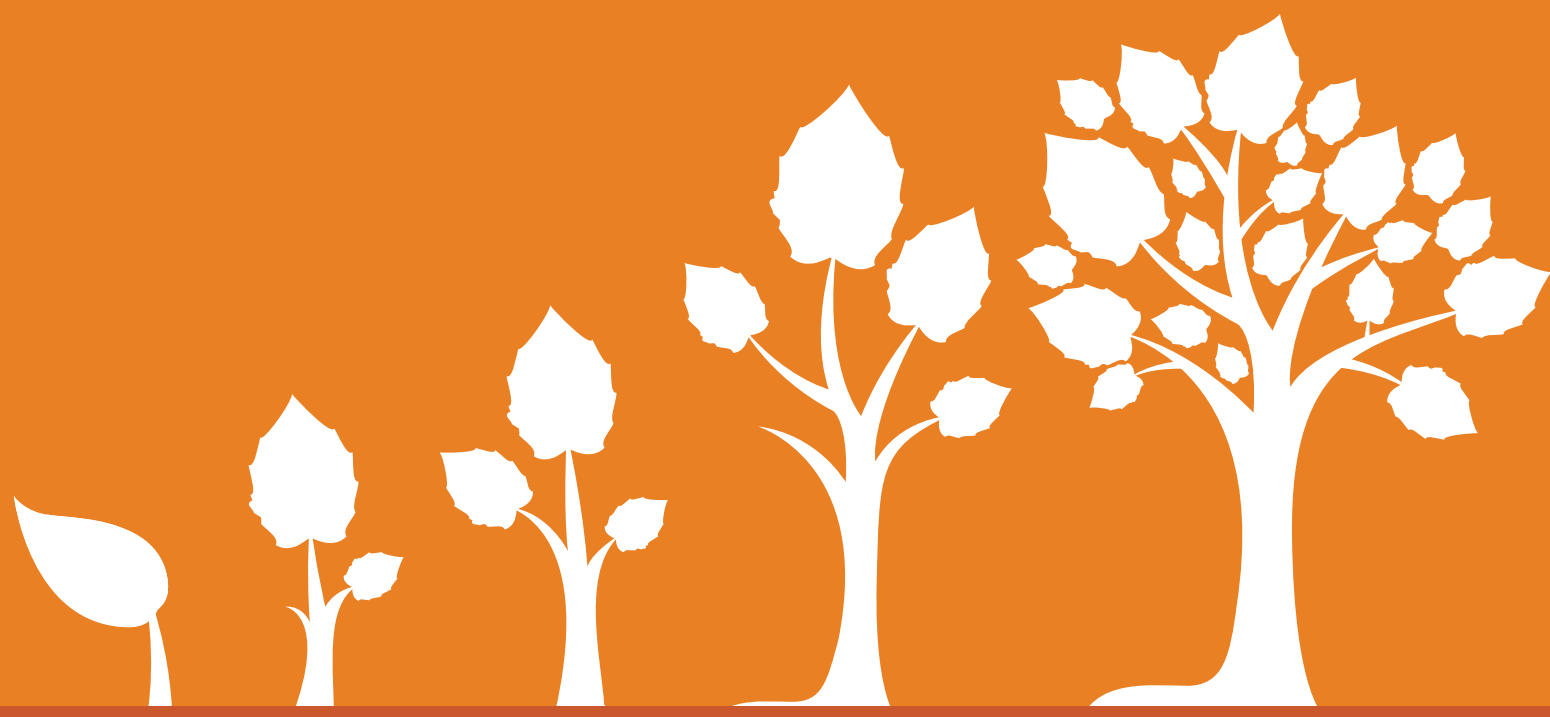
MINISTRY OF HEALTH

PROJECT FOR STRENGTHENING CLINICAL TRAINING SYSTEM
FOR NEW GRADUATE NURSES IN VIETNAM

TEXTBOOK OF CLINICAL TRAINING FOR NEW NURSES

Vol 1



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Vol 1

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INTRODUCTION

According to the Law on Medical Examination and Treatment No. 40/2009/QH12 dated November 23, 2009 and the Decree No. 109/2016/NĐ-CP dated July 1, 2016, which regulate issuance of practical certificate for healthcare practitioners and operational certificate for medical examination and treatment facilities, 9 months practicing at a medical examination and treatment facility for new graduated nurses is required to apply practical certificate of nurse. However, current legal documents have not specified training program, materials, implementation, teaching and evaluation method before issuance of practical certificate.

The Project for strengthening clinical training system for new graduate nurses, hereafter as JICA Nursing Education project, aims to enhance healthcare quality in Vietnam through nationwide scaling-up clinical training system for new nurses. Japan International Cooperation Agency (JICA) provides both technical and financial assistance. Ministry of Health's leader assigned the Administration of Science Technology and Training to act as implementing agency. Bach Mai Hospital, Saint Paul Hospital in Hanoi together with Dien Bien, Vinh Phuc, Binh Dinh and Dong Nai province are selected as pilot sites from 2016 to 2020.

The clinical training program and materials for new graduate nurses including 04 modules that developed by JICA Nursing Education project in coordinated with local and international experts, management officers, lecturers and Vietnam Nurses Association. After a series of revisions through collecting training result in pilot provinces, the material set has approved by Appraisal Committee under Ministry of Health (MoH).

Administration of Science Technology and Training, Ministry of Health would like to highly appreciate the leader of MoH, effective support from JICA especially Japanese experts work in Vietnam; extend thankful to Editing board and all concerned people for contributing efforts in material set development; last but not least, warmest thanks to our colleagues.

Sincerely thanks!

DIRECTOR
ADMINISTRATION OF SCIENCE TECHNOLOGY AND TRAINING

Dr. Pham Van Tac

PREFACE

Nurse plays an important role in the people's health care and there are many specialties in nursing and education levels from intermediate, college, university to postgraduate. In Vietnam, there are more than 30,000 new graduated nurses each year from different levels of intermediate, college and university. According to the Law on Medical Examination and Treatment No. 40/2009/QH12 dated November 23, 2009 and the Decree No. 109/2016/NĐ-CP dated July 1, 2016, which regulate issuance of practical certificate for healthcare practitioners and operational certificate for medical examination and treatment facilities, 9 months practicing at a medical examination and treatment facility for new graduated nurses is required to apply practical certificate of nurse. These training materials were developed to facilitate the implementation of clinical training in health facility to meet these legal documents and to ensure the quality of the training.

The materials consisted of: (1) Curriculum of clinical training for new nurses; (2) Textbook of clinical training for new nurses (Vol.1&2); (3) Training curriculum and materials for preceptors in clinical training for new nurses; (4) Guideline on management and implementation of clinical training for new nurses.

Each book aims to improve necessary nursing competencies at different level because nursing manager's competencies on planning, monitoring and evaluation of training and preceptors' competencies on teaching, supporting and evaluation of trainees are crucial to implement clinical training for new nurse. The training materials could also support all related people who involved in clinical training implementation including Department of Health who manage the training program, nursing professional association and educational institution to support this training and the role of each are clarified in the Guideline. Furthermore, we updated and relating to regulation and expertise, together with application of learning through case-studies reflected theory and practical contents.

We, the members of edition team, do hope that these material as a set could facilitate all stakeholder involved clinical training to enhance necessary capacities to implement the clinical training so that standardized and qualified training can be provided for new nurses to obtain basic competency for nurses in Vietnam.

Lastly, the editing team would express our gratitude to the efforts, contributions and leaderships of the Administration of Science, Technology and Training - Ministry of Health, JICA Nursing Education Project, local and international experts, teachers/lecturers of nursing educational institutions, leaders of provincial Department of Health/Hospital, Head Nurses of provincial Department of Health/Hospitals involved this activities, members of Appraisal Committee of MOH to fulfill this material set.

Thank you very much!

ON BE HALF OF EDITION TEAM

JICA NURSING PROJECT

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ABBREVIATION

MOH	Ministry of Health
DOH	Department of Health
ASTT	Administration of Science Technology and Training
JICA	Japan International Cooperation Agency

TABLE OF CONTENT

CHAPTER 1

ORIENTATION AND NURSING REGULATIONS

LESSON 1

INTRODUCTION OF ORGANIZATION, REGULATIONS OF THE HOSPITAL IMPLEMENTING CLINICAL TRAINING, TRAINING PROGRAM, CLINICAL LEARNING METHOD FOR NEW NURSES

OBJECTIVES

1. Describe hospital organization structure and identify positions of departments, professional areas, technical logistics in the hospital
2. Present hospital's regulations
3. Present training objectives of clinical training for new nurses
4. Present requirements and contents of clinical training for new nurses
5. Perform effectively skills, learning method and self-evaluation during clinical training (Competency 23.1; 23.2)
6. Make report: awareness on roles, obligations of new nurses to the hospital during pre-practice internship process.

CONTENT

1. Introduction the organizational structure and regulations of the hospital

- Scale and organizational system of the hospital
- Hospital regulations
- Functions and tasks of the hospital

….

2. Introduction the curriculum and plan of clinical training for new nurses

2.1. Objectives of clinical training for new nurses

After 9 months of clinical practice, trainees required to reach all indicators in Competency Standards for Vietnam Nurses. It focuses on outcomes as follows: (1) To provide evidence-based fundamental nursing skills in nursing care. (2) To provide nursing care based on the principles of patient safety and infection control. (3) To provide effective and proper communication, team working, health education to patients and families. (4) To engage in quality improvement and effective resource management. (5) To provide nursing care complying with related regulations and professional ethics.

2.1.1. General objective

After the training, new nurses achieve necessary competency standards of Vietnamese nurses and be able to practice caring for the patient actively, safety and effectively at the health care facilities.

2.1.2. Specific objectives

*** Knowledge**

1. Explain the steps of the nursing process.
2. Present the regulations on management, operation, maintenance and utilization of patient care resources.
3. Identify situations applying necessary standard precaution in patient care.
4. Identify risk behaviors and solutions to ensure patient safety related to nursing activities.
5. Identify proper health consultation, education needs of the patient and family.
6. Present relevant legal document, regulations to nursing activities in the hospital.

*** Skill**

1. Apply nursing process and evidence-based practice in patient care (identifying patient and determining proper caring issues; making care plan, implementing plan and proper assessing patient).
2. Implement basic nursing techniques to the patient ensuring safety and effectiveness.
3. Early detect abnormalities of the patient, anaphylaxis, circulatory, respiratory), decide initial management and cooperate with team members for implementing timely and effective first aid, emergency.
4. Properly implement standard preventions and hospital infection control.
5. Properly implement regulations on patient safety in caring practice and medical adverse event report.
6. Communicate with patients, their family and colleague taking into account of their culture and belief.
7. Provide enough and timely information and implement proper health education for patients and their family.
8. Operate and maintain official working equipment in accordance with procedures, regulations, ensure the safety and effectiveness.
9. Record and manage medical records according to regulations.
10. Perform team work in patient care.
11. Apply IT in patient care.
12. Apply basic competency standards in patient care.

*** Attitude**

1. Comply with the provisions of the relevant Laws and ethical standards while practicing professions.
2. Continue self-learning for personal and professional development
3. Behave carefully, meticulously and honestly, and respect and cooperate with patients and colleague, and taking personal and professional responsibility to ensure patient safety

2.2. Clinical training plan for new nurses

(*Annex 1:* Overall training plan – Clinical training plan for new nurses)

2.3. Clinical training content for new nurses

Total clinical training time for new nurses is 38 weeks (1520 hours) that covering Theory and practice (OFF-JT); Clinical studying at departments (OJT); and Review, self-study, test and evaluation (*General curriculum in below table*)

No.	Content	No.of unit
1	Theory and practice (OFF-JT)	76
2	Clinical studying at departments (OJT)	1,324
3	Review, self-study, test, evaluation	120
TOTAL		**1,520**

The curriculum of clinical training for new nurses includes 30 contents (30 lessons) and each practical lesson covers technique group of basic nursing skills and patient care.

Chapter/lesson grouping 1: *Orientation and nursing regulations*

- *Lesson 1:* Introduction of organization, regulations of the hospital Implementing clinical training, training program, clinical learning method for new nurses
- *Lesson 2:* Basic competency standards for Vietnamese nurses
- *Lesson 3:* Applying professional ethics for Vietnamese nurses to the practice of patient care
- *Lesson 4:* Regulations on nursing and patient care

Chapter/lesson grouping 2: *Patient safety*

- *Lesson 5:* Application of standard precautions in patient care practice
- *Lesson 6:* Prevention of medical adverse events

Chapter/lesson grouping 3: *Basic nursing technique and patient care*

- *Lesson 7:* Pain relief care
- *Lesson 8:* Application of nursing process in patient care
- *Lesson 9:* Receiving, transferring and discharging patients
- *Lesson 10:* Vital sign monitoring

- *Lesson 11:* Specimen collection for testing (blood, sputum, stool, urine)
- *Lesson 12:* Hygiene care of patient
- *Lesson 13:* Patient movement support
- *Lesson 14:* Feeding support to patients
- *Lesson 15:* Medication practice to patients
- *Lesson 16:* Fluid infusion – blood transfusion techniques
- *Lesson 17:* Monitoring volume of in and out fluid
- *Lesson 18:* Wound and drainage tube care techniques
- *Lesson 19:* Pressure ulcer prevention and care for patients
- *Lesson 20:* Excretion care

Chapter/ lesson grouping 4: *Patient care management*

- *Lesson 21:* Regulations on recording, managing medical records and care templates
- *Lesson 22:* Medical equipment usage and management: monitor, infusion machine, injection pump, electrocardiograph
- *Lesson 23:* Management of medicines and medical consumable supplies

Chapter/ lesson grouping 5: *First aid, emergency*

- *Lesson 24:* Evaluation of comatose patient based on Glasgow Coma Scale
- *Lesson 25:* Respiratory support and airway management techniques
- *Lesson 26:* Basic emergency care for cardiac arrest
- *Lesson 27:* Prevention and management of anaphylaxis

Chapter/ lesson grouping 6: *Communication, education and teamwork*

- *Lesson 28:* Communication skills in patient care
- *Lesson 29:* Health education
- *Lesson 30:* Teamwork skills in health care

3. Clinical training methodology

3.1. Types of clinical training methods

3.1.1. On-job-training (OJT)

- This is the most common training methods in clinical training. Trainees are divided into small groups (3-7 members in each group). Each group will contact, communicate, take clinical examination, make care plan/patient profile for the selected patient by the trainer/preceptor.
- At the time of lesson, all members need to come to patient's bed side. Group in charge of care plan will make presentation/proposal. Trainer/preceptor delivers the lecture directly on patient.

3.1.2. At patient's room without real patient

- In some clinical lecture, there is no real patient due to several reasons: no patient with relating-diseases which needs to be trained in patient's room, patient in serious condition, patient out of room for tests/operation… or sensitive contents to discuss some points of the lesson with appearance of patient.
- Trainer/preceptor can deliver the lecture with fake patient, models, simulators or other tools such as: X-ray film, photo of patient…

3.1.3. In night shift

- In the night shift, number of trainees and medical staff in the hospital is smaller than day shift, thus trainees have more opportunities and time to contact, examine and take care of patient. When participating in contact, examination, operation and emergency cases, trainees can receive support, explanation and lecture directly on the real patient. Trainees also have more chances to observe doctors, nurses in team work.
- Active learning in night shift (out of working hours) will help trainees gain valuable experiences and clinical skills.

3.1.4. When visiting patient's room

- This is a good chance for trainee to know well about condition of the patient.
- Doctor/nurse in charge will brief health condition of the patient and care activities, especially to patient in serious situation, trainee can understand basic condition of patient, make assessment and develop appropriate care plan.
- To patient with rare disease or appropriate disease with study of new nurses, experienced doctor and nurses will guide new nurses how to study it on the patient.

3.1.5. Through regular meetings in department, hospital

- In the morning at each department, regular meeting will be held when all relating professional issues will be shared among all staffs in the department. In those meetings, trainees can get much information on treatment and care plan to all patients staying in the department, during emergency, transfer, death and other special activities within a day.

3.1.6. Through patient care and monitoring

- Each trainee is assigned to accompany a trainer/preceptor or a nurse and will be in charge of monitoring 1-2 patients. The duties of the trainee are daily (normally in the morning) visiting patient's room, communicating, taking clinical examination, recording actual situation of the patient into profile, making care plan and then submitting to the trainer/preceptor for comments and approval.
- When learning through patient care, trainee has chance to practice as a nurse of the hospital with real patients and can participate in patient care. This activity will help trainees to apply obtained knowledge, skills and attitude into actual work, receive timely feedback from preceptor-in-charge, at the same time, aware of the role and responsibility of a nurse.

3.1.7. At operating room

- Many techniques are implemented for the patients at operating room or patient's rooms. For the techniques which should be fulfilled by nurses, at the beginning stage, new nurse observe how experienced nurse processes steps of the technique on the patient (follow standard procedure), new nurse also can participate in operation under support and supervision of the preceptor. New nurse needs to follow strictly hygiene procedure at operating room, seriously observe performance of the technique. New nurse should pay attention to not obstruct or interrupt performance of the nurse-in-charge.
- When learning technique on the real patient, new nurse must read and understand clearly all procedure of the technique, should learn by groups with at least 2 members. Whenever performing the technique, one new nurse implements, the other one observes, and then discuss on unsuccessful performance of any step/content in order to develop learning plan for improvement in the future.

3.1.8. Self-study in clinical department

- Self-study is an active learning method which aims to apply obtained knowledge into practice positively and effectively.
- Self-study can be implemented by a small group with particular patient that new nurse can conduct health examination, health check, give nursing diagnosis and make care plan by herself. And then, that nurse can share and get comments from other members in the group.

3.2. Assessment methods

3.2.1. Self-assessment of clinical learning

- Trainee uses checklist (which is introduced in each lesson of training material to make self-assessment by group); use competency-based evaluation checklist to assess her/his capacity by each learning period.

3.2.2. Clinical test

* *Clinical test with patient:* is a main assessment method applied in clinical teaching-learning.

- Procedure of clinical test:

  Trainee is requested to randomly select patient with information of name, bed number, room number.

  Fulfill the tasks of test: contact, collect related-disease information, make care plan, perform care technique, implement health education… (depend on time of assessment). Trainee will communicate with patient to fulfill the test.

  Preceptor/ trainer observes, makes additional questions, makes comments and put score.

* *OSCEs Objective Structured Clinical Exams*

- OSCEs has been developed into common assessment to clinical skills which are now used in many Medical Universities in the world and becomes important method for professional certificate issuance for doctors and nurses in many countries.

- Organization and implementation of OSPEs is similar as in Skills lab. Trainees have perform many contents and requirements of exam (each content is implemented in one station. It depends on regulations that 10 or more than 10 stations will be established).
- Final score is based on checklist and is average of points of stations.

3.3. Clinical learning skills

3.3.1. Building safe environment to access and communicate with patient

- Access to patient is the first important step in clinical learning. If new nurse can have good access to patient, good first expression to patient and family, the next steps such as: collecting information, medical examination, making care plan/medical profile… will be carried out more comfortably.
- Clothes: as per regulations, name tag, hat, mask (if needed), neat hair, short cut nails.
- The best environment for communication with patient is at separated room with sufficient professional equipment for medical check/examination. However, due to usually crowded situation in hospital, communication with patient is often performed at patient's bed side.
- In case gender of patient is different from new nurse's one, especially for female patient, it is necessary to have third person to be witness of communication, examination and treatment, usually nurses, colleagues (of same group) or patient's family.
- When patient feels safe and friendly environment for communication, he/she will open and coordinate to share information with nurses.

3.3.2. Communicating with patient

- Objective of communication is to create good relationship with patient: if patient trusts in friendliness and competencies of trainees/new nurses, he/she will be willing to provide personal and medical information to new nurses/trainee and medical staff to receive health care services.
- Psychological appearance of patient is very complicated. Each patient is a person with different thinking and behavior to a same issue. Generally, patient has limitation in communication with others because of pains or worries about diseases… In any cases, communication skill of medical staff is a key factor to access to patient and collect necessary information from patient.
- Using effective communication skills to contact with patient and family to get information on medical history and develop care plan. Subject of communication appeared in several lessons, especially in lesson on communication skills and at Skills lab when having clinical practice. Communication with patients and parents includes:
  + Verbal communication: greetings, introduce oneself, asking for patient's name, listening, raising open and close questions, explaining, feedback, persuading, encouraging…
  + Non-verbal communication: using eyes contact, facial expression, behavior, clothes… to show friendliness and sympathy to patient.

- For conscious patient who can communicate and is 18 years old or older, it is needed to communicate directly with the patient in order to get sufficient information on illness development until present.
- For unconscious patient or in emergency case, immediately communicate with patient's family, at the same time, carry out necessary procedure of patient receiving and first aid.
- For patients in vulnerable groups such as young children, pregnant and elderly people…, patients with mental diseases or lack communication capacity, communication with these patient must be based on current regulations applied for this type of patient only.
- Patients who are in a state of agitation can endanger medical staff. In this case, medical staff needs to be protected when having communication with patient, such as calling for help from colleagues, asking family to control patient. Even when the patient is too emotional, or aggressive, can affect negatively to his health, nurse should temporarily stop communicating and wait for the patient to calm down.

3.3.3. Collecting information from patient

- Greeting, self-introduce name, inform reason for communication and encourage patient to accept this and agree to provide information.
- Ask for permission to add collected information into medical profile, and the medical profile will be kept confidential according to regulations.
- Information collecting starts by personal information such as: full name, age, gender, address, occupation, marriage status….
- Collect health information: medical history and disease development process.
- Disease development process: is pathological development process that patient needs to come to the hospital for health check until time of asking. This matter can start just several days or several hours before, or long time ago.
    + It is necessary to ask for disease development in detail: Why does patient need to go to the hospital? When does the disease start? Changes/developments? Any treatment/health examination before? Which drugs have been used before? Content, dosage, time of use? Any other symptoms? …
    + Using polite and professional questions: There are 2 main types of questions that are often used including: open question and close question.
    + Should start by open question to collect more information. Open question usually start with these phases: Can you share about…? Or How…? *(for example: Can you tell me the development of your illness? How is your fever condition?)*
    + Information provided by patient can be complicated and disordered. In this case, it is necessary to make close questions to confirm that information and move to a new topic. Close questions usually start with: *Did you….?* Or ended with *"..., right? (for example: did you get illness 1 week ago? You used 2 tablets of Efferalgan 500mg to improve your fever condition yesterday, right?)*

+ In case new nurse does not have much experience in collecting information on medical history, there are 2 common issues: (1) Patient does not cooperate to answer all questions, therefore nurse cannot collect sufficient information to complete medical profile. (2) Patient provides many unconcentrated information that it is hard for nurse to get accurate information.

+ Thus, it is necessary to practice communication skills to show sympathize, friendliness and make accurate and professional questions in order to have effective communication with patient.

- Medical history: are health problems that patient have experienced before getting illness this time. History includes personal history, family history and special relationship.

  + Personal history: it is necessary to know whether patient has ever suffered from this disease before? Other experienced diseases? Any previous treatment? Drugs in use for treatment of chronic disease?...

  + Special relationship that may relate to the disease: for infectious diseases, it is needed to know about previous relationship between patient and others who suffered from that disease or risk of illness: flu; hand, foot and mouth disease; prostitutes girls, addicted person,...

  + Family history: may relate to genetic diseases, family diseases or transmitted diseases: any member of family has same disease with patient? Or related disease?

  + Epidemiology: can be diseases relating to epidemiological area such as: malaria, acute diarrhea, flu,… The questions are: Have patient or family ever come to epidemiological area recently? Any neighbor have same diseases? …

  + Disease-related habits: swimming or having bath in pond, lake; having addiction to drugs and other addictive substances; gaming addiction; addicted to watching violent movies; eat raw meat and fish,…

  + History of drug allergy?

- Family condition: finance, culture, belief… relating to patient care.

3.3.4. Clinical examination

- Clinical examination is the most important step to recognize the physical signs and support to provide initial diagnosis.

- Trainees must have physical examination skills on simulator and throughout role-play in Skills lab before performing on real patient.

- Each technique (liver examination, spleen examination, lung examination etc.) will have its own learning-teaching checklist. It needs to follow checklist procedure in order to well perform techniques.

- Clinical examination is normally conducted at the bed side. It's better to have curtain to separate the examination area with other part of room in order to ensure privacy and avoid curiousness especially for female patients. Nurses stand near the patients' bed while delivering clinical examination (do not sit on patient's bed).

- Nurses always use communication skills with patient before conducting clinical examination.
  + Nurses explain purpose of the clinical examination and request for acceptance and cooperation from patients. Please notice that we must not perform if patient disagree.
  + Serious and polite attitude must be shown.
- Many proper postures in clinical examination support to symptom identification so it's better to request patient sitting/laying correctly.
- Clinical examination on certain areas of the body
  + We pay attention to pathological area of the body. The patient is requested to take off pants/shirts and fold up the pants/shirts in order to conduct clinical examination (please do not take off patient's pants/shirts by yourself).
  + Clinical examination is conducted gently, accurately and with appropriate professional manner. If the weather is cold, it's better to keep hands, stethoscope warm and provides warm blanket to patients before the examination.
  + During examination, questions are given to patients in order to obtain pathological information.
  + Clinical signs are diagnosed fully and accurately.
- General clinical examination
  + The systemic manifestation is observed in order to identify combined symptoms such as: pale skin; pale mucosa; leg edema; collateral circulation; erythema; purple fingertips, etc…
  + Vital signs is monitored such as pulse rate, blood pressure, body temperature, respiratory rate etc..
  + Other body parts are examined such as: cardiovascular; respiratory; abdominal; musculoskeletal; urinary tract…
- After performing clinical examination, please do not forget to say Thank you and remind/help patients wear cloths and comeback to comfort posture.

3.3.5. Care plan development

- Trainees need to have analytical skills and synthesize information to select accurate information regarding to patient care's issues so that they can develop care plan.
- The disease progression can occur continuously or in short periods but relating to others. The recorded information in patient medical history shall complete, accurate and valuable to develop patient care in the future.
- Nursing intervention should be recorded clearly and specifically as well as evaluation the effective of after-care.
- Nurses only need to record what they implemented directly on patients in order to avoid mistakes or misunderstanding.

3.3.6. Participating in clinical lessons

- It is valuable opportunity for trainees when they participate in clinical lessons. They communicate with real patients and trainers deliver lessons basing specific patient cases.
- It needs to comply trainer's lesson requirements such as group formation, care plan development and punctual etc…
- Care plan is developed in detail and accurate way. Issues of patient care is identified and nursing interventions may be performed on patients.
- Always be punctual and having serious attitude. It is better to raise questions during lessons. Trainers are ready to answer and guide students/trainees.

3.4. Attitude toward clinical training

- Medical ethics always go in line with medical practice. Knowledge of Medical ethnics will help trainees having good attitude in clinical learning and considering as important basis to achieve better learning results.
- Show respects to "Patient rights". Knowledge on patient rights and professional relationship among doctors, nurses and patients in Medical Ethics' Subject are reviewed for better application.
- Strictly comply with professional regulations and medical ethics when communicate with and provide clinical examination on patients.
- Must not provide professional information to patient without the authorization of assigned nurse.
- Respect patients and their involvement during clinical lessons.

LESSON TEST

Question 1:

Please describe the objectives of clinical training for new nurses; Please indicate unclear objectives; Please discuss with your classmate and preceptor on objective of the curriculum.

Question 2:

As a new nurse who attended in clinical training of the hospital, how do you comply hospital's regulations? (Please briefly describe your responsibilities and how do you comply regulations while study at the hospital).

Question 3: Case study

A group of new nurses assign to Internal Medicine Department in the Hospital A for clinical practice. In the first week of clinical study, this group want to choose the most proper and effective clinical learning method.

QUESTIONS:

1. Please select one effective learning method among those options:
   A. At night shift
   B. Visiting patient with Chief Nurse
   C. Through patient care and monitoring
   D. During operation

   Please explain why do you choose this learning method in order to convince group of new nurses.
2. In order to evaluate your clinical training process, which evaluation method do you apply?
   A. Self-evaluation
   B. Self-evaluation; Evaluated by classmate and get feedback.
   C. Evaluated by preceptor and get feedback.
   D. Self-evaluation; Evaluated by classmate and preceptors; get feedback from them.

   Please explain your selection.
3. Please share some good experience when you communicate with patient and during provide clinical examination for patient.
4. Please share with your group member on how do trainee study the clinical training effectively.

ANSWER: Case study:

Question 1: Trainees can select any answer basing on their experience. The key point is that they will explain the answer in appropriate way.

Question 2: D.

REFERENCES

1. BYT – JICA, 2018, Clinical Practice Training Program for New Nurses.
2. Truong Viet Dung and Phi Van Tham, 2010. Medical – Pharmaceutical Methods, Ministry of Health.
3. Government (2016). Decree 109/2016/NĐ-CP stipulates on the issuance of practical license for practitioners and operational license for medical examination and treatment facilities.
4. Ministry of Health (2013). Circular 22/2013/TT-BYT dated August 9, 2013 guiding on continuous training for medical officials.
5. Ministry of Health (2012). Basic competency standards for Vietnamese nurses.

LESSON 2

BASIC COMPETENCY STANDARDS FOR VIETNAMESE NURSES

OBJECTIVES

1. Present the contents of basic competency standards for Vietnamese nurses (Competency: 23.6)
2. Apply standards/indicators of "Competency standard for Vietnamese nurses" in patient care practice (Competency: 23.6; 24.1)
3. Utilize Checklist of competency standards for Vietnamese nurses (Competency: 23.2)

CONTENTS

1. Introduction

Since 1990, Vietnam Nursing industry has been supported by the Government and Ministry of Health developed rapidly in the areas of practice, management, training and scientific research. In order to enhancing the quality of nursing human resources as basis for developing training program and effectively utilizing human resources to meet the requirement of integration with regional countries and global. The Ministry of Health cooperated with the Vietnam Nursing Association has developed "Basic competency standard for Vietnamese nurses" with the supports from Canada Nursing Association and Nursing Experts from Queensland – Australia. This material has been compiled by the local nursing experts, health manager and nursing education with referencing nursing competency standards f other regional countries and over the world.

2. Brief contents of "Basic competency standard for Vietnamese nurses"

The competency standard for Vietnamese nurses was structured under the common pattern of nurses in the Asia Pacific region and ASEAN to meet the requirement of the area and easy to compare with other country's competency standards. The competency standard for Vietnamese nurses was structured by 3 domains, 25 competencies and 110 indicators.

Of which, 3 domains are: clinical competency includes 15 standards; management and professional development competency includes 8 standards and legal and ethics competency includes 2 standards.

Each competency represents a part of domain and cover 1 obligation of the nurse. One indicator can commonly apply for competencies and domains.

Basic competency standard was compiled elaborately with referring to many valuable materials. The Basic competency standard for Vietnamese nurses has been approved and issued under the Decision No.1352/QD-BYT dated April 24, 2012 by the Ministry of Health.

3. 3. Contents of "Basic competency standard for Vietnamese nurses"

Domain 1

PATIENT CARE COMPETENCIES

Competency 1: Demonstrate knowledge based on the health, illness status of individuals, groups and communities

1. Indicator 1: Identifies the health need of the individuals, families, population groups and/or communities
2. Indicator 2: Explains the health status of the clients/groups

Competency 2: Provides proper decision making in the care of patients considering their belief and values

3. Indicator 1: Collect the information and analyze to identify health problems of the individuals, families, population groups and/or communities
4. Indicator 2: Provides sound decision making in the safe and effective care of patients.
5. Indicator 3: Performs nursing interventions to support patients/clients meeting with their health problems /illness consistent with cultural beliefs of patients/clients and their family.
6. Indicator 4: Monitor patient's process after proving nursing interventions

Competency 3: Sets priorities in nursing care based on their needs of health care

7. Indicator 1: Identifies and analyses the priority needs of patients/clients, families and communities
8. Indicator 2: Determines appropriate nursing care/interventions to address priority needs/ problems

Competency 4: Utilizes nursing process as framework for making nursing plan and intervention

9. Indicator 1: Performs holistic and systematic nursing assessment
10. Indicator 2: Collects appropriate information from patients /clients and completes it into assessment form
11. Indicator 3: Analyses and explains the information exactly.
12. Indicator 4: Formulates a plan of care in collaboration with patients/clients, their family and other members of the health team based on the priority issues, health needs and clients' expectation.
13. Indicator 5: Explain the nursing interventions to clients, families and performs nursing activities effectively following the plan of care in a safe, effective and timely manner.
14. Indicator 6: Provides guides to clients and their families the appropriate self-care methods
15. Indicator 7: Evaluate the nursing care process and revises the care plan based on the patient's health condition and expected outcomes.
16. Indicator 8: Performs necessary things to support clients who is going to discharge
17. Indicator 9: Provides health educations and preventions.

Competency 5: Promote safety, comfort and privacy for the patients

18. Indicator 1: Performs age-specific safety measures in all aspects of patients/clients care
19. Indicator 2: Performs age-specific comfort measures in all aspects of patients/clients care
20. Indicator 3: Performs age-specific measures to ensure privacy in all aspects of patients/clients care

Competency 6: Performs proper care techniques following nursing care process

21. Indicator 1: Follow every steps of the nursing process in the professional scopes
22. Indicator 2: Implements nursing techniques fluently
23. Indicator 3: Follows the rules of infection control

Competency 7: Administer medication safety and effectively

24. Indicator 1: Takes a complete patient drug history
25. Indicator 2: Applies rules of the medication safe use
26. Indicator 3: Teaches the patient about the drugs he is receiving.
27. Indicator 4: Finds out and perform necessary intervention if the patient had any drug allergies/side effects and report timely to doctors and nurses in shift
28. Indicator 5: Be aware of potential drug – drug or drug-food interactions
29. Indicator 6: Evaluates the effects of medication
30. Indicator 7: Documents and publicizes each drug you administer.

Competency 8: Ensures continuity of care

31. Indicator 1: Hands over the patients status to the next care team in detailed and accurately
32. Indicator 2: Involves patients, families and other members of health team effectively to ensure continuity of care.
33. Indicator 3: Establishes measures to implement continuous care for patients.

Competency 9: Performs first aids and acts on emergency

34. Indicator 1: Finds out sudden changes in health condition of patients/clients
35. Indicator 2: Gives decision on interventions and emergencies promptly and appropriately
36. Indicator 3: Coordinates with other health team members.
37. Indicator 4: Performs first aid for patients/clients

Competency 10: Establishes rapport with patients/clients, families and member of the health team

38. Indicator 1: Creates trust and confidence with patients/clients, families and health team members
39. Indicator 2: Spends time with the client/significant others and members of the health team to facilitate interaction

40. Indicator 3: Listens actively to patients/client's concerns/significant others and members of the health team

Competency 11: Effectively communicates with patients and families

41. Indicator 1: Validates patients/client's body language and facial expressions.
42. Indicator 2: Communicates effectively with individuals, families, groups who have communication problems due to disease, due to psychological problems.
43. Indicator 3: Express words, gestures that motivate, encourage safe treatment of patients/clients.
44. Indicator 4: Demonstrating an understanding of culture, belief in communication with patients/clients, families and groups

Competency 12: Utilizes formal and informal channels to facilitate communicating with patients/clients, families and groups

45. Indicator 1: Utilizes audio-visual facilities available to support communication with patients/clients, families and groups.
46. Indicator 2: Utilizes effectively and appropriately communication with patients/clients, families and groups.

Competency 13: Provides appropriate information to the patients/clients on their health and fitness status

47. Indicator 1: Defines appropriate information to provide clients and their families
48. Indicator 2: Performs psychological preparation for patients/clients and families before informing "bad news"

Competency 14: Determines needs and performs health education for individuals, families and communities

49. Indicator 1: Collects and analyzes information on the needs of individuals, families, and groups of health
50. Indicator 2: Identifies priority needs and appropriate education content
51. Indicator 3: Develops health education plan which is suitable to cultural, social and religious aspects for clients, families and communities
52. Indicator 4: Develops health education documents which is suitable to clients' qualifications
53. Indicator 5: Performs relevant health consultation, education properly and effectively for individuals, families and groups.
54. Indicator 6: Evaluate health education result and revised the health education plan if needed based on outcomes

Competency 15: Cooperates with colleagues and other care team members

55. Indicator 1: Well maintains the relationship with other team members, considers patient as a partner in the team

56. Indicator 2: Well collaborates with other team members to make relevant decisions to improve health care quality
57. Indicator 3: Well collaborate with other team members to monitor, take care, treat the patients and complete assigned duties
58. Indicator 4: Respects roles and opinions of other members of the health team
59. Indicator 5: Effectively shares information with other care team members
60. Indicator 6: Acts as liaison or advocate of the patients to ensure patients' benefits, rights for the patient's safe.

Domain 2

MANGEMENT AND PROFESSIONAL DEVELOPMENT COMPETENCIES

Competency 16: Manages, updates and uses patient's documents according to regulations

61. Indicator 1: Applies principles of record management prescribed by the MOH
62. Indicator 2: Maintains the patients/clients records in confident and privacy.
63. Indicator 3: Monitors and improves accuracy, completeness and reliability of relevant data
64. Indicator 4: Makes record readily accessible to facilitate patients/clients care and health policy making

Competency 17: Patient care activity management

65. Indicator 1: Manages individual's tasks and time effectively
66. Indicator 2: Plans the performance of tasks or activities based on priorities
67. Indicator 3: Verifies the competency of the staff prior to delegating tasks
68. Indicator 4: Demonstrates understanding of the relationship between management and utilization of resources effectively to ensure quality and safe care for patients/clients.
69. Indicator 5: uses IT/computer in management, nursing care and updating professional knowledge

Competency 18: Manages, operates and maintains medical equipment effectively

70. Indicator 1: Establishes mechanism to manage and function equipment used for patients/ clients care and treatment
71. Indicator 2: Plans for preventive maintenance program
72. Indicator 3: operate equipment safely, effectively, following infection control rules

Competency 19: Uses resources in patient care properly and effectively

73. Indicator 1: Identifies the cost-effectiveness in the utilization of available resources properly and effectively
74. Indicator 2: Develops and implements plans using considering resources effectively within assigned duty

Competency 20: Establishes working environment safety and effectively

75. Indicator 1: Complies with standards and safety codes prescribed by laws
76. Indicator 2: Adheres to policies, procedures and protocols on prevention and control of infection
77. Indicator 3: Observes protocols on pollution-control (water, air and noise)
78. Indicator 4: Observes proper disposal of wastes
79. Indicator 5Defines steps to follow in case of fire, earthquake and other emergency situations.
80. Indicator 6: Demonstrates understanding on areas related to occupational health and legal documents on safe working environment.

Competency 21: Quality improves and risk management in caring environment

81. Indicator 1: Be aware of the necessity of quality assurance activities, quality improvement through research, feedback and evaluation of regular practice
82. Indicator 2: Detects and reports environmental risks in patient care and make appropriate corrective action
83. Indicator 3: Solicits feedback from patients/clients and significant others regarding care rendered
84. Indicator 4: Applies proper quality improvement measures
85. Indicator 5: Participates in quality improvement activities in health care centre yourself
86. Indicator 6: Shares with the team relevant information regarding patients/clients' condition and significant changes in patients/clients' environment
87. Indicator 7: Makes appropriate changes when existing technical and administrative procedure problems emerge
88. Indicator 8: Makes appropriate recommendations on the treatment and preventions
89. Indicator 9: Apply evidence based to nursing practice to improve safety in patients/clients care

Competency 22: Science researches and evidence-based practice

90. Indicator 1: Identify and choose appropriate, necessary and achievable research areas
91. Indicator 2: Identifies appropriate methods to conduct the chosen research.
92. Indicator 3: Analyses and interprets data gathered using appropriate statistic methods.
93. Indicator 4: Recommends practical solutions appropriate to the problem based on the interpretation of significant findings.
94. Indicator 5: Presents, shares results of findings to colleagues/ patients/ clients/ family and to others
95. Indicator 6: Utilizes the results of findings as an evidence in nursing practice to improve health care quality.

Competency 23: Maintains and develops personal and colleague competencies

96. Indicator 1: Identifies own learning needs, strengths, weaknesses/ limitations.
97. Indicator 2: Pursues continuing education, participates in formal and non-formal education; Applies learned information for the improvement of care.
98. Indicator 3: Gets involved in professional organizations and civic activities
99. Indicator 4: Projects a professional image of the nurse, demonstrates good manners and right conduct at all times.
100. Indicator 5: Possesses positive attitude towards change and criticism, listens to suggestions and recommendations, tries new methods and adapts to changes willingly
101. Indicator 6: Performs function according to professional standards
102. Indicator 7: Contributes to improve training and professional development for colleagues
103. Indicator 8: contributes to improve the role and status of nursing profession in the health sector and in society.

Domain 3

LEGAL AND ETHICS COMPETENCIES

Competency 24: Adheres to practice in accordance with the law

104. Indicator 1: Fulfills legal requirements, rules prescribed by the MOH in nursing practice
105. Indicator 2: Follow workplace rules
106. Indicator 3: Implements code of treatment set by the units / organizations / health centre and law
107. Indicator 4: Records and preserves care records and documents related to the patient, the health problems of patients in accordance with the standard practice of care.

Competency 25: Adheres to practice in accordance with ethics standards of Vietnamese nurses

108. Indicator 1: Accepts responsibility and accountability for own decision and actions
109. Indicator 2: Adheres correctly to the code of ethics for nurses in nursing practice
110. Indicator 3: Reports unethical and immoral incidents to competent authorities and be responsible for that report.

4. Application of "Basic competency standards for Vietnamese nurses" in patient care

4.1. Practice: Application of "Basic competency standards for Vietnamese nurses" in patient care

4.4.1. Homework

- Trainee/group of trainees give an example of a nursing technique
- Trainee/group of trainees think and discuss: What competencies do nurses need to perform effectively, safety the nursing techniques on specific patients?

- Uses *"Basic competency standards for Vietnamese nurses"* to confirm each competency (mentioned above) equalize (link) with which competency, indicator?
- Presents home works by group/individual
- Discusses

4.1.2. <u>Illustration example:</u> Sputum suction technique

*** Required competencies (of a nurse) when suctioning for the patient**

When performing sputum suction for the patient the following competencies are required:

+ Clearly understands patient's disease

+ Communication, explanation skills to patients/families

+ Identifies patient's conditions before performing the technique

+ Identifies equipment, equipment sterilization requirements

+ Clearly understands about procedure, perform or proficient in sputum suction process

+ Identification skills to detect abnormal changes when suctioning sputum; Choose the necessary remedies

+ Records data, reports/shares information of patient with team members

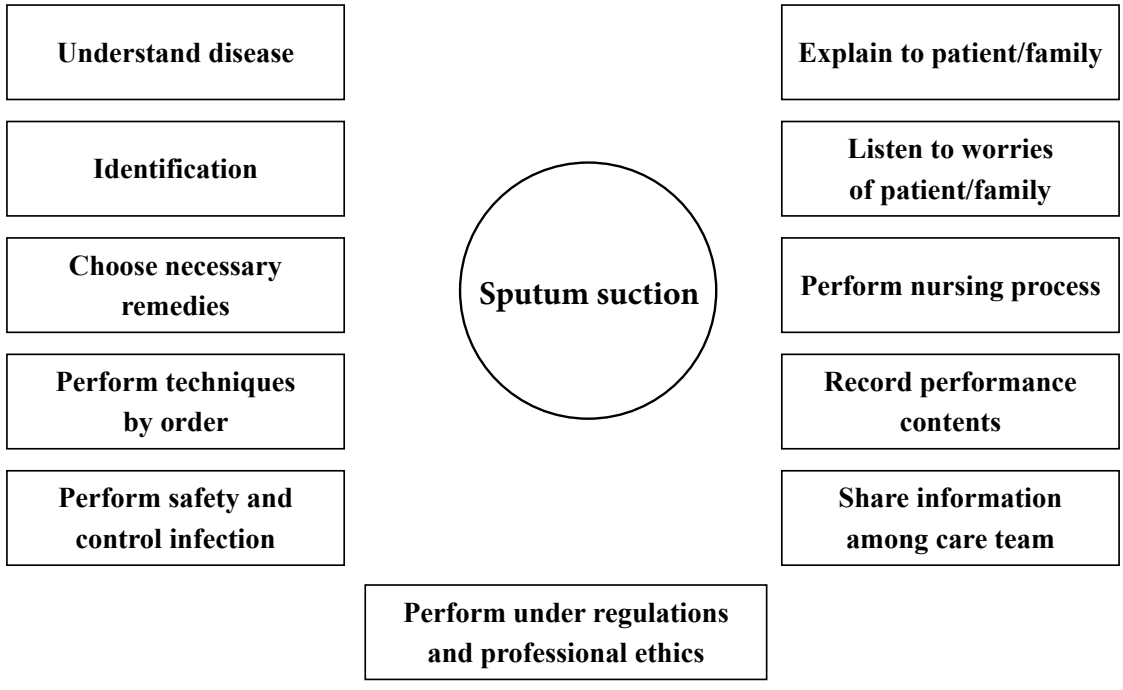
+ Legal regulations on nursing technique performance

+ Professional ethics regulations on technique performance.

