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FACULTY OF NURSING

Perioperative Nursing

The Surgical Experience

Surgery is classified as **major or minor** based on the **degree of risk** for the patient.

Surgery may be classified as **elective,** meaning that it is **necessary but scheduled** at the **convenience of the patient** and the health care provider.

Regardless of whether the surgery is major or minor, elective or emergency, it requires both physical and psychosocial adaptation for the patient and his family and is an important event in a person's life.

Types of Surgery Experience

Minor surgery is brief, carries a low risk, and results in few complications.

It may be performed in an outpatient clinic, same-day surgery setting, or in the operating suite of a hospital.

Major surgery requires hospitalization, is usually prolonged, carries a higher degree of risk, involves major body organs or life-threatening situations, and has the potential of postoperative complications.

Classification of Surgical Procedures

Surgical intervention may be for one or more reasons. The following descriptors classify surgical procedures by purpose:

Ablative - removal of a diseased organ or structure (e.g., appendectomy).

Diagnostic - removal and examination of tissue (e.g., biopsy).

Constructive - repair a congenitally malformed organ or tissue. (e.g., harelip; cleft palate repair).

Surgical procedures usually combine **several classifications** and descriptors. For example, a **trauma patient** may require major, reconstructive, emergency surgery.

One or more of the following may cause the patient psychological stress;

Reconstructive - repair or restoration of an organ or structure (e.g., colostomy; rhinoplasty, cosmetic improvement).

Palliative - relief of pain (for example, rhizotomy--interruption of the nerve root between the ganglion and the spinal cord).

Transplant - transfer an organ or tissue from one body part to another, or from one person to another, to replace a diseased structure, to restore function, or to change appearance (for example, kidney, heart transplant; skin graft).

Impact of Surgical Intervention on the Patient

Surgery produces physical stress relative to the extent of the surgery and the injury to the tissue involved.

The physical stress of surgery is greatly magnified by the psychological stress.

Anxiety and worry use up energy that is needed for healing of tissue during the postoperative period.

Unconsciousness and not knowing or being able to control what is happening.

One or more of the following may cause the patient psychological stress;

- Pain
- Loss of a body part
- Fear of death
- Separation from family and friends.
- The effects of surgery on his lifestyle at home and at work.
- Exposure of his body to strangers.

Regardless of the risk, any surgery that imposes physical and psychological stress is rarely considered "minor" by the patient.

The Pre Operative Phase

The **Pre-Operative phase** begins with the **decision that surgical intervention** is necessary and ends when the patient is transferred to the operating room table.

Patients are admitted to the health care facility for surgical intervention from a variety of situations and in various physical conditions.

The **nurse is responsible** for completion of preoperative forms, implementing doctor's orders for preoperative care, and documentation of all nursing measures.

Nursing Implications

The following nursing implications are related to preparing a patient for surgery.

Prepare the patient's chart which should include:

- Space for the patient's identification.
- A checklist for pertinent clinical records.
- A space for recording the most current set of vital signs taken prior to preoperative medications.
- A space to indicate allergies.
- A space to document all preoperative nursing measures.
- A space to document any comment that indicates something very special about this particular patient (for example, removal of prosthesis, patient hard of hearing).
- A space for signature of release by the registered nurse when all actions are completed.

Completion of Requests for Anesthesia

Complete any request for administration of anesthesia.

- The patient must sign in the presence of a witness, to consent for the surgical procedure.

- The witness is attesting to the patient's signature, not to the patient's understanding of the surgical risks.
- If the adult patient is unconscious, semiconscious, or is not mentally competent, the consent form may be signed by a family member or legal guardian.
- If the patient is a minor (usually under the age of 18), the consent form is signed by a parent or legal guardian.
- A minor who lives away from home and is self-supporting is considered emancipated and he may sign.
- Be familiar with the age of consent for the state in which the health care facility is located and with legal implications when a person other than the patient signs the consent form.
- Legal consent forms must be signed prior to administration of preoperative medication or any type of mind-altering medication or the document is not legally binding.

