DEPARTMENT OF ANESTHESIOLOGY

RULES AND REGULATIONS

(January 11, 1984)
(Revised September 14, 1987)
(Revised February 10, 1988)
(Revised March 31, 1989)
(Revised May 9, 1990)
(Revised April 8, 1992)
(Revised February 10, 1993)
(Revised August 30, 1993)
(Revised March 31, 1994)
(Revised November 9, 1994)
(Revised April 4, 1995)
(Revised July 10, 1995)
(Revised August 9, 1995)
(Revised June 5, 1998)
(Revised May 10, 2001)
(Revised May 5, 2004)
(Revised November 5, 2005)
(Revised January 23, 2007)

Formatted: Centered, Indent: Left: 0", First line: 0"

RULES

ARTICLE I - Name

The name of this clinical department shall be the "Department of Anesthesiology" of the Medical Staff of Washington Adventist Hospital.

ARTICLE II - Purpose

The purpose of this clinical department shall be:

II-1 To provide full service anesthesia coverage for the Hospital, 24 hours a day, seven days a week.

II-2 To maintain standards of professional medical care for patients at Washington Adventist Hospital and to provide a means of education, representation, and organization for physician specialists in Anesthesiology within the general medical staff, nursing staff, and allied health care staff.

II-3 To provide a means whereby issues related to patient care, departmental administration, or scope of anesthesia services may be discussed and improved by the departmental membership.

II-4 To initiate, maintain and continuously improve the rules and regulations and policies of the Department to ensure the highest level of patient care, the most effective governance, and the most integrated array of services.

II-5 To maintain the highest level of performance of all physician and CRNA members through continuous evaluation of patient care rendered, continuous quality improvement, and ongoing peer review.

ARTICLE III - Membership

III-1 Obligations

a. The Chair of the Department shall be a Diplomate of the American Board of Anesthesiology.

b. The Department members agree to abide by the Principles of Medical Ethics of the American Medical Association, the Guidelines to the Ethical Practice of Anesthesiology of the American Society of Anesthesiologists, the Statement of Ethics and Operating Principles for Hospitals Operated by the Seventh-day Adventist Church in North America, and ARTICLE III, Section 3, of the Medical Staff Bylaws.

c. A member of the Department of Anesthesiology is obligated to provide continuous care and supervision of his/her patients;

d. To abide by the departmental rules and regulations;

e. To accept and faithfully discharge departmental assignments as defined by the Bylaws of the Medical Staff;

f. To participate in fulfilling the requirements for providing emergency care as defined by the Bylaws of the Medical Staff.

III-2 Qualifications of Physician Membership

1. An applicant shall be either a Diplomate of the American Board of Anesthesiology or an Active Candidate for Examination by the Board. Certification of the American Board of Anesthesiology must be attained within five years of completion of residency/fellowship. Failure to attain board certification within the required time frame shall result in the immediate expiration of membership and clinical privileges, regardless of the duration of the current term of appointment without any due process rights to challenge the expiration on these grounds.

III-3 Qualifications of Certified Registered Nurse Anesthetists (CRNA) Clinical Privileges Membership

1. A prospective applicant will hold a current registered nurse license from the Maryland State Board of Nursing.

2. A prospective applicant must have completed a program in Nurse Anesthesia from an accredited institution. Accreditation of program is determined by the Council on Accreditation of the American Association of Nurse Anesthetists' (AANA) bylaws. Additionally, prospective applicants must attain a Masters of Science degree, Bachelors of Science degree, or a degree of certification from an aforementioned program.

3. The applicant must have attained certification as a Nurse Anesthetist from the Council on

Certification of the AANA.

OR

must be a registered nurse who meets the qualifications to sit for the examinations for AANA certification and who has applied to the Council on Certification of the AANA for certification as a Nurse Anesthetist.

An individual with these qualifications may practice as a Graduate Nurse Anesthetist (GNA) before certification in the State of Maryland if this practice is under the supervision of an Anesthesiologist.

The Graduate Nurse Anesthetist must sit for the examination at the first opportunity after qualifications have been met. If the Graduate Nurse Anesthetist fails to either sit for the exam or pass the exam, privileges to practice at Washington Adventist Hospital will be immediately revoked.

4. A prospective applicant who is currently certified as a CRNA must maintain certification and recertify every two (2) years as required by the AANA Council on Recertification.

III-4 Membership Appointment Procedure

The applicant must:

a. Submit Application for Privileges
b. Submit signed Delineation of Privileges
c. Be interviewed by the Department Chair
d. Be approved by the Department
e. Be approved through standard Medical Staff procedures
f. Meet, and continue to meet, the standards and requirements set forth in the Medical Staff Bylaws.

Peer recommendations shall be a part of the basis for the development of recommendations for membership and individual clinical privileges.

III-5 Reappointment Process

Members of the Department of Anesthesiology must meet all the requirements of biennial reappointment as set forth in ARTICLE III, Section 6, of the Medical Staff Bylaws.

Peer recommendations shall be a part of the basis for the development of recommendations for reappointment and renewal of individual clinical privileges.

ARTICLE IV - Clinical Privileges

IV-1 Scope of Clinical Privileges

Appointment to the Department of Anesthesiology shall confer on the appointee only such delineated clinical privileges as have been recommended by the Medical Staff and approved by the Board of Directors.

All Active Staff members shall devote their practice primarily to Anesthesiology and its related subspecialties.

IV-2 Granting of Privileges

a. Physicians and CRNAs requesting clinical privileges in the department shall so designate those privileges on the appropriate Delineation of Privileges form.

b. Granting of Delineated Clinical Privileges shall be based on the following criteria:

1. Education
2. Training
3. Experience
4. Demonstrated Competence
5. References

c. CRNAs shall collaborate with an Anesthesiologist or licensed physician in the following manner:

1. An Anesthesiologist shall be physically available to the Nurse Anesthetist for consultation at all times during the administration of and recovery from anesthesia.

2. An Anesthesiologist shall be available for consultation to the Nurse Anesthetist for other aspects of the practice of Nurse Anesthesia. If an Anesthesiologist is not available due to extenuating circumstances, a licensed physician or dentist shall be available to provide this type of consultation.

3. A CRNA shall report to the Maryland Board of Nursing the name of the collaborating Anesthesiologist. When the Board of Nursing receives the name of the collaborating Anesthesiologist, this information shall be forwarded to the appropriate regulatory Board.

d. A CRNA has the right and obligation to refuse to perform any delegated act, whether oral or written, if, in the CRNA's judgement, it is an unsafe or invalidly prescribed medical act.

e. Nurse Anesthetists will be eligible for privileges under supervision of an Anesthesiologist with

privileges, excluding:

1. The management of problems of chronic pain relief.

2. The performance of epidurals on Labor and Delivery patients.

   CRNAs are permitted, however, to monitor and deliver anesthesia care during a Cesarean section when the Anesthesiologist is called to perform other tasks on obstetrical patients.

IV-3 Granting of Additional Privileges

a. Additional privileges may be requested by written application to the department Chair stating the privileges desired, relevant training and experience, and a resume of pertinent cases.

b. Granting of additional privileges must follow standard Medical Staff procedure and be recommended for approval by the Department of Anesthesiology and the Credentials Committee, and the Medical Executive Committee with ratification by the Board of Directors.

ARTICLE V - Officers & Duties

V-1 Officers of the Department are:

a. The Chair
b. The Vice Chair
c. The Secretary

V-2 Qualifications of Officers:

a. The **Chair** shall be a member of the Active Staff in good and regular standing, well qualified by training and experience, certified by the American Board of Anesthesiology, have demonstrated ability for the position. The term of service of the chair of the department shall be limited to three consecutive years, except for the chairs of the departments under contract with the hospital: Anesthesiology, Emergency Medicine, Pathology, Radiation Oncology, and Radiology. Departmental chairmen of the Departments of Anesthesiology, Emergency Medicine, Pathology, Radiation Oncology, and Radiology may be selected by contractual agreements with the Hospital, rather than by Department elections.

b. The **Vice Chair** must be a member of the Active Staff in good and regular standing.

c. The **Secretary** shall be a member of the Active Staff in good and regular standing. He/she shall be elected annually by the Active Staff members of the department through nominations from the floor and voted upon by either open or closed ballot.

V-3 Election of Officers:

There shall be a department nominating committee, formed as follows:

a. The two most immediate past chairs of the department of whom the senior will be the chair of the committee; or, if none are available the president of the Medical Staff may appoint a suitable substitute.

b. Three Active attending physicians shall be elected at the July departmental meeting.

The departmental nominating committee shall meet and nominate one person whose name will be circulated to the Active members of the department at least four weeks prior to the September meeting of the department, at which time the election will be held.

Twenty percent (20%) of the Active members of the department may place another name in nomination by petition presented to the Medical Staff Office no less than two weeks prior to the

date of the election. Thereafter, the nominations shall be closed. The name of the member off the department so nominated shall be posted and circulated to the Active members of the department no less than ten days prior to the election.

V-4 Duties of Officers:

V-4.1 The duties of the Chair are as follows:

(See Medical & Dental Staff Bylaws, Article VII, Section 5 Responsibilities of Departmental Chairs.)

Assure that the purpose of the department is maintained (see Rules and Regulations, Article II).

V-4.2 The duties of the Vice Chair are as follows:

The Vice-Chair shall serve as an alternate to the Chair of the Department either when requested by the Chair or during the absence of the Chair. He/she shall assume the duties of the Chair and have his/her authority.

V-4.3 The duties of the Secretary are as follows:

The Secretary shall keep accurate and complete minutes of all departmental meetings and be responsible for initiating and recording official correspondence to the Department of Anesthesiology. In addition, he/she shall perform such secretarial duties as may be delegated to him/her by the Chair.

V-5 Removal of Departmental Officers:

The removal of departmental officers during their term of office may be initiated by a two-thirds majority vote of all Active Staff members of the department, but no such removal shall be effective until it has been ratified by the Medical Executive Committee and the Board of Directors.

ARTICLE VI - Departmental Committees

The Chair of the Department shall appoint such committees as may be necessary to carry out the organization and functions of the department.

VI-I Departmental Supervisory Committee

All disciplinary matters shall be brought before the departmental supervisory committee for consideration, action, and report to the membership.

The Chair, Vice Chair, and Secretary of the Department shall serve as a supervisory committee. The immediate past chair of the department shall be an ex-officio member of the supervisory committee.

The duties of the supervisory committee shall be to advise in the adoption and supervision of the general technique of the Department, make suggestions to the Medical Executive Committee, consider disciplinary issues, receive suggestions from the staff and investigate complaints made by the staff members or the Board of Directors.

VI-2 Quality Assessment & Improvement

A committee comprised Active/Associate physician members of the department shall be elected yearly to review patient care. This committee shall meet monthly and present its findings, conclusions, and recommendations to a full meeting of the department the following month.

VI-3 Departmental Nominating Committee

(See Article V-3, Election of Officers, of these Rules & Regulations.)

ARTICLE VII - Consultations

VII-1 Consultations

(See Medical Staff Bylaws, General Section, Item #20 for Consultation requirements.)

ARTICLE VIII - Departmental Meetings

VIII-1 Frequency of Meetings

The Department shall meet at least quarterly. Special meetings may be called by the Department Chair or by four voting members submitting written requests to the Department Chair.