…

<u>Important points:</u> If nurse has long experience shall perform high level of "competency". Nurses with short experience (new) can only show some necessary competencies. (at the bottom of figure)

Figure 1: Necessary competencies when performing sputum suction technique



***** Uses "Basic competency standards for Vietnamese nurses"*** to confirm each required competency of nurse when performing sputum suction technique (listed up above) equalizes with (link) which competency, indicator in the ***"Basic competency standards for Vietnamese nurses"?***

+ Clearly understands patient's disease (Competency standard 1.1)
+ Communication, explanation skills to patients/families (Competency standards: 4.5; 4.6; 10.2; 11.3)
+ Identifies patient's conditions before performing the technique; risky factor, infection when performing suction (Competency standards: 2.1; 4.1; 4.3; 6.1)
+ Identifies equipment, equipment sterilization requirements, safety machine usage (Competency standards: 5.1; 6.3; 20.4)
+ Clearly understands about procedure, perform or proficient in sputum suction process (Competency standards: 6.2; 18.3; 20.4)
+ Identification skills to detect abnormal changes when suctioning sputum; Choose the necessary remedies (Competency standards: 4.7; 9.1; 9.2)
+ Records data, reports/shares information of patient with team members (Competency standards: 4.2; 15.3; 16.3)
+ Legal regulations on nursing technique performance (Competency standard: 24.1)
+ Professional ethics regulations on technique performance (Competency standards: 25.1; 25.2

Important points: It is possible that some contents/competencies in some techniques cannot link with any equivalent competencies/indicator in ***"Basic competency standards for Vietnamese nurses"***, it doesn't matter, trainee needs to understand that "care" includes/is made up of different competencies/indicators.

5. Applies "Basic competency standards for Vietnamese nurses" in evaluation of nurse's competency:

5.1. Guides trainees use ***competency-based Checklist***

5.2. Trainees read, discuss unclear contents of ***competency-based Checklist*** (*Annex 2 – Curricula of clinical training for new nurses*)

5.3. Each trainee will self-assess following the ***Self-assessment competency-based Checklist***

5.4. Discussion after self-assessment.

LESSON TEST

Trainee/group of trainees take an example of nursing technique determine required competencies to perform that technique after that compare with the Competency-based Checklist to confirm the relevant required competencies.

REFERENCES

Ministry of Health (2012). Decision No.1352/QĐ-BYT dated April 24, 2012 on the approval of "Basic competency standard for Vietnamese nurses"

LESSON 3

APPLYING PROFESSIONAL ETHICS FOR VIETNAMESE NURSES TO THE PRACTICE OF PATIENT CARE

OBJECTIVES

1. Identify situations relating to professional ethics in the practice of patient care (Competency 11.1; 20.6)
2. Apply "Professional ethics for Vietnam nurses" to the practice of patient care (Competency 5; 7.2; 10.1; 10.3; 11.3; 13.2; 15; 16.1; 16.2; 16.3; 20.1; 20.2; 20.3; 20.4; 21.2; 23.2; 23.4; 23.5; 24.3; 25)

CONTENTS

1. Introduction

Healthcare in general and nursing in particular is discriminated from other occupations by specific professionally ethical obligations, including: To care, to treat, to rescue, to relieve the pain provoked by diseases and medical interventions. In order to complete professional obligations up to the social delegation, nurses are expected to possess technical excellence, as well as professional ethics. Professional characteristics and ethics are the foundation of nursing.

Professional ethics for Vietnam nurses are developed according to: (1) Juridical basis: Article 42 of Anti-corruption Code; (2) Nurses' professional obligations are regulated by: Relationships with patients, colleagues, professions and society; (3) Medical ethics challenges in the market mechanism: Conflicts to arise in the enforcement of nursing obligations; (4) International integration facility: Referring to "The ICN Code of Ethics for Nurses" (2000) and "Medical Ethics manual of the World Medical Association" (2005)

Code of ethics for nurses are the principles, professional values, standards to guide nurses in order to give ethical decisions during the nursing process. Professional ethics are also the basis for patients, residents and managers to supervise and judge the implementation of members nationwide. Every nurse is required to commit applying every time, everywhere of occupation and medical facilities.

Professional ethics for Vietnam nurses are issued according to Decision No.20/QĐ-HĐD, September 10th, 2012 by Vietnam Nurses Association.

2. Professional Ethics for Nurses *(details in the below annex)*

8 principles of Professional Ethics for Nurses:

- Ensure safety for patients;
- Show respect at the patients and their relatives;
- Be friendly with the patients and their family;
- Prove honesty during working process;
- Maintain and improve professional abilities;
- Occupational dignity;
- Provide loyalty and unite among colleagues;
- Commit to society and community.

3. Applying "Professional Ethics for Vietnam Nurses" in the practice of patient care.

3.1. Discussion questions on the applying "Professional Ethics for Vietnam Nurses" in the practice of patient care.

Using your personal experiences of studying in hospitals, as well as visiting the sick acquaintances at hospital, please:

- List down ethically inappropriate behaviors of the nurses/medical officers (that you have witnessed);
- Discuss about the listed problems.

3.2. Discuss about situations relating to professional ethics in the practice of patient care.

3.2.1. Case 1:

*** Description:**

Mr. Le Van M, 64 years old, was a patient under treatment at room no.6, Surgery Department in C Hospital, diagnosed a soft-tissue wound at the left foot as a result of the laborl accident on Monday. Nurse T was walking past the room entrance when Mr. M asked her:

Mr.M: Can you inform me of the nurse in charge of room no.6?

Nurse T: Her name is already on the door's board, and when she works, she always wears her name tag, you have been here for days yet still don't know?

Mr.M was not satisfied! Thank you, I got it!

On the fifth day of treatment,

Mr.M's injuries were infected, nurse H (in charge of room no.6) came into the room and announced that Mr.M would be transferred to room no.10.

Mr.M: I want to stay here in this room, we roommates are close, I don't want to move into another room!

Nurse H: The doctor has assigned, you have to follow professional regulations, please inform your family to prepare all personal belongings, I will take care of your transference this afternoon.

The patient was very uncomfortable and questionable about the treatment room transference.

*** Discussion requirements:**

- Give comments on the nurses' behaviors (true/false) in the situation (according to Professional Ethics for Nurses);
- Suggest appropriate behaviors according to Professional Ethics for Nurses in the situation.

3.2.2. Case 2:

*** Description:**

A woman carried her husband with leg injuries to the emergency room of local hospital X, at around 12:15. Nurse A was on duty at the examination room, he welcomed the patient and asked the doctor for a diagnosis. After the check-up, the doctor requested a X-ray examination.

The wife leads the patient by her hand to the X-ray section; nurse A was taking notes when he noticed the patient's complaint on his severely hurting leg making it hard for him to move.

Nurse A pointed at the stretcher and told the wife: "The stretcher is over there, take it and lift him to the place, he is hurt as you make him walk there!". The wife guided the patient onto the stretcher, suffered to keep it in the right direction. Another patient's family came to help her deliver the patient to the X-ray section.

*** Discussion requirements:**

- Give comments on the nurse's behaviors (true/false) in the situation (according to Professional Ethics for Nurses);
- Suggest appropriate behaviors according to Professional Ethics for Nurses in the situation.

3.2.3. Situation 3:

*** Description:**

Nurse L (treatment room), transfer a patient from Outpatient Department to General Surgery Department. Nurse B (General Surgery Department) refused to take the case because of the lack of some administrative procedures; the nurses arguing for a while made the patient and family anxious!

*** Discussion requirements:**

- Give comments on the nurses' behaviors (true/false) in the situation (according to Professional Ethics for Nurses);
- Suggest appropriate behaviors according to Professional Ethics for Nurses in the situation.

3.2.4. Situation 4:

*** Description:**

A patient was urgently carried into the hospital at past 1 a.m. hardly breathing, the family delivered him directly into Internal Medicine Department, not going through the Emergency Department (as the patient had been treated in Internal Medicine a few times before). Nurse N (on duty of Internal Medicine Dept.) did not let the patient into the department, instructed the patient to the Outpatient Dept. to complete the hospital admission procedures; the patient's family reacted and threatened to sue the nurse; as then nurse N was even more determined in requesting procedures from Examination Department to ensure regulations obedience.

*** Discussion requirements:**

- Give comments on the nurse's behaviors (true/false) in the situation (according to Professional Ethics for Nurses);
- Suggest appropriate behaviors according to Professional Ethics for Nurses in the situation.

3.2.5. Situation 5:

*** Description:**

On a night at Pediatrics Department, a mother of a 5-year-old child (under treatment at the Dept.) demanded a nurse on duty to feed her child fever reliever, according to his high body temperature.

Nurse H (on duty) immediately take measure of the temperature, the result turned out 39°C. The pediatric patient cried, the mother was anxious, urging the nurse to feed him fever reliever. The nurse took a pack of Efferalgan (in the duty cabinet) to feed the patient, and inform the doctor on duty right after.

The doctor disagreed with the settlement of nurse H, criticized her for disobeying the regulations; Nurse H did not take the charge, insisting on her work as not to awaken the doctor; on the other hand, Efferalgan was general medicine, which could be used and reported afterwards!

*** Discussion requirements:**

- Give comments on the nurse's behaviors, conduct of professional duties and co-operation (true/false) in the situation (according to Professional Ethics for Nurses);
- Suggest appropriate solutions according to Professional Ethics for Nurses in the situation.

3.3. Students/Groups present, discuss the questions and situations.

Conclusion: "Professional Ethics for Vietnamese Nurses" was enforced by Vietnam Nurses Association according to Decision No.20/QĐ-HĐD, September 10th, 2012. Professional Ethics for nurses are the principles, professional values, standards to guide nurses in order to give ethical decisions during the practice process. Professional ethics are also the basis for patients, residents and managers to supervise and evaluate the practice of nurses nationwide. Every nurse needs to understand deeply and apply appropriately the ethics to occupational practice.

Annex:

ETHICAL STANDARDS FOR VIETNAMESE NURSES

Chapter I: GENERAL PROVISIONS

Article 1. Scope of regulation and subject of application

These ethical standards are applicable to all members of the Vietnam Nurse Association, Nursing Teachers and Chief Nurses at different levels (hereinafter referred to as Nurse).

Article 2. Objectives

1. To educate nurses about the self-application of ethical standards in nursing services;
2. To assist nurses in making appropriate decisions in each situation, in line with ethical standards;
3. To disseminate ethical standards for Vietnamese nurses, on which monitoring and evaluation activities of people, patients, and management authorities are based;
4. To disseminate ethical standards for Vietnamese nurses, which are aligned with the implementation of the Mutual Recognition Arrangement in Nursing Services, adopted by Vietnam and other ASEAN Member States.

Chapter II. ETHICAL STANDARDS OF NURSES

Article 3. Ensure safety of patients

1. Maintain best practices at work.
2. Be responsible for all decisions and clinical practices in patient care.
3. Take timely interventions and report to responsible persons when experiencing clinical practices of professionals unsafe for patients.

Article 4. Respect patients and their family's members

1. Respect patients' age, gender, ethnicity, religion.
2. Respect patients' autonomy when taking care of them.
3. Respect patients' dignity, self-respect, self-esteem and ensure their privacy and confidentiality when taking care of them.
4. Provide adequate information about their treatments.
5. Safeguard patients' secrets related to their diseases and personal lives.
6. Treat all patients fairly and equally.

Article 5. Be friendly with patients and their family's members

1. Provide self-introduction and greetings to patients and their family's members in a friendly way.
2. Listen to patients and their family's members and reply in a caring and polite way.
3. Take care of patients with a friendly smile.
4. Help patients relieve their pains caused by their diseases and surgeries.

Article 6. Be honest at work

1. Be honest in managing and using medicines and other treatment materials.
2. Be honest in practicing professional care for patients and prescriptions.
3. Be honest in providing information to their medical records.

Article 7. Maintain and enhance professional capacity

1. Fully perform responsibilities of a nurse.
2. Follow technical processes, clinical instructions when taking care of patients.
3. Study on a continuous basis to update knowledge and professional skills.
4. Participate in research and evidence-based practice.

Article 8. Promote the profession's ethical standards

1. Maintain and preserve the profession's reputation when its values and standards are threatened and harmed by others.
2. Be dedicated to patient care and follow working regulations.
3. Refuse to receive money or other benefits from patients, their family's members for being prioritized in examination and treatment.
4. Respect Regulations of the Vietnam Nurse Association and participate in activities of the Association at different levels.

Article 9. Be candid and united with colleagues

1. Cooperate and assist colleagues in fulfilling tasks.
2. Respect and protect dignity and reputation of colleagues.
3. Share professional experiences and lessons learnt with colleagues.

Article 10. Commit oneself to community and society

1. Talk and act in accordance with legal regulations.
2. Be exemplary in community and at place of residence.
3. Participate in philanthropy and environment protection.

Chapter III. PROVISIONS OF IMPLEMENTATION

Article 11. Responsibility of the Central Executive Committee of the Vietnam Nurse Association

1. Collaborate with the Ministry of Health and the Vietnam Medical Association in promoting the implementation of these ethical standards.
2. Develop an implementation plan of the Ethical Standards for nurses at provincial/city level and branches of the Vietnam Nurse Association.

3. Monitor and evaluate the implementation of Ethical Standards for nurses at different levels of the Vietnam Nurse Association.
4. Organize preliminary and summary meetings to disseminate experience, lessons learnt, and case studies for replication to the whole system of the Vietnam Nurse Association.
5. Provide recommendations on timely rewards for branches of the Vietnam Nurse Association at different levels and individuals who show good performance and propose disciplines and punishments for those who make violations against these standards.

Article 12. Responsibility of Chairperson of Provincial Nurse Associations and Heads of Branches

1. Chairperson of Provincial/City Nurse Association
   a) Collaborate with the Department of Health, Chief Nurse of the Department of Health, related departments at local levels to promote the implementation of Ethical Standards for nurses and develop an implementation plan for all branches of the Vietnam Nurse Association.
   b) Monitor and evaluate the implementation of Ethical Standards for nurses at branches under direct management.
   c) Organize preliminary and summary meetings to disseminate experience, lessons learnt, and case studies for replication to all branches of the Vietnam Nurse Association.
   d) Provide recommendations on timely rewards for branches of the Vietnam Nurse Association and individuals who show good performance and propose disciplines and punishments for those who make violations against these standards.
2. Heads of branches
   a) Collaborate with leaders of related departments, Chief Nurses of hospitals to develop an implementation plan and to organize trainings on Ethical Standards for nurses so that they will follow in their profession.
   b) Provide instructions for each member to fill out the self-evaluation form in accordance with the Ethical Standards (Annex 1).
   c) Collaborate with Chief Nurses to evaluate the implementation of Ethical Standards of members and provide feedbacks to each of them based on instructions of the Vietnam Nurse Association (Annex 2).
   d) Report the implementation of Ethical Standards of all members to the Vietnam Nurse Association and healthcare management agencies at the same level.
   e) Provide recommendations on timely rewards for members who show good performance and propose disciplines and punishments for those who make violations against these standards.

REFERENCES

Vietnam Nurses Association (2012). Decision No.20/QĐ-HĐD dated September 10, 2012 on the issuance of Ethical Standards for Vietnamese Nurses

LESSON 4

REGULATIONS ON NURSING AND PATIENT CARE

OBJECTIVES

1. Present regulations on principles for medical practice and prohibited acts in medical examination and treatment and care for patients (Competency standard: 24)
2. Present regulations on rights and obligations of patients and nursing practitioners (Competency standard: 24)
3. Analyze the tasks and scope of professional activities of nurses by levels (Competency standard: 24)
4. Apply and implement hospital regulations and regulations on nursing practice and patient care (Competency standard: 24)

CONTENT

1. INTRODUCTION

As citizens, we must exercise our rights and fulfil obligations to the society, the state and the people. As nurses, we need to have professional competence, legal knowledge, and ethics which are essential to ensure the quality of care for patients, the safety of service users and health care providers.

The understanding of nurses' legal regulations on medical examination and treatment must be displayed in actions including legal compliance, law enforcement, law using and law application in nursing practice. The concepts are interpreted as the followings to help nurses understand well:

- Legal compliance means not to take actions prohibited by law
- Law enforcement means to fulfil the obligations prescribed by law
- Law using means to exercise the rights as prescribed by law
- Law application means to perform the functions, tasks and rights prescribed by law.

The content of the lesson will focus on issues related to principles of the nursing practices, rights, and obligations of nursing practitioners, the rights and responsibilities of patients, regulations on granting practice certificates and professional activities of nurses in caring for patients.

2. GENERAL REGULATIONS ON MEDICAL PRACTICE

2.1 Principles for medical practice:

According to the Article 3 of the Law on Medical Examination and Treatment:

1. To ensure equality, fairness and non-discrimination for patients.

2. To respect patients' rights; to keep confidential information on the health status and privacy of patients indicated in their case history dossiers, except the cases specified in Clause 2 Article 8; Clause 1 Article 11; and Clause 4 Article 59 of this Law.
3. To promptly and properly observe professional and technical regulations.
4. To prioritize medical examination and treatment for cases of emergency, under-6 children, sufferers of serious disabilities, people aged at 80 or older; people with contributions to the revolution; and pregnant women.
5. To guarantee professional ethics of practitioners.
6. To respect, cooperate with, and protect practitioners on duty.

2.2 Prohibited acts

According to the Article 6 of the Law on Medical Examination and Treatment:

- Refusing to provide or intentionally delaying first aid for patients.
- Providing medical examination and treatment without a medical practice certificate or during the time subject to suspension from professional practice; providing medical examination and treatment services without an operation license or during the time subject to suspension from operation.
- Practicing medical examination and treatment or providing medical examination and treatment services outside the scope of professional operation under a medical practice certificate or operation license, except cases of emergency.
- Hiring, borrowing, leasing or lending medical practice certificates or operation licenses.
- Practitioners selling drugs to patients in any forms, except herb doctors, herb assistant doctors, herbalists and owners of family remedies.
- Applying medical professional methods and techniques which have not been recognized and using drugs which have not been licensed for circulation, in medical examination and treatment.
- Advertising professional capacity and qualifications untruthfully or beyond the scope of professional operation under medical practice certificates or operation licenses; abusing traditional herbal medicine knowledge or other medical knowledge to advertise treatment methods or drugs untruthfully.
- Using superstitions in medical examination and treatment.
- Practitioners drinking alcohol or beer or smoking or having an alcoholic concentration in blood or breath when providing medical examination and treatment.
- Infringing upon patients' rights; failing to observe professional and technical regulations in medical examination and treatment; taking advantage of positions and powers in medical examination and treatment: abusing the profession to harm the honor, dignity and body of patients: erasing and modifying case history dossiers to falsify information on medical examination and treatment.

- Harming the health, life, honor and dignity of practitioners.
- Obstructing patients in need of compulsory treatment in admitting to medical examination and treatment establishments or intentionally providing treatment for those not in need of compulsory treatment.
- Medical cadres, civil servants and public employees establishing, engaged in the establishment or management and administration of private hospitals or medical examination and treatment establishments set up and operating under the Enterprise Law or the Law on Cooperatives, unless they are assigned by competent state agencies to manage and administer state-funded medical examination and treatment establishments.
- Bribery giving, taking and broking in medical examination and treatment.

2.3 Rights of patients

7 rights of patients are regulated in Articles 7 to 13 of the Law on Medical Examination and Treatment:

- Rights to medical examination and treatment with quality suitable to actual conditions.
- Rights to respect for privacy.
- Rights to respect for honor and protection of health in medical examination and treatment.
- Rights to choose in medical examination and treatment.
- Rights to obtainment of information on case history dossiers and medical examination and treatment expenses.
- Rights to refusal of medical treatment and discharge from medical examination and treatment establishments.
- Rights of patients losing civil act capacity, or without civil act capacity or with restricted civil act capacity, or being juveniles aged between full 6 years and under full 18 years. Lawful representatives of the patients decide medical examination and treatment for the patients. In cases of emergency, to protect the life and health of a patient, the head of a medical examination and treatment establishment may decide medical examination and treatment for the patient when his/her lawful representative is absent.

2.4 Obligations of patients

Obligations of patients are regulated in Articles 14 to 16 of the Law on Medical Examination and Treatment:

To respect practitioners: To respect and commit no act of harming the honor, dignity, health and life of practitioners and other health workers.

To observe regulations on medical examination and treatment: (1) To truthfully provide information related to their health status and fully cooperate with practitioners and medical examination and treatment establishments. (2) To follow practitioners' instructions on diagnosis and treatment, except the cases specified in Article 12 of this Law. (3) To observe and request their

relatives to observe rules of medical examination and treatment establishments and the law on medical examination and treatment.

To pay medical examination and treatment expenses: To pay medical examination and treatment expenses, except cases of exemption or reduction under law. For insured patients, payment of medical examination and treatment expenses complies with the law on health insurance.

2.5 Rights of practitioners

Rights of practitioners are regulated in Articles 31 to 35 of the Law on Medical Examination and Treatment as follows:

Rights to professional practice: (1) To professionally practice within the scope of professional operation; To decide on and take responsibility for diagnosis and treatment methods within the scope of professional operation indicated in their medical practice certificates; (2) To sign contracts with medical examination and treatment establishments to provide medical examination and treatment, but to be in charge of professional and technical operations at only one medical examination and treatment establishment. (3) To join socio-professional organizations.

Rights to refusal of medical examination and treatment: (1) To refuse to provide medical examination and treatment when, in the course of medical examination and treatment, anticipating that treatment of a disease goes beyond their capacity or is outside the scope of their professional operation, but to report such to a competent person or introduce patients to other medical examination and treatment establishments for treatment. In this case, practitioners shall still provide first aid, supervision, care and treatment for the patients until they are transferred to other medical examination and treatment establishments. (2) To refuse to provide medical examination and treatment when the examination and treatment is contrary to law or professional ethics.

Rights to improvement of professional capacity: (1) To receive training, re-training and continued updating of medical knowledge relevant to their professional practice level. (2) To participate in refresher training and sharing information on professional operation and the health law.

Rights to protection upon occurrence of incidents to patients: (1) To be protected by law and take no responsibility when properly observing professional and technical regulations but incidents still occur. (2) To request agencies, organizations and professional associations to protect their lawful rights and interests upon occurrence of incidents to patients.

Rights to assurance of safety during professional practice: (1) To be equipped with means of labor protection and sanitation to prevent and mitigate risks for infection and occupational accidents. (2) To have their health, life, honor and body protected. (3) To temporarily leave work places when having their life threatened by others, but then to report such to heads of medical examination and treatment establishments or administrations of nearest localities.

2.6 Obligations of practitioners

5 obligations of practitioners are regulated in Articles 36 to 40 of the Law on Medical Examination and Treatment as follows:

Obligations toward patients: (1) To provide timely first aid, emergency aid and medical examination and treatment for patients; (2) To respect rights of patients; (3) To give counseling

and provide information under law; (4) To equally treat patients, not to let personal interests or discrimination affect their professional decisions. (5) To request patients to pay only expenses for medical examination and treatment posted up under law.

Professional obligations: (1) To observe professional and technical regulations; (2) To take responsibility for their medical examination and treatment; (3) To regularly study and update medical knowledge to improve their professional capacity under the Health Minister's regulations; (4) To be devoted in medical examination and treatment; (5) To keep confidential the health status of patients, information provided by patients and case history dossiers; (6) To report on practitioners deceiving patients or colleagues; (7) Not to prescribe or instruct the use of medical examination and treatment services for patients or recommend them to move to other medical examination and treatment establishment for self-seeking interests.

Obligations toward colleagues: (1) To cooperate and respect colleagues in medical examination and treatment; (2) To protect the honor and prestige of colleagues.

Obligations toward the society: (1) To participate in community health protection and education; (2) To participate in supervising the professional capacity and ethics of other practitioners; (3) To observe assignment decisions of their managing agencies; (4) To observe mobilization decisions of competent state agencies upon occurrence of natural disasters, catastrophes or dangerous epidemics.

Professional ethics obligations: Practitioners are obliged to perform professional ethics obligations under the Health Minister's regulations.

2.7 Professional and technical mistakes in medical examination and treatment

According to the Article 73 of the Law on Medical Examination and Treatment, a practitioner makes professional and technical mistakes when he/she is determined by a professional council to commit any of the following acts:

a. Violating regulations on responsibilities for care for and treatment of patients:

b. Violating professional and technical regulations and professional ethics:

c. Infringing upon the rights of patients.

According to the Clause 2 Article 73 of the Law on Medical Examination and Treatment, a practitioner makes no professional and technical mistakes when he/she is determined to fall into either of the following cases:

a. Having observed properly professional and technical regulations in medical examination and treatment but incidents still occur to patients:

b. Cases of emergency in which incidents occur to patients due to an unsolvable lack of technical means and equipment and practitioners under law or the unavailability of professional regulations on a disease and other force majeure cases resulting in such incidents.

2.8 Responsibilities of practitioners upon occurrence of incidents

The Article 76 of the Law on Medical Examination and Treatment regulates responsibilities of practitioners and medical examination and treatment establishments upon occurrence of incidents as follows:

- The insurer from which the medical examination and treatment establishment buys insurance shall pay damages to the patient. In case of the the medical examination and treatment establishment fails to buy insurance, it have to pay damages to the patient by itself under law.
- Apart from paying damages to patients, a medical examination and treatment establishment and a practitioner making professional and technical mistakes resulting in an incident to a patient shall take other legal responsibilities under law.
- An incident occurs in medical examination and treatment but practitioners make no professional and technical mistake, the medical examination and treatment establishment and practitioners are not required to pay damages.

3. REGISTER OF PRACTICE AND SCOPE OF PROFESSIONAL OPERATION

3.1 Initial issuance of a practice certificate for a nurse

According to the Article 5 of the Decree No.109/NĐ-CP dated 01 July 2016, composition of applications for issuance of the practice certificates to Vietnamese nurses includes:

- Application form for practice certificate
- Valid copies of nursing qualifications
- A certificate of completion of internship
- A Certificate of Health
- A criminal record
- A CV
- Two photos of 04 cm x 06 cm

Note: All forms must be same as the forms enclosed with the Decree No.109/NĐ-CP

3.2 Requirements for issuance of operation licenses for injection, dressing change, pulse counting and temperature and blood pressure measurement service providers

The Article 33 of the Decree 109/NĐ-CP dated 01 July 2016 regulates requirements for operation licenses for injection, dressing change, pulse counting and temperature and blood pressure measurement service providers as follows:

1. Facilities:
   a. The location must be permanent, bright enough and separated from places for daily-life activities;
   b. A room for injection or dressing change must have an area of at least 10 m2;

c. Electricity, and water supply must be sufficient and other sanitation conditions must be satisfied for patient care.

2. Medical equipment:

a. Having sufficient medical equipment and instruments suitable to the registered scope of operation;

b. Having anti-shock first aid kits.

3. Personnel:

a. Any person engaged in providing medical examination and treatment must have a practice certificate and be assigned proper tasks which stated in his/her practice certificate.

b. A staff responsible for providing injection, dressing change, pulse counting and temperature and blood pressure measurement services shall satisfy the following requirements:

- Having a two-year medical degree and a practice certificate;
- Having experience in performing injection, dressing change, pulse counting and temperature and blood pressure measurement for at least 45 months.
- Being a full-time practitioner at a healthcare facility.

3.3 Requirements for issuance of operation licenses to home healthcare service providers

The Article 34 of the Decree 109/NĐ-CP dated 01 July 2016 regulates requirements for issuance of operation licenses to home healthcare service providers as follows:

Any facility providing home healthcare services including dressing change, suture removal; physical therapy, rehabilitation; pregnant women and baby care; collection of blood samples for testing, result return; care of patients with cancer and other home nursing services must satisfy the following requirements:

1. Medical equipments:

Having sufficient medical equipment and instruments suitable to the registered scope of operation.

2. Personnel:

a. Any person engaged in providing medical examination and treatment must have a practice certificate and be assigned proper tasks which stated in his/her practice certificate.

b. A staff responsible for providing professional techniques in a home healthcare facility must have a two-year medical degree and a practice certificate and have performed medical examination and treatment for at least 45 months.

- Being a fulltime practitioner at a healthcare facility.

3.4 Scope of professional operation of nurses

Currently, the Ministry of Health regulates the scope of nursing operations under the provisions of Circular No. 26/2015 / TTLTBYT-BNV dated October 7, 2015 regulating codes and standards of proficiency of nurses, midwives, medical technicians as follows:

3.4.1 Nurses level II

Tasks:

a. Patient care in healthcare facilities:

- Examine, identify, and determine health problems of patients, make a care plan, implement this plan, assess the results of the health care;
- Assess the health situation of patients, indicate suitable care and supervision for patients;
- Check and assess the daily progress of patients; identify and cooperate with doctors to provide timely treatment to any abnormal situation of patients;
- Provide, monitor and assess palliative care for end of life patients and psychological support for patients' families;
- Implement, check, and assess basic nursing techniques, intensive nursing techniques, and functional rehabilitation techniques for patients;
- Cooperate with doctors to decide functional rehabilitation and proper nutrition for patients;
- Implement, check, and assess nutritional care for patients;
- Implement, check and assess medical records of patient as required;
- Participate in developing and following patient care procedures.

b. First aid and emergency aid:

- Prepare medicine and emergency aid equipment;
- Implement first aid, medical emergency techniques or specialist first aid and emergency techniques;
- Organize, check, assess, and implement emergencies in diseases and disasters.

c. Health communication, counselling, and education:

- Make plan, provide counselling service, and education about health care for patients.
- Participate in developing contents, programs, materials of health care, and implement communication, counselling, and education about health care.
- Assess activities of health care communication and education.

d. Community health care:

- Communicate and educate patients on disease prevention at healthcare facilities and community;
- Implement primary health care and national target programs;
- Identify, decide and implement nursing care techniques at home: injecting, transmitting, wound caring, caring for patients with the drainage tube and rehabilitation care.

e. Protect the rights of patients:

- Assure that the rights of patients are protected according to the provisions of law;
- Take measures and assess the effectiveness of these measures to ensure safety for patients.

f. Cooperate and support treatment:

- Classify levels of care for patients;
- Cooperate with doctors to support for patients in the process of transferring to other departments or other hospitals or hospital discharge;
- Support, supervise and be responsible for the performance of lower-level nurses;
- Manage patient records, their case history dossiers, patient rooms, patients, medicines, medical equipment, and consumables;

g. Training, research, and career development:

- Organize training activities and provide practical guidance for students, nursing staffs;
- Conduct scientific research, develop technical innovations in patient health care, and improve the quality of patient health care services;
- Update, evaluate and apply evidence-based method in practicing health care for patients;
- Participate in designing continuous training programs and materials for nursing officers.

Requirements for qualifications:

a. Degree of specialist level I or Master's degree in nursing

b. Foreign language certificate of 3 level or higher according to the Circular No. 01/2014 / TT-BGDT dated January 24, 2014 of the Ministry of Education and Training promulgating the 6-level foreign language competence framework for Vietnamese. Or Ethnic language certificate for the position that requires the use of ethnic languages;

c. Basic IT skills in accordance with Circular No. 03/2014 / TT-BTTTT dated March 11, 2014 of the Ministry of Information and Communications regulating IT skills.

d. Certificate in training for nurses level II.

Requirements for professional competence:

a. Understand the Party's views, undertakings and guidelines, policies and laws of the State on protecting, caring and improving the people's health;

b. Understand health and disease of individuals, families and the community, give diagnosis of care, classify levels of care, determine health care, and decide nursing intervention to ensure safety for patients and the community;

c. Implement basic nursing techniques, first aid, and emergency techniques and effectively respond to emergencies, epidemics and disasters;

d. Have skills in counselling and educating health care and effectively communicating with patients and the community;

đ. Have skills in training, practicing, researching, and coordinating with colleagues and promoting nursing careers;

e. To be a head or a secretary or a main participant (participated in over 50% of project time) of grassroots level scientific research project, or have scientific initiatives/inventions which have been approved to improve nursing techniques;

f. To level up to a nurse level II, the nurse must have 9 year experience of working as the nurse level III, and the most recent time to work as a nurse level III requires at least 2 years.

3.4.2 Nurses level III

Tasks

a. Patient care in healthcare facilities:
   - Examine, identify, and determine health problems of patients, make a care plan, implement this plan, assess the results of the health care;
   - Monitor, identify, and decide suitable care and report timely abnormal situations of patients;
   - Provide, check and assess palliative care for end of life patients and psychological support for patients' families;
   - Implement basic nursing techniques, intensive and complex nursing techniques, and functional rehabilitation techniques for patients;
   - Identify nutrition need of patients, implement, check, and evaluate nutritional care for patients;
   - Implement medical records of patient as required;
   - Participate in developing and following patient care procedures.

b. First aid and emergency aid:
   - Prepare medicine and emergency equipment;
   - Implement first aid, medical emergency techniques or respond to emergency situations such as anaphylactic shock, cardiac arrest, respiratory arrest, and specialist first aid, and medical emergency techniques;
   - Implement emergencies in diseases and disasters.

c. Health communication, counselling, and education:
   - Evaluate the demand of counselling, and education about health care of patients;
   - Guide patients to health care and disease prevention;
   - Participate in developing contents, programs, materials of health care, and implement communication, provide counselling service, and education about health care;
   - Assess activities of health care communication and education.

d. Community health care:
   - Communicate and educate patients on disease prevention at healthcare facilities and community;
   - Implement primary health care and national target programs;
   - Implement nursing care techniques at home: injecting, transmitting, wound care, caring for patients with the drainage tube and rehabilitation care.

đ. Protect the rights of patients:

- The legal rights of patients are assured and protected according to the provisions of law;
- Take measures to ensure safety for patients.

e. Cooperate and support treatment:

- Cooperate with doctors to classify levels of care and provide health care for patients;
- Cooperate with doctors to support for patients in the process of transferring to other departments or other hospitals or hospital discharge;
- Support, supervise and be responsible for the performance of lower-level nurses;
- Manage patient records, their case history dossiers, patient rooms, patients, medicines, medical equipment, and consumables;

g. Training, research, and career development:

- Organize training activities and provide practical guidance for students, nursing staffs;
- Conduct scientific research, develop technical innovations in patient health care, and improve the quality of patient health care services;
- Participate in designing continuous training programs and materials for nursing officers.

Requirements for qualifications:

a. Bachelor's degree in nursing

b. Foreign language certificate of A2 level or higher according to the Circular No. 01/2014 / TT-BGDT dated January 24, 2014 of the Ministry of Education and Training promulgating the 6-level foreign language competence framework for Vietnamese. Or Ethnic language certificate for the position that requires the use of ethnic languages;

c. Basic IT skills in accordance with Circular No. 03/2014 / TT-BTTTT dated March 11, 2014 of the Ministry of Information and Communications regulating IT skills.

Requirements for professional competence:

a. Understand the Party's views, undertakings and guidelines, policies and laws of the State on protecting, caring and improving the people's health;

b. Understand health and disease of individuals, families and the community, give diagnosis of care, classify levels of care, determine health care, and decide nursing intervention to ensure safety for patients and the community;

c. Implement basic nursing techniques, first aid, and emergency techniques and effectively respond to emergencies, epidemics and disasters;

d. Have skills in counselling and educating health care and effectively communicating with patients and the community;

đ. Have skills in training, practicing, researching, and coordinating with colleagues and promoting nursing careers;

e. To level up to a nurse level III, the nurse must have 2 year experience of working as the nurse level IV and have a three year degree in nursing at the first recruitment; or 3 year experience of working as the nurse level IV who has a two year degree in nursing at the first recruitment.

3.4.3 Nurses level IV

Tasks

a. Patient care in healthcare facilities:
   - Examine, identify, and determine health problems of patients, make a care plan, implement this plan, assess the results of the health care;
   - Monitor, evaluate daily the progress of patients; and report timely abnormal situations of patients;
   - Provide palliative care for end of life patients and psychological support for patients' families;
   - Implement basic nursing techniques as directed and assigned;
   - Identify nutrition need of patients, implement nutritional care for patients as directed;
   - Implement medical records of patient as required;

b. First aid and emergency aid:
   - Prepare medicine and emergency equipment;
   - Implement first aid, medical emergency techniques;
   - Participate in emergencies in diseases and disasters.

c. Health communication, counselling, and education:
   - Evaluate the demand of consultancy, and education about health care of patients;
   - Guide patients to health care and disease prevention;
   - Implement communication, provide counselling service, and education about health care.

d. Community health care:
   - Communicate and educate patients on disease prevention at health facilities and community;
   - Participate in primary health care and national target programs;
   - Provide nursing care services at home: injecting, wound care, caring for patients with the drainage tube and rehabilitation care, and personal care (shower, shampoo and dressing change) for patients as required.

đ. Protect the rights of patients:
   - The legal rights of patients are assured and protected according to the provisions of law;
   - Take measures to ensure safety for patients.

e. Coordinate and support treatment:
   - Participate in classifying levels of care;
   - Prepare and support for patients in the process of transferring to other departments or other hospitals or hospital discharge;

- Manage patient records, their case history dossiers, patient rooms, patients, medicines, medical equipment, and consumables;

g. Training, research, and career development:
   - Provide practical guidance for students, nursing staffs as assigned;
   - Participate in applying innovations in patient health care, and improving the quality of health care services;

Requirements for qualifications:

a. Diploma's degree in nursing. For those who graduated as midwives or assistant doctors are required to have the certificate in nursing according to the regulations of the MOH.

b. Foreign language certificate of 1 level or higher according to the Circular No. 01/2014 / TT-BGDT dated January 24, 2014 of the Ministry of Education and Training promulgating the 6-level foreign language competence framework for Vietnamese or Ethnic language certificate for the position that requires the use of ethnic languages;

c. Basic IT skills in accordance with Circular No. 03/2014/TT-BTTTT dated March 11, 2014 of the Ministry of Information and Communications regulating IT skills.

Requirements for professional competence:

a. Understand the Party's views, undertakings and guidelines, policies and laws of the State on protecting, caring and improving the people's health;

b. Understand health and disease of individuals, families and the community, give diagnosis of care, classify levels of care, determine health care, and decide nursing intervention to ensure safety for patients and the community;

c. Implement basic nursing techniques, first aid, and emergency techniques;

d. Have skills in educating health care and effectively communicating with patients and the community.

LESSON TEST

Case 1

You are a nurse in the Infectious Diseases Department, you receive a phone call from outside the hospital when you are in the shift. She asks you if there is a patient named Nguyen Van A, 50 years old, coming from Tu Liem, Cau Giay, Hanoi. She informs that her name is Lan and she is the sister of the patient. You are the nurse taking care of patient Nguyen Van A

Q1. Choose the correct answer:

A. There is a patient named Nguyen Van A, 50 years old, coming from Tu Liem Cau Giay, Ha Noi.

B. There is no patient named Nguyen Van A, 50 years old, coming from Tu Liem Cau Giay, Ha Noi.

C. You have an appointment with Mrs. Lan to call back after 15 minutes.

You talked with Mr. Nguyen Van A and he said he did not want to inform to relatives about his situation in the hospital.

Q2. Choose the correct answer when Mrs Lan calls again

A. You supply the phone number of on-call room to Mrs Lan and advise her to ask doctors there.

B. You answer that there is no patient with name, age and address as information which Mrs Lan asked.

C. You answer that there is a patient named Nguyen Van A, 50 years old and coming from Tu Liem, Cau Giay, Ha Noi. However, he did not want to meet her because he is tired.

Mr. Nguyen Van A suffered from hepatitis B. After two week of treatment, he is allowed to leave the hospital by the doctor. Mr. A meet you to ask for making photo of his medical documents for the next hospitalization.

Q3. Choose the correct answer:

A. You tell Mr. A that you will ask the doctor

B. You tell Mr. A that he must write the request of being supplied his summary medical records.

C. You tell Mr. A that you have no right to supply information as his request.

Case 2.

You have Bachelor's degree in nursing, you have worked in the Department of Neurology for 8 years. The Department is still applying the principles of pressure ulcers care: massage the area of pressure ulcers to prevent extension of the ulcers, wash ulcers with physiological saline 9‰, use 70° alcohol for antiseptic. In a training course on pressure ulcers management organized by the Vietnam Nurses Association, you are advised by international and national experts not to massage the area of pressure ulcers, and not to use antiseptic such as alcohol to clean the sores. You want to apply the new knowledge in the department. However, after discussing with the doctor who is responsible for treatment and care for patients, you are asked to follow him strictly.

Q1. Choose the most appropriate solution in the following ways:

A. Happily follow the doctor's orders and give up the idea of applying new knowledge learned.

B. Collect more research evidence and continue to discuss with the doctor.

C. Report to the Head of the Department and suggest a new method of caring for patients with ulcers.

When using 70^0 alcohol as antiseptic on the pressure ulcers area, you often hear patients complain about pain and slow improvement of ulcers.

Q2. Choose the most appropriate solution in the following ways:

A. Encourage the patient to endure pains.

B. Continue to follow the doctor's instructions correctly.

C. Talk to the treating doctor in the meeting of the department.

Case 3

You have a three-year degree in nursing, you are working at a district hospital. A person living next to the house had a traffic accident, he was hospitalized for surgery due to a broken leg. He was left the hospital early. You are asked to perform care services at his home such as: infusion of 10% glucose solution, antibiotic injection, dressing change, removing stitches as ordered by the doctor, and rehabilitation care for the leg of the patient.

Q1. According to the regulations of the Ministry of Health, which of the following activities are in your nursing scope.

A. Injecting antibiotics according to your doctor's order

B. Dressing change according to doctor's order

C. Remove stitches according to the doctor's order

D. Rehabilitate the leg of the patient

E. Perform infusion at home

Answers

Case 1: 1.C, 2.B, 3.B

Case 2: 1.B, 2.C

Case 3: 1. A, B, D

REFERENCES

1. National Assembly (2009). Law on Medical Examination and Treatment No.40/2009/QH12.
2. Government (2016). Decree No. 109/NĐ-CP dated July 1, 2016
3. Ministry of Health and Ministry of Home Affairs (2015). Circular 26/2015/TTLT-BYT-BNV dated October 7, 2015 stipulating codes,professional title standards for nurses, midwifes, technicians

CHAPTER 2

PATIENT SAFETY

LESSON 5

APPLICATION OF STANDARD PRECAUTIONS IN PATIENT CARE PRACTICE

OBJECTIVES

1. Present the definition, principle and contents of Standard precaution;
2. Identify the situations which standard precaution should be applied in patient care;
3. Perform correctly the standard precaution regulations suitable with reality of the hospital (Competency: 20.2);
4. Select and use conformity personal protective equipment in the situation of patient care (Competency: 17.4; 20.1)
5. Category properly medical solid waste (Competency: 20.4)

CONTENTS

1. Definition of hospital infection

Hospital infection also known as medical care related infection (Healthcare Associated Infection - HAI) is infection that occur during the patients'care and treatment are taken in a health care facility without showing or incubated when hospital admission. In general, infections occurring 48 hours (2 days) after hospitalization are normally considered as hospital infection.

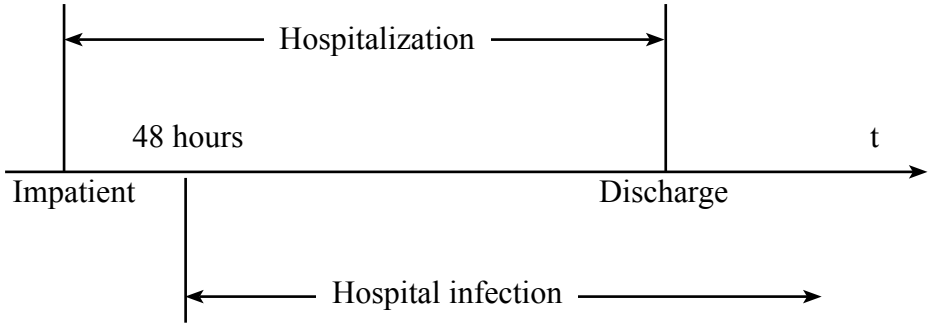


Chart 1. Demonstration the relationship between hospital admission time and hospital infection

2. Evidence relating to hospital infection

According to the Center for Disease Control of America (CDC), in around 31 hospital patients has at least one healthcare-associated infection in US. Annually, there are 1.7 millions people

suffered from hospital infection, patients with hospital infection must extend 17.6 days in hospital and increase the treatment cost of US$ 1100/patient.