Implement Doctors Orders for Pre-Operative Care

- Implement doctor's orders for preoperative care as follows.
- If ordered, administer an enema.
- The enema cleanses the colon of fecal material, which reduces the possibility of wound contamination during surgery.
- If ordered, assure that the operative site skin prep (shave) is done.
- An operating room technician or other designated person will clean and shave a wide area surrounding the planned site for the incision.
- (This may be done in the operating room immediately before surgery).
- The skin prep frees the skin of hair and microorganisms as much as possible, thus decreasing the possibility of them entering the wound via the skin surface during surgery.

Doctors Direction for Pre-Operative Diet

- The doctor will give specific directions concerning withholding food and fluid before surgery.
- Assure that the order is followed.
- Typically, the patient may eat solid food until supper, but can have nothing by mouth (NPO) beginning at midnight before surgery.
- Place the NPO sign outside the patient's room. Instruct the patient of the importance and the reason for being NPO.
- Remove the water pitcher and the drinking glass.
- Clearly mark the diet roster.
- If ordered, administer a sedative.
- The evening before surgery a hypnotic drug, such as flurazepam hydrochloride (Dalmane®) may be given so that the patient can get a good night's sleep.

Patient Preparation before Surgery

- The following outlines the patient hygiene preparation procedure prior to the surgical experience:
- Assist the patient with personal hygiene and related preoperative care.
- The evening before surgery, the patient should take a bath or shower, and shampoo hair to remove excess body dirt and oils. The warm water will also help to relax the patient.
- Sometimes plain soap and water are used for cleansing the skin, but a topical antiseptic may be used.

Patients Personal Effects

- Remove all makeup and nail polish.
- Numerous areas (face, lips, oral mucosa, and nail beds) must be observ ed for evidence of cyanosis.
- Makeup and nail polish hide true coloration.

- The patient may wear a wedding band to surgery, but it must be secure d with tape and gauze wrapping.
- Do not wrap tightly; circulation may be impaired.
- Jewelry and other valuables should be removed for safe keeping.
- Do not leave valuables in the bedside stand or store in the narcotics container.
- Chart what has been done with the valuables
- If possible, send these items home with a relative until the patient has need of them.

Patient Briefing regarding Planned Surgery

Provide the patient with information concerning surgery and include the following information:

- The risks and benefits of surgery.
- The likely outcome if surgery is not performed.
- The alternative methods of treatment by his doctor.

The nurse can also help the patient cope with the upcoming surgery by taking the time to listen to the patient and others who are concerned about his/her well being, and answering other questions. This can be facilitated by:

- Explaining each preoperative nursing measure.
- Providing an opportunity for the patient to express his feelings.
- Asking about spiritual needs and whether he/she wishes to see a Chaplain.

Surgery Briefing to Family members

- Provide family members with information concerning their role the morning of the surgery.
- Give them the surgical waiting room location, and the probable time that they can visit the patient after surgery.
- Explain the rationale for the patient's stay in the recovery room.

- Inform them of any machines or tubes that may be attached to the patient following surgery.

Patient Pre-Operative Morning Care

- Provide Preoperative morning care for the patient as follows:
- Awake the patient early enough to complete morning care.
- Give him a clean hospital gown and the necessary toiletries.
- The patient should have another shower or bath using a topical antiseptic, such as povidone-iodine.
- The skin cannot be made completely sterile, but the number of microorganisms on it can be substantially reduced.
- If the surgery is extensive, it may be several days before the patient has another shower or "real" bath.
- The patient should have complete mouth care before surgery.
- A clean mouth provides comfort for the patient and prevents aspiration of small food particles that may be left in the mouth.
- Instruct the patient not to chew gum.

Other Pre-Operative Patient Care Activities

- Remove prostheses**:** Assist the patient or provide privacy so that the patient can remove any prostheses.
- These includes artificial limbs, artificial eyes, contact lenses, eyeglasses, dentures, or other removable oral appliances.
- Place small items in a container and label them with the patient's name and room number.
- Dentures are usually left at the bedside.
- Record vital signs.
- Obtain and record the patient's temperature, pulse, respiration, and blood pressure before the preoperative medication is administered.

