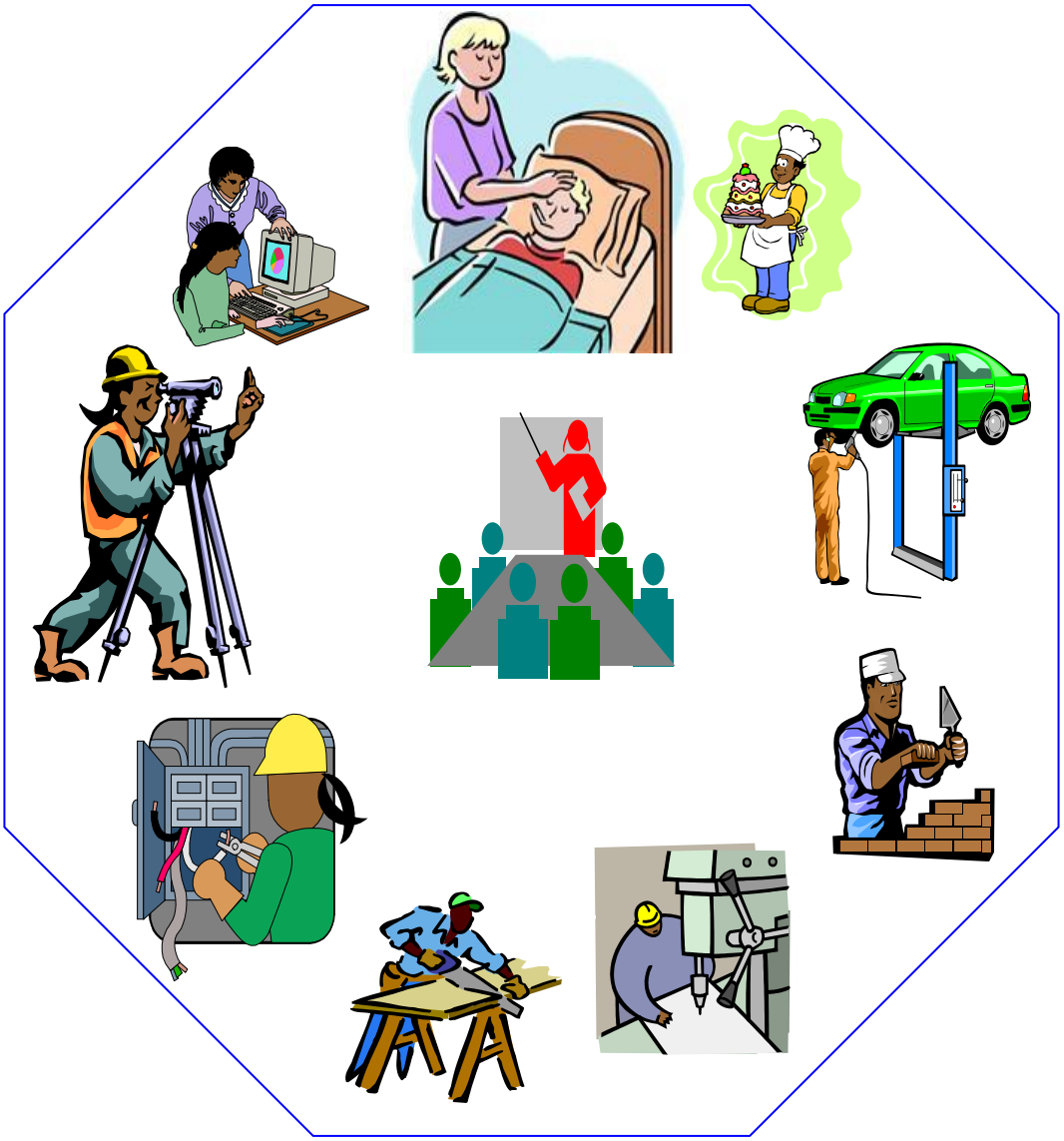
Nursing level-IV

Providing care in the pre/post and intra operative nursing

Based on Dec, 2018 Version OS and Dec, 2019 Version Curriculum



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LG #33	**LO #1- Work as part of the multidisciplinary Health care team in the pre /post and intra operative environment**

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Introduction
- The role of the multi-disciplinary health care team
- Organizations of areas in the Operation room
- Operating team & relationship
- The role of emergency service personnel, referring agencies and other hospital department staff
- Professional communication
- Division of duties
  - ✓ Scrub nurses duties
  - ✓ Circulatory nurse duties
  - ✓ OR nurse
  - ✓ Anesthetic nurse
- Preventing hazards in the operating theatre
- Definition
- Purpose
- classification of hazards
- Methods of prevention
- Nursing responsibilities
- Preventing infection in the operating theatre
- General preparation
- Personal hygiene
- Clothing & shoes
- Hair cover and mask
- Operative room cleaning
- Definition

- Purpose
- Principle of cleaning
- Time of cleaning
- Nursing Responsibility
- Performing hand washing and scrubbing
- Definition of scrubbing
- Purposes of hand washing and scrubbing
- Nursing responsibility
- Procedures for wearing sterile gloves and gowns
  - ✓ Definition
  - ✓ Purpose
  - ✓ Methods of gloving
  - ✓ closed method
  - ✓ Open method
  - ✓ Methods of gowning

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Use work instructions to determine job requirements, including method, material and equipment.
- Define the multidisciplinary Health care team
- Explain the role of the multi-disciplinary health care team
- Explain the organizations of areas in the Operation room
- Explain operating team & relationship
- Explain the role of emergency service personnel and referring agencies
- Define the professional communication
- Discus the division of professional duties
- Identify the preventing hazards in the operating theatre
- Explain the preventing infection in the operating theatre

- Describe the operative room cleaning
- Explain the Performing hand washing and scrubbing
- Explain the procedures for wearing sterile gloves and gown

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” which are placed following all information sheets.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets
7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,
8. If your performance is satisfactory proceed to the next learning guide,
9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Information Sheet 1- The role of the multi-disciplinary health care team

1.1. Introduction

A multidisciplinary primary care team is a group of professionals from various disciplines who communicate and work together in a formal arrangement to provide health services, resources, and advice to a patient population within a primary care.

Team members include primary care doctors, community nurses, dieticians, psychologists, phlebotomists, pharmacists, medical social workers, and others "Multidisciplinary care when professionals from a range of disciplines work together to deliver comprehensive care that addresses as many of the patient's needs as possible.

This can be delivered by a range of professionals functioning as a team under one organisational umbrella or by professionals from a range of organisations, including private practice, brought together as a unique team. As a patient's condition changes over time, the composition of the team may change to reflect the changing clinical and psychosocial needs of the patient.

Members of the surgical team include the surgeon, surgical assistant, an anesthesiologist or anesthetist, a circulating nurse, a scrub nurse and a holding area nurse. The surgeon is the doctor who will perform the surgery. The surgical assistant may be another surgeon, a surgical resident, an RN first assist, or a physician's assistant. The person providing anesthesia and monitoring the vital signs of the patient is either an anesthesiologist (a physician) or a certified registered nurse anesthetist (CRNA).

The circulating nurse is a registered nurse who acts as the patient advocate, obtains the necessary supplies for the procedure, makes sure diagnostic studies, prepares the operative table, positions the patient and cleanses the skin in the operative area before positioning surgical drapes. The scrub nurse (surgical tech) sets up the sterile field, assists with draping the patient, and hands sterile supplies into the operative field and takes used instruments from the surgeon.

The circulating nurse and scrub nurse together count all instruments, used in the surgical field. The count is performed before, during, and after the procedure. The holding area nurse cares for the patients who have been brought into the operating room suite but who are not yet ready to go into the operating room. The holding area nurse may be managing several patients at one time and can also help to transport and transfer the patient.

Before entering the operating room, the members of the surgical team scrub at the sink just outside the room in which the surgery will be performed. Prior to starting the scrub, the team member applies a mask with face shield or goggles. The surgical scrub is usually timed and covers the area from the fingertips to 2 inches above the elbows. The surgical scrub renders the skin clean, not sterile. After the scrub, the skin is dried with a sterile towel. A sterile gown, then sterile gloves is applied. The front of the gown is considered sterile in the front from two inches below the neck to the waist and from the elbow to the wrist. The circulating nurse applies the gown and gloves unassisted, and then assists the other members of the team into their gown and gloves as they enter the room.

1.2. The role of the multi-disciplinary health care team.

The protection and promotion of the health of workers by preventing and controlling occupational diseases and accidents and by eliminating occupational factors and condition hazardous to health and safety at work

The development and promotion of healthy and safe work, work environments and work organizations

The enhancement of the physical, mental and social wellbeing of workers and support for the development and maintenance of their work capacity, as well as professional and social development at work.

Enabling workers to conduct socially and economically productive lives and to contribute positively to sustainable development

Self check-1	Written test

Instructions*:* **Wright short answers for the give question**.

1. Difine multidisciplinary team
2. What is the role of multi disciplinary health care team?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

Score = _____
Rating: _____

1._____

_____

2._____

Information Sheet 2- Organizations of areas in the Operation room

2.1. Organizations of areas in the Operation room

The operation theater is divided into three areas based on the OR design and by activities performed in the area

Unrestricted area

- ✓ It is a place where the pt and staff can enter with their street cloths
- ✓ It is isolated by door from main hospital departments
- ✓ Usually separated by red or green line from the next area

Semi-restricted area

- ✓ It is a transitional zone from unrestricted to restricted area
- ✓ It is limited to properly attired (clothed) personnel
- ✓ Head ,face and entire body are covered
- ✓ Attires:- are clothes don or worn by each member of the OR staff

Basic OR attires include:-

- ✓ *Cape or hood* – used for covering the hair
- ✓ *Mask* – used for covering of mouth & nose
- ✓ *T-shirts* and *trousers*- for covering the trunk and lower body parts
- ✓ *Shoes*- for covering the feet

The purpose of attires is to prevent dissemination of organisms from sebaceous glands, sweat glands, hair follicles as well as other body orifices

Restricted area - (the OR itself)

- ✓ It is the place where actual surgery is performed
- ✓ Maks are required to supplement other OR attires
- ✓ Sterile instruments are used
- ✓ Sterile team members wear (don) sterile gown and gloves

Self check-2	Matching test

Instruction: - Mach **from Column "B" to Collumn ''A''**

Colomun "A"

1. Restricted area
2. Sami restricted area
3. Non restricted area

Colomun "B"

A. The place where the pt and staff can enter with their street cloths
B. The place where actual surgery is performed
C. It is limited to properly attired (clothed) personnel

Answer Sheet

Name_____ Date: _____

1.____ 2. --------- 3.----------

Note: **Satisfactory rating** **Unsatisfactory**

Information Sheet 3- Operating team & relationship

3.1. Operating team & relationship

The operating room team –consists of health personnel from different discipline (profession). As soon as a patient enters the OR he/she is surrounded by these professionals. The OR team perform different tasks which are needed to be carried out at the same time. The team literally has the pt's life on its own hands.

3.2. The role of emergency service personnel, referring agencies and other hospital department staff

Role of the emergency nurse is to evaluate and monitor patients and to manage their care in the emergency department. They also may supervise unlicensed assistive personnel ("nurse aides" or "care partners"). It can be a challenge to get everything done quickly and correctly in an ever-changing environment. Some ED nurse functions are common to other nursing specialties, while others are specific to emergency nursing.

These can be divided into

- Assessment,
- Planning and managing care,
- Tasks,
- 4.communication, and
- Teaching.

Assessment: Emergency nurses interview a patient to get a health history , a list of current medications being taken and allergies. He or she performs a physical examination . This is often a limited exam based on the patient's chief complaint and only infrequently a complete head-to-toe examination.The ED nurse periodically reassesses the patient to detect any changes, either improvement, decompensation or no change. This may be done after a treatment is given to evaluate its effectiveness or at certain time intervals as appropriate for the patient's condition.

Planning and managing care: The ED nurse must have a plan of what to do for the patient, when and in what order. Managing an ED patient's care includes decisions such as whether the patient can go to X ray before getting blood drawn, what tasks to delegate to unlicensed assistive personnel (UAPs), and how many visitors are allowed in the patient's room, among others.

Tasks: There are procedures only the physician can perform, but many others are done by the emergency nurse. These include inserting intravenous ("IV") lines, urinary catheters and nasogastric ("NG") tubes ;drawing blood samples from veins and arteries; dressing wounds; applying splints, administering medications; and in certain jurisdictions RNs can be trained to suture wounds. In some cases, emergency nurses may order certain tests and medications following "collaborative practice guidelines" or "standing orders" set out by the hospital's emergency physician staff.

Communication: All the emergency nurse's observations are recorded in the patient's medicalrecord . These are used by other members of the healthcare team caring for the patient. ED nurses must keep the emergency physician apprised of a patient's condition; if it suddenly worsens, the doctor must be notified immediately. If the patient is admitted to a room in the hospital or transferred to another facility, he or she must "give report" to the nurse at the patient's destination.

Teaching: In addition to simply keeping the patient and his or her family up-to-date throughout the visit, the emergency nurse conducts teaching sessions with them. Topics often include how to take prescribed medication, how to prevent complications, when to return to the ED, and a patient's diagnosis . These are often short interactions and the nurse must evaluate what information the patient needs, how in detail to explain a topic, and the patient's readiness to learn.To do this, the nurse must consider the patient's level of education, level of pain, education level,

cultural influences, age, deficiencies in vision or hearing and other factors.

Self check-3	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discus the operating team & relationship

2. Discus the role of emergency service personsl

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1.----------

2.----------

Note: **Satisfactory rating** **Unsatisfactory**

You can ask you teacher for the copy of the correct answers.

Information Sheet 4- Professional communication

4.1. Professional communication

Communication (from Latin "communis", meaning to share) is the activity of conveying information through the exchange of thoughts, messages, or information, as by speech, visuals, signals, writing, or behavior. Communication requires a sender, a message, and a recipient, although the receiver need not be present or aware of the sender's intent to communicate at the time of communication; thus communication can occur across vast distances in time and space. Communication requires that the communicating parties share an area of communicative commonality. The communication process is complete once the receiver has understood the message of the sender. Effective communication is an important aspect of patient care to ensure patient safety. The Joint Commission for Accreditation for Health Organization has listed effective communication as goal no.2 of the 2006 National Safety Goals.

4.2. Types of communication

Communication of information, messages, opinions, speech and thoughts can be done via different forms of modern communication media, like Internet, telephone and mobile. Some of the basic ways of communication are by speaking, singing, sign language, body language, touch and eye contact. These basic ways of communication are used to transfer information from one entity to other. There are many different types of communication but they can be classified into four basic types.

Verbal Communication

Verbal communication includes sounds, words, language and speaking. Language is said to have originated from sounds and gestures. There are many languages spoken in the world. The basis of language formation are: gender, class, profession, geographical area, age group and other social elements. Speaking is an effective way of communicating and is again classified into two types viz. interpersonal communication and public speaking.

Good verbal communication is an inseparable part of business communication. In a

business, you come across people from various ages, cultures and races. Fluent verbal communication is essential, to deal with people in business meetings. Also, in business communication self-confidence plays a vital role which when clubbed with fluent communication skills can lead to success.

Non-Verbal Communication

Non-verbal communication involves physical ways of communication, like, tone of the voice, touch, smell and body motion. Creative and aesthetic non-verbal communication includes singing, music, dancing and sculpturing. Symbols and sign language are also included in non-verbal communication. Body language is a non-verbal way of communication. Body posture and physical contact convey a lot of information.

4.3. components of communication

We know that communication is a process of transmitting and receiving messages (verbal and non-verbal). Communication is a dialogue not a monologue. So, a communication is said to be effective only if it brings the desired response from the receiver. Communication consists of six components or elements.

Components of Communication

1.Context
2.Sender/Encoder
3.Message
4.Medium
5.Receiver/Decoder
6.Feedback

Self check-4	Written test

Instructions*:* Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers. Write your answers in the sheet provided in the next page.

1. List the barriers of communication

2. Write Components of Communication

3. Define the effective communication?

4. What is professiona communication?

Answer Sheet

Name: _____ *Date:* _____

Short Answer Questions

Information Sheet 5- Division of duties

5.1. Scrub nurses duties

The scrub nurses job is to make sure they are familiar and well educated with every piece of operational equipment. As on request they are required to provide the surgeons with the equipment needed. The scrub nurse is also responsible for making sure all operating equipment is accounted for before and after the operation.

The scrub nurse is responsible for many important technical duties. These can include ensuring they have correctly prepared the surgical instruments and trolleys and ensuring that all operating supplies have been sterilised. Other skills significantly important for the scrub nurse role include non- technical skills. These can include cognitive skills such as formulating appropriate decisions. Another non-technical skill required is being able to work well within a team, for example, the ability to communicate well with the surgical team during a procedure. Surgical instruments on a trolley in preparation for surgery.

Activities of the scrub role include performing a surgical hand scrub; setting up the sterile tables; preparing sutures, ligatures, and special equipment (such as a laparoscope); and assisting the surgeon and the surgical assistants during the procedure by anticipating the instruments that will be required, such as sponges, drains, and other equipment. As the surgical incision is closed, the scrub person and the circulator count all needles, sponges, and instruments to be sure they are accounted for and not retained as a foreign body in the patient. Tissue specimens obtained during surgery must also be labeled by the scrub person and sent to the laboratory by the circulation

5.2. Circulatory nurse duties

A circulation nurse have many similar responsibilities, although they are to insure that the operating room is clear and non-contaminated by previous surgeries or other

infections. They are also there to collected, open, clear and sterilise packets containing surgical equipment.

Before an operation

- ✓ Checks all equipment for proper functioning such as cautery machine, suction machine, OR light and OR table
- ✓ Make sure theater is clean
- ✓ Arreng furniture according to use
- ✓ Plac a clean sheet, arm board (arm strap) and a pillow on the OR table
- ✓ Provide a clean kick bucket and pail
- ✓ Collect necessary stock and equipment
- ✓ Turn on aircon unit
- ✓ Help scrub nurse with setting up the theater
- ✓ Assist with counts and records

5.3. OR nurse

Throughout surgery, nursing responsibilities include providing for the safety and well-being of the patient, coordinating the operating room personnel, and performing scrub and circulating activities. Because the patient's emotional state remains a concern, the care begun by preoperative nurses is continued by the intraoperative nursing staff, who provide the patient with information and realistic reassurance. The nurse supports coping strategies and reinforces the patient's ability to influence outcomes by encouraging his or her active participation in the plan of care. In the role of patient advocate, intraoperative nurses monitor factors that can cause injury, such as patient position, equipment malfunction, and environmental hazards, and they protect patients' dignity and interests while they are anesthetized. Additional responsibilities include maintaining surgical standards of care, identifying existing patient risk factors, and assisting inmodifying complicating factors to help reduce operative risk.

5.4. Anesthetic nurse

An anesthesiologist is a physician specifically trained in the art and science of anesthesiology. An anesthetist is a qualified health care professional who administers anesthetics. Most anesthetists are nurses who have graduated from an accredited nurse anesthesia program and have passed examinations sponsored by the American Association of Nurse Anesthetists to become a certified registered nurse anesthetist (CRNA). The anesthesiologist or anesthetist interviews and assesses the patient prior to surgery, selects the anesthesia, administers it, intubates the patient if necessary, manages any technical problems related to the administration of the anesthetic agent, and supervises the patient's condition throughout the surgical procedure. Before the patient enters the operating room, often at preadmission testing, the anesthesiologist or anesthetist visits the patient to provide information and answer questions.

The type of anesthetic to be administered, previous reactions to anesthetics, and known anatomic abnormalities that would make airway management difficult are discussed. The anesthesiologist or anesthetist uses the American Society of Anesthesiologists (ASA) Physical Status Classification System to determine the patient's status. When the patient arrives in the operating room, the anesthesiologist or anesthetist reassesses the patient's physical condition immediately prior to initiating anesthesia. The anesthetic is administered, and the patient's airway is maintained either through a laryngeal mask airway (LMA) or an endotracheal tube.

During surgery, the anesthesiologist or anesthetist monitors the patient's blood pressure, pulse, and respirations as well as the electrocardiogram (ECG), blood oxygen saturation level, tidal volume, blood gas levels, blood pH, alveolar gas concentrations, and body temperature. Monitoring by electroencephalography is some sometimes required. Levels of anesthetics in the body can also be determined; a mass spectrometer can provide instant readouts of critical concentration levels on display terminals.

Self check-5	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define the role of scrub nurse
2. Write the role of circulating nurse
3. Write the role of OR nurse
4. Write the role of anesthetic nurse

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

2._____

_____

3._____

4.----------

Information Sheet 6- Preventing hazards in the operating theatre

6. 1. Definition

Safety issues in the OR include exposure to blood and body fluids, hazards associated with laser beams, and exposure to latex, radiation, and toxic agents. Internal monitoring of the OR includes the analysis of surface swipe samples and air samples for infectiousand toxic agents.

6.2. Purpose

To minimizing exposure to body fluids and reducing the dangers associated with lasers and radiation have been established

6.3. Classification of hazards

Physical hazards are the most normal occurrences in workplaces. They are usually easy to detect, however, very often are neglected because people are too accustomed to them. Another reason may be due to lack of knowledge or people do not see situations as hazards.

Examples of physical hazards that a caregiver may be exposed to:

- ✓ Electrical hazards: Even in day care institutions or nursing homes where care should be of utmost concern, improper wiring and frayed cords may still go unnoticed. Misuse of electrical equipment also happens in any type of work environment.
- ✓ Endless loud noise: If one is going to work in a nursing home, frequent noise from patients who are suffering from depression is definitely a hazard.
- ✓ Fire
- ✓ Decreased efficiency
- ✓ Annoyance
- ✓ Falls

Biological hazards come from working with animals, people or infectious materials. This is, therefore, one of the most common hazards that a caregiver faces. If one is working in a day care, hospital, hotel laundry, nursing home, laboratories, he/she may be exposed to biological hazards.

Examples of physical hazards that a caregiver may be exposed to:

- ✓ blood or other body fluids
- ✓ fungi
- ✓ bacteria and viruses
- ✓ contaminated wastes

Ergonomic hazards occur when a caregiver's nature of work, body position and working conditions put pressure on his/her body. It is difficult to spot this type of hazard, because caregivers do not immediately notice the effect to their bodies. At first, sore muscles may be experienced. But long term exposure to this type of hazard can cause musculoskeletal problems.

Examples of ergonomic hazards that a caregiver may be exposed to:

- ✓ performing tasks that require lifting heavy loads
- ✓ too much bending and reaching
- ✓ standing for long periods of time
- ✓ holding body parts for long period of time
- ✓ awkward movements, especially if they are repetitive ,repeating the same movements over and over

Some of the Effects of Ergonomic Hazards

- ✓ pain in the shoulders
- ✓ back injury
- ✓ too much impact on wrist and hands
- ✓ numbness in some parts of the body
- ✓ muscle cramps

Chemical hazards are present when a worker is exposed to any chemical preparation in the in any form (solid, liquid or gas). There may be chemicals which are safe, but some caregivers who are sensitive to solutions may cause skin irritation, illness or breathing problems.

Examples of chemical hazards, may be exposed to:

- ✓ liquids like cleaning products
- ✓ disinfecting solutions

Effects of Chemical Hazards

- ✓ Lung diseases
- ✓ Difficulty in breathing
- ✓ Allergy

Psychological Hazards take place when a caregiver's work environment becomes stressful or demanding.

Examples of psychological hazards that a person may be exposed to:

- ✓ Burn outll, fatigue and on call duty
- ✓ Unreasonable expectations from patients or clients
- ✓ Verbal abuse form dissatisfied clients
- ✓ Unreasonable expectations from supervisors and management

Some of the Effects of Psychological Hazards

- ✓ Depression
- ✓ Anxiety
- ✓ Loss of confide ence
- ✓ Loss of concentration at work
- ✓ Deterioration of performance at work

1.6.4. Methods of prevention

Once you recognize a hazard in the workplace, then you can proceed with risk assessment, that is focusing on the risks that really matter in the workplace. Evaluating hazards and risks is the process of determining the level of risk created by the hazard and the likelihood of injury or illness occurring. Most of the time, simple measures can be done, with no trouble, to control risks. An example of this is making sure that cabinet drawers are kept closed so that people do not trip. Needless to say, the concern for control increases as the recognized level of risk increases.

A person identifying the risk of harm or injury from a hazard in a nursing home or day care should consider these questions:

- ✓ How likely it is that a hazard will cause harm;
- ✓ How serious that harm is likely to be;
- ✓ How often (and how many) workers are exposed.

It is a must that you have a record of every risk assessment done. If a certain accident or damage happens again, it might be that you will trace back the original records to check if the assessment overlooked a potential hazard. Assessing or evaluating the hazards and risks is crucial in making a decision on the mode of control to be used.

Control hazards and risks

It is possible that workplace hazards can be controlled by a variety of methods. Of course, the very reason why hazards should be controlled is to prevent workers from being exposed to occupational hazards. Hazard control comes in different processes. But one method may be more effective than the others.

When we speak of controlling hazards and risks, it means settling on the measure that will solve the trouble most successfully.

There are five major categories of control measures:

- Elimination
- Substitution
- Engineering controls
- Administrative controls
- Personal protective equipment.

Eliminating a hazard means removing it completely.

Substitution is replacing or substituting a hazardous agent or work process with a less dangerous one.

An *engineering control* may mean changing a piece of machinery (for example, using proper machine guards) or a work process to reduce exposure to a hazard.

An administrative control may mean working a limited number of hours in a hazardous area is an example of an administrative control (for example, job rotation)

Personal Protective Equipment includes ear and eye protection, respirators and protective clothing. Obviously, the best method of controlling hazards and risks is through elimination. That is to take away or to get rid of the hazard. However, more often than not, this is not possible. So, employers make use of any of the remaining control measures. The general rule is that the use of personal protective equipment (PPE) should be the last alternative in controlling hazards and risks in a workplace. Although it is said that the best method of control measure is through elimination of hazards, a very good technique for a safe and healthy environment is through the utilization of a combination of methods.

Practical ways to prevent hazards and risks

A Closer Look at Electricity

- ✓ As common sense dictates, you have to ensure that all electrical equipment you use is in good condition.
- ✓ Check electrical cords and make sure they are not frayed.
- ✓ Your hands should be dry before attempting to use any electrical equipment.
- ✓ Do not attempt to change fuses unless you know what you are doing.
- ✓ Do not turn on all appliances at the same time just because you want to save time

6.5. Nursing responsibilities

Use of Personal Protective Equipment

Caregivers should religiously abide by the following to prevent biological hazards from happening wear gown that is long enough to cover your clothing. Because the outside of the gown is considered contaminated, this should not be touched when it is removed. A gown that is wet is, of course, considered contaminated also. A caregiver should wear a clean gown every client care. In case the gow n is not available, apron should be worn to mask clothing during client contact. Masks should fit comfortably over the nose and mouth. The same with a gown or apron, a wet mask is considered contaminated. The front of the mask is also contaminated. Masks should not be worn around the neck. For each client contact, a clean mask should be used. Gloves should be used when issue on contamination is present. Also, when a caregiver has open wound on the hands, it is a must that he/she use gloves. The outside of the gloves should not be touched when removed as this is considered contaminated.

Disposal of Health Care Wastes

In order to reduce the burden of disease, health care wastes should be managed appropriately. Whether a caregiver is working in a hospital, a day care, or even at home, proper discarding of medical wastes should be of great consideration.

Human waste products. Obviously, these wastes should be flushed down the toilet without delay and should not be discarded in the street or in any public places.

Blood and bloody fluids. These must be removed right away. It is best if they can be directly flushed down the toilet. If clothes are contaminated, they should be washed separately using hot water and should be dried. Dressings with blood need to be double-bagged in plastic and disposed of based on existing community or local rules.

Needles (sharps). Sharps should be kept in a container which is not easy to pierce like metal (coffee can). Some items may be kept while some should be discarded right away. It is advisable to discuss with the supervisor for the best disposal method.

Medical equipment. If the equipment is contaminated, it should be thrown away. It is ideal that the equipment be double-bagged and disposed of based on the existing regulations in the community. Also, this should be discussed with the immediate supervisor as to whether or not the said equipment can be kept or should be disposed of already.