VIII-2 Order of Business

a. Call to Order
b. Reading/Approval of minutes of previous departmental meeting
c. Candidates for membership and clinical privileges
d. Report of Committees for Patient Care/Peer Review
e. Unfinished Business
f. New Business
g. Adjournment

VIII-3 Presiding Officer

The Chair of the Department shall preside at departmental meetings. The Vice Chair shall preside at any departmental meeting in the absence of the Chair or his/her designee.

VIII-4 Purpose of Meeting

a. To review, evaluate, and continuously improve the quality of patient care. A record shall be maintained that shall include resultant recommendations, conclusions, and actions instituted.

b. To discuss administrative and ethical matters that relate to the welfare or operation of the department.

c. To provide a means of education, representation, and organization for the specialists of Anesthesiology within the Medical Staff structure.

VIII-5 Quorum

a. To constitute a quorum at any departmental meeting, 25% of the eligible staff members of the department must be present. Active, Associate and Provisional members of the staff shall be defined as eligible voting members at a departmental meeting.

b. The action of a majority of the voting members present at a meeting at which a quorum is present shall constitute proper authorization powers of the department.

c. Only Physician members of the Department of Anesthesiology shall have a vote in departmental meetings.

VIII-6 Attendance at Meetings

a. Attendance requirements for Active, Associate and Provisional staff members is 50% of the aggregate sum of the following meetings attended:

1. Quarterly Active Staff meetings--Active and Associate Staff members.

2. Regular departmental meetings--Active, Associate and Provisional Staff members.

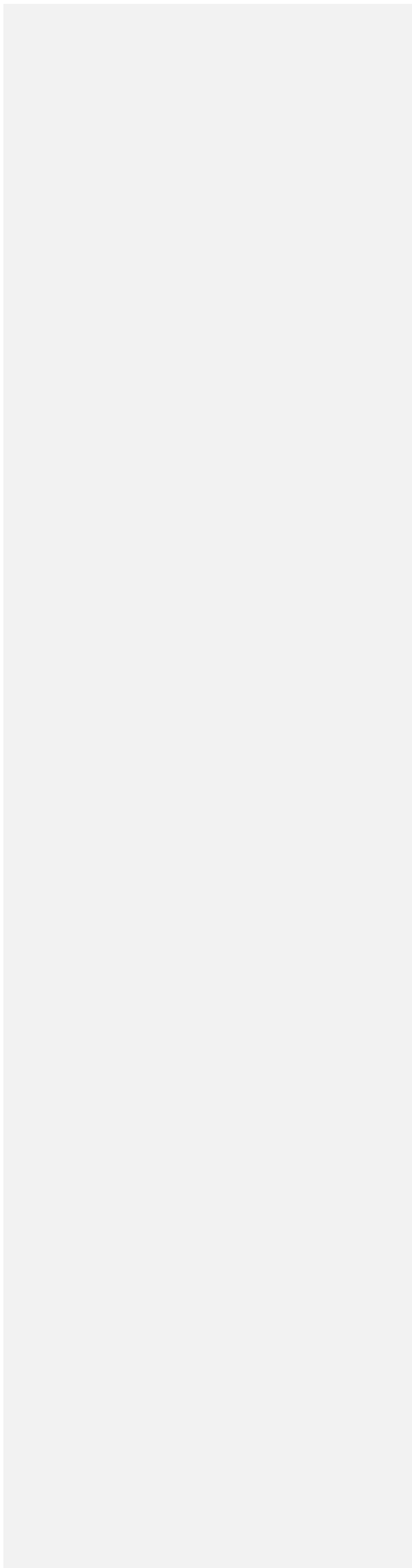
3. Committees--Active, Associate, and Provisional Staff members (Includes departmental review committee).

b. A request for an excused absence will be considered if submitted in writing to the Medical Staff Office, approved by the Department Chair and the Credentials Committee.

c. A member of the Department who has attended a case that is to be presented for discussion at any meeting of the Department shall be notified and shall be required to be present. Failure to attend, on receipt of such notice, shall involve forfeiture of Medical Staff membership.

ARTICLE IX - Appeal

Appeal of a decision made by the Department Chair must be submitted in writing by the complainant through an orderly chain of command consisting of: The Chair of the Department, the Supervisory Committee, and then the Medical Executive Committee. The appeal process is outlined in ARTICLE V of the Medical Staff Bylaws.



ARTICLE X - Rules of Order

Any parliamentary questions not specifically resolved by the provisions set forth in these rules and regulations shall be subject to *Sturgis' Standard Code of Parliamentary Procedure*, second edition.

ARTICLE XI - Amendments

The Rules and Regulations of the Department of Anesthesiology may be amended or repealed at any regular meeting in which a quorum is present or at any special meeting on notice, by two-thirds of the vote of those voting members of the department present. The presence of 25% of the total number of voting members of the department at any regular or special meeting shall constitute a quorum for the purpose of amending or repealing the rules and regulations of the department.

The Rules and Regulations of the Department of Anesthesiology of Washington Adventist Hospital shall not conflict with the Bylaws of the Medical Staff of Washington Adventist Hospital in fact, purpose or intent.

REGULATIONS AND PROTOCOLS

A. Monthly Schedule

A member of the department is assigned the responsibility of designating first, second, etc., coverage of cases for each work day, weekend, and holiday. This is on a rotation basis .

An Anesthesiologist is designated each weekday as the Anesthesiologist in Charge (AIC). The duties of the AIC are to ensure anesthesia coverage for all cases (not limited to the OR) requiring anesthesia coverage. The AIC must work with the OR charge nurse to accommodate changes made in the surgical schedule. Anesthesiologists and CRNAs must receive the permission of the AIC prior to leaving the hospital.

The AIC will also make the anesthesia assignments for coverage of the surgical schedule for the following day. These assignments should be made by 8:00 p.m. the prior night.

B. Night and Weekend Calls

A call sheet for anesthesia coverage will be available for evenings, nights, and weekends, prepared by and distributed by the office of surgery to the labor and delivery rooms, Centrex and the nursing coordinator's office.

The OB Anesthesiologist is designated in parenthesis on the call schedule. He/she will carry beeper (#206) and will stay in the house at all times unless replaced by an alternate. He/she is responsible for all obstetric needs. He/she will also respond to Code Blue situations if he is available. The OB anesthesiologist will round on all patients on the Acute Pain Service and document the visit in the progress notes.

The OB Anesthesiologist will make all in-house pre-op rounds and see consultations. The First call anesthesiologist is responsible for all add-on and emergency surgery. When the schedule is completed he may leave the hospital but must be available on beeper for any emergencies that may arise. The First Call Anesthesiologist must be available in the hospital within 45 minutes once he has been called for a documented emergency.

The second call anesthesiologist will be available to cover add-on and emergency surgeries. He/she will also be on beeper and will be called if the first call anesthesiologist is involved in a surgical case.

On weekends the OB will cover the obstetrics services on an in-house basis as above. The first call anesthesiologist must be available for OR cases as above. A second call anesthesiologist will be available for back-up.

C. Protocol for Notifying "On-Call" Anesthesiologist

1. **Anesthesiologist** - On-Call, first-call anesthesiologist. Inform him/her of the nature of the emergency. If he/she is already involved in a surgical case, it will be his/her responsibility to determine whether or not he/she will finish in time to do the next surgical case, or whether the clinical coordinator should call the second-call anesthesiologist, etc.

SAFETY RULES

Safety for the patient is a paramount consideration followed closely by safety for personnel. The Anesthesiology Department abides of the Operating Room Policy regarding Fire and Explosion

Precautions and Guidelines for Operating Room Attire. No woolen clothing is allowed in operating rooms. Nylon, silk or synthetics can be worn only if in direct contact with skin and covered with cotton clothing. Only cotton blankets are allowed.

No flammable or explosive agents are used in the surgical or obstetrical suites or other anesthetizing area.

D. **Inspection of Equipment** - All anesthesia and electrical equipment are inspected every six months by competent technicians and a record is made of such an inspection.

1) All anesthesia machines, ventilators, monitors and supplies are the property of the Hospital. When a piece of equipment is defective or not functioning consistently up to standards, the defect must be reported to the supervisor of the department where the piece of equipment is located. Prompt corrective measures must be taken.

2) All anesthesia machines will have a pin indexed safety system for high pressure tanks, and indexed system for hospital gas pipeline connections, an oxygen pressure interlock device, pressure and disconnect alarms, oxygen analyzers, and gas scavenger systems. A post proportional gas flow interlock device to prevent hypoxic mixtures is also required. A system that functions as or more effectively than an interlocking system is considered acceptable.

3) Anesthetic apparatus must be inspected and tested by the Anesthesiologist before each use. Oxygen delivery will be verified after each cylinder change or maintenance procedure. Enclosure #1 will serve as a recommended procedure for such daily machine evaluations.

E. **Anesthetizing Location:**

1) Definition - The term "anesthetizing location" shall mean any area of the hospital in which it is intended to administer to a patient an anesthetic agent in the course of examination or treatment and shall include Operating Rooms and other areas in which induction of anesthesia with anesthetic agents is allowed.

2) No explosive anesthetics will be used in any anesthetizing location in the hospital. All anesthetizing locations will be so posted.

3) No flammable or explosive preparation agent or solvent will be used or stored in any anesthetizing location.

4) Except under emergency circumstances, all anesthetics will be conducted at designated anesthetizing locations.

F. ,**HIPPA PRIVACY POLICY**

All Department members agree to be familiar with, and abide by, the CPAS HIPPA compliance policies. A copy of the CPAS Privacy Manual is available in the office and the CPAS HIPPA Compliance Officer may be consulted as necessary

PREREQUISITES FOR PATIENTS UNDERGOING PROCEDURES UNDER THE CARE OF AN ANESTHESIOLOGIST/CRNA

Washington Adventist Hospital currently maintains a Pre-Admission Testing Center for all surgical patients . The AOD or designee will provide appropriate support to the PAT and is available for consultation daily between 13:00 and 15:00 hrs. Preoperative Anesthesia Consultation is also available by direct application to the Anesthesia Office.

1. **NPO Requirements**:
   Patients undergoing elective procedures are required to be NPO for solid food and liquids for 8 hours prior to the procedure. For patients undergoing conscious sedation, liquids are permissible up to 6 hours pre-operatively. Medication should be taken with sips of water in accordance with medication guidelines.NPO requirements my be modified by the Anesthesiologist for emergent or urgent clinical situations or as clinically indicated.

   NPO requirements for Pediatric patients. (See Pediatric Protocol)

2. **Medication Guidelines**

   Even though NPO, patients should continue to take all of their prescribed medications **with a sip of water (no more than 2 teaspoons)- except for those in the Witheld category below**

   .

   Medication to be Withheld

   It is recommended that **patients stop taking herbal supplements two weeks prior to surgery**

   Antiplatelet medications (Plavix and Ticlid) should be withheld at the discretion of the cardiologist, surgeon and anesthesiologist for 7-10 days prior to surgery.

   Glucophage (Metformin), should be held for 24 hours in advance of surgery.
   Other hypoglycemics should in general be held the night before surgery.