In Vietnam, common ratio of hospital infection of the hospitalized patients is from 5% - 10% upon the chrateristic and scale of the hospital. General hospital infections are hospital pneumonia, septicemia, surgical cut infection, urinary infection.

Number of bacteria in 1 cm^2 healthy skin of the patient changes from 10^2 to 106, the most localized areas are groin, armpit, elbow, hand. There are 25% of normal human skin bearing S. *Aureus*. The skins of glycorrhea patients, dialysis cycle patients and chronic dermatitis patients bear higher S. *Aureus* localization.

Many researches in Vietnam show that ratio of medical staff compliant with infection control procedure in patient care generally and in surgical patients particulally is usually only 50% - 70%4. The researches have proved that hand hygiene compliance shall decrease 30% - 50% hospital infections. Current bacteria spectrum is the main culprit cause hospital infection, it is easy to remove by routine hand hygiene (wash hand with water and normal soap or rub hands with alcohol-based hand sanitizer for 20 – 30 seconds).

3. Standard precaution

3.1 Definition

Standard precaution are basic preventive measures applicable to all patients regardless of diagnosis, infection situation and timing of examination, treatment and care based on the principle of blood, secretion and excreta of patient shall be considered as disease contamination risk

3.2 Standard prevention principle

- Principles of standard precaution is to consider all blood, biofluid, secretions, excretas (except sweat) as infectious disease risks.
- Standard precaution is basic practices applicable to all the time, everywhere in every health facility.
- Standard precaution compliance is the most important strategy to reduce health care related infections for the patient, reduce occupational exposure to medical staff.
- Standard precaution application in the patient care are based on the nature of the interaction between medical staff with patients, exposure possibility of blood, biofluid and secretions from the body to select proper personal protective equipment and performances.

3.3 Blood and body secretions are able to transmit pathogenic agents

- All blood and blood products
- All secretions containing blood
- Vaginal fluid
- Sperm

- Pleural fluid
- Pericardium fluid
- Cerebrospinal fluid
- Peritoneum fluid
- Joint fluid
- Amniotic fluid

Note: The above mentioned blood and secretions are not only transmited disease from patient but also transmitted from bloody, secretion, excreta environments.

3.4 Additional precaution

Along with standard precaution commonly applied for blood and fluid of patients, WHO and Center for Disease Control of America also recommend the following additional precaution measures:

- Airborne infection precaution: Applied parallelly with standard precaution to those patients who suspect from infectious disease pathogens which is possibly transmitted by airborne such as Measles, Chickenpox, Herpes Zoster, Varicella Zoster, Tuberculosis, SARS, H5N1 from aerosols technique, medical staff has to wear special respiratory mask.
- Droplet infection precaution: applied parallelly with standard precaution to those patients who suspect from infectious disease which is possibly transmitted through droplet such as Haemophilus influenza type B, Neisseria meningitis, meningococcus, Whooping cough, diphtheria, pneumonia caused by Mycoplasma; some serious viral infections like mumps and rubella.

  Contact infection precaution: applied parallelly with standard precaution to those patients who suspect from infectious disease which is possibly transmitted through touching such as skin infection, Intestinal infections caused by multidrug-resistant bacteria, Diphtheria, Herpes simplexvirus.

3.5 Contents of standard precaution

- Hand hygiene
- Personnal protective equipment usage
- Respiratory hygiene and cough hygiene
- Patient arrangement
- Safety injection and sharp injury risky prevention
- Envirnmental sanitation
- Equipment handling
- Fabric processing
- Waste treatment

4. Routine hand hygiene

4.1 Routine hand hygiene timing

(1) Before directly contacting with patient.

(2) Before performing each clean/sterilized procedure.

(3) Right after contacting with blood and/or body fluids.

(4) After directly contacting with patient.

(5) After contacting with furniture's and equpment's surfaces in the patient room.

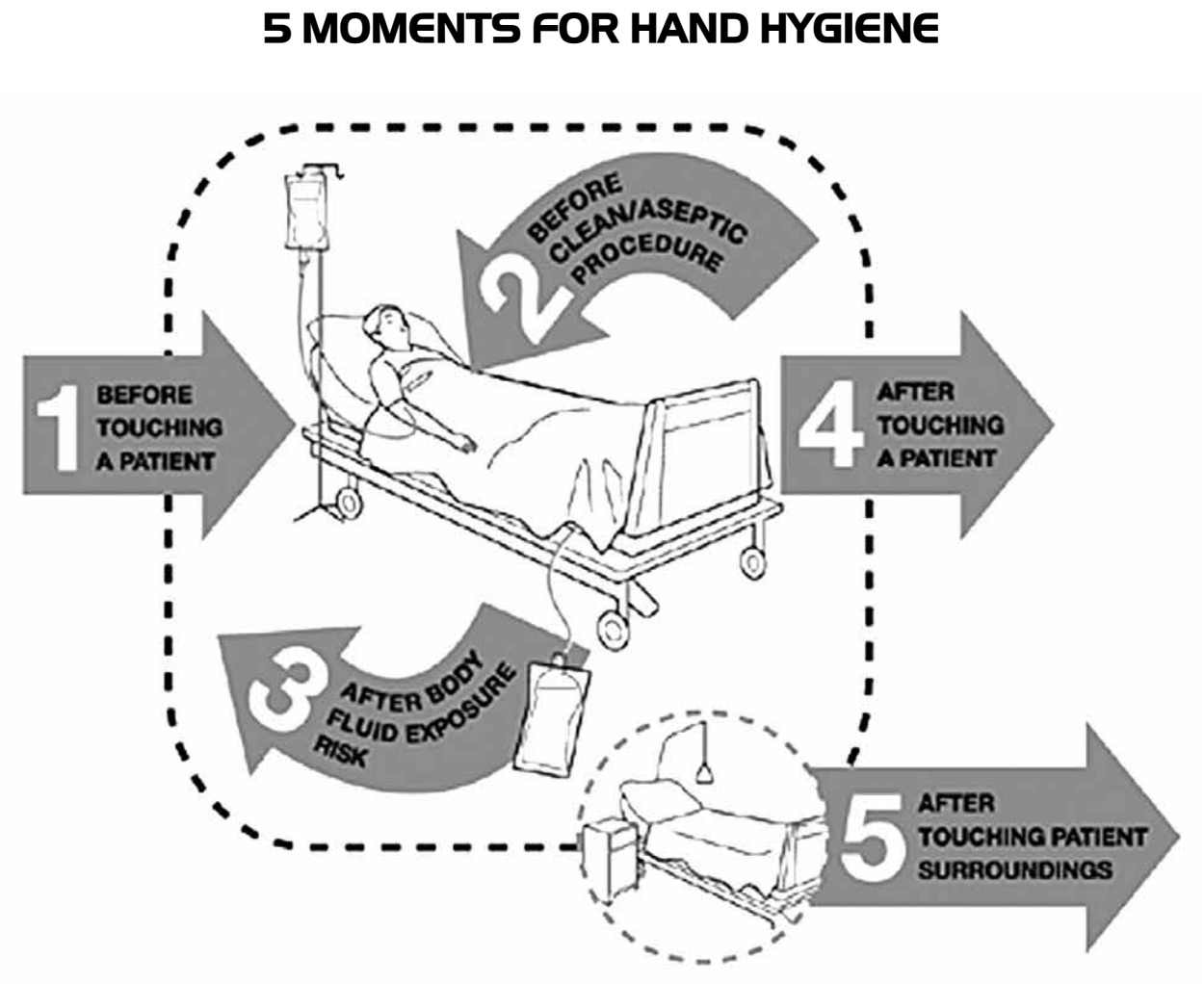


Figure 1. Demonstration of hand higiene timing

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012

In addition, the following care timing needs to have hand higiene:

- Once changing from dirty care to clean care on the same patient.
- Before wearing and removing gloves.
- Before entering and leaving patient room.

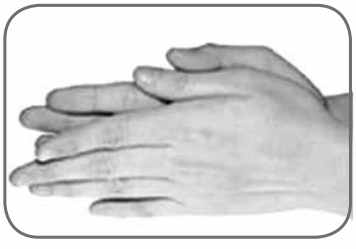
- Every medical staff working in operation room even not directly touch on the patient (anesthesia supporter, assitant, trainee…) needs to clean hands before entering the operation room. In the operation room, whenever the hand touches on equipment's surface, hands need to be cleaned with alcohol based hand sanitizer.
- Medical staff who working in testing room needs to strictly follow the 3rd and 5th step of hand higiene to prevent infection for themselves.

4.2 Routine hand higiene technique

Although, clean hand by wáter and soap or rub the hands with alcohol based hand sanitizer, it needs to follow 6-steps procedures:

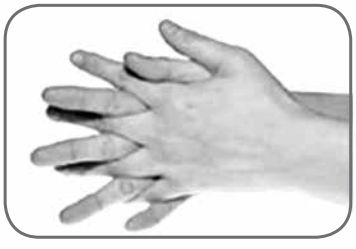
- Step 1: Rub the hollows together.
- Step 2: Rub this hollow on the back of the other hand and vice versa.
- Step 3: Rub the hollows together, squeezing fingers onto interstitial.
- Step 4: Rub the fingers on the hollows of the other hand and viceversa (the fingers should fit with the hollows).
- Step 5: Rub the thumb of the hand on the hollow of the other hand and viceversa (the hollow should cover the thumb).
- Step 6: Rub the tips of the fingers on the hollow of the other hand and viceversa.

HAND HYGIENE STEPS



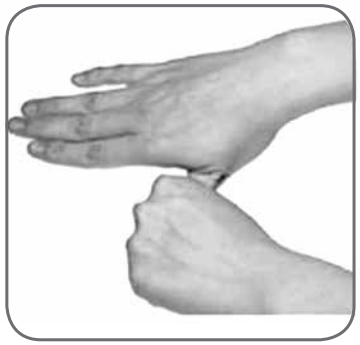
Step 1: Wet hands with water and soap, palm to palm

Step 2: Right palm over left dorsum and left palm over right dorsum



Step 3: Palm to palm, fingers interlaced

Step 4: Back of fingers to opposing palms with fingers interlocked



Step 5: Rotational rubbing of right thumb clasped over left palm and left thumb over right palm

Step 6: Rotational rubbing backwards and forwards with clasped fingers of right hand in palm of left hand and vice-versa. Cleaning hand with water and drying.

Figure 2. Demonstration of hand hygiene steps

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012.

4.3 Attentions to routine hand hygiene

- If the hand is exposed to dirty or stick with body fluids, wash the hand by soap and water.
- Rub the hands by alcohol-based hand sanitizer when do not see dirty on the hand, after removing gloves or examining the patients.
- Fully take 3ml – 5ml hand hygiene sanitizer for each time.
- Properly follow hand hygiene techniques. Rub the hands with hand hygiene sanitizer following the procedure from step 1 to step 6, each step 5 times
- Properly follow hand hygiene time: rubbing time of 6 steps must be from 20 seconds to 30 seconds.
- Avoid hand contamination after hand hygiene.
- Do not use hand dryer to dry the hands.
- Consider to select the type of glove free from talc powder to facilitate the disinfection with alcohol-based hand sanititzer.

4.4 Some hand sanitizers

Table 1: characteristics of hand sanitizers

Characters	Alcohol	Iodine	Chlorhexidine
Effects	Protein degradation of microorganisms	Oxidize	Increase penetration of microbial cell membranes
Bacterial killer spectrum	Gr (+), Gr (-), tuberculosis	Gr (+), Gr (-)	Gr (+), Gr (-), tuberculosis
Mycosis	Good	Good	Good
Virus	Neutral	Weak	Good
Dermatologist	Non	Yes	Non
Effect duration	Quick	Slow	Quick, last long
Inactivated by organic matter	Little	Many	Little
Side effects	Dry skin	Skin allergy, may cause hypothyroidism in newborn	Skin irritation

Source: Guideline of hand hygiene at health facilities, Ministry of Health, 2017

5. Personal protective equipment usage

5.1 Types of personal protective equipment

Personal preventive equpment includes:

- Glove,
- Mask,
- Isolation gown,
- Apron,
- Cap,
- Glass/mask
- Boot or shoe cover

5.2 Selection of personal protective equipment

It should be a reasonable selection of the personal protective equipment as a part of standard precaution. Once selecting the personal protective equipment, medical staff should consider an assessment of the exposure risk of infectious diseases related to technical processes intended to do for the daily patient cares. The selection of personal protective equipment should be undertaken the followings:

- Type of technique
- Exposure possibility to the blood or body fluid and other fluids

- Hand skin of medical staff is scratched
- Have sufficient personal protective equipment to use.

The below table guides the selection of personal protective equipment for different situations:

Table 2. Selection of personal protective equipment

Practical cases	Hand hygiene	Glove	Isolation Gown	Medical mask	Protective glass
Always use before and after contacting with patients and after touching the infected environment	×				
If directly touching with blood, body fluids, excreta, phlegm, rheum, not healthy skin	×	×			
If there is a risk of shooting fluid to the body of medical staff	×	×	×		
If there is a risk of shooting fluid to the body and face of medical staff	×	×	×	×	×

Source: Summary from infection control documents - Administration of Science, Technology and Training, Ministry of Health, 2012.

5.3 Glove wearing

5.3.1. Purpose

- Protecting patient from contamination of pathogens when medical staff performing sterilized procedures.
- Protecting the hands of medical staff by setting up a barrier preventing the blood and fluids from contacting the skin of the hands of medical staff, and separating the chemical agents causing skin irritation to maintain the healthy skin feeling.

5.3.2. Glove wearing procedure

- Hand hygiene.
- Selecting proper size of glove.
- Opening the glove container.
- Using a hand without glove to put on the inside of the wrist glove fold to wear for the other hand.
- Using 4 fingers of gloved hand to put the outside of the other glove fold to wear for the remain hand.
- Adjusting the gloves for fitting with the hands.
- Note: Gloves should cover the sleeve of blouse while taking care of patient
- While wearing stearilized gloves, do not touch on the outside of the gloves

5.3.3. Glove removing procedure

- Using a gloved hand hold the wrist of the other hand to pull the glove overtirned and remove..
- The removed glove is kept by gloved hand.
- The removed glove hand enters the inside the wrist of the other hand, pull the glove overturned so that the glove is covered in the other glove (two in one).
- Put dirty gloves into the infectious waste bag.
- Routine hand hygiene right after removing the gloves.

a. Glove wearing *b. Glove removing*

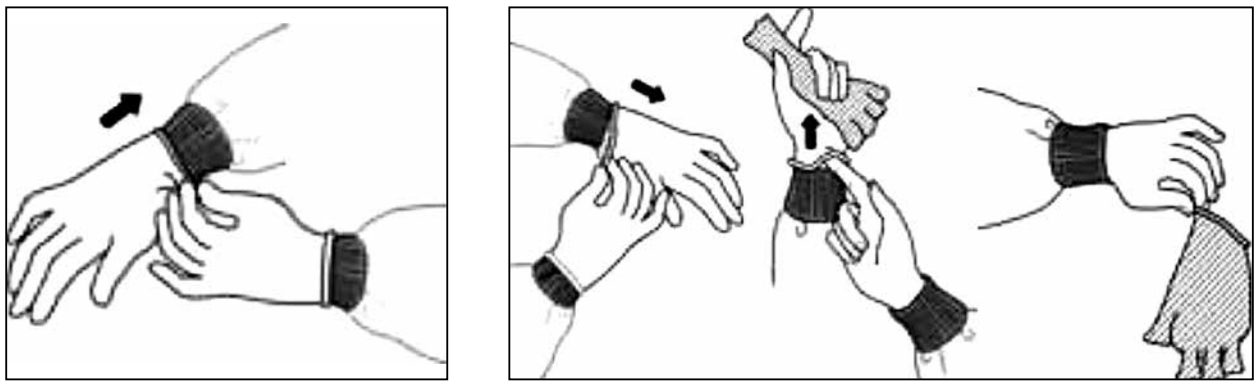


Figure 3: How to wear and remove gloves

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012.

5.3.4 Attentions to wearing gloves

- Wearing gloves can not replace hand hygiene.
- Each pair of gloves is for one patient only
- Disposable gloves are not recommended to reuse.
- No need to wear glove in normal care if contact is on the healthy skin only.

5.4 Medical mask wearing

5.4.1 Purpose

- Protecting patient: to prevent drops from medical staff's mouth onto the surgery cut, skin and mucosa are of the patient where need to be sterilized protection, when medical staff suspected of having repiratory contaminated disease.
- Protecting medical staff: when there is repiratory disease; when performing procedure which having risk of bleeding from the patient; when washing medical instruments, infectious patient care instruments; when collecting fabrics, medical wastes...

5.4.2 When wearing medical mask

- Might be shot by blood, fluid during taking care of patient.
- When working in the surgery area or other stearilization required areas.

- When taking care patient with a respiratory suspected or infection or when medical staff suffered from a respiratory disease.

5.4.3 Mask wearing technique

- Step 1: Put the mask fully cover mouth and chin; metal rod cross horizontally the nose, the fold will be placed as downward direction, the elastic will be inside, the absorbtive side contacts with the face, the non-absorbtive side will be outside.
- Step 2: Tie the upper and lower strings behind the head or strap over the ears.
- Step 3: Use the fingers fasten the metal rod on two sides of the nose.
- Step 4: Adjust the mask rim to fit the face.
- Step 5: Test the breath-in if the air is filtered through the mask and breath-out if the air escaped through the openings. If wearing glasses that are blurry, it means the mask is not technically wearing.

5.4.4 How to remove mask and respirator:

When removing the mask, do not touch on the outside of the mask, unplug the strings and drop into the infected waste bin (Figure 4)

a. Mask and respirator wearing *b. Mask and respirator removing*

Figure 4: How to wear and remove the mask and respirator

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012

5.5 Using protective glasses and facial cap

5.5.1 When protective glasses are used

Wear protective glasses and facial cap when performing technique with blood and fluid fly into eye as: delivery, abortion, endotracheal placement, sunction, teeth removal

5.5.2 How to wear protective glasses

Place glasses or facial cap on the face and adjust for proper fit (figure 3)

5.5.3 How to remove protective glasses

Do not touch on the outside of the glasses or facial cap, use hand to hold the strap of glasses or cap. Put it in the designated bin for the reprocessing (figure 3).

a. How to wear glasses/facial cap *b. How to remove glasses/ facial cap*

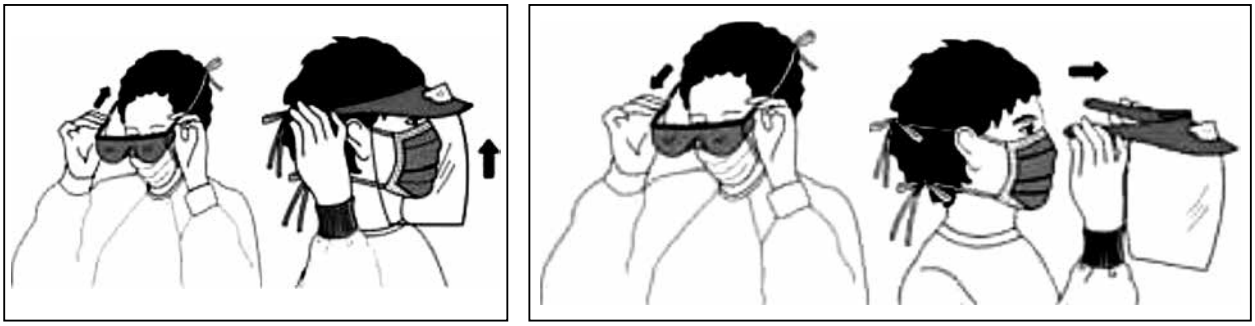


Figure 5: How to wear and remove glasses/facial cap

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012

5.6 Wearing protective cloth and apron

5.6.1. Selection of protective cloth, apron

Wearing protective waterproof cloth/apron when performing technique with prediction of patient's blood and secretion potentiallyflying into the medical staff's uniform. For example, wen performing the procedure of gastric lavage, endotracheal placement, deadbody operation, medical equipment cleaning, bloody fabrics collection.

5.6.2 How to wear protective cloth

Protective cloth is covered from neck to feet, from hand to wrist and cover the back. Tie the strings at neck and belt.

5.6.3 How to remove protective cloth

- Do not touch on the front and sleeve.
- Unplug the strings at neck and belt, pull the cloth from each shoulder toward the same side hand.
- Place the outside in, take the cloth away from the body, roll it up and put into the infection waste bin (Figure 4)

a. How to wear cloth *b. How to remove cloth*

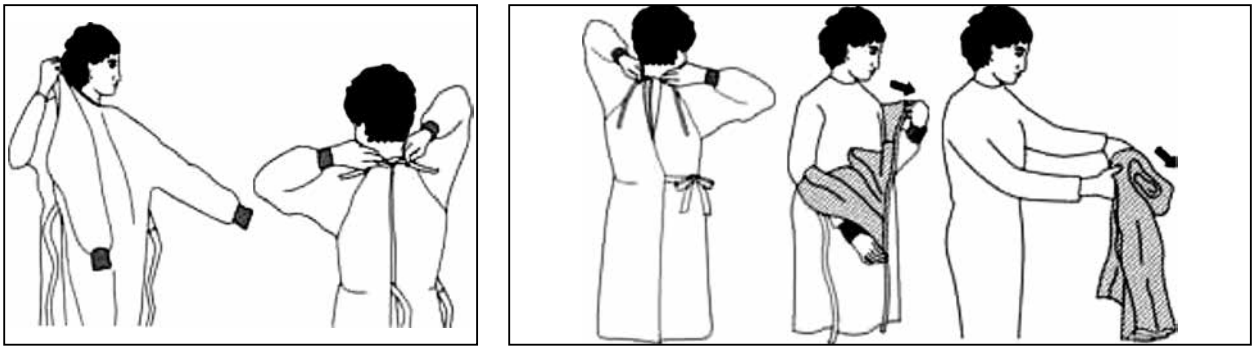


Figure 6: How to wear and remove protective cloth

Source: Infection control document - Administration of Science, Technology and Training, Ministry of Health, 2012

6. Respiratory hygiene /cough etiquette

6.1 Purpose

- Preventing cross-respiratory infection.
- Preventing hands from being infected.

6.2 Application

- During infected respiratory disease time, the people who have symptoms of respiratory disease need to take the measure to control the source of infection and contact exposure.

6.3 Implment respiratory hygiene /cough etiquette rules

- Managing all patients who have active respiratory symptoms , providing medical masks, hand disinfection at the area of examination and treatment for the patient with respiratory symptoms.
- There should be a warning system and instruction at the patient receiving area to category patients with respiratory symptoms.
- All patients with respiratory symptoms must comply with the following rules on respiratory hygine and cough hygiene:
- Cover the mouth and nose with a towel and put the towel into the waste bin or wash if reuse, hand hygiene soon after. Use the elbow to cover when coughing without towel, do not use hand.
- Wear medical mask.
- Hand hygiene right after touching secretions.
- Keep proper distance from other people to prevent droplet spreading infection.

6.4 Patient arrangement rules

- It is advisabble to arrange patients who are unable to control the secretions excreta, fluids in the separated room (especially children with respiratory disease, digestive disease)
- Arrange patient based on the following principles:
  + Transmission pathway of pathogen.
  + Risk factors of transmission.
  + The posibility of hospital infection.

7. Medical equipment processing for reusing

7.1 Terminology

- Sterilization: is the process of killing or removing all kinds of living microorganisms, including bacterial spores.
- Disinfection: is the process of removing the most of all pathogens on the equipment but do not kill bacterial spores.
- High-level disinfection: is the process of killing all microorganisms and some bacterial spores.

- Intermediate-level disinfection: is the process of killing M. tuberculosis, vegetative bacterias, viruses and fungi, but cannot kill bacterial spores.
- Low-level disinfection: is the process of killing common bacteria as several viruses and fungi, can not kill bacterial spores.
- Cleaning: is the process of using mechanical and chemical measures to remove pathogens and organic matters that remaining on the equipment, but can not kill/remove all pathogens.

7.2 Equipment classification and Spaulding method of sterilization/disinfection

Table 3: Spaulding classification

Sterilized equipment (Critical Items):	equipment used to insert to tissues, organs under the skin, blood vessels and sterilize spaces. For example, surgical equipments, catheters, interventional cardiology catheters, implants and ultrasound transducers
High-level disinfection (Semi- critical Items):	equipment exposed to mucosa or injured skin, must be minimally high-level disinfected by disinfectant.
Intermediate, low-level disinfection (Non critical items):	equipment exposed to healthy skin, not exposed to mucosa.

Source: Decision 3671/QĐ-BYT on the approval of infection control guidances - Ministry of Health, 2012

Table 4. Sterilization/Disinfection methods and application

Method	Disinfection level	Applicable equipment
Sterilization	Destroy all microorganisms including bacterial spores	- Patient care critical heat-resistant equipments (surgical equipment) and semi-critical equipment used for patient care. - Critical non heat-resistant and semi-critical equipment. - non heat-resistant and semi-critical equipment which are able to soak.
High level disinfection	Destroy all microorganisms except some bacterial spores	Semi-critical non heat-resistant equipment (respiratory equipment, gastrointestinal endoscopy and bronchial endoscopy equipment.
Intermediate level disinfection	Destroy common bacteria, almost viruses and fungi, but can not kill Mycobacteria and bacterial spores	Some semi-critical and non critical equipment (blood pressure band) or surface (bedside cabinet) bloody.
Low level disinfection	Destroy common bacteria and some viruses and fungi, but can not kill Mycobacteria and bacterial spores	Some non critical equipment (blood pressure band) or surface (bedside cabinet) bloody

Source: Decision 3671/QĐ-BYT on the approval of infection control guidances - Ministry of Health, 2012

7.3 High-level disinfectant selection

Table 5. High-level disinfectant selection

Name of chemical	Hydrogen Peroxide	Peracetic Acid	Glutaralde-hyde	Ortho-phthaladehyde	Hydrogen peroxide/ Peracetic acid
Concentration	7,5%	0,1% - 0,2%	≥ 2,0%	0,55%	7,35%/0,23%
Soaking time and temperature for high-leel disinfection	30 mins at 20^0C	12 mins at 50^0C by using disinfection machine or soaking	20 mins - 90 mins at 20^0C - 25^0C	5 mins - 12 mins at 20^0C5 mins at 25^0C in a disinfection machine or soaking	15 mins at 20^0C
Activation	No	No	Yes	No	No
Using period after activation /open	21 days	1 time use	14 days - 30 days	14 days	14 days
Tool compatibility	Good	Good	Very good	Very good	Uncleared
Regular effect	Eye	Eye	Respiration	Eye, skin	Eye

Note: Daily assessment of the bactericidal effect of high-level disinfectant is recommended.

Source: Decision 3671/QĐ-BYT on the approval of infection control guidances - Ministry of Health, 2012

7.4 Disinfectant selection

Table 6: Disinfectants can be used to soak endoscopy equipment

Name of chemical	**Concentration**	**Soaking time for disinfection**
Glutaraldehyde	≥ 2%	10 hours at 20^0C - 25^0C
Peracetic acid	3.100-3.400ppm, equal 0,31 - 0,34%	2 hours at 20^0C
	0,1% - 0,2%	12 mins at 50^0C - 56^0C using a disinfection machine
Hydrogen Peroxide	7,5%	6 hours at 20^0C
Hydrogen Peroxide/Peracetic acid	7,35%/0,23%	3 hours at 20^0C
Hydrogen Peroxide/ Peracetic acid	1,0%/0,08%	8 hours at 20^0C
Glutaraldehyde/ isopropanol	3,4%/20,1%	8-10 hours at 20^0C 6 giờ ở 25^0C using a disinfection machine

Name of chemical	Concentration	Soaking time for disinfection
Glutaraldehyde/phenol-phenate	1,12%/1,93%	12 hours at 25^0C

Source: Decision 3671/QĐ-BYT on the approval of infection control guidances - Ministry of Health, 2012

Table 7: Criteria of disinfectant selection

1. Must have wide spectrum of antibacteria.
2. Quick effect.
3. Not affected by environmental factors.
4. Non-toxic.
5. Not harmful to the metal equipment and rubber, plastic as well.
6. Long lasting effect on the treated equipment surface.
7. Easy to use.
8. Non odor or pleasant odor.
9. Economic.
10. Can be diluted.
11. Having stable concentration even when diluted.
12. Able to clean well.

Source: Decision 3671/QĐ-BYT on the approval of infection control guidances - Ministry of Health, 2012

7.5 Disinfection quality control

- Monitoring the operational parameters of sterilizer: temperature, presssure and sterilization time.
- Monitoring the status of sterilizer: door system, steam tube, water tube must be absolutely closed.
- Recording book and labelling the disinfected equipment. The information including: lot number, disinfected date and time, disinfected temperature, person in charge.
- Check the status of indicators of sterilization quality used: biological indicators containing bacterial spores, if bacterial spores are killed, it is evidence of sterilized equipment or chemical indicator bands changed color as manufacturer's regulations.

7.6 Preservation of sterilized equipment

- Keep all sterilized equipment in the original cover.
- Store sterilized equipment on the clean shelve or in the dry cabinet: having space between equipment pack and wall/cabinet side, equipment cabinet must be far from ceiling 50cm and floor 20cm to avoid moisture, equipment cabinet must be dry and having door to avoid dust.
- Daily check to find out expired date.
- Sterilized quipment boxes, packs must be placed far from ground.
- Do not place other equipment on the sterilized equipment box, pack.

7.7 Expiry date of sterilized equipment

- Equipment sterilized by wet steam and covered by fabric package can be used within maximally 72 hours at room temperature of 25^0C. If packed in a standard sterilization, package can be used in 1 month.
- All sterilized equipment in the damaged, wet package must be resterilized.
- The opened package but not used, it needs to sterilize again after 1 day.

8. Fabric treatment

8.1 General provisions of classification and collection of fabrics

- Fabrics must be collected and transfered to laundry during the day.
- Patient's fabrics must be collected into two types and put into different bags: dirty fabrics and infected fabrics (bloody, fluid, body waste). Infected fabrics put into yellow waterproof bag. Tighten the bag when filled with ¾.
- Do not mark the fabrics of HIV/AIDS patients for classification and wash separately.
- Do not shake fabrics when changing or receiving, handing over at the laundry area.
- Do not put dirty fabrics on the floor or to the next bed.
- Do not place clean fabrics with dirty ones
- Car carrying fabrics must be sealed, the cover must be cleaned well every dirty fabric carying.
- The fabric collector must wear sanitary gloves, aprons, mask.
- The fabrics must be washed under the procedure upon the infection level and material.
- Clean fabrics must be stored in fully shelves or in clean cabinets

9. Environment sanitation

9.1 Environmental surface classification

9.1.1. Classified by infection level and coding system

- High sterilization required area (white color)
- High contaminant risk area (red color)
- Medium contaminant risk area (yellow color)
- Low contaminant risk area (green color)

9.1.2 Classified by exposure level and frequency of cleaning

- Regular exposure surface (score = 3): clean once a day and when needed
- Less exposure surface (score = 1): weekly cleaning and when needed

9.2 Cleaning procedure:

- From the less contaminated area to the most contaminated area
- From less exposure surface to the regular exposure surface
- From high surface to the lower one.
- From the inside out.

9.3. Cleaning technique

- Eliminate the waste, dust, scrab, visible dirt before cleaning/disinfecting. Using waste collector.
- Minimize dust diffuse or other pollutants during cleaning: Do not use brash in the patient rooms and office area. Do not turn on the fan while collecting waste, dust before cleaning, do not shake the rag while cleaning.
- Use disposable towel, if used repeatedly, wash regularly. Do not immerse dirty towel into cleaning/disinfection solution. Use separated towels for each area and each patient bed.
- Change the cleaning/disinfection solution as recommended by the manufacturer, increase frequency of solution replacement in area with high risk of contamination; when seeing cloudy, dirt and right after cleaning blood/fluid on the surface.

9.4. Cleaning quality requirement:

Every surface is always clean when observe with eye (no dust, dirt, marked or other contaminants) and no unpleasant odor.

10. Classification and management of medical solid waste

10.1 Regulation on medical waste classification

(1) Infectious waste

- Sharp infectious waste
- Non sharp infectious waste
- Waste with high risk of infection
- Surgical waste

(2) Non infectious harmful waste

- Disposed chemical waste including or containing harmful elements;
- Disposed pharmaceuticals that belonging to a cytotoxic or harmful-warning from manufacturer;
- Broken damaged, disposed medical equipment containing mercury and heavy metals;
- Disposed amalgam for teeth healing elements;
- Other harmful waste

(3) Common medical waste

- Daily-life solid waste arisen in daily human activities and external waste in health facility;

10.2 Regulation on classification collection and temporary store in the department

- Waste must be classified immediately at the occured place by the prescribed color codes;
- Harmful and non harmful waste can not be mixed together during collection, transportation and storage;
- Each type of waste is gathered into the bin or colletion equipment by the stipulated color codes.
- Waste bin or bag must not contain more than ¾. If full, the bin will be closed for collection. Bin/bag must be replaced right after collection. A string should be used to seal a plastic bag, and staples should not be used.
- Daily collection waste, for each kind of waste must consider the suitable collection time in line with the generation of waste, avoid long stay in the area.
- Collection time and frequency are scheduled suitable with volum of waste generated in the area. Minimum frequency must be once a day or collected as soon as required.
- High risk infectious waste must be preliminarily treated before collecting, tranporting.

10.3 Regulation on color

- Yellow for package, tools, equipment containing contaminantion waste;
- Black for package, equipment containing non cotamination waste;
- Green for package, tool, equipment containing normal medical waster;
- White for package, tool, equipment containing recycle waste

10.4 Regulation on waste symbol

- Yellow bag, bin for contaminated waste with the symbol of biological danger;
- Black bag, bin for cytotoxic waste with the symbol of cytotoxic and letter of "CYTOTOXIC SUBSTANCE";
- Black bag, box containing radioactive waste with radioactive substance symbol and the letter of 'RADIOACTIVE WASTE';
- White bag, box containing recycle waste with the recycleable symbol.

a) Biological danger | b) Cytotoxic substance | c) Radioactive | d) Recycleable waste

Figure 8: several waste symbols at the health facility

Source: Infection control document - Administration of Science, Technology and Training, 2012

10.5 Regulation on temporaty storage at the department

- Medical waste at the departments, rooms are stored at temporary storage before collected and transported to warehouse. Each department, division needs arrange the temporary space for waste keeping , having enough facility to store waste with proper kinds of waste.
- If there is no temporary storage, waste can be stored at the designated location nearby the department, division but away from patient area and common pathway. It is posible to temporary keep waste in the closed container, put in the department, division.

CHECKLIST

Annex 1. Checklist of routine hand hygiene

No.	Procedures	Achieved	Not achieve	Remark
1	Rub the hollows together			
2	Rub this hollow on the back of the other hand and vice versa			
3	Rub the hollows together, squeezing fingers onto interstitial.			
4	Rub the fingers on the hollows of the other hand and vice versa (the fingers should fit with the hollows)			
5	Rub the thumb of this hand on the hollow of the other hand and vice versa (the hollow should cover the thumb)			
6	Rub the tips of the fingers on the hollow of the other hand and vice versa			

Annex 2. Checklist of wearing mask procedure

No.	Procedures	Achieved	Not achieve	Remark
1	Put the mask fully cover mouth and chin; metal rod cross horizontally the nose, the fold will be placed as downward direction, the elastic will be inside, the absorbtive side contacts with the face, the non-absorbtive side will be outside			
2	Tie the upper and lower strings behind the head or strap over the ears			
3	Use the fingers fasten the metal rod on two sides of the nose			
4	Adjust the mask rim to fit the face.			

5	Test the breath-in if the air is filtered through the mask and breath-out if the air escaped through the openings. If wearing glasses that are blurry, it means the mask is not technically wearing.			

Annex 3. Checklist of wearing glove procedure

No.	Procedures	Achieved	Not achieve	Remark
1	Hand hygiene			
2	Selecting proper size of glove			
3	Opening the glove container			
4	Using a hand without glove to put on the inside of the wrist glove fold to wear for the other hand			
5	Adjusting the gloves for fitting with the hands			

Note: Gloves should cover the sleeve of blouse while taking care of patient. While wearing stearilized gloves, do not touch on the outside of the gloves

Annex 4. Checklist of department surface cleaning

No.	Procedures	Achieved	Not achieve	Remark
1	Wear personal protective equipment, prepare enough equipment for surface cleaning, put warning signboard as regulated			
2	Dilute the cleaning chemicals and environmental disinfectant following the guidance on concentration and dilution			
3	Place a signboard **"Wet floor"** at the door			
4	Arrange furnitures and remove the unnecessary, broken things in the patient room.			
5	Clean/wet sweep dust and clear the waste, pay attention to the conners and under the bed, desk and chair...			
6	**For non infection area** + 1st cleaning with detergent (soap). + 2nd cleaning with clean water and dry **For infection area** + 1st cleaning with detergent (soap) + 2nd cleaning with clean water. + 3rd cleaning with disinfection solution (prepared well as regulation in advance of the working shift)			

7	Rearrange the moved furniture to the right place.			
8	Collect the waste and move out the room			
9	Remove gloves and clean hands			

Annex 5. Checklist of surgery room cleaning at the beginning of the working day

No.	Procedures	Achieved	Not achieve	Remark
1	Hand hygiene, wear personal protective equipment as regulated			
2	Prepare sanitation equipment, dilute surface cleaning solution and environmental disinfection solution regarding concentration and ratio of the manufacturer			
3	Place a signboard **"Wet floor"** at the door.			
4	Clean the surface of machine: using dried, cleaned, disinfectant absorbed towel to clean surface of the surgical room when seeing dirt and dust on the wall, surgical light, machine surface, internal furniture			
5	Clean the floor of surgical room: using dried, cleaned, disinfectant absorbed towel to clean the floor. Floor cleaning technique: split up the floor, wipe the zigzag line, the following cleaning line does not coincide with the previous wipe, Replace the cloth for each $10m^2$ area.			
6	Clean up the sanitation equipment, arrange well the equipment. Remove gloves and put into the medical contaminated waste bin and clean hands			

Annex 6. Checklist of surgery room cleaning between two operations

No.	Procedures	Achieved	Not achieve	Remark
1	Hand hygiene, wear personal protective equipment as regulated.			
2	Prepare sanitation equipment, dilute surface cleaning solution and environmental disinfection solution regarding concentration of the manufacturer			
3	Place a signboard **"Wet floor"** at the door.			

4	Handle the blood and fluid stains by dry tissue paper after that pour the recommended disinfectant solution, Cover by the above disinfection absorbed cloth and keep at least 10 mín before continuing normal cleaning procedure.			
5	Collect all dirty fabrics into the fabric containing bag, do not put dirty fabrics mixed with contaminated fabrics			
6	Pour solution, clean inside and outside of the vacuum by disinfection solution or replaced by the new vacuum. Replace by new gloves if continue working.			
7	Clean the surface of equipment and machine by using colored towels as regulated			
8	Move machines, equipment into sides of the room to make space for cleaning the floor			
9	Clean wall, floor and surface of the surgical room at least twice.			
10	Rearrange the surgical desk, machines, equipments in the room tidy, neaty			
11	Use new plastic bag to lining the waste bin			
12	Remove gloves and put into the medical waste bag/bin as regulated, clean and dry hands			

Annex 7. Checklist of surgery room cleaning at the end of the working day

No.	Procedures	Achieved	Not achieve	Remark
1	Hand hygiene, wear personal protective equipment as regulated.			
2	Prepare sanitation equipment, dilute cleaning solution regarding concentration of the manufacturer			
3	Place a signboard **"Wet floor"** at the door.			
4	Handle the blood and fluid stains by dry tissue paper after that pour the recommended disinfectant solution, Cover by the above disinfection absorbed cloth and keep at least 10 mín before continuing normal cleaning procedure.			
5	Collect the waste on the floor by a wet mop into the medical waste bag/bin. Collect all dirty fabrics into the fabric containing bag, do not put dirty fabrics mixed with contaminated fabrics			

6	Pour solution, clean inside and outside of the vacuum by disinfection solution or replaced by the new vacuum. Replace by new gloves if continue working.			
7	Clean the surface of equipment and machine by using colored towels as regulated.			
8	Move machines, equipment into sides of the room to make space for cleaning the floor.			
9	Clean wall, floor and surface of the surgical room at least twice.			
10	Rearrange the surgical desk, machines, equipments in the room tidy, neaty			
11	Use new plastic bag to lining the waste bin			
12	Remove gloves and put into the medical waste bag/bin as regulated, clean and dry hands.			

LESSON TEST

1.1. Case

Case 1. *Patient Nguyen Van Nam, 35 years old, has history of using drug. Mr. Nam hospitalized in a status of tired, anorexia, his skin and eye mucosa were lightly yellow. In addition, patient has persistent cough and mild fever at 38^{0C}. Mr. Nam was hospitalized with the initial diagnosis of hepatitis B. He was prescribed to test CTM, HBV, HCV, lung X-ray. You are the nurse assigned to take care Mr. Nam.*

Question 1. When taking care of the patient, what following precautions would you take and why?

A. Prevention of exposure

B. Standard precaution

C. Prevention of spreading by shot droplets

D. Prevention of air transmission

Question 2. When taking blood for testing, which following personal protective equipment will you select?

A. Cap, medical mask, sterilized gloves

B. Cap, respiration mask, clean gloves

C. Cap, medical mask, clean gloves

D. Medical mask, clean gloves, sharp object container

After getting the test: HbsAg-positive, lung X-ray with image of left upper lung injury. Mr. Nam was diagnosis with hepatitis B and pulmonary tuberculosis. Then, doctor appointed to do sputum smear test and result was BK (++).

Question 3. From the test results and doctor's diagnosis, which following contamination preventive methos will you select when taking care of Mr. Nam?

A. Prevention of exposure by touching and air

B. Standard precaution and air contamination

C. Standard precaution, droplet and air prevention

D. Standard precaution, touching and droplet prevention

Question 4. When taking technical performance for Mr. Nam with the potential of gas creating, blood, fluid shooting, which following personal protective equipment will you select and why?

A. Medical mask

B. Respiratory mask

C. Clean gloves

D. Sterilized gloves

E. Long-sleeve gown

F. Protective glasses

Question 5. What the most important tuberculosis prevention method for patient's family and medical staff should you advice to Mr. Nam?

A. Compliance with medication

B. Changing of respiratory hygiene behavious of the patient

C. Proper classification of medical solid waste

D. Keep the room clean when coughing and sputuming

Case 2. *Recently, the Women's Newspaper has published series of article about non-gloves blood taking or use the same glove for taking bloods of patients. Have look on the photo and video and give your opinion about the following issues:*

Source: Phu Nu Newspaper dated October 27, 2018

Discussion questions:

Question 1. Your opinion about nurses using the same glove for taking bloods of patients.

Question 2. Your opinion about non-gloves wearing when taking blood of patient for the test

Question 3. Which practice recorded in the video are correct and incorrect regarding the current regulations of the MOH ?

Question 4. Guideline on hand hygiene in the health facilities has issued by the Decision No.3916/QĐ-BYT dated 28/8/2017 states that "Gloves are not recommended when carrying out some clean/sterilized cares (injection, blooding, bandage replacement…) if the medical staff himself does not see the possibility of being exposed to the blood/fluids. Do you think this regulation suitable with actual circumstance? Why?

1.2 Questions for standard precaution in patient care knowledge and application assessment

Select the appropriate below phrase to fill in the blank

Question 1. Hospital infection also referred to as medical-related infections, are the infections that occur during hospitalization of patient, and these infections are …(1)…. or… (2)…. upon admission to the hospital. The infections occurred after …(3)…. Hospitalized so called hospital infections.