Proper Hand washing

As you touch people, tables, chairs, books, sinks, handrails, and other objects and surfaces, there is a possibility that you contaminate your hands. The germs that have accumulated when touching things may be the means for you to get sick and spread illness to others. The importance of hand washing comes in. It is by far the best and simplest way to prevent germs from spreading and to keep the people around you from getting sick. Though it is said that hand washing is the first line of defense against the spread of illnesses, you should be aware of the proper way of doing it. Otherwise, you may just be wasting your time doing it because you do not really wipe out what should be eliminated.

Put a Stop to Ergonomic Hazard

Efficient control measures are now being utilized by employers to avoid ergonomic hazards among health care workers. Manual handling of patients, for example, has become less stressful due to some paraphernalia being used that facilitate the task. Adjustable height work stations, improved tool design, and adjusted work pace are now part of a worker's life. Conscious or not, they have to examine their work routine and consider these simple rules:

Self check-6	Matching and written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Part I Mach from collumon "B " to collumon ''A''

Columon A	Columon B
1. Chemical hazard	A. Fire
2. Physical hazad	B. blood
3. Biological hazard	C. burn out
4. Psychological hazard	D. disinfecting solution

ParT II Short answer

1. What is the purpose of preventing hazards in Operation Theater?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

Part I. 1----------2----------3----------4----------

Part II. ----------

Information Sheet 7- Preventing infection in the operating theatre

7.1. General preparation

An operating theater (also known as an operating room (OR), operating suite , or operation suite) is a facility within a hospital where surgical operations are carried out in an aseptic environment. Historically, the term "operating theatre" referred to a non-sterile, tiered theater or amphitheater in which students and other spectators could watch surgeons perform surgery. Contemporary operating rooms are devoid of a theatre setting, making the term "operating theater" a misnomer. There are only two old-style operating theaters left, both of which are preserved as part of museums.

Operating rooms are spacious, easy to clean in a cleanroom , and well-lit, typically with overhead surgical lights, and may have viewing screens and monitors . Operating rooms are generally windowless and feature controlled temperature and humidity. Special air handlers filter the air and maintain a slightly elevated pressure. Electricity support has backup systems in case of a black-out. Rooms are supplied with wall suction, oxygen, and possibly other anesthetic gases. Key equipment consists of the operating table and the anesthesia cart .

In addition, there are tables to set up instruments. There is storage space for common surgical supplies. There are containers for disposables. Outside the operating room is a dedicated scrubbing area that is used by surgeons, anesthetists , ODPs (operating department practitioners), and nurses prior to surgery. An operating room will have a map to enable the terminal cleaner to realign the operating table and equipment to the desired layout during cleaning. Several operating rooms are part of the operating suite that forms a distinct section within a health-care facility. Besides the operating rooms and their wash rooms, it contains rooms for personnel to change, wash, and rest, preparation and recovery rooms(s), storage and cleaning facilities, offices, dedicated corridors, and possibly other supportive units. In larger facilities, the operating suite is climate- and air-controlled, and separated from other departments so that only authorized personnel have access.

People in the operating room wear PPE (personal protective equipment) to help prevent bacteria from infecting the surgical incision. This PPE includes the following: Similar to normal cleanrooms , germless. A protective cap covering their hair Masks over their lower face, covering their mouths and noses with minimal gaps to prevent inhalation of plume or airborne microbes Shades or glasses over their eyes, including specialized colored glasses for use with different lasers. a fiber-optic headlight may be attached for greater visibility Sterile gloves; usually latex-free due to latex.

Sensitivity which affects some health care workers and patients. Long gowns, with the bottom of the gown no closer than six inches to the ground. Protective covers on their shoes. The surgeon may also wear special glasses that help him/her to see more clearly. The circulating nurse and anesthesiologist will not wear a gown in the OR because they are not a part of the sterile team. They must keep a distance of 12-16 inches from any sterile object, person, or field.

7.2. Personal hygiene

Ideal personal hygiene is expected from OR personnel People (Staff) with URTI should be restricted from OR Staff with cut wounds (lesion) should be restricted from handling OR instrument, Nails should be cut short, Remove ornaments-rings neck lace, Minimize facial make up Wash hands between pts after removing gloves , etc…

7.3. Clothing & shoes

- ✓ Don freshly laundered OR attire on arrival to OR
- ✓ Change the attire whenever wet or soiled
- ✓ Avoid blood stained attire
- ✓ Launder attire only in hospital
- ✓ Wear OR attire only in the OR
- ✓ Wear comfortable and supportive shoes to minimize fatigue
- ✓ Use head cover- cape (hood), since hair is a gross contaminant, hair should be covered in semi-restricted and restricted area
- ✓ Avoid escape of any hair

- ✓ Mask: wear masks in restricted area to contain and filter droplet contaminating micro-organisms from mouth and nasopharynx during breathing talking, sneezing and coughing

7.4. Hair cover and mask

Masks: should fit comfortably over the nose and mouth. The same with a gown or apron, a wet mask is considered contaminated. The front of the mask is also contaminated. Masks should not be worn around the neck. For each client contact, a clean mask should be used

Figure 1. **Hair cover and mask**

7.4. Operative room cleaning

Definition Is to make free from substances that are unpleasant, harmful, or unwanted

Purpose

- ✓ Purpose of OR cleaning:-
- ✓ To prevent cross-contamination
- ✓ To make OR free safe environment for the pt and staff
- ✓ To make the room attractive as well

Principle of cleaning

Surgical asepsis prevents the contamination of surgical wounds. The patient's natural skin flora or a previously existing infection may cause postoperative wound infection. Rigorous adherence to the principles of surgical asepsis by OR personnel is the foundation of preventing surgical site infections.Follow the following principles.

- All soils should be removed without harming the surface being cleaned or the surrounding surfaces.
- The surface should be restored to its original state after the cleaning processes.
- The c leaning process should be efficient, using a minimum of equipment, cleaning agents, labour & time.
- The simplest cleaning method should be tried first, along with using the mildest cleaning agent.
- Always use the cleaning methods least harmful to the surface should be used.
- The cleaning should proceed from high area to low wherever possible.
- Always start with the cleaner surfaces & then go on to clean the more heavily soiled ones, so as to prevent the spread of soil from dirty to cleaner surfaces.
- While wet cleaning an area or polishing the floor, the cleaner should walk backwards while cleaning in front of him.

- Use of the suction/vacuum cleaning should be preferred over sweeping wherever possible.
- Sweeping should be done before dusting, and dusting before suction cleaning.
- The noise levels while cleaning should be kept as low as possible.
- Try to remove stains as soon as they occur using the correct methods.

Time of cleaning

- Room cleaning b/n patients
  - ✓ To prevent cross contamination
  - ✓ The conatmination cycle is from pt => environment=> staff=> other pts.
  - ✓ We break this cycle
  - ✓ Very frequently used materials are washed or cleaned .
  - ✓ Eg instruments, furniture, stretcher, anesthesia equipment, floor, etc…
- Discard used gowns, gloves, soiled sponges, sharp objects, solutions and suction bottle contents, etc
- Daily terminal cleaning cleaning at the completion of daily schedule
- Less frequently used materials are cleaned such as :
  - ✓ Scrub sink
  - ✓ Storage carts
  - ✓ Transport carts
  - ✓ Cleaning equipments,etc
- Weekly or monthly cleaning
  - ✓ In weekly cleaning one day (Friday) is selected for cleaning
  - ✓ All staff are involved
  - ✓ There is no scheduled operation-except emergency
  - ✓ Rarely used items are washed or cleaned such as: walls, ceilings, storage shelf, sterilization, anesthesia machine
  - ✓ Nurses are responsible for the cleaning and prevention of infection in the OR

Self check-7	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Explain time of OR Cleaning
2. List principles cleaning
3. Write the purpose of OR cleaning

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1----------

2----------

3----------

Information Sheet 8- Performing hand washing and scrubbing

8.1. **Definition of scrubbing**

Hands are the most common ways in which microorganisms such as bacteria can be transported and subsequently causes infections, especially to those susceptible to infections. In order to prevent spread of microorganisms hand hygiene must be performed adequately to reduce the transmission of infectious agent. The transmission of microbes from one to another mostly takes place via our hands, or hands to contaminated object. Hand hygiene is one of the simplest and most effective procedures to prevent the spread of disease. It's essential that everyone takes responsibility to ensure that the care provided is carried out in safe manner. Wash hands by soap and water or use an antiseptic hand rub/Waterless hand washing. In order to facilitate compliance in public services in infection prevention and control following procedures should be introduced

- ✓ Providing hand rubs at the entrance to service use areas for visitors if not contraindicated.

- ✓ Notices and hand hygiene poster should be displayed to attract attention of visitors and service users

- ✓ Hand hygiene leaflets should be distributed during outbreaks or mass media should be used.

Types of hand washing

Water based hand washing (liquid soap and water): is using soap with water and it suspends transient microorganisms allowing them to be rinsed off effectively (mechanical removal) of dirty. Soap and water hand washing is effective as hand washing preparations containing anti-microbial agents (antiseptic solutions) for decontaminating hands and removing and removing transient microorganism.

Waterless hand washing (Alcohol based hand washing): is using hand alcohol rub sanitizers as hand washing agent. Preparations contain an emollient which aid in reducing damage to the hands, these preparations should only be used when there is no visible soiling of the hands, if there is visible soiling, soap and water hand washing should be used. Alcohol hand rub provide an acceptable alternative to soap and water in moist situations when hands are physically clean, this hand rubs are less effective if used immediately after the application of a hand lotions. However hands will need to wash with soap and water after several applications in order to prevent a buildup of an emollient on the skin.

Levels of hand hygiene: hand washing is probably the most important method of protecting the service user. The technique is more important than the solutions used. There are two main levels of hand hygiene.

Routine hand washing: it is removing dirt, organic matter and most transient organism acquired through direct contact with person, and from the environment. Liquid soap and water is adequate for this procedure. A fifteen to thirty seconds hand wash using liquid soap is **acceptable**.

Aseptic hand washing: it is disinfecting hands by removing transient microorganism and reducing resident organism. Level of hand hygiene should be done prior invasive procedures. Aseptic hand washing can be achieved through routine hand washing with soap and water followed by an application of alcohol hand rub or washing with

antiseptic solutions containing antimicrobial agents and ensures you are “bare below elbows”.

“Bare below the Elbow as per dress Code Policy”include:

- ✓ Staff in clinical contact, direct patient care or involved in the cleaning of the environment/patient equipment, must be “bare below the elbow” to facilitate good hand hygiene practice.
- ✓ Sleeves should be short or rolled up
- ✓ All wrist and hand jewellery should be removed with the exception of a wedding ring
- ✓ Finger nails should be kept short, clean and free from nail vanish, artificial nails and nails extensions.

When should perform hand washing

WHO “FIVE KEY moments for hand hygiene”

- ✓ Before touching a patient
- ✓ Before clean/aseptic procedure
- ✓ Immediately/After bodily fluids exposure
- ✓ After touching a patient
- ✓ After touching patient surroundings

Additional Moments for Hand Hygiene

- ✓ Before commencing work/after leaving work area
- ✓ Before and after preparing or eating food

- ✓ Before handling medicines
- ✓ Before wearing & after removing gloves*
- ✓ After handling contaminated laundry & waste
- ✓ After contact with used equipment
- ✓ After using the toilet
- ✓ After cleaning equipment or the environment.

Standard hand washing procedure:

- ✓ Remove jewellery.
- ✓ Wet hands thoroughly all over.
- ✓ Use pH neutral soap.
- ✓ Lather soap all over hands.
- ✓ Rub hands together vigorously for 15-20 seconds. Pay particular attention to the fingertips, thumbs, wrists, finger webs and the backs of the hands.
- ✓ Rinse under running water.
- ✓ Pat hands dry with paper towels.

Surgical hand washing/scrub: removes transient organisms and a substantial number of resident organisms. Effective skin antisepsis can be achieved by: Surgical hand wash/scrub using aqueous skin disinfectants. the disinfectant solutions available for surgical skin hand washing are: 4% Chlorhexidinegluconate skin cleanser, 7.5% Povidone iodine and 2% Triclosan skin cleanser. It is important that mixtures of the different types of antiseptic solutions are not used together as they may inactivate each other.

How to use an alcohol-based hand sanitizer

Alcohol-based hand sanitizers, which don't require water, are an acceptable alternative when soap and water aren't available. If you use a hand sanitizer, make sure the product contains at least 60% alcohol. Follow these steps:

- Apply the gel product to the palm of one hand. Check the label to find out the appropriate amount.
- Rub your hands together.

Figure 2. Hand hygiene with soap and water

How to wash your hands: It's generally best to wash your hands with soap and water. Over the counter antibacterial soaps are no more effective at killing germs than is regular soap. Follow these steps.

8.2. Purposes of hand washing and scrubbing

- ✓ Removes dirty and soil from hand
- ✓ Reduce cross contamination
- ✓ Reduce risk of hand acting as caciers of diseases
- ✓ Break the chain of infection spread
- ✓ Prevent nosocomial infection
- ✓ Gives psychological cleanliness feeling to the paramedical staff
- ✓ Interrupt feco oral transmission disease

Self check-8	Multiple choice test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Which one of the following is/are purpose of hand washing?
   A. To prevent diseases transmission
   B. To breaks the chain of diseases
   C. To Reduce cross contamination
   D. ALL
2. Which one are the simplest and most effective procedures to prevent the spread of disease.
   A. Hand hygiene
   B. boiling
   C. sterilization
   D. none

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1---------

2.----------

Information Sheet 9- Procedures for wearing sterile gloves and gowns

9.1. Definition

Gloves: gloves are the most probably used personal protective equipment, they covers hand and wrist protecting from exposure of droplets and contamination. Health care workers must use personal protective equipment when providing care to their patients or at working area because gloves protect both patient and client. Gloves should be used when issue on contamination is present. Also, when a caregiver has open wound on the hands, it is a must that he/she use gloves. The outside of the gloves should not be touched when removed as this is considered contaminated. The sterile gloves are donned immediately after gowning.

Gown: is cloth covering and putted over clothes and tied behind that is long enough to cover your clothing. Because the outside of the gown is considered contaminated, this should not be touched when it is removed. A gown that is wet is, of course, considered contaminated also. A caregiver should wear a clean gown every client care. In case the gown is not available, apron should be worn to mask clothing during client contact. The sterile gown is put on immediately after the surgical scrub.

9.2. Purpose

A sterile gown and gloves are worn:

- To exclude skin as a possible contaminant and
- To create a barrier between the sterile and nonsterile areas.

9.2. Methods of gloving

Gloves and Gloving

Gloving: is the process of wearing gloves.

Hand hygiene coupled with the use of protective gloves, is a key component in minimizing the spread of disease-producing microorganisms and maintaining an infection-free environment.

In addition, understanding when sterile or high-level disinfected gloves are required and, equally important, ***when they are not, can*** reduce costs, while maintaining safety for both patient and caregiver.

closed method

- Lay the glove palm down over the cuff of the gown. The fingers of the glove face toward you
- Working through the gown sleeve grasps the cuff of the glove and bring it over the open cuff of the sleeve.
- Unroll the glove cuff so that it covers the sleeve cuff.
- Proceed with the opposite hand, using the same technique.
- Never allow the bare hand to contact the gown cuff edge or outside glove.

Closed technique self-gloving

I. HOW TO DON GLOVES:

1. Take out a glove from its original box

2. Touch only a restricted surface of the glove corresponding to the wrist (at the top edge of the cuff)

3. Don the first glove

4. Take the second glove with the bare hand and touch only a restricted surface of glove corresponding to the wrist

5. To avoid touching the skin of the forearm with the gloved hand, turn the external surface of the glove to be donned on the folded fingers of the gloved hand, thus permitting to glove the second hand

6. Once gloved, hands should not touch anything else that is not defined by indications and conditions for glove use

open method

Pick up the glove by its inside cuff with one hand.

- Do not touch the glove wrapper with the bare hand

Slide the glove onto the opposite hand.

- Leave the cuff down

Using the practically gloved hand, slide the fingers into the outer side of the opposite glove cuff.

Slide the hand into the glove and unroll the cuff.

- Do not touch the bare arm as the cuff is unrolled.

with the gloved hand, slide the fingers under the outside edge of the opposite cuff and unroll it gently, using the same technique

Methods of gowning

Gowning

The purpose of wearing sterile gown is in order to provide sterile field

There are two methods of sterile gowning:-

- ✓ Gowning self and
- ✓ Gowning another as the gown is donned:

The practitioners must ensure that they touch the inside of the gown only and that both arms are inserted into the sleeves of the gown together.

The circulating person should assist the scrubbed person by securing the gown's back ties.

Scrub person, putting on gown, gently shake out folds, then slips arms into sleeves without touching sterile outside of gown with bare hands

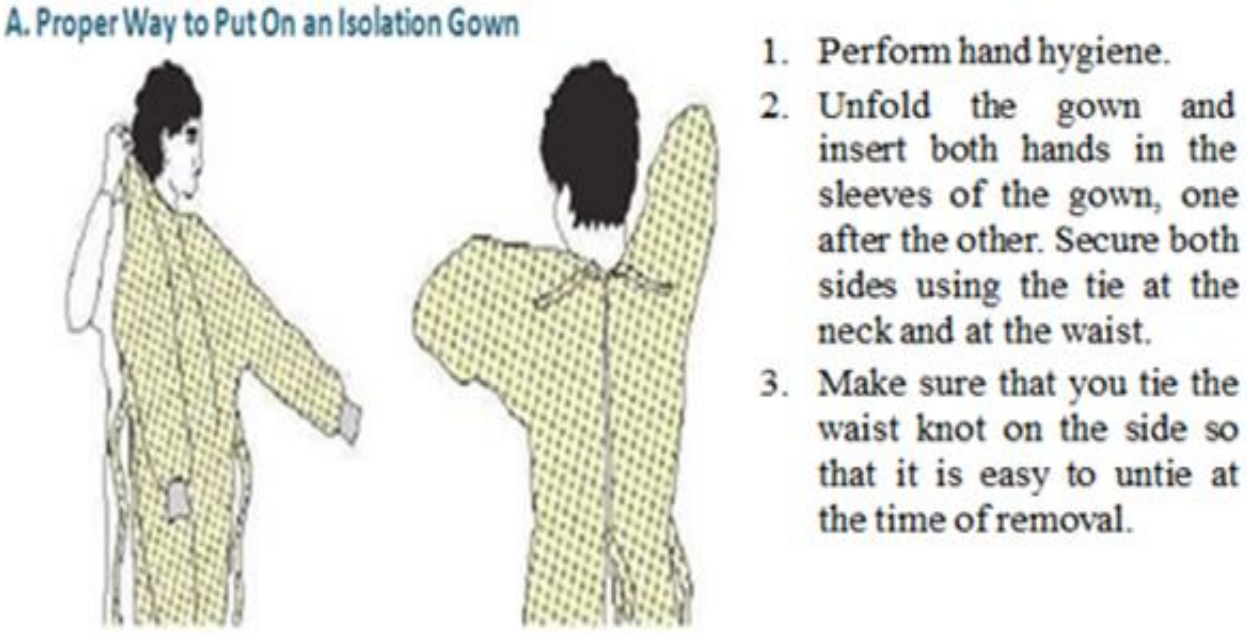

Figure3:- How to put on isolation gown

Figure 4:- Circulator nurse, pulling gown on scrub person without touching the outside of the gown.

B. Proper Way to Remove an Isolation Gown

1. Release the knot around the neck, being sure not to contaminate the neck, followed by the side knot.
2. Slowly pull the gown away from your body, pulling it inside out, as you remove your hands, one after the other.
3. Fold the gown inside out, ensuring that you avoid touching the outer surface of the gown.
4. Dispose of the gown in a contaminated-waste container.

Figure5: - How to remove isolation gown

Self check-9	Multiple choice test

Instructions*:* Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers. Write your answers in the sheet provided in the next page.

1. Discus the method of gloving and gowning

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1----------

Operation title 1: - Donning and removing surgical Gowns

Purpose	To protect patients from microorganisms present on the abdomen and arms of the healthcare staff during surgery
Equipment ,tools and materials	Supplies and equipment needed or useful for include these: • Sterile gown
Conditions	• Appropriate table, gowning area
Procedures	1. The sterile gown is folded inside out. 2. Grasp the gown inside the neckline, step back, and allow the gown to open in front of you; keep the inside of the gown towardyou; do not allow it to touch anything 3. Holding the neck band with both hand and gently shakes the folds from the gown 4. With hands at shoulder level, slip both arms into the gown; keep your hands inside thesleeves of the gown 5. The circulating nurse will step up behind you and grasp the inside of the gown, bring it over your shoulders, and secure the ties at the neckand waist. 6. Unfasten neck and then ties 7. Remove gown using a peeling motion; pull gown from each shoulder towards the same hands. 8. Gown will turn inside out 9. Hold removed gown away from body, roll into a bundle and discard into waste or linen receptacle

LG #34	LO #2- **Contribute to the assessment of client undergoing surgical intervention**

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Definition
- Phases of surgery
- Communicating clients, significant others and health team members
- Assessment of client undergoing surgical intervention
- Preoperative nursing assessment
  - ✓ Cardiovascular assessment
  - ✓ Respiratory assessment
  - ✓ Nutritional &fluid assessment
  - ✓ Hepatic & renal assessment
  - ✓ Immunity & endocrine
  - ✓ Psychological & spiritual assessment
  - ✓ Risk factors for surgical complication
- Intraoperative nursing assessment
- postoperative nursing assessment
- Documented pre/post and inters operative assessment

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Explain the Communicating clients, significant others and health team members
- Assess the client undergoing surgical intervention
- Explain the Preoperative nursing assessment
- Explain the intraoperative nursing assessment
- Explain the postoperative nursing assessment
- Documented pre/post and inters operative assessment

Learning Instructions:

1 Read the specific objectives of this Learning Guide.

2 Follow the instructions described below.

3 Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.

4 Accomplish the “Self-checks” which are placed following all information sheets.

5 Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).

6 If you earned a satisfactory evaluation proceed to “Operation sheets

7 Perform “the Learning activity performance test” which is placed following “Operation sheets” ,

8 If your performance is satisfactory proceed to the next learning guide,

9 If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Instruction Sheet 1.	Contribute to the assessment of client undergoing surgical intervention

1.1. Definition

1.2. Phases of surgery

In surgery there are 3 main phases: Preoperative, intraoperative and postoperative. These phases collectively are known as the perioperative period. Perioperative nursing is the way by which nursing care is provided. Each phase is related to specific activities carried out and skills needed for different stages of nursing.

Preoperative Phase

This stage is undertaken when the patient decides to have surgery. Preoperative phase, which includes discussing to the patients about all the benefits of the procedure but also the dangers that could occur. By giving this information to the patients prior their operation, it's a good chance for the patient to discuss any concerns they may have. Also the theatre nurses must making sure that the patients are in good condition, before going ahead with the surgery. While it is very important to prepare a patient physically it is also important to mentally prepare a patient prior to surgery.

A surgical nurse will help prepare the patient using various methods often including family members depending on the situation. The patient will normally express any concerns about the surgery to the nurse, this information will be passed on to other hospital staff including the surgeon, the appropriate actions will be taken dependent on the situation.

Intraoperative Phase

This stage begins when the ward nurse, who has prepared the patient for surgery, delivers the patient and their notes to the theatre and/or anesthetic nurse. Many checks are undertaken in this stage to ensure a safe environment for the patient and the theatre staff. The theatre nurse carries out activities to maintain a sterile environment and to ensure the surgical equipment is working well. The nurse also organises all surgical instruments and ensures all supplies needed during the surgery are available.

Postoperative Phase

This phase begins when the theatre/anaesthetic nurse delivers the patients notes to the nurses and staff in the Post-Anaesthetic Care Unit (PACU). This can also be known as the recovery room. Here the nurse's immediate attention is on checking the patient's airway and breathing. In this phase nurses also attend to pain relief and any other complications following surgery.

These nurses, often in day surgery cases, attend to provide patients and their caregivers with support and instructions and requirements needed for home care.

The first twenty-four hours post-surgery are critical, there are many procedures that should take place in order to monitor the patient. Observations of the patient need to be taken and recorded every fifteen minutes. General observations are inclusive of, heart rate, blood pressure, temperature, respiratory rate and oxygen saturation.

Further tasks taken out by a surgical nurse post operation include; urine output, assessment of wound sites, replacing intravenous requirements and reporting any abnormalities. It is also a task of the nurse to collect information about the patient's social history or issues, mobility restrictions, nutrition and education requirements prior to discharge from hospital. When these tasks are taken out it is proven to improve recovery.

2.2. Communicating clients, significant others and health team members

Health communication is the study and practice of communicating promotional health information, such as in public health campaigns, health education, and between doctor and patient. The purpose of disseminating health information is to influence personal health choices by improving health literacy. Because effective health communication must be tailored for the audience and the situation, research into health communication seeks to refine communication strategies to inform people about ways to enhance health or to avoid specific health risks. Academically, health communication is a discipline within communication studies.

Health communication may variously seek to: increase audience knowledge and awareness of a health issue influence behaviors and attitudes towards a health issue demonstrate healthy practices demonstrate the benefits of behavior changes to public health outcomes advocate a position on a health issue or policy increase demand or support for health services argue against misconceptions about health

Training

Health communication professionals are specifically trained in methods and strategies for effective communication of public health messages, with qualifications in research, strategic development, and evaluating effectiveness.

Health communication is taught in masters and doctoral programs. The Coalition for Health Communication maintains a list of such programs.

Scholars and practitioners in health communication are often trained in disciplines such as communication studies , sociology , psychology , public health , or medicine and then focus within their field on either health or communication.

Practitioners are pragmatic and draw from social-scientific scholarship, theories from the humanities, and professional fields such as education, management, law and marketing. Professionals trained in health communication encounter a wide range of

employment opportunities spanning between the public, private, and volunteer sectors and have the opportunity for a large amount of career mobility. Examples of jobs in each of these categories include federal, state, and local health departments in the public sector, Pharmaceutical companies and large corporations in the private sector, and various non-profit organizations such as the American Cancer Society and the American Heart Association in the volunteer sector.

Overview International Communication Association officially recognized health communication in 1975; in 1997, the American Public Health Association categorized health communication as a discipline of Public Health Education and Health Promotion.
Careers in the field of health communication range widely between the public, private, and volunteer sectors and professionals of health communication are distinctively trained to conduct communication research, develop successful and repeatable campaigns for health promotion and advocacy, and to evaluate how effective these strategies have been for future campaigns.

Clear communication is essential to successful public health practice at every level of the ecological model : intrapersonal, interpersonal, group, organizational, and societal. In each instance of health communication, there must be careful deliberation concerning the appropriate channel for messages to best reach the target audience, ranging from face-to-face interactions to television, Internet, and other forms of mass media. The recent explosion of new Internet communication technologies,particularly through the development of health websites (such as MedlinePlus, Health finder, and WebMD), online support groups (such as the Association for Cancer Online Resources), web portals, tailored information systems, tele health programs, electronic health records, social networking , and mobile devices (cell phones, PDAs, etc.) means that the potential media are ever changing.
The social and cultural contexts in which health communication occurs are also widely diverse and can include (but are not limited to) homes, schools, doctor's offices, and workplaces, and messages must consider the variant levels of health literacy.

Self check 1	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1. Discus the phase of surgery

2. What is the role of nurses in each phase?

Score = _____
Rating: _____

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

_____

Information Sheet 3- Assessment of client undergoing surgical intervention

3.1. Assessment of client undergoing surgical intervention

Preoperative care refers to health care provided before a surgical operation. The aim of preoperative care is to do whatever is right to increase the success of the surgery. At some point before the operation the health care provider will assess the fitness of the person to have surgery. This assessment should include whatever tests are indicated, but not include screening for conditions without an indication. Immediately before surgery the person's body is prepared, perhaps by washing with an antiseptic, and whenever possible their anxiety is addressed to make them comfortable.

Technique

At some point before surgery a health care provider conducts a preoperative assessment to verify that a person is fit and ready for the surgery. For surgeries in which a person receives either general or local anesthesia, this assessment may be done either by a doctor or a nurse trained to do the assessment. The available research does not give insight about any differences in outcomes depending on whether a doctor or nurse conducts this assessment. Addressing anxiety Playing calming music to patients immediately before surgery has a beneficial effect in addressing anxiety about the surgery.

Surgical site preparation Hair removal at the location where the surgical incision is made is often done before the surgery. Sufficient evidence does not exist to say that removing hair is a useful way to prevent infections. When it is done immediately before surgery, the use of hair clippers might be preferable to shaving. Bathing with an antiseptic like chlorhexidine does not seem to affect incidence of complications after surgery. However, washing the surgical site with chlorhexidine after surgery does seem helpful for preventing surgical site infection. Risks screening is a test to see whether a person has a diseases, and screenings are often done before surgery.