   Non-steroidal anti-inflammatories, anticoagulants, oral hypoglycemics pseudoephedrine (sudafed), and appetite suppressants **should be held on the morning of surgery or earlier if so ordered by the physician.**

   Insulin should be held on the morning of surgery unless preoperative insulin orders are given by a physician.

   Lovenox and Fandoparinux should be held on the morning of surgery.

Any of the above guidelines can be modified by physician orders/ recommendations. Ambulatory patients should be encouraged to bring all medications and inhalers with them to the hospital.

3. **Anticoagulation and Regional Anesthesia or Pain Control**.
The Anesthesiology Department will, in general, follow the Guidelines of the 2002 Consensus Statement of the American Society of Regional Anesthesia and Pain Medicine. Many factors affect the risk for a serious Hemorrhagic event and the following time intervals represent minimum guidelines:
Patients receiving Low- Molecular Weight Heparin are generally not eligible for neuraxial techniques until 10 -12 hours following the last dose. If an epidural catheter is in place, it should not, in general, be pulled until 10- 12 hrs post dose and the next LMWH should not be given for at least 2 hrs.
Patients receiving antiplatelet medications are generally not eligible for neuraxial techniques for 14 days(ticlodipine) ,7 days (clopidogrel), 48hours (reopro) and 8 hours (Aggrastat and Integrilin)
Administration of one of these agents in the Post-Operative period may also lead to a neuraxial hemorrhagic event and such therapy should be coordinated with the anesthesiologist.

4. **H&P**
A history and physical exam within **30 days** of surgery must be present in the chart together with a heart and lung physical exam within 48 hours of surgery.

5 **Consent**
The operative permit must be properly signed by the patient , the surgeon and a witness

6. **CBC**
A CBC is required within 30 days of surgery for Short Stay unit patients and AM admits with the following exceptions:

a) Patients undergoing cataract surgery and corneal transplantation under retrobulbar block.
b) Patients between the ages of 6 months and 18 years. If these patients have a known acute or chronic anemia, or a reason to have an acute or chronic anemia, a hemoglobin and hematocrit are still required.

7 .**EKG** within 6 weeks of surgery is required for patients age 50 years and older. Patients under 50 years of age with a history or signs and symptoms of cardiac disease should have an EKG within 6 weeks of surgery.

Exceptions: Patients having cataract surgery and corneal transplantation under retrobulbar block.

8. **CXR**
A pre-operative chest x-ray within one month of surgery will be required for patients with any of the following conditions:

a) Signs or symptoms of acute or chronic pulmonary disease
b) Signs or symptoms of acute or chronic cardiovascular disease
c) A history of malignancy
d) A history of radiation therapy to the chest, head, or neck

Exceptions: Patients having cataract surgery and corneal transplantation under retrobulbar block.

9. **BNP/Potassium**
A BMP within two weeks of surgery is required for patients who are on diuretics, hypertensive, or diabetic and having cardiac, major vascular, thoracic, major abdominal surgery or major pelvic surgery. Patients with a history of renal insufficiency or renal disease, having the above surgical procedures, must have a BMP within 2 weeks of surgery.

Renal failure patients on dialysis must have Serum Potassium level within 24 hours prior to the day of surgery.

10. Patients who have recently been on Coumadin require a PT within 48 hours of planned surgery or a normal PT subsequent to the discontinuation of Coumadin.

11. **Pregnancy test Requirements**.
Patients from menarche to one year post menopause having any procedure must have a pregnancy test resulted within 7 days . This includes patients with a history of tubal ligation but excludes patients known to be pregnant ,where the operation is pregnancy related, eg. placement of cervical cerclage, and those with history of hysterectomy.

12. Blood Cross Match
The attending surgeon is in general, responsible for ordering a type and screen or type and cross match as appropriate for the proposed surgery. If there is a medical or anesthesiologic need for blood availability then the anesthesiologist may order either as appropriate.

POLICIES

DELIVERY OF PATIENT CARE

These guidelines will apply to the administration of all general anesthetics, regional anesthetics and intraoperative sedation/analgesia at WAH. They shall apply to all Department of Anesthesiology members.

A. Pre-Operative Care:

1. Before surgery (or procedure), the patients physical exam ,medical history , any indicated diagnostic tests, and a preoperative diagnosis are completed and recorded in the patients medical record.

2. All elective surgical patients will have a pre-anesthetic visit by an Anesthesiologist or a CRNA, in consultation with an Anesthesiologist, before arriving in the Operating Room. In-patients will be seen the day before surgery except in emergency situations. Appropriate patient consent will be obtained prior to surgery and documented on the appropriate form, except in life-threatening emergencies.

3. A pre-anesthetic interview and evaluation will be done.

4. Pre-operative medication ordered, as indicated. This will be administered only after the pre-anesthetic evaluation is completed and informed consent obtained.

5. Pertinent consultations ordered.

6. Necessary laboratory and diagnostic testing ordered. Refer to Prerequisites for Patient Having Surgery.

7. A pre-anesthetic note will be made on the patient's Anesthesia Record. The Pre-anesthetic interview/evaluation will include and document on the Anesthesia Record:

   a. Evidence of the interview with the patient.

   b. System review with past and present medical history.

   c. Review of objective data (Lab, EKG, X-ray, etc.).

   d. History of:

      1) Previous anesthetics and complications.

      2) Family history regarding anesthesia.
      3) Allergies.

      4) Medications.

5) Last fluid or food intake.

e. Determination of physical status (ASA Classification 1-5) and a determination of the patients capacity to undergo the proposed anesthetics.

f. The anesthesia options and associated risks and potential complications are discussed with the patient and/or family if appropriate.

g. Plan of anesthesia for proposed operation

8. Patient is assessed to plan for appropriate post procedure care such as ICU placement, post -operative ventilator support..

9. The Anesthesiologist will confer with the Surgeon about any case he deems necessary to postpone. The surgeon and Anesthesiologist will then order any consults or diagnostic work-up felt necessary. It is the Surgeon's responsibility to communicate with Medical Attendees and Consultants involved in referring the case.

10. Prior to commencing an anesthetic, the anesthetist will check the cleanliness, condition, and readiness of all required equipment.

11. All medications in syringes should be clearly labeled with the drug name and concentration, e.g., mgs/ml. All medications added to IV solutions for infusion should also be clearly labeled with the drug name, amount, and volume of fluid to which medication was added.

B. <u>Intra-Operative Management of Anesthesia:</u>

1. An Anesthesiologist or CRNA must be present in the room throughout the conduct of all general anesthetics, regional anesthetics and monitored anesthesia care.

2. SCIP – Antibiotic Prophylaxis.
The anesthesiologist is vital to the correct implementation of the Surgical Care Improvement Project (SCIP) and is responsible for intraoperative antibiotic administration according to the WAH standing orders.

3. Intrapoperative Patient Positioning:
The anesthesiologist shares responsibility with the surgeon and OR nursing staff for safe and appropriate patient positioning intaoperatively. Any safety concerns over the patient position should be clearly communicated to the other members of the OR team and carefully documented

4. Blood Glucose Control.
The influence of blood glucose control in post-operative infection rates and in post –cardiac surgical neurological outcomes is recognized as also are the conflicting effects of hypothermia , surgical catabolic stress and tissue ischemia /infarction.

All patients will have blood glucose monitoring and therapy appropriate to their clinical situation.

All diabetic patients must have a current blood gucose available at the start of surgery.

For Cardiac Surgery the target *Intraoperative* Blood Glucose Level is currently undetermined. It has been shown that attempts to control to below 180mg/dl may not be achievable in some patients despite high dose insulin therapy while the risk of postoperative Hypoglycemic events increases. Postoperatively there are indications that tight control at or below 125mg/dl is usually achievable and results in progressive outcome improvement.

All cases involving Cardiopulmonary Bypass will have at least one intraoperative blood glucose measurement .

Patients with Hyperglyceamia (defined as greater than 180 mg/dl) will be treated with insulin bolus and/or infusion as appropriate. The blood glucose goal intra-operatively is 100 – 200 mg/dl. The level should be monitored hourly when an insulin infusion is occurring. Much higher insulin infusion rates may be required during surgery than in the post operative period .A maximum rate of 10 units per hour is recommended. Even with rates of 10 units per hour or greater the blood glucose may remain elevated and out of control. Care should be taken to avoid rebound hypoglycemia especially around the time of hand over.

Postoperatively the ICU staff will be using the WAH standard order set for hyperglyceamia with typical insulin infusion rates of 1-4 units per hour

5. 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 in use.

6. During all anesthetics, pulse oximetry shall be employed continuously. Adequate illumination and exposure of the patient are necessary to assess color.

7. Every patient receiving general anesthesia shall have the adequacy of ventilation continually evaluated. While qualitative clinical signs such as chest excursion, observation of the reservoir breathing bag and auscultation of breath sounds may be useful, quantitative monitoring of the carbon dioxide content and/or volume of expired gas is strongly encouraged.

8. 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.

9. 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..

10. During regional anesthesia and monitored anesthesia care, the adequacy of ventilation shall be evaluated, at least, by continual observation of qualitative clinical signs..

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

12. Every patient receiving anesthesia shall have arterial blood pressure and heart rate

determined and evaluated at least every five minutes.

13. 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, pulse plethysmography or oximetry.

14. There shall be readily available a means to continuously measure the patients body temperature. When changes in the body temperature are intended, anticipated, or suspected, the temperature shall be measured.

15. An anesthetic record will be maintained during the administration of anesthesia for each patient. Documentation must include the following:

    a. Documentation of continuous and intermittent physiologic monitoring at regular intervals. Blood pressure and heart rate shall be recorded at 5 minute intervals. If there is no significant deviation from the previously recorded entry SPO_2 at 10-15 minute intervals.

    b. The dosage of all drugs and agents used and the times given.

    c. The type and amount of all fluids administered, including blood and blood products.

    d. The technique or techniques used.

    e. Record of unusual events during anesthesia.

    f. Status of patient at conclusion of anesthesia.

1. <u>Post-Anesthesia Care:</u>

1. The Anesthesiologist or CRNA (along with the Operating Room circulating Nurses) will accompany all patients to an appropriate postoperative setting such as the Post-Anesthesia Care Unit SSU, Transcare or ICU. The patients condition will be continually evaluated and treated during transport with monitoring and support appropriate to the patients condition.

2. The Anesthesiologist (along with the Operating Room circulating Nurses) will report the following information to the Post-Anesthesia Care Unit Nurse:

    a. The type of surgical procedure.

    b. Any significant pre-existing medical history.

    c. Type of anesthesia including additional invasive monitoring and adjunctive anesthetic procedures.

    d. Intra-operative management problems or complications.

    e. All medications, fluids, blood products, estimated blood loss, urine output, and most recent laboratory values (if any).

3. The Anesthesiologist will remain with the patient as long as he/she deems necessary and until the PACU Nurse accepts responsibility for the nursing care of the patient.

4. The postoperative status of the patient will be evaluated on admission to and discharge from the Post-Anesthesia Care Unit. The patients condition shall be evaluated continuously while in the PACU (by PACU Nurses).

5. The patient may be discharged if they meet criteria approved by the Department of Anesthesiology and the medical staff. The name of the physician accepting responsibility for discharge should be noted on the record. Patients who do not meet the criteria may be discharged by an order from the responsible anesthesiologist.