A. Showed
B. Not present
C. Not during incubation period
D. 24 hours
E. 48 hours

Circle the most correct answer from 2 to 4

Question 2. Airborne transmission occurs due to droplets containing pathogens with dimension of:

A. < 5 µm
B. < 10 µm
C. < 15 µm
D. < 20 µm

Question 3. The following blood and secretions are able to transmit the pathogens, EXCEPT:

A. All blood and its products
B. Sweat
C. The secretions containing visible blood
D. Vaginal fluid
E. Gastric Fluid
F. Semen
G. Cerebrospinal fluid
H. Peritoneal fluid
I. Muscosal membrane
J. Amniotic fluid
K. Pleural fluid
L. Peripheral fluid

Select the right and wrong sentences from 4 to 5

Question 4. Prevention methods of contamination of exposure, droplets and Airborn are so called additional prevention.

A. Correct
B. Incorrect

Question 5. During respiratory disease, patients who have respiratory symptoms need to take application of controlling methods for respiratory and droplet.

A. Correct
B. Incorrect

Circle the most correct answer from Question 6 to 12

Question 6. Select the most suitable practice if you do not have tissue or towel to cover the mouth when coughing

A. Use hand to cover the mouth
B. Cough in the empty place
C. Use your elbow to cover the mouth
D. Stand about 1m away from people

Question 7. Cleaning is the method of:

A. Removing all microorganisms
B. Removing most of bacteria but not all
C. Removing bacteria and spores
D. Removing dirts from equipment

Question 8. Disinfection is the technical method to:

A. Remove dirts from equipment
B. Kill almost bacteria and viruses
C. Kill bacteria
D. Kill bacteria except spores

Question 9. Equipment needs to be sterilized:

A. Equipment touching with intact skin
B. Equipment touching with intact lining
C. Equipment toching with blood and sterilized tissues
D. All are correct

Question 10. Unused equipment, of which package is open, should:

A. Wrap again and reuse
B. Wrap again and redisinfect at low levevl
C. Wrap again and redisinfect at high level
D. Wrap again and sterilize

Question 11. The patient's fabrics are collected and classified into 2 types:

A. White and color fabrics
B. Patient's clothes and bed sheets
C. Normal fabrics and contaminated fabrics
D. Bloody and contaminated fabrics

Question 12. The followings are contaminated waste, EXCEPT:

A. Sharp contaminated waste
B. Non sharp contaminated waste
C. Surgical waste
D. Disposal chemicals

Question 13. fill in detail identifications of 3 medical solid waste groups

A. Contamination waste
B. Non contamination hazard waste
C. Normal waste…….

Question 14. White plastic bag used for containing recyce waste

A. Correct
B. Incorrect

ANSWER LESSON 1

Case 1.

Question 1: B
Question 2: D
Question 3: A
Question 1.4: B, C, E, F
Question 1.5: A, B

Case 2.

Question 1. Violate expertise regulation

Question 2. Is practice at risk

Question 3. Common use gloves for patients,

Question 4. This regulation is not really suitable and need to concider to update the regulations

Part of knowledge asseement of Standard precaution application

Question 1: 1=B, 2=C, 3=48 hours
Question 2. A
Question 3. B
Question 5. B
Question 6. A
Question 7. C
Question 8. B
Question 9. D

Question 10. C

Question 11. D

Question 12. C

Question 13. D

Question 14. C

1.3 Competency based assessment checklist for Application of standard prevention in patient care

No.	Assessment content	Can do independently (2)	Can do with support (1)	Can not do or do wrongly (0)
1	Present the definition, principle and contents of standard precaution			
2	Apply the practical guidance on standard precaution suitable with reality of the hospital (20.76);			
3	Select and use conformity personal protective equipment in the situation of patient care (17.68; 20.75)			
4	Category properly medical solid waste (20.78)			

REFERENCES

1) Centers for Disease Control and Prevention, Healthcare-associated Infections https://www.cdc.gov/hai/data/index.html
2) Ministry of Heal, Guidance on Infection control at health facilities according to the Circular 16/2018/TT-BYT
3) Ministry of Health, Guidance on hospital infection supervision at the health facilities, Decision No. 3916/QĐ-BYT dated 28/8/2017
4) Ministry of Health, Guidance on standard precaution at the health facilities. Decision 3671/QĐ-BYT dated 26/9/2012
5) Ministry of Health, Guidance on hand hygiene at the health facilities. Decision No. 3916/QĐ-BYT dated 28/8/2017
6) Ministry of Health, Guidance on equipment disinfection and sterilization at the health facilities. Decision 3671/QĐ-BYT dated 26/9/2012
7) Ministry of Health, Guidance on handling endoscopic surgical equipment and soft endoscopic tube at the health facilities. Decision No. 3916/QĐ-BYT dated 28/8/2017
8) Ministry of Health, Guidance on surface cleaning at the health facilities. Decision No. 3916/QĐ-BYT dated 28/8/2017
9) Ministry of Health – Ministry of Environment and Resourses, Stipulation on medical waste management. Inteministerial Circular No.58/2015/TTLT-BYT-BTNMT dated 31/12/2015

LESSON 6

PREVENTION OF MEDICAL ADVERSE EVENTS

OBJECTIVES

1. Present the definition, frequency and common medical adverse events
2. Classification of medical adverse events
3. Strictly comply with the regulation and procedure on medical adverse events prevention (Competency 21.2)
4. Voluntary report medical adverse events, and learning lessons from errors (Competency 21.2; 25.3)

CONTENT

1. Definition

There are various terminologies used for a medical adverse event such as: Iatrogenic, Medical Error, Patient Safety, and Medical Adverse Events.

According to Institute Of Medicine-IOM, patient safety is the prevention of harm to patients.

Patient safety program focuses on 3 significant issues including:

(a) prevents errors;

(b) learns from the errors that do occur;

(c) built on a culture of safety that involves health care professionals, organizations, and patients.

According to WHO and IOM: a medical adverse event is an incident that result in harm to the patient harm such as disabling the patient temporarily or permanently, prolonging hospital stay or causing patient death. Such events may be related to health care management other than disease complication itself of the patient. A medical adverse event can be preventable or unpreventable.

2. Frequency and common types of medical adverse event

2.1 Common medical adverse event

- Wrong diagnosis,
- Wrong order, late order
- Prescribing fault
- Equipment error
- Wrong patient

- Wrong surgery (wrong site, wrong methodology)
- Gossypiboma
- Wrong medicine, blood transfusion
- Wrong testing result
- Wrong specimen
- Hospital infection
- Patient falls
- Patient suicides
- Babies switched at birth
- Kidnapping
- Vaccine mis-injection
- Environment (fire, explosion, electronic shock, etc..)
- Hospital charge mistake
- Medical staff violence
- Sexual abuse.

2.2 Frequency of common medical adverse events

Table 1. Frequency of common medical adverse eventss in developed countries [8-13]

Study	Year	Number of patients in study	Number of medical adverse events	(%)
1. US (Harvard Medical Practice Study)	1984	30,195	1,133	3.7
2. US (Utah-Colorado Study)*	1992	14,565	787	5.4
3. Australia (Quality in Australia Health Case Study)**	1992	14,179	1,499	10.6
4. UK (Adverse event in British hospitals)	2000	1,014	119	10.8
5. Canada (The incidence of adverse events among hospital patients in Canada)	2000	3,745	255	7.5
6. Denmark	1998	1,097	176	9.0
7. Netherlands (Adverse Events and potentially preventable deaths in Dutch hospitals)	2004	7,926		5.7

** Applied study method of Australia; ** Applied study method of US.*

Table 2. Hospital infection

Study	Year	Hospital infection (%)
Pham Duc Muc and colleagues. Hospital infection in 11 Central hospitals.	2005	5.8
Nguyen Thanh Ha and colleagues. Hospital infection in 6 Southern hospitals.	2005	5.6
Nguyen Viet Hung. Hospital infection in 36 Northern hospitals.	2006	7.8
Tran Huu Luyen. Incision infection monitoring on 1000 surgical patients in Hue Central Hospital.	2008	4.3
Le The Anh Thu. Monitoring of pneumonia related to mechanical ventilation on 170 patients in Cho Ray hospital.	2011	39.4

Note: Figures in table 2 were published in Journal of Clinical Medicine and Vietnam Journal of Nursing

3. Trend of medical adverse events

More than a decade since Institute of Medicine-IOM and countries in the worlds announced reports on medical adverse events, have they been able to reduce medical adverse events after huge researching effort, financial and resource investment

According to a report of US Office of Inspector General studying 780 random medical records of patients in October 2008, 13,5% of patients experienced medical adverse events (1 out of 7 patients who discharged from hospital experienced adverse event meeting at least 1 criteria of medical adverse event definition); 51% of events were unpreventable; 44% of events were preventable and 5% were undetermined.

An overall study by John T Jame on Lippincott William & Wilkin which used Global Trigger Tool of the Institute for Healthcare Improvement estimated a lower limit of 210.000 death/year due to medical adverse event while a study of IOM in 1999 estimated an annual number of 98.000 death/year resulted from medical adverse events.

A retrospective study of the Netherlands which was carried on 11.883 medical records of 20 hospitals, of which 7,787 of medical records were in 2004 and 3,966 were in 2008, showed an increasing rate of medical adverse events from 4.1% (2004) to 6.2% (2008). Medical adverse events went up among surgical patients representing 50% of all medical adverse eventss19. Medical adverse events were determined by the authors to be sustainable and difficult to change therefore it was necessary to get patients involved in the process of minimizing medical adverse events.

The 9th medical report of Minesota-United State of America in January 2013 recorded an increase of medical adverse events in 2012 compared to previous years. There was a monthly average number of 26,1 events in which 28% of events caused harm to patients and 4% of events resulted in death; Medical adverse events related to wrong surgical procedure and wrong-site surgery slightly increased.

The results of studies proved that the target of no medical adverse events or "medical adverse events = 0" is an impossible target. Since 2000s, advanced nations in America, Europe and Japan have initiated patient safety programs and deployed various solutions to prevent medical adverse events but have not achieved remarkable results.

4. 4. Criteria of medical adverse event identification and classification of medical adverse events

4.1 Criteria of medical adverse event identification

Criteria used in the identification of medical adverse events in US and other countries are:

(1) Medical adverse events in the list of serious adverse events to report under US regulations;

(2) Medical adverse events in the list of adverse events to be denied a high claim by health insurance agencies;

(3) Medical adverse events cause harm to patients ranging from level 1 to level 4: lengthy hospital stay, permanent health damage; emergency intervention and death.

4.2 Classification of medical adverse events

4.2.1 Classification by professional characteristics

World Alliance for Patient Safety classified medical adverse events into 6 categories:

- Wrong patient name
- Insufficient handover to the next shift
- Wrong medicine including prescribing fault, wrong administration, wrong dose, wrong usage.
- Wrong site surgery, wrong patient, wrong procedure.
- Hospital infection
- Patient falls during treatment period at medical facilities.

4.2.2 Classification by active errors and latent adverse events

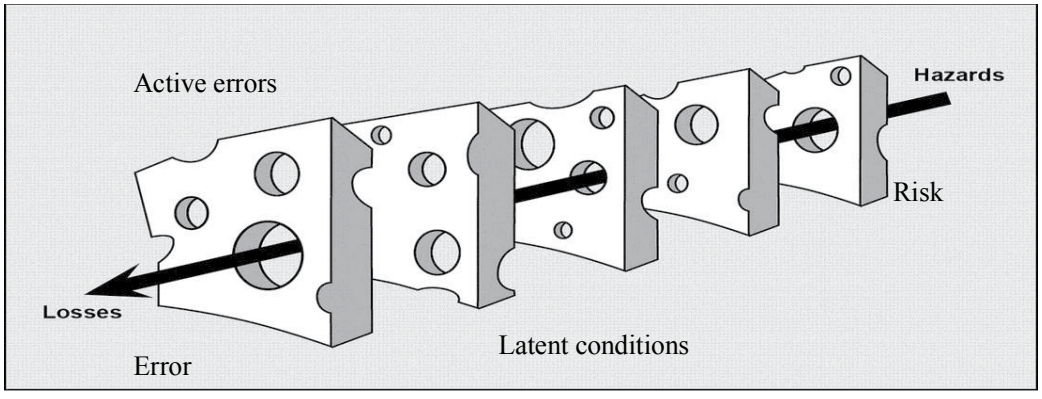


Diagram 1. Layers of defense of medical adverse event prevention system

Source: Reason J. Carthey, Diagnosing vulnerable system syndrome

In health care sector, professional processes and activities of doctors such as examination, diagnosis, prescription, procedure intervention and other indirect administrative procedures possibly cause risks directly and indirectly to patients. Therefore, all working procedures must be designed to enable the entire system capability to detect and prevent medical adverse events.

Analysis of medical adverse events related factors.

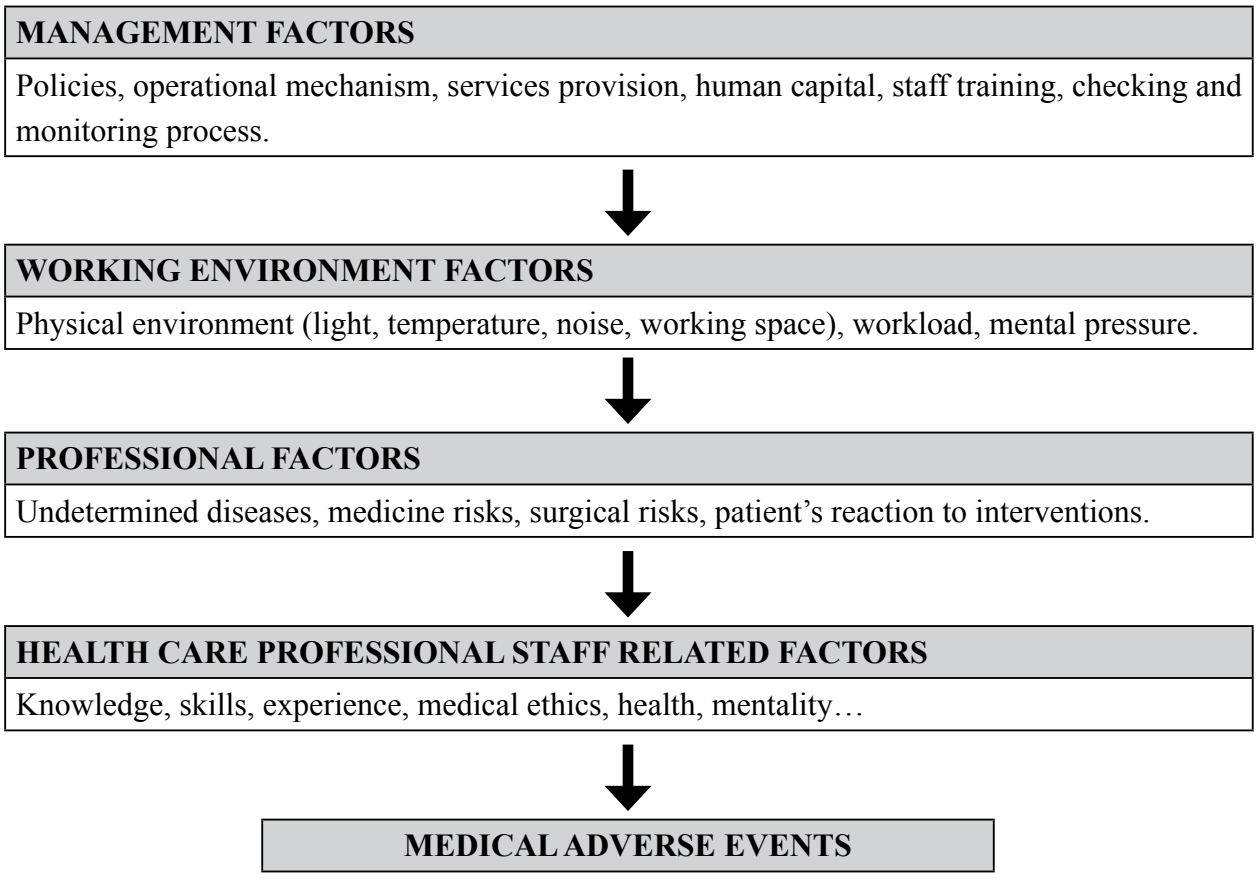


Diagram 2: Connection between latent factors and active errors

(Source: Continuous training material of patient safety, Medical Services Administration, Ministry of Health – 2014)

Errors caused by health care professionals or active errors relate directly to doctors and nurses who are on the front line interacting directly with patients. When a medical adverse event occurs, health care professionals (doctor, nurse, midwife…) often have to take accountability for the error. In fact, many active errors are caused by system. 70% of medical adverse events are latent factors and only 30% of medical adverse events are active one. Individual accountability will lead to truth hiding culture and influences long term consequences.

Latent factors related to a medical adverse event likely include: inappropriate policies, non-patient centered professional regulations, lack of human resources, over workload, lack of patient serving devices, self-management mechanism, etc. Even though, these factors are hardly taken into consideration when analyzing causes of a medical adverse event. Thus, if we only focus on individual accountability, original causes of the event are not settled yet and a similar medical adverse event possibly still happens.

Researchers introduced a Vulnerable System Syndrome which consists of 3 main symptoms: (1) Individual accountability (doctor, nurse, midwife…); (2) Negation of the existence of systematic weakness; (3) Profit pursuit leads to abuse of professional orders, forgetting of patient-centered goal (see diagram 1).

4.2.3 Classification of relevant factors

a. Factors of health care professionals

Unintentional errors such as: (1) Separate task allocation among health care professionals such as: one staff in charge of drug dosage, one injects; one implements order; (2) Late medical recording after examining and nursing the patient, etc; (3) Forget taking testing specimens, forget hand-overing to the next shift, late medication use, verbal medication instruction without recording, etc..; (4) Physical and mental health of health care professionals…; (5) Knowledge and experience of health care professionals.

Intentional errors: (1) Incompliance with professional regulations and procedures (such as hygiene regulations.); (2) Violation of professional ethics, patient centered care is not put on the first leading to abuse of drug and advanced technology or usage of low quality medical devices for patients.

b. Professional factors

There is a high level of probability and uncertainty in medical science. Patients in medical facilities undergo many surgical interventions, surgery and inhale drugs and chemicals into their body which possibly cause reactions leading to force majeure risks. So it is important to understand that not all of medical adverse events are caused by poor accountability and ethics of health care professionals.

Limitations of medical science. Medical achievements have helped to detect diseases at early stage and many people with terminal diseases have been successfully treated. However, in some cases, limitations of medical science cause a serious errors. Such as a medical adverse event in Taiwan in 2012, where HIV-infected organs were transplanted into 5 other patients, this medical adverse event happened due to lack of capability to identify the HIV-infected donor at the screening stage.

Examination process is complicated with participation of many individuals, departments while internal connection is impaired and incomplete in term of information.

c. Health care working environment factor

Health care working environment has many pressures due to overload, working time (health care professionals often have to work at night) together with noisy and narrow working place which requires health care professionals to work with very high intensity and cope with stressful mentality pressure.

d. Policy and management factor

- Some medical policies and regulations need to be revised to remove negative impacts on patient safety namely: regulation on administering drugs for 2-3days period; regulation on

registering initial medical facility for medical examination and treatment causing difficulties for patients to transfer to central medical facilities; regulation on paying hospital charges by service item leading to abuse of drug, test, high technology, etc.

- Hospital autonomy mechanism also carries potential implications that need to be controlled such as: reduction in initial costs and number of nursing staffs; decrease in usage of medical devices; requirement for doctors to consider payment capacity of patients before prescribing or ordering test, etc.
- Medical examination and treatment are not well-organized such as: extended work shift (24h/day) while on-duty health care professionals on weekends, public holidays have not fully implemented the principle: hospital works 24h/day and 7days/week.

4.2.4 Classification of Medication Errors by level of harm

no error	A	events that have the capacity to cause error
Error with no harm	B	Error that did not reach the patient
	C	Error that reached the patient but did not cause patient harm
	D	Error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to preclude harm
error with harm or death	E	Error may have contributed to or resulted in temporary harm to the patient and required intervention
	F	Error may have contributed to or resulted in temporary harm to the patient requiring initial or prolonged hospitalization.
	G	Error occurred may have contributed to or resulted in permanent patient harm
	H	Error required intervention necessary to sustain life
	I	Error may have contributed to or resulted in the Patient's death.

Source: NCC MERP Index, National Coordinating Council for Medication Error Reporting and Prevention , June 12,2001..

5. Principles of medical adverse event prevention

- Recognize and effectively prepare for medical adverse event
- Do not simplify, combine or shorten professional process
- Maintain renewal process
- Respect different professional opinions regardless of professional title
- Pay attention to all aspects of hospital operation.

6. Master solutions

1) Implement 6 patient safety goals of Joint Commission International (JCI)

2) Build patient safety instructions, regulations and processes
3) Deploy voluntary and compulsory medical adverse events reporting system
4) Implement professional insurance
5) Improve working environment
6) Enhance works of monitoring, evaluating, training and communicating on medical adverse events.
7) Renew culture of patient safety

7. Specific solutions

7.1 Implement 6 patient safety goals of JCI

Goal 1. Identify patients correctly

Solutions:

Regulations on patient identification timing

- Before transferring patients to surgery department; pre-anesthesia and before slitting skin
- Before providing treatments and procedures: bandage replacement, medical thread cutting, sonde placement and withdrawal…
- Before administering medications
- Before taking blood and other specimens for clinical testing
- Before blood and blood products transfusion.

Regulations on using patient identifiers

- According to WHO, patients should be identified using two patient identifiers such as full name, medical record number. In Vietnam, the author advises to use at least 3 identifiers including full name, date of birth and medical record number.
- Information of patient identifiers must be recorded consistently in all professional records (medical record, treatment form, nursing form, testing order, testing specimens label, medication book, etc) and patient identifying bracelet.
- For testing and X-ray department: it is required to identify and record sufficiently patient identifiers before taking specimens for testing, x-ray or administering drugs and blood products. Labelling testing specimens must be done at the witness of patients.

Regulations on patient identifier collection

- To identify patients correctly means identifying correctly the patients themselves and all relevant information such as medical record, prescription, testing order, blood, blood products, medications, testing specimens, etc.
- It is recommended to ask open questions when identifying patients and not to affirm patient's name.

- Health care professionals must verify patient identifiers by comparing information provided by patients and their families with information in medical record or patient identifying bracelet. In case, the patient can't speak or is in unconscious condition or is unable to provide information correctly, it is necessary to cross check with recorded information on medical record and patient identifying bracelet.
- If the patient is in a coma, their relatives should provide patient identifiers. If the patient is unconscious and is carried to the hospital by police or emergency service without patient identifiers, hospital admission number or emergency number will be recorded in patient profile.

Goal 2. Improve effective communication

Solutions:

- Verbal order is not encouraged. In case of emergency where verbal order is needed, the individual who gives the order and the receiver must comply following instructions: (1) The receiver writes down order or reads back so that the order giver can listen to and confirm verbally that the order is understood correctly. This requirement is applicable to all medical orders by verbal way not only medication order; (2) When receiving abnormal testing result, the receiver verifies testing result by reading back; (3) The order giver confirms that the order is understood correctly and write down the verbal order in medical record.
- Standardize abbreviation list: (1) the hospital reviews abbreviation list with the participation of doctors for consistent application to all order givers. (2) Print out list of abbreviation and place in proper position so that everyone can see whenever needed or enclose abbreviation list to treatment form or nursing form.
- Improve cooperation between clinical department and testing department: (1) professionals of testing department will inform abnormal testing results to professionals of clinical department on timely basis; (2) The hospital will issue regulations on receipt time of testing results for the purpose of timely diagnosis and treatment.

Goal 3. Improve the safety of high-alert medication

Common types of adverse drug events

- Wrong patient
- Wrong medication
- Wrong dosage
- Wrong type of drugs
- Wrong route
- Wrong frequency
- Wrong timing or interval
- Wrong drug preparation
- Wrong technique of drug taking
- Prescribing fault for the patient with allergy history.

Adverse drug events preventive solutions

- Provide sufficient and correct information of the patient.
- Provide sufficient information of medications for doctor and nurse
- Ensure effective communication between doctor, pharmacist and nurse
- Label drug and container in right manner.
- Store drugs in a place that can easily be seen, reached and found.
- Store drugs of similar name and package in a separate place.
- Provide drug usage supporting equipment (infusion pump,..)
- Ensure working environment for health care professionals (light, noise and shift)
- Organize training course on drug and drug usage for health care professionals.
- Advise the patient on drug information and encourage the patient to finish drug order.
- Develop medication risk management process.

Remarks for nursing staffs

- Check drugs (drug name, dosage, content, frequency/day, timing, interval and route). Check expiry date and quality of drug via its color, odor, integrity of drug and container.
- Instruct the patient to follow treatment procedure such as: impacts and drug usage process and inform treating doctor if the patient denies treatment.
- Check history of drug allergy
- Implement the "five-right" of drug usage
- Make the patient aware of drugs
- Observe drug usage of the patient

Table 3: Example of confused drug name

Group	Similarities and differences	Example
Look-alike and sound-alike	Same manufacturer, same ingredients, same form, different content, different package	**DD Glucose 5%** **DD Glucose 10%**
	Same manufacturer, same ingredients, same form, different content	**Crestor 5mg** (Rosuvastatin) **Crestor 10mg** (Rosuvastatin)
	Same manufacturer, same form, different ingredients	**INSUNOVA - R** (Insulin mixture) **INSUNOVA - 30/70** (Insulin mixture)
	Same manufacturer, same ingredients, different form, different content	**CELLCEPT 250mg** (Mycophenolat) **CELLCEPT 500mg** (Mycophenolat)

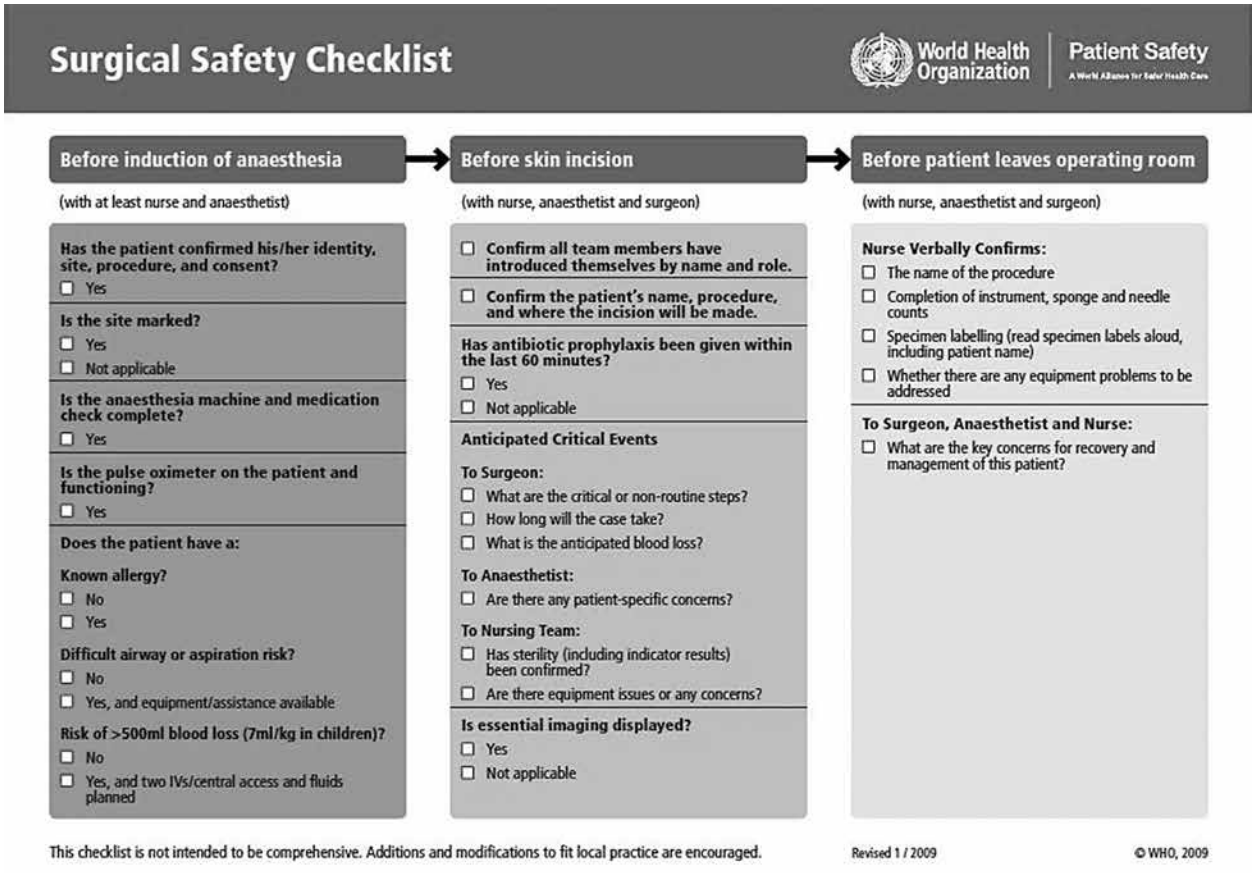
Look-alike	Different ingredients	**Gentamicin 80mg/2ml** (Gentamicin) **Lidocain 40mg/2ml** (Lidocaine)
	Same manufacture, different ingredients	**Panangin 400mg + 452mg** (Magnesi aspartat + Kali aspartate) **DIAPHYLLIN Venosum 240mg** (Aminophylin)
	Same ingredients, different content	**Augmentin 250/31.25** (Amoxicilin + acid clavulanic) **Augdibil 500/62.5** (Amoxicilin + acid clavulanic)
Same name but different content or form	Different content, different form	**Morphin 10mg/ml** (Morphin) **Morphin 30mg** (Morphin)
		Voltaren injection 75mg/3ml (Diclofenac) **Voltaren tablet 75mg** (Diclofenac)
Sound-alike	Same ingredients, different content	**Fen**tanyl 0,5mg - Rotexmedica **Fen**ilham-HAMELN 50MCG/ML
	Different ingredient	**Partamol** (Paracetamol) **Paratramol** (Paracetamol + Tramadol)
	Same manufacturer, different ingredients	**Nol**vadex (Tamoxifen citrate) **Zol**adex (Goserelin)
	Same ingredients, different manufacturer	**Sevorane** (Sevoflurane) **Sevoflurane** (Sevoflurane)
	Same ingredients, different content	**Cisplatin** Bidiphar 10mg/20ml (Cisplatin) DBL **Cisplatin** Injection 50mg/50ml (Cisplatin)

Source: ISMP's List of Confused Drug Names

Goal 4. Ensure safe surgery

Solutions:

a) Implement surgical safety checklist



Surgical Safety Checklist

World Health Organization | Patient Safety

Before induction of anaesthesia (with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision (with nurse, anaesthetist and surgeon)
- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room (with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

Source: https://www.who.int/patientsafety/safesurgery/checklist/en/

b) Implement ten goals for safe surgery, intervention procedure by WHO:

- Operate on the correct patient and correct site
- Use appropriate methods to prevent harm from administration of anaesthetics while protecting the patient from pain.
- Recognize and effectively prepare for life threatening loss of airway or respiratory function
- Recognize and effectively prepare for risk of blood loss.
- Avoid inducing allergic drugs or drug products for the patient with drug allergy history.
- Consistently use methods known to minimize the risk for surgical site infection.
- Prevent inadvertent retention of instruments and sponges in surgical wounds
- Secure and accurately identify all surgical specimens.
- Effectively communicate and exchange critical information with surgeon for the safe conduct of the operation.
- Hospitals and public health care system will establish routine surveillance of surgical capacity, volume and results.

Goal 5. Reduce the risk of health care-associated infections

Solutions:

a) Perform infection control standard precautions

- Hand hygiene
- Use personal protective equipment
- Respiratory hygiene and cough etiquette
- Patient arrangement
- Safe injection and prevention of needle stick injuries
- Environmental cleaning
- Medical equipment
- Linen laundering
- Waste disposal

b) Perform infection control additional precautions

- Precautions of infection by droplet
- Precautions of infection by airborne

Goal 6. Reduce the risk of patient harm resulting from falls

Solution:

- Place bed in lowest position
- Bed with rails
- Un-slippery floor
- Appropriate lighting for patient room
- Bathroom and toilet door with handles
- Risk assessment of falls
- FALL RISK medical bracelet
- Paste fall risk alert card in patient room, patient bed, etc
- Inform patients at risk for falling to the next shift
- Arrange patient room appropriately to avoid fall risk
- Arrange all items in patient room within patient's reach.
- Install call bell within reach
- Avoid opening window to lower risk
- Educate the patient and their family about risk of falls.

7.2 Install medical adverse event reporting system

Goals

- Set up database of medical adverse events

- Lessons learnt from medical adverse events
- Find out solutions to reduce medical adverse events

General regulations

- Medical adverse event reporting is applied at all clinical, subclinical and specialized departments.
- All health care professionals involved in a serious medical adverse event will compulsory report the error using standard form of the hospital (Appendix 1. List of serious medical adverse events. Appendix 2. Medical adverse event mandatory reporting form)
- All health care professionals directly involved or witnessed a medical adverse event which nearly happened or happened but caused no harm to the patient are encouraged to report the adverse event voluntarily (Appendix 3: Medical adverse event voluntary reporting form)
- Information on medical adverse event reporting system will be used for lessons learned not for the assessment of individual accountability related to the adverse event.
- All information in the reporting form should be honest, objective and timely.

Installment rules of medical adverse event reporting system

- All health care professionals are encouraged to voluntarily report medical adverse events for the purpose of recognizing types and causes of medical adverse events as well as error precautions.
- Medical adverse event reporting system will be managed confidentially and not for the assessment of individual accountability.
- Reporting medical adverse events is the obligation of all health care professionals working in medical facilities.
- Voluntary reporters of medical adverse events will be recognized and secured safety.

7.3. Improve working environment of health care professionals

- Health care working environment of doctors and nurses carries many risks of latent factors such as: (1) Patient overload; (2) shortage of professional resources resulting in quick examination and contact with patients; (3) lack of medical equipment for patient treatment; (4) mental pressure due to inadequate legislation to protect health care professionals.
- Nursing staffs and midwives play significant roles in reducing medical errors because: (1) Services provided by nursing staffs and midwives are considered by WHO as one of pillars of health care provision system (highest staffing number, patient contact and largest number of services provided); (2) Most of doctor's orders are carried out by nursing staffs; (3) Nursing works are required before and after treatment and ensure the safety of treatment process.

7.4. Implement professional insurance as per Law on Medical Examination and Treatment

- Experiences from recent issues in health care sector are very complicated for both health care professionals and providers requiring attention of the whole system as well as opinion of public media to prevent negative social impacts.
- It is required to implement professional insurance as soon as possible to directly reduce pressure for health care staffs and providers. Professional insurance system will enhance patient trust

and lower pressure for health care staffs when contacting with patients and their families. In the event of medical adverse events, insurance agency will work with patients and their families on behalf of health care professionals and providers.

7.5 Patient safety culture

- Awareness and opinion of management level about patient safety culture will decisively contribute to the success of patient safety program. Firstly, management level needs to pay attention to fix latent factors. In fact, medical adverse events now have been recognized as a public issue which requires improvement of the whole health care system as well as relevant sectors in addition to the improvement health care professionals. Assessment of individual accountability will lead to truth hiding culture which has been proved un-effective for long term results.
- Taking initiative in assessing risks and reviewing information in official and unofficial medical adverse event reports will enable necessary interventions.
- Renewing checking and assessment culture: Health care facilities will actively apply patient safety culture and implement performance self-checking based on standard quality protocols; eliminate "achievement disease" and conduct real assessment. It is encouraged to set up and operate independent assessment agencies in compliance with Law on Medical Examination and Treatment.

LESSON TEST

Case study

1. Case study 1

Description: *A patient named Nam was staying at Pediatrics Department, last Friday, treating doctor prescribed antibiotics for Nam for 3 days from Saturday to next Monday. On Saturday, his mother informed the nurse that Nam had history of drug allergy and asked not to inject antibiotics. Though this information was recorded in his medical record but was not handovered to the next shift on Sunday so right after being injected antibiotics as prescribed, Nam was transferred to intensive care department for Emergency treatment of anaphylactic reactions. After his situation was getting worse, his family went back to Pediatrics Department and assaulted the health care professionals.*

Question 1. List down active errors and latent factors in the medical adverse event mentioned above.

Active errors:

.....

.....

.....

Latent factors:

.....

.....

Question 2. Based on what you learnt, classify the above medical adverse events by following basis:

By professional knowledge:

.....

.....

.....

By level of harm to the patient:

.....

.....

.....

By active and latent factors:

.....

.....

.....

Question 3. If you were a member of Disciplinary Council, who would be assessed for individual accountability in this medical adverse event for professional violation.

.....

.....

Question 4. What is lesson learnt from the medical adverse event?

.....

.....

.....

2. Case study 2

At 7h30 in the morning of 20 July 2013, Nurse A at local district health center performed doctor's order to inject hepatitis B vaccine for 3 newborns. Due to a power outage, Nurse A turned on his cell phone flashlight and opened the fridge and wrongly took 3 bottles of Esmeron – a drug for muscle relaxant and injected for 3 babies. Previously, the chief nurse of clinical department had agreed for an anesthesiologist from operating department to store remaining bottles of Esmeron from an operation in the fridge of hepatitis B vaccine.

Question 1. List down at list 5 adverse events in managing and using drug from this case study.

1 .....

2 .....

3 .....

4 .....

5 .....

After being mistakenly injected Esmeron muscle relaxants, 3 babies got cyanotic, hiccuped and were taken to the emergency room. All 3 children died after 30 minutes of emergency.

Question 2. Analyze the causes of this serious wrong drug leading to the death of 3 children? What do you learn from this adverse event?

2.1 Why did the 3 children die at the same time? .....

.....

2.2 Lessons learnt? .....

.....

After the error, Nurse A retrieved and discarded 3 used Esmeron vials then he secretly took 3 new hepatitis B vaccine bottles and absorbed the content and left vials in the waste container of injection trolley. Additionally, Nurse A has not yet attended training course on the expanded program on immunization and did not have vaccination certificate but he still vaccinated the children.

Question 3. What nursing ethics did Nurse A violate?

.....

Question 4: What clauses of Law of medical examination and treatment did Nurse A violate?

.....

ANSWERS

Case study 1

Question 1.

Students list down at least 3 out of 4 active errors and 2 latent factors from the medical adverse event.

Active errors: *(1) The treating doctor did not check drug allergy history of the patient; (2) Nursing staff on Saturday did not handover sufficiently to on-duty nursing staff on Sunday; (3) Nursing staff on Sunday did not check drug allergy history before injection; (4) On-duty doctor on Saturday did not timely order to stop antibiotics injection for the patient.*

Latent factors: (1) Medical record and injection book are not consistent "Information provided by the patient's family was recorded in medical record while nursing staff performed injection based on injection book"; (2) The hospital has not applied drug allergy bracelet for patients yet.

Answers to question 2.

a) Classification by professional knowledge: the cause of the adverse event is incomplete handover to the next shift.

b) Classification by level of harm to the patient: serious level

c) Classification by active and latent errors: including both active errors and latent factors.

Answers to question 3.

Students are required to recognize not only individuals who directly involved in the adverse event but also individuals managing department/hospital due to latent factors.

Not only treating doctor, on-duty doctor and nurse on Saturday, on-duty nurse on Sunday, but also the leader of the hospital/department/chief nurse are considered responsibility due to latent factor.

Answers to question 4. Students list down at least 3 out of 4 following lessons:

a. Know about drug allergy history of patients before injecting antibiotics

b. Timely update into medical record and injection book to alert allergy situation of the patient.

c. Timely communicate among relevant health care professionals

d. Instruct the patient's family to use drug for the patient.

Case study 2.

Answers to question 1.

1. Lack of regulations on managing vaccine fridge
2. Store hepatitis B vaccine at the same place with anesthetic drugs
3. Lack of handover between drug managing person and nurse A
4. Nurse A did not check drug name before injection
5. Combine the drug preparation for 3 syringes at the same time

Answer to question 2.1:

The death of 3 babies at the same time was because nurse A combined the drug preparation of Esmeron for 3 syringes at the same time then injected them constantly.

Answer to question 2. Lessons learnt are:

- Do not shorten, combine, simplify professional procedures
- Strictly follow the 5 rights when using drug for the patient
- Double check when delivering and receiving drug.

Answer to question 3:

List down 1 out of 2 following contents:

- Article 1 and 2 Clause 3
- Article 1 and 2 Clause 6

Answer to question 4:

List down 1 out of 2 following contents:

- Clause 3 (article 3 and 5)
- Clause 6 (article 3)

- Clause 37 (article 1 and 2)
- Clause 40

REFERENCES

1. Ministry of Health. Circular # 19 /2013/TT-BYT instructing the implementation of quality management in medical examination and treatment in hospital.
2. Medical Services Administration, Ministry of Health (2014). Continuous training material of Patient safety.
3. Nguyen Thanh Ha (2005), *"Hospital infection control in 6 Southern hospitals"*.
4. Nguyen Viet Hùng (2005). *"Situation of hospital infection in Northern hospitals"*.
5. Tran Huu Luyen. *"Hospital infection on surgical patients"*.
6. Pham Duc Muc and colleagues (2005). *"Hospital infection in hospitals under Ministry of Health in 2005"*.
7. Le Anh Thu. *"Hospital infections on patients with mechanical ventilation"*.
8. Pamela H. Mitchell. Defining Patient Safety and Quality Care
9. Results of Harvard Medical Practice Study II. New England Journal of Medicine, 1991,323:377.384.
10. Wilson, R.M., Runciman W.B., Gibberd R.w., Newby,L., & Hamilton, J.D. (1995). The quality in Australia health care Study. The medical Journal of Australia,163 (9), 458-471.
11. Vincent, C., Neale, G., & Woloshynowych,M. (2001). An adverse events in British hyospitals: Preliminary retrospective record review. British Medical Journal, 322 (7285), 517-519.
12. Baker, G.R., Norton P.G., Flintoft, W., Blais, R., Cox,J., et al. (2004). The Canadian adverse event study: The incident of adverse events among hospital patient in Canada, CMA,170 (11), 1678-1686
13. Mette Lundgaard, Louise Raboel, Elizabeth Broegger Jensen. Danish Society for patient Safety. The Danish patient experience: the Act on patient safety in the Danish health care system.
14. M Zegers, M C de Bruijne, C Wagner. Adverse events and potentially preventable deaths in Dutch hospitals. Results of retrospective patient record review study.
15. Davis P, Lay-Yee R, Briant R, Ali W, Scott A, Schug S. Adverse events in New Zealand public hospitals II: preventability and clinical context.
16. Daniel R. Levinson. Adverse events in hospitals: National incident among medical beneficiaries. Office of Investigator General.
17. Trends in adverse events over time: why are we not improving Adverse health events in Minnesota. Ninth Annual Report/January 2013.
18. WHO Multi-professional Patient Safety Curriculum Guide (2011)https://www.who.int/patientsafety/education/mp_curriculum_guide/en/ ; and http://origin.wpro.who.int/health_services/documents/wpro_patient_safety_curriculum_guide/en/
19. Circular No.43/2018/TT-BYT dated 26 December 2018 providing guidelines for prevention of adverse events in health facilities.

CHAPTER 3

BASIC NURSING TECHNIQUE AND PATIENT CARE (PART 1)

LESSON 7

PAIN RELIEF CARE

OBJECTIVES

1. explain the factors influenced to the pain. (competency: 1.1; 1.2, 3.1, 4.1, 4.3).
2. Be able to use the pain assessment tool to assess patients. (competency: 2.1; 2.4; 3.1, 4.1; 21.9).
3. Be able to perform pain control measures during patient care provision and to instruct patient/ patient family to take part in pain control. (competency 2.2; 2.3; 3.2; 4.2, 4.3; 4.4; 4.5;4.6; 4.7;5.2; 5.3; 6;7.1,7.2;8.2;10.1, 10.3, 11, 12.2; 13.1;15.1;16.3; 18.3; 23.6, 24.1; 24.4; 25.1; 25.2).

CONTENTS

Introduction

Pain is the most common sign in a number of diseases and it is also one of reasons that patient has to visit hospital for examination and treatment. According to Bonica J.J. (1978), 58% cancer patients have major sign of pain. Pain is seen in every age from children to elder. There are 5% - 15% of children and adolescences; it is more common in elderly accounting for nearly 30%; and the rate of patients who have chronic pain and have to use pain relief drug like morphine accounts 20% – 30% (Dawn A. M., 2005). Pain also becomes an obsession of postoperative patients. The study of Nguyen Thi Kim Thu (2010) showed that 100% patients have pain after abdominal surgery... Pain relief is to help patient to have better quality of life. This is also a responsibility of healthcare workers including nursing staff.