Screenings should happen when they are indicated and not otherwise as a matter of routine. Screenings which are done without indication carry the risks of having unnecessary health care . Commonly overused screenings include the following:
Electrocardiograms (ECGs) are sometimes given before any kind of surgery as a matter of routine, but are unnecessary if a person does not have new and worrisome symptoms and if the surgery is minor. Eye surgery, for example, would not usually require an ECG.

Cardiac imaging and cardiac stress tests are usually unnecessary for people who do not have a serious heart condition and who are having surgery unrelated to the heart. People in the United States using government healthcare services are especially likely to have this procedure without indication. Chest x-rays are usually unnecessary for people under age 70 who are not having chest surgery and who do not have worrisome symptoms. Breathing tests are usually unnecessary for people who do not smoke , do not have respiratory disease , and who do not have symptoms.Carotid ultrasonography is usually unnecessary for people who have not had a stroke or mini-stroke .

Special populations

Children

Among children who are at normal risk for normal risk of pulmonary aspiration or vomiting during anaesthesia, there is no evidence showing that denying them oral liquids before surgery improves outcomes but there is evidence showing that giving liquids prevents anxiety.

Recreational substance users Sometimes before a surgery a health care provider will recommend some health intervention to modify some risky behavior which is associated with complications from surgery.

Smoking cessation before surgery is likely to reduce the risk of complications from surgery. In circumstances in which a person's doctor advises them to avoid drinking alcohol before and after the surgery, but in which the person seems likely to drink

Self check-2	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write the most important assessment for the patient undergoing surgical intervention

Answer Sheet

Name: _____ Date:

Short Answer Questions

Part

1._____

Information Sheet 4- Preoperative nursing assessment

4.1. Cardiovascular assessment

The goal in preparing any patient for surgery is to ensure a wellfunctioning cardiovascular system to meet the oxygen, fluid, and nutritional needs of the perioperative period. If the patient has uncontrolled hypertension, surgery may be postponed until the blood pressure is under control. Because cardiovascular disease increases the risk for complications, patients with these conditions require greater-than-usual diligence during all phases of nursing management and care.

Depending on the severity of the s symptoms, surgery may be deferred until medical treatment can be instituted to improve the patient's condition. At times, surgical treatment can be modified to meet the cardiac tolerance of the patient. For example, in a patient with obstruction of the descending colon and coronary artery disease, a tempor ary simple colostomy may be performed rather than a more extensive colon resection that would require a prolonged period of anesthesia.

4.2. Respiratory assessment

The goal for potential surgical patients is optimal respiratory function. Patients are taught breathing exercises and use of an incentive spirometer if indicated. Because adequate ventilation is potentially compromised during all phases of surgical treatment, surgery is usually postponed when the patient has a respiratory infection. Patients with underlying respiratory disease (eg, asthma, chronic obstructive pulmonary disease) are assessed carefully for current threats to their pulmonary status. Patients' use of medications that may affect recovery is also assessed. Patients who smoke are urged to stop 2 months before surgery, although many do not do so. These patients should be counseled to stop smoking at least 24 hours prior to surgery.

Research suggests that counseling has a positive effect on the patient's smoking behavior 24 hours preceding surgery, helping reduce the potential for adverse effects associated with smoking such as increased airway reactivity, decreased mucociliary clearance, as well as physiologic changes in the cardiovascular and immune systems.

4.3. Nutritional & fluid assessment

Optimal nutrition is an essential factor in promoting healing and resisting infection and other surgical complications. Assessment of a patient's nutritional status provides information on obesity, undernutrition, weight loss, malnutrition, deficiencies in specific nutrients, metabolic abnormalities, the effects of medications on nutrition, and special problems of the hospitalized patient (Quinn, 1999). Nutritional needs may be determined by measurement of body mass index and waist circumference.

4.4. Hepatic & renal assessment

The presurgical goal is optimal function of the liver and urinary systems so that medications, anesthetic agents, body wastes, and toxins are adequately processed and removed from the body.The liver is important in the biotransformation of anesthetic compounds. Therefore, any disorder of the liver has an effect on how anesthetic agents are metabolized. Because acute liver disease is associated with high surgical mortality, preoperative improvement in liver function is a goal.

Careful assessment is made with the help of various liver function tests. Because the kidneys are involved in excreting anesthetic drugs and their metabolites and because acid–base status and metabolism. Patients who have received corticosteroids are at risk for adrenal insufficiency. Therefore, the use of corticosteroids for any purpose during the preceding year must be reported to the anesthesiologist or anesthetist and surgeon. Additionally, the patient is monitored for signs of adrenal insufficiency. Patients with uncontrolled thyroid disorders are at risk for thyrotoxicosis (with hyperthyroid disorders) and respiratory failure (with hypothyroid disorders). Therefore, the patient is assessed for a history of these disorders.

4.5. Immunity & endocrine

An important function of the preoperative assessment is to determine the existence of allergies, including the nature of previous allergic reactions. It is especially important to identify and document any sensitivity to medications and past adverse reactions to these agents. The patient is asked to identify any substances that precipitated previous allergic reactions, including medications, blood transfusions, contrast agents, latex, and food products, and to describe the signs and symptoms produced by these substances.

Immunosuppression is common with corticosteroid therapy, renal transplantation, radiation therapy, chemotherapy, and disorders affecting the immune system, such as acquired immunodeficiency syndrome (AIDS) and leukemia. The mildest symptoms or slightest temperature elevation must be investigated. Because patientswho are immunosuppressed are highly susceptible to infection, great care is taken to ensure strict asepsis.

4.6. Psychological & spiritual assessment

Spiritual beliefs play an important role in how people cope with fear and anxiety. Regardless of the patient's religious affiliation, spiritual beliefs can be as therapeutic as medication. Every attempt must be made to help the patient obtain the spiritual help that he or she requests. Faith has great sustaining power. Thus, the beliefs of each patient should be respected and supported. Although patients and families are undoubtedly relieved that surgery is over, anxiety levels may remain high in the immediate postoperative period. Many factors contribute to this anxiety: pain, being in an unfamiliar environment, feeling unable to control one's circumstances, fear of the long-term effects of surgery, fear of complications, loss of ability to care for self, fatigue, spiritual distress, altered role responsibilities, ineffective coping, and altered body image are all potential reactions to the surgical experience.

The nurse helps the patient and family work through their anxieties by providing reassurance and information and by spending time listening to and addressing their concerns. The nurse describes hospital routines and what to expect in the ensuing hours and days until discharge and explains the purpose of nursing assessments and interventions. Informing patients when they will be able to drink fluids or eat, when they will be getting out of bed, and when tubes and drains will be removed helps them gain a sense of control and participation in recovery and engages them in the plan of care.

Acknowledging family members' concerns and accepting and encouraging their participation in the patient's care assists them in feeling they are helping their loved one. The nurse can manipulate the environment to enhance rest and relaxation by providing privacy, reducing noise, adjusting the lighting, providing enough seating for family members, and performing any other measures that will produce a supportive atmosphere.

4.7. Risk factors for surgical complication

Patients at increased risk for postoperative complications (eg, deep vein thrombosis) and pulmonary problems include the following:

Deep Vein Thrombosis

- ✓ Orthopedic patients having hip surgery, knee reconstruction, and other lower extremity surgery
- ✓ Urologic patients having transurethral prostatectomy, and older patients having urologic surgery
- ✓ General surgical patients over 40 years of age, those who are obese, those with a malignancy, those who have had prior deep vein thrombosis or pulmonary embolism, or those undergoing extensive, complicated surgical procedures
- ✓ Gynecology (and obstetric) patients over 40 years of age with added risk factors (varicose veins, previous venous thrombosis, infection, malignancy, obesity)
- ✓ Neurosurgical patients, similar to other surgical high-risk groups (in patients with stroke, for instance, the risk of deep vein thrombosis in the paralyzed leg is as high as 75%)

Pulmonary Complications

- ✓ Type of surgery—greater incidence after all forms of abdominalsurgery when compared with peripheral surgery
- ✓ Location of incision—the closer the incision to the diaphragm, the higher the incidence of pulmonary complications
- ✓ Preoperative respiratory problems
- ✓ Age—greater risk after age 40 than before age 40
- ✓ Sepsis and Obesity—weight greater than 110% of ideal body weight
- ✓ Prolonged bed rest
- ✓ Duration of surgical procedure—more than 3 hours
- ✓ Aspiration
- ✓ Dehydration
- ✓ Malnutrition
- ✓ Hypotension and shock
- ✓ Immunosuppression

Self check-4	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discus the preoperative nursing assessment
2. Explain the risk factors for surgical complication

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

Part

1.----------

2----------

Information Sheet 5- Intraoperative nursing assessment

5.1. Intraoperative nursing assessment

Maintenance of Safety

- ✓ Maintains aseptic, controlled environment
- ✓ Effectively manages human resources, equipment, and supplies for individualized patient care
- ✓ Transfers patient to operating room bed or table
- ✓ Positions the patient
    - o Functional alignment
    - o Exposure of surgical site
- ✓ Applies grounding device to patient
- ✓ Ensures that the sponge, needle, and instrument counts are correct
- ✓ Completes intraoperative documentation

Physiologic Monitoring

- ✓ Calculates effects on patient of excessive fluid loss or gain
- ✓ Distinguishes normal from abnormal cardiopulmonary data
- ✓ Reports changes in patient's vital signs
- ✓ Institutes measures to promote normothermia

Psychological Support (Before Induction and When Patient Is Conscious)

- ✓ Provides emotional support to patient
- ✓ Stands near or touches patient during procedures and induction
- ✓ Continues to assess patient's emotional status

Information Sheet 6- Post-operative nursing assessment

6.1. Post-operative nursing assessment

Assessment of the hospitalized postoperative patient includes monitoring vital signs and completing a review of systems upon the patient's arrival to the clinical unit and at regular intervals thereafter.Respiratory status is important because pulmonary complications are among the most frequent and serious problems encountered by the surgical patient.

The nurse monitors for airway patency and any signs of laryngeal edema. The quality of respirations, including depth, rate, and sound, are assessed regularly. Chest auscultation verifies that breath sounds are normal (or abnormal) bilaterally, and the findings are documented as a baseline for later comparisons. Often, because of the effects of analgesic and anesthetic medications, respirations are slow. Shallow and rapid respirations may be caused by pain, constricting dressings, gastric dilation, abdominal distention, or obesity.

Noisy breathing may be due to obstruction by secretions or the tongue. Another possible complication is flash pulmonary edema that occurs when protein and fluid accumulate in the alveoli unrelated to elevated pulmonary artery occlusive pressure. Signs and symptoms include agitation; tachypnea; tachycardia; decreased pulse oximetry readings; frothy, pink sputum; and crackles on auscultation.The nurse assesses the patient's pain level using a verbal or visual analogue scale and assesses the characteristics of the pain. The patient's appearance, pulse, respirations, blood pressure, skin color (adequate or cyanotic), and skin temperature (cold and clammy, warm and moist, or warm and dry) are clues to cardiovascular function. When the patient arrives in the clinical unit, the surgical site is assessed for bleeding, type and integrity of dressings, and drains.

The nurse also assesses the patient's mental status and level of consciousness, speech, and orientation and compares them with the preoperative baseline. Although a change in mental status or postoperative restlessness may be related to anxiety, pain, or medications, it may also be a symptom of oxygen deficit or hemorrhage. These serious causes must be investigated and excluded before other causes are

pursued. General discomfort that results from laying in one position on the operating table, the handling of tissues by the surgical team, the body's reaction to anesthesia, and anxiety are also common causes of restlessness. These discomforts may be relieved by administering the prescribed analgesics, changing the patient's position frequently, and assessing and alleviating the cause of anxiety. If tight, drainage-soaked bandages are causing discomfort, reinforcing or changing the dressing completely as prescribed by the physician may make the patientmore comfortable. The bladder is assessed for distention because urinary retention can also cause restlessness.

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Self-Check -6	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discus post operative nursing assessment

Answer sheet

1_____

_____

Note: **Satisfactory rating - 1 points** **Unsatisfactory - 0 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Question

Information Sheet 7- Documented pre/post and inters operative assessment

7.1. Documented pre/post and inters operative assessment

The documentation of nursing assessment is the recording of the process about how a judgment was made and its related factors, in addition to the result of the judgment. It makes the process of nursing assessment visible through what is presented in the documentation content. During nursing assessment, a nurse systematically collects, verifies, analyses and communicates a health care client's information to derive a nursing diagnosis and plan individualized nursing care for the client. Complete and accurate nursing assessment determines the accuracy of the other stages of the nursing process.

The nursing documents may contain a number of assessment forms. In an assessment form, a licensed Registered Nurse records the client's information, such as physiological, psychological, sociological, and spiritual status

Recording format

Paper-based nursing documentation

The paper-based nursing documentation has been in place for decades. Client's data are recorded in paper documents. The information in these documents needs to be integrated for sense-making in a nursing decision. Electronic nursing documentation. Electronic nursing documentation is an electronic format of nursing documentation an increasingly used by nurses. Electronic nursing documentation systems have been implemented in health care organizations to bring in the benefits of increasing access to more complete, accurate and up-to-date data and reducing redundancy, improving communication and care service delivery.

Comparison of the quality of paper-based and electronic documentation. Electronic nursing documentation systems are able to produce somewhat better quality data in comparison with paper-based systems, in certain respects depending on the characteristics of the systems and the practice of the various study settings.

The common benefits of electronic documentation systems include the improvement of comprehensiveness in documenting the nursing process, the use of standardized language and the recording of specific items about particular client issues and relevance of the message. In addition, electronic systems can improve legibility, dating and signing in nursing records.

Self-Check -7	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Explain types documenting format

Answer sheet

1_____

_____

_____

Score = _____

Rating: _____

Note: **Satisfactory rating - 1 points** **Unsatisfactory - 0 points**

Operation title 1: - Nasogastric tube insertion

Purpose	✓ To administer tube feeding and medication to clients unable to eat by mouth or swallow a sufficient diet without aspirating food or fluids in to the lungs. ✓ To establish a means for suctioning stomach contents to prevent gastric distension, before and after surgery ,nausea and vomiting
Equipment ,tools and materials	Supplies and equipment needed NGT, (Ryle's tube) plaster, • Gauze • Water soluble lubricant • Disposable glove • Glass of water • 20 to 50 ml syringe • Stethoscope • Blue litmus paper • Ink • Waster receiver • Rubber sheet and draw sheet • Mouth wash tray • Tongue depressor • Flash light • Basin with warm water or ice • Denature cup • Safety pin and rubber band • Bath towel • Normal saline
Conditions or situations for the operations	• All tools, equipment's and materials should be available on time when required.

Procedures	1. Explain the procedure to the patient 2. Wash hands and prepare equipments 3. Position 4. Done examination glove 5. Drape plastic sheet and lower around patient's neck. 6. Assess client's necks 7. After hyperextend the head of the client observe the patent 8. Prepare the tube for insertion. 9. Use the tube to mark off the distance 10. Lubricate about 15-20 cm of the tube 11. Insert the rounded end of the tube 12. As the tube passes down in the nasopharynx, ask the patient to start swallowing 13. Advance the tube through the pharynx 14. Continue in advancing the tube until the mark 15. Taping a tube to the bridge of the nose 16. Check the position of the tube to confirm *17.* Clamp the end of the tube with clamper or forceps or spigot *18.* Secure the tube to the nostril and attach to forehead with adhesive tape. Ensure patient is comfortable. 19. Attach the tube to a suction source or feeding apparatus as ordered 20. Assist the patient into position and comfort 21. Remove and clean the used equipment return it in to proper place 22. Wash hands and dry 23. Document relevant information

LG #35	LO #3- Contribute to the planning care for pre/post and Intra operative Nursing

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Preoperative nursing interventions
- developing an individualized plan of care
- Registered nurse
- Nursing care plan with participation of clients
- Risk management principles
- Demonstrating risk management principles
- Informed consent
- Health promotion and education
- Preoperative patient education
- Bowel &urinary preparation
- pain management
- Infection prevention
- Deep breathing & coughing exercise
- Mobility & active body movement
- Preoperative pain management
- Preoperative psychological intervention
- General preoperative nursing intervention
- Skin preparation
- Caring out regular review of plan
- Identifying potential for adverse client outcome
- Reporting potential for adverse client outcome
- Following policies and procedures for discharge/transfer

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Discribes the preoperative nursing interventions
- Explain the caring out regular review of plan
- Identify potential for adverse client outcome
- Report potential for adverse client outcome

- Following policies and procedures for discharge/transfer

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” which are placed following all information sheets.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets
7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,
8. If your performance is satisfactory proceed to the next learning guide,
9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Information Sheet 1- Contribute to the planning care for pre/post and Intra operative Nursing

1. Developing an individualized plan of care

Preoperative care refers to health care provided before a surgical operation . The aim of preoperative care is to do whatever is right to increase the success of the surgery.At some point before the operation the health care provider will assess the fitness of the person to have surgery. This assessment should include whatever tests are indicated , but not include screening for conditions without an indication. Immediately before surgery the person's body is prepared, perhaps by washing with an antiseptic, and whenever possible their anxiety is addressed to make them comfortable.

Technique at some point before surgery a health care provider conducts a preoperative assessment to verify that a person is fit and ready for the surgery. For surgeries in which a person receives either general or local anesthesia, this assessment may be done either by a doctor or a nurse trained to do the assessment. The available research does not give insight about any differences in outcomes depending on whether a doctor or nurse conducts this assessment. Addressing anxiety playing calming music to patients immediately before surgery has a beneficial effect in addressing anxiety about the surgery. Surgical site preparation Hair removal at the location where the surgical incision is made is often done before the surgery. Sufficient evidence does not exist to say that removing hair is a useful way to prevent infections.

When it is done immediately before surgery, the use of hair clippers might be preferable to shaving . Bathing with an antiseptic like chlorhexidine does not seem to affect incidence of complications after surgery. However, washing the surgical site with chlorhexidine after surgery does seem helpful for preventing surgical site infection .Risks Screening is a test to see whether a person has a disease , and screenings are often done before surgery. Screenings should happen when they are indicated and not

Self check 1	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1.what is individual care ?

Score = _____
Rating: _____

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

_____

_____

_____

_____

Information Sheet 2- Registered nurse

2.1. Registered nurse

The registered nurse (RN) is another member of the operating room staff. Although the scope of practice of the RN depends on each state's nurse practice act, the RN practices under the direct supervision of the surgeon.

RN responsibilities may include handling tissue, providing exposure at the operative field, suturing, and providing hemostasis. The entire process requires a thorough understanding of anatomy and physiology, tissue handling, and the principles of surgical asepsis. The competent RN needs to be aware of the objectives of the surgery, needs to have the knowledge and ability to anticipateneeds and to work as a skilled member of a team, and needs to be able to handle any emergency situation in the operating room.

A registered nurse (RN) is a nurse who has graduated from a nursing program and met the requirements outlined by a country, state, province or similar licensing body to obtain a nursing license . An RN's scope of practice is determined by legislation, and is regulated by a professional body or council .Registered nurses are employed in a wide variety of professional settings, and often specialize in a field of practice. They may be responsible for supervising care delivered by other healthcare workers, including student nurses, licensed practical nurses (except in Canada), unlicensed assistive personnel, and less-experienced RNs.

Registered nurses must usually meet a minimum practice hours requirement and undertake continuing education to maintain their license. Furthermore, there is often a requirement that an RN remain free from serious criminal convictions. History the registration of nurses by nursing councils or boards began in the early twentieth century. New Zealand registered the first nurse in 1901 with the establishment of the Nurses Registration Act. Nurses were required to complete three years of training and pass a state- administered examination. Registration ensured a degree of consistency in the education of new nurses, and the title was usually protected by law. After 1905 in California, for example, it became a misdemeanour to claim to be

an RN without a certificate of registration. Registration acts allowed authorities a degree of control over who was admitted to the profession. Requirements varied by location, but often included a stipulation that the applicant must be "of good moral character" and must not have mental or physical conditions that rendered them unable to practice. As nursing became more of an international profession, with RNs travelling to find work or improved working conditions and wages, some countries began implementing standardized language tests (notably the International English Language Testing System).

When obtaining a nursing degree there are two major benefits that come with it, which are the personal benefits and the patient's benefits. Some personal benefits are that nursing is a highly respected position. They are highly respected due to the amount of knowledge that they hold. In order for a nurse to be successful, they must use their knowledge as a resource to keep the departments functioning. Another advantage of becoming a nurse is that jobs are in high demand.

One reason for this has to do with the generation of baby boomers beginning to retire therefore, more spots will be available. Other careers often have all their positions filled, but when it comes to nursing there are usually never enough nurses to fill all the positions. It is comfortable for a person to know that when it comes time to graduate there is a spot that will still need to be filled. Nursing also provides many different possibilities of employment. With a nursing degree, there are many positions that fall under this category. Being able to explore other options gives someone the chance to find the most suitable job for themselves. Not only do nurses receive the perks variety, but also with signing bonuses and shift preferences.

Now to begin with how patients will benefit from having a fuller nursing staff. When the preferred number of nurses is not met then this could potentially put someone's life at risk. When a patient is provided with a fully equipped staff there is much less room for error as there are enough nurses to properly rotate through the patient's rooms. As the number of nurses increases, the quality of life for the patients increases as well. Having a full staff can also help give the patient confidence that they are being properly cared for. It allows them to feel comfortable and safe. This is one less stressor that a patient will have to think while they are in the clinic.

By nation Australia Nursing registration in Australia has been at a national level since 2010, since the inception of the Nursing and Midwifery Board of Australia (NMBA), which forms part of the Australian Health Practitioners Regulation Agency (AHPRA). Prior to 2010, Nursing registration in Australia was administered individually by each state and territory.The title 'Registered Nurse' (also known in the state of Victoria as a 'Division 1 Nurse') is granted to a nurse who has successfully completed a board-approved course in the field of nursing, as outlined by education and registration standards defined by the NMBA. Registered Nurses are also required to meet certain other standards to fulfil registration standards as outlined by the NMBA, and these can include continuing professional development, recency of practice, criminal history checks and competency in the english language.

Educational requirements for an entry-level Registered Nurse are at the level of bachelor's degree in Australia, and can range in two to four years in length with three years being the national average. Some universities offer a two- year 'fast track' bachelor's degree, whereby a students study three years worth of coursework compressed in a two-year period. This is made possible by reducing summer and winter semester breaks and utilising three semesters per year compared to two. Some universities also offer combined degrees which allow the graduate to exit the program with a Masters in Nursing, e.g.: Bachelor of Science/Master of Nursing, and these are generally offered over a four-year period.

Postgraduate nursing education is widespread in Australia and is encouraged by employing bodies such as state health services (e.g. New South Wales Health). There are many varying courses and scholarships available which provide a bachelor-level Registered Nurse the opportunity to 'up-skill' and assume an extended scope of practice. Such courses are offered at all levels of the post graduate spectrum and range from graduate certificate to master's degree and provide a theoretical framework for a bachelor level Registered nurse to take up an advanced practice position such as Clinical Nurse Specialist (CNS), Clinical Nurse Consultant (CNC) and Nurse Practitioner (NP).

Canada in all Canadian provinces except Quebec, newly registerednurses are required to have a Bachelor of Science in Nursing . This is either achieved through a four-year university (or collaborative) program or through a bridging program for registered practical nurses or licensed practical nurses . Some universities also offer compressed programs for applicants already holding a bachelor's degree in another field. Prior to 2015, initial licensure as an RN required passing the Canadian Registered Nurse Examination (CRNE) offered by the Canadian Nurses Association. As of 2015, for initial licensure, Canadian RNs must pass the NCLEX-RN exam offered by the National Council of State Boards of Nursing.

In Quebec, the 'Ordre des infirmières et infirmiers du Québec' (Quebec Order of Nurses) administers their own licensing exam for registration within the province.In British Columbia, due to cuts to education funding made by the BC Liberal government, funding for foreign students in the clinical parts of nursing programs was eliminated, and as a consequence, all public institutions no longer admitted foreign students to their undergraduate nursing programs. In Denmark, nurses are certified by the Danish Ministry of Health . It is also the ministry that keeps track of violationsnand can retract individual authorization. Economics As of 2011, there are 2.24 million registered nurses in China.

In 2014, the United States had approximately 2,751,000 registered nurses[24] and Canada had just over 250,000. In the US and Canada this works out to approximately eight nurses per 1,000 people. According to the Bureau of Labor Statistics, registered nursing jobs are projected to grow by 15% between 2016 and 2026, which is much faster than the average overall rate. The growth rate in the United States is due to a number of reasons, including an increased interest in preventative care, an increase in chronic illnesses, and the demands of services required by the baby boom generation. The highest-paid registered nurses in the United States are in California. California cities often comprise the top five highest-paying metropolitan areas for registered nurses in the country.

Self check 2	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is registered nurse?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

_____

_____

Note: Satisfactory rating =2 points **Unsatisfactory rating=below 2 point**

Information Sheet 3- Nursing care plan with participation of clients

3.1. Nursing care plan with participation of clients

Patient participation is a trend that arose in answer to perceived physician paternalism. However, only rarely can unchecked physician paternalism be justified, and unlimited patient autonomy would presumably be equally abhorrent.

In recent years, the term "patient participation" has been used in many different contexts. These include, for example: participatory medicine, health consumerism, and patient-centered care . For the latter context, i.e. patient-centered care, a more nuanced definition was proposed in 2009 by the president of the Institute for Healthcare Improvement Donald Berwick : "The experience (to the extent the informed, individual patient desires it) of transparency, individualization, recognition, respect, dignity, and choice in all matters, without exception, related to one's person, circumstances, and relationships in health care" are concepts closely related to patient participation.

Patient participation is a generic term, and thus no list can be exhaustive; nonetheless, the following description shall subdivide it into several areas where patients and/or their advocates have a role. The practice of engaging patients in health policy originated from the consumer advocacy movement, which prioritized consumer safety, access to information and public participation in public health programs. Depending on the context, patient participation in health policy can refer to informed decision making, health advocacy, program development, policy implementation, and evaluation of services. Patient participation in health policy can affect many different levels of the health care system.

Hospitalized individuals may participate in their own medical care in an effort to make shared decisions. In other areas, patients act as advocates by serving as members of organizational and governmental policy committees. Increased patient participation in health policy can lead to improvements in patient satisfaction, quality and safety, cost savings and population health outcomes. Involving patient participation in health policy research can also ensure that public health needs are accurately incorporated into policy proposals.

Furthermore, patient satisfaction scores from these surveys have become an important metric by which hospitals are evaluated and compared to one another. Patient participation has riven the development of a variety of health policies, ranging from the expansion of hospital visitation hours to the implementation of patient-centered bedside rounding by hospital medical teams. Patient participation has contributed to improvements in the nurse-to- nurse handoff process by engaging with staff to discuss change-of-shift information at the patient's bedside. Patient participation in care coordination has also lead to the utilization of electronic medical records that patients can access and edit.

By engaging with patients and patient advocacy groups, policymakers can support patients to shape public policy.Examples include facilitation of public participation in research, town hall meetings, public information sessions, internet and mobile-based surveys and open comment periods on proposed legislation. Hospitals promote patient participation by empowering patients to serve as advisers and decision makers, including on quality improvement teams, patient safety committees, and family-centered care councils. Similarly, foundations, nonprofit organizations, and governmentagencies can create funding mechanisms requiring and supporting patient participation insocietal decisions and priority setting.

Self check 3	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. How to participate the patient in caring?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____
_____
_____

Note: Satisfactory rating =2 points **Unsatisfactory rating=below 2 point**

Information Sheet 4- Risk management principles

4.1. Risk management principles

In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss (or impact) and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled in descending order. In practice the process of assessing overall risk can be difficult, and balancing resources used to mitigate between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled. Intangible risk management identifies a new type of a risk that has a 100% probability of occurring but is ignored by the organizationdue to a lack of identification ability.

Relationship risk appears when ineffective collaboration occurs. Process-engagement risk may be an issue when ineffective operational procedures are applied. These risks directly reduce the productivity of knowledge workers, decrease cost-effectiveness, profitability, service, quality, reputation, brand value, and earnings quality. Intangible risk management allows risk management to create immediate value from the identification and reduction of risks that reduce productivity.