6. The Anesthesiologist will write post-op orders he/she deems necessary.

7. Documentation includes a record of the following:

    a. Vital signs and level of consciousness; pulse oximetry shall be measured and recorded on a time-based records.

    b. Intravenous fluids administered, including blood and blood products.

    c. All drugs administered and their dosage and times given.

    d. Post-anesthesia visits.

    e. Any unusual events or post-operative complications and the management of those events.

8. The Anesthesiologist will be responsible for the post-operative management of related anesthesia complications, unless a specialist is required for a specific complication.

9. A post-anesthetic note will be written on the chart within forty-eight (48) hours of the operation, documenting the patient's condition after the patient has recovered from the anesthetic. The note will include documentation of the general status and any complications related to the anesthetic with the management of the complications. The date and time of the note will be documented.

POLICIES FOR POST ANESTHESIA CARE UNIT

The Surgery Supervisor and the Chair of Anesthesiology are in charge of the Surgery Recovery Room. The nurse in charge of the Recovery Room shall be designated as an Assistant Head Nurse.

1. Staffing problems are to be handled by the Surgery Supervisor and Assistant Head Nurse in the Recovery Room in cooperation with the Nursing Service Office. The Recovery Room Assistant Head Nurse should be consulted when there are changes in personnel or any other problems. The two areas should assist each other when necessary.

2. Hours or service are as follows:

   Monday thru Friday: 7:00 a.m. - 11:00 p.m.
   On Call: Weekends and 11:00 p.m. - 7:00 a.m. daily

3. All types of post anesthesia patients are to be recovered.

   Exceptions: (1) Anesthesiologist may send patient directly to Unit, (2) Cardiac Surgery goes directly to ICU, and (3) Patients who receive minimal amounts of sedation/ analgesia under monitored anesthesia care may be sent directly to SSU or patient floor as deemed appropriate by the attending anesthesiologist. Examples include: patients having cataract extraction with i.o. implantation.

4. Criteria for releasing patient from the Post Anesthesia Care Unit:

   A. Be able to respond correctly to questions of location, time and date. Also be able to call for assistance, if able to do so pre-operatively.

   B. Vital signs should be stable.

   C. The minimum stay is 30 minutes for an adult. Patients may be discharged when discharge criteria is met.

   D. A patient should stay at least 30 minutes after receiving any narcotic, tranquilizer or hypnotic.

   E. There should be no evidence of excessive bleeding.

   F. Children should stay 30 minutes. However, if alert and anxious to go to parents, this time may be shortened to 20 minutes, is stable and discharge criteria is met.

   G. The length of stay is one and one half to 2 hours for prostatectomy cases.

   H. The PACU score should be 10 (See Subject 904, Section D for explanation of score.)

Exception to the above should be made with the approval of the anesthesiologist, if going to ICU or if the patient had pre-op handicap.

I. An anesthesiologist will sign for the discharge of patients. In the absence of a physician responsible for discharge the patient may be discharged if the PACU score is 10 (see Subject 904, Section D, for explanation of score) without the anesthesiologist's signature. The name of the anesthesiologist/physician accepting responsibility for discharge shall be noted on the record.

5. Criteria for transporting critically ill patients:

A. All patients transported to any critical care unit from the PACU should have at the very least a cardiac monitor on during the transport.

B. Oxygen by nasal cannula or mask should be used during transport per the anesthesiologist's order. If the patient requires oxygen during the transport, an Ambu bag and mask should be available also during the transport. Pulse oximetry may be used at the option of the anesthesiologist.

C. All direct admissions to the critical care units from the operating room will be accompanied by the Anesthesiologist or CRNA

D. Patients who are on the ventilator and deemed unstable by the attending anesthesiologist or PACU nurse should be transported from the PACU to the critical care units with an anesthesiologist or CRNA in attendance. If the attending anesthesiologist will not be available during the transport, he/she should make arrangements with the in-house anesthesiologist about the transport of the patient.

6. When the patient is transferred to the hospital unit a report should be given to the nurse in charge as to the vital signs, condition of patient, wound or incision, and drains.

7. Patients who have received general anesthesia on an outpatient basis will be sent to the Short Stay Unit after they have been discharged from PACU.

8. Anesthesiologists will sign for discharge of patients. The patient can be discharged without signature but they must meet the PACU discharge criteria. Compliance with the criteria is documented on the PACU record. On occasion, if the discharge criteria cannot be met, the anesthesiologist may approve discharge from the PACU if they feel that discharge is appropriate for this patient after careful review of the patients condition. This shall be clearly documented on the PACU record.

9. Post-anesthesia visits will be documented on the anesthesia chart in the designated place. Date and time should be given. Any complications noted at the time of visit should be entered at this time also. At least one post-anesthesia visit should be recorded, preferably more on major cases when indicated.

10. The following are discharge criteria for PACU regarding oxygen supplement and temperature:

    1. Any patient who has a temperature of less than 34 degrees centigrade should be referred to the attending anesthesiologist prior to discharge from the PACU.

    2. Prior to discharge from PACU, patients will be made to breath room air for 5-10 minutes, and then oxygen saturation measured by pulse oximeter. Any patient who has an oxygen saturation of less than 5% below baseline will be referred to the attending anesthesiologist for further orders regarding use of oxygen therapy.

    Exceptions to these policies will be for patients on the ventilator in PACU or whose status makes supplemental oxygen necessary.

11. Additional policies - see PACU Monitor.

ANESTHESIA FOR LABOR AND DELIVERY

Anesthesiologists are available to provide anesthetic services for labor and delivery and as consultants for patients with high risk pregnancies.

These guidelines will apply to the administration of labor and delivery analgesia and anesthesia.

A. Pre-Anesthetic Care

1. A resuscitation cart will be available at all times on the Labor and Delivery Floor.
2. Labor analgesia will be provided at the request of the referring obstetrician and with the consent of the patient.
3. A pre-anesthetic evaluation will be performed by the Anesthesiologist or Nurse Anesthetist. (See Pre-op Care for details)
4. Necessary laboratory and diagnostic tests will be ordered and reviewed.
5. A pre-anesthetic note will be made on the patient's hospital record.
6. Intravenous access will be established with a large bore IV (preferably sixteen (16) to eighteen (18) gauge) using a needleless system, before administering anesthetic agents. A minimum of 500 cc of lactated Ringers will be administered prior to placement of an epidural.

B. Anesthetic Care

1. Baseline blood pressure and heart rate will be obtained.
2. Following placement of a lumbar epidural catheter, a test dose of local anesthetic which may contain epinephrine will be administered.
3. The patient will be placed in the supine or elevated head-of-bed position with uterine displacement.
4. The patient will have blood pressure assessed at intervals of no greater than five (5) minutes for the first twenty (20) minutes following injection of local anesthetic into the epidural catheter. The patient may not be left unattended for fifteen (15) minutes following the initial dose or after a top-up-dose of local anesthetic.
5. The anesthetic level will be assessed following administration of local anesthetic.

C. Continuous Epidural Infusion for Labor and Delivery

GOAL:

Narcotics and Local Anesthetics administered in small amounts to the neuraxis produce analgesia during labor. Continuous infusion of these drugs provide analgesia with a minimum amount of drug and minimal side-effects. This protocol is designed to provide the obstetrical care team with information about the continuous infusion epidural technique and appropriate management of the catheters, pumps, and patients receiving them.

METHOD:

1. Patients will be pre-hydrated with lactated Ringers solution (at least 500 cc) and an epidural catheter placed in the usual fashion. After appropriate test dose, all patients will receive a

loading dose (given incrementally) of either:

a. Bupivacaine .25%

b. Bupivacaine .125% with Fentanyl 50-100 mcg.

c. Bupivacaine 0.5% .

2. All infusions will be administered by an infusion pump or equivalent device.

3. Pump tubing will have no side ports.

4. The infusion pump will be clearly labeled as to contents and that it is the <u>EPIDURAL PUMP.</u>

5. Patient will be evaluated for satisfactory block, and if block is spotty or inadequate, additional bolus injections may be administered or the catheter may be replaced.

6. Patients will be evaluated at regular intervals for level and quality of analgesia by the Anesthesiologist.

7. Infusion should be continued until delivery. If the obstetrician requests decreased motor block, the epidural infusion rate can be decreased. Changes in delivery rate can be made by the Anesthesiologist or by the nurse under the direction of the Anesthesiologist. The pump can be shut off by the nurse in case of untoward events or by direction of the obstetrician or Anesthesiologist.

8. Additional analgesia will be provided as needed for obstetrical procedures (e.g., Forceps delivery, C-Section, etc.).

9. Nursing will continue to record vital signs q 5 minutes for the first 20 minutes after the bolus injection, then q 30, while the patient is receiving the infusion. He/she is to inform the Anesthesiologist of any major change in the patient's condition or vital sign changes greater than 20% from baseline.

10. At no time will the following concentrations be exceeded on the Labor & Delivery Floor for infusion:

    Bupivacaine .125%
    Fentanyl 2 mcg/cc

11. Under no circumstances should Bupivacaine 0.75% be used for patients in Labor and Delivery.

12. Drips will be mixed by the physician or the Pharmacy.

ENACTED: 01/09/91
REVISED: 04/ /92, 08/30/93

D. Post-Anesthesia Care

1. The Anesthesiologist, or any Obstetrician or CRNA under the direction of the Anesthesiologist, may remove the Epidural catheter at the completion of labor and delivery.

After removal, he/she should document the procedure e.g.,

29 JUL 93 0930
Epidural catheter removed.
Tip intact.

The Epidural should be left in place after delivery in the following cases:

(a). Planned or expected post-partum tubal ligation with twenty-four (24) hours of delivery.
(b). Retained products of conception that may require removal in the Delivery Room (DR) under anesthesia.
(c). When additional anesthesia is needed for repair of episiotomy or laceration.
(d). If any resistance is encountered upon attempted removal of the catheter, the catheter should be left in place and the attending anesthesiologist notified immediately.

2. Patients may be discharged from labor floor after they meet estimated criteria.
3. An order for discharge may be written by the Anesthesiologist.
4. The Anesthesiologist will write any post-op orders he/she deems necessary. Recognition of the transfer of certain medications into breast milk will be taken into consideration when prescribing.
5. The Anesthesiologist will be responsible for the management of related post-anesthesia complications and will consult with appropriate specialists if necessary for care of a specific complication.
6. A post-anesthesia note will be written on the chart within 48 hours after delivery documenting the patients post-anesthesia condition.

These guidelines will apply to the administration of anesthesia for Cesarean Section based on the degree of urgency, the desires of the patient, and the judgment of the Anesthesiologist. The anesthetic will be one that the Anesthesiologist feels (a) is safest and most comfortable for the mother, (b) is least depressant to the newborn, and (c) provides the optimal working conditions for the obstetrician.

A. Pre-Anesthetic Care for Cesarean Section

1. Check resuscitation equipment and oxygen delivery system. A complete anesthesia machinery safety check should be performed. Have suction equipment ready and available.
2. A pre-anesthetic evaluation will be performed. See preoperative care and prerequisites for patients undergoing procedures under the care of an Anesthesiologist/CRNA.
3. Necessary laboratory and diagnostic tests will be ordered and reviewed.
4. A pre-anesthetic note will be placed on the hospital record of the patient.
5. All patients going to the Delivery Room for planned, urgent, or emergency Cesarean Section, will be given Bicitra 30 cc p.o. by the nurse prior to arriving in the Delivery Room.