Pain is a feeling which gives signal of a physical harm and it seems to be subjective and psychological. Pain thresthold depends on each patient, only patient is able to identify his/ her painful level. There are several factors that affect to the pain thresthold such as age, occupation, awareness, personal experiences; other factors such as: culture, personal character, ethnic group, emotion, physical and health conditions also affect to pain level. However, patients are not responsible for persuading the nurse that they are painful. The nurses should take the responsibility for listening when patient have pain.

In order to pain control, nurses should collaborate with patients and patient family to identify the causes, characteristics and influenced factors of the pain. Base on that, effective pain control intervention plan will be developed. There are many pain control methods including drug or non drug usage and exclusion of influenced factors.

1. Pain definition, cause and physiology of pain

1.1. Pain definition

Pain is an unpleasant subjective experience associated with actual or potential tissue damage, or described in terms of such damage. (International Association for the Study of Pain (1980 - IASP)

Therefore, pain associates to physical aspect and it is a sensory feeling that gives signal of tissue damage. Pain is also a psychological subjective aspect, including imagined pain or unknown cause pain.

1.2. Pain classification

1.2.1. Mechanical classification

- Nociceptive pain: is a pain due to stimulus of nociceptive tips of intact or damaged nerves that sensitive with central or peripheral pain relief drugs and nerve block methods. This is a common mechanism in acute pain (trauma, infection, degeneration etc) or in the diseases having persistent damages (cancer, rheumatologic diseases etc).
- Neuropathic pain: is a pain caused by damage of central or peripheral nerves. It is often described as burring, shooting pain caused by damaged nerves.
- Pain due to psychological factor: it is an obsession feeling rather than physical pain. Patients describe unclearly or they always change description with atypical symptoms. Pain disappears only when patients focus on a certain issue. Pain relief drug is not effective with this kind of pain. It is common seen in the cases such as hysteria disease, distress, auto - suggestion of disease, schizophrenia etc.

1.2.2. Classification by time and painful characteristics

- Acute pain is a newly appeared pain having strong intensity as a useful alert symptom. Acute pain helps to identify the symptom of pain having tissue damage or not. Acute pain is commonly seen after surgery, trauma, burn and obstetrics.
- Chronic pain is a persistent manifestation that relapse several times. It destroys the body in physical, psychological and social aspects causing worry for patient and affecting to quality of life. Chronic pain includes back pain, neck pain, muscle pain or pain due to neurological cause, pain due to scar etc.
- Cancer pain may be acute or chronic pain due to invasion and pressure of cancer cells to normal tissues causing tissue damage and stimulus of sensory perception of the body and organs. Cancer pain is described as throbbing, sharp, aching; or neuropathic pain (central or peripheral pain): burning, shooting, tingling etc.

1.3. Cause of pain

1.3.1. Damage of tissues: due to infection, inflammation reaction, tumor, ischemia, trauma, medical intervention procedure, toxicity of drug etc.

1.3.2. Potential tissue damage: due to the diseases having no tissue damage but still cause pain.

1.3.3. Psychological – social factors

- Mental disorders such as depression, anxiety disorder may cause pain or it make more severe of physical pain. Vise versa, physical pain also causes mental disorders such as depression or anxiety disorder.
- Other psychological syndromes also cause chronic pain such as prolonged psychological pain cause real physical pain or post trauma psychological disorder, delusion or pain sensory disorder due to metal illness. Psychological syndromes also cause pain or make pain more severe.
- In some cases, pain relief treatment will not have good result if basic causes of depression, anxiety disorder or other psychological issues are not diagnosed and treated.

2. Influenced factors to pain sensory

2.1. Physical factors

- Age: pain sensation may be seen at every age. According to a survey on the rate of chronic pain in Denmark: the rate of chronic pain increases with the older age of – approximate 10% in 16 – 24 years old, more than 10% in 25 – 44 years old, more than 20% in 45 – 66 years old and it reaches nearly 30% from 67 years old or older (Eriksen J., 2003)
- Physical condition: the rate of muscle and bone pain increases in obesity patients. According to Dawn A. M. (2005), when obesity patients lost weight (approximate 12% of body weight), who have knee pain, the rate of pain decrease 30%. The weight loss in obesity women also make the rate of knee join pain and foot pain decreased.
- Gender: Roger B. F. (2000) recognized that women often have more severe chronic pain than man. They are also more sensitive with toxic in the laboratory than man. Some reasons are given to explain this difference: socio psychological factors such as believe in the role of man, affection of generations in the family, female hormone etc.

2.2. Social factor

- Attention: pain sensation will be increased when patients pay too much attention to it and it will be decreased if less attention is paid (Carroll and Seers, 1999). Therefore, when providing pain relief care, nurses should change the patient's attention by giving guidance for relax, massage or point acupuncture, etc.
- Experiences of patient: Each patient has his/ her own individual experiences in pain sensation. For example, if a patient has chronic pain that repeat many times he or she may gain experience for pain prevention effectively.
- The support of family and surrounding people: the appearance of family members helps patient feel less pain and anxiety, especially children.

2.3. Spiritual factor: is understood in wider meaning about religion, "Why does God force me like this?" "Why do I have pain?"...

Some other factors also make pain sensation increase such as loss of control, dependence on family or to be burden of the family therefore nurses should consider to take care this aspect, especially for the chronic cases.

2.4. Psychological factor:

- Anxiety: Anxiety often causes increase of pain and pain is also a cause of anxiety. Therefore, it is necessary to combine pain control and reassure patient using drug or psychological therapy.
- Reaction of patient: People, who are sensitive often, feel excessively the events in their life therefore their pain threshold is low. Nurses should have experience about patient's reaction to make suitable interventional plan: support patient family, exercise to help patient relief pain.

3. Pain assessment

3.1. Ask patients about pain: Contents of questions and assessment

- Age, gender, general condition
- The causes promote pain or relates to pain
- Pain position and special position of pain, time of pain.
- Radiating pain: local or radiated pain? Radiating pain to which area?
- Pain characteristics: aching pain, soreness, stabbing, tearing pain etc.
- Type and time of pain: persistent aching pain, when does the pain increase? Is it improved when relaxing or not? Does patient have sleep disorder?
- Pain intensify
- Underlying symptoms: numbness, weak, paresthesia, limitation of movement.
- Progress of pain: increased, decreased, not increased but not decreased.
- The undergone treatment: medication, physiotherapy, operation: how is effect of treatment?

One simple method to avoid missing information is to use tips to memory the following OPQRST letters:

O1: Onset (Onset and progression over the time). How long has the pain been? How to start? Slowly or suddenly? Progression and change throughout the day.

O2: Origin. Pain due to pathology or injury? If due to injury, carefully exploit the mechanism causing the injury

P1: Position. Pain in one place or many places. Pain on the spot or spread from somewhere else. Shallow or deep

P2: Pattern, Continuous or periodical pain? Active or at rest pain? Pain when moving? Actions caused pain increase or decrease? Pain has changed? More serious, the same or less?

Q1: Quality. Features of pain: Pain such as pressure, burning, numbness, cutting?

Q2: Quantity (pain intensity)

R: Radiation. Radiate to where? What cause radiation pain?

S: Signs & Symptoms. Morning stiffness, crackle sound in the joint, limitation of movement?

T: Treatment. Current and past treatments as well as its result, including medications and other methods. It should also assess the patient's reaction and expectation of the treatment.

3.2. Pain assessment tool:

Identifying pain intensity is an essential component of initial pain assessment and follow-up monitoring. There are many useful pain scales that help measure pain intensity

3.2.1. Pain assessment scale:

Commonly used scales include Verbal Rating Scale (VRS), Numeric Rating Scale (NRS), Visual Analog Scale (VAS) and Image Rating Scale

- Verbal Rating Scale is the simplest measure, it contains the least information. This Scale may be less reliable than the others because used adjectives might not have same meanings to the different people.
- Numeric Rating Scale: This Scale is simple to use in clinical context and being the most commonly used measure to assess the pain. Patient indicates their pain intensity on a scale from 0 to 10: 0 indicates no pain and 10 indicates most imaginable painfulness. This scale is more accurate than the Verbal Rating Scale. Numeric Rating Scale is easier to use for people who are disabled due to illness or who have low education. Its downside is missing some information, because many people can distinguish more than 10 levels of pain. Another downside, it is a hierarchical scale rather than a true distance scale, so there is no fixed relationship between the points, even if they are divided equally spaced. This means that point 4 pain is not twice as severe as point 2.
- Visual Analog Scale: is another valuable scale to measure pain intensity and rather similar to the Numeric Rating Scale. It is a 100 mm long line with two heads: one end is no pain and the other is unbearable pain. Patient will indicate on the line at the point that best describes their pain intensity. The length of the line until patient's mark will be measured and recorded by mm. The advantage of this scale is not limit by 10 separated levels of pain intensity, it allows to measure more details. The main disadvantage is that it is sometimes hard to understand for some patients. If it is applied correctly, VAS is a reliable scale, means its ends are margins and the double score reflects exactly double pain level.
- Image Rating Scale (Facial Scale): describe different faces in pain. This scale sometimes used for kid patients, low perception patients or language barrier

3.2.2. General pain assessment tools

- The McGill Pain Questionnaire (MPQ) was developed by Melzack from assessing three separated components of a patient's pain experience (sensory, affective and evaluative aspect). It is the one of the most widely tested pain assessment tools and has become a "golden standard" for other tools. Patients are introduced 80 grouped adjectives and patients have to select one word from each group which is most suitable to indicate their pains. To complete, each MPQ

take 15-20 mins, therefore it causes burden for patient in comparison with VAS and NRS, Due to such burden, the author later developed a short form tool (MPQ-Short Form), including 15 selected adjectives and patient shall indicate on the 4 levels scale.

- The Memorial Pain Assessment Card (MPAC): is a tool developed to assess to quickly assess pain in cancer patients, using 3 visual scales to assess pain, pain relief and mood and include a set of pain intensity adjectives. The advantage of this assessment tool is taking less time and its results correspond to longer assessment tools. The card can be folded and put into the pocket and each scale is presented for patient individually.
- The Brief Pain Inventory (BPI): is a comprehensive pain assessment tool whose value and reliability have been certified in cancer, AIDS and arthritis patients. It takes 5 – 15 mins to complete this Inventory, consist of 11 scores of pain intensity assessment as well as aspect of pain to the general activity, mood, movability, working, relationship, sleep and comfortability. Unlike MPQ or MPAC, BPI also provides information on the functional status of the patient. Re-assessment of pain after treatment may show an improvement in sensory or mood scale but patient may still report no improvement in physical activity. A simultaneous assessment of function is more complete in assessing the effectiveness of chronic pain treatment. BPI is a good selection to measure pain in patient whose illness become worse.

3.2.3. Utilization of VAS: the scale length is 100 mm, and fixed at both sides.

Visual Analog Scale (VAS) is a visual pain assessment tool which has been used by number of healthcare establishments because it is simple, easy to understand and apply.

There are 2 sides of scale:

- One side shows the faces, the left side with laugh face indicates no pain and the right side with cry face indicates unprecedented pain.
- Another side consists of number from 0 to 10.

A slide bar can be moved to choose painful intensity.

The pain level from 0 to 10 has been described as follows:

0- No pain

1- Slight mild pain, almost cannot feel and think of it, sometimes patient feels slight pain

2- mild pain, sometimes patient feels strong shooting.

3- Pain makes patient pay attention and cannot focus to work. But patient is adaptable with pain.

4- Moderate pain, patient can forget pain if he or she is working.

5- More pain, patient cannot forget pain in several minutes, patient still is able to work.

6- More moderate pain, affects to daily activities and it is difficult to concentrate to a certain work.

7- Severe pain affects to the sensations and limits much daily activities of patient; it also influent to patient's sleep.

8- Excruciate pain, limits activities, it requires great efforts.

9- Terrible pain, patient cries, moans, uncontrolled.

10- Pain makes patient not able to talk, lie on bed and may be unconscious.

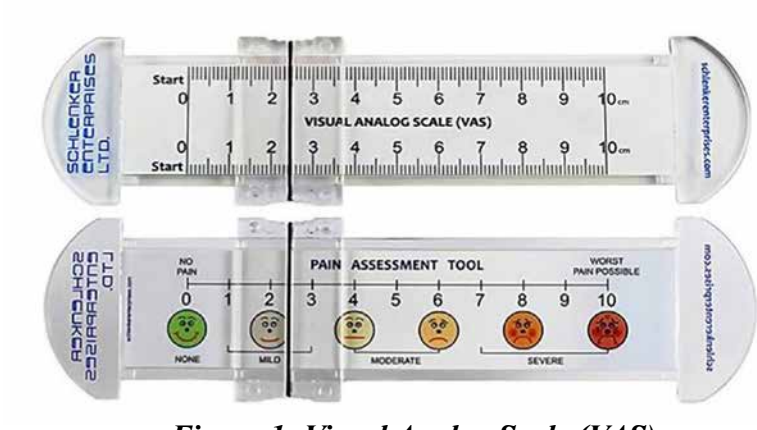


Figure 1: Visual Analog Scale (VAS)

(Sourse: Schlenker enterprise.com)

Instruction for pain assessment:

* Applied to conscious patients, whose awareness able to understand and listen to instruction of VAS; it is applied for conscious patient from 15 years old, who is able to use the slide bar of the scale *(some cases, patients understand how to use the scale to identify the hurt intensity, are able to ask other person to slide the bar – when their fingers are injured)*.

* Steps for pain assessment by VAS

  - Nurses explain to patient about purpose and usage of VAS
  - Patients lie or sit
  - Turn the red side to patients.
  - Nurses instruct patients to observe, identify the red side of VAS, instruct how to slide the bar and stop sliding.
  - Patients assess his hurt by sliding the bar.
  - Nurses interpret hurt at the opposite side of VAS; write down number of centimeter at stop of the bar.
  - Assess pain intensity of patients according to result assessment table.

Result of pain intensity assessment

Result	Pain intensity
0 – 0.5 cm	No pain
0.6 – 4.4 cm	mild pain
4.5 – 7.4 cm	Moderate pain
> 7.5 cm	Severe pain

4. Role of nurses in pain control

- Assess most objectively the pain of the patient
- Provide timely pain interventions for the patient
- Report patient's changes as well as patient's response to doctors, the doctor may adjust dose based on the pain assessment (by using pain assessment scale) or other signs of pain.
- When the patient's pain is controlled, nurse shall support:

  + To optimize the patient's comfort, sleep and activity

  + To reduce worries and enhance the recovery.

5. Application of pain control in clinical setting

Pain control has been widely applied in chronic pain (back ache, join pain, chest pain and cancer pain) and acute pain (postoperative pain, postnatal pain, pain due to acute lung oedema and myocardial infraction etc).

Pain control method should not be applied for the pain with unknown cause, surgical pain (due to perforation of empty organ, break of solid organ, ileus, appendicitis, bile duct obstruction, calculus of ureter, peritonitis etc)

Pain control principle:

- Patient who has pain need to be controlled in order to improve quality of life in every stage of disease.
- Pain control is to reduce pain intensity and prevent the relapse of pain. Pain control is successful when patients feel not pain, comfortable and able to maintain normal activities.
- Pain control can be performed at the healthcare establishments, at home or in community.
- Respect and record patient's description about pain and effects of pain relief interventional methods, including when patients use opium drugs. The description of pain should be recorded as soon as the patient is admitted to the hospital, responding after taking the medication and implementing interventions; even the smallest changes in pain. The first pain assessment needs to conduct for all items, but the subsequence needs not to conduct all as the first time.
- Do not only use drug for pain relief, it requires combining non – drug method and attention should be paid to psychological aspect.
- Pain relief methods and dose of medicine depends on each patient.

6. Pain control methods

Purpose of pain control is to make patient reduce pain, comfortable, collaborate and rely in healthcare workers during examination, nursing care and treatment process, it facilitates the following examinations and limits the adverse events caused by pain. It consists of following major methods:

6.1. Reduction of factors causing pain:

Remove painful agents, the stimulus factors causing pain. These methods can be applied firstly when conduct pain relief for patients, including: keep warm, reduction of noise in the patient ward, change patient's position every 2 hours, place patient at comfortable posture, instruct patients to relax etc.

6.2. Pain relief by drugs

6.2.1. Drugs for pain relief:

The drugs used in pain control are non-steroid (NSAIDs), steroid and central pain relief drug (morphine); Pain relief by local anesthesia method also has been used widely.

- NSAIDs take effect to the nerves receiving peripheral pain sensation. It is good for slight to moderate pain. Some common drugs are ketorolac, Piroxicam, Ibuprofene... Some side effects of this drug groups are digestive tract stimulation, decreased platelet adhesion, decreased kidney perfusion and it may cause more severity of previous kidney disease. The successful criteria after using the drug, pain level of patient reduces more than 3 scores or pain level < 4/10.
- Opioid pain relief drugs, is effective for both peripheral and central pains. Some common used drugs are morphine, dolargan, fentanyl.... Pain relief effect is good but opioid pain relief drugs have some side effects (addictive, nausea, vomit, itchy, constipation, urine retention, respiratory inhibition etc.) therefore the usage of those drugs should be limited. The drugs are indicated in moderate and severe pain, chest pain due to heart problems, acute lung oedema. Use of Opioid pain relief drugs according to 3 steps of World Health Organization:

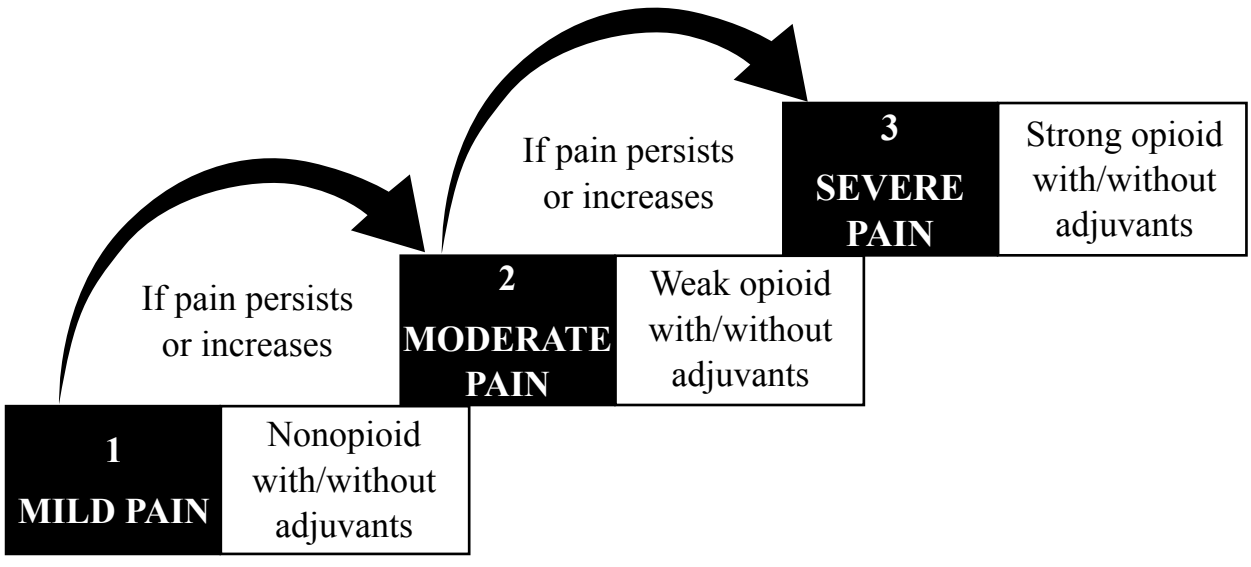


Figure 2: Pain relief ladder of World Health Organization

Source: https://www.who.int/cancer/palliative/painladder/en/

- Local anesthetic is effective to block nervous conduction, and desensitize an area of the body therefore it is helpful for pain relief. Some desensitizers such as lidocain, bupivacain... can be used in combination with local anesthesia, plexus block.

6.2.2. Pain control techniques

* Usage of drugs administered by oral route, subcutaneous, intramuscular, intravenous injection - common for NSAIDs, opiod pain relief drugs.
  - Priority is given for oral administration, except when patient is not able to take medicine.
  - It requires monitoring the respond of patients to the drugs;
  - Use correct drug, sufficient dose (as indication) for each patient,
  - Monitor to detect side effects of drugs.

This is a pain control method using drug that allows patient control the pain by him/ herself by managing the dose of pain relief drug. Patient only needs to press a button in a special device so called as PCA, a pump contains the amount of pain relief drug prepared by physician, and this pump is connected to a small tube that allows drug going to the vein, subcutaneously. The overdose can be prevented by interval lock.

Advantage of this method is to achieve expected pain relief level with minimal dose of pain relief drug depending on pain threshold of each patient.

Some common mistakes when using PCA: patient presses wrong button, broken pump, alarm or out of battery. Some other mistakes are broken interval lock, improper pump installation etc.

* Local anesthesia – includes methods: continuous injection at the surgical site; epidural anesthesia etc. Nurses should understand well side effects of anesthesia techniques, especially epidural anesthesia to explain to patients and prevent those adverse effects.

6.2.3. Non – drug used pain control:

Some interventions help to relief pain and can be used in acute or level 1 care at home or health recovery establishment. These interventions include behavioral and physical perception or relaxation:

* *Education:* explain to patient know about pain and pain control method help patient believe in treatment method to achieve expected effects early. This method is not applied for the cases that want to terminate pain in a short time.

* *Instruction using pictures:* is a relaxation by imagining beautiful pictures such as river, mountain, interesting relax places that patients used to experience, focus on breath to feel the air exchange of lung or pay attention to number to reduce pain. Do not cut thinking flow of patients during relaxation.

* *Entertainment:* is a muscular and mind relaxation method that helps to reduce pain, anxiety and make the brain comfortable. Such relaxation reduces tension.

* *Use heat (hot/ cold):* there are some pain positions which need to use heat require physician's indication. Do not use this method in sensitive areas. Utilization of hot or cold heat should not prolong more than 20 minutes. Nurses should observe and monitor patient during nursing care process.

- Hot, cold compress (Learners should learn the lesson hot, cold compress)
- Infrared radiation: infrared radiation is a high heat so called as heat radiation. Effects of infrared radiation mainly cause vasodilatation, red skin during treatment therefore it is effective for control of chronic inflammation and muscular relaxation. The depth of infrared radiation in the body is about 1 – 3 mm.
- Short wave: effective for heat generation at deep tissue (2 – 3 cm), therefore it is often applied for chronic pain, muscular pain, and neuropathic pain.
- Ultrasound: may make temperature increased at deeper tissue (may be up to 8cm) and scope of contraindications is narrower.
- Electrical pulses: depending frequency and type of electrical pulses, electricity stimulate to skin and inhibit pain. It often lasts from 4 – 6 hours after treatment.

* *Transcutaneous electrical nerve stimulation* (TENS): This is a method use the electricity to stimulate nerve number V subcutaneously. Patients feel comfortable thanks to vibration. TENS lasts in 15 to 30 minutes or longer if patient needs. This method is used for chronic pain and cosmetic surgery.

* *Massage:* use the hands to make direct effect to the body and help to relief the pain. Massage helps to relax muscle, excrete the stagnant substances inside the muscle; enrich oxygen, circulate blood, then stimulate relaxation of nervous system, reduce neurological tension and muscle pain.

* *Acupuncture and point acupuncture:* This method stimulates the body to generate Endorphin; twisting and vibration of acupuncture needle and pressure from skin make pain reduced.

* *Hypnotization:* is a therapy method by taking a person to an unexpected status to change perception and memory. During hypnotization, insinuation helps painful sensation of patient disappeared or patient feel more comfortable.

* *Psychological treatment:* this is a safety method that relieves pain by reduction of physiological tension.

Nurses should understand the role of psychology in generation, development of disease, affection of psychology to patient; also, it is possible to apply principles regarding contact with patients, patient family during treatment and nursing care process.

Psychology impacts greatly to effectiveness of treatment and nursing care process. Patients, who have comfortable psychology, receive quicker treatment method and recovery. To be comfortable, patient should remove all agents, uncomfortable symptoms for patient including pain symptoms. Pain control management should be maintained during hospital stay process and lasted to the end stage of life. Nurses should play the role as person, who accompany with patient and provide the most comfortableness.

6.3. Pain care of nurses

To provide pain relief nursing care for patient, nurses (or collaboration with nursing team) should have collaboration of patient and patient family to assess the causes, characteristics and

influenced factors of pain; assessment of pain level. Based on that, pain control plan will be made for patient.

6.3.1. Acute pain care

Pain identification:

- Ask patient about pain symptoms, pain level and characteristics; relevant factors
- Exam and assess pain (use pain assessment pain –VAS etc.)
- General examination, identify the cause of pain, assess influenced factors to pain control methods.
- Restlessness, discomfort, depression
- Change of body weight
- amyotrophic lateral sclerosis
- Less communication with others
- Sympathetic reaction
- Patient has physical reactions against pain such as sweating, shrinking ...
- Decreased taste buds
- Excessive expression of emotions: crying, screaming ...
- Face of pain
- Sleep disorder

Nursing diagnose:

Pain relating to damage to organs (respiratory, digestive, urinary ....)

Nursing intervention:

Nursing interventions	Reason
Implement pain assessment. Identify position, feature, starting point, time, frequency, severe level	To identify objectively the patient's response to pain management measures
Observe patient's nonverbal reactions as: moaning, crying, grimacing, protection posture...	Evaluate objectively pain level
Accept the patient's describes on pain	Evaluate pain subjectively
Record vital signs	Changes of vital signs can reflect the severity of pain
Evaluate patient's current medication	Adjust or maintain the patient's medication
Predict the need for pain control of patient	Make quickly, timely decision on patient's pain control, especially for the case of reduce pain relief drug dose

Create silent environment for patient	Help patient's comfort and reduce stressful factors cause more painful
Use non-medication pain relief methods (relax, breathing exercises, music therapy).	Non-medication pain relief methods can support and enhance the effects of pain relief drugs
Carry out optimal pain relief methods as using drug for patient	In some cases, other therapies are ineffective or less effective, drug is mandatory
Record patient's pain control methods	Identify effectiveness of medication
Record patient's reaction of pain control methods	Assist other medical staff and patient understand patient's pain control status

Evaluation

Evaluate pain level and other related factors

Evaluate patient's response level with pain relief methods

6.3.2. Chronic pain care

Pain identification:

- Ask patient about pain symptoms, pain level and characteristics; relevant factors
- Exam and assess pain (use pain assessment pain –VAS etc.)
- General examination, identify the cause of pain, assess influenced factors to pain control methods.
- Restlessness, discomfort, depression
- Change of body weight
- amyotrophic lateral sclerosis
- Less communication with others
- Sympathetic reaction
- Patient has physical reactions against pain such as sweating, shrinking ...
- Decreased taste buds
- Excessive expression of emotions: crying, screaming ...
- Face of pain
- Sleep disorder

Nursing diagnose:

Pain relating chronic diseases

Pain relating to damage to organs (respiratory, digestive, urinary....)

Nursing interventions:

Nursing interventions	Reason
Implement pain assessment. Identify position, feature, starting point, time, frequency, severe level	To identify objectively the patient's response to pain management measures
Check current pain relief medication	Understand more about patient's medication history
Record patient's expectation of pain relief methods	Understand patient's expectation for effective coordination
Encourage patient apply breathing therapy and confirm the effectiveness	Non-medication pain relief methods can support and enhance the effects of pain relief drugs
Understanding of patient on the need for analgesics: NSAIDS, addictive and non-addictive drugs	These are addictive drugs and can cause sleep disorders.
Assess the status of decreased taste, urination and sleep disorders of patient	Monitor side effects of pain relief drug
Use non-medication pain relief methods (relax, breathing exercises, music therapy).	Non-medication pain relief methods can support and enhance the effects of pain relief drugs
Evaluate effectiveness of pain relief drugs and make questions about increasement or decrease of dose, if necessary	Adjust medication timely, if necessary

Evaluation

Evaluate pain level and other related factors

Evaluate patient's response level with pain relief methods

LESSON TEST

1. Select the most correct answer

1.1. Contraindications of pain control method:

A. Unknown cause abdominal pain B. Acute sciatic pain

C. Pain due to acute lung oedema D. Knee join pain

1.2. Pain control principle:

A. Pain control needs to be done in every patient

B. Pain control needs to be done in the healthcare establishment

C. Combine different methods in pain control

D. Do not use morphine in pain control because it causes addictive

1.3. Pain control methods:

A. Lessen factors causing pain

B. Use drugs

C. Massage, point acupuncture, hypnotization, psychology...

D. All the above-mentioned methods

1.4. Drugs used in pain control:

A. NSAID B. Central pain relief drug

C. Anesthetic D. 3 above mentioned groups

1.5. Which self pain control method will be realized?

A. Intravenous injection B. Intramuscular injection

C. Epidural injection D. 3 methods

2. Practical scenario

Patient Hoang Trong L; 35 years old, IT engineer; he is single and the son of a family. He has healthy medical history, and does not smoke. He admitted in the hospital with diagnosis of femoral bone fracture due to traffic accident. Patient underwent operation for joining bone and he receives treatment at Trauma department and postoperative care in the first day. Patient condition: conscious; Mr. L said that he feels severe pain at surgical site. Pulse 85 rates/ minute, blood pressure 135/ 83 mmHg, body temperature 36.60C, breath rate 19 times/ minute.

Questions:

Assess symptoms relating to pain in patient L.

Use VAS to assess pain intensity of patient L *(apply role play method)*

Please point out pain control measures for patient L at this moment.

After 10 days, general conditions and surgical site of patient become stable. Doctor indicates suture cut and exercise according to instruction of rehabilitation staff. Mr. L said to nurse that he still feels pain at surgical site, difficult to sleep, does not want to move as instruction of doctor. Mr. L requests to use opiod pain relief drug.

As a nurse, would you please explain and give consultancy to patient L how to take care and relieve pain at this time? *(apply role play method)*

Answer:

Question 1.1: A; Question 1.2: C; Question 1.3: D;

Question 1.4: D; Question 1.5: D

Clinical scenario

Instructor select a patient in clinical department having pain symptom (due to different causes...), request learner to assess patient, assess pain by VAS, make plan and implement pain nursing care plan for patient. Then, instructor and other learners give feedback comments.

Competency based assessment checklist for Pain relief care

No	Contents	Achievement level		
		Can do independently (2)	**Can do with support (1)**	**Can not do or do wrongly (0)**
1	To recognize the factors influenced to the pain.			
2	Be able to use the pain assessment tool to assess patients.			
3	Be able to perform pain control measures during patient care provision and to instruct patient/ patient family to take part in pain control.			

REFERENCES

1. Prof. Pham Thi Minh Duc, Physiology (for medical education), Medical Publishing House 2011
2. Prof. Pham Thi Minh Duc, Physiology (for education of bachelor of nurse), Education Publishing House 2007
3. benhvien103.vn – Treatment principles and palliative care for cancer
4. Doenges, M. E., Moorhouse, M. F., & Murr, A. C. (2019). Nurse's pocket guide: Diagnoses, prioritized interventions, and rationales. Philadelphia: F.A. Davis.
5. TS. Jensen, G. Cruccu, P. Anand (2006), "Assessment of neuropathic pain", European handbook of neurological management, Blackwell publishing, pp:109-123.

LESSON 8

APPLICATION OF NURSING PROCESS IN PATIENT CARE

OBJECTIVES

1. Explain procedures of the nursing proces (Competency 1.2; 4.5)
2. Describe the concept, meaning and application of evidence-based practice to patient care; (Competency 21.9; 22.6)
3. Apply nursing process in making care plan and performing patient care at clinical departments – suitable with patient status and care timing (Competency 2; 3; 4.1; 4.2; 4.3; 4.4; 4.5; 4.6; 4.7; 4.8; 4.9; 5; 6; 8; 10; 11; 14; 16.3; 18.3; 20; 24.1; 24.4; 25.1; 25.2)
4. Use evidences in patient care. (Competency 21.9; 22.6)

CONTENTS

PART ONE: THEORY

1. Nursing process

**** Concept***

- Nursing process includes many steps where the nurse has to pass in patient care activties.
- Nursing process is a seri of activities following the advance determined plan, directly towarding a separated care result.

**** The importance of nursing process***

- Being the guidance for all activities of the nurse
- Assist to patient care activities comprehensively
- Assist to care activities continuously and not missed
- Being document that provide information of patient, care activities to other colleagues

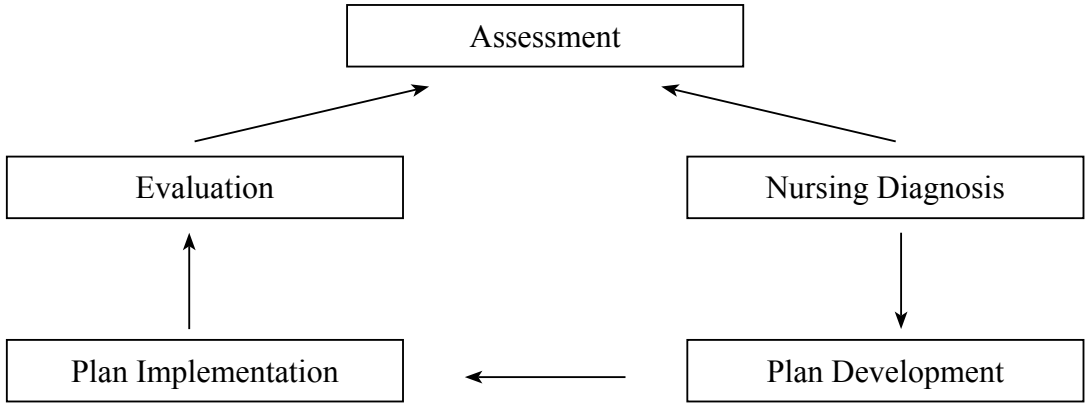
**** Nursing process is utilized for:***

- Identifying actual situation and health care issues for each person
- Developing plans properly with patient's difficulties and meeting with the patient's needs.

**** Nursing process consists of 5 steps:***

- Identification
- Nursing diagnosis
- Plan development

- Plan implementation
- Evaluation



2. Steps of nursing process

2.1. Assessment

2.1.1. Definition

- Assessment is a process of organized and systematic information collection which is used to assess individual's health condition
- Assessment is the collection, evaluation, examination and record exactly of the information according to the current situation of patient.
- Nursing assessment is basis for developing quality care plan for each person.

2.1.2. Items of assessment

Assessment contents have to include: physical, mental/emaotional assessment; economi and social status; adtitude, culture and environment identification. The obtained information from the assessment should be described shortly, accurately and should not explain.

- Physical assessment: the actual assessment of respiratory, circulatory, temperature, skin, nutrition, excretion, movement, hearing, vision, speech, hygiene, previous diseases, current illnesses, the risk factors, signs and symptoms of the disease ..
- Mental/emotional assessment: the response by verbal, non-verbal, personality, behavioral, thinking ability, attention, memory (long or short), fear, understanding of illness, language, actions of patient.
- Social, economic and cultural assessment:
  + Education qualification, social understanding, how is culture influence to the patient?
  + Structure, family background, working status, financial matter...
  + Assessment of the relationship between religious belief and the educational level of the patient

+ Assessment of living condition, working place effecting to disease causes? Possible to prevent disease?

2.1.3. Assess information for classification

The obtained information can be categorized into two types: objective information and subjective information

- Objective information: Objective information is the type of information that other people can see in a person. Objective information is collected through physical examination such as high / low temperature, fast / slow pulse, skin condition, urine output, movement limitation... These are signs of diseases or changes of patient conditions.
- Subjective information: is the information which the patient feels and tells. Other people may not aware, including: Patient's complaints about pain, patient's feelings about illness, worrries.. those are responses of the patient, These information also plays an important role in correct identification of a patient's problem. For example: a patient told the increase of pain after 3 days of operation, this will suggest that something may happen?
  + When describing subjective information it should be specific, clear and accurate; If the patient complains of pain: it is necessary to describe the intensity, duration, location, and other problems relating to the pain.
  + In necessary case, it can extract the words of the patient but without being interpreted in the subjective sense of the nurse.

2.1.4. Information source

- Patient: In almost cases, the patient will be the best information source. Patient can provide the most realiable information based on their own health conditions.

  Just using information from other sources subjectively when the patient is not able to recognize to answer the questions. For example, for the case that patient is confused, cannot manage, unable to explain necessary information.
- Patient's family and relatives: can provide information of current issues, used medications, allergy history, new disease or previous diseases of the patient.
- Other medical officials: Doctors, physiotherapists can provide objective suitable, necessary and useful information in some cases.
- Patient's records: Not only provide curent and passed information but also help verify the information provided by the patient and also show us the direction of treatment used effectively or not.

2.1.5. Information clollection method

• Initial interview (asking disease, checking medical history, illness history)

- Interview between nurses and patients is the very improtant factor in establishing relationship in care. During the interview the patient to collect information, the nurse must focus on information given by the patient and keep them confidentially. The ensure of confidential

information will encourage the patient to provide more information to medical officials. More information more valuable for nurses, because based on such information will assist for making accurate nursing diagnosis.

- Improtant meaning of initial interview:
  + Allows the patient and nurse to establish relationships.
  + Collects information about the patient.
  + Allows the nurse to observe the patient.
  + Allows the patient to ask questions.
  + Assist nurses identify problems of the patients
  + Provides information used for making care plan appropriately.
- The good relationship between nurses and patients has high value in care. Their interactions are based on the belief that nurse of which the nurse shows their professional abilities in care and expressing sympathy to the patient's situation. The nurse needs to make patient understand their responsibility in making patient's care plan.

• Physical examination

- Patient examination is usually conducted immediately after the interview. The obtained information during the interview can be verified through physical examination.
- Physical examination is conducted systematically, collected basic information such as vital signs, weight, height, next is top-to-toe examination, based on the structure, function of the body for examination.
- When conducting physical examination should use the skills:
  + Observation
  + Touching: Use hands to touch, manipulate and collect information such as pulse, temperature, and pinch skin to assess its elasticity.
  + Knocking: knock the body's organs to identify the abnormals
  + Listening: used for examination and identification of the sound of respiratory system, circulatory and digestion. The stethoscopes are instruments used very commonly.
- Notable points when performing patient physical examination:
  + Clearly explains to patient for understanding what nurse is doing during examination and can only examine when they allow.
  + Have enough light, the natural light is the best.
  + Ensure the privacy while examining, can only reveal the part of body where to be examined and lasting for a necessary time to complete the examination.
  + During examination process, it is necessary to compare collected information with the "normal values".

+ The collected information during examination should be recoded, because if waiting until completion of examination, some information may not maintain accurately.

+ Completing examination process should identify abnormal points which may indicate patient's previous, current and future health conditions.

+ When finishing the examination, nurse should help patient dress up, leave the patient at the comfortable position.

• Testing results

- Tests is prescribed by doctor, testing results will be used supplementary to nursing diagnosis by the nurse.

- Tests can verify collected information and support for developing proper patient's care plan.

2.2. Nursing diagnosis

- After assessment of patient, the nurse must provide nursing diagnosis or identify the caring issues to patients.

- Definition: Nursing diagnosis is to address the current or potential issues of patients which require the intervention of nurses to solve together with its reasons if it is known.

+ Current issue is the existing issues at the time of identification.

+ Potential issue is the possible issues/risks in the future.

- Nursing diagnosis formula:

Nursing diagnosis = Patient's issues + Reason (if any)

- Nursing diagnosis must be accurated based on the real fact relating to patient's issue, shortly and specifically based on the patient's information

- Nursing diagnosis is not medical diagnosis. For example:

Problems	Nursing diagnosis	Medical diagnosis
- Breast cancer	Not a nursing diagnosis	Be a medical diagnosis
- Poor looks due to myopia	*Be a nursing diagnosis::* - Problem: poor look - Reason: myopia	
- Difficult moving due to after surgery	*Be a nursing diagnosis:* - Problem: difficult moving - Reason: after surgery	
- There is a tendency for infections due to open drainage	*Be a nursing diagnosis:* - Problem: infection tendency - Reason: open wound	

- The difference between medical diagnosis and nursing diagnosis

Medical diagnosis *(Treatment diagnosis)*	**Nursing diagnosis** *(caring diagnosis)*
- Describe a particular disease process, it is the same for all sick people.	- Describe the patient's disease response, which is different for each patient.
- Towards identification of disease.	- Towards the individual needs of the patient.
- Maintain unchanged during illness.	- Change when the patient's reaction changes.
- Complementary to care.	- Complementary to treatment.

- It should base on the following criteria to evaluate whether caring diagnosis is correct or not?
  + Is nursing diagnosis clear?
  + Are used technical terms correct?
  + Is the 2nd part of nursing diagnosis correct? Does it reflect the specific factor involved in the diagnosis?
  + Does nursing diagnosis reflect the situation which nurses can provide main, necessary interventions?
  + Do nursing diagnosises reflect fully and accurately curent, potential issues consistent with clinical symptoms of patients?

2.3. Making care plan

- Making care plan is necessary to enable nurses implement patient care properly.
- In order to make patient care plan effectively:
  + Nursing diagnosis must be clear and detail
  + Priotizing the given issues
  + Objectives must be achieved within a specific time
  + Given objectives must be realistic and achievable
  + Collaborating with patients
  + Easy to evaluate plan regularly
- There are 3 steps to develop care plan: Set up priority issues, write down objectives, write down care plan.

2.3.1 Setting up priority issues

It is necessary to consider the following matters when setting up priorities:

- Identify which nursing diagnosis is patient potentially life-threatening, Those situations must be the most emphasized
- The basic needs of patient must be settled first.

- Consult with patient to find out which issues must be more prioritized to follow if it does not interfere the treatment plan.

2.3.2. Writing down objectives

- Given objectives are written in achievable, measurable technical terms. The objectives mention patient's issues not actions of nurses
  + Objectives must be written clearly and specifically
  + Each objective is for one care diagnosis
  + Each objective has a certain time to complete
- Objective development needs to have fully 4 main components
  + Subject: patient
  + Action: Showing the action to be taken to the patient
  + Implementation standard: how long, how far, how many? It indicates the degsinated time to complete. For example, until discharge, at the end of shift, at 2pm thí afternoon...
  + Condition: under the certain situations, behaviour can be carried. For example, with support of crutch (walking, with supports from family)

Subject + Action + Standard + Condition = Given objectives

For example:

Subject	Action	Standard	Condition
Patient	Will walk	Up and down by stairs, when discharge	With support of crutch
Patient	Will urinate	At least 100ml at 6pm this afternoon	After removing urinate sonde

2.3.3. Writing down care plan

- Care plan shows personaliation according to the needs of a specific patient. The patient should involve in drafting their care plan when necessary.
- Language used in the care plan should be clear for all users can understand.
- Care plan must be realistic, it should be available at the care time and used for handover.

2.4. Care plan implementation

- Plan implementation is the necessary actions to fulfill described nursing interventions. It has consecutively and interaction aspect with other components of nusing process
- In theory, the implementation of care plan complies with the components of the nursing process, but in the emergency case it is done right from the assessment.
- During the plan implementation, nurse will reidentify patient and can revise the care plan
- Care plan implementation becomes actions caused by nursing interventions.

2.4.1. Types of Nursing intervention:

There are 3 types: dependent, independent, interdependent

** Dependent intervention:*

+ Dependent interventions are developed based on the instructions or demands of other medical officials, normally of the doctor. For example, medication, sonde placement, thread remove...
+ Dependent intervention: the nurses follow the instruction, orders. However, the nurses have to take judgement abilities while performing their duties, must have abilities to identify suitable, proper doctor's order before performing. For example: checking medication dose following order, do not perform the order passively, just because doctor indicates the medical orders.
+ Nurses must understand the expectation results and side effects of all kinds of drugs used for patient and acquire care actions, follow-up to ensure patient safe.
+ If treatment order or mediation seems not suitable or proper, nurses must check the medical order with the owner before performing required nursing activities.
+ Simply performing medical order without checking ít validity is extremely negligent. The careless can lead to consequence of nurse caused serious damages to patients.

* *Independent intervention:* Independent intervetion covers specific aspects of nursing practice which are legally permitted and without any supervision and instruction of othe medical officials such as skin care to prevent dermatitis, bandgage replacement, health eduation, patient hygiene...

* *Interdependent intervention:*

+ Interdependent intervention are the nurisng interventions in order to reponse treatment plan of doctors in some special cases.
+ This intervention can be performed immediately without refer to the owner of the order when necessary. This intervention type is popular in emergency faciities. For example: medication performance with specific dosage for arrhythmia patients, high fever convulsions...

