nurse Anesthetists and Anesthesiologists.
   b) This care is provided in accordance with the Anesthesia Policies and Procedures.

E) PATIENT SELECTION

1) The patient's overall physical status should be considered prior to the planning of administration of any level of sedation/analgesia.
2) The RN is responsible for collecting the baseline physiologic measurements, however it is the physician who is responsible for selecting the appropriate level of sedation/analgesia for the specific patient.
3) Pre-Procedure Assessment and Management
   a) Prior to the administration of moderate and deep sedation/analgesia and anesthesia, a thorough patient assessment and plan of care is performed by a licensed independent practitioner and reviewed at the time of treatment.
   b) For moderate sedation/analgesia, the initial patient assessment and plan of care is done by the credentialed physician
   c) An American Society of Anesthesiologist (ASA) Risk Classification Status is determined and documented based on this assessment

ASA Risk	*PHYSICAL STATUS*
I	Normal, healthy patient with no systemic disease
II	Mild to moderate systemic disease
III	Severe systemic disease with functional limitation that is not incapacitating
IV	Severe systemic disease that is incapacitating and life-threatening
V	A moribund patient not expected to survive 24 hours without intervention

   d) The patient history should include a minimum of:
      (i) Chief Complaint and admitting diagnosis.
      (ii) Allergies, including past medication reactions.
      (iii) Current medications and dosages.
      (iv) Significant medical history, including: neuro-musculoskeletal disease, cardiopulmonary disease, hematological disease, gastrointestinal disease, renal/endocrine disease.
      (v) Previous problems with anesthesia or sedation
      (vi) Age
      (vii) NPO status
      - Pulmonary aspiration risk should be considered in determining timing of an elective or scheduled procedure and target level of sedation

	SOLIDS & NONCLEAR LIQUIDS	*CLEAR LIQUIDS*
Adults	7 – 8 hours	4 hours
Children older than	7 – 8 hours	4 hours

36 months		
Infants aged 6 – 36 months	7 hours	4 hours

(viii) Last menstrual period (if applicable)

e) The physical examination should include a minimum of:
(i) Examination specific to procedure being performed
(ii) Height and weight
(iii) Level of consciousness and mental status
(iv) Mobility status
(v) Baseline vital signs (temperature, pulse, respiration's, and oxygen saturation)
(vi) Review of current test results, as applicable
(vii) Examination of heart and lungs by auscultation
(viii) Emotional status and communication ability
(ix) Indications/symptoms for procedure requiring moderate sedation/analgesia.

F) PRE-PROCEDURE PREPARATION

1) Plan of Care

a) Educate patient
b) Obtain informed consent, for procedure and for moderate sedation/analgesia
c) Assemble necessary equipment, including:
(i) Supplemental oxygen set up
(ii) Nasal cannula and/or fact tent
(iii) Pulse oximeter
(iv) Oral / nasal airways
(v) Crash cart with defibrillator
(vi) Blood Pressure Monitoring
(vii) Cardiac monitor
(viii) Suction apparatus with appropriate suction catheters
(ix) Endotracheal tubes (various sized), laryngoscope
(x) Ambu bag and mask
d) Prepare medications to be administered (Administered drugs aren't listed – these are "emergency' meds listed below).
(i) Have Benadryl, Epinephrine, Narcan, and Romazicon immediately available
e) Infants/Children weighing < 40 kg should have a Pediatric Code Sheet that is weight-based readily available prior to initiating sedation/analgesia and the procedure.

2) Intravenous Access:
   a) Availability of intravenous access during moderate sedation/analgesia allows medications to be titrated readily to achieve the desired effects.
   b) The lag time between drug administration is minimized when medications are administered by the intravenous route. In addition, fluids and resuscitation medications can be administered should an emergency occur.
   c) Moderate sedation/analgesia is to be administered intravenously; it is recommended that an intravenous infusion site should be maintained throughout the procedure and recovery period.
   d) In some cases, particularly with pediatrics and other uncooperative patients, it may be permissible to initiate moderate sedation/analgesia via alternate routes, i.e. P.O., intranasal, IM, rectal, oral transmucosal, or inhalation.
      (i) After sedation has been established, it may be possible to continue the diagnostic or therapeutic procedure without the need for intravenous access. The credentialed physician should make these decisions.