B. Intra-operative Management of Anesthesia for Cesarean Section

See Intra-operative Management of Anesthesia (Pages 23-24)

C. Post-Anesthesia Care for Cesarean Section

See Post Anesthesia Care (Page 25-26)

D. General Delivery Room Considerations

Emergency drugs should be available at all times in the Delivery Room in the event of emergency Caesarean section. The following drugs should be readily available: Propofol, Ketamine, Succinyl Choline, Atropine, Ephedrine. If emergency drugs are made up during the course of a 24 hour period, they should be discarded at the end of that 24 hour period, and new emergency drugs made up by the oncoming anesthesiologist

PEDIATRIC PROTOCOL

A. Pre-operative

1. The goal of anesthesia is to provide a relatively painless and anxiety-free experience.

    a. An unpleasant experience can result in short and long-term problems such as:

        i. nightmares
        ii. disrupted sleep patterns
        iii. behavior problems
        iv. life long fear of medical personnel and hospitals

2. Pre-operative visit to familiarize the patient and family with the hospital environment, as well as teaching at the patient's level of understanding, will allay the majority of anxiety.

    a. Children will be less anxious if their parents are not anxious, so parent teaching is as important as that for the child.

    b. Videotapes of the peri-operative experience that the parent and child can view together may be helpful.

    c. A play area with dolls or stuffed animals with whom the child can act out the peri-operative events can be therapeutic.

3. Pre-Medication

    a. This is usually unnecessary in children less than six (6) months old.

    b. At greater than six months, and especially from the ages of 1-3 years, patients may have difficulty separating from their parents.

    c. Children who have previously had experience with surgery regardless of their age may require pre-medication.

4. Goals of Pre-Medication

    a. To provide an anxiety-free state prior to and on arrival in the operating room.

    b. Drugs should have a rapid onset, short duration of action and be free of side effects.

    c. They should be able to be administered in a non-noxious manner.

5. The following are suggested drugs and dosage for pre-medication:

    Midazolam oral 0.5 - 0.7 mg/kg

	rectal	0.5 - 1.0 mg/kg
	IV	0.05 mg/kg
	nasal	0.2 - 0.5 mg/kg
Methohexital	rectal	25 - 30 mg/kg
Thiopental	rectal	30 mg/kg
Ketamine	oral	6 - 10 mg/kg
	rectal	10 - 15 mg/kg
	IM	2 - 10 mg/kg
	IV	1 - 2 mg/kg

a. Ketamine should be combined with an antisialygogue (glycopyrrolate or atropine), to diminish excessive salivation during induction.

b. Midazolam in 10 mg/2 cc concentrations will be for use by Anesthesiology only. The vials are to be labeled **"Not for IV Use"** and are only to be provided by the Pharmacy to the Short Stay Unit.

6. Oral Pre-medication should be mixed in 10 - 15 cc of cola syrup or kool aid or an age appropriate dose of oral Tylenol. If Tylenol is used, the primary physician should be notified to avoid inadvertent Tylenol overdosage.

7. Oral pre-medications should be administered 10 -15 minutes before the patients expected arrival in the OR.

8. Patients whose oral pre-medication was given longer than 45 minutes prior to coming to the OR may require a second dose.

B. Intra-operative

1. Parents Role During Induction

   a. In many circumstances it can be helpful for a designated parent to accompany the child into the operating room and be present during the anesthetic induction.

b. To accomplish this, the following procedures will be useful:

i. Parent changes into scrub clothes when the child changes.

ii. Parent can walk with the non-sedated child or carry the sedated child into the OR. Alternatively, the patient may be brought to the OR by wheelchair or stretcher.

iii. Parent can actively participate in induction by re-assuring the child/holding their hand, etc.

iv. Immediately after induction and prior to IV starts or intubation, the parent will be escorted back to the SSU by the circulating nurse or an assistant.

2. Anesthetic Considerations

a. Our goal once we have provided a non-threatening induction is to maintain anesthesia through a variety of techniques including but not limited to:

MAC
Inhalation agents
Intravenous agents
Regional blocks
Combination of all the above

b. Ideally, rapid emergence and a relatively pain-free post-operative state are highly desirable.

c. The use of regional blocks can result in decreased pain on emergence and a decreased requirement for inhalation or intravenous agents.

Useful blocks include but are not limited to: Caudal block
Ilioinguinal/iliohypogastric nerve block
Penile block

d. Acetaminophen may be given for mild pain relief. It may be given orally pre-operatively or rectally after induction and prior to sterile draping of the patient.

Recommended doses are: Oral or rectal in a dose of 60 mg per year of age.

C. Post-operative Considerations

On arrival in the PACU;

1. initial vital signs should be taken,
2. report given,
3. the patient determined to be medically stable, and parent may be allowed to return to assist in post-operative care.

a. Often the best way to calm a crying child is to have the parent hold the child in their arms in a rocking chair.

D. Discharge Criteria

1. The following should be used as guidelines for patient discharge:

   a. Vital signs stable
   b. Alert and oriented or appropriate for age
   c. Absence of respiratory distress
   d. Swallow, cough, and gag reflex present
   e. Nausea, vomiting and dizziness minimal or absent
   f. Parent/guardian given discharge instructions and understands them

E. NPO Guidelines for Pediatrics

1. Changing concepts in pediatric anesthesia have included a change in fasting requirements.

2. Studies have demonstrated that providing "clear" liquids 2-3 hours prior to the induction of anesthesia does not alter residual gastric volume, may enhance gastric emptying, and may increase gastro pH.

3. The incidence of hypovolemia, hypoglycemia and a stressful physiologic and psychologic state may be reduced by allowing "clear" liquids 2-3 hours prior to surgery.

4. Fasting guidelines for the SSU are (hours):

	Milk/Solids	**Clear Liquids***
Newborn - 6 months	4	2
6 months - 36 months	6	3
Greater than (>) 36 months	8	3

*** Clear liquids include:** water, apple juice, plain jello, tea.

RELIEF EXCHANGE PROTOCOL

When one anesthetist relieves another, the hand over should include the following elements:

A. SITUATION

1. Patient's diagnosis, procedure, notable past history, allergies, abnormal lab values, chest film, ECG.
2. Anesthetic technique and logic.

B. STATUS

1. Anesthetic course.
2. Progress of surgical procedure.
3. Fluids and blood products given, blood loss.
4. IV lines, A-line, ports.
5. Present level of anesthesia; going up or down.
6. Labelling of drugs and concentrations on administration.
7. Current gas flows, anesthetic concentration, and reading of oxygen analyzer, cylinder and pipeline supply pressures.
8. Clinical signs and vital signs for original anesthetist exits.

C. FUTURE

1. Need for anesthetics, fluids, and drugs.
2. Availability of drug products.
3. Plan for post-operative respiratory and drug support.
4. Time when the relieved anesthetist will return.

NOTE: Record time of relief exchange and reliever's name on anesthetic record.

ANESTHESIA FOR, CARDIOVERSION, CARDIAC CATHETERIZATION LABORATORY CARDIAC SPECIAL PROCEDURES and RADIOLOGY SUITE

It is the policy of the Department of Anesthesiology to provide the same standard of care for anesthetics administered off site as provided in the operating room. The standards established on pages 19-26 must be followed.

The requirements are as follows:

1. Patients must be made N.P.O. (nothing by mouth) for greater than eight (8) hours.

2. Pre-operative requirements for laboratory work, EKG, chest X-ray, history and physical, and permit follow the same requirements as in the operating room.

3. A pre-anesthetic evaluation will be performed prior to the anesthetic.

4. Medical problems will be under control and managed by an appropriate physician.

5. Patients for all off site Anesthesia support will be scheduled through the OR scheduling office..

6. Necessary equipment in the Treatment Room will include 100% Oxygen, AMBU bag and mask, (or equivalent system), suction device, intubation equipment, anesthetic drugs, resuscitative drugs, blood pressure monitors, EKG, a defibrillator, and oxygen saturation monitor.

7. An anesthesia machine may be brought to the Off-Site Location for procedures requiring general anesthesia. A full anesthesia check out procedure will be performed prior to use.

8. Anesthesia and Recovery Room records or an equivalent record is required. Discharge criteria will be developed that complies with PACU Standards.

9. Post-anesthetic evaluation will be performed by the Anesthesiologist.

WASHINGTON ADVENTIST HOSPITAL
SEDATION/ANALGESIA POLICY

PURPOSE:

To identify patients undergoing invasive procedures receiving sedation/analgesia and to create a policy that insures safe perioperative care.

POLICY:

This policy applies to patients who receive sedation/analgesia and undergo operative and other invasive or diagnostic procedures in any setting. Examples of patients who meet this criteria include, but are not limited to, patients receiving sedation/analgesia for: cardiac catheterization, endoscopic procedures, diagnostic radiologic procedures, closed orthopaedic reduction in the Emergency Department, and patients receiving sedation/analgesia in the Operating Room. These criteria **do not** apply to patients receiving **premedication analgesia** in the following setting: Labor and Delivery, invasive or diagnostic procedures, **or** to patients receiving analgesia for control of pain on nursing units or patient controlled analgesia (see PCA Protocol). Also excluded are critical care patients who receive sedation for tolerance of mechanical ventilation, as well as patients undergoing emergent intubation.

DEFINITION:
Sedation/analgesia (formerly referred to as conscious sedation) is produced by the administration of pharmacologic agents that produce a depressed level of consciousness, but retains the patient's ability to maintain a patent airway, the ability to respond to physical stimuli, swallow and cough.

PRE-PROCEDURE
A history and physical examination must be in the medical record prior to the procedure on all patients receiving sedation/analgesia. ***It is recommended that the following be evaluated*:**

(1) Previous adverse experience with sedation/analgesia as well as regional and general anesthesia.
(2) Documentation of NPO status
(3) History of tobacco, alcohol or substance use or abuse.

It is also recommended that patients presenting for sedation/analgesia should undergo a focused airway evaluation including airway abnormalities.

Pre-procedure laboratory testing should be guided by the patient's underlying medical condition and the likelihood that the results will affect the management of sedation/analgesia.

Pre-procedure fasting (NPO) guidelines are required for patients receiving sedation/analgesia, ie., NPO 8 hours prior to procedure. Emergent and urgent clinical conditions may exist that preclude strict adherence to this NPO Guideline.

Informed consent for the procedure must be obtained prior to the administration of sedative/analgesic drugs. (Refer to patient care Policy 5850 on Consents, General)

All patients must have a patient identification wrist band or other suitable means of identification.

All departments using sedation for outpatients should develop a pre-procedure patient information form. **This form should include instructions to:**

> "Have a **capable person** return directly with you to your home after this procedure, and rest until you feel capable of independent activity. Since some of the medication you received may have a prolonged action, you should not do any of the following things for at least twenty-four (24) hours:
> Make major financial or business decisions, operate an automobile, machines, or applicances which require alertness; or drink alcohol. Take only prescribed medication."

SPECIAL SITUATIONS

Appropriate medical specialist should be consulted prior to administration of sedation/analgesia to patients with significant underlying conditions.

