Unit Two
Operative Care
Definition of Surgery

Surgery is any procedure performed on the human body that uses instruments to alter tissue or organ integrity.

Type of Surgery
Surgery done according to

1.seriousness
2.urgency
3.cause

 Seriousness: Degree of risk
1. Major
   Involves extensive reconstruction or alteration in body parts; poses great risks.
2. Minor
   Involves minimal alteration in body parts; often designed to correct deformities; involves minimal risk compared with major procedures

 Urgency
1. Elective
   Performed on the basis of client’s choice; not essential and may not necessary for health.
2. Urgent
   Necessary for client’s health, may prevent additional problem from developing (e.g. tissue destruction); not necessarily emergency.

3. Emergent
   Must be done immediately to save life or preserve function of body part.

4. Required
Has to performed at some point; can be pre-scheduled.

**Cause**

1. **Diagnostic**
   Allows to confirm diagnosis.
2. **Corrective**
   Excision or removal of diseased body part.
3. **Reconstructive**
   Restore function or appearance to traumatized or malfunctioning tissues.

**Operative nursing care** is the nursing care that includes providing of care in:

1. Before operation (preoperative).
2. During operation (intraoperative).
3. After operation (postoperative).

**Surgical settings**

1. Surgical suites (ward)
2. Ambulatory care setting
3. Clinics
4. Physician offices
5. Community setting
6. Homes

**Preoperative phase**

begins with the decision for surgical intervention and ends with transfer to the OR.
Selected factors that in increase surgical risk.

- **Age**- Very young and older clients.
- **Nutrition**- a malnourished client is prone to poor tolerance of anesthesia, infection, poor wound healing and the potential for multiple organ failure after surgery.
- **Obesity**- often have difficulty in resuming normal activity after surgery.
- **General survey**- gestures and body movements may reflect decreased energy or weakness caused by illness.
- **Cardiovascular system**- alterations in cardiac status are responsible for as many as 30% of perioperative death.
- **Respiratory system**- a decline in ventilatory function, assessed through breathing pattern and chest excursion, may indicate a client’s risk for respiratory complications.
- **Renal system**- abnormal renal function can alter fluid and electrolyte balance and decrease the excretion of preoperative medications and anesthetic agents.
- **Neurologic system**- a client’s LOC will change as a result of general anesthesia but should return to the preoperative LOC after surgery.
- **Musculoskeletal** system- Deformities may interfere with intraoperative and postoperative positioning. Avoid positioning over an area where the the skin shows signs of pressure over bony prominences.
- **Gastrointestinal system**- alteration in function after surgery may result in decreased or absent bowel sound and distention.
- **Head and Neck**- the condition of oral mucous membranes reveals the level of hydration.
Gerontological Considerations

**Cardiovascular**

1. Coronary flow decreases
2. Heart rate decreases
3. Response to stress decreases
4. Peripheral vascular decreases
5. Cardiac output decreases
6. Cardiac reserve decreases

**Respiratory System**

1. Static lung volumes decreases
2. Pulmonary static recoil decreases
3. Sensitivity of the airway receptors decreases

**Nervous system**

1. Increased incidence of post-op. confusion
2. Increased incidence of delirium
3. Increased sensitivity to anesthetic agents

**Renal System**

1. Renal blood flow declines 1.5% per year
2. Renal clearance reduced

**Gastrointestinal**
1. Decreased intestinal motility
2. Decreased liver blood flow
3. Delayed gastric emptying

Musculoskeletal
1. Decreased mass, tone, strength
2. Decreased bone density

Integumentary
1. Decreased elasticity
2. Decreased lean body mass
3. Decreased subcutaneous fat

Laboratory and diagnostic studies
Screening tests depend on the condition of the client and the nature of the surgery. If test reveals severe problems the surgery may be cancel until the condition is stabilized.

Blood type and screen, urinalysis, 12 lead EKG and chest X-ray are ordered to screen for pre-existing abnormalities.

Common nursing diagnosis
1. Knowledge deficit
2. Anxiety
3. Risk for ineffective airway clearance
4. Risk for ineffective peripheral tissue perfusion

Day before surgery
1. Provide emotional support and answer questions.
2. Follow preoperative dietary restrictions (NPO or nothing by mouth
6-8 h before surgery).
3. Prepare for elimination needs during and after surgery.
4. Shave and prepare the preoperative site.
5. Check vital signs and weight accurately.
6. Signs the patient or responsible person on Consent Form.
7. Complete Data base/admission assessment form.
8. Do the blood investigations and other test (according to the policy) & check results.
9. Prepare patient physically and emotionally for operation.
10. Provide I.V nutrition and hydration (as order).
11. Teach patient about surgery, deep breathing, coughing exercise, leg exercise postoperative equipment and monitoring devices

**Day of surgery**

1. Check that proper identification band is on patient hand.
2. Check that preoperative consent forms are signed and medical record is in order.
3. Check vital signs (notify physician for changes in BP, temperature, cough, symptoms of infection).
4. Remind patient not to swallow water if NPO for surgery.
5. Provide I.V nutrition and hydration (as order).
6. Remove cosmetics and prostheses (i.e., contact lenses, dentures…).
7. Have patient empty bladder and bowel prior to surgery.
8. Place valuables in appropriate area (hospital safety department).
9. Provide special preoperative order (preoperative medication, special procedure…).
11. Wear a patient the gown, cap.
12. Check that diagnostic test results are available.