H. INTRA-PROCEDURE MONITORING
1) When monitoring a patient during moderate sedation/analgesia, the goal is the safe maintenance of a relaxed, arousable, cooperative state in the patient, with intact protective reflexes.
2) A monitoring RN is responsible at all times and should not engage in tasks that would compromise monitoring during the procedure.
   a) Patients' responses to verbal commands during a procedure serve as a guide to their level of consciousness.
   b) An appropriate level of consciousness implies that patients will be able to control their own airways and take deep breaths, as necessary.
3) Additional staffing should be provided based on the type of procedure, response to the medications administered, and the overall health of the patient.
4) With administration of sedation/analgesia medications, patients' responses to verbal commands are delayed and responses are frequently slowed or slurred.
   a) Light tactile stimulation may be required to get the patients' attention. Once aroused, they should respond appropriately to verbal commands
   b) Monitoring parameters should be determined by the type of procedure, depth of central nervous system depression, and the overall health of the patient.
   c) The minimal monitoring parameters required for moderate sedation/analgesia are as follows:
      (i) Level of Consciousness (Response to Commands):

- **Is assessed during the onset of sedation and whenever medications are titrated.**
- **Once an appropriately safe level of sedation is established, patients should be aroused every 15 minutes.**

(ii) **Ventilation (Observation of chest movement): Should be assessed at least every 15 minutes.**

- **The use of end-tidal CO2 (ETCO2) monitoring is highly recommended, if available.**

(iii) **Pulse Oximetry: Continuous**

(iv) **Blood Pressure, Heart Rate, Respiratory Rate:**

- **Baseline, before sedation**
- **During onset of sedation**
- **Regular intervals during procedure (at least at 15 minute intervals)**
- **End of procedure**

(v) **Electrocardiographic Monitoring: Continuous for all patients**

(vi) **The following vital signs should be *immediately* reported to the physician:**

- **Respiratory rate less than 10 / minute or greater than 20 / minute (Adults). Acceptable respiratory rates for pediatric patients should be age appropriate and designated by the nurse and physician prior to the procedure.**
- **Blood pressure variant of 25% of baseline.**
- **Heart rate variant of 25% of baseline.**
- **Oxygen saturation lower than 90%.**
- **Cardiac dysrhythmias.**
- **Significant decrease in level of consciousness.**

I. POST-PROCEDURE MONITORING

1) Moderate sedation/analgesia patients should have vital signs monitored approximately every 15 minutes until stable.

a) Stability criteria includes:

(i) **Oxygen saturation greater than 90% on room air, or as prior to procedure**

(ii) **Patient easily aroused, or as prior to procedure**

(iii) **Protective reflexes intact**

(iv) **Vital signs within 20% of baseline**

(v) **Patient alert and oriented to person, place, time, or as prior to procedure**

J. TRANSFER GUIDELINES (STABILITY CRITERIA)

1) All patients who have received sedation/analgesia should be monitored until appropriate stability criteria have been satisfied. The duration of monitoring should be individualized depending on the level of sedation achieved; overall condition of the patient, and the nature of the intervention for which moderate sedation/analgesia was administered.
2) A competent RN should be in attendance until stability criteria are fulfilled. This nurse must be capable of establishing a patent airway and providing positive pressure ventilation.
3) Level of Consciousness and Vital Signs should be recorded at regular intervals (every 5 to 15 minutes) during recovery. The responsible physician should be notified if vital signs fall outside of the limits previously established for each patient.
4) Patients should not be transferred until stability has been established.

5) The Post-sedation/Analgesia Aldrete score should be within 2 points of the admission score prior to discharge:

CATEGORY	ARRIVAL	TRANSFER
ACTIVITY Able to move 4 extremities voluntarily or on command = 2 Able to move 2 extremities voluntarily or on command = 1 Able to move 0 extremities voluntarily or on command = 0		
CIRCULATION BP +/-20% of Preanesthetic level = 2 BP +/-20-50% of Preanesthetic level = 1 BP +/-50% of Preanesthetic level = 0		
CONSCIOUSNESS Fully Awake = 2 Arousable on calling = 1 Not responding = 0		
COLOR Pink = 2 Pale, dusky, blotchy, jaundiced, other = 1 Cyanotic = 0		
TOTALS		

K) DISCHARGE GUIDELINES

1) Patients should be alert and oriented, or returned to their pre-anesthesia baseline mentation.
   a) Patients should be able to sit up and talk, if age-appropriate
   b) Caregivers must be aware that pediatric patients are at risk for airway obstruction should the head fall forward while the child is secured in a car seat.

2) Sufficient time (up to 1 hour) should have elapsed after the last administration of reversal agents (naloxone, flumazenil) so that patients do not become re-sedated after reversal effects have abated.
3) The state of hydration should be adequate in all patients
4) Patients should be discharged in the presence of a responsible adult who will accompany them home and be able to report any post-procedure complications.
5) Patients, and the accompanying responsible adult, should be provided with verbal and written instructions regarding post-procedure diet, medications, activities, and a phone number to use in case of an emergency.
6) A discharge order should be obtained from the attending physician and/or anesthesiologist.