It is recommended that criteria for consultation with an anesthesiologist be developed by the individual departments utilizing sedation/analgesia. Individual departmental policies are necessary due to the different patient populations underoing procedures, eg., a patient with severe CAD or acute MI is a typical patient undergoing PTCA and may not require consultation. The same patient undergoing emergency endoscopy for GI bleeding should require consultation with an anesthesiologist prior to the procedure.

INTRA-PROCEDURE

Due to the potential complications of the administration of parenteral analgesics and sedatives and the ease of management when a secure vascular access is available, it is mandatory that all patients receiving such medications have a secure vascular access that is connected to an appropriate intravenous administration system.

MONITORING

Patient monitoring is performed by an RN or ACLS certified technologist. The following monitoring occurs continuously throughout the procedure and acute recovery:

Pulse oximetry - Appropriate alarms will be used to detect hypoxemia. Supplemental oxygen is used when appropriate.
EKG monitoring - Appropriate alarms set to detect rate/rhythm changes
Ventilatory function - Observation of spontaneous respiratory activity, rate and color
Level of consciousness - Response to medication and procedural activity

Non-invasive automatic blood pressure monitoring occurs every 5 minutes with alarms appropriately set. The RN or an ACLS prepared technologist will keep the physician informed with regard to the patient's level of consciousness, pulse oximetry, blood pressure, pulse, and respirations.

Sedative and analgesic drugs may be administered by an RN. These drugs may be administered by a technologist who is ACLS certified and credentialed to do so by the hospital and State of Maryland.

In the event of complications related to the use of sedative/narcotic drugs (e.g., respiratory arrest, hypotension, cyanosis, persistently low SPO_2, or allergic reaction, any of which are considered to be refractory to therapy by the physician in attendance), an Anesthesiologist must be called. The Anesthesiologist may recommend modification or termination of the procedure in the interest of patient safety.

DOCUMENTATION

Documentation will be made part of the permanent record and shall include:

A. Medication dosage, route, time, adverse effects and person administering.

B. Type and amount of fluids administered including blood and blood products, monitoring devices or equipment used.

C. **Physiologic data from continuous and intermittent monitoring (BP, HR, Rhythm, SPO_2, RR) shall be documented prior to administration of sedation and analgesia medications, at 15 minute intervals, at any significant event or deviation from base line and at the end of the procedure**.

D. Level of consciousness is documented pre and post procedure, in response to any significant event and/or deviation in level of consciousness during procedure.

E. Any untoward or significant patient reaction, method of management and resolution.

MEDICATION ***(refer Addendum A)***

A. The use of short acting agents is strongly recommended for all outpatient procedures in an effort to minimize the duration of the post-procedure recovery period. The use of short acting intravenous agents is advised due to the reliability and rapidity of onset of the agents. When possible, intramuscular sedation should be avoided.

B. When narcotic analgesics are required, it is recommended that those agents with the shortest duration and most rapid onset of action, such as Fentanyl, should be utilized rather than agents with longer duration of action such as Morphine. Agents should be carefully titrated to effect by incremental dosing.

C. Naloxone (Narcan) should be readily available. When needed, and the clinical situation permits, Naloxone (when required) should be administered intravenously in increments of 0.1 mg. This method of administration minimizes hypertension, nausea and vomiting, and tachycardia.

D. The value of benzodiazepines in procedures is recognized. It is recognized that doses should be individualized. In an effort to decrease the development of phlebitis and respiratory arrest, these drugs should be administered via a running IV, at the rate not exceeding 2.5 mg/minute for Diazepam (Valium) and 1 mg/minute for Midazolam (Versed).

E. Flumazenil should be readily available to reverse the profound sedation and respiratory depression secondary to overdosage of benzodiazepines. Flumazenil should be given in an initial dose of 0.2 mg IV over 30 seconds. If the desired level of consciousness is not reached, another dose of 0.3 mg IV over 30 seconds may be administered. If there is still no response, another 0.5 mg IV over 30 seconds can be given and then repeated every one (1) minute up to a total dose of 3 mg. Please see PDR or package insert.

F. Compliance with the above recommendations should minimize the need for opiate antagonists. When giving drugs for sedation/analgesia intravenously, doses should be individualized and titrated to effect. **EXTREME CARE MUST BE TAKEN TO AVOID RESPIRATORY AND CARDIOPULMONARY DEPRESSION**. In elderly or debilitated patients drug doses should be decreased.

   If narcotics are administered in combination with benzodiazepines or other hypnotic/ sedatives, the doses of each should be reduced appropriately. Since apnea and respiratory depression are potentiated by these combinations, titration of these drugs is mandatory.

   Some specialists prefer to use Midazolam for conscious sedation. This drug is three to four times more potent than diazepam. Reductions in dosage by 30% are suggested for patients over 60 years of age or when narcotics are given concomitantly. Additional reductions of 60% are appropriate for debilitated patients. All doses should be carefully titrated over two (2) or more minutes in small incremental doses. ALL CLINICIANS SHOULD CAREFULLY READ THE MOST RECENT EDITION OF THE PDR FOR RECOMMENDATIONS CONCERNING THE USE OF VERSED. Propofol, Pentothal and Methohexital should not be used for sedation/analgesia unless an anesthesiologist (or CRNA) is in attendance. Intravenous Ketamine can only be administered by the physician.

EMERGENCY EQUIPMENT & DRUGS

Suction and oxygen should be immediately available. A resuscitation bag for respiratory assistance and equipment for emergency intubation should be available. Drugs and equipment for cardiopulmonary resuscitation should be accessible.

POST PROCEDURE

An adequate space to permit recovery of patients under proper supervision should be available in all areas where sedation is used.

A. Patients will be discharged from the procedure room to the PACU, Transcare, **or** unit with an equivalent level of care. They will be discharged from these units when they meet established criteria.

B. If procedures are performed in the ICU, CCU, and ED, they may be allowed to recover in that unit with monitoring and discharge criteria that meet the standard of the PACU.

C. **After procedures in which the patient received no sedation or minimal sedation and the patient can be discharged to a general nursing floor or short stay unit provided following criteria are met:**

   1. **No reversal agents were used.**

   2. **Level of consciousness, respiratory effort and oxygen saturation return to pre-procedure baseline with stabilized blood pressure and pulse.**

COMPETENCY MONITORING

Medical staff are credentialled to perform sedation/analagesia

Monitoring staff must successfully participate in competency validation related to the management of patients receiving sedation/analgesia.

ANESTHESIOLOGY DEPARTMENT
POLICY FOR INFECTION CONTROL

Effective Date: 11/82
Cross Referenced:
Reviewed: 8/88, 2/89, 4/94
Revised: 6/85, 4/86, 8/87, 5/90, 3/92, 10/94, 10/97

Policy No: 71100
Origin: INF CTRL
Authority: ICC

PURPOSE

Anesthesiologists/CRNA's have contact with respiratory mucosa and secretions. In addition, these professionals mix and administer a variety of intravenous medications to patients during times of severe compromise of natural resistance. Finally, they control physiology in patients during acute recovery from anesthesia. The sensitive nature of these activities mandates careful control of infection hazards.

The policies and procedures outlined here should give guidance for personnel working in anesthesia services.

POLICY

I. RESPONSIBILITIES

A. Chairman of Anesthesia

1. Train and supervise other anesthesiologists and CRNA's in infection control.
2. Assure compliance with hospital infection control policies.
3. Prepare and revise guidelines on care of patients and prevention of infection for approval by the Anesthesia Service and the Infection Control Committee.
4. Assure the safe health status of members of Anesthesia Services to prevent the acquisition OR transmission of disease.
5. Assure adequate maintenance and cleaning of anesthesia equipment by designing appropriate written procedures and controls.

B. Infection Control Practitioner

1. Collaborate with the Chairman of Anesthesia in education programs.
2. Assist in formulation of infection control guidelines.
3. Periodically assess the adherence to the infection control guidelines.
4. Investigate outbreaks and single episodes of infections in surgical patients.

C. Infection Control Committee

1. Review and approve policies and procedures.
2. Review results of environmental cultures and follow-up as necessary.

D. O.R. Anesthesia Technician

1. Maintains anesthesia carts as directed.

    a. Cleans cart tops daily and between cases. The remaining portion of the cart is cleaned on a rotating schedule.

    b. Properly disposes of all used needles, IV bags and medications left at the end of the case

    c. Stocks carts with IV fluids, non-controlled medications, anesthetic agents, ventilator hoses and anesthesia supplies. (Par levels determined by Chairman of Anesthesia.)

2. Maintains Anesthesia Machines.

    a. Cleans surfaces of anesthesia machines and lines between cases with hospital-approved germicide (i.e., Stat III).

    b. Changes machine tubing and cleans machine valves.

    c. Changes Bara/soda lime on an established schedule.

    d. Cleans ventilator bellows monthly.

    e. Changes TVX cartridges (Expiratory Flow cartridge).

    f. Changes O_2 sensors on an established schedule.

    g. CO_2 monitors:

        1) Calibrated monthly by Biomed. Tubing within the machine is changed at that time.

        2) Tubes changed with each case.

        3) Cleaned according to specification/established schedule.

3. Maintains Anesthesia Equipment

    a. Checks daily for stocking of anesthesia room.

    b. Responsible for ordering specialty items as determined by Inventory Control Coordinator for Materials Management.

    c. Changes batteries in O_2 analyzers and temperature monitors.

d. Checks monitors and other anesthesia equipment for proper operation and availability in O.R. suites.

1) Vital signs monitors

2) EKG machines

3) Temperature monitors

4) O_2 monitors

e. Works closely with Inventory Control Coordinator for Materials Management to report all malfunctioning equipment and with technical representatives to ensure proper and prompt repair of equipment -- securing a loaner or substitute equipment when needed.

II. PERSONNEL

A. Employee Health

1. Anesthesiologists/CRNA's should comply with the hospital's Employee Health and TB Control program.

2. Anesthesiologists/CRNA's who have upper respiratory or gastrointestinal problems, or untreated draining lesions, may not report for duty.

3. The Infection Control Practitioner shall be notified of any contagious diseases.

4. Free Hepatitis B vaccinations will be offered to all anesthesiologists/CRNA's by the hospital Employee Health Service.

5. In the case of percutaneous, non-intact skin, or mucous membrane exposure to blood or body fluids, the following procedures should be taken:

a. Wash the site thoroughly with an antimicrobial soap.

b. If mucous membrane exposure, flush immediately with large amounts of water.

c. Fill out a blue Incident Report form.

d. Report immediately to Employee Health (or the Emergency Department when EH is closed) for follow up and prophylactic treatment if necessary.

6. Chemoprophylaxis will be offered to anesthesiologists/CRNA's who sustain a high-risk exposure to the HIV virus. Post-exposure chemoprophylaxis with Zidovudine, Lamivudine, and Indinavir should be initiated ASAP (within 2 hours).

7. If an Anesthesia staff member is exposed to a communicable disease, the incident is to be reported to the Employee Health Nurse follow up.

8. Eating and drinking must be restricted to the lounge area.

B. Dress Code

All persons who enter the O.R. or Delivery Room Suite must wear the approved surgical scrub uniform. Additional required garb includes:

1. Cap or hood to fully cover head hair.

2. High efficiency mask to fully cover mouth and nose. IT SHOULD NOT BE HUNG AROUND THE NECK.

3. Shoe covers.

4. When leaving suite, scrub clothes must be covered with a clean, buttoned lab coat. It is preferable to change scrub clothes when re-entering suite.

