Perioperative Care in Obstetrics

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Objectives

- List stages of perioperative care
- Describe potential complications related obstetrical surgical procedures
- Discuss PACU standards of care as related to the Obstetrics
- Describe patient assessments and nursing interventions required in the PACU
- Discuss potential complications in the recovery period through case study

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Perioperative Care in Obstetrics

- Developing a *Culture of Safety*
- Team Communication
- Patient safety initiatives
- Understanding team members roles and responsibilities
- Just Culture

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Preoperative Care

- Pre-op checklist
- Consents
- Pt. identification
- History & physical
- Pre-Procedural Verification

Step 1 Prior to entering the OR:

- Patient /procedure verification & OR readiness check

Step 2 Completed in the OR when all personnel are present:

- Patient/ procedure verification prior to anesthetic
- Patient/ procedure verification prior to incision

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Preoperative Patient Preparation

- NPO, IV preload,
- Antacid , Antiemetic
- Indwelling urinary catheter
- Hair Removal and Skin Cleansing
- Antibiotics
  - Prophylactic antibiotic received within 1hr. prior to incision or at the time of birth for cesarean section (SCIP Core Measure)
- DVT Prophylaxis
- US if breech, multiples

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Physical Environment

- Equipment and Supplies
  - Suction, medical gases
  - Blood products, devices or special equipment present
  - Electrosurgical unit
  - Crash cart, MH supplies
  - Patient positioning aids
  - Medications
  - Patient warming unit
  - Rapid infuser

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Physical environment

Ensure aseptic technique & proper attire

- Utilize *Personal Protective Equipment*
- Observe safe traffic patterns
- Be aware of fire hazards (preps, cautery, ventilation)
- Keep distractions, side conversations to a minimum
- Maintain patient privacy, dignity; especially when under general anesthesia

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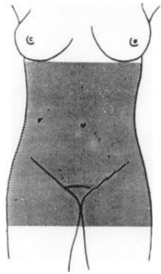
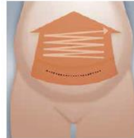
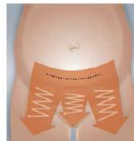
Skin Prep

- Be aware of the type of prep to accommodate the type of surgery and potential for complications







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Types of Incisions

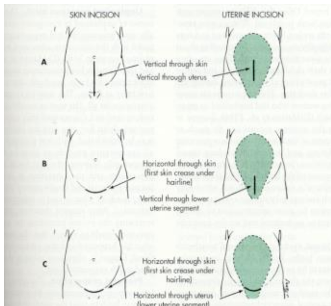

Fig. 25-13 Cesarean birth: skin and uterine incisions. **A,** Classic: vertical incisions of skin and uterus. **B,** Low cervical: horizontal incision of skin; vertical incision of uterus. **C,** Low cervical: horizontal incisions of skin and uterus.

- Know your incision site before you prep
- Displace uterus while in supine position
- Skin incision:
  - Vertical
  - Low transverse
- Uterine Incision:
  - Low transverse
  - Vertical
  - Inverted “T”

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Types of Anesthesia

- Regional
  - Spinal – single shot dose, lasts approximately 1-2 hours
  - Epidural – single dose with repeat bolus or continuous infusion
- General
  - Combination of medication and gas
  - Requires *skilled* rapid sequence induction

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Assisting with General Induction

- Needs dedicated nurse to assist anesthesia provider
- Assists with placing monitor pads/VS equipment
- Positions patient for safety and good oxygenation prior to induction of anesthesia
- When anesthesia is ready, provides cricoid pressure and ET tube assistance and stabilization
- Extubate when awake

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Malignant Hyperthermia (MH) Symptoms

- Unexplained tachycardia
- Muscle rigidity
- Rapid, deep breathing
- ↓ O_2 saturation
- Skin hot, flushed , then mottled (body temp can reach 110°F within minutes)

Anesthetics

Not safe for use in MH-susceptible patients, the following anesthetic agents are known triggers of MH:

- Inhaled General Anesthetics
- Desflurane
- Enflurane
- Ether
- Halothane
- Isoflurane
- Methoxyflurane
- Sevoflurane
- Succinylcholine

All other anesthetic agents outside of these two categories of Volatile anesthetic agents and depolarizing muscle relaxants are considered safe.