L) DOCUMENTATION
1) Documentation throughout moderate sedation/analgesia procedures should reflect continued assessment, planning, implementation, and evaluation of the patient.
2) Documentation of the above is made on the appropriate unit-specific nursing flow sheet.
3) Documentation should include:
   a) Dosage, route, time and effects of all medications used
   b) Type and amount of fluids, if given
   c) Monitoring devices and equipment used
   d) Physiological monitoring data
   e) Level of consciousness
   f) Any interventions and the patients response to those interventions
   g) Any untoward reaction and its resolution
4) Nursing is responsible for completing the AdvantX documentation.
   a) The Nurse Manager compiles data to track and trend routine and/or abnormal data.
   b) On a quarterly basis, the Medical Executive Committee reports trends to the appropriate physician peer review committees.

Reference:

A. American Academy of Pediatrics. "Monitoring Patients During and After Sedation"
B. American Society of Anesthesiologist (2001) Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia
C. Anesthesia Patient Safety Foundation (1996) "Recommendations for Safe Administration of Minimal Sedation and Moderate Sedation/Analgesia (Conscious Sedation)" Roche Laboratories
D. Berkowitz, Connie M. (1997) "Conscious Sedation: A Primer, RN, February
E. Carroll, Patricia (1997) "Pulse Oximetry-At Your Fingertips", RN, February
F. JCAHO (2001) "Revisions to Anesthesia Care Standards" Comprehensive Accreditation Manual for Hospitals. Effective January 1, 2001.
G. Society of Gastroenterology Nurses and Associates, Inc. "Nursing Care of the Patient Receiving Sedation in the Gastrointestinal Endoscopy Setting"
H. Somerson, Steven J., Husted, Craig W., Sicilia, Michael R. (1995). "Insights Into Conscious Sedation", American Journal of Nursing, June

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: LIPID RESUSCITATION FOR CARDIAC TOXICITY	
EFFECTIVE DATE: JANUARY 2015	NUMBER: JRMC-02
REVIEW/REVISION DATES: N/A	PAGE 1 OF 2

POLICY

The center will have equipment available to easily assemble a Lipid Rescue Kit for possible local anesthetic toxicity.

PURPOSE

To provide a means to counteract toxic effect of local anesthetics.

OVERVIEW

Local anesthetics are amphipathic chemicals, meaning they have affinity for both lipid and water environments. This characteristic allows local anesthetics to cross plasma membrane and intracellular membranes quickly and also to interact with charged targets such as structural or catalytic proteins and signaling systems. Therefore, local anesthetics produce a variety of toxic effects in several tissue types, mainly heart, brain and skeletal muscle.

Consider that local anesthetic toxicity typically presents as seizures followed by cardiac arrhythmias and hypotension.

PROTOCOL

This following protocol should be used only after standard resuscitation methods fail to re-establish sufficient circulatory stability:

- 20% Intralipid
- 1.5ml/kg as an initial bolus, followed by
- 0.25ml/kg/min for 30-60 minutes
- Bolus could be repeated 1-2 times for persistent asystole.
- Infusion rate could be increased if the blood pressure declines.

LIPID RESCUE KIT

The Block Cart and/or Pyxis contains the following:

- **2- 20% Lipid 500ml bag**
- **2- IV tubing**
- **2- 60cc Syringes**
- **3- 18 gauge needles**

The protocol is attached to each Lipid bag.

COMMONWEALTH ANESTHESIA ASSOCIATES

JOHN RANDOLPH MEDICAL CENTER

ANESTHESIOLOGY POLICIES AND PROCEDURES

TITLE: PACEMAKER/AUTOMATIC INTERNAL CARDIAC DEFIBRILLATOR	
EFFECTIVE DATE: JANUARY 2015	NUMBER: JRMC-03
REVIEW/REVISION DATES: N/A	PAGE 1 OF 2

SCOPE: All patients with a pacemaker or internal cardiac defibrillator.

PURPOSE: Pacemakers/Automatic Implantable Cardiac Defibrillators, or AICDs, are more widely used and are indicated for many patient conditions. It is predictable as more of these devices are placed, ambulatory surgery centers are more likely to see them in patients presenting for surgery. This policy will provide guidelines to identify patients that have a Pacemaker or AICD and provide them with safe and appropriate care.