- Allow the patient time to complete any last minute personal measures and visit with the family.

Surgical Check List

- Recheck surgical check list. If ordered, administer preoperative medications.
- Pre-op medications are usually ordered by the anesthesiologist, and administered about 30 to 60 minutes before the patient is taken to the operating room. The medications may be ordered given at a scheduled time or on call (the operating room will call and tell you when to give the medications).
- The medications may consist of one, two, or three drugs: a narcotic or sedative; a drug to decrease secretions in the mouth, nose, throat, and bronchi; and an antiemetic.
- Have the patient void before administering the medications. Explain to the patient the effects experienced following administration of the medications (drowsiness, extreme dry mouth).
- Instruct the patient to remain in bed. Raise the side rails on the bed and place the call bell within easy reach. Assist the operating room technician. The patient is usually transported to the operating room on a wheeled litter, or gurney.
- The technician should cover the patient with a clean sheet or cotton blanket. Assist the technician to position the patient on the litter. See that the patient is comfortable, and that the restraint is fastened to prevent him from falling off the litter.

Documentation of Nursing Measures

- All necessary information should be recorded on the chart before the patient leaves the nursing unit.
- Check the patient's identification band to be sure the right patient is being taken to surgery.

- Check the consent form to be sure that it is correctly signed and witnessed.
- "Sign out" the patient in the nurse's notes.
- Include the date, the time, the event, and your observations on the status of the patient.

Intra Operative Phase

The **Intraoperative phase** is the period during which the patient is undergoing surgery in the operating room.

It ends when the patient is transferred to the post-anesthesia recovery room.

Classification of Surgical Procedures

Descriptors used to classify surgical procedures include as follows**:**

- Ablative
- Diagnostic
- Constructive
- Reconstructive
- Palliative
- Transplant

These descriptors are directly related to the reasons for surgical intervention performed.

Reasons for Surgical Intervention

Reasons for performing Surgical Interventions are as follows**:**

- To cure an illness or disease by removing the diseased tissue or organs.
- To visualize internal structures during diagnosis.
- To obtain tissue for examination.
- To prevent disease or injury.
- To improve appearance.
- To repair or remove traumatized tissue and structures.
- To relieve symptoms or pain.

The Surgical Team

Key Members: The Intraoperative phase begins when the patient is received in the surgical area and lasts until the patient is transferred to the recovery area. Although the surgeon has the most important role in this phase, there are five key members of the surgical team which are as follows:

- The Surgeon
- The Anesthesiologist
- The Scrub Nurse
- The Circulating Nurse

The Surgeon

The Surgeon: The surgeon is the leader of the surgical team.

The surgeon is ultimately responsible for performing the surgery effectively and safely; however, he is dependent upon other members of the team for the patient's emotional well being and physiologic monitoring.

Anesthesiologist

Anesthesiologist/Anesthetist**:** An anesthesiologist is a physician trained in the administration of anesthetics.

An anesthetist is a registered professional nurse trained to administer anesthetics.

The responsibilities of the anesthesiologist or anesthetist include:

- Providing a smooth induction of the patient's anesthesia in order to prevent pain.
- Maintaining satisfactory degrees of relaxation of the patient for the duration of the surgical procedure.
- Continuous monitoring of the physiologic status of the patient for the duration of the surgical procedure.
- Continuous monitoring of the physiologic status of the patient to include oxygen exchange, systemic circulation, neurologic status, and vital signs.
- Advising the surgeon of impending complications and independently intervening as necessary.

Scrub Nurse

Scrub Nurse/Assistant**:** The scrub nurse or scrub assistant is a nurse or surgical technician who prepares the surgical set-up, maintains surgical asepsis while draping and handling instruments, and assists the surgeon by passing instruments, sutures, and supplies.

The scrub nurse must have extensive knowledge of all instruments and how they are used.