2.4.2. Steps of care plan imlementation:

During implementation the nurse must pass through the following steps: reidentify patient, reconsider and revise care plan, idenntify the points needed for support, communicate about care plan to other nurses, to patients and their famiies.

** Reidentify patients*

- During nursing care process, it covers patient idetification and reidentification. The physical, knowledge, emotional, social and mental needs of patients as well as their activities become emphasizes of nurses.
- The patient reidentification process is to check the correctness of initial identification to determine the changes of patient conditions. For example, there was a special problem or a situation of patient has been changed, do we need to change plan?
- A new nursing diagnosis may be necessary to ensure the care is performed properly and correctly. Any change, addition or cancellation regarding care must be recorded in patient profile.

** Care plan consideration and revision*

The care plan consideration and revision should be made at least once a day if possible, in special case, it can immediately revise right after having patient's condition changed to ensure the care plan timely performed.

** Communication of care plan*

Communication of care plan há made to patients/families and other nurses will improve the compliance with given care plan. During the care plan communication, it is neccessary to explain to patients/families that care plan will be a good chance to both nurses and patients understand each other well.

2.5. Evaluation

- Evaluation of nursing process is used to measure the response of patients to the cares of nurses which have been conducted.
- Evaluation is identification of improvement of patient conditions towarding the achievement of care plan objectives. The response of patient to the plan has been evaluated based on given objective: which improvements or failures orccured in comparison with objectives' expectation results.
- This evaluation is used to evaluate both shorterm and longterm objectives and also clearly identify new arisen health problems. The consideration and evaluation process determine the possible necessaries of the care plan.
- The evaluation covers 4 steps:
  + Setting up evaluation criteria
  + Comparing the patient's response to the evaluation criteria
  + Checking any difference in objective completion that affect to the expected results.
  + Revising care plan.

3. Evidence-based practice

3.1. Concept: Evidence-Based Practice (EBP) requires that decisions about health care are based on the best available, current, valid and relevant evidence. These decisions should be made by the patient, informed by the informed by medical staff who have clear expertise and thorough consideration, within the context of available resources.

Dawes M. Summerskill W. Glasziou P. Cartabellotta A. Martin J. Hopayian K. Porzsolt F. Burls A. Osborne J. Second International Conference of Evidence-Based Health Care Teachers and Developers. Sicily statement on evidence-based practice. BMC Medical Education. 5(1):1, 2005.

3.2. Meanings

Assiting nurses update constantly knowledge in care practice, carefully evaluate sourse and realibility of information. Evidence will spplement what nurses have not studied. Evidence can

make nurse to change the methods, even that used for a long time if there is evidence that contradicts what they study at school or what has been practiced for many years. With proven results, evidence can improve patient care results, can help nurses save time, work more effectively.

3.3. Steps of evidence-based practice application

Evidence-based practice consists of 5 steps:

- Making question (possible to answer) based on clinical issues
- Finding out evidence: Scientific evidence is often collected and summarized from scientific studies published in scientific journals with a system of critical approval.
- Evaluating evidence level: speech of expert or result of scientific research such as Randomized Controlled Trial (RCT) or equipvalent.
- Analyzing evidence: base on reliability and authenticity of the researches, results,...
- Utilizing evidence in care practice and taking level of evidence, professional qualification, priority and benifits of patient into consideration.
- Evaluating effectiveness after utilizing evidence in care practice.

PART 2: PRACTICE

1. Practical steps applying nursing process in patient care

No.	Practical steps	Reason
1	**Preparation** - Equipment for medical examination: blood pressure monitor, thermometer, stethoscope, ... - Patient care facilities - Depending on the care, appropriate equipment will be prepared - Sample of case study/clinical case (attached Annex)	Sample of casestudy will assist trainess in recording learnt contents (identification, care plan), demonstrating and discussing with stidying team, submiting to preceptor once required.
2	**Patient communication:** greeting, self-introduction	
3	**Identification:** - Asking patients/families - Physical identification: examining - Emotional, mental identification: asking and examining - Economical, culture, social identification: asking patients/families - Environmental identification: asking patients/families the relevant/influence factors to patients	- Collecting subjective information, exercising illness asking skills. - Collecting objective information. Exercising health examination skills.

4	**Determination of care issues/care diagnosis** - Determining patient care issues at the time after examination; - Arranging care issues under the prioritized orders	Determining prioritized care issues to perform proper care to patient's conditions, timely response to emergency conditions (if any)
5	**Development of care plan** Setting up goals, plan for each care issue	Clearly determining achieved objectives ad proper care plan
6	**Care plan implementation** - Listing up detail care activities for each care issue according to the care plan - Performing care activities to patient	Ensure continuity of care in order, not missed
7	**Evaluation** - Evaluating during and after performing care activities. - Evaluating the patient's cooperation, results/ good or bad developments after performing care plan for each care issue	Identify the cooperation of the patients/ families when taking care; Identify good or bad development or abnormal of the patient during and after performing care plan
8	**Record** case study/clinical case: following format (Annex 3)	- Practicing writing and thinking skills - Saving information and submitting to preceptor (when required)
9	**Present** case study/clinical case	- Discussing in the team, practicing presentation skill

2. Practical checklist applying Nursing process in patient care

No.	Content	Achievement level		
		Achieved	**Not achieve**	**Remarks**
1	Preparation			
2	Communicating with patient			
3	Identification: - Asking patient - Physical identification - Mental, emotional identification - Economic, cultural, social identification - Environmental factor identification			
4	Determining care issues/care diagnosis			
5	Care plan development			
6	Care plan implementation			
7	Evaluation			

8	Recording case study/clinical case			
9	Presenting case study/clinical case			

3. Example of practical case; applying nursing process in developing and implementing patient care plan (by using case study format)

3.1. Practical case

Nguyen Van Viet, 62, is the owner of Pho, located at No. 15, Lane 8, Tran Phu, Ba Dinh, Hanoi. Mr. Viet was falled down by a motorcycle and was admitted to the hospital on November 24, 2018. Doctors examined and diagnosed Femoral fracture (left side)., Mr. Viet was operated on bone connection on November 25, 2018.

On November 28, 2018 is the forth day after surgery; he was completely awake, he answered when nurse comes to see:

- "Sometimes I feel a little pain!
- "Last night, I went to the toilet myself!
- "Today is a beautiful sunny day, I want to down the cafeteria to drink coffee!
- "I want to go back to my restaurant because I have been away for a long time"
- "I have not had a shower because afraid of wound infection caused by water"
- "I eat normally, have a good appetite"

The patient's bed is next to the door, near the balcony. His wife was his caregiver all day from hospitalized, she looked tired;

Vital sign on November 28, 2018: Temperature 36.8^{0}C, pulse 80 time/min, blood pressure 123/65 mmHg, SpO_2 96%. The surgery wound is not red, not hot, not swollen, slightly painful

Treatment indication: drop infusion twice/day and take painkillers. From tomorrow (November 28, 1818) will perform rehabilitation. Gauze is humour absorbent. The patient is required to take rest in bed in the patient room, limit moving, when moving it needs the supports from nurse or family and must use crutch.

Question: Applying nursing process to identify, develop and implement care plan based on the above case (writing plan as case study format (see annex at the end of lesson))

3.2. Care plan

Content of patient care plan in 3.1 has been recorded as the following format:

CASESTUDY FORMAT

Name of trainee: **Hoàng Thuý Nga**

Class: *New nurses, 2nd course in 2018* Subject: *Nursing practice*

3.2.1. Administrative information *(of patient)*

- Name of patient: Nguyễn Văn Việt age : 62
- Gender: Male
- Nation: Kinh
- Address: No.15, lane 8, Trần Phú, Ba Đình, Hà Nội
- Occupation: Pho restaurant owner
- Caregiver/contact when needed: Wife: Phạm Thị Hoa, Telephone 0904125356
- Hospitalized date: 24 /11 / 2018
- Department: Orthopaedic Surgery

3.2.2. Medical information *(of patient)*

- Hospitalize reason: Traffic accident
- Medical diagnosis: *Femoral fracture (left side).*
- Treatment method: Surgical
- Drug prescribed: antibiotic drops infusion twice a day and take painkillers

3.2.3. Identification

- ***Illness History (summary):***

When he delivers Pho by bike in the rain, he slipped away. He was admitted to the hospital on 24th November. As a result of examination, diagnosis was Femoral fracture, and surgical operation was done on 25th November

- ***Disease history :*** *Diabetes, high blood pressure.*
- ***Subjective information (question):***

** The patient is awake and responds to nurse's questions:*

- "Sometimes I feel a little pain!

  "Last night, I went to the toilet myself!

  "Today is a beautiful sunny day, I want to down the cafeteria to drink coffee!
- "I want to go back to my restaurant because I have been away for a long time"

  "I have not had a shower because afraid of wound infection caused by water."
- "I eat normally, have a good appetite"

- ***Objective information (clinical examination, relevant testing results)***

** Real conditions of patient:*

- Patient was sufferd from Femoral fracture (left side) and was operated on bone connection on November 25, 2018
- Today is the 4th day after surgery
- Vital sign on 28.11.2018: Temperature 36.8^0C, pulse 80 time/min, blood pressure 123/65 mmHg, SpO_2 96%.
- The surgery wound is not red, not hot, not swollen, slightly painful
- Gauze is humour absorbent

** Treatment order:*

+ Infusion of antibiotics twice a day and take painkiller.
+ Rehabilitation will be started tomorrow (November 28, 1818)
+ The patient is required to take rest in bed in the patient room, limit moving, when moving it needs the supports from nurse or family and must use crutch

Identification summary:

** Physical identification:*

- Subjective information:
  + 62 years old, fall down from motorbike; diabetes, high blood pressure history
  + slightly pain sometimes
- Objective information:
  + Femoral fracture (left side) and was operated for 4 days
  + Vital sign on 28.11.2018: Temperature 36.8^0C, pulse 80 time/min, blood pressure 123/65 mmHg, SpO_2 96%.
  + The surgery wound is not red, not hot, not swollen, slightly painful
  + Gauze is humour absorbent
  + Treatment order: Infusion of antibiotics twice a day and take painkiller, taking rest on bed in patient room, limit moving, when moving needs the supports and must use crutch, rehabilitation starts tomorrow.

** Mental, emotional identification:*

- Patient himself went to toilet, wants to go out
- does not want to take shower

** Economical, cultural, social identifications*

- Family status: His wife takes care all day (24 hours), she looks rather tired

** Environmental factors identification*

- Location of patient bed is next the door, near the balcony

Through collected information, the patient's problems are: it may not be understood well about his current conditions, so the patient went to toilet himself and wanted to go out; it may not be clear if not good hygiene caused incision infection;

.....

3.2.4. Care plan

Care Issues	**Care plan development** (plan, expected results)	**Caring implementation**	**Evaluation of care / results**
The risk of falls relating to lack of knowledge about the necessity of rest after surgery.	- Examine the incision and joint motion	8:30 : - Checked the incision, it is not red, not hot, not swollen, slightly painful, normal joint movement.	- Normal signs - monitoring continuously
	- Checking patient's movement with crutch support	10:00 - Checked the patient's movements. The patient's crutches are rather tall so the posture is slightly hang up. It was recommended to change the crutch size to fit the patient	- Crutches adjustment is very important to move easily and safely. After adjustment, the patient is more comfortable Need to monitor continuously
	- Checking height of bed	- Checked and adjusted the height of bed to fit the patient	- Risk of falling: Medium
	- Checking the risk of fall with using scoring checklist	- Fall risk score: 11 (age: 1, fall down history: 0, stool/urine: 0, medication: 1, caring equipment: 1, movement: 4, consciousness 4)	
	- Perform the medical order of using painkiller to the patient	- Patient was given painkiller medication as prescribed	- The patient took medication as directed by the nurse.

	- Consultancy plan Talk to the patient and his wife about the support request as needed. - Explain the need for support and use crutches while moving, patient needs to limit movement	14:00 - Explained the need for taking rest and limit moving after surgery and the risk of fall to the patient and his wife. Explained that when he wanted to go toilet, do not hesitate to call for help from nurse - Explained to his wife for necessity of taking rest	- Patient/wife accepted the consultations - The patient seems a little reluctant to ask for support from others.
The risk of wound infection relating to lack of knowledge about hygiene	- Check the vital signs, incision pain - Checking the wound - Ask the patient about self-care hygiene	8:30 : - Body temperature: 36.5^{0}C, pulse: 76 / min, blood pressure: 110/60 mmHg, spO_2: 97% - Checked incision: not red, not hot, not swollen, slightly painful, gauze is humour absorbent. - Asked the patient about hygiene: the patient afraid of shower will make wet the bandage causing infection of the incision!	- Normal signs, monitoring continuously - Poor hygiene, - There is a risk of incision infection
	- Change bandage of incision. - Properly administer antibiotic drops infusion twice a day	9:00 - Perform bandage replacement, disinfect the incision, dress the incision with sterilized gauze - perform the antibiotic infusion as directed after changing the gauze.	- No redness, no swelling, no fluid - Patients co-op when taking medications; stable condition.
	- Discuss and explain to the patient and his wife about the needs to ensure sterilization of the incision area and body hygiene, to prevent incision infection.	- Explained to the patient and his wife about the need to keep the incision area clean; - He needs his wife's support when showering	- Patient and his wife receive consultation

	- Explain to the patient the need for bathing support.		
…	….	…..	….
…	….	….	….

November 28, 2018

Comments of trainee:

I felt difficult to explain about fall risk, I was not confident in consultation with patient about hygiene. Since tomorrow, the rehabilitation will start, I want to observe and will share more to patient's family.

Comments/feedbacks of preceptor

Trainee could make rather detail the patient's care plan, she could practice and get experiences of patient care. Explanation and consultation skills are difficult issues, we have to get correct information about patient's conditions and more improve communication skill. Tomorrow, we will observe whether the patient can understand through his behaviors.

LESSON TEST

1. Select the most correct answers:

Question 1: The source of information for patient identification of nurse including:

A. patient, families, relatives

B. Patients, families, medical staff

C. Patients, relatives, medical staff, medical records

D. Patients, family members and relatives, medical staff, medical records

Question 2: Nurses collect information from patients through:

A. Asking patient, examination and test results

B. Asking patient and examination

C. Asking patient, relatives, medical staff,

D. Asking and referring medical records

Question 3: The role of nursing process in patient care

A. Helps the patient care activities comprehensively

B. Helps the patient care activities comprehensively, continuously and not missed

C. Helps to ensure patient safety

D. Helps the patient care activities continuously and not missed

Question 4: Evaluation when performing nursing process

A. Evaluate the patient's response to the nursing care which they received.
B. Evaluate the patient's condition development in care.
C. Evaluate the patient's response to the nursing care which they received; Include the cooperation and development of the patient during and after care.
D. Evaluate the patient's response to the nursing care which they received; Include the cooperation and development of the patient after care.

Answers: Question 1: D; Question 2: A; Question 3: B; Question 4: C;

2. Clinical Case homework

Case 1:

Vu Thanh Ha, 9 years old, hospitalized in pediatric Department for 2 days. Disease diagnosis: virus fever; current condition of patient (December 5, 2018 – at 8:00 am): she awakes, weight 22 kg, body temperature 39^0C, pulse 130 times/minute, breath rate 28 times/minute; no cough, no shortness of breath; little urine, normal defecation; Mother often takes care of her baby at the hospital, she tells that the patient often eats little, does not want to drink Oresol and loves to suck candy very much.

Doctor's prescription:

- Fever reduction: Efferalgan 250mg x 3 pack - for morning, noon, evening; 1 pack each

- Oresol baby x 4 pack, mixed with water (1 packet mixed with 200 ml water), for drinking

Question: Utilizing nursing process to identify, develop and implement care plan for above patient.

Case 2:

Pham Thi N, 32 years old, teacher; her hospitalization (December 14, 2018) was diagnosed with bowel obstruction; The patient was opearated, she is taken care by the Department of External Surgery after surgery on 2nd day.

The patient had a history of caesarean birth two times, her second child is 24 months old.

Patient condition: Weight 58 kg, height 1m56

- The patient is awake; skin, mucosa are normal; survival sign: pulse 80 times / min; Blood pressure 120/80 mmHg; temperature 37.2^0C; breath rate 18 times / min,
- Abdomen slightly distention, not yet fart, the incision is about 12 cm, three pores slightly swollen, red; no humour on gauze.
- The patient feels pain of the incision, pain of all body, not dare to move for fear of surgery incision broken.
- The patient is well-cared by the family, urinating in bed.
- Medical treatment: fluid infusion, injectable antibiotics (twice a day), daily bandage replacement.

Question: Utilizing nursing process to identify, develop and implement care plan for above patient.

3. Clinical Case handling homework

Perform when trainees study at the clinical departments.

Preceptor selects patient in the Department (at least 01 patient/week, with available kind of diseases in the clinical department - depending on the duration of training provided to trainees, it can select the simple/complicated level ascendingly. The preceptor will request the trainees/ group to perform the steps of the nursing process for the patient. When the trainee/group take the steps: asking patient , examining and performing the care plan - other trainees will observe, the preceptor will supervise and support (if necessary). After that, trainee/group are requested to present prepared care plan (in the form of a case study). - The group will give comments and discussions with the support of the preceptor.

(For the objectives 1, 2, 3)

Competency based assessment checklist for Application of nursing process in patient care

No.	Content	Achievement level		
		Can do independently, without support (2)	**Can do with support (1)**	**Cannot do or wrong (0)**
1	Explain procedures of the nursing proces			
2	Describe the concept, meaning of evidence-based practice; The steps of applying evidence-based practice to patient care			
3	Apply nursing process in making care plan and performing patient care at clinical departments – suitable with patient status and care timing			
4	Use evidences in patient care			

REFERENCES

1. Bộ Y tế - Đỗ Đình Xuân & Trần Thị Thuận, (2010), *Kỹ năng thực hành điều dưỡng,* tập I, II, Nhà Xuất bản Y học.
2. Bộ Y tế - Đỗ Đình Xuân, (2007), Điều dưỡng cơ bản - dành cho Cao đẳng điều dưỡng, tập I, Nhà xuất bản Y học
3. Bộ Y tế - Trần Thị Thuận, (2008), Điều dưỡng cơ bản- dành cho Cử nhân điều dưỡng, tập I, Nhà xuất bản Y học
4. Phạm Đức Mục – Hội Điều dưỡng Việt Nam, (2012), Nghiên cứu Điều Dưỡng, Nhà xuất bản Y học
5. Perry, A.G., & Potter, P.A., (2006), *Clinical nursing skills & techniques*, Ed 6th, Elsevier Mosby, Philadelphia.

ANNEX

CARE PLAN
CLINICAL CASE/CASESTUDY

(for trainee)

Full name: .....

Class: ..... Subject .....

1. Administrative information

- Name of patient: ..... Age: .....
- Gender: Male/female
- Nation .....
- Address: .....
- Career: .....
- Care people /for necessary case .....
- Hospitalized date: .....
- Department: .....

2. Health information

- Reason of hospitalization: .....
- Medical diagnosis: .....
- Treatment method: .....
- Prescribed medication: .....

.....

3. Identification

o Illness history (summary):

.....

.....

.....

.....

o Health history .....

o Subjective information (ask patient)

.....

.....

.....

.....

o Objective information: (Clinical examination, relevant test result)

.....

.....

.....

.....

Care plan

Care problem/ care diagnosis	**Making care plan** (plan, expected result)	**Care implementation**	**Care evaluation/ Result**

Date ..... Month ..... Year .....

Self-assessment of trainee

.....

.....

.....

.....

Comments/feedbacks and certification of preceptor

.....

.....

.....

Date ..... Month ..... Year .....

LESSON 9

RECEIVING, TRANSFERRING AND DISCHARGING PATIENTS

OBJECTIVES

1. Correctly follow the procedure of receiving patient at out-patient department/ clinical department, procedure of referral patient to other department or other hospital and procedure of discharge from the hospital (Competency 1; 2; 3; 4; 6; 7; 8; 9; 13; 14; 15; 16.3; 17.5; 18.3; 20.1; 20.2; 24.2, 24.4)
2. Demonstrate appropriate communication skills, attentive behavior, complying with regulations when receiving, transferring and discharging patients (Competency 5; 10; 11; 12; 24.3; 24.1; 25.2)

CONTENT

1. Introduction

The more the society is developing, the more people pay attention to their health and their family's one. Therefore, medical services are also developing accordingly not only in the big cities but also in countryside and remote areas. There are more chance to people to access to medical services. When patient comes to hospital as inpatient or referral patient, depending on their health situation, each patient as well as his/her family has different thoughts and aspirations. Normally, patient is worry about his/her health condition when coming to the hospital (worry about whether he/she can recover? Is it serious? Does it recur?). On the other hand, most of patients are not familiar with hospital environment and face up with difficulties when processing hospitalization procedure. When patient can discharge from the hospital, the patient and his/her family also do not know well and fully about discharge procedure, patient's care at home and disease prevention in the community. Therefore, it is necessary that nurses must understand the situation of the patient, show their kindness, thoughtfulness and sympathy with worries of the patients, support and help them feel more comfortable and trustable in treatment and medical care that creates good impression at the first sight. Besides that, nurses also need to cooperate with colleagues to provide care services to the patient continuously, safely and effectively since receiving the patients until they discharge from the hospital or transfer to other hospitals. When patients discharge from the hospital, nurses also need to provide fully health education that patient can take care of their health and monitor their health condition at home by themselves.

Group of skills when receiving, transferring and discharging patients includes:

- Receiving patient to the hospital
- Processing necessary procedure when transferring patient to other department or other hospital.
- Preparing for patient's discharge from the hospital.

2. Receiving patient to the hospital

Nurse needs to understand clearly and fully about regulations, rules and policies of the hospital and departments, then he/she can explain correctly to the patients and their family when hospitalizing.

2.1. Administrative procedure of hospitalization

* Emergency case:
  - Move the patient immediately to Emergency department; Record name, family name, age, address, organization and family's information of the patient with date, time and reason for hospitalization; Record name and address of person who takes patient to the hospitals, transportation mean and condition of the patient.
  - List up property of the patient in order to hand-over to his/her family or clinical department which receiving the patient.
* Non-emergency case: when coming to the hospital, the patient needs to take following necessary documents:
  - Referral letter from lower-level health facility;
  - Certificate of exemption from hospital fees and medical insurance card;
  - Making patient's profile (need to fulfill all necessary information into first part of patient's profile): full name, age, address, reason for hospitalization, etc.…
  - Receipt of retained property of the patient.

Nurses need to have observation and assessment skill when receiving the patient in order to evaluate health conditions and needs of the patient.

2.2. Preparing equipment, tools and infrastructure to receive patients

2.2.1. Preparing waiting room

- Clean, cool and quiet;
- Enough seats for all patients during waiting time;
- Preparing leaflet, brochure, pictures on health education as reference that patients can see and read during waiting time;
- Preparing drinking water;
- Having notification on regulation and rules of the hospital/department;
- Ticketing for health examination by ordinal number;

2.2.2. Preparing examination department

- Arranging neat and clean space for health examination; ensuring coolness in the summer and warm in the winter;
- Preparing protection screen, bed, table and chairs for medical examination;

- Preparing enough necessary tools for the doctors to take medical examination:
  + General tools: stethoscope, lamp, reflector hammer, thermometer, sphygmomanometer, stopwatch...
  + Specialized medical equipment
- Preparing all necessary administrative documents (medical documents, hospitalization record, test results, vital sign monitoring sheets, etc.…)

2.2.3. Preparing reception room

- Related documents for hospitalization of the patients

2.2.4. Patient's room

- Patient's bed which is proper with condition of the patient;
- Alarming system to call medical staff;
- Uniform of patient and family during hospitalization period;
- Towels, soaps, toothpaste and toothbrushes, pots...
- Cup with lid;
- Bedpan...

2.3. Procedure

No.	Implementation	Reasons
Receiving patient in out-patient department		
1.	Nurse communicates with the patient: - Greeting, introduce yourself to the patient, call the patient's name appropriately in line with custom; For older patient, it is not allowed to call their names only, but to call their name and ranks depending on their age (Mr., Uncle…) - Showing friendly attitude; - Guiding and explaining necessary procedure before having medical examination; - Arranging seats to patients in waiting room; inviting patient to have medical examination by ordinal order. *<u>Remark:</u> Give priorities to emergency cases, patients in serious condition, elder patients and childs.*	- Making a good impression to patient and his/her family when they come to the hospital for the first time. - Helping patient to overcome initial difficulties when they come to the hospital for the first time.

2.	Assessment: - Finding medical history of the patient through interview with him/her or their family about time of getting disease, current situation and medical history. - Observing and taking nursing assessment: checking vital signs, weight, height…	- Overall assessment of the patient's condition in order to have timely countermeasure; - Supporting diagnosis of the doctors.
3.	Examination by doctor and diagnosis: - Helping doctors to examine - Performing professional techniques as directed	Supporting doctors and performing direction
4.	In case the patient is not hospitalized: - Nurse reminds patients to strictly implement medical treatment direction of the doctor; - Instructing patients on how to take care of their health and how to prevent disease at home	
5.	In case the patient is hospitalized: - Taking necessary procedure of hospitalization; - Guiding patient to have personal sanitation; helping them to wear hospital's uniform if they cannot do by themselves; - Taking patient to clinical department for treatment: using a stretcher or wheelchair to transfer the patient if the patient is at risk of falling or unable to walk by himself.	Supporting patient and family when hospitalization
Receiving patient at clinical department		
6.	Receiving hand-over: - Patient and his condition when coming to the clinical department; - Medical documents	As per regulations.
7.	Guiding patient to his/her room: - Arranging bed to patient and help them have peaceful and safe environment; - Closing door or protection screen if the patient uses separated room; - Providing personal tools (in need); lifting up the bed to ensure safety for patients (if any) - Arranging personal tools and equipment appropriately;	Helping patient feels safe and comfortable

8.	Taking health examination and assessing health condition of the patient (especially patient is child): pulse, temperature, blood pressure, breathing rate, weight; mental condition which is drowsy or loose; skin condition ..., prosthetics (dentures, artificial eyes, artificial anus ...) - Listening comments or worries of the patients. - Encouraging patient and his/her family to raise questions	- Making appropriate care plan - Creating an opportunity to clarify the wrong wishes and understandings about the illness of patients and families
9.	Informing patient and his family on detail of treatment and patient's care	Reducing the anxiety of patients and families to help them understand and coordinate with nurses to improve care effectiveness.
10.	Assessing knowledge on patient's care, hospital regulation on patient and the family	Identifying necessary information to provide to patient and family
11.	Providing explanation to patient and his family: - How to use the facilities of the faculty: electrical switches, fans, television (if any), bathrooms, toilets ... - Instructing patients and their relatives to strictly follow the internal regulations of clinical department: the time of medical examination, the time of visiting ... - Instructing patients and their relatives: to the patient's room clean, not to smoke, not to make noise in the patient's room, to dispose of garbage in accordance with regulations. - Instructing on how to call nurses when needed.	Helping patients know how to use the common facilities, no sense of alien in comparison with home, creating peace of mind in treatment. - As per regulation Ensuring safety of the patient
12.	Advising patient and his family on how to take care of his heath by themselves	Helping patient and family to follow direction of the treatment and care
13.	Reporting to head nurse and doctor: after finishing necessary procedure of hospitalization in clinical department and unusual signs of patients (if any). - Supporting doctor in health examination and taking necessary tests; - Perform medical treatment orders.	Coordinating in care and treatment to the patient
14.	Recording medical profile: - Date and time of patient receiving; - Condition of the patient; - Monitoring factors; - Implemented treatment orders;	Ensuring legality

Technical checklist on receiving patient to the hospital

No.	Content	Achievement level		
		Achieved	Not achieved	Remark
Receiving patient at examination department				
1	Nurse communicates with patient			
2	Patient assessment			
3	Health examination by doctor and having treatment orders			
4	In case patient is not hospitalized			
5	In case patient is hospitalized			
Receiving patient at clinical department				
6	Receiving hand-over			
7	Guiding patient to his room			
8	Assessing, observing condition of the patient			
9	Informing detail of treatment orders and care to the patient and his family.			
10	Assessing knowledge of care of the patient			
11	Explaining and guiding to the patient and his family			
12	Providing health education on nursing care to the patient and his family			
13	Reporting to head nurse and doctors;			
14	Supporting doctor in health examination, testing and performing treatment orders.			
15	Recording medical profile			

3. Transferring patient to other department/hospital

During hospital stay period for treatment, depending on condition of patient and improvement of disease, the doctor may decide to transfer the patient to another department or to another hospital that makes the patient and his family feel worry. Therefore, it is necessary that nurse has to support them and explain to them that it will bring better nursing care and medical treatment to the patient after transferring.

3.1. Necessary procedure of transferring to other department/hospital

3.1.1. Transferring to another department:

- Contacting to receiving department to arrange proper time for transferring patient;
- Informing department of general planning to implement necessary procedure to transfer patient and preparing transportation mean for transferring if needed;
- Providing explanation on reason and schedule of transferring to patient and his family;
- Handing over all medical documents of the patient to the receiving department; Informing characters of thoughts and activities of the patient to the receiving department for continuous management; Guiding patient to his new room, and then back to work;

3.1.2. Transferring to another hospital:

- Contacting to the receiving hospital to arrange proper time for transferring; In case of emergency, it is necessary to make a call in advance;
- Informing department of general planning to implement necessary procedure to transfer patient and preparing transportation mean for transferring;
- Preparing medical profile including: summary of medical records and treatment documents (results of ultrasounds, functional exploration and tests, etc.…)
- Informing patient and his family about the date and time of hospital transfer, clearly explaining the reasons for hospital transfer that helps the patient to feel secure;
- When transferring patient to another hospital; nurses have to accompany him and prepare necessary site aids equipment (emergency box…)
- When arriving, nurse has to hand over all medical documents of the patient to the receiving hospital; Informing characters of thoughts and activities of the patient to the receiving hospital for continuous management and treatment; Guiding patient to his new room, signing for confirmation, and then back to work;

3.2. Procedure of transferring patient to another department/hospital

- Medical profile: referral letter, summary of medical record…
- Register book to hand-over patient and drugs
- Transportation means: Stretchers, wheelchairs, cars
- Emergency supplies: oxygen bottles, emergency medicine

3.3. Procedure

No.	Procedure	Reasons
1	Informing, explaining reasons for department/ hospital transfer to patient and his family Guiding transfer procedure to patient and his family	Helping patient understand the situation and reduce their worries
2	- Completing procedure of hospital/department transfer according to current regulations of the hospital	- Helping receiving department/hospital have appropriate nursing care and treatment direction to the patient; - Facilitating department/hospital transfer activity; Transferring all necessary information to the receiving unit.
3	Updating information to receiving department/ hospital	Ensuring effective treatment and care for patients in new departments / hospitals, reducing the risk of errors in treatment and care
4	Managing personal care tools of the patient: clothes, blankets, valuable items.	Avoiding losing assets of the patient
5	Assessing the patient's condition: spirit, vital signs, respiratory obstruction ... and record in the medical profile	Ensuring safety when transferring patient
6	Checking medical tools, equipment and drugs before transferring the patient	Đảm bảo an toàn khi vận chuyển người bệnh
7	Foreseeing possibility/ risks may occur to the patient during transferring.	Knowing how to take precautions to minimize the risk of complications during transport
8	Helping patient to take stretchers or wheelchair to move to the car.	Creating friendship and warms with the patient, then help them feel secure.
9	Transferring patient to the new medical facility	Monitoring patient's condition and timely taking action to unusual signs.
10	Handing-over patient to the receiving medical unit: - Condition of the patient, administrative procedure and technical procedure, assets of patient. - Signing to confirm hand-over to receiving department/hospital.	Ensuring legality

11	Reporting to head nurse/ head of department: - Patient has been transferred to the new department safely; - Date and time of transfer; - Condition of the patient when transferring	Ensuring legality

Technical checklist on transferring patient to another department/hospital

No.	Content	Achievement level		
		Achieved	Not achieved	Remark
1	Inform and guide procedure of hospital/department transfer to the patient;			
2	Complete necessary administrative procedure for department/hospital transfer			
3	Transfer updated information on treatment to the receiving department/hospital			
4	Manage personal tools for patient's care			
5	Evaluate condition of the patient			
6	Check medical tools, equipment and drugs before transferring			
7	Foreseeing possibility/ risks may occur to the patient during transferring.			
8	Helping patient to take stretchers or wheelchair to move to the car.			
9	Transferring patient to the new medical facility			
10	Handing-over patient to receiving unit			
11	Reporting to head nurse/ head of department			

4. Hospital discharge

Hospital discharge plan requires the participation of all health care workers and requires discussion with patients and their families. Nurse needs to determine the needs of patients when discharged from the hospital and check available care facilities in community in accordance with the situation of the patient. Nurse needs to contact the services and monitor the progress of the patient after discharge.

4.1. Procedure of hospital discharge:

- Preparing medical documents of the patient with clear note on date and time of hospital discharge, result of treatment and care.

- Transferring documents of the patient to General Planning Department to finish hospital discharge procedure;
- Informing condition of patient, date and time of hospital discharge, administration procedure to the patient, his family or his organization for greeting him and finishing payment for medical fees;
- Transferring information on treatment, care and prevention to the patient in order to maintain treatment effectiveness. If patient needs to come back to hospital periodically for re-check, it is necessary to inform them the schedule of re-check clearly and solve the patients' questions if any;
- Providing detail explanation on treatment result, treatment method, up-coming treatment at home, feeding and exercise to improve health condition;
- Processing payment procedure for medical fee and informing detail of payment to the patient.

4.2. Necessary documents and tools for hospital discharge

- Medical profile
- Means of transportation and proper supportive tools
  + Means of transportation: wheelchair / stretcher, car
  + Emergency facilities: oxygen bottle, ball squeeze, medicine (in case of serious illness, needs of coming back home from family)

4.3. Procedure

No.	Procedure	Reasons
Preparation for discharge		
1	Advising, providing health education to patient and family on signs/symptoms, complications, information on drug use, medical equipment, feeding and exercise mechanism, nursing care at home or delivering brochure of health education to patient and his family	- Identifying feedbacks from patient and his family timely - Helping patient and his family understand about the disease; - Help patient make self-care at home
2	Informing and explaining reasons for hospital discharge, date and time of discharge to patient and his family	Helping patient prepare for hospital discharge
3	Informing detail of expenses to patients, time and venue for payment	
4	Contacting to heath care service in community	Help them feel secure after discharge
On the date of discharge		
5	Encouraging patient and his family to make questions and discuss on related care issues at home	Helping patient and family understand the way of health care at home.

6	Checking whether patient receives letter of discharge, home treatment orders, re-check schedule from the doctors. Reminding them on re-check schedule and periodic health check schedule.	Supporting patient timely Patient has re-check on schedule
7	Supporting patient to check personal assets, return borrowing tools to the hospital; Guiding patient/ his family to make payment for medical fee	Completing discharge procedure Avoid to forget. Pushing up discharge procedure
8	Assessing patient's condition when discharge	Health monitoring
9	Support to arrange appropriate transportation means in line with patient's condition Say goodbye and wish good health	Ensuring safety of the patient Patient satisfies when discharge
10	Transferring medical profile of the patient to General Planning Department of the hospital Reporting to head nurse on completion of hospital discharge procedure	Maintaining medical record; Ensuring legality
11	Hygiene and disinfection of patient rooms, individual beds after patients leave the hospital.	Creating clean and safe environment in patient's room; preparing to receive new patient.

Technical checklist on hospital discharge

No.	Content	Achievement level		
		Achieved	**Not achieved**	**Remark**
Preparation for discharge				
1	Advising, providing health education			
2	Informing and explaining reasons for hospital discharge, date and time of discharge to patient and his family			
3	Informing detail of expenses to patients, time and venue for payment			
4	Contacting to heath care service in community			
On the day of discharge				
5	Encouraging patient and his family to make questions and discuss on related care issues at home			

6	Checking whether patient receives letter of discharge, home treatment orders, re-check schedule from the doctors.			
7	Supporting patient to check personal assets, return borrowing tools to the hospital; Guiding patient/ his family to make payment for medical fee			
8	Assessing patient's condition when discharge			
9	Support to arrange appropriate transportation means in line with patient's condition Say goodbye and wish good health			
10	Transferring medical profile of the patient to General Planning Department of the hospital Reporting to head nurse on completion of hospital discharge procedure			
11	Hygiene and disinfection of patient rooms, individual beds after patients discharge from the hospital.			

LESSON TEST

1. Select right answer:

Question 1: When receiving patient at the department, nurse has following duties:

A. Preparing room, equipment and tools; supporting doctor during health examination
B. Inviting all patient to enter for examination
C. Prescribe medication after the doctor finishes examination
D. Providing health education to patient

Question 2: After receiving patient in the department, the first work of nurse is:

A. Communicating with patient
B. Checking vital signs
C. Inviting doctor to come for examination
D. Taking blood test

Question 3: When patient is transferred to another department, what should nurse do to support mentally to the patient?

A. Contacting to head nurse, up-coming patient
B. Explaining and informing to help them feel secure
C. Preparing medical documents
D. Preparing transportation means for transferring

Question 4: In case of emergency, when does nurse must complete documents?

A. After coming to emergency
B. Before coming to emergency
C. Before moving patient to clinical department
D. After moving patient to clinical department

Question 5: When arriving to receiving hospital, nurse needs to transfer information to receiving hospital except:

A. Condition of the patient before transferring
B. Condition of the patient during transferring
C. Time of transferring
D. Any treatment action during transferring if any

Question 6: When patient discharges from the hospital, nurse need to do some works except:

A. Checking discharge letter, prescription
B. Instructing patient on issues that need care, monitoring and treatment after discharge from hospital
C. Informing patient/family detail of expenses, date and time of discharge
D. Introducing hospital's regulation

Question 7: Plan of health education for discharged patient, except:

A. Kind of drug, how to use it, need to purchase more if disease returns.
B. Mechanism of feeding, drinking and exercise
C. Sanitation
D. Prevention

2. Case study

Case study 1

Male patient, 50 years old, having peptic ulcer during 5 years. When he came to the hospital, he had blood vomit, black stool, pulse 100 times/minute, blood pressure 85/60 mmHg, breathing rate 24 times/minute, testing red blood cell 3.0T/L; The doctor diagnosed the patient with gastrointestinal bleeding.

1. Can you raise your assessment on the patient's condition?
2. If you are nurse in charge of receiving patients, can you perform how you receive patient in the hospital? (by role play)
3. The patient is transferred from Department of Examination to Internal Department on the 4th floor. Which factors should you pay attention in order to ensure safety of the patient when transferring him to 4th floor? Explain clearly your points.

Case study 2

The patient named H is suffered from a whole-body convulsive fit and signs of respiratory failure, then the doctor decided to transfer him to Resuscitation department. You are nurse who is appointed to transfer him, please clarify:

1. Which action should you take before transferring in order to ensure continuous care to the patient?
2. The distance from Emergency department to Resuscitation department is 200m, which is appropriate transportation mean as you think?

Case study 3

Female patient, 55 years old, weight 65kg, height 1,52m; she often has headache at home. When hospitalization, doctor diagnosed the patient with hypertension disease (blood pressure at the time of hospitalization is 185/95 mmHg. After 15 days with treatment at the hospital, the current condition of the patient is as following: conscious, body temperature 36.3^0C, pulse 70 times/minute, arterial blood pressure 135/85 mmHg, breathing rate 17 times/minute, no headache, having a good appetite. The doctor appoints the patient to discharge from the hospital. In case you are the nurse who directly take care of patients:

1. Give advice to the patient how to use drug and diet at home?
2. Instruct patients about symptoms of disease that need to pay attention at home and when he needs to go to the hospital?

Answers:

1. Select right answer:

Question 1: A	Question 2: A
Question 3: B	Question 4: A
Question 5: C	Question 6: D
Question 7: A	

Competency based assessment checklist for Receiving, transferring and discharging patients

No.	Competency	Achievement level		
		Can do independently without support (2)	**Can do with support (1)**	**Cannot do or do wrongly (0)**
1	Strictly follow the process when receiving patients at the examination department/at the clinical department			
2	Strictly follow the process of patient's transfer to another department, another hospital			
3	Strictly follow the process of hospital discharge			
4	Demonstrate appropriate communication skills, attentive behavior, complying with regulations when receiving, transferring and discharging patients.			

REFERENCES

1. Bộ Y tế (2010). *Hướng dẫn thực hành 55 kỹ thuật điều dưỡng cơ bản,* Nhà xuất bản giáo dục Việt Nam
2. Bộ Y tế (2012). *Bài giảng kỹ năng điều dưỡng,* Nhà xuất bản Y học, Hà Nội

LESSON 10

VITAL SIGN MONITORING

OBJECTIVE

1. Perform the techniques for monitoring pulses, respiratory rate, blood pressure, body temperature properly and suitable with patient's condition (competency 2.3; 2.4; 3.2; 4.2; 4.3; 4.5; 5.2; 5.3; 6.1; 6.2; 16.3; 18.3; 24.4; 25.2)
2. Be able to assess abnormal vital signs and make suitable decision for dealing with (competency 4.1; 3.2; 9.1; 9.2; 9.4)
3. Give consultancy to patients and patient families how to monitor and take care in case of abnormal vital signs (competency 4.6).

CONTENTS

1. Introduction

Vital signs is a term that mentions vital functional indicators in human body including: body temperature, pulse, blood pressure, respiratory rate and oxygen saturation concentration in the blood, aiming at assessing functions of circulation system, respiratory of the body. Vital signs need to be assessed when patient visits to receive examination, treatment in the healthcare settings and during home care.

Nurses should make the nursing intervention suitable with patient's conditions and monitor patient's response to therapeutic and nursing care methods based on results of vital sign assessment. When providing home care service, nurse should give instruction to patient and patient family to monitor basic vital signs by themselves to help them monitor their health status at home.

Vital signs are affected by a number of factors such as age, gender, weather, environment etc. Therefore, nurses have to record all the relevant factors when assessing vital signs.

2. Monitor body temperature

2.1. Concept of body temperature:

Body temperature is a temperature of the body, it differs depending on each part of the body.

- Central body temperature: is a temperature in the parts located deeply inside the body that directly affect to biological reactions happened inside the body. It does not change according to the temperature of environment. Central body temperature is often measured at three positions:
  + At the rectum: the most stable, it varies from 36.3 - 37.1^{0}C in normal condition.
  + At the mouth: body temperature is lower than at the rectum 0.2 – 0.6^{0}C.

+ At the armpit: lower than at the rectum 0.5 - 1^0C, large variant, convenient for monitoring patient's body temperature.

- Peripheral body temperature: is a skin temperature, it is affected by environment temperature, peripheral body temperature also changes depending on measurement position. For example, it is 33.5^{0}C at the forehead, 32^{0}C on the palm, 28^{0}C on instep.

2.2. The factors influenced to the body temperature

- Age: the higher age the more decreased body temperature.
- Gender: female's body temperature increases 0.3 – 0.5^{0}C during middle period of menstrual cycle, end stage of pregnancy, body temperature may increase 0.5 – 0.8^{0}C.
- Muscular movement: the more muscular movement status the more increase of body temperature.
- Environment temperature: it is too hot or too cold, body temperature also increases or decreases.
- Disease condition: body temperature increases in almost infection (in cholera, viral hepatitis, body temperature may reduce at acute phase).

2.3. Disorder of body temperature: it is a consequence of imbalance between thermal generation and discharge, this imbalance may cause two conditions: hyperthermia or hypothermia.

2.3.1. Hypothermia: a thermal loss condition of the body that cause disorder of thermal generation and discharge makes body temperature decreased. There are 3 kinds of hypothermia:

- Physiological hypothermia: it is seen in hibernated animals.
- Artificial hypothermia: active induced hypothermia.
- Pathological hypothermia: due to low environment temperature or disease status of the body. In clinical setting, patients have the sign of hypothermia when rectal temperature is less than 36^{0}C.

2.3.2. Hyperthermia: hyperthermia is a condition that the body accumulates heat, limits thermal discharge to the environment or increase of thermal generation, sometimes, it combines these two conditions, including:

* Heat acquisition: it is a condition of hyperthermia due to too high temperature of the environment causing limitation of thermal discharge: it is commonly seen in heat stroke or sun stroke.
* Fever: is a condition of hyperthermia due to disorder of body temperature regulation center under effects of damaged factors, usually due to infection: in clinical setting, fever is a status that patient's body temperature increases higher than normal range (more than 370C measured at the rectum). There are 4 levels of fever
  + Slight fever: when body temperature is from 37 - 38^{0}C.
  + Medium fever: when body temperature is from 38 - 39^{0}C.
  + High fever: when body temperature is from 39 - 40^{0}C.
  + Extremely high fever: when body temperature is more than 40^{0}C.