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MH– Emergency Treatment

- Discontinue volatile agents and succinylcholine
- Get help
- Get Dantrolene2.5 mg/kg rapidly IV
- Bicarbonate for metabolic acidosis
- Cool the patient

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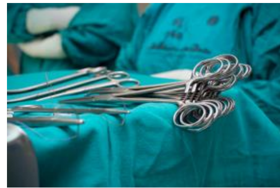
Intraoperative

- Specimen Handling
- Label fluids on the Sterile Field
- Surgical Counts
- Know the location of Supplies
- Know the Instruments
- Discrepant counts
- Wound management
- Documentation



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Intraoperative Complications

Surgical Emergencies

- Hemorrhage
- Organ Injury
- C-Hysterectomy
- Fire

The classic fire triangle and typical components. Different members of the surgical team are primarily involved with different sides of the triangle.

Anesthetic Emergencies

- Malignant hyperthermia
- Failed/difficult intubation
- Code
- Latex Allergy
- Anaphylaxis

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OR Summary

- Preoperative duties
- Physical environment
- Anesthesia Options
- Malignant Hyperthermia
- Intraoperative duties
- Intraoperative Complications

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References

1. Association of Operating Room Nurses. *Perioperative Standards and Recommended Practices, current edition.*
2. World Health Organization, Surgical Safety Checklist URL http://www.who.int/patientsafety/safesurgery/en
3. American Academy of Pediatrics and American College of OB GYN *Guidelines for Perinatal Care, current edition*

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OB PACU

- PACU Staffing Standards - A registered nurse is present when any patient is recovering. Nurse to patient staffing ratios are based on patient condition and are consistent with other post anesthesia units in the institution.

ASPAN, 2010-2012

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Standards for Phase I Level of Care

- *Phase I* is the immediate post anesthesia period
- Two RNs, one who is competent in phase I post anesthesia nursing, will be present in the unit where the patient is receiving phase I care at all times
- 1:1 nurse/patient ratio will occur from time of PACU admission until critical elements are met or while patient requires additional airway/cardiac support

ASPAN, 2010-2012

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Maternal Critical Elements

- Report has been received from the anesthesia provider, questions have been answered and the transfer of care has taken place.
- The patient is conscious and breathing without necessary assistance
- Initial assessment is complete and documented
- Patient is hemodynamically stable
- A second nurse must be available to assist as needed

ASPAN, 2010-2012, AWHONN, 2010

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Neonatal Critical Elements

- Report has been received from the baby nurse, questions have been answered and the transfer of care has taken place
- Initial assessment and care are completed and documented
- The baby is conscious and has a patent airway without assistance
- The baby is stable
- Initial assessment is complete and documented
- Identification Bracelets have been placed
- A second nurse must be available to assist as needed

ASPAN, 2010-2012, AWHONN, 2010

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Altered Ratios & Timeframes

- 1 nurse can care for one mother/baby couplet after critical elements are met and both are stable
- If there are 2 stable moms and 2 stable babies you need two RNs while in PACU
- Readiness for discharge is defined by patient status, not by time frame
- According to Perinatal Care Guidelines, Recovery (defined as VS q 15 min) needs to be at least 2 hours or longer if complications.

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ACLS Qualified or Not?

ASPAN (2008)	AWHONN (2010)	Joint Commission (2009)
Peri-anesthesia nurse providing Phase I level of care will maintain a current ACLS and/or PALS provider status, as appropriate to the patient population served.	Does not mandate ACLS for perinatal nurses who provide post-analgesia/post-anesthesia care for obstetric patients. However, each hospital must ensure that teams capable of providing ACLS care (e.g., a code team) and the means to provide invasive monitoring or extensive ventilatory support to obstetric patients are available at all times.	Patients with the same health status and condition should receive a comparable level of quality care regardless of where that care is provided within the hospital. Hospitals may provide different services to patients with similar needs as long as the patient's outcome is not affected.