Opportunity cost represents a unique challenge for risk managers. It can be difficult to determine when to put resources toward risk management and when to use those resources elsewhere. Again, ideal risk management minimizes spending (or manpower or other resources) and also minimizes the negative effects of risks. Risk is defined as the possibility that an event will occur that adversely affects the achievement of an objective. Uncertainty, therefore, is a key aspect of risk. Systems like the Committee of Sponsoring Organizations of the Tradeway Commission Enterprise Risk Management (COSO ERM), can assist managers in mitigating risk factors.

Each company may have different internal control components, which leads to different outcomes. For example, the framework for ERM components includes Internal Environment, Objective Setting, Event Identification, Risk Assessment, Risk

Response, Control Activities, Information and Communication, and Monitoring. Method for the most part, these methods consist of the following elements, performed, more or less, in the following order.

- ✓ Identify the threats
- ✓ Assess the vulnerability of critical assets to specific threats
- ✓ Determine the risk
- ✓ Identify ways to reduce those risks
- ✓ Prioritize risk reduction measures Principles

Information Sheet 5- Demonstrating risk management principles

5.1. Demonstrating risk management principles

The department is committed to maintaining and continuously improving an enterprise wide system that manages risks at a strategic and operational level.

This system is designed to complement the strategic plan and promotes:

Risk management as part of the organisation's culture:

- ✓ a culture that is not risk averse but is prepared to manage risks within an appetite that is set and reviewed by the Executive Leadership Team (ELT);
- ✓ a culture of enquiry, learning, reflection and trust to anticipate and objectively assess risks and opportunities associated with managing directions, services, processes, competencies, values and behaviours;
- ✓ a culture with channels of communication that are open, ethical, and improve connectivity across the department;
- ✓ a culture which continually adds value to departmental governance structure and client outcomes;
- ✓ a culture which commits to a robust business planning and reporting cycle which is inclusive of risk management principles.
- ✓ Visible focus on managing strategic risk emergence and uncertainty:
- ✓ demonstrated by exercising risk leadership by example and communicating the risk culture;
- ✓ modelling behaviours based on principles outlined in this framework;
- ✓ overseeing and understanding the interdependence of risks;
- ✓ ensuring competencies by supporting professional development and risk management education and training; and
- ✓ aligning resources with managing risks and opportunities
- ✓ Full accountability for managing and reporting significant risks at all levels of the organisation (strategic and operational):
- ✓ managing the uncertainty associated with strategic risks

Recording and Reporting of Risks

The department uses an electronic tool (DCSI Risk Register) to record and maintain its risks, controls and treatments. It is a requirement for all business units within the department to have their risks, operational or strategic, recorded on the register. Reporting of risks, controls and treatments occurs on a quarterly basis. These reports are subject to a quality review process that ensures there is a consistent approach and language used across the department. The results are then reported to the Chief Executive and members of the ELT and Audit Committees.

The Project Officer in the Risk Management function of Quality Assurance, Risk & Business Improvement Branch (QARBI) of Financial Services Division is the administrator of the register and also assists the Risk Assessment Facilitators (RAF) in maximising use of the electronic risk register to record and report the information.
Risk control management (sometimes also called control self assessment):

- ✓ designing methods and procedures as controls to manage risks;
- ✓ reduces the likelihood of potential problems occurring and limits the impact if they do
- ✓ monitor and reviews the effectiveness of controls

Limitations of risk management

In acknowledging the limitations of risk management in isolation, the department will be better prepared to embed risk management in everything we do. To demonstrate this, the AS/NZS ISO 31000:2009 principles have been aligned to the department approach and then further aligned with the high performance framework and the business excellence framework.

Information Sheet 6- Informed consent

6.1. Informed consent

Voluntary and written **informed consent** from the patient it is necessary before nonemergent surgery can be performed. Such written consent protects the patient from unsanctioned surgery and protects the surgeon from claims of an unauthorized operation. In the best interests of all parties concerned, sound medical, ethical, and legal principles are followed. The nurse may ask the patient to sign the form and may witness the patient's signature.

It is the physician's responsibility to provide appropriate information. Before the patient signs the consent form, the surgeon must provide a clear and simple explanation of what the surger y will entail. The surgeon must also inform the patient of the benefits, alternatives, possible risks, complications, disfigurement, disability, and removal of body parts as well as what to expect in the early and late postoperative periods.

If the patient needs additional information to make his or her decision, the nurse notifies the physician about this. Also, the nurse ascertains that the consent form has been signed before administering psychoactive premedication, because the consent may not be valid if it was obtained while the patient was under the influence of medications that can affect judgment and decision-making capacity. Informed consent is necessary in the following circumstances:

- ✓ Invasive procedures, such as a surgical incision, a biopsy, a cystoscopy, or paracentesis
- ✓ Procedures requiring sedation and/or anesthesia
- ✓ A nonsurgical procedure, such as an arteriography, that carrier more than slight risk to the patient
- ✓ Procedures involving radiation

The patient personally signs the consent if he or she is of legal age and is mentally capable. When the patient is a minor or unconscious or incompetent, permission must be obtained from a responsible family member (preferably next of kin) or legal guardian. An emancipated minor (married or independently learning his or her own living) may sign his or her own consent form. State regulations and agency policy must be followed.

In an emergency, it may be necessary for the surgeon to operate as a lifesaving measure without the patient's informed consent. Every effort, however, must be made to contact the patient's family. In such a situation, contact can be made by telephone, telegram, fax, or other electronic means. When the patient has doubts and has not had the opportunity to investigate alternative treatments, a second opinion may be requested. No patient should be urged or coerced to sign an operative permit. Refusing to undergo a surgical procedure is a person's legal right and privilege. However, such informationmust be documented and relayed to the surgeon so that other arrangements can be made. For example, additional explanations may be provided to the patient and family, or the surgery may be rescheduled.

The consent process can be improved by providing audiovisual materials to supplement discussion, by ensuring that thewording of the consent form is understandable, and by using other strategies and resources as needed to help the patient understand its concents

Criteria for valid informed concent

Valid consent must be freely given, without coercion.

Incompetent Patient

Informed Subj ect

Informed consent should be in writing. It should contain the following:

- ✓ Explanation of procedure and its risks
- ✓ Description of benefits and alteratives
- ✓ An offer to answer questions about procedure
- ✓ Instructions that the patient may withdraw consent
- ✓ A statement informing the patient if the protocol differs from customary procedure

Information Sheet 7- Health promotion and education

7. 1. Health promotion and education

Health promotion is about raising the health status of individuals and communities. *Promotion* in the health context means improving, advancing, supporting, encouraging and placing health higher on personal and public agendas. Given that major socioeconomic determinants of health are often outside individual or even collective control, a fundamental aspect of health promotion is that it aims to empower people to have more control over aspects of their lives that affect their health. These twin elements of improving health and having more control over it are fundamental to the aims and processes of health promotion.

Promoting Health: A Practical Guide

Health Organization (WHO) definition of health promotion as it appears in the *Ottawa Charter* has been widely adopted and neatly encompasses this: 'Health promotion is the process of enabling people to increase control over, and to improve, their health' (WHO 1986).UWL is the only institution in the UW System with a Public Health and Community Health Education undergraduate program which has been nationally accredited by the Council on Education for Public Health [CEPH] since 1992. UWL offers undergraduate majors in both public health and community health education [PH-CHE] and school health education. As health educators, our graduates link consumers with health care providers and/or health-related information. Our graduates facilitate cognitive, affective, and behavioral changes in others to attain total wellbeing.

The ultimate goal of health education is the improvement of the nation's health and the reduction of preventable illness, disability, and death. Health education is particularly concerned with influencing behavioral factors. It is an applied field of learning which relies largely upon the knowledge of the physical, biological, and medical sciences, and related fields. It is a discipline, in which the relevant knowledge and ideas, from several fields, are combined and synthesized.

Information Sheet 8- Preoperative patient education

3.1.8. Preoperative patient education

Preoperative teaching for patients undergoing surgery includes instruction in breathing and leg exercises used to prevent postoperative complications, such as pneumonia and deep vein thrombosis. These exercises may be performed in the hospital or at home.

Diaphragmatic Breathing

Diaphragmatic breathing refers to a flattening of the dome of the diaphragm during inspiration, with resultant enlargement of the upperabdomen as air rushes in. During expiration, the abdominal muscles contract.

- ✓ Practice in the same position you would assume in bed after surgery: a semi-Fowler's position, propped in bed with the back and shoulders well supported with pillows.
- ✓ With your hands in a loose-fist position, allow the hands to rest lightly on the front of the lower ribs, with your fingertips against lower chest to feel the movement.
- ✓ Breathe out gently and fully as the ribs sink down and inward toward midline.
- ✓ Then take a deep breath through your nose and mouth, letting the abdomen rise as the lungs fill with air.
- ✓ Hold this breath for a count of five.
- ✓ Exhale and let out *all* the air through your nose and mouth.
- ✓ Repeat this exercise 15 times with a short rest after each groupof five.
- ✓ Practice this twice a day preoperatively.

Coughing

- ✓ Lean forward slightly from a sitting position in bed, interlace your fingers together, and place your hands across the incisional site to act as a splintlike
- ✓ Breathe with the diaphragm as described under "Diaphragmatic Breathing."
- ✓ With your mouth slightly open, breathe in fully.
- ✓ "Hack" out sharply for three short breaths.

- ✓ Then, keeping your mouth open, take in a quick deep breath and immediately give a strong cough once or twice. This helps clear secretions from your chest. It may cause some discomfort but will not harm your incision.

Leg Exercises

- ✓ Lie in a semi-Fowler's position and perform the following simple exercises to improve circulation.
- ✓ Bend your knee and raise your foot—hold it a few seconds, then extend the leg and lower it to the bed.
- ✓ Do this five times with one leg, and then repeat with the other leg.
- ✓ Then trace circles with the feet by bending them down, in toward each other, up, and then out.
- ✓ Repeat these movements five times.

Turning to the Side

- ✓ Turn on your side with the uppermost leg flexed most and supported on a pillow.
- ✓ Grasp the side rail as an aid to maneuver to the side.
- ✓ Practice diaphragmatic breathing and coughing while on your side.

Getting Out of Bed

- ✓ Turn on your side.
- ✓ Push yourself up with one hand as you swing your legs out of bed.

Bowel & urinary preparation

Enemas are not commonly ordered preoperatively unless the patient is undergoing abdominal or pelvic surgery. In this case, a cleansing enema or laxative may be prescribed the evening before surgery and may be repeated the morning of surgery.

The goals of this preparation are to allow satisfactory visualization of the surgical site and to prevent trauma to the intestine or contamination of the peritoneum by feces. Unless the condition of the patient presents some contraindication, the toilet or bedside commode, rather than the bedpan, is used for evacuating the enema if the patient is hospitalized during this time. Additionally, antibiotics may be prescribed to reduce intestinal flora.

Pain management

An assessment should include a determination between acute and chronic pain so that the patient may differentiate postoperative pain from a chronic condition. It is at this point that a pain scale should be introduced and its use explained to the patient.

Postoperatively, medications are administered to relieve pain and maintain comfort without increasing the risk for inadequate air exchange.

The patient is instructed to take the medication as frequently as prescribed during the initial postoperative period for pain relief. Anticipated methods of administration of analgesic agents for inpatients include patient-controlled analgesia (PCA), epidural catheter bolus or infusion, or patient-controlled epidural analgesia (PCEA).

A patient who is expected to go home would receive oral analgesic agents. These are discussed with the patient before surgery, and the patient's interest and willingness to use those methods are assessed. The patient is instructed in use of a pain intensity rating scale to promote effective postoperative pain management.

Infection prevention

Infection prevention is a scientific and practical approach designed to prevent harm caused by infections to the patients and health works. No country, no health care facility, even with the most developed health care systems can claim to be free from problems associated with infections. The health problems due to communicable diseases can be tackled by the application of relatively easy measures at different levels of the health system**.**

The policies and procedures set out in this manual are based on national and international published best practices. As new information becomes available, this document will be reviewed and updated. Infection prevention and control strategies are designed to protect service users and healthcare staff from the risk of transmissible disease. A systematic approach to infection prevention and control requires each health care provider to play a vital role in protecting everyone who utilizes the healthcare system. Healthcare staff must adhere to infection prevention and control guidelines and policies at all times, and use critical thinking, risk assessment and problem solving in managing clinical situations

The Code requires that an NHS body must, in relation to preventing and controlling the risks of HCAIs, have in place the appropriate core policies. These core policies can be found within relevant sections of the Infection Prevention and Control Policy Manual.

Other trust policies to which this policy relates

- ✓ Cleaning services
- ✓ Building and refurbishment, including air-handling systems
- ✓ Waste management
- ✓ Laundry arrangements for used and infected linen
- ✓ Planned preventive maintenance
- ✓ Pest control
- ✓ Management of drinkable and non-drinkable water supplies
- ✓ Minimising the risk of Legionella by adhering to national guidance; and monitoring
- ✓ Food services, including food hygiene and food brought into the care setting by service users, staff and visitors

The Infection Prevention and Control Team

The Infection Prevention and Control Team consists of specialist nursing and medical staff with 24hour seven day a week on-call advice from the Microbiology service at UCLH and is responsible for:

- ✓ Co-ordinating infection control audits, education and training, policy and strategy development and the production of relevant infection control reports

and data for use with the Trust to monitor and promote improvements in practice.

- ✓ Providing timely advice or infection control is available to all Trust staff and key Trust committees.
- ✓ Providing advice regarding the purchase of medical devices and equipment, building/renovation and engineering service and contracts relating to Hotel Services, i.e. cleaning, waste disposal, food etc.
- ✓ Revising this policy manual so that it complies with current national, professional and Trust guidelines and standards.
- ✓ Maintaining close links with the Director of Infection Prevention and Control and reporting to the Infection Control Group.

All Trust Staff are responsible for:

- ✓ Ensuring that they follow good infection control practice at all times and that they are familiar with infection control policies, procedures and guidance relevant to their area of work.
- ✓ Complying with the procedures outlined in this manual.
- ✓ Bringing to the attention of the team manager or infection control team any problems in applying the procedures.

The Team Manager (e.g. person in charge of a clinical area/unit or department) has the responsibility to ensure that:

- ✓ This policy is accessible to all staff.
- ✓ The required facilities and equipment are available to enable compliance with the manual.
- ✓ All clinical staff within their area of responsibility have received training in the procedures outlined in the manual.
- ✓ Compliance with the procedures is appropriately audited.
- ✓ Carry out a written risk assessment by following Trust Risk Management Strategy Appendix 2, in all clinical and associated areas in respect of hand hygiene facilities/materials and the use of alcohol based hand rub (ABHR) dispensers. Where deemed appropriate ABHR dispensers can be wall mounted, or staff will wear personal bottles

- ✓ Ensure that the management of infection control risks are one of their fundamental duties.
- ✓ Be aware that in healthcare, matrons or persons of a similar standing have personal responsibility and accountability for delivering a safe and clean care environment
- ✓ That the nurse or other person in charge of any patient or resident area has direct responsibility for ensuring that cleanliness standards are maintained throughout that shift/

Deep breathing & coughing exercise

One goal of preoperative nursing care is to teach the patient how to promote optimal lung expansion and consequent blood oxygenation after anesthesia. The patient assumes a sitting position to enhance lung expansion. The nurse then demonstrates how to take a deep, slow breath and how to exhale slowly. After practicing deep breathing several times, the patient is instructed to breathe deeply, exhale through the mouth, take a short breath, and cough from deep in the lungs. The nurse also demonstrates how to use an incentive spirometer, a device that provides measurement and feedback related to breathing effectiveness. In addition to enhancing respiration, these exercises may help the patient to relax.

If there will be a thoracic or abdominal incision, the nurse demonstrates how the incision line can be splinted to minimize pressure and control pain. The patient should put the palms of both hands together, interlacing the fingers snugly. Placing the hands across the incisional site acts as an effective splint when coughing. Additionally, the patient is informed that medications are available to relieve pain and should be taken regularly for pain relief so that effective deep-breathing and coughing exercises can be performed. The goal in promoting coughing is to mobilize secretions so they can be removed. Deep breathing before coughing stimulates the cough reflex. If the patient does not cough effectively, atelectasis (lung collapse), pneumonia, and other lung complications may occur.

Mobility & active body movement

The goals of promoting mobility postoperatively are to improve circulation, prevent venous stasis, and promote optimal respiratory function. The nurse explains the rationale for frequent position changes after surgery and then shows the patient how to turn from side to side and how to assume the lateral position without causing pain or disrupting intravenous lines, drainage tubes, or other equipment. Any special position the individual patient will need to maintain after surgery (eg, adduction or elevation of an extremity) is discussed, as is the importance of maintaining as much mobility as possible despite restrictions. Reviewing the process before surgery is helpful because the patient may be too uncomfortable after surgery to absorb new information.

Exercises of the extremities include extension and flexion of the knee and hip joints (similar to bicycle riding while lying on the side). The foot is rotated as though tracing the largest possible circle with the great toe. The elbow and shoulder are also put through range of motion. At first, palsy, post-polio syndrome, and other neuromuscular disorders) may need special position during surgery to prevent pain and injury.

Moreover, these patients may be unable to sense whether their extremities are positioned incorrectly. Patients with respiratory problems related to a disability (eg, multiple sclerosis, muscular dystrophy) may experience difficulties unless the problems are made known to the anesthesiologist or anesthetist and adjustments are made. These factors need to be clearly identified in the preoperative period and communicated to the appropriate personnel.

Preoperative pain management

Opioids are the mainstay therapy for alleviating moderate to severe pain. An increasing awareness among patients, healthcare organizations, patient- advocate organizations, and regulatory agencies for adequate pain control has promoted the use of these drugs. Although the treatment of acute pain and cancer pain with opioids is not in dispute, administrating opioids for alleviating chronic nonmalignant pain remains controversial.

Most of the controversy surrounds uncertainties as to the long-term analgesic effectiveness of opioids, the ability of physicians to choose appropriate patient candidates, the risk of side effects, and the potential for abuse. Nevertheless, many treatment guidelines for chronic nonmalignant pain list opioids as an option, especially if more traditional treatment modalities have failed frequency for chronic pain; one study reports that 44% of patients prescribed any analgesic were prescribed an opioid.

Despite the commercial success of longer acting opioids such as OxyContin (Purdue Pharma, Stamford, CT) (oxycodone) and guidelines that recommend the use of long-acting opioids on a time-contingent basis, short-acting opioids such as codeine, hydrocodone, and oxycodone are more commonly used for alleviating chronic pain.5-7

The average daily opioid dose in studies that focus on patients treated in primary care settings was found to be relatively low and corresponded to about 45 mg of oral morphine per day, although a large dose range also was observed in these studies.5,6 Although the prevalence of chronically opioid-consuming patients who present for surgery is not known, the growing enthusiasm for the use of opioids is likely to increase the number of such patients.

Preoperative psychological intervention

- Treatment of disorders such as anemia, HTN, infections control diabtes
- ✓ Correction of fluid & electrolyte imbalance
- ✓ Restoration of adequate blood volume
- ✓ Assessments of all body system
- include
- ✓ Giving full explanation about the procedure
- ✓ Motivating pt to ask questions and answering
- ✓ Show other pt recovery from the same operation
- ✓ Reassuring pt
- ✓ Reduce pt anxiety & fear
- ✓ Giving full explanation about the procedure
- ✓ Motivating pt to ask questions and answering
- ✓ Show other pt recovery from the same operation
- ✓ Reassuring pt
- ✓ Reduce pt anxiety & fear

General preoperative nursing intervention

Managing Nutrition and Fluids

The major purpose of withholding food and fluid before surgery is to prevent aspiration. However, studies demonstrate that in patients who do not have a compromised airway or coexisting diseases or disorders that affect gastric emptying or fluid volume (eg, pregnancy, obesity, diabetes gastroesophageal reflux, enteral tube feeding, ileus or bowel obstruction), lengthy restriction of fluid and food is unnecessary.Until recently, fluid and food were restricted preoperatively overnight and often longer.

Skin preparation

Procedures for skin preparation vary based on patient and surgical procedure factors. Of the 21,000 SSIs reported to the National Healthcare Safety Network (NHSN) in 2009-2010, 30.4% were attributed to Staphylococcus aureus, a bacteria that is commonly found on the skin. 2 Close to half of these S. aureus infections are methicillin- resistant S. aureus. Because not all hospitals reported data to NHSN in 2009 and 2010, these figures are likely to increase with the advent of federal pay-for-reporting programs in 2011-2013.

Committee describes the goals of preoperative skin preparation as:

- ✓ The removal of soil and transient microbes from the skin.
- ✓ The rapid reduction of resident microbes without tissue irritation.
- ✓ The inhibition of rapid, rebound growth of these microbes.

Information Sheet 9- Caring out regular review of plan

9.1. Caring out regular review of plan

The patient with a planned procedure, skin preparation begins at home. Patient education is essential. For patients undergoing Class I/ clean procedures below the chin, AORN recommends two showers using chlorhexidine gluconate before surgery to decrease the number of microorganisms on the skin (see Surgical wound classifications). Although the act of showering or bathing with regular soap will reduce skin flora, using 4% chlorhexidine gluconate doubles the reduction. Chlorhexidine gluconate has been shown to be an effective skin prep agent, but needs to be used properly and cautiously by the patient at home. Important teaching points include achieving a contact time of 2 minutes and thorough rinsing to remove residual chlorhexidine (which can cause skin irritation), followed by drying with a clean towel. The patient shouldn't apply powders or lotions following the shower, and should don fresh clothing.

Patients should be told to use chlorhexidine 4% carefully and to avoid contact with the eyes, insides of the ears, and other mucous membranes because of the risk of corneal damage and deafness. 3 Chlorhexidine gluconate also can have a drying effect on the skin. Explain to patients that chlorhexidine gluconate comes in different concentrations based on intended use; the oral rinse, for example, is a 0.12% concentration

Information Sheet 10- Identifying potential for adverse client outcome

10.1. Identifying potential for adverse client outcome

The Health and Social Care Act 2008: Code of Practice for the NHS on the Prevention and Control of Healthcare Associated Infections and Related Guidance requires that each NHS body has systems in place that are sufficient to minimise the risk of infections to patients, staff and visitors. The Healthcare Commission monitors performance against the Code of Practice as part of the annual health-check and compliance with Standards for Better Health. The Infection Control Service ensures that systems are in place to achieve this-for example by having an annual programme of work

Information Sheet 11- Reporting potential for adverse client outcome

11.1. Reporting potential for adverse client outcome

Preparing the Bowel for Surgery

Enemas are not commonly ordered preoperatively unless the patient is undergoing abdominal or pelvic surgery. In this case, a cleansing enema or laxative may be prescribed the evening before surgery and may be repeated the morning of surgery. The goals of this preparation are to allow satisfactory visualization of the surgical site and to prevent trauma to the intestine or contamination of the peritoneum by feces.

Unless the condition of the patient presents some contraindication, the toilet or bedside commode, rather than the bedpan, is used for evacuating the enema if the patient is hospitalized during this time. Additionally, antibiotics may be prescribed to reduce intestinal flora.

Information Sheet 12- Following policies and procedures for discharge/transfer

12.1. Following policies and procedures for discharge/transfer

It is the policy of the facility to develop and implement an effective discharge planning process that focuses on the resident's discharge goals, the preparation of residents to be active partners and effectively transition them to post-discharge care, and the reduction of factors leading to preventable readmissions, in accordance with State and Federal Regulations.

PROCEDURE:

1. The facility's discharge planning process will be consistent with the discharge rights set forth at 483.15(b) as applicable.
2. The facility will ensure that the discharge needs of each resident are identified and result in the development of a discharge plan for each resident.
3. The facility will include regular re-evaluation of residents to identify changes that require modification of the discharge plan. The discharge plan must be updated, as needed, to reflect these changes.
4. The facility will involve the interdisciplinary team, as defined by §483.21(b)(2)(ii), in the ongoing process of developing the discharge plan.
5. The facility will consider caregiver/support person availability and the resident's or caregiver's/support person(s) capacity and capability to perform required care, as part of the identification of discharge needs.
6. The facility will involve the resident and resident representative in the development of the discharge plan and inform the resident and resident representative of the final plan.
7. The facility will address the resident's goals of care and treatment preferences.
8. The facility will document that a resident has been asked about their interest inreceiving information regarding returning to the community.
9. If the resident indicates an interest in returning to the community, the facility will document any referrals to local contact agencies or other appropriate entities made for this purpose.

10. The Facility will update a resident's comprehensive care plan and discharge plan, as appropriate, in response to information received from referrals to local contact agencies or other appropriate entities.

11. If discharge to the community is determined to not be feasible, the facility must document who made the determination and why.

12. For residents who are transferred to another SNF or who are discharged to a HHA, IRF, or LTCH, assist residents and their resident representatives in selecting a postacute care provider by using data that includes, but is not limited to SNF, HHA, IRF, or LTCH standardized patient assessment data, data on quality measures, and data on resource use to the extent the data is available. The facility must ensure that the post-acute care standardized patient assessment data, data on quality measures, and data on resource use is relevant and applicable to the resident's goals of care and treatment preferences.

13. Document, complete on a timely basis based on the resident's needs, and include in the clinical record, the evaluation of the resident's discharge needs and discharge plan. The results of the evaluation must be discussed with the resident or resident's representative. All relevant resident information must be incorporated into the discharge plan to facilitate its implementation and to avoid unnecessary delays in the resident's discharge or transfer.

14. A post-discharge plan of care that is developed with the participation of the resident and, with the resident's consent, the resident representative(s), which will assist the resident to adjust to his or her new living environment.

15. The post-discharge plan of care will indicate where the individual plans to reside, any arrangements that have been made for the resident's follow up care and any post-discharge medical and non-medical services.

Self check 3	Contribute to the planning care for pre/post and Intra operative Nursing

Instructions*:* Answer all the questions listed below and write your answers in the sheet

choose the best answer for the following question

1. Criteria for valid informed consent

A. voluntary

B.Informed

C.Competent Patient

D. all

2. The goal of preoperative skin preparation is to decrease bacteria without injuring the skin.

A. TRUE B. FALSE

3. Informed consent is necessary in the following circumstances:

A. Invasive procedures, such as a surgical incision, a biopsy, a cystoscopy, or paracentesis

B. Procedures requiring sedation and/or anesthesia

C. A nonsurgical procedure, such as an arteriography, that carrier more than slight risk to the patient

D. Procedures involving radiation

E. ALL

LG #36	LO #4- **Perform clinical nursing actions that are appropriate to the care of pre/post and intra operative clients**

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Prioritizing nursing interventions
- Critical thinking & problem solving approaches
- Modifying nursing interventions in case of need
- Nursing interventions
  - ✓ Preliminary preparation and positioning
  - ✓ Assisting in skin preparation and draping
- Maintaining a safe environment appropriately for the age
- Contemporary nursing interventions
- Checking equipment
  - ✓ Proper functioning
  - ✓ Taking corrective action
  - ✓ Reporting
- Performing infection control measure
- Standards of a surgical conscience
- Undertaking preoperative diagnostic procedures
- Implementing preoperative surgical procedures
- Anticipating and intervening Potential intra operative
- Complications
- Assisting in administration of anesthesia
  - ✓ Definition and Purpose
  - ✓ Types of anesthesia
  - ✓ Indication
  - ✓ Method of administration
  - ✓ Stage of anesthesia
  - ✓ Complications of anesthesia
  - ✓ Pre anesthesia medication

- ✓ Nursing responsibilities
- Selecting instruments according to type of operation
  - ✓ General set
  - ✓ Minor set
  - ✓ Plastic set
- Passing instrument at the operation field

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Identifyiny the prioritizing nursing interventions
- Explain the critical thinking & problem solving approaches
- Explain the modifying nursing interventions in case of need
- Give the nursing interventions
- Explain performing infection control measure
- Expain the standards of a surgical conscience
- Discus the undertaking preoperative diagnostic procedures
- Give the implementing preoperative surgical procedures
- Identifying the anticipating and intervening Potential intra operativeComplications
- Assist in administration of anesthesia
- Dicribe the selecting instruments according to type of operation

Learning Instructions:

1 Read the specific objectives of this Learning Guide.

2 Follow the instructions described below.

3 Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.

4 Accomplish the “Self-checks” which are placed following all information sheets.

5 Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).