2.4. Basic principles when measure body temperature:

2.4.1. Carry out principles of vital sign measurement

- Before measuring vital signs, patient should take rest at least 15 minutes
- Check devices, tools before implementing the technique.
- When vital signs are measured, do not perform any procedure on patient.
- Normally, monitor vital signs twice per day: in the morning and afternoon, interval of 8 hours. Special case, monitoring time may be every 15 minutes, 1 hour, 2 hours, 3 hours etc.
- If results of patient's vital signs are not normal, take care and report physician to deal with timely.
- Record results in monitoring sheet to ensure honest and privacy according to regulation
  + Pulse: red color
  + Temperature: blue color
  + Blood pressure: red color or blue color
  + Respiratory rate: blue color or black color

2.4.2. For measurement of body temperature:

- Place thermometer in proper position, follow regulation on body temperature measurement time for each kind of thermometer.
- Consider relevant factors that make wrong result of body temperature measurement: environment temperature, measurement position, type of thermometer.
- Ensure privacy and comfortableness when measure body temperature in patient (in anus).
- Select suitable and safe body temperature measurement position for patient:
  + Do not perform oral temperature measurement in infants, mental illness patients and old patients.
  + Do not perform anal temperature measurement for those, who suffer from diarrhea, constipation, injury at anal site and hemorrhoid.
- Read result accurately right after measuring body temperature.
- If there is a suspicion with the result, reassess patient or use another device to measure temperature at another position for comparison.

2.5. Some common positions for body temperature measurement

Body temperature measurement position	Advantages	Limitation/ disadvantages
Armpit	- Safe, cheap device - Applied to all patients	- Longer measurement time - Thermometer must be kept at proper position
Skin	- Not costly - Safety, not invasive - Applied to newborn babies	- May be affected by environment temperature
Mouth	- Easy to measure - Convenient for patient - Accurate result	- Not applicable for patients having oral injury, trauma, epilepsy, chill, infants, small children, patients with conscious disorder, incorporative patient.
Anus	Give accurate result	- Not applicable for those, who suffer from diarrhea, injury/ surgery, bleeding in anus, sphincteric disorder. - It is not recommended to measure daily vital signs for newborn.
Ear	- Easy to access measurement site - Give accurate result because tympanum is close to body temperature regulation center - Quick measurement time (from 2-5 seconds)	- Patients, who have media otitis or sticky cerumen may cause wrong result. - Difficult to place at correct position in newborn, infants and children less than 3 years old.

2.6. Practical procedure for body temperature measuring skills

No	Implementation steps	Reasons
1	Nurse: wear uniform, hand rub/ washing.	
2	Prepaare, arrange devices properly: Thermometer suitable for patient, recording sheet, pens, ruller; gauge, dry cotton, etc - Curtain: if any	
3	Patient assessment and preparation - Identify correct patient, inform and explain to make patient feel secure. - Assess patient: Cooperation, measurement site, influenced factors - Say necessary things to patient: take rest 15 minutes before measurement, patient should defecate in case of anal measurement.	- Patient understand benefits of body temperature measurement; correct preparation to ensure accurate measurement result

	Body temperature measurement by mercury – in – glass thermometer	
4	Take thermometer out of box, shake thermometer down in the way that mercury marking is lower than 35^0C.	Avoid wrong result
5 *	Patient's posture, placement of thermometer and length of measurement for positions	
	Axillary body temperature measurement - Patient sits or lies down - Nurse dry the armpit using dry gauge - Place thermometer under patient's arm, thermometer towards to breast side, close the arm along the body, place forearm on abdomen. - Keep thermometer within 10 minutes	- Not make wrong result - Ensure accurate measurement of body temperature.
	Oral body temperature measurement - Patient sits or lies down - Nurse wear clean gloves (if necessary) - Ask patient open his/ her mouth, curl his tongue, place mercury bulb under the tongue or next to the cheek. - Ask patient do not curl the tongue, use the lips to keep thermometer in 5 minutes.	- To prevent infection via excretion - Ensure to measure accurate body temperature measurement.
	Anal body temperature measurement - Patient lies on the left side - Apply lubricant on the tip of thermometer - Nurse stands opposite to the patient's hip, exposure the measurement site - Place thermometer in patient's anus towards to umbilical side, insert gently inside with the depth of: + Infant: 1.5 cm + Small children: 2.5 cm + Adult: 3.7 cm - Keeping thermometer in 5 minutes	- Do not harm patient's anus - Ensure accurate of body temperature measurement.
6	Take out thermometer and read result accurately (do not hold mercury bulb).	- Hold mercury bulb will affect the result of measurement
7	Use cotton/ gauge to clean mercury bulb Put thermometer in astray/ cup containing disinfectant	
8	Assess body temperature	Assess whether body temperature is normal or abnormal
9	Inform results and help patient come back comfortable posture	
10	Support nursing interventional measures (if patient has abnormal body temperature – fever or hypothermia)	Nursing management

11	Write down in record/ monitoring sheet Write down date, time measuring body temperature result in medical record /monitoring sheet Report physician, healthcare worker abnormal result	- Keep to monitor progress of patient's body temperature - Collaborate for management and nursing care
	Measurement of body temperature by electrical thermometer	
4	Take thermometer out of box, press start button within 7 seconds until having the sound "beep"	To turn on thermometer
5 *	Place patient at suitable posture depending on measurement position Place thermometer in measurement site: in the mouth, armpit (same as measurement position using mercury thermometer) or forehead. Keep thermometer in position sufficient length of measurement (about 20 – 25 seconds), until hearing the sound "beep, beep, beep) and temperature indicator appears on the screen	Correct position according to the type of thermometer Ensure accurate body temperature measurement
6	Reading results	
7	Clean, disinfect thermometer	To prevent infection
8	Assess body temperature	- Assess body temperature normal or abnormal
9	Inform result and help patient comeback comfortable posture	
10	Provide nursing care and consultancy (if patient has abnormal body temperature, fever or hypothermia)	Management of nurse
11	Write down the result in record: - Write date, time, result of body temperature measurement in medical record/ nursing care sheet - Report physician, relevant healthcare workers if there is abnormal result	- Keep to monitor progress of patient's body temperature - Collaborate to manage, provide nursing care

Note: If step 5 is not implemented properly, technical requirements will not be attained

2.7. Checklist for body temperature measurement

No	Contents	Achievement level		
		Achieved	Not achieve	Remark
1	Nurse: wear uniform, hand rub/ washing.			
2	Prepare, arrange devices Curtain			
3	Patient assessment and preparation			
4	Take thermometer out of the box, prepare thermometer			
5	Patient's posture, the way of thermometer placement and measurement time for different type of thermometers and measurement site			
6	Take thermometer out, read result			
7	Do hygiene of thermometer, Put thermometer in astray/ glass/ bag			
8	Assess body temperature			
9	Inform result, help patient come back comfortable posture			
10	Provide nursing care and consultancy			
11	Write down in medical record/ nursing care sheet - Report when there is abnormal result			

3. Pulse monitoring

3.1. Concept: pulse is a rebound feeling when put a finger in the artery (pulse beats). Pulse beats not because of blood flows to the pulse touching site. It causes by vibration generated from aortic when the heart is at systolic phase.

The more vibration wave spreads the weaker wave will be and it is no longer exist at capillary system. Therefore, it is impossible to see the pulse beat in the vein.

- ***Pulse rate:*** Normally, pulse rate is equivalent to contraction rate of the heart. Pulse rate may be different between this person to another one and it is influenced by a number of factors:
- Normal pulse rate: 70-80 beats per minute in adult.

  Newborn: 120 – 140 beats/minute; one year old child: 100 – 130 rate per minute; 5 – 6 year old children: 90 – 100 beats/ minute;; 10 – 15 years old: 80 – 90 beat/ minute; elderly: 60 - 70 beats/ minute.
- ***Rhythm of pulse:*** is an interval between beatings; normal rhythm is normal if the interval of beats is the same and regular.

3.2. Influenced factors: Some factors influences to the pulse

- Psychological status, feeling and activity of the body influence to pulse rate. The pulse often increases when patient is moved.
- Age: pulse rate reduces gradually from birth to the old age.
- Gender: pulse of female is quicker than male ((7 - 8 beats/ minute).
- Activity, exercise: pulse rate increases when having activity, exercise because of more heart contraction to meet the needs of energy consumption.
- Eating: pulse rate increases after eating due to increase of metabolic process.
- Time: pulse rate in the afternoon is quicker than in the morning.
- Medicine: Some medicine may make pulse rate increased or decreased, for example, narcotic drug makes pulse rate decreased, Atropine makes pulse rate increased.

3.3. Abnormal pulse:

- Rapid pulse: pulse rate is more than 90 beats/ minute, it is seen in infections, heart disease, Basedow, administration of atropine sulfate...
- Slow pulse: pulse rate is less than 60 beats/ minute, it is seen in heart disease, digitalin poison, jaundice due to cholestasis ...
- Irregular pulse: it is seen in heart failure, …

3.4. Principles in taking pulse

3.4.1 Principle for monitoring vital signs (refer 2.4.1)

When taking pulse, it is necessary to follow principles for monitoring vital signs

3.4.2. Principles of counting pulse

- Use 2 - 3 fingers (forefinger, middle finger and ring finger) to count the pulse, do not use the thumb to count the pulse.
- Pulse must be counted fully in one minute
- When counting the pulse, note the frequency, intensity, rhythm
- Monitor pulse before and after usage of medication affecting to cardiovascular.
- When irregular or abnormal pulse is measured, count the pulse and compare especially those, who have cardiovascular disease.
- Identify the necessity for evaluating short pulse:
  + When count radial artery, heart rate is not regular.
  + Patient has the signs of cardiac output decrease: dyspnea, extremely tired, chest pain, and palpitation. Those signs show abnormality of heart function.
- Ensure privacy during counting heart rate and auscultation of heart.
- If pulse is not regular, combine pulse palpation and heart auscultation.

3.5. Position of pulse palpation:

Pulse can be palpated at any position that has peripheral artery located under the skin and on a firm tissue. Pulse can be palpated clearly at following positions:

- Temporal artery: is common to take pulse in children if radial artery cannot be palpated.
- Carotid artery: when taking pulse in this position, it is easy to stimulate carotid sinus leading to slow pulse rate, especially in elderly, who have heart disease. Therefore, pulse should be taken at one side of neck by slight pressing on artery
- Apex cordis: pulse is taken at apex cordis's position, it is an actual contraction frequency of heart.
- Brachial artery: is usually used in measurement technique of arterial blood pressure.
- Femoral artery: pulse is taken at the middle of the line connecting incisura vertebralis superior and pubis in inguinale. It is used when radial artery cannot be taken and to evaluate lower limb's circulation.
- Popliteal artery: when taking pulse at this position, patient's leg at stretched position.
- Posteria tibia artery: take pulse at interior corn.
- Dorsal artery of foot: pulse is taken at connection line between interior and exterior corns with the middle line between big toe and the second toe.
- Radial artery: is the most commonly used because it is easy to identify, convenient in most of patients.

3.6. Practical procedure for counting pulse/heart rate

Procedure for counting radial artery and heart rate

No	Implementation steps	Reasons
1	- Nurse wears uniform, wash hands. - Check, arrange devices: timekeeper, monitoring sheet, red ball poinpen, ruler, stethoscope.	
2	Patient assessment and preparation - Identify correct patient, inform and explain to make patient feel secure. - Assess patient: cooperation, influenced factors - Tell patients necessary things: take rest before taking pulse 15 minutes.	- Patient understand about the purpose of pulse monitoring; well prepare to ensure accurate result.
Counting radial artery		
3	Patient position: - Sit: comfortable, keep hand straight, place hand on the desk/ chair equivalent to the height of chest. - Supine: place hands along to the body	Help patient comfortable, nurse perform technique easily and give acurate result.

4	Place a pillow under forearm – wrist of patient	Hand of patient is not painful due to pressing hand on the desk/ chair
5	Identify the position for taking pulse, place 3 típ of fingers on patient's adial artery NB (index finger, middle finger and ring finger; do not use a thumb to take pulse), press slightly	To take pulse clearly and accurately
6 *	Count pulse: when touching beat of pulse, look at timekeeper and take pulse in one minute: assess frequency, intensity, rhythm, and tension.	- Count and assess pulse
Count heart rate		
3	Patient's posture: supine or sitting, exposure sternum and left chest	Convenient to identify the position for auscultation the heart rate
4	Identify the position of heart apex: place fingers along intercostal cavity 4,5 at the right side of chest, feel slight beating in the area 1 to 2 cm at heart apex position	The clearest heart sound can be listened at this position
5	Wear the ear tip of stethoscope, make warm of diaphragm (using 2 palms) within 5 – 10 seconds (in cold weather);	
6 *	- Place diaphragm at heart apex position on the left chest wall. - Concentrate to hear heart sound T1, T2 (normal sound) After listening clearly 2 heart sounds T1 and T2, use time keeper to count within 1 minute.	Listen and realize heart sound
7	Assess pulse/heart rate	Identify normal or abnormal pulse/heart rate
8	Inform result and help patient comeback comfortable posture	- Patient know about his/ her pulse/heart rate
9	Provide nursing care and consultancy (if patient as abnormal pulse /heart rate)	Nursing management
10	Write down results on medical record/ nursing care sheet - Write down time, date, result of pulse/heart rate in medical record/ monitoring sheet - Inform physician, relevant healthcare workers when there is abnormal result	- File and monitor progress of pulse/heart rate of patient - Collaborate to manage and provide nursing care

Notice: If step is not implemented, requirement will not be attained.*

3.7. Checklist for counting pulse technique

No	Contents	Achievement level		
		Achieved	Not achieve	Remark
1	Patient assessment and preparation			
2	Patient's posture			
3	Place a pillow under the arm – wrist of patient			
4	Identify the site for taking pulse			
5	Count pulse in 1 minute: assess frequency, intensity, rhythm, tension.			
6	Assess pulse			
7	Inform result and help patient comeback comfortable posture			
8	Provide nursing care and consultancy (if patient has abnormal pulse)			
9	Write down results on medical record/ nursing care sheet			
10	Ghi kết quả vào hồ sơ/ phiếu theo dõi			

Checklist for skill counting heart rate

No	Contents	Achievement level		
		Achieved	Not achieve	Remark
1	- Nurse wears uniform, wash hands. - Check, arrange devices			
2	Patient assessment and preparation			
3	Patient's posture			
4	Identify the position for taking pulse and count heart rate			
5	Warm up diaphragm, wear ear tip			
6	Count heart rate in 1 minute: assess frequency, rhythm etc.			
7	Assess heart rate			
8	Inform result and help patient comeback comfortable posture			
9	Provide nursing care and consultancy (if patient has abnormal heart rate)			
10	Write down results on medical record/ nursing care sheet			

4. Monitor respiratory rate

4.1. Concept:

Respiratory rate (or respiratory frequency) is a number of breath (including inspiration and expiration) in every minute. Normal respiratory rate: smooth, regular respiration without sensation and it is done via nose gradually.

- Breathing frequency in adult normally from 16 - 20 beats/ minute, regular rhythm, average amplitude, respiratory intensity is stronger during inspiration phase but time is shorter during expiration.
- In children: breathing frequency change by the ages.

Newborn period: 40 – 60 times/ minute; < 6 months: 35 – 40 times/ minute; 7 – 12 months : 30 – 35 times/ minute; 2 – 3 years old : 25 – 30 times/ minute; 4 – 6 years old : 20 – 25 times/ minute; 7 – 15 years old : 18 – 20 times/ minute.

4.2. Influenced factors to respiratory rate: Respiratory rate changes when a person is still healthy, it calls as physiological change of respiratory rate.

- Tachypnea: respiratory rate is more rapid and deeper than normal and it is commonly seen in following case: exercise, hot weather, hot and muggy, moved.
- Bradypnea: owing to have sport exercise, QiGong exercise, some people have slower respiratory rate than normal person.
- Due to intension of a person: respiratory rate also can be slower or quicker.

4.3 Respiratory rate disorder: In almost disease cases, respiratory rate changes in terms of frequency, amplitude, so called as dyspnea. Breathing becomes heavy, patient feels uncomfortable, they have to pay attention to breath, it is a sign of dyspnea.

- Rapid difficult breathing
- Slow difficult breathing
- Irregular breathing

* Cheyne – Stokes respiration: common seen in cerebral hemorrhage, brain tumor, poison, hypeureamia etc.

* Kussmaul respiration: common seen in coma induced by diabetes mellitus.

4. 4. Principle of respiratory rate monitoring

4.4.1 Principle of monitoring vital signs (refer 2.4.1)

When monitor respiratory rate, it requires to follow principles of monitoring vital signs

4.4.2. Principle of respiratory rate monitoring:

- Do not let patient know that you are counting respiratory rate. For children, respiratory rate count should be done when children lie still, ideally when they sleep.

- Count respiratory rate in children before taking other vital signs.
- Ensure patient in comfortable posture.
- Count respiratory rate in full one minute. Pay attention to intensity, rhythm when patient has respiratory rate disorder, heart and respiratory diseases,
- It is necessary to consider history, factors relating to patient's tachypnea, bradypnea, irregular breathing.

4.5. Practical procedure for monitoring respiratory rate skill.

No	Implementation steps	Reasons
1	Nurse washes hands. Check, arrange devices: timekeeper, monitoring sheet, color ball point pen	
2	Patient assessment and preparation - Identify correct patient, inform and explain to make patient feel secure. - Assess patient: Cooperation, Influenced factors - Tell patient necessary things: take rest before monitoring 15 minutes	- Patient understands the purpose of monitoring; prepare properly to ensure accurate result
3	Comfortable posture: sitting or lying with bed head elevated at angle of 45 - 60^0 Exposure chest, abdomen (if necessary) – when counting respiratory rate in children	Observe clearly chest and abdomen when monitoring respiratory rate
4	Place patient's hand cross on abdomen or lower part of chest, nurse holds the patient's hand similar like taking pulse	To let patient does not pay attention during monitoring respiratory rate.
5	Observe a cycle of inspiration – expiration as a breath rate: count breath rate in 1 minute	
6	Assess rhythm, superficial, breathing type, mobilization of auxiliary breathing muscle	Know normal or pathological breathing status
7	Inform result and help patient comeback comfortable posture	- Patient know about his/ her respiratory rate
8	Provide nursing care and consultancy (if patient has abnormal respiratory rate)	Management of nurse
9	Write down results on medical record/ nursing care sheet - Write down date, time of monitoring, result of monitoring in medical record/ monitoring sheet - Report relevant doctors, healthcare workers if the result is abnormal	- File and monitor progress of patient's respiratory rate - Collaboration in management, nursing care

4.6. Checklist of respiratory rate monitoring

No	Contents	Achievement level		
		Achieved	Not achieve	Remark
1	Nurse washes hands. Check, arrange devices:			
2	Patient assessment and preparation			
3	Posture, exposure chest, abdomen (if necessary)			
4	Place patient's hands crossing on abdomen or lower part of chest, nurse's hand put on patient's hand.			
5	Observe, count in 1 minutes			
6	Assess rhythm, superficial, deep level, respiratory style, etc.			
7	Inform result			
8	Provide nursing care and consultancy			
9	Write down results on medical record/ nursing care sheet			

5. Arterial blood pressure measurement.

5.1. Definition:

* Arterial blood pressure is a pressure of blood on arterial wall, it is formed by following factors:
  - Contraction of heart.
  - Blood output in the artery.
  - Peripheral resistance.
* Arterial blood pressure has two values.
  - Systolic blood pressure (maximal blood pressure): is the highest blood pressure inside artery when the heart contracts.
  - Diastolic blood pressure (minimal blood pressure): is a minimal pressure of blood when the heart is at diastolic phase.
  - Blood pressure measurement unit is a mercury millimeter (mmHg).
* Normal indicator of blood pressure: for adult
  - Normal range of maximal blood pressure (systolic blood pressure): 90 – < 140 mmHg
  - Normal range of minimal blood pressure (diastolic blood pressure): 60 – < 90 mmHg

5.2. Influenced factors to blood pressure:

- Age: blood pressure trends increased by age, children often have low blood pressure measurement, it gradually increases in adults, blood pressure in the elderly is often higher than younger one.
- Gender: at the same age, blood pressure in female is lower than in male.
- Exercise: may make blood pressure increased immediately.
- When contact with healthcare workers, systolic blood pressure of patient may increase more 20 – 30mmHg, diastolic blood pressure increases more 5 – 10mmHg, it is called as "white coat hypertension".
- Emotion: worry, afraid, excited feeling also causes hypertension.
- Blood pressure is higher in an obesity person than average stature one.
- Environment: noisy, crowded, narrow may cause temporary hypertension.
- Drugs:
  + Vasoconstrictor causes hypertension.
  + Vasodilator causes hypotension.
  + Narcotic drugs cause hypotension.

5.3. Pathological changes of blood pressure

5.3.1. Hypertension:

When measure blood pressure according to Krotkof method in adult, if systolic blood pressure ≥ 140mmHg or diastolic blood pressure ≥ 90mmHg, it is called as hypertension.

Hypertension is defined when average blood pressure ≥ 110mmHg, or when measuring continuous blood pressure in 24 hours ≥ 135/85mmHg.

+ When blood pressure increases ≥ 220/120mmHg it is called as "paroxysmal hypertension attack".

WHO (2003), classification of hypertension in adult (from 18 years old) as follows

Blood pressure and hypertension level	**Systolic blood pressure (mmHg)**	**Diastolic blood pressure (mmHg)**
- Optimal - Normal - Normal - high	< 120 < 130 130 - 139	< 80 < 85 85 - 89
- Hypertension level 1 - Hypertension level 2	140 – 159 and/ or Diastolic blood pressure is 90 – 99 ≥ 160 – 179 and/ or Diastolic blood pressure is 100 - 109	
- Hypertension level 3	≥ 180 and/ or Diastolic blood pressure is 110	

5.3.2. Hypotension:

Systolic blood pressure< 90mmHg and Diastolic blood pressure < 60mmHg is called as Hypotension.

Some people always have hypotension < 95/60mmHg without any signs of disease.

Hypotension accompanied with pulse collapse or shock (Systolic blood pressure ≤ 80 mmHg) is a critical condition, it should be treated timely otherwise patient's life will be threatened.

5.3.3. Low pulse pressure:

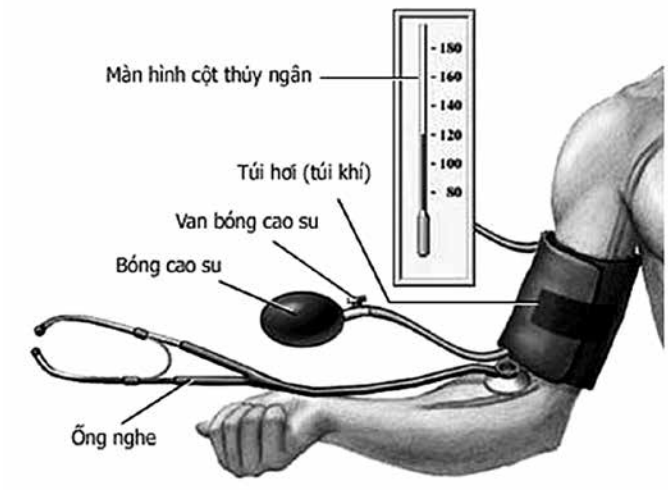
Discrepancy between systolic blood pressure and diastolic blood pressure decreases ≤ 20mmHg is called as low pulse pressure.

5.4. Principle of blood pressure measurement

5.4.1. Perform principles of monitoring vital signs (refer 2.4.1)

5.4.2. For measurement of blood pressure

- Select suitable position for blood pressure measurement
- Put the arm same height with heart
- Size of cuff must be fit the limb:
  + The width of cuff must be larger more than 20% of measured limb or 40% of measured limb circumference and 2/3 length of measured limb



Mercury sphygmomanometer

- Notice for patients, who has the risk of standing position hypertension
- Blood pressure should be measured regularly in those, who have heart and respiratory diseases
- Report abnormal blood pressure result to physician, nurse on duty.
- If patient uses cafein, measurement should be done after 30 minutes.
- Prepare suitable device, correct measurement technique, posture to avoid wrong result of blood pressure.
- Make timetable for patient to measure blood pressure.

5.5. Sites for blood pressure measurements and types of sphygmomanometer.

5.5.1. Sites for blood pressure measurement

- **Arm:** is the most common site for measurement of blood pressure.
- **Wrist:** device is smaller, suitable for fat person because the size of wrist does not change much.
- **Calf:** cuff is placed on the calf, stethoscope is placed on posteria tibia artery.
- **Thigh:** patient at lying prone position, cuff is placed on middle of thigh, stethoscope is placed on popliteal site.

The site of IV route , dialysis bypass arm should not be used for measurement Blood pressure.

5.5.2. Types of sphygmomanometer: there are a number of sphygmomanometer types used in clinical setting. Each type of sphygmomanometer has its advantages and limitations. Nurse should know in order to choose suitable sphygmomanometer to measure blood pressure for patient.

Type of sphygmomanometer	Advantages	Limitations
Mercury sphygmomanometer	- High accurate level, it is a standard medical device to calibrate quality of other sphygmomanometers	- Bulky - Easy broken mercury column causes harm and dangerous hazard
Manual sphygmomanometer	- Popular, not heavy - The result is not as accurate as mercury sphygmomanometer	- Careful preservation should be done, springs inside sphygmomanometer will be decreased and causes inaccurate result.
Electronic sphygmomanometer 	- Easy for usage - It is effective when performing several measurements - No need stethoscope - Patient can measure blood pressure conveniently at home.	- High cost - There must be electrical source - Sensitive with movement outside, it should not be used for convulsion patient - There might be error

5.6. Technical procedure for measurement of arterial blood pressure.

5.6.1. Procedure for measurement of arterial blood pressure on the arm using mercury or manual sphymamonameter

No	Implementation steps	Reasons
1	Nurse wears uniform, wash hands. Check, arrange devices: Sphymamonameter, stethoscope, monitoring sheet, color ball point pen	

2	Patient assessment and preparation - Identify correct patient, inform and explain to make patient feel secure. - Assess patient: Cooperation, Influenced factors - Ask patient necessary things: Take rest before measuring blood pressure 15 minutest, do not drink coffee etc…	- Identify correct patient - Ensure accurate result
3	Suitable posture: - Supine with straight head (do not use pillow), place measured arm along the body or spread arm, roll up sleeve to the armpit. - Comfortable sitting position, place hand on the desk equivalent to the height of hear	Correct posture will give accurate result
4	- Wrap cuff far from the site of stethoscope 3 - 5 cm; - Place sphygmomanometer equal to the heart if it is a mercury one; if it is a manual sphygmomanometer manometer should be placed on the cuff.	
5	- Identify pulseless moment: use one hand to palpate pulse at elbow, use another hand to inflate the cuff until there is no pulse tension – read the number of mmHg at pulseless moment . - Place diaphragm of stethoscope on artery at ben of elbow; wear ear tips of stethoscope in 2 ears	- Identify inflation level
6	Inflate the BP cuff: twist the valve of elastic bulb, inflate BP cuff until pulseless point, inflate 30 mmHg more	Do not overinflate BP cuff, it cause uncomfortable condition for patient
7	- Deflate BP cuff gradually, hear and observe mercury column or look at manometer until listen to the first beat. It is maximal à blood pressure (systolic blood pressure). - Continue to deflate BP cuff until listen to the change of tone or the last beat sound. It is minimal blood pressure. Deflate BP cuff totally (manometer become zero number) after taking minimal blood pressure	Identify maximal blood pressure (systolic blood pressure) Identify minimal blood pressure (diastolic blood pressure)
8	Measure blood pressure in second time, after the first time from 1 – 2 minutes; measurement method is the same as the first time	To redefine blood pressure
9	Remove BP cuff, fold the mercury box Tidy up devices	
10	Assess blood presure, compare with previous measured data	To assess normal or abnormal blood pressure
11	Inform result and help patient comeback comfortable posture	- Patient knows his/ her own blood pressure

12	Provide nursing care and consultancy (if patient has abnormal blood pressure)	Management of nurse
13	Write down results on medical record/ nursing care sheet - Write down date, time of monitoring, result of monitoring in medical record/ monitoring sheet - Report physician, healthcare worker when there is an abnormal result	- File and monitor blood pressure progress of patient - Collaborate to provide management and nursing care

Note: If * is performed incorrectly,it will not meet the technical requirement

5.6.2. Procedure for measurement of arterial blood pressure by electronic sphygmomanometer

No	Implementation steps	Reasons
1	Nurse wears uniform, wash hands. Check, arrange devices: Sphymamonameter, stethoscope, monitoring sheet, color ball point pen	
2	Patient assessment and preparation - Identify correct patient, inform and explain to make patient feel secure. - Assess patient: Cooperation, Influenced factors - Ask patient necessary things: Take rest before measuring blood pressure 15 minutest, do not drink coffee…	- Identify correct patient - Ensure accurate result
3	Posture: patient sits or lies; Place device equally to position of heart	Correct posture will provide accurate result
4	- Check electrical resource of the device	
5	- Wrap the cuff on the upper arm or twist (depend on type of sphygmomanometer)	
6	- Turn on Start button, the device will automatically measure and disappear the result of blood pressure.	
7 to 12	The following steps are similar to steps 8 to step 13 of the procedure for blood pressure measurement using manual sphygmomanometer	

5.7. Checklist for measurement of brachial blood pressure by mercury and manual Sphygmomanometers

No	Contents	Achievement level		
		Achieved	Not achieved	Remark
1	Nurse wears uniform, wash hands. Check, arrange devices:			
2	Patient assessment and preparation			
3	Suitable posture: supine or sitting			

4	- Place cuff - Position sphygmomanometer			
5	- Identify pulseless point: - Place diaphragm of stethoscope on brachial artery, wear stethoscope			
6	Inflate BP cuff until pulseless point, inflate 30 mmHg more			
7	- Deflate cuff, identify maximal, minimal blood pressure, deflate BP cuff totally			
8	Measure blood pressure second time			
9	Tidy up devices			
10	Assess blood pressure			
11	Inform result and help patient comeback comfortable posture			
12	Provide nursing care and consultancy			
13	Write down results on medical record/ nursing care sheet			

Checklist for measurement of arterial blood pressure by electronic sphymamonameter

No	Contents	Achievement level		
		Achieved	**Not achieved**	**Remark**
1	Nurse wears uniform, wash hands. Check, arrange devices:			
2	Patient assessment and preparation			
3	Posture: patient sits or lies; Place device equal to heart position			
4	- Check the electrical source of the device			
5	- Wrap BP cuff on upper arm or wrist of patient (depending on type of device)			
6	- Turn on Start button, the device will automatically measure and display the result of quả blood pressure.			
7	Measure blood pressure second time			
8	Tidy up devices			
9	Assess blood pressure			
10	Inform result and help patient comeback comfortable posture			

11	Provide nursing care and consultancy			
12	Write down results on medical record/ nursing care sheet			

LESSON TEST

1. Select the most correct answer

Question 1. Risk of hyperthermia will be thought of in which following cases

A. Result of taking axillary body temperature of 37.3^0C, right after full eating

B. Result of taking axillary body temperature of 37.5^0C, right after exercise

C. Result of taking axillary body temperature of 37.4^0C, right after waking up

D. Result of taking axillary body temperature of 37.4^0C, in noon time of summer.

Question 2. A five – years – old baby Nguyen Thi Lan suffered from cough and fever at home. She was taken by her mother to visit hospital. Nurse in reception room take body temperature. She cries, struggles and does not allow to measure her body temperature. In this case, which is the site for taking body temperature chosen by nurse?

A. Axillary body temperature measurement

B. Anal body temperature measurement

C. Oral body temperature measurement

D. Forehead body temperature measurement

Question 3. What is a prioritized measure to carry out when patient has high fever and convulsion

A. Use medication for reducing body temperature, cool compression

B. Place anti-febrile medication in anus

C. Use antibiotics and anti-convulsion medications

D. Wipe cool towel, use antibiotics

Question 4. Where should you take pulse in patients who are in emergency condition and having rapid pulse

A. Carotid artery

B. Temporal artery

C. Dorsal artery

D. Radial artery

Question 5. Eating, leaving regime helps to prevent hypertension, EXCLUDE

A. Eating by habit, dividing into several small meals

B. Weight loss (in case of overweight)

C. Regular exercise

D. Stop smoking, drinking

Question 6. When do you count the most accurate respiratory rate in children

A. After measuring body temperature

B. After giving injection

C. After measuring blood pressure

D. Before performing procedure and taking other vital signs

2. Assess vital signs

Result of vital sign monitoring of some patients at Internal Medicine department of hospital X as follows:

No	Name of patient	Gender/ Years old	Vital signs			
			Pulse	HAĐM	Body temperature	Respiratory rate
1	Doan Ngoc Hai	Male 67 years old	90 beats/ minute	140/87 mmHg	36.7^0C (axilliary measurement)	18 times/ minute
2	Hoang Van Nga	Female 6 years old	130 beats/ minute	Not measure	37.2^0C (anal measurement)	30 times/ minute
3	Nguyen Hai Nam	Nam 35 years old	58 beats/ minute	117/70 mmHg	36.5^0C (axilliary measurement)	15 times/ minute

Question: Would you please assess vital signs of the above mentioned patients.

3. Practical scenario.

Scenario 1:

65 years old Le Anh M; history of chronic bronchitis, she often admits in the hospital due to acute attack of chronic bronchitis. This time, she visit hospital for regular health check. She walks from the first to the fourth floor and enters Internal Medicine consultation room to request nurse allow her to be examined (at that time, there is no patient in this consultation room). Nurse invites her to enter the room and takes her vital signs. The results of vital sign taking of Ms. M are as follows: Pulse 86 times/ minute; respiratory rate 24 beats/ minute; Blood pressure 140/85 mmHg; body temperature 37.2^0C (auxillary measurement).

Question:

1.1. Please give your evaluation on professional principles when measuring vital signs performed by a nurse of Internal Medicine Consultation room.

1.2. Select one of the most correct assessment about Ms. M's vital signs

A. Vital sign result increases

B. Vital sign result is normal

C. Vital sign result is normal, it requires re-measure to have accurate result

D. Vital sign result: Normal blood pressure, rapid pulse and breath rate

1.3. Perform skills for counting pulse, respiratory rate, taking blood pressure and body temperature for Ms. M? (Use role play method)

Scenario 2.

Ms. Do Thi T, a 30 years old teacher, felt tired and vertigo during giving lecture. She was taken to the health station. Nurse in health station received her and took her vital signs. The results are as follows:

Pulse 62 beats/ minute; respiratory rate 22 beats/ minute; brachial blood pressure 80/55 mmHg

Some information about Ms. T: height: 1.60 m. Body weight: 52 kg; she often follows dietetic regime and she does not have annual health check before.

Question:

2.1. Please tell your assess about Ms. T's vital signs? Please identify prioritized nursing care issue for Ms. T.

2.2. Select the most correct answer about nursing management for Ms. T.

A. Tell her about her blood pressure status, it requires treatment

B. Let her lie down on the bed with lower head position, invite physician to conduct examination

C. Let her lie down on the bed with lower head position, let her drink warm drinking water

D. Tell Ms. T about her low blood pressure condition, give her medication for administration

Scenario 3.

Ms. Pham Thi V, 62 years old woman was retired. Her consciousness is good. She had history of hypertension 2 years ago (the highest blood pressure is 175/ 100 mmHg), she was prescribed medication for outpatient treatment, sometimes, she visits commune health station to check blood pressure. She wants to be consulted about monitoring and caring her blood pressure at home.

Question: Please select the most correct answer

3.1. Consultancy of nurse to Ms. V about her blood pressure monitoring

A. Tell her that she should visit health station frequently to measure blood pressure because she has time

B. Tell her that she should ask the nurse of commune health station to visit her house to measure her blood pressure

C. Tell her that she should buy a sphygmomanometer to monitor her blood pressure by herself

D. Tell her that she should buy a sphygmomanometer and instruct her how to measure to monitor blood pressure by herself

3.2. When she has abnormal hypertension and she visits a health station, what should nurse manage?

A. Let patient lie in quiet atmosphere, explain to make her feel secure, measure her blood pressure again, invite physician to conduct examination

B. Measure blood pressure, invite physician to conduct examination immediately

C. Let patient lie in quiet atmosphere, explain to patient, ask patient about her medication administration at home

D. Let patient lie in quiet atmosphere, explain to make her feel secure, give her medication for reducing blood pressure

Keys for answer: Question 1.; C, Question 2.; D, Question 2.; B, Question 4.; A, Question 5.; A, Question 6.; D

Scenario: 1.2; C, 2.2; B, 3.1; D, 3.2; A

4. Scenario/case study

Instructor selects some patients in clinical departments, who need to monitor and assess vital signs. Ask learners/ group of learners to assess patients, make nursing care plan and perform techniques for measuring body temperature, blood pressure, counting pulse and respiratory rate. Instructor observes and support when necessary. After that, let the group of learners to discuss and give your feedback comments.

Competency based assessment checklist for Vital sign monitoring

No	Contents	Achievement level		
		Can do independently without support (2)	**Can do with support (1)**	**Can not do or do wrongly (0)**
1	Assess abnormal vital signs and give decision for suitable management			
2	Perform pulse monitoring technique properly and suitably with patient's condition			
3	Perform respiratory rate monitoring technique, suitable with patient's condition			
4	Perform proper body temperature monitoring technique, suitable with patient's condition			
5	Perform proper blood pressure measurement, suitable with patient condition			
6	Provide consultancy for patient and patient family how to monitor and take care of abnormal vital signs			

REFERENCES

1. The Ministry of Health, (2010). Guideline for practicing 55 basic nursing care techniques volume 1, Viet Nam Education Publishing House
2. The Ministry of Health, (2012). Lectures on nursing skills, Medical Publishing House
3. The Ministry of Health- Do Dinh Xuan, (2007), Basic Nursing - for Nursing college, volume I, Medical Publishing House
4. The Ministry of Health- Tran Thi Thuan, (2008), Basic Nursing - for Bachelor of Nurse, volume I, Medical Publishing House
5. http://www.benhvien103.vn

LESSON 11

SPECIMEN COLLECTION FOR TESTING (BLOOD, SPUTUM, STOOL, URINE)

OBJECTIVES

1. Perform specimen collection techniques for testing properly and effectively as procedure (competency 1.2; 2.3;2.4; 3.2; 4.2; 4.5; 5.1; 5.3;6.1; 6.2; 6.3; 8.2; 16.3; 18.3; 20.2; 20.4; 24.4; 25.2)
2. Be able to give guidance for patients/ patient families to collect some kinds of specimens (sputum, stool, urine) properly according to technical requirements (competency 2.3; 4.5; 4.6; 8.2, 14.5)

CONTENTS

1. Introduction

Specimen collection is a technique that take an amount of blood, excretion fluid or tissue of patient and transfer to laboratory.

The result of test plays important role in diagnosis, treatment and taking care and monitoring patient. In some cases, testing plays important role in making decision for diagnosis, especially in diagnosis of disease in early stage and some diseases having poor/ unclear clinical symptoms. The results of para-clinical tests such as urine, blood, stool, sputum, excretion etc. are useful for physicians not only to make accurate and proper diagnosis but also to provide information about patient's conditions helpful for making nursing diagnosis, identifying the risks, making plan and evaluating the effectiveness of nursing care activities. Implementation of order for specimen collection is one of the collaborative functions of nurses is to carry out the orders of tests made by physicians. In addition to effective implementation of specimen collection procedure, assurance of accuracy of testing result is really necessary. The more development of science the more modern and high specialized interpretation of testing result is required. Therefore, the principle of specimen collection must be ensured. The nurses must be equipped with sufficient knowledge, skills in preparation, proper specimen collection and preservation according to regulation.

The group of skills for collection laboratory testing specimens consists of:

- Blood collection for testing
- Sputum collection for testing
- Stool collection for testing
- Urine collection for testing

2. Blood collection for testing

2.1. Purpose

- To support disease diagnosis
- To monitor response of treatment
- To provide information on nutrition, metabolic, hematological, immunological, biochemistry status of patient.
- To screen disease in early stage even without clinical manifestations.

2.2. Types of blood testing

2.2.1. Biochemistry tests:

- Electrolyte test, Urea, creatinine, protein, Glucose, lipid
- Enzyme: GOT, GPT, CK, CK-MB, Troponin T…
- Total bilirubin, direct Bilirubin, indirect Bilirubin.
- Lipid testing: Cholesterol, Triglyceride, HDL, LDL.

2.2.2. Physical testing:

Bleeding time and clotting time, erythrocyte sedimentation rate, pH, hematocrit …

2.2.3. Cell testing:

Blood typing, red blood count, white blood count, platelet count, shape of blood cells.

2.2.4. Microbiological – parasitological test:

- Quick diagnostic test: HBsAg (viral hepatitis B), HIV, Anti-HCV (viral hepatitis C), Chlamydia (vaginitis caused by Chlamydia), flue A/B, Dengue (dengue fever)
- Bacterial culture, sensitivity testing
- Finding malaria parasite etc.

2.3. Methods of blood collection

- Take capillary blood
- Venipuncture
- Arterial blood

2.4. Noticed points

- Blood collection is an invasive technique causing pain for patient and it makes patient worried, afraid, especially children. Nurses should explain clearly to patient to ease their worry.
- When collecting blood specimen, nurse should limit injury for vein. Do not take specimen via fistula because of bleeding and clotting risk.
- When collecting blood to identify the substances, specimen should be collected in the morning before eating.

- Blood culture to find bacteria in the blood:
  + There should at least 2 culture specimens at two different positions. If bacteria appears in 2 specimens blood contains bacteria, if bacteria only appears in a blood specimen, it means that the specimen is contaminated and causes wrong result.
  + Blood culture must be done before using antibiotics for patient because antibiotic may kill bacteria and cause wrong result due to not able to detect bacteria in the cultured blood. If patient used antibiotic previously, it should be noted and inform to laboratory.
- Some tests that require special blood specimen collection such as not using tourniquet for testing acid lactic, avoid testing tube to contact with light in testing vitamin concentration …
- The testing tubes provided by laboratory has two types:
  + Testing tube containing coagulant substance.
  + Testing tube without coagulant substance (natrium citrate, calcium oxalate, heparin, EDTA)

2.5. Blood sampling technical procedure

2.5.1. Assessment

- Assessment of patient's understanding about the purpose and blood sampling procedure
- Identification of conditions need to be done before blood sampling
- Assessment of risk factors before taking venous blood sample: usage of coagulation agents, thrombocytopenia, coagulation disorder (history of hemophilia).
- Assessment of patient's medical history
- Assessment of contraindications of venous blood sampling: site of fluid transfusion, risk of venous embolism due to thrombosis, arteriovenous fistula in hemodialysis, arm of patients with breast removal.
- Check again physician's indication about type of tests.

2.5.2. Devices

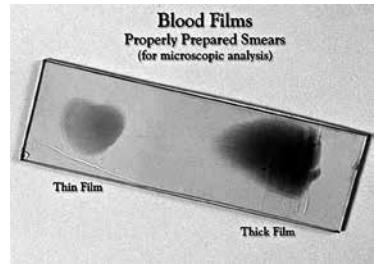
* Capillary blood sampling:
  - 3 clean, dry glass slides, of which one plain glass for pulling slides.
  - Alcohol moistened cotton, dry cotton
  - Clean gloves
  - Sterile needle, size of needle 25 - 26G, length of needle 1-1.5 cm
  - Bag for containing medical waste
* Venous blood sampling:
  - Alcohol 70^0
  - Clean gloves
  - Arm rest pillow

- Tourniquet
- Personal bandage
- Testing tube suitable for test: write down the name of patient on label
- Testing tube container
- Testing order form
- Sterile syringe suitable with the amount of blood sampling
- Sterile needle, needle size 20 -21 for adult, 23 -25 for child
- Blood sampling via central venous catheter: 2 sterile syringes 10ml, 1 syringe 10 ml containing physiological saline solution.
- Blood culture: 2 sterile syringe 20ml, sterile needle (needle size 20 -21G for adult, 23 -25G for child), testing tubes for anaerobic and aerobic bacteria.