5. Conductive shoes or dedicated O.R. shoes should not be worn outside of the O.R. suite unless covered with shoe covers. Covers should be removed when re-entering suite.

6. Use disposable gloves when in contact with any body fluid (i.e., wound drainage) to reduce risk of contamination and disease transmission. Change gloves between each patient. Good handwashing should be done whether gloves are used or not.

C. Handwashing

1. An Iodophor or chlorhexidine gluconate (CHG) scrub solution should be at each sink for handwashing.

2. Hands should be washed:

   a. Before beginning work
   b. Before and after eating
   c. After handling contaminated equipment
   d. Before and after each direct patient contact
   e. After touching blood, body fluids, secretions, excretions and contaminated items.
   f. After using bathroom facilities
   g. After removing gloves or other protective garments
   h. Before going home

3. A 3- to 5-minute surgical scrub of the hands and lower arms should be performed prior to the first case and between cases.

D. Sterile Technique

Sterile gloves and masks are worn for all major nerve block procedures, and for insertion of all central lines.

III. PATIENTS

A. Intravenous and arterial lines must be placed according to Hospital standards, i.e.;

1. Skin should be prepped with an alcohol scrub.

2. IV supplies should be disposable and discarded after one use.

3. Used needles should be placed in an impervious sharps container which is sealed shut, and when full, disposed of in the contaminated waste container.

B. Anesthesiologists/CRNA's should wear sterile gloves when handling surgical instruments, during insertion of arterial or central venous lines, or giving regional or spinal anesthetic.

C. Aseptic technique is to be enforced by proper preparation of skin area with Betadine or other suitable disinfectant for all subcutaneous, intramuscular, intravenous, intraarterial, epidural, or spinal injections.

D. A protective screen must be placed between patient's face and operative site before skin preparation is finished.

E. Standard Precautions

1. Standard Precautions apply to all patients receiving care in the hospital, regardless of their diagnosis or presumed infection status.

2. Standard Precautions applies to: 1) blood, 2) all body fluids, secretions, and excretions (except sweat), regardless of whether or not they contain visible blood, 3) non-intact skin and 4) mucous membranes.

3. Use disposable gloves when in contact with any body fluid to reduce the risk of contamination and disease transmission. Change gloves between each patient. Good handwashing should be done whether or not gloves are used.

4. Mask and eye protection should be worn to protect the eyes and mucous membranes during activities likely to generate splashes and sprays of body fluids,(i.e, blood splashes, vomitus, and respiratory secretions).

5. Gowns provide a barrier between personal clothing and the patient's body fluids.

6. As soon as possible, personnel should change scrub suits, uniforms and clothing soiled with patient body fluids, and clean the skin surface with soap and water.

7. Resuscitation devices are to be used for resuscitation.

8. All disposable sharp items will be discarded in the appropriate puncture-resistant container. Needles are NOT to be bent, clipped, or recapped.

F. Care of Patients in Isolation

1. Isolation technique approved for the Operating Room should be followed according to the type of isolation.

2. The anesthesia machine and ventilator billows are terminally cleaned after the case and the Bara/soda lime is changed.

3. A bacterial filter is placed at the expiratory side of the breathing circuit of the anesthesia machine when operating on patients with confirmed or suspected TB. This helps reduce the risk for contaminating anesthesia equipment or discharging tubercle bacilli into the ambient air.

4. Patients with known pulmonary infection, including tuberculosis, should have a completely disposable circuit. Equipment and supplies must be discarded in red medical waste bags for incineration after use.

Insert G______________________

IV. EQUIPMENT

A. Disposable equipment should be used where possible. Any disposables must be discarded after one-time use.

B. Cleaning of anesthesia equipment is the responsibility of an appointed anesthesia technician.

1. Face masks, breathing bags, and tubing are all disposable and are discarded after use.

2. Laryngoscope blades, after use:

   a. Soaked for 20 minutes in Enzol.

   b. Processed through the Steris system.

3. Laryngeal mask

   a. Soaked for 20 minutes in Enzol.

   b. Washed by hand with a mild soapy solution (i.e., Ivory Soap).

   c. Autoclaved four minutes.

4. Endotracheal tubes should be disposable.

    a. Endotracheal tubes are discarded after one use.

    b. All tubes should be kept sterile before use.

5. Airways should be disposable.

    a. Disposable airways are discarded after one use.

6. Suction Tips and Tubing should be disposable.

    a. Suction catheters should be discarded after one-time use.

    b. Suction tubing and bottles should be changed daily.

7. Bara/soda lime Containers should be changed when color change indicates need.

8. Anesthesia Machines, Ventilators, and Monitor Equipment

    a. Wipe daily with hospital-approved germicide (i.e., Stat III) on outside surfaces.

    b. Terminally clean machine on a rotating schedule according to instructions of manufacturer.

    c. EKG, pulse oximeter and monitor cables will be wiped daily with hospital-approved germicide (i.e., Stat III) by Environmental Services.

9. Anesthesia Carts

    a. The cart tops are cleaned daily and between cases. Wipe outside surfaces with germicide daily and as needed.

    b. The entire cart should be cleaned weekly.

    c. Supplies are checked out daily and restocked as needed.

10. Blood Pressure Cuffs

    a. Soiled cuffs should be wiped with germicide solution or replaced. All cuffs should be wiped at least daily.

    b. Bladder or cuff and tubing should be wiped with Stat III germicide.

11. Medications

    a. Single-dose vials should be used whenever possible.

    b. Multidose Medications

        1) All multidose medications MUST be marked with the date and initialed when opened.

        2) Product labels or package inserts should be consulted to determine if refrigeration of the vial, after opening or reconstituting of a multidose medication, is necessary.

            a) Proper storage temperature is important as some ingredients and preservatives are affected by temperature.

            b) In some cases, bacterial survival may be enhanced by refrigeration.

            c) Refrigerated multidose medications should be stored at 36-46EF (2-8EC).

        3) Any parenteral medications that have been opened during a code should be discarded

immediately and replaced with unopened vials.

4) Multidose medications must be discarded after 30 days unless a shorter storage time is noted on the package insert.

5) Solutions which do not contain bacteriostat or preservatives must be discarded immediately following withdrawal of any portion of the contents.

6) Multidose medications found without dates must be discarded immediately!

c. Pharmacists, and the Anesthesia technician are responsible for discarding outdated medications on the anesthesia carts and drug boxes.

V. DISPOSABLE SUPPLIES

The Hospital will provide the following disposable supplies for the administration of anesthesia. The following are for one patient use only, and then discarded

1. Tubing for anesthesia machines with breathing bags.
2. Airways -- all sizes -- oral and nasal
3. Endotracheal tubes
4. Suction catheters and tubing
5. All IV supplies
6. Nerve block trays
7. Epidural trays
8. Spinal trays
9. Masks
10. Syringes (NOTE: SYRINGES ARE FOR SINGLE PATIENT USE ONLY!)

VI. CONTAMINATED WASTE

A. All waste materials contaminated with patient's blood and body fluids should be discarded into red medical waste bags for proper disposal.

B. Separate collection containers shall be provided for glass, non-aerosol cans, disposables, etc., which are not contaminated and thus are not incinerated or autoclaved.

C. All sharps, needles, syringes, lancets and blades from procedure trays are to be disposed of in the puncture-resistant sharps containers. Needles are NOT to be re-capped, purposely bent, or clipped. Magnetic pads are provided on the sterile field for collection of blades and needles used during surgical procedures.

CARDIAC ARREST CODE BLUE IN OPERATING ROOM, SHORT STAY UNIT (SSU) OR POST ANESTHESIA CARE UNIT (PACU)

PURPOSE

To identify methods employed by physicians, nurses and ancillary personnel, with special training, to restore cardiac circulatory, ventilatory and metabolic function for the patient who suffers sudden and unexpected clinical death.

POLICY

1. All professional and non-professional personnel assigned to the Surgical Services Department, Short Stay Unit (SSU), and Post-Anesthesia Care Unit (PACU) must be Basic Cardiac Life Support (BCLS) certified. Additionally, all professional personnel assigned to the PACU must be Advanced Cardiac Life Support Certified (ACLS) within one (1) year of employment on the Unit.

2. Anyone witnessing or discovering a cardiopulmonary arrest will summon help and initiate BCLS.

3. Centrex will be notified in the following manner:

   A. **Surgical Services Area**

      1. Centrex will be notified of a Code Blue in the Surgical Services area.

      2. Centrex will then notify an Intensivist, Hospital Nursing Coordinator, and CCU Nurse assigned to the "Code Blue Team."

   B. **SSU or PACU**

      1. Centrex will be notified of a Code Blue in the Short Stay Unit or PACU area.

      2. Centrex will then notify the "Code Blue Team."

RESPONSIBILITIES

1. **Hospital**

   Will provide yearly proficiency and certification classes for personnel requiring BCLS and/or ACLS certification or recertification to comply with their respective job descriptions and departmental assignments.

2. **Surgical Services, SSU, and PACU Unit Directors**

   Will review all department or unit personnel files to enforce the maintenance of BCLS and/or ACLS certification and proficiency policy.

3. **Surgical Services, SSU, and PACU Staff**

   Will participate on a yearly basis in training in BCLS and/or ACLS to demonstrate and maintain a high level of proficiency and certification.

CODE BLUE TEAM MEMBERS AND DUTIES

1. **Surgical Services Area**

   A. **Circulating RN and CCU RN**

      Will summon help via "Code Blue" button in OR Suite or at patient location.

      Secures "Crash Cart" and prepares medications, equipment and supplies to assist Code Blue Team as necessary.

   B. **Nursing Coordinator**

      Official record keeper during the code when present.

   C. **Anesthesiologist, Surgeon, and/or Intensivist**

      Will, when appropriate, initiate CPR and assume the role of "Team Captain."

      Will direct the surgical "Code Blue Team" and initiate patient care procedures.

2. **SSU**

A. **SSU Staff**

Will summon help via "Code Blue" button in SSU or at patient location.

Secure "Crash Cart" and prepares medications, equipment and supplies to assist Code Blue Team as necessary.

B. **Nursing Coordinator**

Official record keeper during the code when present.

C. **Anesthesiologist, Surgeon, and/or House Officer**

Will, when appropriate, initiate CPR and assume the role of "Team Captain."

Will direct the SSU "Code Blue Team" and initiate patient care procedures.

3. **PACU**

A. **PACU RN**

Will summon help via "Code Blue" button in PACU or at patient location.

Secures "Crash Cart" and prepares medications, equipment and supplies to assist Code Blue Team as necessary.

B. **Nursing Coordinator**

Official record keeper during the code when present.

C. **Anesthesiologist, Surgeon, and/or House Officer**

Will, when appropriate, initiate CPR and assume the role of "Team Captain."

Will direct the PACU "Code Blue Team" and initiate patient care procedures.