6 If you earned a satisfactory evaluation proceed to “Operation sheets

7 Perform “the Learning activity performance test” which is placed following “Operation sheets” ,

8 If your performance is satisfactory proceed to the next learning guide,

9 If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Information Sheet 1- Prioritizing nursing interventions

1.1. Prioritizing nursing interventions

A nursing care plan provides direction on the type of nursing care the individual/family/ community may need. The main focus of a nursing care plan is to facilitate standardised,evidence-based and holistic care. Nursing care plans have been used for quite a number of years for human purposes and are now also getting used in the veterinary profession. A care plan includes the following components: assessment, diagnosis, expected outcomes,interventions, rationale and evaluation. According to UK nurse Helen Ballantyne, care plans are a critical aspect of nursing and they are meant to allow standardised, evidence- based holistic care.

It is important to draw attention to the difference between care plan and care planning. Care planning is related to identifying problems and coming up with solutions to reduce or remove the problems. The care plan is essentially the documentation of this process. It includes within it a set of actions the nurse will apply to resolve/support nursing diagnoses identified by nursing assessment. Care plans make it possible for interventions to be recorded and their effectiveness assessed. Nursing care plans provide continuity of care, safety, quality careand compliance. A nursing care plan promotes documentation and is used for reimbursementpurposes such as Medicare and Medicaid. The therapeutic nursing plan is a tool and a legal document that contains priority problems or needs specific to the patient and the nursing directives linked to the problems.

It shows the evolution of the clinical profile of a patient. The TNP is the nurse's responsibility. She's the only one who can inscribe information and re- evaluate the TNP during the course of treatment of the patient. This document is usedby nurses, nursing assistant and they communicate the directives to the beneficiaryattendants. The priority problems or needs are often the diagnoses of the patient and nursing problem such as wounds, dehydration, altered state of consciousness, risk of complication and much more.

These diagnoses are around problems or needs that are detected by nurses and need specific interventions and evaluation follow-up. The nursing directives can be addressed to nurses, nursing assistants or beneficiary attendants. Each priority problem or need must be followed by a nursing directive or an intervention. The interventions must be specific to the patient. For example, 2 patients with the problem 'uncooperative care' can need different directives. For one patient the directive could be: 'educate about the pathology and the effects of the drugs on the health situation'; for the other, it could be the'use a directive approach.' It depends on the nature of the problem which needs to be evaluated by a nurse.

purpose

- ✓ To promote evidence-based nursing care and to provide comfortable and familiar conditions in hospitals or health centers.
- ✓ To promote holistic care which means the whole person is considered including physical, psychological, social and spiritual in relation to management and prevention of the disease.
- ✓ To support methods such as care pathways and care bundles. Care pathways involve a team effort in order to come to a consensus with regards to standards of care and expected outcomes while care bundles are related to best practice with regards to care given for a specific disease.
- ✓ To record care.
- ✓ To measure care.
- ✓ To provide treatment measure health issues or disease conditions
- ✓ To Ensure the Psychological support and reduce stress anxiety to the patient

Self check 1	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. How to prioritizing nursing intervention?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____
_____
_____

Information Sheet 2- . Critical thinking & problem solving approaches

2. Critical thinking & problem solving approaches

Critical thinking is the analysis of facts to form a judgment. The subject is complex, and several different definitions exist, which generally include the rational, skeptical, unbiased analysis, or evaluation of factual evidence . Critical thinking is self-directed , self-disciplined , self-monitored , and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities as well as a commitment to overcome native egocentrism and sociocentrism.

Traditionally, critical thinking has been variously defined as follows: "The process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information toreach an answer or conclusion" "Disciplined thinking that is clear, rational, open-minded, and informed by evidence" "Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based""Includes a commitment to using reason in the formulation of our beliefs" The skill and propensity to engage in an activity with reflective scepticism (McPeck, 1981) Thinking about one's thinking in a manner designed to organize and clarify, raise the efficiency of, and recognize errors and biases in one's own thinking. Critical thinking is not 'hard' thinking nor is it directed at solving problems (other than 'improving' one's own thinking). Critical thinking is inward-directed with the intent of maximizing the rationality of the thinker. One does not use critical thinking to solve problemsone uses critical thinking to improve one's process of thinking.

"Critical thinking is a type of thinking pattern that requires people to be reflective, and pay attention to decision-making which guides their beliefs and actions. Critical thinking allows people to deduct with more logic, to process sophisticated information and to look at various sides of issues, so that they can produce more solid conclusions." Critical thinking has seven critical features: being inquisitive and

curious, being open- minded to different sides, being able to think systematically, being analytical, being persistent to truth, being confident about critical thinking itself, and lastly, being mature Although critical thinking could be defined in several different ways, there is a general agreement in its key component—the desire to reach for a satisfactory result, and this should be achieved by rational thinking and result-driven manner. Halpern thinks that critical thinking firstly involves learned abilities such as problem-solving, calculation and successful probability application. It also includes a tendency to engage the thinking process. In recent times, Stanovich believed that modern IQ test could hardly measure the ability of critical thinking.

Contemporary critical thinking scholars have expanded these traditional definitions to include qualities, concepts, and processes such as creativity, imagination, discovery, reflection, empathy, connecting knowing, feminist theory, subjectivity, ambiguity, and inconclusiveness. Some definitions of critical thinking exclude these subjective practices. Problem solving consists of using generic or ad hoc methods in an orderly manner to find solutions to problems. Some of the problem- solving techniques developed and used in philosophy, artificial intelligence, computer science , engineering, mathematics , or medicine are related to mental problem-solving techniques studied in psychology .

Definition the term problem solving has a slightly different meaning depending on the discipline. For instance, it is a mental process in psychology and a computerized process in computer science . There are two different types of problems, ill-defined and well-defined: different approaches are used for each. Well- defined problems have specific end goals and clear expected solutions, while ill-defined problems do not. Well-defined problems allow for more initial planning than ill-defined problems. Solving problems sometimes involves dealing with pragmatics, the way that context contributes to meaning, and semantics , the interpretation of the problem. The ability to understand the end goal of the problem is, and what rules could be applied, represents the key to solving the problem. Sometimes the problem requires abstract thinking or coming up with a creative solution.

Psychology Problem solving in psychology refers to the process of finding solutions to problems encountered in life. Solutions to these problems are usually situation or context- specific. The process starts with problem finding and problem shaping ,

where the problem is discovered and simplified. The next step is to generate possible solutions and evaluate them. Finally a solution is selected to be implemented and verified. Problems have an end goal to be reached and how you get there depends upon problem orientation (problem- solving coping style and skills) and systematic analysis. Mental health professionals study the human problem solving processes using methods such as introspection , behaviorism , simulation , computer modeling, and experiment . Social psychologists look into the person-environment relationship aspect of the problem and independent and interdependent problem-solving methods. Problem solving has been defined as a higher-order cognitive process and intellectual function that requires the modulation and control of more routine or fundamental skills.

Self check 2	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1. Discus important of critical thinking

2. What is problem solving?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

_____

_____

Information Sheet 3- Modifying nursing interventions in case of need

3.1. Modifying nursing interventions in case of need

The Nursing Interventions Classification is a care classification system which describes the activities that nurses perform as a part of the planning phase of the nursing process associated with the creation of a nursing care plan.The NIC provides a four level hierarchy whose first two levels consists of a list of 433 different interventions, each with a definition in general terms, and then the ground-level list of a variable number of specific activities a nurse could perform to complete the intervention. The second two levels form a taxonomy in which each intervention is grouped into 27 classes, and each class is grouped into six domains. An intent of this structure is to make it easier for a nurse to select an intervention for the situation, and to use a computer to describe the intervention in terms of standardized labels for classes and domains. Another intent is in each case to make it easy to use a Nursing Minimum Data Set (NMDS).

3.3. Preliminary preparation and positioning

The patient's position on the operating table depends on the surgical procedure to be performed as well as on the patient'sphysical condition. The potential for transient discomfort or permanent injury is present, because many positions are awkward. Hyperextending joints, compressing arteries, or pressing on nerves and bony prominences usually results in discomfort simply because the position must be sustainedfor a long period of time.

Factors to consider include the following:

- ✓ The patient should be in as comfortable a position as possible, whether conscious or unconscious.
- ✓ The operative field must be adequately exposed.
- ✓ An awkward position, undue pressure on a body part, or use of stirrups or traction should not obstruct the vascular supply.
- ✓ Respiration should not be impeded by pressure of arms on the chest or by a gown that constricts the neck or chest.

- ✓ Nerves must be protected from undue pressure. Improper positioning of the arms, hands, legs, or feet can cause serious injury or paralysis. Shoulder braces must be well padded to prevent irreparable nerve injury, especially when the Trendelenburg position is necessary.
- ✓ Precautions for patient safety must be observed, particularly with thin, elderly, or obese patients and those with a physical deformity.
- ✓ The patient may need light restraint before induction in case of excitement.

A. Patient in position on the operating table for a laparotomy. Note the strap above the knees.

B. Patient in Trendelenburg position on operating table.

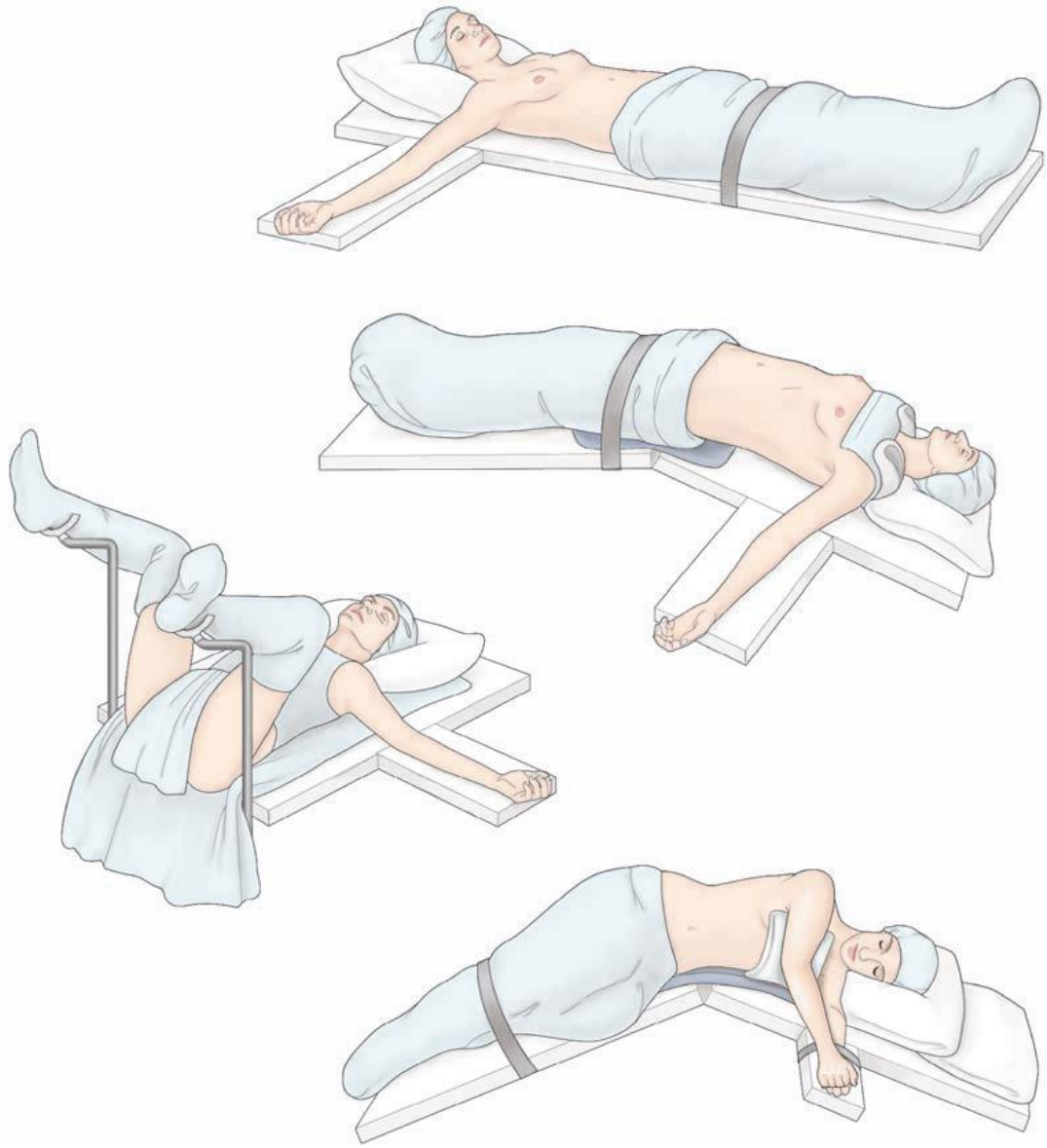
Note padded shoulder braces in place. Be sure that brace does not press on brachial plexus.

C. Patient in lithotomy position.

Note that the hips extend over the edge of the table.

D. Patient lies on unaffected side for kidney surgery.

Table is spread apart to provide space between the lower ribs and the pelvis. The upper leg is extended; the lower leg is flexed at the knee and hip joints; a pillow



The usual position for surgery, called the dorsal recumbent position, is flat on the back. Both arms are positioned at the side of the table, one with the hand placed palm down; the other is carefully positioned on an armboard to facilitate IV infusion of fluids, blood, or medications. This position is used for most abdominal surgeries except for surgery of the gallbladder or pelvis (see Fig. 19-5A). The Trendelenburg position usually is used for surgery on the lower abdomen and pelvis to obtain good exposure by displacing the intestines into the upper abdomen. In this position, the head and body are lowered. The patient is held in position by padded shoulder braces (see Fig. 19-5B).

The lithotomy position is used for nearly all perineal, rectal, and vaginal surgical procedures (see Fig. 19-5C). The patient is positioned on the back with the legs and thighs flexed. The position is maintained by placing the feet in stirrups.
The Sims or lateral position is used for renal surgery.The patient is placed on the nonoperative side with an air pillow 12.5 to 15 cm (5 to 6 inches) thick under the loin, or on a table with a kidney or back lift (see Fig. 19-5D).

Assisting in skin preparation and draping

Skin disinfection is a process that involves the application of a disinfectant to reduce levels of microorganisms on the skin. Disinfecting both the skin of the patient and the hands of the healthcare providers are an important part of surgery . Skin disinfection may be accomplished with a number of solutions including providone-iodine , chlorhexidine , alcohol based solutions, and cetrimide . There is tentative evidence that chlorhexidine and denatured alcohol use to clean skin prior to surgery is better than povidone-iodine with alcohol; however, the evidence is not strong enough as of 2015 to determine routine practice. Its importance in health care was determined by Semmelweis in the 1840s. a. The procedure of covering a patient and surrounding areas with a sterile barrier to create and maintain a sterile field during a surgical procedure is called draping.

The purpose of draping is to eliminate the passage of microorganisms between nonsterile and sterile areas. Draping materials may be disposable or nondisposable. Disposable drapes are generally paper or plastic or a combination and may or may not be absorbent.

- The first step in draping is the placing of a drape sheet from the foot to the knees.

The scrub will select the sheet and hand one end to the surgeon across the operating table, supporting the folds, keeping it high, and holding it taut until it is opened, then drop it (open fingers and release sheet). The second drape sheet is handled in the same manner. This sheet is placed below the incision site with the edge of the sheet just below the incision site. This draping sheet provides extra thickness of material under the area from the Mayo tray to the incision where instruments and sponges are placed. It also closes some of the opening in the laparotomy sheet, if necessary.

- When disposable drapes are used, the towels usually have a removable strip with an adhesive on the folded edge. The third step in draping is placing the four sterile towels around the line of incision. The scrub unfolds first towel, passes the towel drape to the surgeon with the strip side facing the scrub, and then removes the adhesive strip. The surgeon places the towel within the scrubbed area on the near side of the line of incision, leaving only enough exposed skin for the incision. The second towel is placed in the same way, except the towel is placed on the lower side (toward feet) of the line of incision.
- The third towel is passed the same way, except the towel is placed on the upper side (toward head) the line of incision. The last towel is passed to the surgeon with the adhesive strip facing the surgeon and is placed on the far side of the line of incision. The adhesive area holds the towel drapes in place.
- Finally, the scrub will select the surgical drape (lap sheet). This lap sheet has a fenestration (opening) in the drape for the incision. The scrub places the opening directly over the skin area outlined by the drape towels and in the direction indicated for the foot or head of the table. The lap sheet will have an arrow or some other indication to identify the head or foot portion of the drape. Drop the folds over the sides of the table, then open it downward over the patient's feet and upward over the anesthetist screen.

c. Aseptic technique must be observed at all times in the draping process. You should:

- ✓ Handle the drapes as little as possible.
- ✓ Never reach across the operating table to drape the opposite side; go around the table.
- ✓ Hold the drapes high enough to avoid touching nonsterile area but avoid touching the overhead light.
- ✓ Hold the drape high until it is directly over the proper area, then drop (open fingers and release sheet) it down where it is to remain. NEVER ADJUST ANY DRAPE.
- ✓ If the drape is incorrectly placed, leave it in place and place another drape over it.
- ✓ Protect the gloved hands by cuffing the end of the sheet over them. Do not let the gloved hand touch the skin of the patient.
- ✓ In unfolding a sheet from the operative site toward the foot or head of the table, protect the gloved hand by enclosing it in the turned back cuff of the sheet.
- ✓ If a drape becomes contaminated, discard it immediately.
- ✓ If the end of a drape falls below waist level, do not handle it further. Drop it and use another drape.
- ✓ If in doubt about sterility, discard the drape.
- ✓ If a hole is found in a drape after it is laid down, cover the hole with another drape or discard the entire drape.

Self check 3	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discus the important position for surgery

2. importance of skin preparation and drapping?

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____
_____
_____
_____
_____

2._____
_____

Information Sheet 5- Maintaining a safe environment appropriately for the age

5. Maintaining a safe environment appropriately for the age

During the immediate postoperative period, the patient recovering from anesthesia should have three side rails up, and the bed should be in the low position. The nurse assesses the patient's level of consciousness and orientation and determines whether the patient can resume wearing his or her eyeglasses or hearing aid, because e impaired vision, inability to hear postoperative instructions, or inability to communicate verbally places the patient at risk for injury.

All objects the patient may need should be within reach, especially the call light. Any immediate postoperative orders concerning special positioning, equipment, or interventions should be implemented as soon as possible. The patient is instructed to ask for assistance with any activity. Although restraints are occasionally necessary for the disoriented patient, they should be avoided if at all possible. Agency policy on the use of restraints must be consulted and followed. Any surgical procedure has the potential for injury due to disrupted neurovascular integrity resulting from prolonged awkward positioning in the OR, manipulation of tissues, inadvertent severing of nerves or blood vessels, or tight bandages. Any orthopedic surgery or surgery involving the extremities carries risk of peripheral nerve damage.

Vascular surgeries, such as replacement of sections of diseased peripheral arteries or inserting an arteriovenous graft, put the patient at risk for thrombus formation at the surgical site and subsequent ischemia of tissues distal to the thrombus. Assessment includes having the patient move the hand or foot distal to the surgical site through a full range of motion, assessing all surfaces for intact sensation, and assessing peripheral pulses.

Information Sheet 6- Performing infection control measure

6.1. Performing infection control measure

Infection control is the discipline concerned with preventing nosocomial or healthcare-associated infection, a practical (rather than academic) sub-discipline of epidemiology . It is an essential, though often underrecognized and undersupported, part of the infrastructure of health care. Infection control and hospital epidemiology are akin to public health practice,practiced within the confines of a particular health-care delivery system rather than directed at society as a whole. Anti-infective agents include antibiotics, antibacterials , antifungals, antivirals and antiprotozoals .

Infection control addresses factors related to the spread of infections within the healthcare setting (whether patient-to-patient, from patients to staff and from staff to patients, or among-staff), including prevention (via hand hygiene/hand washing, cleaning/disinfection/ sterilization, vaccination, surveillance), monitoring/investigation of demonstrated or suspected spread of infection within a particular health-cardryeting (surveillance and outbreak investigation), and management (interruption of outbreaks). It is on this basis that the common title being adopted within health care is "infection prevention and control."

Infection control in healthcare facilities Aseptic technique is a key component of all invasive medical procedures. Similarly, infection control measures are most effective when Standard Precautions (health care) are applied because undiagnosed infection is common. Hand hygiene Independent studies by Ignaz Semmelweis in 1846 in Vienna and Oliver Wendell Holmes, Sr. in 1843 in Boston established a link between the hands of health care workers and the spread of hospital-acquired disease. The U.S. Centers for Disease Control and Prevention (CDC) state that “It is well documented that the most important measure for preventing the spread of pathogens is effective handwashing.” In the developed world, hand washing is mandatory in most health care settings and required by many different regulators.

Drying is an essential part of the hand hygiene process. In November 2008, a non-peer- reviewed. study was presented to the European Tissue Symposium by the University of Westminster , London, comparing the bacteria levels present after the use of paper towels , warm air hand dryers, and modern jet-air hand dryers. Of those three methods, only paper towels reduced the total number of bacteria on hands, with "through-air dried" towels the most effective.The presenters also carried out tests to establish whether there was the potential for cross-contamination of other washroom users and the washroom environment as a result of each type of drying method.

Effectiveness of the sterilizer (e.g., a steam autoclave) is determined in three ways. First, mechanical indicators and gauges on the machine itself indicate proper operation of the machine. Second heat sensitive indicators or tape on the sterilizing bags change color which indicate proper levels of heat or steam. And, third (most importantly) is biological testing in which a microorganism that is highly heat and chemical resistant (often the bacterial endospore) is selected as the standard challenge. If the process kills this microorganism, the sterilizer is considered to be effective. Sterilization, if performed properly, is an effective way of preventing bacteria from spreading. It should be used for the cleaning of the medical instruments or gloves , and basically any type of medical item that comes into contact with the blood stream and sterile tissues.

There are four main ways in which such items can be sterilized: autoclave (by using high- pressure steam), dry heat (in an oven), by using chemical sterilants such as glutaraldehydes or formaldehyde solutions or by radiation (with the help of physical agents). The first two are the most used methods of sterilizations mainly because of their accessibility and availability. Steam sterilization is one of the most effective types of sterilizations, if done correctly which is often hard to achieve. Instruments that are used in health care facilities are usually sterilized with this method. The general rule in this case is that in order to perform an effective sterilization, the steam must get into contact with all the surfaces that are meant to be disinfected. On the other hand, dry heat sterilization, which is performed with the help of an oven, is also an accessible type of sterilization, although it can only be used to disinfect instruments that are made of metal glass .

The very high temperatures needed to perform sterilization in this way are able to melt the instruments that are not made of glass or metal.Steam sterilization is done at a temperature of 121 C (250 F) with a pressure of 209 kPa (15 lbs/in2). In these conditions, rubber items must be sterilized for 20 minutes, and wrapped items 134 C with pressure of 310 kPa for 7 minutes. The time is counted once the temperature that is needed has been reached. Steam sterilization requires four conditions in order to be efficient: adequate contact, sufficiently high temperature, correct time and sufficient moisture . Sterilization using steam can also be done at a temperature of 132 C (270 F), at a double pressure. Dry heat sterilization is performed at 170 C (340 F) for one hour or two hours at a temperature of 160 C (320 F). Dry heat sterilization can also be performed at 121 C, for at least 16 hours.

Chemical sterilization, also referred to as cold sterilization, can be used to sterilize instruments that cannot normally be disinfected through the other two processes described above. The items sterilized with coldsterilization are usually those that can be damaged by regular sterilization. Commonly, glutaraldehydes and formaldehyde are used in this process, but in different ways. When using the first type of disinfectant, the instruments are soaked in a 2-4% solution for at least 10 hours while a solution of 8% formaldehyde will sterilize the items in 24 hours or more. Chemical sterilization is generally more expensive than steam sterilization and therefore it is used for instruments that cannot be disinfected otherwise. After the instruments have been soaked in the chemical solutions, they are mandatory to be rinsed with sterile water which will remove the residues from the disinfectants .

This is the reason why needles and syringes are not sterilized in this way, as the residues left by the chemical solution that has been used to disinfect them cannot be washed off with water and they may interfere with the administered treatment. Although formaldehyde is less expensive than glutaraldehydes, it is also more irritating to the eyes, skin and respiratory tract and is classified as a potential carcinogen . Other sterilization methods exist, though their efficiency is still controversial. These methods include gas, UV, gas plasma, and chemical sterilization with agents such as peroxyacetic acid or [[paraformaldehyde]

Cleaning

Infections can be prevented from occurring in homes as well. In order to reduce their chances to contract an infection, individuals are recommended to maintain a good hygiene by washing their hands after every contact with questionable areas or bodily fluids and by disposing of garbage at regular intervals to prevent germs from **growing.**

Disinfection uses liquid chemicals on surfaces and at room temperature to kill disease causing microorganisms. Ultraviolet light has also been used to disinfect the rooms of patients infected with Clostridium difficile after discharge. Disinfection is less effective than sterilization because it does not kill bacterial endospores.

Personal protective equipment

Disposable PPE

Personal protective equipment (PPE) is specialized clothing or equipment worn by a worker for protection against a hazard. The hazard in a health care setting is exposure to blood, saliva, or other bodily fluids or aerosols that may carry infectious materials such as Hepatitis C , HIV, or other blood borne or bodily fluid pathogen .

PPE prevents contact with a potentially infectious material by creating a physical barrier between the potential infectious material and the healthcare worker. The United States Occupational Safety and Health Administration (OSHA) requires the use of Personal protective equipment (PPE) by workers to guard against blood borne pathogens if there is a reasonably anticipated exposure to blood or other potentially infectious materials.

Components of PPE include gloves , gowns , bonnets, shoe covers, face shields, CPR masks , goggles , surgical masks , and respirators. How many components are used and how the components are used is often determined by regulations or the infection control protocol of the facility in question. Many or most of these items are disposable to avoid carrying infectious materials from one patient to another patient and to avoid difficult or costly disinfection .

Information Sheet 7- Standards of a surgical conscience

7.1. Standards of a surgical conscience

Surgical conscience refers to the ethics and morality followed by the team of surgical professionals for safeguarding the dignity, rights, values, beliefs, contentions and wellness of patients during and after the course of surgical intervention. The level of surgical conscience directs the surgeons and associated nurses in terms of their decision-making and behavior patterns while extending surgical interventions to the concerned patients. The beliefs, values, conventions and attitude followed by the surgical professionals influence the quality of their sterile and aseptic interventions across the operative units. Surgical conscience promotes the awareness levels of the surgical professionals in the context of configuring a safe environment across the operative unit for protecting the health and life of the affected patients. The pattern of surgical conscience provides privilege to thesurgical professionals in terms of withholding the surgical interventions in the context of preventingthe inappropriate invasion of the incorrect surgical site, unsafe surgical approaches or absence of informed consent by the concerned patients. External barriers that predominantly conflict with the patterns of surgical conscience attribute to the insurance companies, legislative mandates and requirements. These barriers affect the medical decision making sometimes force the surgical teams to follow unsafe practices leading to debilitating patient outcomes.

Surgical conscience advocates the willingness of surgeons and nurses in terms of admitting their errors and earnestly rectifying them in the context of safeguarding the health, wellness and rights of the affected patients.

The following prerequisites require effective execution by the surgical team members for earnestly practicing surgical conscience across the operative units.

- ✓ Surgical team members require safeguarding the religious conventions, beliefs and perspectives of
- ✓ patients while extending surgical interventions across the operative units.

- ✓ The team of surgical professionals needs to consider the surgery candidates as dignified individuals and address their apprehensions prior to the execution of surgical interventions.
- ✓ The surgical team should respect and safeguard the privacy of surgical subjects and must not reveal their protected health information against their will and consent to any unauthorized individual.
- ✓ Surgical team members must refrain themselves from discussing their surgical case outside the premises of their surgical settings.
- ✓ The condition of patients following surgical intervention must not become the subject of public opinion and reporting of an adverse event across the operative room requires instant reporting by the members of the surgical team.
- ✓ The members of the surgical team must remain honest and refrain themselves from executing a surgical intervention with which they are unfamiliar during the course of their clinical experience.
- ✓ The pattern of surgical conscience influences the following attributes of the members of the surgical team across the clinical setting:
- ✓ The safety of the patient predominantly influenced by the patterns of surgical conscience of the surgical team members. Therefore, team members must earnestly evaluate the factors that exhibit the potential of harming the patient.
- ✓ The evaluation of electrical hazards across the operative unit is influenced by the extent of surgical conscience followed by the surgical team members. Surgical team members must ascertain the removal of defective electrical cords and plugs for reducing the risk of any associated adverse event for patients requiring surgical intervention.
- ✓ The grounding of the patients during electrocautery intervention necessarily required for reducing the scope of electric shock and this attribute influenced by the level of conscience and ethics followed by the members of the surgical team.
- ✓ The movement and positioning of patients during the surgical interventions are influenced by the extent of surgical conscience followed by the surgical team. Surgical team members must safeguard the vasculature and

musculoskeletal structures of the patients enrolled for the surgical interventions.