The scrub nurse or assistant wears sterile gown, cap, mask, and gloves.

Circulating Nurse

Circulating Nurse**:** The circulating nurse is a professional registered nurse who is liaison between scrubbed personnel and those outside of the operating room.

The circulating nurse is free to respond to request from the surgeon, anesthesiologist or anesthetist, obtain supplies, deliver supplies to the sterile field, and carry out the nursing care plan.

The circulating nurse does not scrub or wear sterile gloves or a sterile gown.

Other responsibilities include:

- Initial assessment of the patient on admission to the operating room, helping monitoring the patient.
- Assisting the surgeon and scrub nurse to don sterile gowns and gloves.
- Anticipating the need for equipment, instruments, medications, and blood components, opening packages so that the scrub nurse can remove the sterile supplies, preparing labels, and arranging for transfer of specimens to the laboratory for analysis.
- Saving all used and discarded gauze sponges, and at the end of the operation, counting the number of sponges, instruments, and needles used during the operation to prevent the accidental loss of an item in the wound.

Major Classifications of Anesthetic Agents

There are three major classifications of anesthetic agents:

- General Anesthetic
- Regional Anesthetic
- Local Anesthetic

A general anesthetic produces loss of consciousness and thus affects the total person.

When the patient is given drugs to produce central nervous system depression, it is termed general anesthesia.

Characteristics of General Anesthetic

Characteristics of the ideal General Anesthetic are as follows:

- It produces analgesia.
- It produces complete loss of consciousness.
- It provides a degree of muscle relaxation.
- It dulls reflexes.
- It is safe and has minimal side effects.

General anesthesia is used for major head and neck surgery, intracranial surgery, thoracic surgery, upper abdominal surgery, and surgery of the upper and lower extremities.

Phases of General Anesthesia

There are three phases of general anesthesia as follows:

- Induction
- Maintenance
- Emergence

General Anesthetic Use

- To obtain optimal effects and decrease likelihood of toxicity, administration of a general anesthetic requires the use of one or more agents.

Often an intravenous drug such as thiopental sodium (Pentothal) is used for induction and then supplemented with other agents to produce surgical anesthesia.

Inhalation anesthesia is often used because it has the advantage of rapid excretion and reversal of effects.

The disadvantage is that it carries major risks of circulatory and respiratory depression.

Routes of Administration of a General Anesthetic Agents

Routes of administration of a General Anesthetic agent are as follows:

- Rectal (which is not used much in today's medical practices)
- Intravenous infusion
- Inhalation

No single anesthetic meets the criteria for an ideal general anesthetic.

A Regional or Block Anesthetic Agent

A regional or block anesthetic agent causes loss of sensation in a large region of the body.

The patient remains awake but loses sensation in the specific region anesthetized. In some instances, reflexes are lost also.

When an anesthetic agent is injected near a nerve or nerve pathway, it is termed regional anesthesia.

Regional anesthesia may be accomplished by nerve blocks, or subdural or epidural blocks (see figure insert)..

A Regional or Block Anesthetic Agent

Nerve blocks are done by injecting a local anesthetic around a nerve trunk supplying the area of surgery such as the jaw, face, and extremities.

Subdural blocks are used to provide spinal anesthesia. The injection of an anesthetic, through a lumbar puncture, into the cerebrospinal fluid in the

subarachnoid space causes sensory, motor and autonomic blockage, and is used for surgery of the lower abdomen, perineum, and lower extremities.

Side effects of spinal anesthesia include headache, hypotension, and urinary retention.

For epidural block, the agent is injected through the lumbar interspace into the epidural space, that is, outside the spinal canal.

Local Anesthesia is administration of an anesthetic agent directly into the tissues.

It may be applied topically to skin surfaces and the mucous membranes in the nasopharynx, mouth, vagina, or rectum or injected intradermally into the tissue.

Phases of General Anesthesia

Induction (rendering the patient unconscious) begins with administration of the anesthetic agent and continues until the patient is ready for the incision.

Maintenance (surgical anesthesia) begins with the initial incision and continues until near completion of the procedure.

