

CA-2 Curriculum for Obstetric Anesthesia Department of Anesthesiology

Description of Rotation or Educational Experience

The goal of the CA-2 rotation in obstetric anesthesia is to enhance the knowledge and skills acquired during the CA-1 obstetric anesthesia experience. Residents should become more adept at managing complex obstetric patients, at placement of difficult regional anesthetics, and at utilizing advanced analgesic techniques. Any deficiencies documented during the CA-1 rotation should be completed during the CA-2 experience. After completion of the CA-2 rotation residents should have the skills and knowledge to independently manage anesthetics for obstetric patients.

Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- Become facile in the delivery of regional analgesia during labor & delivery in all patients including those with recognized or suspected difficult regional placement
- Become expert with alternative analgesic techniques for labor
- Recognize obstetric pathology and its potential threat to mother or baby
- Formulate appropriate periorperative care and management of regional or general anesthesia for vaginal or cesarean delivery in the obstetric patient with cardiac disease
- Formulate appropriate periorperative care and management of regional or general anesthesia for vaginal or cesarean delivery in the obstetric patient with pregnancy induced hypertensive diseases

Competencies

- Appropriately directed History and Physical Examinations for obstetric patients including those with complex pathology
- Develop appropriate patient-specific analgesia plans for labor patients including those with complex pathology
- Develop appropriate patient-specific anesthetic plans for Obstetric Surgical Procedures in all patients including those with complex pathology
- Placement and Management of Lumbar Epidural Anesthesia for Obstetric Surgical Procedures in all patients including those with complex pathology
- Placement and Management of Lumbar Epidural Analgesia - Continuous Infusion
- Placement and Management of Lumbar Epidural Analgesia – Patient Controlled
- Placement and Management of Spinal Anesthesia for Labor
- Placement and Management of Spinal Anesthesia for Obstetric Surgical Procedures
- Placement and Management of Combined Spinal Epidural Analgesia for Labor
- Placement and Management of Combined Spinal Epidural Anesthesia for

Obstetric Surgical Procedures

- Management of General Anesthesia for Obstetric Surgical Procedures
- Appropriate perioperative and intraoperative management of obstetric patients with cardiac pathology
- Appropriate perioperative and intraoperative management of obstetric patients with pregnancy induced hypertensive diseases

Objectives

Residents must be able to:

- Evaluate a minimum 15 patients for labor analgesia and develop an anesthetic plans which are validated by the attending physician
- Evaluate a minimum 12 patients for obstetric surgical procedures and develop anesthetic plans which are validated by the attending physician
- Successfully Perform a minimum of 15 epidural anesthetics for labor analgesia
- Successfully Perform at least 5 of the 15 labor epidurals as Combined Spinal Epidurals
- Successfully Perform at least 5 of the 15 labor epidurals as Patient Controlled Epidural Analgesia
- Successfully Perform a minimum of 12 spinal anesthetics for Cesarean Delivery
- Successfully Perform at least 4 of the 12 spinal anesthetics as Combined Spinal Epidurals
- Successfully Perform at least 5 epidural anesthetics for Cesarean Delivery
- Successfully Perform at least 4 spinal anesthetics for Post-Partum Tubal Occlusion
- Demonstrate improved regional anesthetic skills in patients with suspected or recognized difficult regional placement
- Demonstrate appropriate periorperative care and manage regional or general anesthesia for cesarean delivery in the obstetric patient with cardiac disease including indications for placement of invasive monitoring
- Differentiate between positive and negative effects of regional anesthesia in specific cardiac lesions
- Demonstrate appropriate periorperative care and manage regional or general anesthesia for cesarean delivery in the obstetric patient with pregnancy induced hypertensive diseases including indications for placement of invasive monitoring
- Management of General Anesthesia for Obstetric Surgical Procedures or outline a care plan of a hypothetical patient
- During the last week of the rotation Pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria Demonstrating appropriate Patient Management
- Successful demonstration of adequate patient care as assessed by faculty on Written Formative Evaluations

Medical Knowledge

Goal

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this

knowledge to patient care. Residents are expected to:

- Demonstrate an Anesthesia Consultant level of knowledge regarding the physiologic changes associated with pregnancy and the impact of those changes on the conduct of anesthesia
- Appropriately evaluate the need for perioperative and intraoperative invasive monitoring in obstetric patients with cardiac disease
- Appropriately evaluate the need for perioperative and intraoperative invasive monitoring of patients with pregnancy induced hypertensive diseases
- Differentiate the effect of regional and general anesthesia on obstetric patients with specific valvular cardiac disease
- Anticipate the effects of regional and general anesthesia on obstetric patients with specific congenital heart defects
- Become familiar with the perioperative management and the effect of regional and general anesthesia on obstetric patients with cardiomyopathy of pregnancy
- Outline the anesthetic considerations in the pregnant patient requiring anesthesia for non-obstetric surgery
- Identify the special anesthetic considerations in the obstetric patient with traumatic injury
- Understand the theory and application of advanced labor analgesia techniques
- Recognize and be knowledgeable in the appropriate management of obstetric emergencies