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OB PACU Equipment

- Artificial airways and means to deliver O_2
- Suction
- VS, EKG and Pulse oxymetry
- IV Supplies and stock medications
- Stock supplies such as dressings, gloves, emesis basins, tape, etc.
- Adjustable lighting and mode of warming a patient
- Emergency Cart with defibrillator and ventilator available
- Malignant Hyperthermia Supplies

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Admission to OB PACU

- Receive report from Anesthesia provider and circulator RN
- Initial Assessment – upon arrival, communicated to anesthesia provider
- Patient should be able to maintain their airway
- Once PACU RN determines that the patient is stable and has met the critical elements, the anesthesia provider may leave the area.

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Respiratory

Assessment & Intervention	Potential Complications
• Auscultation/ Pulse oximetry • Supportive airway equipment available • Prevent atelectasis and venous stasis • Cough & deep breathe • Encourage position changes	• Aspiration • Mechanical Obstruction • Laryngospasm • Bronchospasm • Pulmonary Edema • Pulmonary Embolism

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Cardiovascular

Assessment & Intervention	Potential Complications
• Auscultation • Monitor B/P, Pulse rate/quality • EKG • I&O	• PAC • PVC • Tachycardia

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Reproductive

Assessment & Intervention

- Assessment
- Potential Complications
- Nursing Interventions
- Emergency medications

Potential Complications

- PPH
- Uterine prolapse
- Incisional bleeding

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Renal/Fluids and Electrolytes

Assessment & Intervention

- Assessment
- I&O, appearance of urine
- Edema
- Chemistry lab values

Potential Complications

- Renal shutdown
- Pulmonary edema
- Bladder trauma

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Gastrointestinal

Assessment & Intervention

- Emesis,
- Diet status (NPO, Clear liquids)
- Positioning
- Medications
- Complementary therapies

Potential Complications

- Intractable vomiting
- Electrolyte imbalance
- Incisional pain
- Bleeding

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Neuromuscular/Sensory

Assessment & Intervention	Potential Complications
• LOC, VS • Emotional Status • DTRs • Dermatome levels • Motor movement	• Hyper/hypothermia • Delayed Emergence • Emergence Excitement • Total or High Spinal • Seizures • Sleep disturbances • Headaches • Backaches

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Pain Management

- **Assessment**
  - Pain assessment scales
  - Physiologic response
- **Attitudes**
  - Care-givers, Patient, Support System
  - " The single most reliable indicator is the patient's self report."
  - Physiologic Response
- **Nursing Actions**
  - Medications
  - Comfort measures
  - Document pain scale before & after interventions

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Maternal/Newborn Attachment

- Attachment and Interaction
  - Early contact facilitates attachment, but delayed interaction does not negate attachment
- Nursing Actions
  - Assess for readiness
  - Control pain, tremors, nausea
  - Encourage Skin to Skin/Breastfeeding
  - Educate on Positioning with incisional support

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Discharge Criteria

Documentation

- Met criteria per institutional guidelines
- Transfer of patient

Giving Report

- Standardize bedside handoff
  - Include safety checks
- Patient status
- Transfer of care documentation

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Modified Aldrete Score

Activity	Voluntarily moves all limbs =2 Voluntarily moves 2 limbs = 1 Unable to move = 0	
Respiration	Breaths deep coughs on own = 2 Dyspnea/hypoventilation = 1 Apneic = 0	
Circulation	BP +/- 20 mm Hg of pre-anesthetic levels = 2 Bp > 20-50 mm Hg of pre-anesthetic levels = 1 BP > 50 mm HG of pre-anesthetic levels = 0	
Consciousness	Fully awake = 2 Arousable = 1 Unresponsive = 0	
Color	Natural = 2 Pale/blotchy = 1 Cyanotic = 0	
Score		

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Summary OB PACU

- Frequency of Assessments for Mom:
  - BP, P, RR, O_2 sat - every 15 minutes for at least 2 hrs
  - Vaginal bleeding should be evaluated continuously
  - May be discharged when criteria met
- Frequency of Assessments for Baby:
  - T, HR, RR, skin color, adequacy of peripheral circulation, type of respiration, LOC, tone/activity monitored and documented at least every 30 min. until the newborns condition has remained stable for 2 hrs

AAP& ACOG 2007

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