Emergence begins when the patient starts to come out from under the effects of the anesthesia and usually ends when the patient leaves the operating room.

Impact of the Anesthetic Agent

Depending on its classification, Anesthesia produces states such as narcosis (loss of consciousness), analgesia (insensibility to pain), loss of reflexes, and relaxation.

General Anesthesia produces all of these responses.

Regional Anesthesia does not cause narcosis, but does result in analgesia and reflex loss.

Local anesthesia results in loss of sensation in a small area of tissue.

The choice of route and the type of anesthesia is primarily made by the anesthetist or anesthesiologist after discussion with the patient.

Factors which effect the selection of the Anesthetic Agent

Whether by intravenous, inhalation, oral, or rectal route, many factors effect the selection of an anesthetic agent:

- The type of surgery.
- The location and type of anesthetic agent required.
- The anticipated length of the procedure.
- The patient's condition.
- The patient's age.
- The patient's previous experiences with anesthesia.
- The available equipment.
- Preferences of the anesthesiologist or anesthetist and the patient.
- The skill of the anesthesiologist or anesthetist.

Factors considered when selecting the Anesthetic Agent

- Smoking and drinking habits of the patient
- Medications the patient is taking
- Presence of disease

Factors impacting selection of Anesthetic Agent

Pre-existing medical conditions relating to any of the following body organs are of particular concern**:**

- Pulmonary function
- Hepatic function
- Renal function
- Cardiovascular function

Pulmonary function is adversely affected by upper respiratory tract infections and chronic obstructive lung diseases such as emphysema, especially when intensified by the effects of general anesthesia.

These conditions also predispose the patient to postoperative lung infections.

Impact of medication on the Anesthetic Agent

Patients may be taking medication for conditions unrelated to the surgery, and are unaware of the potential for adverse reactions of these medications with anesthetic agents.

Because some medications interact adversely with other medications and with anesthetic agents, preoperative assessment should include a thorough medication history.

Medications, whether prescribed or over-the-counter, can affect the patient's reaction to the anesthetic agent, increase the effects of the anesthesia, and increase the risk from the stress of surgery.

Medication is usually withheld when the patient goes to surgery; but some specific medications are given even then.

For example, patients with cardiovascular problems or diabetes mellitus may continue to receive their prescribed medications.

Factors impacting the Anesthetic Agent

Liver diseases such as cirrhosis impair the ability of the liver to detoxify medications used during surgery, to produce the prothrombin necessary for blood clotting, and to metabolize nutrients essential for healing following surgery.

Renal insufficiency may alter the excretion of drugs and influence the patient's response to the anesthesia. Regulation of fluids and electrolytes, as well as acid-base balance, may be impaired by renal disease.

Well-controlled cardiac conditions pose minimal surgical risks. Severe hypertension, congestive heart failure, or recent myocardial infarction drastically increase the risks.

Drugs which increase Surgical Risk

Drugs in the following categories that increase surgical risk are as follows:

Adrenal steroids - abrupt withdrawal may cause cardiovascular collapse in long-term users.

Antibiotics - may be incompatible with anesthetic agent, resulting in untoward reactions.

Mycin group - may cause respiratory paralysis when combined with certain muscle relaxants used during surgery.

Anticoagulants - may precipitate hemorrhage.

Diuretics - may cause electrolyte (especially potassium) imbalances, resulting in respiratory depression from the anesthesia.

Tranquilizers - may increase the hypotensive effect of the anesthetic agent, thus contributing to shock.

The Recovery Room

The Recovery Room is defined as a specific nursing unit, which accommodates patients who have undergone major or minor surgery.

Following the operation, the patient is carefully moved from the operating table to a wheeled stretcher or bed and transferred to the recovery room.

The patient usually remains in the recovery room until he begins to respond to stimuli.

The postoperative phase lasts from the patient's admission to the recovery room through the complete recovery from surgery.

Nursing Function for Patient Care in the Recovery Room

The general nursing goals of care for a patient in the recovery room are as follows:

Surgery traumatizes the body, decreasing its energy and resistance.