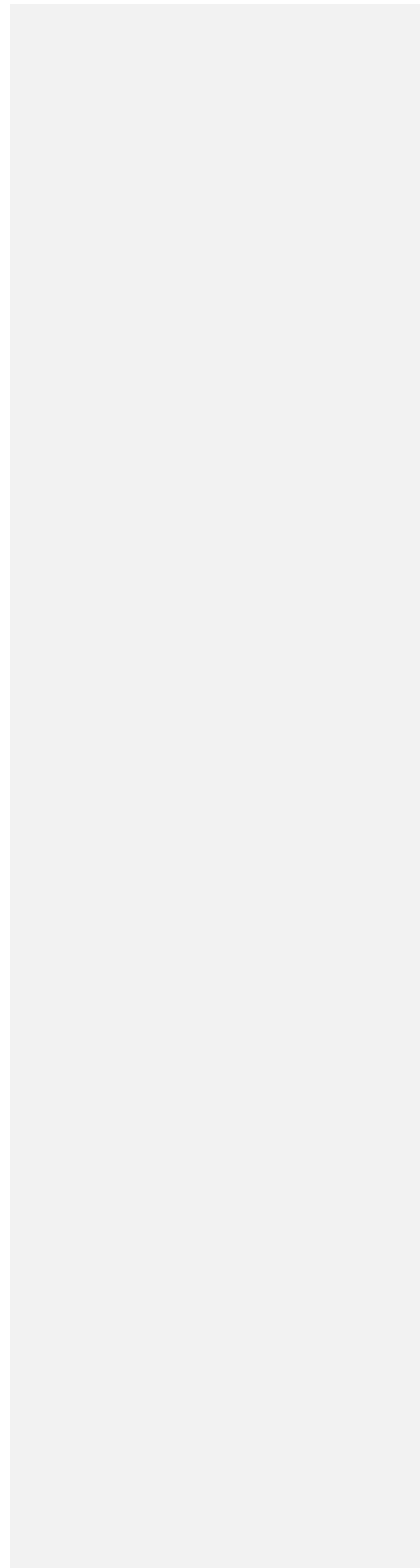
FIRE PREVENTION

1. No explosive anesthetic agents are permitted in the surgical suite or delivery suite.
2. No open flames are to be used in the operating room (this includes smoking, matches, alcohol lamps, etc.).
3. Safety checks of the following will be carried out by Maintenance on a monthly basis and recorded:
    a. All electrical outlets
    b. Grounding of all operating room furniture
4. All equipment will be properly grounded to maintain a conductive path to the conductive flooring.
5. Surgery table pads, stretchers, stools and pillows shall be covered with conductive metal.
6. No woolen blankets are to be used in surgery.
7. Cotton undergarments are preferable. Undergarments made of nylon or other synthetics should be rinsed in a non-static softener when laundered.
8. All electrical equipment used in the operating room must be equipped with special safety type plugs compatible with the special plugs in these rooms.
9. Whenever a head lamp is used, always secure with tape the connector or boxed lighting unit on a high stool or IV stand. This not only secures the connection but keeps it several feet from the floor.
10. When connecting head lamp, cautery unit, etc., always connect all other plugs or connections before connecting to special safety plug.

    Be sure that unit is plugged in before turning any switches on for cautery units, etc., and that equipment is turned off before unplugging the unit.
11. All personnel should know where all fire extinguishers are located in the department and know how they work.
12. All personnel should know where the oxygen and nitrous oxide shut-off valves are located by each room, and know how and when the shut them off in case of fire.

FIRE IN AN OPERATING ROOM

See Operating Room Rules and Regulations.



FIRE IN THE SURGICAL PACU

See Operating Room and PACU Rules and Regulations.

SURGICAL SAFETY POLICIES

1. No electrical equipment will be used in the Operating Room except that which has been approved by the Engineering Department.

2. A preventive maintenance program is done on a scheduled basis on all electrosurgical units, monitoring equipment, and the defibrillators. A log of such inspections is maintained in the Plant Services/or Inventory Control Manager.

3. Electrical safety inspections are conducted on a scheduled basis by the engineer. Records of such are kept by the Director of Safety and Security and the Director of Plant Services.

4. Portable electrical equipment used in the Operating Room Suite shall be turned on or off by means of an approved attachment plug and wall receptacle or switch approved for use in hazardous locations.

5. Whenever electrical equipment is used that is not normally used in surgery (such as new equipment or a doctor's personal electrical equipment), the hospital engineer will check same for proper connections, grounding, etc., and label prior to their use.

6. All electrical equipment in areas where anesthesia is given must be on a line isolation monitor which makes an audible sound and flashes a visual signal when there is an electrical problem. When the signal is given, the use of flammable anesthesia must be discontinued, and electrical equipment should not be used except for monitoring or life support equipment. The source of the problem is frequently the last piece of equipment added before the signal is given. Hospital engineering must be called immediately. The operating room may not be used again until the problem is corrected. All O.R. personnel must know what to do when the signal is given.

7. X-ray equipment shall be approved for use in a hazardous location, or switches and control devices shall be operated from outside room.

8. Separate collection containers shall be provided for glass, non-aerosol cans, disposables, etc., which are not incinerated.

9. Separated collection containers shall be provided for the disposal of syringes and needles. Magnetic pads are provided on the sterile field for disposal of blades and needles used during surgical procedures.

10. Oxygen and gas connections will be free from oil and grease. These are checked prior to use by the Anesthesiologist.

11. Nitrogen cylinders for air-powered instrumentation will be fastened by a chain on three-wheeled conductive carriers and stored in the inner corridor against the walls. Excess gas cylinders not securely attached to either an anesthesia machine, or equipment will not be stored in the Operating Room. Replacement tanks are kept in the explosion-proof room, near Medical Records.
12. Cotton undergarments are preferable. Those made of nylon or other synthetics should be rinsed in a non-static product when laundered. Clean ones should be worn daily.

13. Covers, stretchers pads, and pillows fabricated from conductive sheets are provided. Items not covered with conductive material are not permitted in the operating rooms.

14. Casters and other conductive equipment shall be kept clean and free from debris that would inhibit their conductivity.

15. a. Humidity shall be kept at a minimum of 50-60 degrees F. at all times, checked on a daily basis to reduce the possibility of electrostatic spark discharges. If the humidity is below 50 degrees or higher than 60 degrees, contact the Plant Services Department.

    b. The anesthesia personnel shall familiarize themselves with the humidity control and also with the rate and volume of air exchange in the O.R. Rooms. The present exchange rate is acceptable.

16. Daily monitoring of temperature, humidity, and the ground fault system is maintained and entered in a log. This log is located at the O.R. Control Desk.

ENCLOSURE #1

CHECK-OUT

A GUIDE FOR PREOPERATIVE INSPECTION OF AN ANESTHESIA MACHINE

Compiled and presented by the U. S. Food and Drug Administration

PREOPERATIVE ANESTHESIA MACHINE CHECKLIST

Backup Ventilation Equipment

1. **Verify Backup Ventilation Equipment is Available and Functioning**

High Pressure System

2. **Check Oxygen Cylinder Supply**
   a. Open 0_2 cylinder, and verify at least half full (about 1000 psi).
   b. Close cylinder.

3. **Check Central Pipeline Supplies**
   a. Confirm that central pipeline supply hoses are properly connected and that the pipeline gauges read about 50 psi.

Low Pressure System

4. **Check Initial Status of Low Pressure System**
   a. Close flow control valves and turn vaporizers off.
   b. Check fill level and tighten vaporizer filler caps.

5. **Perform Leak Check of Machine Low Pressure System**
   a. Verify that the machine master switch and flow control valves are OFF.
   b. Attach "Suction Bulb" to common (fresh) gas outlet.
   c. Squeeze bulb repeatedly until fully collapsed.
   d. Verify bulb stays fully collapsed for at least 10 seconds.
   e. Open one vaporizer at a time and repeat 'c' and 'd' as above.
   f. Remove suction bulb and reconnect fresh gas hose.

6. **Turn On Machine Master Switch and All Other Necessary Electrical Equipment**

7. **Test Flowmeters**
   a. Adjust flow of all gases through their full range, checking for smooth operation of floats and undamaged flowtubes.
   b. Attempt to create a hypoxic O_2/N_2O mixture and verify correct changes in flow and/or alarm.

Scavenging System

8. **Adjust and Check Scavenging System**
   a. Ensure proper connections between the scavenging system and both APL (pop-off) valve and ventilator relief valve.
   b. Adjust waste gas vacuum (if possible).
   c. Fully open APL valve and occlude Y-piece.
   d. With minimum O_2 flow, allow scavenger reservoir bag to collapse completely and verify that absorber pressure gauge reads about zero.
   e. With O_2 flush activated, allow the scavenger reservoir bag to distend fully, and then verify that absorber pressure gauge reads < 10 cm-H_2O.

Breathing System

9. **Calibrate O_2 Monitor**
   a. Calibrate to read 21% in room air.
   b. Re-install O_2 sensor in circuit and flush breathing system with O_2.
   c. Monitor should now read greater than 90%.

10. **Check Initial Status of Breathing System**
    a. Set selector switch to "Bag" mode.
    b. Check that breathing circuit is complete, undamaged and unobstructed.
    c. Verify that CO_2 absorbent is adequate.
    d. Install breathing circuit accessory equipment (e.g., humidifier, PEEP valve) to be used during each case.

11. **Perform Breathing System Leak Check**
    a. Set all gas flows to zero (or minimum).
    b. Close APL (pop-off) valve and occlude Y-piece.
    c. Pressurize breathing system to about 30 cm H_2O with O_2 flush.
    d. Ensure that pressure remains fixed for at least 10 seconds.
    e. Open APL (pop-off) valve and ensure that pressure decreases.

Manual and Automatic Ventilation Systems

12. **Test Ventilation Systems and Unidirectional Valves**
    a. Place a second breathing bag on Y-piece.
    b. Set appropriate ventilator parameters for next patient.
    c. Switch to automatic ventilation (Ventilator) mode.
    d. Fill bellows and breathing bag with O_2 flush and then turn ventilator ON.
    e. Set O_2 flow to minimum, other gas flows to zero.
    f. Verify that during inspiration bellows delivers appropriate tidal volume and that during expiration bellows fills completely.
    g. Set fresh gas flow to about 5 L/min.
    h. Verify that the ventilator bellows and simulated lungs fill, and empty appropriately without sustained pressure at end expiration.
    i. Check for proper action of unidirectional valves.
    j. Exercise breathing circuit accessories to ensure proper function.
    k. Turn ventilator OFF and switch to manual ventilation (Bag/APL) mode.
    l. Ventilate manually and assure inflation and deflation of artificial lungs and appropriate feel of system resistance and compliance.
    m. Remove second breathing bag from Y-piece.

Monitors

13. **Check, Calibrate and Set Alarm Limits of All Monitors**
    a. Capnometer
    b. Pulse Oximeter
    c. Oxygen Analyzer
    d. Spirometer
    e. Pressure Monitor with high and low airway pressure alarms

Final Position

14. **Check Final Status of Machine**
    a. Vaporizers off.
    b. APL valve open.
    c. Selector switch to "Bag" mode.
    d. All flowmeters to zero.
    e. Patient suction level adequate.
    f. Patient breathing system ready to use.

ENCLOSURE #2

U.S. DEPT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE

from MMWR, June 24, 1988, Vol. 37, No. 24, pp.377-382, 387-388

Update: Universal Precautions for Prevention of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodbourne Pathogens in Health-Care Settings.