**Notes:**

a. Outpatient surgery: patient may perform some preoperative preparations at home.
b. A parent must sign a consent form for a child.

**Pre-op. medications**

- Prior to administering – check permits
- Purpose:
1. Allay anxiety  
2. Decrease pharyngeal secretions-
3. decrease gastric secretions 
4. Decrease side effects of anaesthesia 
5. induce amnesia

**Intraoperative:**

Transferred to OR-ends with the transfer to the recovery area.

**Surgical team**

- Surgeon 
- Anesthesiologist 
- Scrub Nurse 
- Circulating Nurse

**Scrub nurse**

(RN or Scrub tech)-

1. preparation of supplies and equipment on the sterile field;
2. maintenance of pt.s safety and integrity:
3. observation of the scrubbed team for breaks in the sterile fields; 
4. provision of appropriate sterile instrumentation, sutures, and supplies; sharps count.

**Circulating Nurse**

1. responsible for creating a safe environment, 
2. managing the activities outside the sterile field, 
3. providing nursing care to the patient. 
4. Documenting intraoperative nursing care and ensuring surgical specimens are identified and place in the right media. 
5. In charge of the instrument and sharps count 
6. communicating relevant information to individual outside of the OR, such as family members

**nursing intervention**

1. Ask the patient about any known allergies.
2. Verify patient identification and that the correct surgery is scheduled.
3. Antidotal supplies (of anesthesia) must be available in an emergency room.
4. Promote measures that ensure adequate tissue perfusion:
   a. Assess the patient's vital signs continuously, respiratory status, peripheral vascular status, and cardiovascular status.
   b. Assist with mechanical ventilation.
5. Promote measures that maintain adequate fluid and electrolyte balance:
   a. Monitor intake and output accurately.
   b. Assess for skin turgor and mucous membranes (signs of dehydration) and circulatory overload (breath sounds, peripheral edema, & jugular vein distention).
6. Promote measures that maintain the patient's normal temperature:
   a. Ensure that OR temperature is between 25°C and 26.6°C.
   b. Warm all intravenous and irrigating solutions.
   c. Monitor the patient's temperature continuously.
   d. Remove all wet gowns and drapes promptly and replace with dry to prevent heat loss.
7. Promote measures that decrease risk of infection:
   a. Maintain sterile procedures and techniques during surgery.
   b. Apply sterile dressings to all wounds.
   c. Non-scrubbed personnel refrain from touching or contaminating anything that is sterile.
8. Ensure patient's safety in the OR:
   a. Remove any potential contaminants.
   b. Recheck electrical equipment for proper operation.
   c. Make sure that necessary equipment and supplies are available.
   d. Count and record sutures, needles, instruments, and sponges.
   e. Assist in transferring the patient to the OR table.
   f. Cover the patient with a warm blanket, and attach the safety belt.
   g. Remain at the patient's side during anesthesia induction.
   h. Verify proper patient positioning to protect nerves, circulation, respiration, and skin.
   i. Ensure that newly requested items are quickly supplied to the anesthesia or scrub team by the circulating nurse.

**Postoperative**

Begins with transfer to PACU and ends with the discharge of the patients from the surgical facility or the hospital.
The Immediate Postoperative care:

Recovery Room:

Goals

1. Adequate tissue perfusions.
3. Absence of postoperative complication.

The Immediate Postoperative care:

1-Recovery Room:

Nursing Interventions

Assess and provide intervention for the following at least 15 minutes:

1. Airway (Maintain Airway patency and optimal respiratory function).
2. Vital signs (every 5 minutes for 3 times then every 15 minute).
3. General appearance, Level of consciousness (LOC), and movement of extremities.
4. Pain level (administers medication).
5. Urine output, drain or catheter patency.
6. Intravenous or central line patency.
7. Observe operative site, dressing, and drainage for haemorrhage.
8. Function of cardiac and oxygen

2. Later Postoperative care (in department):

1. Assess the patient's level of consciousness.
2. Place the patient in a safe position on the side with face down & neck slightly extended (prevents aspiration of vomitus & airway obstruction).

3. Monitor vital signs:
   1. Every 15 minutes the first hour.
   2. Every 30 minutes the next 2 hours.
   3. Every hour for next 4 hours.
   4. Finally, every 4 hours.

**When caring for post-surgical patient, think of the “4 W’s”**

1. Wind: prevent respiratory complications
2. Wound: prevent infection
3. Water: monitor I & O
4. Walk: prevent thrombophlebitis

**Operative complication**

1. Respiratory- atelectasis, pulm. Embolus
2. Cardiovascular- venous thrombosis
4. GU- urinary retention
5. Hemorrhage-slipping of a ligature(suture)
6. Wound infection-
7. Wound dehiscence and evisceration-