Anesthesia impairs the patient's ability to respond to environmental stimuli and to help himself.

An artificial airway is usually maintained in place until reflexes for gagging and swallowing return.

When the reflexes return, the patient usually spits out the airway.

Nursing Goals of the Recovery Room

Other Nursing Goals of the Recovery Room are as follows:

- To relieve the patient's discomfort.
- Pain is usually greatest for 12 to 36 hours after surgery, decreasing on the second and third post-op day.
- Analgesics are usually administered every 4 hours the first day.
- Tension increases pain perception and responses, thus analgesics are most effective if given before the patient's pain becomes severe.
- Analgesics may be administered in patient controlled infusions.

The Recovery Room Complications

Early detection of complications. Most people recover from surgery without incident.

Complications or problems are relatively rare, but the recovery room nurse must be aware of the possibility and clinical signs of complications.

Prevention of complications. Complications that should be prevented in the recovery room are respiratory distress and hypovolemic shock.

The Recovery Room and Intensive Care

The difference between the recovery room and surgical intensive care are as follows**:**

The recovery room staff supports patients for a few hours until they have recovered from anesthesia.

The surgical intensive care staff supports patients for a prolonged stay, which may last 24 hours or longer.

The procedure related to Postoperative Patient Care according to the following Body Systems:

- Respiratory System
- Cardiovascular System
- Urinary System
- Gastrointestinal System
- Integumentary System

Respiratory System

- Respiratory System: The cough reflex is suppressed during surgery and mucous accumulates in the trachea and bronchi.
- After surgery, respiration is less effective because of the anesthesia and pain medication, and because deep respirations cause pain at the incision site.
- As a result, the alveoli do not inflate and may collapse, and retained secretions increase the potential for respiratory infection and atelectasis.
- Turn the patient as ordered.
- Ambulate the patient as ordered.
- If permitted, place the patient in a semi-Fowler's position, with support for the neck and shoulders, to aid lung expansion.

Post-Operative Respiratory Care

- Reinforce the deep breathing exercises the patient was taught preoperatively.
- Deep breathing exercises hyperventilate the alveoli and prevent their collapse, improve lung expansion and volume, help to expel anesthetic gases and mucus, and facilitate oxygenation of tissues.
- Exhale gently and completely.
- Inhale through the nose gently and completely.
- Hold his breath and mentally count to three.

- Exhale as completely as possible through pursed lips as if to whistle.
- Repeat these steps three times every hour while awake.

Post-Operative Respiratory Care - Coughing

Coughing, in conjunction with deep breathing, helps to remove retained mucus from the respiratory tract.

- Coughing is painful for the postoperative patient.
- While in a semi-Fowler's position, the patient should support the incision with a pillow or folded bath blanket and follow these guidelines for effective coughing**:**
- Inhale and exhale deeply and slowly through the nose three times.
- Take a deep breath and hold it for 3 seconds.
- Give two or three "hacking" coughs while exhaling with the mouth open and the tongue out.
- Take a deep breath with the mouth open.
- Cough deeply once or twice.
- Take another deep breath.
- Repeat these steps every 2 hours while awake.

Post-Operative Respiratory Care - Breathing Apparatus

- An **Incentive Spirometer** may be ordered to help increase lung volume, inflation of alveoli, and facilitate venous return.
- Most patients learn to use this device and can carry out the procedure without a nurse in attendance.
- Monitor the patient from time to time to motivate them to use the spirometer and to be sure that they use it correctly.
- While in an upright position, the patient should take two or three normal breaths, then insert the spirometer's mouthpiece into his mouth.
- Inhale through the mouth and hold the breath for 3 to 5 seconds.

- Exhale slowly and fully.
- Repeat this sequence 10 times during each waking hour for the first 5 post-op days.
- Do not use the spirometer immediately before or after meals.

Cardiovascular System

Cardiovascular System: Venous return from the legs slows during surgery and may actually decrease in some surgical positions.