Competencies

- Consultant level of knowledge of physiologic changes associated with pregnancy
- Appropriate management of analgesia and anesthesia for obstetric patients with valvular cardiac disease
- Appropriate management of analgesia and anesthesia for obstetric patients with cardiomyopathy of pregnancy
- Appropriate management of analgesia and anesthesia for obstetric patients with obstetric patient with cardiac disease
- invasive monitoring for Pregnancy Induced Hypertension
- Appropriate management of analgesia and anesthesia for obstetric patients with congenital heart defects
- Appropriate management of anesthesia for obstetric patients for non-obstetric surgery
- Appropriate management of analgesia and anesthesia for obstetric patients with traumatic injuries
- Appropriate management of analgesia and anesthesia of patients with obstetric emergencies

Objectives

Residents must be able to:

- List the indications for perioperative and intraoperative invasive monitoring in obstetric patients with cardiac disease
- List the indications for perioperative and intraoperative invasive monitoring of

- patients with pregnancy induced hypertensive diseases
- Describe the effect of regional and general anesthesia on obstetric patients with specific valvular cardiac disease
 - Describe the effect of regional and general anesthesia on obstetric patients with specific congenital heart defects
 - Describe the perioperative management and the effect of regional and general anesthesia on obstetric patients with cardiomyopathy of pregnancy
 - During the last week of the rotation Pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria Demonstrating appropriate knowledge in the area of Obstetric Anesthesia.
 - Pass a Written Examination during the last week of the rotation
 - Successful knowledge acquisition as assessed by faculty on Written Formative Evaluations
 - Complete Portfolio Assignment: Faculty assessment of knowledge exhibited in resident case work up of 1 patient with a pregnancy related co-morbidity. Assessment should include a summary of the pertinent evaluation of the patient and anesthesia plan demonstrating evidenced based medical practice as documented with pertinent literature references.

Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Residents are expected to develop skills and habits to be able to:

- To be able to identify and access appropriate reference resources to solve complex obstetric anesthesia management problems in a timely manner
- Independently seek answers to previously unencountered clinical questions and incorporate this knowledge acquisition into appropriate management and care plans
- Develop a routine of review of the post-anesthetic hospital course of patients receiving anesthesia or analgesia, identify complications or suboptimal outcomes, and devise alternative management plans that could have improved those outcomes
- To be able to access 'on-line' reference sources pertinent to the anesthetic management of obstetric patients

Competencies

- Identify personal strengths, deficiencies and limits in knowledge and expertise related to the field of obstetric anesthesia.
- Set learning and improvement goals based on patient, obstetric, nursing, and faculty feedback
- Actively participate and seek educational opportunities
- Systematically analyze anesthesia practices, including labor analgesia and peri-operative care, and by post-anesthetic assessment of patients, restructure anesthetic practice based on improved patient outcomes

- Incorporate pertinent findings and conclusions of scientific studies to improve obstetric anesthesia outcomes
- Use information technology to optimize learning
- Disseminate knowledge acquired for the further education of patients, families, students, residents and other health professionals

Objectives

Residents must be able to:

- Portfolio: Resident Experience Narrative - Case Management: Residents will identify 1 obstetric patient with one or more significant co-morbidities (ASA Physical Class III or higher), perform a literature search, identify at least 2 references pertinent to the patients pathology and produce a 1 page synopsis of the evaluation, alternative managements, proposed management of the patient, and anticipated possible complications. The resident will review the case with the attending physician and submit copies for inclusion in their portfolio.
- Portfolio: Review of Patient Record - Post-Anesthetic Rounds: Residents will identify 2 patients on post-anesthetic rounds that they feel had suboptimal outcomes. Residents will summarize the anesthetic management of each patient in writing and submit a brief synopsis of alternative management techniques that might have produced more optimal outcome. Residents will review the plans with the attending physician and submit copies for their portfolio.
- During the last week of the rotation Pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria demonstrating appropriate strategies for acquisition of additional skills and knowledge for care and management of the anesthetic of an obstetric patient.
- Successful demonstration of adequate practice- based learning and improvement as assessed by faculty on Written Formative Evaluations

Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Be able to prioritize the delivery of anesthesia and analgesia in complex obstetric patients based on the acuity of the parturient and fetus in consultation with obstetric providers
- Function as a member of a care team with nurses, obstetricians, pediatricians and neonatologists
- Provided expertise and leadership in the field of practice of Obstetric Anesthesiology

Competencies

- Work effectively with nurses, obstetricians, pediatricians and neonatologists to deliver timely and effective anesthetic care to complex obstetric patients
- Coordinate patient care within the health care system relevant to obstetric anesthesia

- Incorporate considerations of risk-benefit analysis in the delivery of anesthetic care to complex obstetric patients
- Advocate for quality patient care and educate nurses, obstetricians, pediatricians of the anesthetic implications to maternal – fetal well being
- Participate as part of inter-professional team to enhance patient safety and improve the quality of obstetric patient care
- Participate in identifying systems errors and in implementing potential systems solutions

Objectives

Residents must be able to:

- Overall satisfactory performance on a 360 evaluation demonstrating satisfactory performance as part of an obstetric patient care team.
- Successful acquisition of patient information from hospital based systems as documented in the resident's Portfolio of patient case presentation.
- During the last week of the rotation Pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria demonstrating appropriate utilization of hospital based resources in preparation and management of a complex obstetric anesthetic
- Successful demonstration of adequate systems based practice as assessed by faculty on Written Formative Evaluations

Professionalism**Goal**

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Provide the highest possible quality obstetric anesthesia care
- Provide a role model for students, junior anesthesia residents, and related practitioners as to commitment and professional conduct in the anesthetic care of obstetric patient
- Cognizance of the ethical challenges in the care of the parturient and the fetus
- Sensitivity to the particular needs of the parturient that has suffered fetal loss

Competencies

- Demonstrates Courtesy and Respect for patients, nurses, physicians, and ancillary staff
- Demonstrates Compassion and Integrity to others
- Responds to patient requests for labor analgesia in a timely manner that supersedes self-interest
- Completes patient care tasks and provides appropriate follow-up and feedback to patient and staff
- Acts in the best interest of the patient
- Advocates quality and timely anesthetic care
- Respects patient privacy and autonomy
- Accountable to patients, society, and the profession
- Sensitive and responsive to a diverse patient population, including but not limited to diversity in age, culture, race, religion, disabilities, and sexual orientation

Objectives

Residents must be able to:

- Demonstration of professionalism on 360 degree evaluation
- During the last week of the rotation Pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria Demonstrating appropriate interpersonal interaction strategies for dealing with anesthesia and obstetric faculty and residents, MICC nursing staff, surgical technologists, secretarial staff or other support staff.
- Successful demonstration of adequate professionalism as assessed by faculty on Written Formative Evaluations

Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

- Effectively obtain pertinent medical history from the complex obstetric patient
- Effectively describe available anesthetic and analgesic options at appropriate age and education specific levels
- Obtain informed consent for anesthesia and labor analgesia and explain related risks including the potential anesthetic impact on the parturient and the baby
- Provide sensitive reassurance while performing regional anesthesia

Competencies

- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
- Communicate effectively with obstetricians, consultants, nurses, and ancillary staff
- Work effectively as a member of the obstetric care team
- Act as Consultant Anesthesiologist with expertise in Obstetric Anesthesia to other physicians and health professionals
- Maintain comprehensive, timely, and legible anesthesia records and consultations

Objectives

Residents must be able to:

- Positive assessment of interpersonal and communication skills on 360 degree evaluation
- During the last week of the rotation pass an Oral Examination based upon the American Board of Anesthesiology format and scored using ABA criteria demonstrating appropriate communication skills.
- Successful demonstration of adequate interpersonal and communication skills as assessed by faculty on Written Formative Evaluations
- Demonstrate effective written communication skills on Portfolio entries

Teaching Methods

What teaching methods are you using on this rotation or educational experience?

- Didactic Lectures (70% Completion Goal)
- Socratic Method

- Review and discussion of Preoperative evaluations and anesthetic plans
- Intraoperative discussion of pertinent physiologic changes and case management
- Review and discussion of post-anesthetic evaluation
- Case Scenario discussions
- Portfolio assignments
- Suggested Readings

Assessment Method (residents)

- Oral Examination
- Written Examination
- Clinical Performance Ratings (Global)
- 360 Degree Evaluation
- Review of Patient Record: Post-anesthetic Rounds
- Resident Experience Narrative: Complicated Obstetric Patient
- Focused Observation and Evaluation

	Patient Care	Medical Knowledge	Practice Based Learning	System Based Practice	Professionalism	Communication
Clinical Performance Ratings	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly
Resident Experience Narrative	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
Oral Examination	Monthly	Monthly				
Written Examination		Monthly				
360 Degree Evaluation				Monthly	Monthly	Monthly
Review of Patient Record	Monthly	Monthly	Monthly			Monthly
Focused Observation and Assessment	Weekly					Weekly

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Assessment Method (Program Evaluation)

How do you evaluate whether this educational experience is effective?