- ✓ The pattern of environmental protection influences the nursing care for the patients eligible for surgical intervention. Therefore, ethical conventions direct surgical teams for ceasing the
- ✓ unwanted exposure of patient's body surface across the operative units in reducing the probability of infection transmission as suggested by an essay writer.
- ✓ The psychological state of patients is predominantly influenced by the ethical parameters and level of conscience followed by the surgical teams.

  Therefore, surgical teams must remain compassionate with patients across the operative room and effectively empathize with them throughout the course of surgical interventions.

Information Sheet 8- Undertaking preoperative diagnostic procedures

8.1.1 Undertaking preoperative diagnostic procedures

Surgeons conducting Operations Surgery [a] is a medical specialty that uses operative manual and instrumental techniques on a person to investigate or treat a pathological condition such as a disease or injury, to help improve bodily function or appearance or to repair unwanted ruptured areas. The act of performing surgery may be called a surgical procedure , operation, or simply"surgery". In this context, the verb "operate"means to perform surgery. The adjective surgical means pertaining to surgery; e.g.surgical instruments or surgical nurse. The person or subject on which the surgery is performed can be a person or an animal. A surgeon is a person who practices surgery and a surgeon's assistant is a person who practices surgical assistance.

A surgical team is made up of surgeon, surgeon's assistant, anaesthetist, circulating nurse and surgical technologist. Surgery usually spans minutes to hours, but it is typically not an ongoing or periodic type of treatment. The term "surgery" can also refer to the place where surgery is performed, or, in British English, simply the office of a physician , [1] dentist, or veterinarian. Definitions Surgery is a invasive technique with the fundamental principle of physical intervention on organs/organ systems/tissues for diagnostic or therapeutic reasons. As a general rule, a procedure is considered surgical when it involves cutting of a person's tissues or closure of a previously sustained wound. Other procedures that do not necessarily fall under this rubric, such as angioplasty or endoscopy , may be considered surgery if they involve "common" surgical procedure or settings, such as use of a sterile environment, anesthesia , antiseptic conditions, typical surgical instruments, and suturing or stapling .

All forms of surgery are considered invasive procedures; so-called "noninvasive surgery" usually refers to an excision that does not penetrate the structure being excised (e.g.laser ablation of the cornea) or to a radiosurgical procedure (e.g. irradiation of a

tumor).

Types of surgery

Surgical procedures are commonly categorized by urgency, type of procedure, body system

involved, the degree of invasiveness, and special instrumentation.

Based on timing:

Elective surgery is done to correct a non-life-threatening condition, and is carried out at the person's request, subject to the surgeon's and the surgical facility's availability.

A semi-elective surgery is one that must be done to avoid permanent disability or death, but can be postponed for a short time.

Emergency surgery is surgery which must be done promptly to save life, limb, or functional capacity.

Based on purpose:

Exploratory surgery is performed to aid or confirm a diagnosis.

Therapeutic surgery treats a previously diagnosed condition. Cosmetic surgery is done to subjectively improve the appearanceof an otherwise normal structure. By type of procedure: Amputation involves cutting off a body part, usually a limb or digit; castration is also an example. Resection is the removal of all of an internal organ or body part, or a key part (lung lobe; liver quadrant) of such an organ or body part that has its own name or code designation. Excision is the cutting out or removal of only part of an organ, tissue, or other body part from the person. Extirpation is the complete excision or surgical destruction of a body part. Replantation involves reattaching a severed body part. Reconstructive surgery involves reconstruction of an injured, mutilated, or deformed part of the body. Transplant surgery is the replacement of an organ or body part by insertion of another from different human (or animal) into the person undergoing surgery. Removing an organ or body part from a live human or animal for use in transplant is also a type of surgery.

By body part:

When surgery is performed on one organ system or structure, it may be classed by the organ, organ system or tissue involved. Examples include cardiac surgery (performed on the heart), gastrointestinal surgery (performed within the digestive tract and its accessory organs), and orthopedic surgery (performed on bones or muscles).

By degree of invasiveness of surgical

procedures: Minimally-invasive surgery involves smaller outer incision (s) to insert miniaturized instruments within a body cavity or structure, as in laparoscopic surgery or angioplasty. By contrast, an open surgical procedure such as a laparotomy requires a large incision to access the area of interest. By equipment used: Laser surgery involves use of a laser for cutting tissue instead of a scalpel or similar surgical instruments. Microsurgery involves the use of an operating microscope for the surgeon to see small structures. Robotic surgery makes use of a surgical robot, such as the Da Vinci or the ZEUS robotic surgical systems , to control the instrumentation under the direction of the surgeon.

Terminology

Main article: List of surgical procedures Excision surgery names often start with a name for the organ to be excised (cut out) and end in -ectomy .

Procedures involving cutting into an organ or tissue end in -otomy. A surgical procedure cutting through the abdominal wall to gain access to the abdominal cavity is a laparotomy .

Minimally invasive procedures , involving small incisions through which an endoscope is inserted, end in -oscopy . For example, such surgery in the abdominal cavity is called laparoscopy Procedures for formation of a permanent or semi-permanent opening called a stoma in the body end in -ostomy .

Reconstruction, plastic or cosmetic surgery of a body part starts with a name for the body part to be reconstructed and ends in - oplasty . Rhino is used as a prefix for "nose", therefore a rhinoplasty is reconstructive or cosmetic surgery for the nose.

Repair of damaged or congenital abnormal structure ends in -rraphy.

Reoperation (return to the operating room) refers to a return to the operating theater after an initial surgery is performed to re- address an aspect of patient care best treated surgically. Reasons for reoperation include persistent bleeding after surgery, development of or persistence of infection.

Description of surgical procedure

Location

Inpatient surgery is performed in a hospital, and the person undergoing surgery stays at least one night in the hospital after the surgery.

Outpatient surgery occurs in a hospital outpatient department or freestanding ambulatory surgery center, and the person who had surgery is discharged the same working day. Office surgery occurs in a physician's office, and the person is discharged the same working day.

At a hospital , modern surgery is often performed in an operating theater using surgical instruments, an operating table, and other equipment. Among United States hospitalizations for nonmaternal andnonneonatal conditions in 2012, more than one-fourth of stays and half of hospital costs involved stays that included operating room (OR) procedures. The environment and procedures used in surgery are governed by the principles of aseptic technique : the strict separation of "sterile" (free of microorganisms) things from "unsterile" or "contaminated" things. All surgical instruments must be sterilized , and an instrument must be replaced or re-sterilized if, it becomes contaminated (i.e. handled in an unsterile manner, or allowed to touch an unsterile surface). Operating room staff must wear sterile attire (scrubs, a scrub cap, a sterile surgical gown, sterile latex or non-latex polymer gloves and a surgical mask), and they must scrub hands and arms with an approved disinfectant agent before each procedure.

Preoperative care

Main article: Preoperative care Prior to surgery, the person is given a medical examination , receives certain pre-operative tests, and their physical status is rated according to the ASA physical status classification system . If these results are satisfactory, the person requiring surgery signs a consent form and is given a surgical clearance.

If the procedure is expected to result in significant blood loss, an autologous blood donation may be made some weeks prior to surgery. If the surgery involves the digestive system , the person requiring surgery may be instructed to perform a bowel prep by drinking a solution of polyethylene glycol the night before the procedure. People preparing for surgery are also instructed to abstain from food or drink (an NPO order after midnight on the night before the procedure), to minimize the effect of stomach contents on pre-operative medications and reduce the risk of aspiration if the person vomits during or after the procedure.

Some medical systems have a practice of routinely performing chest x-rays before surgery. The premise behind this practice is that the physician might discover some unknown medical condition which would complicate the surgery, and that upon discovering this with the chest x-ray, the physician would adapt the surgery practice accordingly. However, medical specialty professional organizations recommend against routine pre-operative chest x-rays for people who have an unremarkable medical history and presented with a physical exam which did not indicate a chest x-ray. Routine x-ray examination is more likely to result in problems like misdiagnosis, overtreatment, or other negative outcomes than it is to result in a benefit to the person. Likewise, other tests including complete blood count , prothrombin time , partial thromboplastin time, basic metabolic panel, and urinalysis should not be done unless the results of these tests can help evaluate surgical risk.

In the pre-operative holding area, the person preparing for surgery changes out of his or her street clothes and is asked to confirm the details of his or her surgery. A set of vital signs are recorded, a peripheral IV line is placed, and pre-operative medications (antibiotics, sedatives, etc.) are given. When the person enters the operating room, the skin surface to be operated on, called the operating field, is cleaned and prepared by applying an antiseptic such as chlorhexidine gluconate or povidone-iodine to reduce the possibility of infection. If hair is present at the surgical site, it is clipped off prior to prep application. The person is assisted by an anesthesiologist or resident to make a specific surgical position, then sterile drapes are used to cover the surgical site or at least a wide area surrounding the operating field; the drapes are clipped to a pair of poles near the head of the bed to form an "ether screen", which separates the anesthetist/anesthesiologist 's working area (unsterile) from the surgical site (sterile).

Anesthesia is administered to prevent pain from an incision, tissue manipulation and suturing. Based on the procedure, anesthesia may be provided locally or as general anesthesia . Spinal anesthesia may be used when the surgical site is too large or deep for a local block, but general anesthesia may not be desirable. With local and spinal anesthesia, the surgical site is anesthetized, but the person can remain conscious or minimally sedated. In contrast, general anesthesia renders the person

unconscious and paralyzed during surgery. The person is intubated and is placed on a mechanical ventilator , and anesthesia is produced by a combination of injected and inhaled agents. Choice of surgical method and anesthetic technique aims to reduce the risk of complications, shorten the time needed for recovery and minimise the surgical stress response.

Intraoperative phase

The intraoperative phase begins when the surgery subject is received in the surgical area (such as the operating theater or surgical department), and lasts until the subject is transferred to a recovery area (such as a post- anesthesia care unit).

An incision is made to access the surgical site.Blood vessels may be clamped or cauterized to prevent bleeding, and retractors may be used to expose the site or keep the incision open. The approach to the surgical site may involve several layers of incision and dissection, as in abdominal surgery, where the incision must traverse skin, subcutaneous tissue, three layers of muscle and then the peritoneum. In certain cases, bone may be cut to further access the interior of the body; for example, cutting the skull for brain surgery or cutting the sternum for thoracic (chest) surgery to open up the rib cage .

Whilst in surgery aseptic technique is used to prevent infection or further spreading of the disease. The surgeons' and assistants' hands, wrists and forearms are washed thoroughly for at least 4 minutes to prevent germs getting into the operative field, then sterile gloves are placed onto their hands. Anantiseptic solution is applied to the area of the person's body that will be operated on. Sterile drapes are placed around the operative site.Surgical masks are worn by the surgical team to avoid germs on droplets of liquid from their mouths and noses from contaminating the operative site. Work to correct the problem in body then proceeds. This work may involve: excision – cutting out an organ, tumor, or other tissue. resection – partial removal of an organ or other bodily structure. reconnection of organs, tissues, etc.,particularly if severed. Resection of organs such as intestines involves reconnection. Internal suturing or stapling may be used.Surgical connection between blood vessels or other tubular or hollow structures such as loops of intestine is called anastomosis. reduction – the movement or realignment of a body part to its normal position.

removal of calculi (stones) draining of accumulated fluids debridement – removal of dead, damaged, or diseased tissue

Blood or blood expanders may be administered to compensate for blood lost during surgery. Once the procedure is complete, sutures or staples are used to close the incision. Once the incision is closed, the anesthetic agents are stopped or reversed, and the person is taken off ventilation and extubated (if general anesthesia was administered).

Self check 8	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Difine the following terms

1. Laparascopy
2. Ligation
3. -ectomy
4.-otomy

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____
_____
_____

2._____
_____

Information Sheet 9- Implementing preoperative surgical procedures

9. Implementing preoperative surgical procedures

A care given for apt from time of admission for surgery until is shifted to operation theatre It includes all the activities necessary to prepare the patient properly for surgery.It begins when the decision for surgery is made and ends when the patient is transferred to operating room

Purpose

- ✓ To prepare pt psychologically, physiologically & physically for surgery
- ✓ To prevent post- operative complications
- ✓ To provide comfort & reduce fear, anxiety
- ✓ Help to enhancing pt recovery

Preparing the client for surgery

Informed consent-must is obtained before any surgical procedure is an important medical legal document. This information needs to be discussed in language the patient can understand. The information that usually be discussed includes:- describing the proposed surgery the possible risk and benefits of the proceduce the reason why surgery is indicated and any other information that will help the patient reach an informed decision.

Client teaching

- ✓ Give general orientation and explanation of the surgical experience.
- ✓ Explain all pre- operative activities:- such as bowel preparation, skin preparation and insertion of urinary or intra venous catheters or nasogastric tubes.
- ✓ The patient should be informed of any dietary or fluid restrictions, including NPO status.
- ✓ helps patients understands what will occur during each phase of the surgical process
- ✓ It also decreased patient's anxiety
- ✓ Increase patients co-operation in their health care

Patient preparation

They are classified in to three major phase

- The day before surgery
- At the day of surgery
- Just before the time of surgery

The day before surgery

The nurse is responsible for preparing the patient physically and emotionally to ensure optimal condition for the surgical experience

Physiological Preparation

Treatment of disorders such as anemia, HTN, infections control diabtes

- ✓ Correction of fluid & electrolyte imbalance
- ✓ Restoration of adequate blood volume
- ✓ Assessments of all body system

Physical preparation

- It is important that the patient be in a good state of physical health before surgery.
- Unless it is an emergency operation.
- He/she should have balanced diet, fluid, sleep and rest before his surgery.
- Have patient or relative sign consent for the operation
- Patient preparation includes the following; Lab Investigation

  Starting an I.V line, placing nasogastric tube, preparing the skin, bowel preparation and administering pre-operative medications.

Patient preparation

- ✓ Encourage the patient to cough and deep breath
- ✓ Taking deep breaths helps to expand alveoli and promote an effective cough, which decrease the risk of atelectasis.
- ✓ Deep breathing is useful for all clients, especially the post operative client
- ✓ Shallow breathing or ineffective cough can lead to mucus plugging, atlectiasis, hypoxemia, or pneumonia
- ✓ Be sure the patient's hair is clean.
- ✓ If the surgery is on the face, neck, shoulders or upper chest,
- ✓ the hair should be thoroughly washed, combed
- ✓ and tied up to keep it from touching the operative area.

- ✓ If the surgery is on the head the area must be shaved and the hair washed.
- ✓ If an enema has been ordered, give at the night before surgery.
- ✓ It is important that the patient has a good sleep before his operation,
- ✓ Make him comfortable.
- ✓ Instructs patient about deep breathing and cough exercise

Day of Surgery:

- ✓ If the surgery is in the morning be sure the patient is prepared early.
- ✓ Any thing abnormal such as pain, cough any change in v/s must be reported immediately.
- ✓ The surgery may have to be canceled or delayed until the patient is be come well.
- ✓ If the surgery is in the morning, nothing should be taken by mouth after midnight (N.P.O.).
- ✓ If the surgery is in the afternoon., fluids and food should not be taken in the morning.
- ✓ Check the cleanliness of body areas, umbilicus, nails and hair.

Information Sheet 9- Anticipating and intervening Potential intra operative Complications

9.Anticipating and intervening Potential intra operative Complications

Potential intraoperative complications include nausea and vomiting, anaphylaxis, hypoxia, hypothermia, malignant hyperthermia, and disseminated intravascular coagulopathy (DIC).

NAUSEA AND VOMITING

Nausea and vomiting, or regurgitation, may affect patients during the intraoperative period. If gagging occurs, the patient is turned to the side, the head of the table is lowered, and a basin is provided to collect the vomitus. Suction is used to remove saliva and vomited gastric contents. There is no single way to prevent nausea and vomiting; an interdisciplinary approach involving the surgeon, anesthesiologist or anesthetist, and nurse is best. In some cases, the anesthesiologist administers antiemetics preoperatively or intraoperatively to counteract possible aspiration. If the patient aspirates vomitus, an asthma-like attack with severe bronchial spasms and wheezing is triggered. Pneumonitis and pulmonary edema can subsequently develop, leading to extreme hypoxia. Increasing medical attention is being paid to silent regurgitation of gastric contents, which occurs more frequently than previously realized. The importance of pH in the etiology of acid aspiration is being studied, as is the value of perioperative administration of a histamine-2 receptor antagonist, such as cimetidine (Tagamet), and similar medications.

Anaphylaxis

Any time a substance foreign to the patient is introduced; there is the potential for an anaphylactic reaction. Because medications are the most common cause of anaphylaxis, intraoperative nurses must be aware of the type and method of anesthesia used as well as the specific agents. An anaphylactic reaction can occur in response to many medications, latex, or other substances. The reaction may be immediate or delayed. Anaphylaxis is a lifethreatening acute allergic reaction that

causes vasodilation, hypotension, and bronchial constriction. Fibrin sealants are used in a variety of surgical procedures, and cyanoacrylate tissue adhesives are used to close wounds without the use of sutures. These sealants have been implicated in allergic reactions and anaphylaxis. Although these reactions are rare, the nurse should be alert to the possibility and observe the patient for changes in vital signs and symptoms o f anaphylaxis when these products are used.

Hypoxia and other respiratory complications

Inadequate ventilation, occlusion of the airway, inadvertent intubation of the esophagus, and hypoxia are significant potential problems of general anesthesia. Many factors can contribute to inadequate ventilation. Respiratory depression caused by anesthetic agents, aspiration of respiratory tract secretions or vomitus, and the patient's position on the operating table can compromise the exchange of gases. Anatomic variation can make the trachea difficult to visualize and result in the artificial airway being inserted into the esophagus rather than the trachea. In addition to these dangers, asphyxia caused by foreign bodies in the mouth, spasm of the vocal cords, relaxation of the tongue, or aspiration of vomitus, saliva, or blood can occur. Since brain damage from hypoxia occurs within minutes, vigilant assessment of the patient's oxygenation status is a primary function of the anesthesiologist or anesthetist and the circulating nurse. Peripheral perfusion is checked frequently, and pulse oximetry values are monitored continuously.

Malignant hyperthermia

Malignant hyperthermia is an inherited muscle disorder chemically induced by anesthetic agents. With the mortality rate exceeding 50%, identifying patients at risk for malignant hyperthermia is imperative. Susceptible people include those with strong and bulky muscles, a history of muscle cramps or muscle weakness and unexplained temperature elevation, and an unexplained death of a family member during surgery that was accompanied by a febrile response.

Hypothermia

During anesthesia, the patient's temperature may fall. Glucose metabolism is reduced, and as a result metabolic acidosis may develop. This condition is called hypothermia and is indicated by a core body temperature below normal (36.6°C [98.0°F] or lower). Inadvertent hypothermia may occur as a result of a low temperature in the OR, infusion of cold fluids, inhalation of cold gases, open body wounds or cavities, decreased muscle activity, advanced age, or the pharmaceutical agents used (eg, vasodilators, phenothiazines, general anesthetics). Hypothermia may also be intentionally induced in selected surgical procedures (such as cardiac surgeries requiring cardiopulmonary bypass) to reduce the patient's metabolic rate.

Preventing unintentional hypothermia is a major objective. If hypothermia occurs, the goal of intervention is to minimize or reverse the physiologic process. If hypothermia is intentional, the goal is safe return to normal body temperature.

Information Sheet 10- Assisting in administration of anesthesia

10.1. Definition and Purpose

Anesthesia or anaesthesia (from Greek "without sensation") is a state of controlled, temporary loss of sensation or awareness that is induced for medical purposes. It may include some or all of analgesia (relief from or prevention of pain), paralysis (muscle relaxation), amnesia (loss of memory), and unconsciousness. A patient under the effects of anesthetic drugs is referred to as being anesthetized . The purpose of anesthesia can be distilled down to three basic goals or endpoints: hypnosis (a temporary loss of consciousness and with it a loss of memory. In a pharmacological context, the word hypnosis usually has this technical meaning, in contrast to its more familiar lay or psychological meaning of an altered state of consciousness not necessarily caused by drugs—see hypnosis). analgesia (lack of sensation which also blunts autonomic reflexes) muscle relaxation

10.2. Types of anesthesia

There are two types of anesthesia

I. General Anesthesia (GA)

II. Local (regional) Anesthesia

General anesthesia

- is a complete and reversible loss of sensation
- Depending upon the type and amount of agent used, the patient may be slightly or not at all responsive to stimuli.
- A combination of agents is frequently used to achieve the desired level of muscle relaxation and analgesia

Regional Anesthesia

Regional anesthesia is a form of local anesthesia in which an anesthetic agent is injected around nerves so that the area supplied by these nerves is anesthetized. The effect depends on the type of nerve involved. Motor fibers are the largest fibers and have the thickest myelin sheath. Sympathetic fibers are the smallest and have a minimal covering. Sensory fibers are intermediate. Thus, a local anesthetic blocks motor nerves least readily and sympathetic nerves most readily. An anesthetic

cannot be regarded as having worn off until all three systems (motor, sensory, and autonomic) are no longer affected. The patient receiving spinal or local anesthesia is awake and aware of his or her surroundings unless medications are given to produce mild sedation or to relieve anxiety. The nurse must avoid careless conversation, unnecessary noise, and unpleasant odors; these may be noticed by the patient in the OR and may contribute to a negative view of the surgical experience. A quiet environment is therapeutic. The diagnosis must not be stated aloud if the patient is not to know it at this time.

Conduction Blocks and Spinal Anesthesia

There are many types of conduction blocks, depending on the nerve groups affected by the injection. Epidural anesthesia is achieved by injecting a local anesthetic into the spinal canal in the space surrounding the dura mater. Epidural anesthesia also blocks sensory, motor, and autonomic functions, but it is differentiated from spinal anesthesia by the injection site and the amount of anesthetic used. Epidural doses are much higher because the epidural anesthetic does not make direct contact with the cord or nerve roots. An advantage of epidural anesthesia is the absence of headache that occasionally results from subarachnoid injection. A disadvantage is the greater technical challenge of introducing the anesthetic into the epidural rather than the subarachnoid space. If inadvertent subarachnoid injection occurs during epidural anesthesia and the anesthetic travels toward the head, high spinal anesthesia can result; this can produce severe hypotension and respiratory depression and arrest. Treatment of these complications includes airway support, intravenous fluids, and use of vasopressors.

Other types of nerve blocks include:

- ✓ Brachial plexus block, which produces anesthesia of the arm
- ✓ Paravertebral anesthesia, which produces anesthesia of the nerves supplying the chest, abdominal wall, and extremities
- ✓ Transsacral (caudal) block, which produces anesthesia of the perineum and, occasionally, the lower abdomen Spinal anesthesia is a type of extensive conduction nerve block that is produced when a local anesthetic is introduced into the subarachnoid space at the lumbar level, usually between L4 and L5.

- ✓ It produces anesthesia of the lower extremities, perineum, and lower abdomen. For the lumbar puncture procedure, the patient usually lies on the side in a knee–chest position.

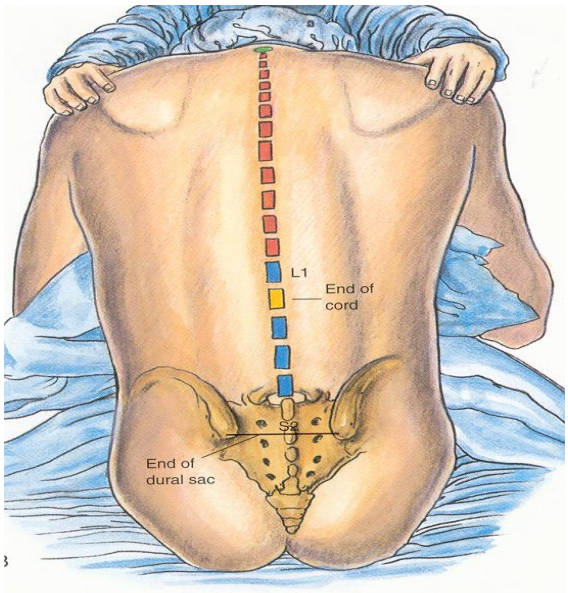
Sterile technique is used as a spinal puncture is made and the medication is injected through the needle. As soon as the injection has been made, the patient is positioned on his or her back. If a relatively high level of block is sought, the head and shoulders are lowered. The spread of the anesthetic agent and the level of anesthesia depend on the amount of fluid injected, the speed with which it is injected, the positioning of the patient after the injection, and the specific gravity of the agent. If the specific gravity is greater than that of cerebrospinal fluid (CSF), the agent moves to the dependent position of the subarachnoid space. If the specific gravity is less than that of CSF, the anesthetic moves away from the dependent position. The anesthesiologist or anesthetist controls the spread of the agent. Generally, the agents used are procaine, tetracaine (Pontocaine), lidocaine (Xylocaine), and bupivacaine.

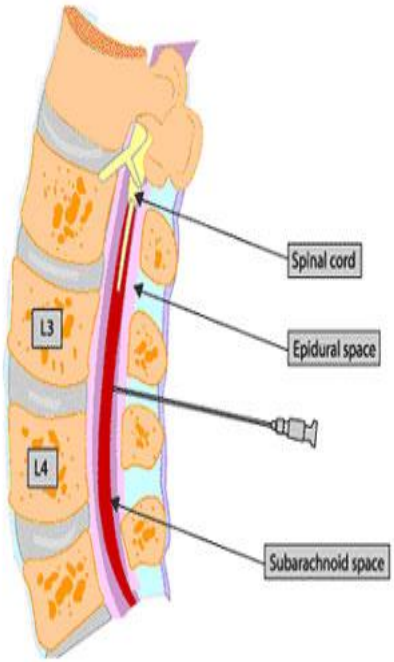
A few minutes after induction of a spinal anesthetic, anesthesia and paralysis affect the toes and perineum and then gradually the legs and abdomen. If the anesthetic reaches the upper thoracic and cervical spinal cord in high concentrations, a temporary partial or complete respiratory paralysis results. Paralysis of the respiratory muscles is managed by mechanical ventilation until the effects of the anesthetic on the respiratory nerves have worn off. Nausea, vomiting, and pain may occur during surgery when spinal anesthesia is used. As a rule, these reactions result from manipulation of various structures, particularly those within the abdominal cavity. The simultaneous intravenous administration of a weak solution of thiopental and inhalation of nitrous oxide may prevent such reactions.

Headache may be an after-effect of spinal anesthesia. Several factors are involved in the incidence of headache: the size of the spinal needle used the leakage of fluid from the subarachnoid space through the puncture site, and the patient's hydration status. Measures that increase cerebrospinal pressure are helpful in relieving headache. These include keeping the patient lying flat, quiet, and well hydrated. In continuous spinal anesthesia, the tip of a plastic catheter remains in the subarachnoid space during the surgical procedure so that more anesthetics may be

injected as needed. This technique allows greater control of the dosage, but there is greater potential for postanesthetic headache because of the large-gauge needle used.

Site of injection





Local Infiltration Anesthesia

Infiltration anesthesia is the injection of a solution containing the local anesthetic into the tissues at the planned incision site. Often it is combined with a local regional block by injecting the nerves immediately supplying the area.

The advantages of local anesthesia are as follows:

- ✓ It is simple, economical, and nonexplosive.
- ✓ Equipment needed is minimal.
- ✓ Postoperative recovery is brief.
- ✓ Undesirable effects of general anesthesia are avoided.
- ✓ It is ideal for short and superficial surgical procedures.

Local anesthesia is often administered in combination with epinephrine. Epinephrine constricts blood vessels, which prevents rapid absorption of the anesthetic agent and thus prolongs its local action. Rapid absorption of the anesthetic agent into the bloodstream, which could cause seizures, is also prevented. Local anesthesia is the anesthesia of choice in any surgical procedurein which it can be used. However, contraindications includehigh preoperative levels of anxiety, because surgery with local anesthesia may increase anxiety. A patient who requests general anesthesia rarely does well under local anesthesia. For some surgical procedures, local anesthesia is impractical because of the number of injections and the amount of anesthetic that would berequired (breast reconstruction, for example). The skin is prepared as for any surgical procedure, and a smallgauge needle is used to inject a modest amount of the anesthetic into the skin layers. This produces blanching or a wheal. Additional anesthetic is then injected in the skin until an area the length of the proposed incision is anesthetized. A larger, longer needle then is used to infiltrate deeper tissues with the anesthetic.