With circulatory stasis of the legs, thrombophlebitis and emboli are potential complications of surgery. Venous return is increased by flexion and contraction of the leg muscles. To prevent thrombophlebitis, instruct the patient to exercise the legs while on bedrest.

Post-Operative Cardiovascular Procedure

- Leg exercises are easier if the patient is in a supine position with the head of the bed slightly raised to relax abdominal muscles.
- Leg exercises (figure in diagrammatic insertt) should be individualized using the following guidelines;
- Flex and extend the knees, pressing the backs of the knees down toward the mattress on extension.
- Alternately, point the toes toward the chin (dorsiflex) and toward the foot of the bed (plantar flex); then, make a circle with the toes.
- Raise and lower each leg, keeping the leg straight.
- Repeat leg exercises every 1 to 2 hours.

Post-Operative Cardiovascular Support

- Ambulate the patient as ordered. (See also separate Nursing Course Module on Patient Ambulating).
- Provide physical support for the first attempts.
- Have the patient dangle the legs at the bedside before ambulation.
- Monitor the patient's blood pressure while he dangles.

- If the patient is hypotensive or experiences dizziness while dangling, do not ambulate.
- Report this event to the supervisor.

Post-Operative Urinary System Procedure

- **Urinary System.** Patients who have had abdominal surgery, particularly in the lower abdominal and pelvic regions, often have difficulty urinating after surgery.
- The sensation of needing to urinate may temporarily decrease from operative trauma in the region near the bladder.
- The fear of pain may cause the patient to feel tense and have difficulty urinating.
- If the patient does not have a catheter, and has not voided within eight hours after return to the nursing unit, report this event to the supervisor.
- Palpate the patient's bladder for distention and assess the patient's response.
- The area over the bladder may feel rounder and slightly cooler than the rest of the abdomen.
- The patient may tell you that he feels a sense of fullness and urgency.

Post-Operative Urinary System Procedure

Additional post-operative Urinary System patient support is as follows:

- Assist the patient to void.
- Assist the patient to the bathroom or provide privacy.
- Position the patient comfortably on the bedpan or offer the urinal.
- Measure and record urine output.
- If the first urine voided following surgery is less than 30 cc, notify the supervisor.
- If there is blood or other abnormal content in the urine, or the patient complains of pain when voiding, report this to the supervisor.

- Follow nursing unit standing operating procedures (SOP) for infection control, when caring for the patient with a Foley catheter.

Post-Operative Gastrointestinal System Procedure

- **Gastrointestinal System:** Inactivity and altered fluid and food intake during the perioperative period alter gastrointestinal activities.
- Nausea and vomiting may result from an accumulation of stomach contents before peristalsis returns or from manipulation of organs during the surgical procedure if the patient had abdominal surgery.
- Report to the supervisor if the patient complains of abdominal distention.
- Ask the patient if he has passed gas since returning from surgery.
- Auscultate for bowel sounds. Report your assessment to the supervisor, and document in nursing notes.
- Assess abdominal distention, especially if bowel sounds are not audible or are high-pitched, indicating an absence of peristalsis.
- Provide a privacy so that the patient will feel comfortable expelling gas.

Gastrointestinal System - Measures and Checks

- Encourage food and fluid intake when the patient in no longer NPO.
- Ambulate the patient to assist peristalsis and help relieve gas pain, which is a common postoperative discomfort.
- Instruct the patient to tell you of his first bowel movement following surgery. Record the bowel movement on the intake and output (I&O) sheet.
- If nursing measures are not effective, the doctor may order medication or an enema to facilitate peristalsis and relieve distention.
- A last measure may require the insertion of a nasogastric or rectal tube.
- Document nursing measures and the results in the nursing notes.

Integumentary System

Integumentary System: Follow doctor's orders for wound care, wound irrigations and cultures.