POLICY: These patients should be cleared for surgery by the patient's cardiologist. The clearance must address:

- The reason for the placement of the device
- Frequency of firing
- Pacer dependence
- Ventricular function
- Ischemic risk of the patient.

The consultant must also address the need for turning off the device and reprogramming. Colonial Heights Surgery Center or John Randolph Medical Center will fax the Pacemaker/AICD information form to the consulting Cardiologist for completion and have it returned to the Center for review. This information will be placed in the patient's record. The Anesthesiologist will then determine if the patient would be an acceptable cardiovascular risk for outpatient surgery at Colonial Heights Surgery Center or at John Randolph Medical Center. Lastly, the patient's co-existing diseases must not exclude them from surgery at an outpatient center. This policy is an attempt to define a subset of the growing number of Pacemaker/AICD candidates who are eligible to be done in an outpatient setting.

PROCEDURE

- **Pre-Op:**
  Recognize that patient has a Pacemaker/AICD during pre-operative phone call or review of PASSPORT form. Obtain information from the patient on cardiologist's name, address and phone number. Contact cardiologist's office by mailing the Information Sheet (JRMC-03 A) to the office. Once letter is obtained from cardiologist's office, have anesthesia department review the form and make recommendations. Place the Information Sheet in the patient's record.

- **Intraoperative:**
  In the Operating Room the device will be disabled as indicated. Defibrillator pads will be placed near all patients until the function of the Pacemaker/AICD has resumed and the patient is stable and ready for transfer to PACU.

- **PACU:**
  The patient will be recovered in the standard routing of Colonial Heights Surgery Center and at John Randolph Medical Center. The anesthesia provider will instruct the PACU nurse in the appropriate management of the patient. If the devices function returns with the removal of a magnet, that should be done prior to transport to the PACU. If the device requires reactivation by and equipment representative, that may be performed in the OR or in the PACU setting. In any case the external defibrillator device should remain functional until reactivation occurs.

  It is recognized that any patient with a Pacemaker/AICD is a higher cardiovascular risk patient. The policy is designed to aid the surgeons in safely taking care of their patients. It will require close coordination between the Surgeon, consulting Cardiologist and the Anesthesiologist.

  If preoperative medical clearance is not obtained, the case shall not be performed. Individually, the Anesthesiologist will decide after reviewing the case and/or discussing it with the surgeon and consultants if it may reasonably be performed at Colonial Heights Surgery Center or at John Randolph Medical Center. If the case cannot be done, the center's pre-op team will notify the surgeon's office as soon as possible.

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Dear Dr._____ Date _____

Your patient is scheduled for surgery at John Randolph Medical Center or Colonial Heights Surgery Center. Please review the following and advise us regarding his/her cardiac and pacemaker/AICD status. We appreciate your sharing this information with us so that we may provide safe and appropriate care for your patient. Thank you for your prompt attention to this important matter.

Robert Panten, MD
Medical Director, CHSC

Patient Name:	
Date of Birth:	**Date of Surgery:**
Scheduled Procedure:	

Please complete and fax this letter to JRMC scheduling fax line @ 1-866-244-0546

PACEMAKER / ICD (circle one)

Cardiologist/RN: _____

Office #: _____Pager #: _____

Indication for Placement (Diagnosis): _____

Type of Unit/Manufacturer: _____

Manufacturer's Rep: _____

Phone #: _____ Cell#: _____

Manufacturer's 1-800 Number:_____

Date of Placement/Last Battery Change: _____

Date of Last Phone Interrogation: _____ Any Recent

Events?:_____

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Pacemaker
Is the patient pacemaker dependent? **Yes / No**
Underlying rhythm?
Will the underlying rhythm support an adequate blood pressure/cardiac output? **Yes / No**
Rate responsive parameters? **Yes / No** Are they **on / off**?
Is it necessary to interrogate patient's pacemaker prior to this procedure? **Yes / No**
Will we need a pacemaker magnet? **Yes / No** Magnet effect on pacemaker? _____
Given the proposed surgery, what are the Cardiologist/Manufacturers Recommendations?
Is it necessary to interrogate patient's pacemaker immediately following this procedure? **Yes /No**
Name/Phone Number of person to reprogram Pacemaker:
AICD
Is it a dual pacemaker/AICD unit? **Yes / No**: If "yes" is the patient pacemaker dependent? **Yes / No**
Cardiologist/Manufacturers recommendation for management
Will we need a magnet? **Yes / No**: What type of magnet?
Will the unit have to be turned off? **Yes / No**
Name & Contact # of Rep:

Does this patient require cardiac clearance prior to this procedure? ❑**Yes** ❑**No**

Cardiologist Signature: _____ Date: _____