The action of the agent is almost immediate, so surgery may begin as soon as the injection is complete. Anesthesia lasts 45 minutes to 3 hours, depending on the anesthetic and the use of epinephrine.

10.3. **Indication**

Indication for general aneasthesia

- ✓ Skull surgery
- ✓ Thoracic surgery
- ✓ Critical patients
- ✓ Indication for regional anesthesia
  - o Lower abdominal and pelvic procedures

- Caesarian section
- Lower extremity
- Patients with renal and hepatic problems
- Indication for infiltration

- Suturing of wound
- Episiotomy
- Tooth extraction
- Circumcision
- Removal of cysts, fibroma etc

10.4. Method of administration

Anesthetics produce anesthesia because they are delivered to the brain at a high partial pressure that enables them to cross the blood–brain barrier. Relatively large amounts of anesthetic must be administered during induction and the early maintenance phases because the anesthetic is recirculated and deposited in body tissues. As these sites become saturated, smaller amounts of the anesthetic agent are required to maintain anesthesia because equilibrium or near equilibrium has been achieved between brain, blood, and other tissues. Anything that diminishes peripheral blood flow, such as vasoconstriction or shock, may reduce the amount of anesthetic required. Conversely, when peripheral blood flow is unusually high, as in the muscularly active or the apprehensive patient, induction is slower and greater quantities of anesthetic are required because the brain receives a smaller quantity of anesthetic.

Inhalation

Liquid anesthetics may be administered by mixing the vaporswith oxygen or nitrous oxide–oxygen and then having the patient inhale the mixture. The vapor is administered to the patient through a tube or a mask. The inhalation anesthetic may also be administered through a laryngeal mask, a flexible tube with an inflatable silicone ring and cuff that can be inserted into the larynx. . The endotracheal technique for administering anesthetics consists of introducing a soft rubber or plastic endotracheal tube into the trachea, usually by means of a laryngoscope. The endotracheal tube may be inserted through either the nose or mouth. When in place,

the tube seals off the lungs from the esophagus so that if the patient vomits, stomach contents do not enter the lungs.

Intravenous

General anesthesia can also be produced by the intravenous injection of various substances, such as barbiturates, benzodiazepines, nonbarbiturate hypnotics, dissociative agents, and opioid agents. These medications may be administered for induction (initiation) or maintenance of anesthesia. They are often used along with inhalation anesthetics but may be used alone. They can also be used to produce moderate sedation. An advantage of intravenous anesthesia is that the onset of anesthesia is pleasant; there is none of the buzzing, roaring, or dizziness known to follow administration of an inhalation anesthetic.For this reason, induction of anesthesia usually begins with an intravenous agent and is often preferred by patients who have experienced various methods. The duration of action is brief, and the patient awakens with little nausea or vomiting. Thiopental is usually the agent of choice, and it is often administered with other anesthetic agents in prolonged procedures.

Intravenous anesthetic agents are nonexplosive, they require little equipment, and they are easy to administer. The low incidence of postoperative nausea and vomiting makes the method useful in eye surgery because vomiting would increase intraocular pressure and endanger vision in the operated eye. Intravenous anesthesia is useful for short procedures but is used less often for the longer procedures of abdominal surgery. It is not indicated for children, who have small veins and require intubation because of their susceptibility to respiratory obstruction.

A disadvantage of an intravenous anesthetic such as thiopental is its powerful respiratory depressant effect. It must be administered by a skilled anesthesiologist or anesthetist and only when some method of oxygen administration is available immediately in case of difficulty. Sneezing, coughing, and laryngospasm are sometimes noted with its use.

Intravenous neuromuscular blockers (muscle relaxants) block the transmission of nerve impulses at the neuromuscular junction of skeletal muscles. Muscle relaxants are used to relax muscles in abdominal and thoracic surgery, relax eye muscles in certain types of eye surgery, facilitate endotracheal intubation, treat laryngospasm,

and assist in mechanical ventilation. Purified curare was the first widely used muscle relaxant; tubocurarine was isolated as the active ingredient. Succinylcholine was later introduced because it acts more rapidly than curare. Several other agents are also used.

The ideal muscle relaxant has the following characteristics:

- ✓ It is nondepolarizing (noncompetitive agent), with an onset and duration of action similar to succinylcholine but without its problems of bradycardia and cardiac dysrhythmias.
- ✓ It has a duration of action between those of succinylcholine and pancuronium.
- ✓ It lacks cumulative and cardiovascular effects.
- ✓ It can be metabolized and does not depend on the kidneys for its elimination.

10.5. Stage of anesthesia

General anesthesia consists of four stages, each associated with specific clinical manifestations. When opioid agents (narcotics) and neuromuscular blockers (relaxants) are administered, several of the stages are absent. The anesthesia level consists of general anesthesia and spinal or major regional anesthesia but does not include local anesthesia (JCAHO, 2001).

Anesthesia is a state of narcosis (severe central nervous system depression produced by pharmacologic agents), analgesia, relaxation, and reflex loss. Patients under general anesthesia are not arousable, even to painful stimuli. They lose the ability to maintain ventilatory function and require assistance in maintaining a patent airway. Cardiovascular function may be impaired as well (JCAHO, 2001).

STAGE I: BEGINNING ANESTHESIA (INDUCTION)

As the patient breathes in the anesthetic mixture, warmth, dizziness, and a feeling of detachment may be experienced. The patient may have a ringing, roaring, or buzzing in the ears and, though still conscious, may sense an inability to move the extremities easily. During this stage, noises are exaggerated; even low voices or minor sounds seem loud and unreal. For this reason, the nurse avoids making unnecessary noises or motions when anesthesia begins.

STAGE II: EXCITEMENT

The excitement stage, characterized variously by struggling, shouting, talking, singing, laughing, or crying, is often avoided if the anesthetic is administered smoothly and quickly. The pupils dilate, but contract if exposed to light; the pulse rate is rapid, and respirations may be irregular. Because of the possibility of uncontrolled movements of the patient during this stage, the anesthesiologist or anesthetist must always be assisted by someone ready to help restrain the patient. A strap may be in place across the patient's thighs, and the hands may be secured to an armboard. The patient should not be touched except for purposes of restraint, but restraints should not be applied over the operative site. Manipulation increases circulation to the operative site and thereby increases the potential for bleeding.

STAGE III: SURGICAL ANESTHESIA (RELAXATION)

Surgical anesthesia is reached by continued administration of theanesthetic vapor or gas. The patient is unconscious and lies quietly on the table. The pupils are small but contract when exposed to light. Respirations are regular, the pulse rate and volume are normal, and the skin is pink or slightly flushed. With proper administration of the anesthetic, this stage may be maintained for hours in one of several planes, ranging from light (1) to deep (4), depending on the depth of anesthesia needed.

STAGE IV: MEDULLARY DEPRESSION (DANGER)

This stage is reached when too much anesthesia has been administered. Respirations become shallow, the pulse is weak and thready, and the pupils become widely dilated and no longer contract when exposed to light. Cyanosis develops and, without prompt intervention, death rapidly follows. If this stage develops, the anesthetic is discontinued immediately and respiratory and circulatory support is initiated to prevent death. Stimulants, although rarely used, may be administered; narcotic antagonists can be used if overdosage is due to opioids. During smooth administration of an anesthetic, there is no sharp division between the first three stages, and there is no stage IV. The patient passes gradually from one stage to another, and it is only by close observation of the signs exhibited by the patient that an anesthesiologist or anesthetist can control the situation. The responses of the pupils, the blood pressure, and the respiratory and cardiac rates are probably the most reliable guides to the patient's condition.

10.6. Complications of anesthesia

A. local complications

- Tissue trauma
- Ischemia
- Infection

B. systemic complications

- Hypotension due to vasodilatation
- Give IV fluids, vasopressors (ephedrine, adrenaline)

✓ **Neurological:-**headache , convulsion

✓ Respiratory depression:- give oxygen by mask.

✓ Bradycardia (give atropine IV)

✓ Vasodilatation if persist (ephedrine).

✓ Neurological complications (rare):-meningitis, and peridural abscess.

✓ Pre anesthesia medication

The use of preanesthetic medication is minimal with ambulatory or outpatient surgery. If prescribed, it is usually administered in the preoperative holding area. If a preanesthetic medication is administered, the patient is kept in bed with the side rails raised because the medication can cause lightheadedness or drowsiness. During this time, the nurse observes the patient for any untoward reaction to the medications. The immediate surroundings are kept quiet to promote relaxation. Often, surgery is delayed or operating room schedules are sschanged, and it becomes impossible to request that a medication be given at a specific time. In these situations, the preoperative medication is prescribed “on call from operating room.”

The nurse can have the medication ready to give and administer it as soon as a call is received from the operating room staff. It usually takes 15 to 20 minutes to prepare the patient for the operating room. If the nurse gives the medication before attending to the other details of preoperative preparation, the patient will have at least partial benefit from the preoperative medication and will have a smoother anesthetic and operative course.

Self check 10	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1. Discus types of anesthesia
2. Explain stage of anesthesia

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

_____

_____

_____

_____

Information Sheet 11- Selecting instruments according to type of operation

11.1. General set

Surgical instruments can vary widely by the field of surgery that they are used in. In general instruments can be divided into five classes by function:

- Cutting and dissecting instruments: Scalpels, scissors, and saws are the most traditional Although the term dissection is broad energy devices such as diathermy/cautery are often used as more modern alternatives.
- Grasping or holding instruments: Classically this included forceps and clamps predominantly Roughly forceps can be divided in traumatic (tissue crushing) and atraumatic (tissue preserving, such as Debakey's) Numerous examples are available for different purposes by field
- Hemostatic instruments: This includes instruments utilized for the cessation of bleeding Artery forceps are a classic example in which bleeding is halted by direct clamping of a vessel Sutures are often used, aided by a needle holder Cautery and related instruments are used with increasing frequency in high resource countrie
- Retractors: Surgery is often considered to be largely about exposure A multitude of retractors exist to aid in exposing the bodies cavities accessed during surgery These can broadly be hand held(often by a junior assistant) or self retaining
- Tissue unifying instruments and materials: This would include instruments that aid in tissue unification (such as needle holders or staple applicators) And the materials themselves

11.2. Minor set

It is the surgical instrument used for a minor surgical procedure typically includes any procedure that can be safely performed in an outpatient setting, without the use of general anesthesia or the need for respiratory assistance. FastMed performs such procedures in a safe, sterile environment, using a local anesthetic delivered by either an injection or a topical cream. Although the types of procedures vary by location,

some of the more common minor surgery procedures performed by FastMed providers include:

How Long Do Minor Surgical Procedures Take?

Most minor surgical procedures performed at FastMed are completed within minutes once it has been set up. The length of time required depends on the type of procedure performed. Expect to spend about 15 to 30 minutes for most, or up to an hour for more complicated minor procedures after being checked in and placed in a room. For an estimated length of time, contact your local

Do Minor Surgeries Require Anesthesia?

By definition, minor surgeries are surgeries performed without general anesthesia or respiratory assistance. Most will be performed using an injected anesthetic or topical cream anesthetic applied to the site of the procedure.

Who Performs Minor Surgical Procedures?

FastMed performs minor surgical procedures on site at most locations during normal extended hours, 7 days a week, 365 days a year. Your minor surgical procedure will be completed by qualified FastMed providers.

Make FastMed Your Minor Surgery Center

If you require minor surgery for a cut, wound, foreign object removal, or other non-life-threatening concern, there's no need to spend hours at a hospital ER or wait weeks for an appointment with a surgery center. Just visit your local FastMed Urgent Care provider at your convenience. Our providers will provide the care you need in a compassionate, comfortable environment, without that costly and time- consuming ER visit or long wait time for an appointment. We're here seven days a week, including holidays, with extended morning and evening hours. No appointment is required. Feel free to check in online in advance for your convenience.

Removal of foreign objects from superficial wounds, ears, superficial eye, ear, or nose, (or vaginal) Stitching and/or removal of stitches for wounds and lacerations Incision and drainage Other simple procedures (contact your local FastMed for specific details on the types of procedures provided)

Self check 11	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1. List general instrument used for surgery
2. What is the difference between general and minor set

Score = _____

Rating: _____

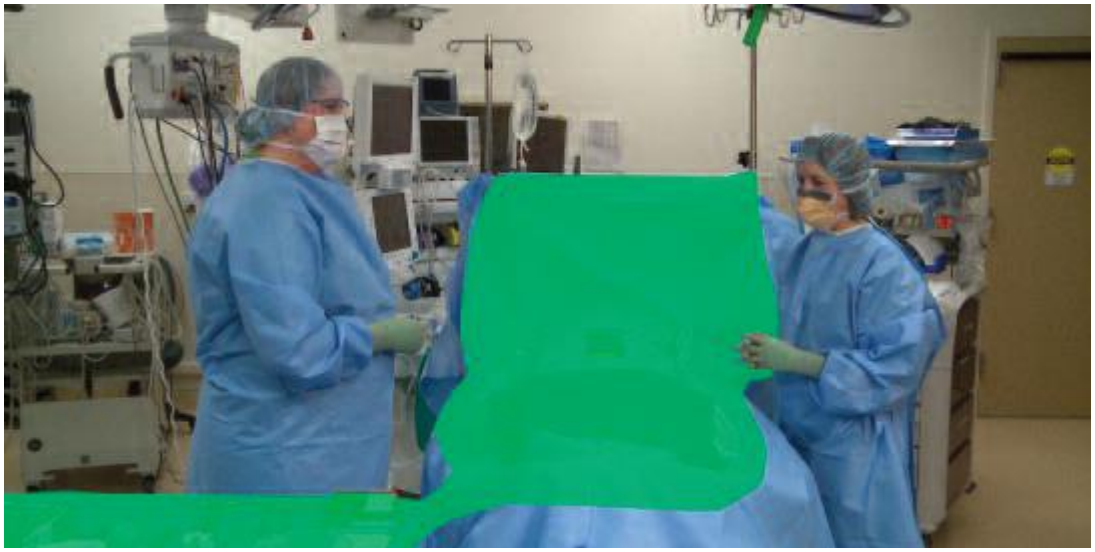
Answer Sheet

Name: _____ Date: _____

Short Answer Questions

Information Sheet 12- Passing instrument at the operation field

12. Passing instrument at the operation field



The sterile field consists of the area surrounding the site of theincision or perforation into tissue, or the site of introduction of an instrument into a body orifice that has been prepared for a surgical or other invasive procedure. The sterile field also includes all work areas, furniture, and equipment covered with sterile drapes and drape accessories, and all personnel who are wearing sterile attire. Perioperative personnel are key to creating, maintaining, and monitoring the sterile field. Before preparing a sterile field, they should perform a surgical hand scrub and don a sterile gown and gloves. This helps minimize contamination by microbes present on the skin and clothing.

Placement and Timing of Sterile Field Preparation

The sterile field should be prepared where it will be used. Moving the sterile field after it is created increases the risk of contamination, because air currents created by movement can lead to microbial and particle contamination. For the same reason,

movement of personnel around the sterile field should be kept to a minimum. In addition, the sterile field should be prepared as near as possible to the start time of the surgical or other invasive procedure. This helps minimize the amount of dust and other airborne particles that settle on the field, which is important because these particles can increase contamination by bacteria and other microbes. AORN recommendations note that the potential for contamination is event-related, and that there is

Segregation of Instruments

Sterile fields and instruments should be kept separate during procedures that involve both the abdomen and perineal area. The perineum has a higher number of microorganisms than the abdomen does, and placing instruments, gloves and other items in the abdomen after they have contacted the perineal area can cause serious infections.

In addition, the peritoneum is mechanically distended during laparoscopic abdominal procedures, which can make it easier for bacteria to pass through to the bloodstream, kidneys, and lungs. This is another reason it is important to prevent crosscontamination during dual procedures.Cross-contamination also can cause UTIs, which CDC's National Healthcare Safety Network has identified as the most common health care-acquired infection. To help prevent iatrogenic UTIs during gynecological laparoscopies, appropriate sterile technique must be used when passing transurethral instruments and catheters.

Isolation Technique for Bowel Surgery

During bowel surgery, surgical personnel should practice isolation technique, also known as bowel technique or contamination technique.3 This practice helps prevent microorganisms in the bowel from penetrating the abdominal cavity, the surgical site, or the tissues of the abdominal wall.

During isolation technique, the following practices should be

Followed

• Surgical instruments or equipment that have touched the inside of the bowel are not used after the bowel has been closed.

• Contaminated items are removed from the sterile field or placed in a separate area, so that the sterile team does not touch them again.

• Clean instruments are used to close the wound.

Introducing items to the sterile Field

To prevent contamination, items that are introduced into the sterile field must be opened, dispensed, and transferred using practices that:

• Protect their sterility.

• Protect the sterility of the sterile field.

• Prevent unsterile objects or unscrubbed team membersfrom reaching or leaning over the field.

Inspection before Opening

Before introducing any object to a sterile field, the item should be inspected to verify that it has been correctly processed and packaged and that the packaging is intact.
3 These practices help reduce the chance of inadvertent microbial contamination. The following are general steps that should be followed before introducing any item to a sterile field:

- ✓ Check for an expiration date before opening the item.
- ✓ If this date has passed, do not use the item.
- ✓ Check the wrappers of instrument trays for moisture
- ✓ and to be sure they have not torn.
- ✓ Check the chemical sterilization indicator in the
- ✓ package to make sure the color has changed as expected, which signifies appropriate sterilization.

Opening and Delivery Technique for Wrapped Items

Assisting team members should hand sterile items directly to a scrubbed team member or place them securely on the sterile field, so they do not slide off or push other items off the field. Items should not be tossed. Tossing an item could compromise the sterile drape or cause other items to shift.

To avoid tearing or puncturing the surgical drape, heavy or sharp items should either be handed directly to a scrubbed team member or opened on a separate, clean, dry surface.

Whenever opening wrapped sterile supplies, the perioperative team member should

• First open the wrapper flap that is farthest away from his or her body.

• Then open each side flap.

• Last, open the near (or closest) flap.

This helps prevent movement of an unsterile arm over the sterile contents of the package, which could contaminate it.

The edges of the wrapper are considered contaminated. They should be secured and not allowed to touch sterile areas or items.

Opening Peel Packages and Rigid Sterilization Containers

Peel pouches should be opened onto the sterile field so that the contents of the pouch do not touch the unsterile edges, and so that the team member who is opening the peel pouch does not touch the inside of the package.3 This practice prevents contamination of the package contents.

Rigid sterilization containers should be inspected and then opened onto a flat, clean, dry surface.

AORN recommends following the manufacturers instructions for opening rigid containers to help ensure that the contents remain sterile. The perioperative team member should

- ✓ Lift the lid up, away from the container and toward

him or herself.

- ✓ Check the lid for integrity of the filter or valve.
- ✓ Treat the package as contaminated if the filter is moist,
- ✓ broken, ripped, torn, or punctured.
- ✓ Not allow contaminated packages to touch the sterile field.

Monitoring the sterile field

Leaving a sterile field unattended, even for a brief time, increases the risk of undetected contamination.3 Therefore, sterile fields must be monitored continuously from the time they are created until the surgical or other invasive procedure is completed.

AORN recommendations specify that perioperative personnel **not** tape closed the doors to the OR or other procedure room as an alternative to monitoring the sterile field.

Covering a Sterile Field

If a surgical or other invasive procedure is unexpectedly delayed, or if there is increased activity around a sterile field, the field may be covered with a sterile drape to prevent airborne contamination.3 In one study, researchers divided 45 opened, sterile trays into three groups: trays left uncovered in a locked OR, trays left uncovered in an OR with single-person traffic occurring every 10 minutes from an unsterile hallway, and trays that were immediately covered with a sterile surgical towel. The trays were cultured at time 0 and at 30, 60, 120, and 240 minutes after they were opened. The results showed that the covered trays were not contaminated, but that there

Self check 14	Written test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Review questions

1. How to prepare surgical instrument at field of operation?
2. How to put sterile and clean instrument?

Score = _____

Rating: _____

Answer Sheet

Name: _____ Date: _____

Short Answer Questions

1._____

_____

LG #37	LO #5- Evaluate the effectiveness of nursing interventions and planned care in pre/ post and intra operative environment

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Evaluation consideration
  - ✓ Client responses
  - ✓ Nursing interventions
  - ✓ Documentation
  - ✓ Client acceptance to specific health promotion initiatives
- Assess consideration
  - ✓ Client understanding of their condition
  - ✓ Medications and therapeutic regimes
- Identifying emergency response to adverse reactions
- Reporting emergency treatment and client‘s response
- Orientation to recovery room
- Equipment
- Nursing care for patient in recovery room
- Admitting patient to recovery room
- Nursing management in recovery room
- Post-operative patient assessment
- Maintaining patent airway
  - ✓ head tilt and chin lift maneuver:
  - ✓ Air way maintenance using oral/nasal air way device
- Maintaining cardiovascular stability
- Assessing and managing electrolyte imbalance
- Assessing and managing Hemorrhage
- Pre anesthesia medication for relieving pain & anxiety
- Post anesthesia care
- Postoperative complication
- Post-operative report and Discharge from post anesthesia care unit

- Care & storage of instrument

Learning Instructions:

1 Read the specific objectives of this Learning Guide.

2 Follow the instructions described below.

3 Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.

4 Accomplish the “Self-checks” which are placed following all information sheets.

5 Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).

6 If you earned a satisfactory evaluation proceed to “Operation sheets

7 Perform “the Learning activity performance test” which is placed following “Operation sheets” ,

8 If your performance is satisfactory proceed to the next learning guide,

9 If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Information Sheet 1- Evaluate the effectiveness of nursing interventions and planned care in pre/ post and intra operative environment.

1. Evaluation consideration

1.1. Client responses

As the patient enters the OR, he or she may feel either relaxed and prepared or fearful and highly stressed. These feelings depend to a large extent on the amount and timing of preoperative sedation and the patient's level of fear and anxiety. Fears about loss of control, the unknown, pain, death, changes in body structure or function, and disruption of lifestyle all may contribute to generalized anxiety. These fears can increase the amount of anesthetic needed, the level of postoperative pain, and overall recovery time. The patient is also subject to several risks. Infection, failure of the surgery to relieve symptoms, temporary or permanent complications related to the procedure or the anesthetic, and death are uncommon but potential outcomes of the surgical experience (Chart 19-1).

In addition to fears and risks, the patient undergoing sedation and anesthesia temporarily loses both cognitive function and biologic self-protective mechanisms. Loss of pain sense, reflexes, and ability to communicate subjects the intraoperative patient to possible injury Nursing documentation is the record of nursing care that is planned and delivered to individual clients by qualified nurses or other caregivers under the direction of a qualified nurse. It contains information in accordance with the steps of the nursing process.

1.2. Nursing interventions

Throughout surgery, nursing responsibilities include providing for the safety and well-being of the patient, coordinating the OR personnel, and performing scrub and circulating activities. Because the patient's emotional state remains a concern, the care begun by preoperative nurses is continued by the intraoperative nursing staff, who provide the patient with information and reassurance. The nurse supports coping strategies and reinforces the patient's ability to influence outcomes by encouraging his or her active participation in the plan of care.

As patient advocates, intraoperative nurses monitor factors that can cause injury, such as patient position, equipment malfunction, and environmental hazards, and they protect the patient's dignity and interests while the patient is anesthetized. Additional responsibilities include maintaining surgical standards of care and identifying and minimizing risks and complications. Nursing documentation is the principal clinical information source to meet legal and professional requirements, and one of the most significant components in nursing care. Quality nursing documentation plays a vital role in the delivery of quality nursing care services through supporting better communication between different care team members to facilitate continuity of care and safety of the clients.

1.3. Documentation

Purposes

A written record of the history, treatment, care, and response of the client while under the care of a health care provider. A guide for reimbursement of care costs. Evidence of care in a court of law. A legal record that can be used as evidence of events that occurred or treatments given. Show the use of the nursing process. It contains observations by the nurses about the client's condition, care, and treatment delivered. Provides data for quality assurance studies and shows progress toward expected outcomes. Documentation of the nursing process See also: Nursing process The internationally accepted nursing process consists of five steps: assessment , nursing problem/diagnosis, goal, intervention and evaluation.[3] Nursing process model provides the theoretical framework for nursing documentation. A nurse can follow this model to assess the clinical situation of a client and record a constructive document for nursing communication.

Content

Nursing documentation mainly consists of a client's background information or nursing history referred as admission form, numerous assessment forms, nursing care plan and progress notes. These documents record the client's data captured at the relevant stages of the nursing process . [4] The following sections describe the concept, aim, possible structure and content of these nursing documents using the example of nursing documentation in Australian residential aged care homes.

Admission

An admission form is a fundamental record in nursing documentation. It documents a client's status, reasons why the client is being admitted, and the initial instructions for that client's care. [5] The form is completed by a nurse when a client is admitted to a health care facility. The admission form provides the basic information to establish foundations for further nursing assessment. It usually contains the general data about a client, such as name, gender, age, birth date, address, contact, identification information (ID) and some situational descriptions about marriage, work or other background information. Based on the different nursing care provider's requirements, this form may also record family history , past medical history , history of present illness , and allergies

Assessment

The documentation of nursing assessment is the recording of the process about how a judgment was made and its related factors, in addition to the result of the judgment. It makes the process of nursing assessment visible through what is presented in the documentation content. [6] During nursing assessment, a nurse systematically collects, verifies, analyses and communicates a health care client's information to derive a nursing diagnosis and plan individualized nursing care for the client. [7] Complete and accurate nursing assessment determines the accuracy of the other stages of the nursing process. The nursing documents may contain a number of assessment forms. In an assessment form, a licensed Registered Nurse records the client's information, such as physiological, psychological, sociological, and spiritual status (see Figure 2). The accuracy and completeness of nursing assessment determine the accuracy of care planning in the nursing process.

Nursing care plan The nursing care plan (NCP) is a clinical document recording the nursing process, which is a systematic method of planning and providing care to clients. It was originally developed in hospitals to guide nursing students or junior nurses in providing care to client; however, the format was task-oriened rather than nursing-process based. Nowadays, the NCP is widely used in nursing in various clinical and educational settings as a tool to direct individualized nursing care for clients. The nurses make nursing care plans based on the assessments they have completed previously with a client.There are many ways of structuring nursing care plans in correspondence with the different needs of nursing care in different nursing

specialties. For example, a nursing care plan in an Australian residential aged care home may be structured with several sections under each care domain such as pain, mobility, lifestyle, nutrition and continence.

The information is recorded in free-text style, and various terms are used singly or in combination to name each of the four sections in the formats that are used by a facility during a particular period. Progress notes A progress note is the record of nursing actions and observations in the nursing care process.

1.4. Client acceptance to specific health promotion initiatives

Special considerations for patients with mental or physical disabilities include the need for appropriate assistive devices, modifications in preoperative teaching, and additional assistance with and attention to positioning or transferring. Assistive devices include hearing aids, eyeglasses, braces, prostheses, and other devices. People who are hearing- impaired may need a sign interpreter or some alternative communication system perioperatively. If the patient relies on signing or speech (lip) reading and his or her eyeglasses or contact lenses are removed or the health care staff wear surgical masks, an alternative method of communication will be needed. These needs must be identified in the preoperative evaluation and clearly communicated to personnel. Specific strategies for accommodating the patient's needs must be identified in advance. Ensuring the security of assistive devices is important, because these devices are expensive and are likely to be lost

Information Sheet 2- Assess consideration

2. Assess consideration

Nurses have long recognized the value of preoperative instruction (Rothrock, 2003). Each patient is taught as an individual, with consideration for any unique concerns or learning needs. Multiple teaching strategies should be used (eg, verbal, written, return demonstration), depending on the patient's needs and abilities (Saufl, 2004). Preoperative teaching is initiated as soon as possible. It should start in the physician's office or at the time of PAT and continue until the patient arrives in the OR. Ideally, instruction is spaced over a period of time to allow the patient to assimilate information and ask questions as they arise. Frequently, teaching sessions are combined with various preparation procedures to allow for an easy and timely flow of information. The nurse should guide the patient through the experience and allow ample time for questions. For some patients, overly detailed descriptions increase anxiety; the nurse should be sensitive to this and provide less detail.