- In addition to assessment of the surgical wound, you should evaluate the patient's general condition and laboratory test results.
- If the patient complains of increased or constant pain from the wound, or if wound edges are swollen or there is purulent drainage, further assessment should be made and your findings reported and documented.
- Generalized malaise, increased pain, anorexia, and an elevated body temperature and pulse rate are indicators of infection.
- Important laboratory data include an elevated white blood cell count and the causative organism if a wound culture is done.
- Staples or sutures are usually removed by the doctor using sterile technique.
- After the staples or sutures are removed, the doctor may apply Steri-Strip® to the wound to give support as it continues to heal.

Procedure for Applying a Patient Dressing

At some time, most wounds are covered with a dressing and you may be responsible for changing the dressing. The following outlines the approach to Patient dressing:

First, **gather needed supplies.** Items may be packaged individually or all necessary items may be in a sterile dressing tray.

Some surgical units have special dressing carts, with agents needed to clean the wound, and materials to cover and secure the dressing.

Next, **prepare the patient** for the dressing change by explaining what will be done, providing privacy for the procedure, and assisting the patient to a position that is comfortable for him and for you.

Finally, **use appropriate aseptic techniques** when changing the dressing and follow precautions for contact with blood and body fluids.

- The most common cause of nosocomial infections is carelessness in observing medical and surgical asepsis when changing dressings.
- It is especially important to wash hands thoroughly before and after changing dressings and to follow the US Centers for Disease Control (CDC) guidelines.
- Methods of Caring for Wounds
- The basic objective of wound care is to promote tissue repair and regeneration, so that skin integrity is restores.
- There are two methods of caring for wounds:
- The Open Method, in which no dressing is used to cover the wound
- The Closed Method, in which a dressing is applied.

Dressings have advantages and disadvantages.

Advantages. Dressings absorb drainage, protect the wound from injury and contamination, and provide physical, psychological, and aesthetic comfort for the patient.

Disadvantages. Dressings can rub or stick to the wound, causing superficial injury.

Dressings create a warm, damp, and dark environment conducive to the growth of organisms and resultant infection.

Contact with Blood and Body Fluids

Precautions for Contact with Blood and Body Fluids:

- Wear gloves when touching blood, body fluids containing visible blood, an open wound, or non-intact skin of all clients and when handling items or surfaces soiled with blood or body fluids.

- Wash hands thoroughly after removing gloves and if contaminated with blood or with body fluids that contain visible blood.

- Take precautions to prevent injuries by needles, sharp instruments, or sharp devices.
- Do not give direct client care if you have open or weeping lesions or dermatitis.
- If procedures commonly cause droplets or splashing of blood or body fluids to which universal precautions apply, wear gloves, a surgical mask, and protective eyewear, as appropriate.

Post Operative Nursing Implications:

- The nursing process is used throughout the Peri-operative period to provide the patient with individualized care and the knowledge and ability for self-care following disposition.
- Surgical intervention often alters physical appearance and normal physiological functions and may threaten the patients psychological security.
- Some surgical patients react to the loss of a body part as to a death.
- Any or all of these may lead to alterations in the patient's self-concept and body image.
- Be aware of the patient's needs and establish interventions that will support his strengths and effective coping skills.

General Post-Operative Monitoring and Observation

- Monitor vital signs as ordered.
- Administer analgesics as ordered.
- Report lowered blood pressure and increased pulse to supervisor (hypovolemic shock).
- Report elevated temperature and rapid/weak pulse immediately to supervisor (infection).

Procedure to Administering Post-Operative Patient Medication

- Apply all nursing implications related to the patient receiving analgesics whether narcotic or non-narcotic, to include the following:
- Check each medication order against the doctor's order.
- Prepare the medications (check labels, accurately calculate dosages, observe proper asepsis techniques with needles and syringes).
- Check the patient's identification wristband to ensure positive identification before administering medications.

Nursing Implications related to Post-Operative Patient Medication

- Apply all nursing implications related to the patient receiving analgesics whether narcotic or non-narcotic, to include the following:
- **Administer the medications:** Offer each drug separately if administering more than one drug at the same time.
- Remain with the patient and see that the medication is taken.
- Never leave medications at the bedside for the patient to take later.
- Document the medications given as soon as possible.