- Assessment of successful Patient Care Competency in oral examinations and faculty evaluations of observations of clinical practice.
- Performance of residents on written and oral examinations
- Performance on the Obstetric Anesthesia subset of In-Service Examinations administered by the American Board of Anesthesiology
- Performance on the Obstetric Anesthesia subset of Anesthesia Knowledge Test
- Performance of program graduates on the Obstetric Anesthesia subset of the written examination of the American Board of Anesthesiology
- Review of Resident Evaluations of Faculty Performance
- Review of Resident Program Evaluations

- Post-graduate assessments of adequacy of training

Level of Supervision

Residents are supervised 1:1 by an attending anesthesiologist with sub-specialty training or documented subspecialty interest in Obstetric Anesthesia.

Educational Resources

Recommended readings and references:

PRIMARY TEXT: Chestnut, David. Obstetric Anesthesia: Principles and Practice. Mosby, Inc. Philadelphia, PA 2004.

REFERENCE TEXTS:

Halpern, Stephen and Douglas, M. Joanne. Evidence Based Obstetric Anesthesia. Blackwell Publ, Ltd. Malden, MA 2005.

Datta, Sanjay. Anesthetic and Obstetric Management of High Risk Pregnancy. Springer-Verlag, Inc. New York, NY 2004.

WEB REFERENCES:

ASA Practice guidelines on obstetrical anesthesia:

<http://www.asahq.org/publicationsAndServices/obguide.html>

ASA Guidelines for regional anesthesia in obstetrics

<http://www.asahq.org/publicationsAndServices/standards/11.html>

ASA Guidelines optimal goals for anesthesia care in obstetrics

<http://www.asahq.org/publicationsAndServices/standards/24.html>

Society of Obstetric Anesthesia and Perinatology

<http://www.soap.org>

American Society of Anesthesiologists

<http://www.asahq.org>. Keyword: obstetric

American College of Obstetricians and Gynecologists

<http://www.acog.org> Keyword: anesthesia

ASA refresher courses: Advances in labor analgesia.

http://www.asahq.org/rcls/RCLS_SRC/212_Birnback.pdf

ASA refresher courses: Does regional anesthesia influence the progress and outcome of labor? http://www.asahq.org/rcls/RCLS_SRC/216_Camann.pdf

ASA refresher courses: Problems in obstetric anesthesia: blood pressure, blood loss and blood patch http://www.asahq.org/rcls/RCLS_SRC/211_Chestnut.pdf

ASA refresher courses: Anesthesia for emergency caesarean section
http://www.asahq.org/rcls/RCLS_SRC/214_Malinow.pdf

ASA refresher courses: Obstetric emergencies and anesthetic management
http://www.asahq.org/rcls/RCLS_SRC/522_Palmer.pdf

Social Justice

West Virginia University is committed to social justice. We concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color, or national group. Any suggestions as to how to further such a positive and open environment in this rotation will be appreciated and given serious consideration.

Attached Addenda

Addendum: CA-2 Educational Experience Checklist

Curriculum Timeline

Written by Richard Driver Jr. MD, Phillip Legg DO, February 2007
Approved by the Anesthesiology Education Committee on 2-26-2007
Revised by Richard Driver Jr. MD and approved June 6, 2007

Addendum 1

CA-2 Obstetric Anesthesia Educational Experience Check List

CA-2 Obstetric Anesthesia
Educational Experience Check List

Resident _____ Rotation Date _____

	Staff	Resident	Date
Materials:			
Orientation Manual	_____	_____	_____
Curriculum	_____	_____	_____
Didactic Lectures:			
Non-Obstetric Surg	_____	_____	_____
Physiology Review	_____	_____	_____
OB Trauma	_____	_____	_____
Cardiac Disease	_____	_____	_____
Advanced Analgesia	_____	_____	_____
Retained Placenta	_____	_____	_____
PIH Management	_____	_____	_____
Assessment:			
Portfolio (Mngmt)	_____	_____	_____
Case Logs	_____	_____	_____
Written Exam	_____	_____	_____
Oral Exam	_____	_____	_____
Portfolio (PostOp1)	_____	_____	_____
Portfolio (PostOp2)	_____	_____	_____
Section Chief	_____	Date	_____