Teaching should go beyond descriptions of the procedure and should include explanations of the sensations the patient will experience. For example, telling the patient only that preoperative medication will cause relaxation before the operation is not as effective as also noting that the medication may result in lightheadedness and drowsiness. Knowing what to expect will help the patient anticipate these reactions and thus attain a higher degree of relaxation than might otherwise be expected. In addition, preoperative teaching includes instruction in breathing and leg exercises used to prevent postoperative complications such as pneumonia and deep vein thrombosis. These exercises may be performed in the hospital or at home .

The ideal timing for preoperative teaching is not on the day of surgery but during the preadmission visit, when diagnostic tests are performed. At this time, the nurse or resource person answers questions and provides important patient teaching. During this visit, the patient can meet and ask questions of the perioperative nurse, view audiovisual resources, receive written materials, and be given the telephone number to call as questions arise closer to the date of surgery.

2.1. Client understanding of their condition

A pain assessment should include differentiation between acute and chronic pain. Research suggests that, in older adults, teaching pain communication skills and pain management before surgery may result in greater pain relief during the early postoperative period (McDonald & Molony, 2004). A pain intensity scale should be introduced and explained to the patient to promote more effective postoperative pain management. Chapter 13 contains several examples of pain scales.

Preoperative patient teaching also needs to include the difference between acute and chronic pain, so that the patient is prepared to differentiate acute postoperative pain from a chronic condition such as back pain (Nair & Podichetty, 2004). Postoperatively, medications are administered to relieve pain and maintain comfort without increasing the risk of inadequate air exchange. The patient is instructed to take the medication as frequently as prescribed during the initial postoperative period for pain relief.

Anticipated methods of administration of analgesic agents for inpatients include patient-controlled analgesia (PCA), epidural catheter bolus or infusion, or patient-controlled epidural analgesia (PCEA). A patient who is expected to go home will likely receive oral analgesic agents. These methods are discussed with the patient before surgery, and the patient's interest and willingness to use them are assessed

2.2. Medications and therapeutic regimes

Cognitive strategies useful for reducing anxiety were addressed previously in this chapter. In addition to these strategies, music therapy is an easy-to-administer, inexpensive, noninvasive intervention that can reduce anxiety in the perioperative patient. The general preoperative teaching addressed earlier in this section also helps decrease anxiety in many patients. Knowing ahead of time about the possible need for a ventilator, drainage tubes, or other types of equipment helps decrease anxiety in the postoperative period. The major purpose of withholding food and fluid before surgery is to prevent aspiration. Until recently, fluid and food were restricted preoperatively overnight and often longer. However, the American Society of Anesthesiologists reviewed this practice and has made new recommendations for people undergoing elective surgery who are otherwise healthy. Studies show that lengthy restriction of fluid and food is unnecessary in patients who do not have a

compromised airway, coexisting disease, or disorders that affect gastric emptying or fluid volume (eg, pregnancy, obesity, diabetes, gastroesophageal reflux, enteral tube feeding, ileus, bowel obstruction) (Brady, Kinn & Stewart, 2004).

Specific recommendations depend on the age of the patient and the type of food eaten. For example, adults may be advised to fast for 8 hours after eating fatty food and 4 hours after ingesting milk products. Most patients are currently allowed clear liquids up to 2 hours before an elective procedure

3. Identifying emergency response to adverse reactions

Emergency response is the phase of the disaster-management cycle that often attractsthe most attention and resources. During this phase, environmental health services mayhave a great impact on the health and well-being of affected communities. However, the impact achieved in the early days of the response is largely a test of previously-planned local and national preparedness and mitigation measures. Moreover, the way the emergency response has been planned and the way the emergency is managed will have a significant influence on post-disaster recovery and future development possibilities. The emergency response phase should therefore be seen as a critical part of the disastermanagement cycle. Emergency response is sometimes a cyclical process, involving repeated assess ment, planning, action and review, to respond appropriately to needs and capacities as they evolve.

It starts with an initial assessment and may be triggered spontaneously by the disasterevent, or officials may authorize the mobilization of people and resources. Rapid and effective mobilization is facilitated by proper disaster preparedness.

Information Sheet 4- Reporting emergency treatment and client‘s response

4. Reporting emergency treatment and client‘s response

The nursing management objectives for the patient in the PACU are to provide care until the patient has recovered from the effects of anesthesia (eg, until resumption of motor and sensory functions), is oriented, has stable vital signs, and shows no evidence of hemorrhage or other complications. Frequent, skilled assessments of the blood oxygen saturation level, pulse rate and regularity, depth and nature of respirations, skin color, level of consciousness, and ability to respond to commands are the cornerstones of nursing care in the PACU. The nurse performs a baseline assessment, then checks the surgical site for drainage or hemorrhage and makes sure that all drainage tubes and monitoring lines are connected and functioning. The nurse checks any IV fluids or medications currently infusing and verifies dosage and rate.

After the initial assessment, the patient's vital signs and general physical status are assessed at least every 15 minutes (Defazio-Quinn & Schick, 2004). Patency of the airway and respiratory function are always evaluated first, followed by assessment of cardiovascular function, the condition of the surgical site, and function of the central nervous system. The nurse must be aware of any pertinent information from the patient's history that may be significant (eg, patient is deaf or hard of hearing, has a history of seizures, has diabetes, is allergic to certain medications or to latex).

Information Sheet 5- Orientation to recovery room

5.5. Orientation to recovery room

Promoting Home and Community-Based Care

To ensure patient safety and recovery, expert patient teaching and discharge planning are necessary when a patient undergoes same-day or ambulatory surgery. Because anesthetics cloud memory for concurrent events, verbal and written instructions should be given to both the patient and the adult who will be accompanying the patient home. Alternative formats (eg, large print, Braille) of instructions or use of a sign interpreter may be required to ensure patient and family understanding. Assess breathing and administer supplemental oxygen, if prescribed.

Nursing interventions

- ✓ Monitor vital signs and note skin warmth, moisture, and color.
- ✓ Assess the surgical site and wound drainage systems. Connect all drainage tubes to gravity or suction as indicated and monitor closed drainage systems.
- ✓ Assess level of consciousness, orientation, and ability to move extremities.
- ✓ Assess pain level, pain characteristics (location, quality) and timing, type, and route of administration of last dose of analgesic.
- ✓ Administer analgesics as prescribed and assess their effectiveness in relieving pain.
- ✓ Place the call light, emesis basin, ice chips (if allowed), and bedpan or urinal within reach.
- ✓ Position the patient to enhance comfort, safety, and lung expansion.
- ✓ Assess IV sites for patency and infusions for correct rate and solution.
- ✓ Assess urine output in closed drainage system or the patient's urge to void and bladder distention.
- ✓ Reinforce the need to begin deep-breathing and leg exercises.

Information Sheet 6- Equipment

6. Equipment

Patients have always required detailed discharge instructions to become proficient in special self-care needs after surgery; however, dramatically reduced hospital lengths of stay during the past decade have greatly increased the amount of information needed while reducing the amount of time in which to provide it. Although needs are specific to individual patients and the procedures they have undergone, general patient education needs for postoperative care have been identified.

INSTRUMENTS

Surgical Instruments:- Various maneuvers are common to all surgical procedures. The surgeon dissects, cuts, excises, incises, or alters tissue or body functions in the process bleeding must controlled. So they provide the need for each maneuver weather they are short or long, straight or curved, blunt or sharp bigger or smaller. Majority of surgical instruments are classified by their function. Nomenclature doesn't standardize surgical instrument.

Classification

Cutting and Dissecting:- cutting instrument have sharp edges, they are used to cut, incise, excise, or dissect tissues. Examples:-scissor, scalpels, punches, knifes, bone cutters, sharp dissectors.

Grasping and Holding:- tissues and other structures should be hold in position so the surgeon can perform the desired maneuver without injuring the surrounding tissue. Examples:-tissue forceps (toothed and non-toothed), sponge holding forceps, allies, Babcock, bone holding forceps, stone forceps etc.

Clamping and occluding:-these instruments are used to apply pressure. Example:- Artery forceps (Hemostatic forceps or mosquitos), crushing, clamper, gastric and intestinal clamps etc. Artery forceps are commonly used surgical instrument.

Exposing and retracting:-tissue and other structures should be pulled a side for the exposure of surgical site. Example:-Different retractors, devoir, longneck, roo-

retracter, racks (skin retractor),self-retaining retractor, abdominal and pelvic retractor.

Suturing instrument:-needles (with eye (widow) and without, round (a traumatic), cutting (traumatic), wedged (needle with stich), needle holder.

Viewing Instruments:-these are instrument used for visualizing internal organ. Example:-Endoscopes, vaginal speculum.

Suctioning and aspirating:-blood fragile, tissues and irrigating solutions should be removed by electrical or manual suction. Example:-Suction machines, suction tube, and suction nozzle.

Probing and dilating:-these are the instrument used to enlarge orifices and ducts and also to explore structures. Example:- Buginal and Dilator.

A basic general set of instruments consists of the following.

- ✓ Scalpel handles No 3 and 4
- ✓ Scalpel blades No 11, 21, 23
- ✓ Dissecting forceps, toothed, small----2
- ✓ Dissecting forceps, toothed, large----2
- ✓ Dissecting forceps, non-toothed, small---2
- ✓ Dissecting forceps, non-toothed, large---2
- ✓ Scissors, curved on flat, small and large---2
- ✓ Scissors, straight---------2
- ✓ Scissors----------1
- ✓ Hemostats, curved on flat, small----10
- ✓ Hemostats, curved on flat, long------4
- ✓ Hemostats, straight----------10

- ✓ Allis' forceps, short----------6
- ✓ Allis' forceps, long----------6
- ✓ Babcock's forceps, short----------6
- ✓ Dissector----------1
- ✓ Aneurysm needle----------1
- ✓ Towel clips----------6
- ✓ Sponge holding forceps----------6
- ✓ Curetting spoon----------1
- ✓ Malleable probe----------1
- ✓ Sinus forceps----------1
- ✓ Needle holder, large----------2
- ✓ Needle holder, small----------2
- ✓ Retractors, single hook, sharp and blunt—2
- ✓ Retractors, double hook----------2
- ✓ Retractors, medium (langen beck) -----2
- ✓ Retractors, large (Morris) ----------2
- ✓ Suction tip (simple) ----------2
- ✓ Suction tip (multi perforated) ----------2

Plastic instruments

- ✓ Endotracheal tube
- ✓ Suction tube
- ✓ Suction tip
- ✓ Face mask
- ✓ Oxygen administering tube
- ✓ Syringe
- ✓ Drainage tube etc.

Information Sheet 7- Nursing care for patient in recovery room

7. Nursing care for patient in recovery room

The nursing management objectives for the patient in the PACU are to provide care until the patient has recovered from the effects of anesthesia (eg, until resumption of motor and sensory functions), is oriented, has stable vital signs, and shows no evidence of hemorrhage or other complications. Surgery, whether elective or emergent, is a stressful, complex event. Today, as a result of advances in surgical techniques and instrumentation as well as in anesthesia, many surgical procedures that were once performed in an inpatient setting now take place in ambulatory or outpatient settings. Approximately 60% of elective surgeries are now performed in an ambulatory or outpatient setting; this number is expected to continue to increase over the next decade (Conner, 2004).

In the past, the patient scheduled for elective surgery was admitted to the hospital at least one day before surgery for evaluation and preparation; these activities are now completed before the patient is admitted to the hospital. Today, many patients arrive at the hospital on the morning of surgery and go home after recovering from the anesthesia in the postanesthesia care unit (PACU). Often, surgical patients who require hospital stays are trauma patients, acutely ill patients, patients undergoing major surgery, patients who require emergency surgery, and patients with a concurrent medical disorder. As a result, the acuity and complexity of surgical patients and procedures have increased in the inpatient setting. Although each setting (ambulatory, outpatient, or inpatient) offers its own unique advantages for the delivery of patient care, they all require a comprehensive preoperative nursing assessment and nursing interventions to prepare the patient and family before surgery

Information Sheet 8- Admitting patient to recovery room

8. Admitting patient to recovery room

Transferring the postoperative patient from the operating room to the PACU is the responsibility of the anesthesiologist or anesthetist. During transport from the operating room to the PACU, the anesthesia provider remains at the head of the stretcher (to maintain the airway), and a surgical team member remains at the opposite end. Transporting the patient involves special consideration of the incision site, potential vascular changes, and exposure. The surgical incision is considered every time the postoperative patient is moved; many wounds are closed under Considerable tension, and every effort is made to prevent further strain on the incision.

The patient is positioned so that he or she is not lying on and obstructing drains or drainage tubes. Serious orthostatic hypotension may occur when a patient is moved from one position to another (eg, from a lithotomy position to a horizontal position or from a lateral to a supine position), so the patient must be moved slowly and carefully. As soon as the patient is placed on the stretcher or bed, the soiled gown is removed and replaced with a dry gown. The patient is covered with lightweight blankets and warmed. The side rails are raised to guard against falls.

The nurse who admits the patient to the PACU reviews the following information with the anesthesiologist or anesthetist:

- ✓ Medical diagnosis and type of surgery performed
- ✓ Pertinent past medical history and allergies
- ✓ Patient's age and general condition, airway patency, vital signs
- ✓ Anesthetics and other medications used during the procedure (eg, opioids and other analgesic agents, muscle relaxants, antibiotic agents)
- ✓ Any problems that occurred in the operating room that might influence postoperative care (eg, extensive hemorrhage, shock, cardiac arrest)
- ✓ Pathology encountered (if malignancy is an issue during surgery, the nurse needs to know whether the patient and/or family have been informed)
- ✓ Fluid administered, estimated blood loss and replacement fluids

Information Sheet 9- Nursing management in recovery room

9. Nursing management in recovery room

The nursing management objectives for the patient in the PACU are to provide care until the patient has recovered from the effects of anesthesia (eg, until resumption of motor and sensory functions), is oriented, has stable vital signs, and shows no evidence of hemorrhage or other complications. During the first 24 hours after surgery, nursing care of the hospitalized patient on the general medical-surgical unit involves continuing to help the patient recover from the effects of anesthesia, frequently assessing the patient's physiologic status, monitoring for complications, managing pain, and implementing measures designed to achieve the long-range goals of independence with self-care, successful management of the therapeutic regimen, discharge to home, and full recovery. In the initial hours after admission to the clinical unit, adequate ventilation, hemodynamic stability, incisional pain, surgical site integrity, nausea and vomiting, neurologic status, and spontaneous voiding are primary concerns.

The pulse rate, blood pressure, and respiration rate are recorded at least every 15 minutes for the first hour and every 30 minutes for the next 2 hours. Thereafter, they are measured less frequently if they remain stable. The temperature is monitored every 4 hours for the first 24 hours. Patients usually begin to feel better several hours after surgery or after waking up the next morning. Although pain may still be intense, many patients feel more alert, less nauseous, and less anxious. They have begun their breathing and leg exercises, and many will have dangled their legs over the edge of the bed, stood, and ambulated a few feet or been assisted out of bed to the chair at least once. Many will have tolerated a light meal and had IV fluids discontinued. The focus of care shifts from intense physiologic management and symptomatic relief of the adverse effects of anesthesia to regaining independence with self-care and preparing for discharge. Despite these gains, the postoperative patient is still at risk for complications.

Information Sheet 10- Post-operative patient assessment

10. Post-operative patient assessment

Frequent, skilled assessments of the blood oxygen saturation level, pulse rate and regularity, depth and nature of respirations, skin color, level of consciousness, and ability to respond to commands are the cornerstones of nursing care in the PACU. The nurse performs a baseline assessment, then checks the surgical site for drainage or hemorrhage and makes sure that all drainage tubes and monitoring lines are connected and functioning. After the initial assessment, vital signs are monitored and the patient's general physical status is assessed at least every 15 minutes.
Patency of the airway and respiratory function are always evaluated first, followed by assessment of cardiovascular function, the condition of the surgical site, and function of the central nervous system.

The nurse needs to be aware of any pertinent information from the patient's history that may be significant (eg, patient is hard of hearing, has a history of seizures, has diabetes, or is allergic to certain medications The postoperative period extends from the time the patient leaves the operating room until the last follow-up visit with the surgeon. This period may be as short as 1 week or as long as several months. During the postoperative period, nursing care focuses on reestablishing the patient's physiologic equilibrium, alleviating pain, preventing complications, and teaching the patient self-care. Careful assessment and immediate intervention assist the patient in returning to optimal function quickly, safely, and as comfortable as possible. Ongoing care in the community through home care, clinic visits, office visits, or telephone follow-up facilitates an uncomplicated recovery.

The post anesthesia care unit (PACU), also called the post anesthesia recovery room, is located adjacent to the operating rooms. Patients still under anesthesia or recovering from anesthesia are placed in this unit for easy access to experienced, highly skilled nurses, anesthesiologists or anesthetists, surgeons, advanced hemodynamic and pulmonary monitoring and support, special equipment, and medications. The PACU is kept quiet, clean, and free of unnecessary equipment. This area is painted in soft, pleasing colors and has indirect lighting, a soundproof

ceiling, equipment that controls or eliminates noise (e.g., plastic emesis basins, rubber bumpers on beds and tables), and isolated but visible quarters for disruptive patients. The PACU should also be well ventilated. These features benefit the patient by helping to decrease anxiety and promote comfort.

Information Sheet 11- Maintaining patent airway

11. Maintaining patent airway

The primary objective in the immediate postoperative period is to maintain pulmonary ventilation and thus prevent hypoxemia (reduced oxygen in the blood) and hypercapnia (excess carbon dioxide in the blood). Both can occur if the airway is obstructed and ventilation is reduced (hypoventilation). Besides checking the physician's orders for and administering supplemental oxygen, the nurse assesses respiratory rate and depth, ease of respirations, oxygen saturation, and breath sounds Patients who have experienced prolonged anesthesia usually are unconscious, with all muscles relaxed. This relaxation extends to the muscles of the pharynx. When the patient lies on his or herback, the lower jaw and the tongue fall backward and the air passages become obstructed. This is called hypopharyngeal obstruction. A sign of occlusion include choking, noisy and irregular respirations, decreased oxygen saturation scores, and with in minute a blue, dusky color (cyanosis) of the skin. Because movement of the thorax and the diaphragm does not necessarily indicate that the patient is breathing, the nurse needs to place the palm of the hand at the patient's nose and mouth to feel the exhaled breath.

The anesthesiologist or anesthetist may leave a hard rubber or plastic airway in the patient's mouth to maintain a patent airway. Such a device should not be removed until signs such as gagging indicate that reflex action is returning. Alternatively, the patient may enter the PACU with an endotracheal tube still in place and may require continued mechanical ventilation.The nurse assists in initiating the use of the ventilator and in the weaning and extubation processes. Some patients, particularly those who have had extensive or lengthy surgical procedures, may be transferred from the operating room directly to the intensive care unit or may be transferred from the PACU to the intensive care unit while still intubated and on mechanical ventilation.

Respiratory difficulty can also result from excessive secretion of mucus or aspiration of vomitus. Turning the patient to one side allows the collected fluid to escape from the side of the mouth. If the teeth are clenched, the mouth may be opened manually

but cautiously with a padded tongue depressor. The head of the bed is elevated 15 to 30 degrees unless contraindicated, and the patient is closely observed to maintain the airway as well as to minimize the risk of aspiration. If vomiting occurs, the patient is turned to the side to prevent aspiration and the vomitus is collected in the emesis basin. Mucus or vomitus obstructing the pharynx or the trachea is suctioned with a pharyngeal suction tip or a nasal catheter introduced into the nasopharynx or oropharynx.

The catheter can be passed into the nasopharynx or oropharynx safely to a distance of 15 to 20 cm (6 to 8 inches). Caution is necessary in suctioning the throat of a patient who has had a tonsillectomy or other oral or laryngeal surgery because of risk for bleeding and discomfort.

11.1. Head tilt and chin lift maneuver:

The head-tilt/chin-lift is a procedure used to prevent the tongue obstruction the upper airways. The maneuver is performedby tilting the head back wards in unconscious patients, often by applying pressure to the forehead and the chin. The maneuver is used in any patient in whom cervical spine injury is not concern and is taught on most first aid courses as the standard way of clearing an airway. This maneuever and the jaw-thrust maneuver are two of the main tools of basic airway management.

If cervical spine injury is a concern and/or the patient is immobilized on a long spine board and/or cervical coller; the jaw thrust maneuver can be used instead.

If the patien is in danger of aspirating; he or she should be placed in the recovery position or advanced airway management should be used.

11.2. Air way maintenance using oral/nasal air way device

Oropharngeal airway devices are often used as “bite blocks” after a patients trachea has been intubated, in oerder to prevent the clenching of the teeth on the endothrecheal tube. Nasopharngeal airway devices are generally constructed from red rubber or polyvinyl chloride and are available in various sizes. A nasal air way should be lubricated and gently inserted transnasally.

11.3. Maintaining cardiovascular stability

To monitor cardiovascular stability, the nurse assesses the patient's mental status; vital signs; cardiac rhythm; skin temperature,color, and moisture; and urine output. Central venous pressure, pulmonary artery pressure, and arterial lines are monitored if the patient's condition requires such assessment. Thenurse also assesses the patency of all IV lines. The primary cardiovascular complications seen in the PACU include hypotension and shock, hemorrhage, hypertension, and dysrhythmias.

11.4. Assessing and managing electrolyte imbalance

Electrolyte imbalance, or **water-electrolyte imbalance**, is an abnormality in the concentration of electrolytes in the body. Electrolytes play a vital role in maintaining homeostasis within the body. They help to regulate heart and neurological function, fluid balance, oxygen delivery, acid–base balance and much more. Electrolyte imbalances can develop by consuming too little or too much electrolyte as well as excreting too little or too much electrolyte. Electrolyte disturbances are involved in many disease processes, and are an important part of patient management in medicine. The causes, severity, treatment, and outcomes of these disturbances can vastly differ depending on the implicated electrolyte. The most serious electrolyte disturbances involve abnormalities in the levels of sodium, potassium or calcium.

Other electrolyte imbalances are less common and often occur in conjunction with major electrolyte changes. The kidney is the most important organ in maintaining appropriate fluid and electrolyte balance, but other factors such as hormonal changes and physiological stress play a role.

Chronic laxative abuse or severe diarrhea or vomiting (gastroenteritis) can lead to electrolyte disturbances along with dehydration. People suffering from bulimia or anorexia nervosa are at especially high risk for an electrolyte imbalance. At worst, electrolyte imbalance can lead to death by cardiac failure if not treated appropriately and rapidly enough, as may be observed with the refeeding syndrome.

11.5. Assessing and managing Hemorrhage

Hemorrhage is an uncommon yet serious complication of surgery that can result in death. It can present insidiously or emergently at any time in the immediate postoperative period or up to several days after surgery. When blood loss is extreme, the patient is apprehensive, restless, and thirsty; the skin is cold, moist, and pale. The pulse rate increases, the temperature falls, and respirations are rapid and deep, often of the gasping type spoken of as “air hunger.” If hemorrhage progresses untreated, cardiac output decreases, arterial and venous blood pressure and hemoglobin level fall rapidly, the lips and the conjunctivae become pallid, spots appear before the eyes, a ringing is heard in the ears, and the patient grows weaker but remains conscious until near death.

Transfusing blood or blood products and determining the cause of hemorrhage are the initial therapeutic measures. The surgical site and incision should always be inspected for bleeding. If bleeding is evident, a sterile gauze pad and a pressure dressing are Special considerations must be given to patients who decline blood transfusions, such as Jehovah’s Witnesses and those who identify specific requests on their advance directives or living will.

11.6. Pre anesthesia medication for relieving pain & anxiety

The special field known as perioperative and perianesthesia nursing includes a wide variety of nursing functions associated with the patient's surgical experience during the perioperative period. Perioperative and perianesthesia nursing addresses the nursing roles relevant to the three phases of the surgical experience: preoperative, intraoperative, and postoperative. Each phase begins and ends at a particular point in the sequence of events that constitutes the surgical experience, and each includes a wide range of activities the nurse performs using the nursing process and based on the standards of practice (American Society of PeriAnesthesia Nurses, 2002). Chart 18-1 presents nursing activities characteristic of the three perioperative phases of care. Concurrent with technologic advances have been changes in the delivery of and payment for health care. Pressure to reduce hospital stays and contain costs has resulted in diagnostic preadmission testing (PAT) and preoperative preparation before admission to the hospital. Many facilities have a presurgical services department to facilitate PAT and to initiate the nursing assessment process, which

focuses on patient demographics, health history, and other information pertinent to the surgical procedure (Halaszynski, Juda & Silverman, 2004). The increasing use of ambulatory, same-day, or short-stay surgery, means that patients leave the hospital sooner, which increases the need for teaching, discharge planning, preparation for self-care, and referral for home care and rehabilitation services. Competent care of ambulatory, same-day, or short-stay surgical patients requires a sound knowledge of all aspects of perioperative and perianesthesia nursing.

11.6. Post anesthesia care

Monitored anesthesia care (MAC), also referred to as monitored sedation, is administered by an anesthesiologist or anesthetist. Although similar to moderate sedation, the health care provider who administers MAC, usually an anesthesiologist or anesthetist, must be prepared and qualified to convert to general anesthesia if necessary. The skills of an anesthesiologist or anesthetist may be necessary to manage the effects of a level of deeper sedation to return the patient to the appropriate level of sedation (Morton et al., 2005; American Society of Anesthesiologists, 2004). MAC may be used for healthy patients undergoing relatively minor surgical procedures and for some critically ill patients who may be unable to tolerate anesthesia without extensive invasive monitoring and pharmacologic support (Rothrock, 2003). Moderate sedation and monitored anesthesia care are compared

PHASES OF POSTANESTHESIA CARE

Post anesthesia care in some hospitals and ambulatory surgical centers is divided into two phases. In the phase I PACU, used during the immediate recovery phase, intensive nursing care is provided. The phase II PACU is reserved for patients who require less frequent observation and less nursing care. In the phase II unit, the patient is prepared for discharge. Recliners rather than stretchers or beds are standard in many phase II units, which may also be referred to as step-down, sit-up, or progressive care units.The PACU bed provides easy access to the patient, is safe and easily movable, can be readily placed in position, and has features that facilitate care, such as intravenous (IV) poles, side rails, wheel brakes, and a chart storage rack. Patients may remain in a phase II PACU unit for as long as 4 to 6 hours, depending on the type of surgery and any preexisting conditions of the patient.

In facilities without separate phase I and phase II units, the patient remains in the PACU and may be discharged home directly from this unit. Both phase I and phase II PACU nurses have special skills.

The phase I PACU nurse provides frequent (every 15 minutes) monitoring of the patient's pulse, electrocardiogram, respiratory rate, blood pressure, and pulse ox meter value (blood oxygen level). The nurse in the phase II PACU must possess strong clinical assessment and patient teaching skills

11.7. Post-operative report

- ✓ Immediately report any of these signs of infection:
- ✓ Redness, marked swelling exceeding 1⁄2 inch (2.5 cm) from incision site; tenderness; or increased warmth around wound
- ✓ Red streaks in skin near wound
- ✓ Pus or discharge, foul odor
- ✓ Chills or temperature higher than

11.8. Discharge from post anesthesia care unit

A patient remains in the PACU until he or she has fully recovered from the anesthetic agent. Indicators of recovery include stable blood pressure, adequate respiratory function, adequate oxygen saturation level compared with baseline, and spontaneous movement or movement on command.

Usually the following measures are used to determine the patient's readiness for discharge from the PACU:

- ✓ Stable vital signs
- ✓ Orientation to person, place, events, and time
- ✓ Uncompromised pulmonary function
- ✓ Pulse oximetry readings indicating adequate blood oxygen saturation
- ✓ Urine output at least 30 mL/h
- ✓ Nausea and vomiting absent or under control
- ✓ Minimal pain

11.9. Care & storage of instrument

Many hospitals use a scoring system (eg, Aldrete score) to determine the patient's general condition and readiness for transfer from the PACU. Throughout the

recovery period, the patient's physical signs are observed and evaluated by means of a scoring system based on a set of objective criteria. This evaluation guide, a modification of the Apgar scoring system used for evaluating newborns, allows a more objective assessment of the patient's condition in the PACU. The patient is assessed at regular intervals (eg, every 15 or 30 minutes), and the score is totaled on the assessment record. Patients with a score lower than 7 must remain in the PACU until their condition improves or they are transferred to an intensive care area, depending on their preoperative baseline scores.

The patient is discharged from the phase I PACU by the anesthesiologist or anesthetist to the critical care unit, the medicalsurgical unit, the phase II PACU, or home with a responsible family member. Patients being discharged directly to home require verbal and written instructions and information about follow-up

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