Figure: types of testing tube

2.5.3. Steps for implementation

No	Implementation	Reason
1	Check and rearrange device in appropriate manner	Convenient for performing skills
2	Patient preparation - Check patient's record - Inform and explain to patients - Keep patient at convenient position	Create good collaboration of patients
3	Wash hand, bring devices to the patient's bed	
A. Capilary blood sampling		
1 - 3	Perform steps from 1 – 3 above	
4	Slightly press the 4th finger or ear lobe	Blood concentrates to the tip of finger and ear lobe, it reduces pain for patient

5	Clean the tip of finger or ear lobe by alcohol.	To prevent infection
6	Use a sterile needle to puncture with the depth of 2 mm, withdraw needle	
7	Use the dry cotton to remove the first drop of blood	To prevent infection
8	- *Blood taking:* Keep the glass slide by forefinger and thumb, apply the slide slightly to the puncture parasite site. Take 2 drops of blood with 5 mm diameter in 2 different slides.(about 1/3 of the outside) - *Making template:* + Make thick drops: use 1 corner of glass leaves to stir in a wide circle gradually making the area of blood droplets wider or double, remove the fibrin fibers from the blood droplets + Make thin drops: take the edge of the glass leaf and place it on the second drop of blood gently to spread the blood throughout the glass, then gently pull the glass along the slide, pulling it evenly so that the glass and glass are always created At an angle of about 300, the blood is spread evenly, the beveled tail is like a tongue-shaped shape, with no horizontal or broken marks - To make the lamella dry completely, fix the thin droplet with 900 alcohol, thick drop to leave, wait for the alcohol to dry fixed, send to the laboratory as soon as possible	To make slide for detecting malaria 
9	Place alcohol moistened cotton at puncture site	Stop bleeding
10	Send the sample to the laboratory	Timely and accurate result
11	Remove gloves	To prevent super-infection
12	Write down in medical record	To ensure legal aspect
B. Venous blood sampling		
1 - 3	Perform steps from 1 – 3 above	
4	Patient lies with head up position 30^0, exposure the arm, keep the arm straight. Place the arm rest pillow under his/ her arm	To make patient be comfortable and to exposure the vein
5	Apply the tourniquet at upper part of puncture site about 5 – 10 cm.	To stop the blood and to make vein clear and convenient for blood collection

6	Identify blood sampling position	To perform easily and do not break the vein.
7	Disinfect the skin as spiral shape from the entry site with the width of 5cm and let it dry	To prevent infection
8	Use the thumb of reversed hand to pull slightly under puncture site, dominant hand keeps the needle and punctures at angle 15 – 300 collect suitable amount of blood as requirement of test	Take sufficient blood amount, do not cause blood loss
9	Remove tourniquet and withdraw needle quickly	Avoid long application of tourniquet. It makes obstacle of circulation
10	Press dry cotton on puncture site	To stop bleeding
11	Remove needle, put the blood in test tube, gently shake the tube from top to bottom about 8 - 10 times if it has anticoagulant agent	To prevent broken red blood cell
12	Remove gloves, help patient to come back comfortable posture	Patient is comfortable
13	Clean devices, wash the hands	To prevent secondary-infection
14	Write down in medical record	To ensure legal aspect

Checklist for blood sampling procedure

No	**Contents**	**Achievement level**		
		Achieved	**Not achieve**	**Remark**
1	Check the device			
2	Patient preparation			
3	Wash the hand, bring devices to the patient's bed			
A. Capillary blood sampling				
1 - 3	*Perform steps from 1 – 3 above*			
4	Gently press the top of 4th finger or ear lob			
5	Disinfection			
6	Use sterile needle to puncture with the depth of 2 mm, withdraw needle			
7	Remove the first drop of blood			
8	Take blood on glass slide			
9	Stop bleeding			
10	Send the blood sample to the laboratory			

11	Remove gloves, clean and tidy up devices			
12	Write down in medical record			
B. Venous blood sampling technique				
1 – 3	*Perform steps 1 – 3 above*			
4	Let patient lie on suitable posture			
5	Apply tourniquet			
6	Identify entry site			
7	Disinfection			
8	Insert the needle into the vein; take sufficient amount of blood as requirement of test.			
9	Remove tourniquet, quickly withdraw needle			
10	Stop bleeding			
11	Put the blood into test tube			
12	Remove gloves, help patient to come back comfortable posture			
13	Clean and tidy up device, wash hand			
14	Write down in medical record			

3. Urine specimen collection

Urine is an important excretion that contains most of residue of the body via urological tract. Level of excretion depends on:

- Blood volume and pressure through kidney
- Excretion capacity through kidney
- Water provision for the body

The changes in quantity, characteristic and chemical components of urine show abnormality of the body. Therefore, urinary test plays important role to support diagnosis of liver, kidney diseases, pregnancy or infection etc.

3.1. Types of urinary testing

3.1.1. Physical test:

- Urine volume: normal adult 1.2 – 1.4 litters/ 24h.
  + Physiological change: more urine in cold weather or when drinking more water. Less urine when drinking less water, working more, hot weather etc.
  + Pathological changes: large volume of urine is seen in diabetes mellitus, diabetes insipidus. Small volume of urine or anuria are seen in kidney, heart failure etc.

- Colour of urine:
  + It is normal if its colour is slight yellow.
  + Red colour: hematuria
  + Dark yellow: infection.

However, history of patients in usage of medication, food, drinking should be exploited because some medicines can make urine colour change. Such as:

  + Anti-TB drug Rifampycin, some soft drink stained with red colour make urine become red,
  + Mistasolblue make urine become blue
  + Vitamin B2 makes it become yellow…

- Smell of urine:
  + Newly excreted urine has no smell. If it remains long time in the air, there will be urine smell due to urea transformation to NH3.
  + Abnormal urine with stinking smell is commonly seen in infection disease or acetone smell in diabetes mellitus.
- Painful urination: normally, there is no painful or pitting sensation during urination. However, patient with urinary infection feels painful, pitting, strangury or cloudy urine.

3.1.2. Biochemistry test:

Table of urine biochemical indicators in a normal person.

Basic urine indicators	Normal
Glucose	Negative (-)
Protein	(-)
Bilirubin	(-)
Ketone (ceton)	(-)
Specific gravity (density)	1.010 – 1.020
pH	5 – 8
Urobilinogen	< 0.2 EU/l
Nitrite	(-)
Red blood cell	(-)
White blood cell	(-)

3.1.3. Cell testing:

- To find out the red blood cell in urine
- To find out granular cast
- Inorganic substances: acid uric, calcium, urate, phosphate ...

3.1.4. Microbiological testing: culture for finding bacterial and sensitivity testing.

- The most common urine test is culture and sensitivity testing. Result interpretation within 24 – 48 hours is the best and it should not exceed 72 hours. If there are bacteria in the urine, sensitivity testing shows what kind of antibiotic resist that bacterium.
- When patient is able to urinate by him/ herself, collect midstream urine to perform culture and sensitivity testing.
- Patient having urinary catheter: use the absolute sterile collection technique to avoid invasion of bacteria to catheter. Do not collect urine specimen in the drainage bag for culture except collection of urine specimen in the first time of urinary catheterization. Bacteria quickly develop in the drainage bag and it causes the incorrect result.

3.2. Urine specimen collection method:

- Collect midstream urine specimen, the first portion of the urine stream should be voided to perform measurement of 10 parameters, 2 parameters and 3 parameters. If urinary glucose is suspected, urine specimen should be collected in 2 hours after eating.
- 24h (or12h) urinary collection for measure concentration of some substances, urine should be collected in an sterile container and use the thymol solution 10% (5 ml) for reservation in a cold place.
- Collect urine specimen from urinary catheter.

3.3. Urine specimen collection technical procedure

3.3.1 Assessment

- Assessment patients and patient families' understanding about the purpose of test and specimen collection method.
- Assess urinary infection signs and symptoms: sudden, acute onset, haematuria, cloudy urine, strange smell urine, burning feeling urination, strangury or urine remained in the bladder.
- Hygiene status of perineum
- Check again requirements of laboratory about urine specimen collection technique.
- Assessment of abilities of movement, perineum self hygiene and usage of toilet.

3.3.2. Devices

- Testing order sheet filled in with the name of patients and testing orders, which have been checked accurately.
- Test tube written the date, time, name of specimen and name of patient.
- Clean gloves
- Test tube container
- Sterile cotton
- Disinfectant solution

- Physiological saline
- Soap, clean towel
- Bed (if patient cannot move)
- Alcohol, chlorhexidine, sterile cotton bud
- Sterile syringe 5 ml, 20ml

3.2.3. Implementation steps

No	Implementation	Reasons
1	Check and rearrange device suitably Stick label on the test tube	To be convenient for skill performance
2	Patient preparation - Check and identify patient accurately - Explain, guide techniques for patient and patient family to avoid stool or other tissue mixing - Explain to patient/ patient family the reason why the drainage tube should be clamped 30 minutes before collecting specimen - Create close space for patient: use partition around patient bed, close the door or inside the toilet (if patient is able to walk) - Provide drinking water for patient (if necessary) before collecting urine specimen	 - Ensure correct patient - Create good collaboration of patient - Explain to make patient understand the purpose of urine specimen collection from bladder - Ensure privacy for patient - Help to excrete urine easily
3	Write down the name of patient on test tube	Avoid to forget or wrong specimens
A. Collect midstream urine specimen		
1 - 3	Perform steps 1 – 3 above	
4	Instruct patient to perform perineum hygiene, disinfection of urethral meatus	To avoid contaminated urine due to flow urinary tract
5	Instruct patient to open the cap of sterile tube, do not touch the lumen of tube	Dirty test tube will cause incorrect testing result
6	Instruct patient how to collect urine specimen: the first portion of the urine stream should be voided, put the tube directly to collect midstream urine (about 30 – 50 ml). Take out the tube before finishing urination.	The first portion of urine flush bacteria out of urinary tract and does not contaminate urine specimen.
7	Put the cap of tube (only hold outside). Wash the tube. Label the tube.	To avoid infection
8	Bring to laboratory about 15 – 20 minutes, or keep in cold place within 20 hours	Result of test will be accurate and timely
9	Remove gloves, wash hands and tidy up devices	To prevent infection

10	Write down medical record - Date, time of urine collection - Nature, characteristics of urine	Surely carry out physician's order This data may help to confirm some special issues
B. 24 hours urine specimen collection		
1 - 3	Perform steps 1 – 3 above	
4	Prepare urine collection container having cap, preservative substances and write down the name of patient	To prevent contamination of urine
5	Let patient finish urinate and write down the time (for example from 6 am)	Calculate starting time
6	Ask patient to collect all the urine in container (including defecation)	Ensure accurate amount of urine within 24 hours
7	Keep the container at airy place, put the cap, avoid falling down	Avoid disintegration of substances in urine
8	After 24h (in 6am next day), ask patient to urinate last time in container	
9	Measure the amount of urine, write down and take specimen as requirement	
10	Perform steps 7 – 10 similar as midstream urine specimen collection skill	
C. Urine specimen collection from urinary catheter (for the patient who placed urinary catheter)		
1 - 3	Perform steps 1 – 3 above	
4	Clamp urinary catheter before 30 minutes. Prepare syringe	To collect newly excreted urine specimen
5	Wash hand, wear clean gloves	To reduce bacteria infection
6	Place patient on posture that easy to contact with catheter	Easy to perform technique
7	Disinfect entry point, wait until disinfectant dry	To prevent contamination of specimen from outside
8	Insert needle at angle 45^0 in connection position between catheter and drainage bag (rubber part), aspirate about 5 ml of urine (for urinary culture) or 20 ml of urine (for biochemical test)	Collect sufficient urine specimen necessary for testing
9	Release urine in sterile test tube (for urinary culture) or clean test tube (for ordinary test)	Prevent infection during transferring urine from syringe to test tube
10	Remove clamp and let urine going to drainage bag	Avoid stagnant urine inside bladder
11	Perform steps 7 – 10 similar as midstream urine specimen collection	

Checklist for urine specimen collection technique

No	Contents	Achievement level		
		Achieved	Not achieve	Remark
1	Check device			
2	Prepare patient			
3	Write the name of patient on test tube			
A. Midstream specimen collection				
1-3	Perform steps 1 – 3 above			
4	Perform perineum hygiene, disinfection of urethral meatus			
5	Open cap of sterile test tube			
6	Midstream urine specimen collection (about 30 - 50ml)			
7	Put the cap and wash outside of test tube. Label the test tube			
8	Bring to laboratory			
9	Wash hand, tidy up devices			
10	Write down in medical record			
B. Urine specimen collection in 24 hours				
1-3	Perform steps 1 – 3 above			
4	Prepare urine container			
5	Let patient urinate and record time			
6	Ask patient to collect urine in the container			
7	After 24 hours, let patient urinate last time in container			
8	Measure the amount of collected urine, record and collect specimen as requirement			
9	Perform steps from 7 – 10 similar as midstream urine specimen collection			
C. Urine specimen collection from catheter				
1-3	Perform steps 1 – 3 above			
4	Clamp catheter before 30 minutes. Prepare syringe			
5	Wash hand, wear clean gloves			
6	Place patient at suitable posture			
7	Disinfection puncture site			

8	Insert needle and aspirate urine			
9	Release urine to test tube			
10	Remove clamp to let urine go to drainage bag			
11	Perform from 7 -10 similar as midstream specimen collection skill			

4. Stool specimen collection

4.1. Purpose

- Biochemical testing: find out blood, bile pigments and fat in the stool.
- Finding bacteria and parasite in intestine.

4.2. Application:

In digestive diseases and relevant organs such as liver, pancreas etc.

4.3. Primary assessment of stool colour change:

- Stool colour: slight yellow or brown yellow
- Black stool
  + Stool stays long time in the intestine and it is affected by digestive enzyme. The change of colour may be observed after digestion of blood such as blood pudding.
  + Some medicines such as bismuth subsalicylate
  + Supplemented iron regime or the root of liquorices.
- Blue or green stool:
  + Stool crosses quickly through colon.
  + In sick children, stool may change colour to be blue or green.
  + Eating blue or green food, vegetable may lead to green colour of stool. When children digest solid food at the beginning, they also have green colour and it will no longer exist.
- Stool may have white colour due to bile duct obstruction (congenital bile duct obstruction, bile duct tumour etc).

4.4. Some notices when collecting stool specimen:

- Test for finding blood in the stool is often sent to laboratory and the result will be available within several hours.
- For testing of amoeba and giardial, temperature should be kept at 37^0C.
- For testing egg of parasite, the specimen must be preserved by dropping amount of formol 5% in to stool vial.

- In case finding blood in the stool, patient should not eat lean meat or administer medicine containing iron or bismuth within 48 hours.
- Notice: do not take specimen from genitals, especially woman during menstrual period.
- Do not collect stool specimen mixed with urine.

4.5. Stool specimen collection technical procedure

4.5.1 Assessment

- Assessment of patient about:
  + Understanding of patients and patient families about necessity of stool specimen collection
  + Collaborative capacity for specimen collection
  + Diseases: haemorrhoid, digestive disorder, digestive haemorrhage
  + Menstrual cycle
- Medicine have been used by patients
- Consider indications for stool specimen collection ordered by physician

4.5.2. Device

- Bed pan
- Specimen container
- Stick for stool specimen collection
- Clean gloves
- Soap, water
- Toilet paper

4.5.3. Implementation steps

No	Implementation	Reason
1	Check and rearrange device appropriately	Convenient for performing technique
2	Prepare patient: inform and explain to patient and patient family about technique	To avoid environment contamination
3	Let patient urinate and take urine separately. If culture bacteria use the large and sterilized bean shape astray and wash anus	To avoid mixing of urine and stool To avoid contamination from device or from anus to specimen
4	Let patient defecate on bed pan	
5	Use the stick for stool specimen collection (10 - 15g) at the middle of stool or suspected place such as mucus, blood, pus. Put the stool in the container and put on the lid.	Help to preserve specimen and avoid contamination to surrounding place.

6	In case of testing egg of pinworm: use the cotton bud, take the substances on anus interstice, put the cotton bud in the container and put on the lid.	Pinworm often lays egg at anus interstice.
7	Send to laboratory quickly	To avoid damage of specimen
8	Remove gloves, wash hand	To prevent infection
9	Write down in medical record: - Date, time of specimen collection - Nature, characteristics of stool - Uncomfortable condition of patient during stool specimen collection process	To ensure legal aspect

Checklist of stool specimen collection technical procedure

No	Contents	Achievement level		
		Achieved	**Not achieve**	**Remark**
1	Check devices			
2	Prepare patient			
3	Let patient urinate and take urine separately.			
4	Let patient defecate on bed pan			
5	Use the stick for stool specimen collection and put on the lid			
6	In case of testing egg of pinworm: use the cotton bud, take the substances on anus interstice, put the cotton bud in the container and put on the lid.			
7	Early send specimen to laboratory			
8	Remove gloves, wash hand, tidy up devices			
9	Write down in medical record			

5. Sputum specimen collection

Sputum is excreted by the cells coated respiratory tract with daily minimal amount. Some respiratory diseases may cause increased amount or change of sputum characteristic. Sputum testing supports diagnosis and treatment of some diseases from bronchiolitis to lung cancer.

Sputum suction often use to collect sputum specimen when patient is not able to spit. Sometimes, sputum suction with strong pressure may cause cough, vomit, and contraction of muscles in throat, larynx, and bronchus. In addition, sputum suction may cause lack of oxygen and intracranial hypertension.

5.1. Types of sputum specimens

- Pathological test may detect ectopic cells or cancer cells
- Bacterial testing: direct smear for detecting bacteria or perform culture and sensitivity test

5.2. Changes of sputum characters:

- Colour
  + Yellow, green colour: infection status
  + Red brown colour: typical colour of pneumonia
- Smell:
  + Stinking: lung cancer.
  + Addle egg: infection due to aerobic microorganism

5.3. Some notices when collecting sputum specimen:

- Sputum specimen should be collected in early morning, after patient cleans his/ her teeth.
- Sputum specimen should be collected after eating 1 -2 hours
- If collect specimen for AFB testing, specimens should be collected in 3 days continuously. The result of sputum culture may be available up to 8 weeks

5.4. Technical procedure for sputum specimen collection

5.4.1. Assessment

- Check again physician's indications for sputum testing: amount of sputum, number of test, time and specimen collection method.
- Assessment of patient's understanding about purposes and procedures of sputum collection
- Assessment of the nearest eating time of patient or gastric tube feeding status. Perform the technique in 1 – 2 hours after patient eats
- Assess respiratory status of patient, respiratory frequency, characteristics, superficial or deep breathing, colour of skin and mucous
- Identify necessary measures to support patient in sputum specimen collection

5.4.2. Devices

- Sterile sputum container
- Sterile sputum suction devices and suction unit (sputum culture)
- Tube for containing sterile swab (if patient can not spit)
- Sputum container with cap
- Clean gloves and sterile gloves
- Oxygen system, (if necessary)

5.4.3. Steps of implementation

No	Implementation	Reasons
1	Check and rearrange device suitably	Convenient in performing skills
2	Prepare patients - Identify patient's name, inform and explain to patients, patient families - Suitable patient's posture - Instruct patient to breath normally during sputum suction to prevent too rapid breathing	Create good collaboration of patient Perform technique in convenient manner
3	Create privacy space for patient (close the door, curtain etc.)	
A. Sputum specimen collection by spitting		
1-3	Perform steps 1 – 3 above	
4	Explain and instruct patient how to cough and spit sputum.	Do not spit fluid in throat and saliva
5	Ask patient clean his/ her teeth and gargle the month by clean water	Toothpaste and mouthwash should not be used because they may change the result of culture
6	Wear clean gloves, keep container for sputum specimen collection and ask patient do not touch his/ her hand inside container	To prevent contamination from outside
7	Instruct patient to breathe deeply 3 – 4 times; remember to breathe slowly with full expiration. After full expiration, ask patient to cough, spit sputum strongly to the container	
8	Repeat again until collecting about 5 - 10 ml of sputum (not mixed with saliva)	
9	Cover the lid of container, clean the sputum if it is stained to outside by alcohol immersed cotton	
10	Give clean towel to patient in order to clean his/ her month	
11	Write down the name of patient on the specimen container	Wrong specimen will cause wrong diagnosis and treatment
12	Put specimens in special container and send to laboratory	Sputum specimen is collected properly, avoid super-infection
13	Remove gloves, wash hand, tidy up devices	To prevent infection
14	Let patient at comfortable and convenient posture	Patient is taken care and paid attention

15	Write down in medical record: - Date, time of sputum specimen collection - Nature, characteristic of sputum - Capacity for realizing procedure of patient	To ensure legal aspect
B. Sputum specimen collection by suctioning		
1-3	Perform steps 1 – 3 above	
4	Place patient at upper head position or semi Fowler position	To help the lung expand maximally and patient is able to cough
5	Wash hand, wear clean gloves on of inversion hand. Prepare suction device to ensure the machine in good operation	Well preparation of machine to aspirate sputum
6	Connect suction unit with sputum container	Facilitate sputum specimen collection
7	Wear sterile gloves on dominant hand	To avoid respiratory infection
8	Use sterile gloves to connect sterile catheter with elastic tube of suction unit	Put sputum directly to the specimen container
9	Gently insert the tip of suction tube through pharynx, endotracheal tube or tracheotomy site (not turn on suction unit)	Avoid damage airway until performance of procedure
10	Insert catheter in the trachea gently and quickly	Insert catheter in the trachea gently and quickly to limit patient's cough reflection
11	Ask patient cough, turn on suction unit in 5-10 seconds, take about 2 - 10ml of sputum	Ensure to collect sputum from bronchus. If suction is done over 10 seconds it will cause hypoxia and membrane damage
12	Withdraw catheter from sputum container and turn of suction unit	Suction unit may damage membrane during catheter withdrawal
13	Cover the lid of container, clean the sputum if it is stained to outside by alcohol immersed cotton	To avoid infection for person, who collect and process specimen
14	Remove suction tube with connector and perform disinfection	To reduce the risk of organism spread
15	Give clean towel to patient in order to clean his/ her month	Help patient feel clean and comfortable
16	Perform from steps 11 – 15 same as sputum specimen collection skill by spiting	

Checklist for technical procedure for sputum specimen collection

No	Contents	Achievement level		
		Achieved	**Not Achieve**	**Remark**
1	Check devices			
2	Prepare patient			
A. Sputum specimen collection by spiting				
1-2	Perform steps 1 and 2 above			
3	Ask patient clean his/ her teeth and gargle the month by clean water			
4	Wear clean gloves, hold container for sputum specimen collection			
5	Ask patient cough strongly and spit sputum directly to the container			
6	Cover the lid closely			
7	Clean patient's mouth			
8	Write down the name of patient on specimen container			
9	Send to laboratory			
10	Remove gloves, wash hand, tidy up devices			
11	Place patient on comfortable posture			
12	Write down in medical record			
B. Sputum specimen collection by sputum suction				
1-2	Perform steps 1 and 2 above			
3	Place patient on upper head position			
4	Wash hand, wear clean gloves at introversion hand. Connect suction unit with sputum container part			
5	Wear sterile gloves on dominant hand			
6	Insert catheter into trachea			
7	Ask patient cough, turn on suction unit for sputum specimen collection			
8	Withdraw catheter, turn off device			
9	Perform steps from 4.6 – 4.12 same as sputum specimen collection technique by spiting sputum			

LESSON TEST

1. Select the most correct answers

Question 1: Blood specimen collection to find malaria parasite need to be done by nurse when:

A. Before patient has fever

B. After patient has fever

C. During patient has fever

D. Specimen collection time is not important

Question 2: A diabetic patient who needs to undergo blood glucose test, which position for blood specimen will be collected by nurse:

A. Capillary blood sampling

B. Venous blood sampling

C. Arterial blood sampling

D. Capillary blood and Venous blood samplings

Question 3: Urinary culture for detecting bacteria, what kind of method should be done

A. Collect clean midstream urine

B. Collect midstream urine, ensure sterile devices for urinary specimen collection

C. Collect urinary specimen in 24 hours

D. Get urine through the catheter

Question 4: Patient A, 65 years old, 2 days recently, he has intermittent urination and complaints lower abdominal pain. When visiting hospital, physician makes diagnosis of urinary tract infection and indicates urine specimen collection for testing. Patient rejects specimen collection. Management of nurse at that time:

A. Report physician

B. No need to collect urinary sample and patient can be treated

C. Ask patient family try different ways to collect urinary sample

D. Explain clearly, precisely all necessary information and support patient if necessary

Question 5: Patient agrees to take urinary specimen but it is impossible to collect urine because he just urinated, no urine. Doctor allows collecting urine at home. Nurse instructs patient to sampling the urine, except:

A. Midstream specimen collection method

B. Patient has to drink a lot of water

C. Hygiene of genitalia before collecting specimen

D. After collecting specimen, keep in room temperature and bring immediately to the laboratory.

Question 6: The things patient need to do before taking sputum specimen, except:

A. Drinking much water

B. Exercise to cough and spit sputum

C. Taking sputum in early morning

D. It is possible to collect sputum mixed with saliva if there is not so much sputum.

Question 7: When collecting sputum, how much sputum should be collected:

A. 2-10 ml.

B. >10 ml.

C. Amount of sputum is not important

D. 30 ml.

Question 8: 4 years old patient suspected with TB infection. He does not know how to spit the sputum. Sputum collection method in this case is:

A. Comfort baby try to spit sputum

B. Waiting until having sputum

C. Collect pharyngeal fluid

D. Collect blood specimen

Scenario for practice

Scenario 1

Patient Nguyen Van M. 65 years old, he has a health check and current his status: body weight 80kg, height 1.65m, pulse 80 rates/ min, blood pressure 175/95 mmHg, body temperature 36.5^0C, normal eating. Mr. M is indicated by physician at Outpatient department to take fasting blood specimen collection.

Question:

1. Please tell your assessment about status of patient M?
2. Please communicate and explain to patient M. about purpose of blood collection for testing *(using role play method?)*
3. Perform blood specimen collection technique for patient M? *(perform on simulator or instructor select a patient in a clinical department who have indication for blood specimen collection)*

Scenario 2

A 25 years old female patient, she feels tired several days recently, little and dark urine, she did not take any treatment at home and admits in the hospital. She has history of glomerulonephritis treatment when she was a child. Patient's condition at admission time: normal physical status, conscious, tired. Vital signs: breathing: 18 rates/ min, pulse about 85 rates/ min, arterial blood pressure 160/95 mmHg, body temperature 37.1^0C. Patient urinates about 400 ml/day, dark yellow color, mild edema at eyelid, poor eating. Physician indicates urine specimen collection for testing. She feels really worry because of small amount of urine and she does not know how to collect urine.

Question:

1. Please tell your assessment about status of patient?
2. Please explain to patient to reduce her worry and understand the purpose of the technique? *(using role play method)*
3. Instruct patient the way of collecting urine specimen for testing? *(using role play method)*

Scenario 3

60 years old female patient admits hospital because of prolonged cough and sputum spitting. At present, patient is conscious, pale skin and membrane, vital signs: pulse: 85 rates/ min, body temperature 37^0C, blood pressure 120/80 mmHg, breathing 20 rates/ min; height 1m50, body weight 36 kg. Patient has cough and spits white and green sputum in the morning about 20 ml, she is tired, poor eating and sometimes has mild fever in the afternoon. She is indicated to collect sputum specimen collection for testing.

Question:

1. Please tell your assessment about status of patient?
2. Instruct patient the way for collecting sputum specimen for testing? *(using role play method)*

Scenario 4

Patient B, a female patient, 46 years old, her height is 156 cm, body weight is 43 kg, occupation: farmer. She has a history of mucus defecation and she often has abdominal pain and loss appetite, difficult digestion and visits hospital for examination. In order to make diagnosis, physician indicates stool specimen collection for testing.

Question:

1. Select the correct instruction of stool specimen collection:
   A. Stool specimen collection in the morning
   B. Take abnormal stool (viscous part…)
   C. Take any part of stool
   D. Take stool mixed with urine
2. Instruct patient to collect stool specimen for testing (using role play method)?

Answer

1. Select the most correct answer

Question 1: C	Question 2: D
Question 3: B	Question 4: D
Question 5: B	Question 6: D
Question 7: A	Question 8: C

2. Scenario for practice
   Scenario for practice

Competency based assessment checklist for Specimen collection for testing (blood, sputum, stool, urine)

No	Competency	Achievement level		
		Can do independently without support (2)	Can do with support (1)	Cannot do or do wrong (0)
1	Perform blood specimen collection technique properly and effectively			
2	Perform urine specimen collection technique properly and effectively			
3	Perform stool specimen collection technique properly and effectively			
4	Perform sputum specimen technique properly and effectively			
5	Instruct patient/ patient family to collect some kinds of specimen (sputum, stool, urine) according to technical requirements			

REFERENCES

1. Ministry of Health (2010). *Guidance for practice of 55 basic nursing techniques, volume II,* Viet Nam Education Publishing House
2. Ministry of Health (2012). *Lecture on nursing skill,* Medical Publishing House, Ha Noi
3. The Ministry of Health (2007). *Basic nursing 2.* Viet Nam Education Publishing House
4. The Ministry of Health (2012). *Basic nursing 2.* Medical Publishing House, Ha Noi
5. www.benhvien103.vn

LESSON 12

HYGIENE CARE OF PATIENT

OBJECTIVES

1. Identify patients' needs of hygiene care (Competency: 1.1; 2.1; 2.2; 2.3; 3.1; 4.1; 4.2; 4.3; 4.4; 6.1; 18.3)
2. Perform proper personal hygiene care of patients in accordance with correct procedures and actual situation of the patients (Competency 2.2, 2.3, 3.2, 5.1, 5.2, 5.3, 6.1;6.2; 6.3; 16.3; 20.1; 20.4; 24.1; 25.1; 25.2)
3. Guide patients and their families to perform proper hygiene care of patients according to the needs of the patients (Competency 4.6; 4.9; 13.1; 14.1; 14.2; 14.3; 14.5)

CONTENTS

1. Introduction

When people are ill, their resistance to outside factors become weak, the risk of bacterial infection is higher than that of healthy persons. Hygiene care of sick people is a basic daily need, especially of the patients who are in bed for a long time, or limited in movement, and unable to take self-care. Poor personal hygiene can lead to bacterial infection through skin, mucosa, causing superinfection, negatively affecting the treatment. On the other hand, good personal hygiene helps strengthen body circulatory system, sweating and the body's resistance. The relationship between nurses and patients is also improved through hygiene care, and this helps nurses to detect abnormal signs of patients early and prevent complications due to poor hygiene.

Hygiene care of patients including:

- Oral care
- Shampoo
- Skin care (bathing)
- Clothing

2. Oral care

2.1. Common diseases in the mouth

- Candida fungal infection (Oral thrush)
- Inflammation of one or both corners of the mouth (Angular cheilitis)
- Throat ulcers

- Viral infection
- Epithelial carcinoma

2.2. Application

2.2.1. Normal oral care

Provide normal care to patients who are conscious but unable to move.

2.2.2. Special oral care

- Patients can drink water but cannot do it by themselves (due to high fever, serious disease ...)
- Patients cannot self-drink water (broken jaw bone ...)
- Unconscious patients
- Patients with mouth wounds

2.3. Principles of oral care

- Take oral care in parallel with introducing oral care techniques and benefits to the patient and their family.
- Brush teeth in vertical motions
- Follow a certain procedure to avoid missing any step.
- If the patient's mouth is too dirty and has much tartar on the tongue, use glycerine solution and lemon juice to clean the mouth and tongue, after 15-20 minutes, start to take oral care steps.
- For the mouth with injury, guarantee sterilization when taking care.
- For dentures, it is necessary to guide the patient/family with some cautions as follows:
  + After eating, remove and brush dentures gently and rinse clearly, avoid brushing the inside of the jaw (the side connecting with gum, and palate) to prevent abrasion of the dentures.
  + Eat liquid diet or soft food when starting the use of dentures.
  + Before going to bed, remove the dentures, soak them in a water cup with a lid, avoid leaving the dentures in a dry and hot place, avoid dropping the dentures because they can crack or break.
  + Every day, rinse the mouth thoroughly with saline or mouthwash solutions to care gums and palate.
  + Try to chew by both sides of the jaw to avoid any pain in jaw joints.
  + Avoid using toothpicks while wearing the dentures.

2.4. Oral care of some special patients

- Avoid dropping water into the respiratory system of the unconscious patient. Use a suction apparatus in the process of oral hygiene for the patient.

- Make oral assessment to the patient with diabetes. Oral hygiene techniques must be performed gently to avoid causing injuries in gums and oral mucosa.
- Use oral analgesic gel to help reduce the pain of the patient with oral infection during care.

2.5. Oral care procedure

2.5.1. Oral care (for patient without consciousness disorder)

No	Procedure	Reason
1	Prepare equipment: - Brush; toothpaste - Mouthwash: Mouthwash added Fluor or 0.9% sodium chloride solution. - Towels; Clean gloves - Tongue depressor; Warm water cup; kidney tray - Dental floss	Convenient to take care.
2	Identify, prepare for the patient - Inform, explain oral care techniques to the patient - Put the patient sitting or lying with his/her head on a pillow (30^0 - 45^0), his face turns to the side of the care provider.	- To help the patient understand and cooperate well. - To have a comfortable position for caring. - To avoid entering water in the lung.
A. Oral care with a toothbrush		
1-2	Perform steps 1 and 2 above	
3	Raise the bed and its side rails.	- To make the patient safe and comfortable.
4	Put a towel on the patient's chest.	- To prevent dirty water from pouring on clothes of the patient.
5	The nurse: dress as required Wash the hands Wear clean gloves.	- To reduce the risk of cross contamination
6	Wet the toothbrush, place toothpaste on the brush.	- To help spread evenly toothpaste on the teeth.
7	To brush teeth for the patient - Put the toothbrush at an angle of 450 from the gum surface so that the toothbrush touch and penetrate underneath the gum line. - Brush the inner and outer surfaces of the teeth from the gums. - Hold the toothbrush in parallel with the teeth and gently brush the chewing surface of the teeth.	- To brush all surfaces of the teeth to clean plaque and tartar. Remove food particles stuck between the teeth and on the chewing surface.

8	Instruct the patient how to brush their teeth properly (if the patient can brush his teeth by himself). Instruct the patient to place the brush at 45^0 angle, and gently clean the chewing surface and sides of the teeth.	- To help the patient brush the teeth by himself
9	Gargling: to instruct the patient to gargle carefully with water, then spit in a kidney tray. - Give mouthwash solution to the patient for gargle for 30 seconds.	- To clean the patient's mouth. - To remove plaque and prevent gum diseases
10	Assist the patient to wipe his lips and face	- To promote cleanliness and comfort for the patient.
11	Use dental floss to clean the teeth. - Put dental floss into the interdental area then pull up and down. - Explain to the patient/ his family about the effects of using dental floss daily.	- To remove plaque, prevent gum diseases and kill bacteria that cause tooth decay.
12	Help the patient to gargle with water, spit in the kidney tray.	- To remove plaque and tartar in the oral cavity.
13	Put the patient in a comfortable position, lower the bed.	- To create comfort and safety for the patient.
14	Dispose of equipment, and discharge dirty water, clean the toothbrush.	- To ensure hospital hygiene and safety - To prevent cross infection.
15	Wash hands as required	- To reduce microbial transmission.
16	Write records: The oral abnormalities of the patient: injury, bleeding, inflammation ...	- To manage performance of the procedure. - To monitor and manage the dental condition of the patient.
B. Oral hygiene for the patient with dentures		
1-2	Perform steps 1 and 2 above	
3	Pour warm water into a basin	- To brush and clean the dentures.
4	The nurse: dress as required Wash the hands Wear clean gloves.	- To reduce risk of cross infection.
5	Remove the dentures from the patient's mouth - Use gauze to pull down gently the upper jaw or lift up slightly the lower jaw. - Guide the patient to do by himself	- To remove the dentures from the patient's mouth easily

6	Check oral cavity: Place the dentures in a cup Use a pen torch and a tongue depressor to fully examine oral condition.	- To assess the oral mucosal moisture, the cleanness of the patient's mouth. To detect problems, bleeding or ulcers...
7	Use toothpaste or suitable hygiene solution to clean the dentures - Brush inside horizontally, outside and top of the false teeth. - Brush vertically to clean proximal surfaces and contact areas of the teeth Brush the upper jaw, then the lower jaw. Brush the upper jaw from top to bottom, while lower jaw from bottom to top.	- To clean the dentures effectively - To remove plaque from contact areas of the teeth
8	Ask the patient to gargle Clean the dentures with warm water	- To clean the mouth and remove food particles from the false teeth
9	Put the dentures back into the patient's mouth firmly; Ask the patient if it is comfortable and fit.	- To make the patient feel comfortable with the dentures
10	Some patients do not want to use the dentures (when not needed). The nurse should put the patient's dentures into a cup of warm water, leave the cup in a safe place, write down the name, age of the patient, number of the patient's room and bed.	- To prevent loss
11	Dispose of equipment, and discharge dirty water, clean the toothbrush Remove dirty gloves	- To ensure hospital hygiene and safety - To prevent cross infection.
12	Wash hands as required	- To reduce microbial transmission.
13	Write records: Oral abnormalities of the patient: injury, bleeding, inflammation ...	- To manage performance of the procedure. - To monitor and manage the dental condition of the patient.

Checklist of the procedure for oral care(for patient without consciousness disorder)

No	**Steps**	**Achievement level**		
		Achieved	**Not achieve**	**Remark**
1	Prepare and check equipment			
2	Prepare for the patient			

A. Oral care with a toothbrush				
1-2	Perform steps 1 and 2 above			
3	Raise the bed and its side rails.			
4	Put a towel on the patient's chest.			
5	Wash the hands Wear clean gloves.			
6	Wet the toothbrush, place toothpaste on the brush.			
7	Give the toothbrush to the patient and instruct him to brush his teeth by himself			
8	Brush the patient's teeth if he cannot do it by himself			
9	Help the patient gargle and spit in a kidney tray			
10	Clean the mouth of the patient			
11	Help the patient use dental floss to clean his teeth			
12	Help the patient gargle carefully with water and spit in a kidney tray			
13	Put the patient in a comfortable position			
14	Remove equipment			
15	Wash hands as required			
16	Write records			
B. Patients with dentures				
1-2	Perform steps 1 and 2 above			
3	Pour warm water into a basin			
4	Wash the hands; Wear clean gloves			
5	Remove the dentures from the patient's mouth, place dentures in a cup			
6	Use a pen torch and tongue depressor to fully examine oral condition			
7	Use toothpaste or suitable hygiene solution to clean the dentures			
8	Clean the dentures with warm water			
9	Put the dentures back into the patient's mouth, or put in a cup with warm water			
10	Dispose of equipment			

11	Wash hands as required			
12	Write records			

2.5.2 oral care (for patient with consciousness disorder)

No	Procedure	Reason
1	Prepare equipment *and others such as follow* - Mouth gag; gauze - Glycerin solution; Lemon juice; Vaselin	To ensure comfortable oral hygiene process.
2	Prepare for the patient - Explain the procedure to the patient's family - Lower the head of the patient on the bed with his face turns toward the care provider (if possible)	- The patient's family is ready to cooperate. - To prevent water from entering in the lung of the patient
3	The nurse: Dress and wash hands properly, wear clean gloves	- To reduce the risk of cross infection
4	Place a towel under the patient's chin Keep the kidney tray under the patient's cheek	- To prevent water from wetting the bed - To use the kidney tray to get the patient's vomit and secretion
5	- Keep the patient's mouth open: Use tongue depressor/mouth gag - Teeth cleaning: use NaCl 0.9% solution or mouthwash with gauze, brush the upper and lower jaws, inner, outer and chewing surfaces of the patient's teeth. Brush the upper jaw from top to bottom, the lower jaw from bottom to top	- To clean the false teeth; Remove materials from interdental areas.
6	Clean the palate, tongue. Use a cleansing cloth to clean the patient's mouth	- To clean the tongue and palate
7	Use glycerin gel, lemon juice for the oral mucosa, gums and Vaseline for the lips	- To avoid lips and oral mucosa from becoming unmoistured
8	Dispose of equipment and wash hands - Take the towel from the patient, clean the kidney tray; remove gloves, wash hands	- To kill bacteria on hands, prevent cross infection
9	Write records: - Time of taking oral hygiene - Oral abnormalities of the patient: injury, bleeding, inflammation,...	- To manage performance of the procedure. - To monitor and manage the dental condition of the patient.

Checklist of the procedure of oral care (for patient with consciousness disorder)

No	Steps	Achievement level		
		Achieved	Not achieve	Remark
1	Prepare equipment			
2	Prepare for the patient			
3	The nurse needs to wash hands and wear clean gloves			
4	Place a towel under the patient's chin Keep the kidney tray under the patient's cheek			
5	Open the patient'mouth; Clean the patient's teeth			
6	Clean the palate			
7	Use glycerin gel, lemon juice and vaselin			
8	Dispose of equipment and wash hands - Take the towel from the patient, clean the kidney tray; - Remove gloves, wash hands			
9	Write records			

3. Wash patients' hair

3.1. Some common diseases and injures in hair and scalp

- Dandruff
- Lice
- Hair loss

3.2. Shampoo and not shampoo

- Shampoo all patients who stay in the bed for a long time, do not wash their hair by themselves
- Do not shampoo patients who have:
  + High fever, delirium or convulsions
  + Acute pain, respiratory failure
  + Suffered from cardiovascular collapse, abnormal blood pressure, increased intracranial pressure

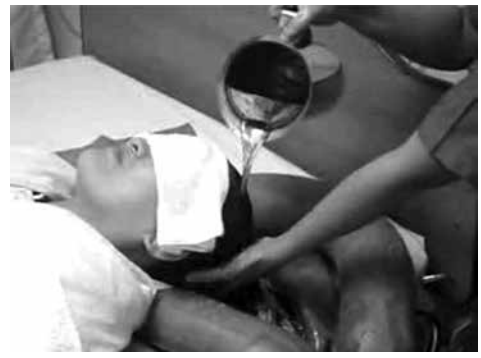
3.3. Principles of shampooing the patient

- Avoid getting cold for the patient.
- Avoid entering soapy water in the eyes and ears of the patient.
- Use vaseline gauze for the patient with a wound in his head. Wash his hair then take care of the wound.

- Avoid shaking the head of the patient while washing, help the patient feel comfortable, and safe when lying for shampoo.
- If the bedspread or clothes of the patient is wet, replace it immediately after washing.

3.4. Practical procedure for washing patients' hair in the bed

No	Procedure	Reason
1	Prepare necessaries: - Shampoo; Warm water; a thermometer - Waterproof cotton, towels, - Safety pin - Hair washing tray - Dirty water container - Comb - Clinical waste bag - Hair dryer	Convenient to take care
2	Prepare for the patient: Inform and explain the hair washing procedure for the patient/ his family	The patient understands and cooperates well
3	Turn off the fan, close the door, and the curtains	To ensure privacy for the patient and to avoid drafts
4	The patient's posture Put the head of the patient at lower posture than his shoulders, put a nylon covered pillow under his shoulders, wrap a towel around the patient's neck and nape, and fix this with a safety pin. Put patient's head laying in the hair washing tray (a towel under the tray)	- To avoid wetting - To use a towel for the hair after finishing shampoo
5	Use a small towel to cover the patient's eyes and put cotton plugs into ears of the patient	- To protect the eyes of the patient while undertaking shampoo. - To avoid water coming into the ears of the patient.
6	Comb the patient's hair smoothly from the root to the end (divide into small parts to comb if the hair is long). Use vaseline gauze to protect the wound in the head before washing	- To help comb hair easily after washing - To avoid dirty water in the wound

7	- Wet the patient's hair - Rub a small amount of shampoo in to the patient's hair - Use fingertips to rub the head of the patient (avoid scratching and shaking the patient's head) - Rinse the hair with warm water and repeat the stage until all of the lather from shampoo has been washed away	 - To wet the hair and scalp of the patient - To massage the head to improve blood circulation in the scalp - To make the patient feel comfortable - To clean hair and scalp
8	- Remove the cotton ear plugs, remove the eye cover, pull the towel in the patient's neck to wrap the hair. - Remove the washing tray, ensure the patient is in the comfortable posture in the bed - Use a towel and hair dryer to dry the hair - Comb the hair, braid the patient's hair (if necessary).	- Avoid wetting pillows - Make the hair dry after shampooing, avoid getting cold for the patient
9	Measure the amount of hair loss, assess the condition of the hair and the scalp	- To detect early diseases of the hair and scalp
10	Dispose of equipment Wash hands as required	- To ensure hygiene and safety - To avoid the risk of cross infection
11	Write records: - The condition of the patient's hair - Problem areas in the scalp: position, and situation - Cooperation and satisfaction of the patient/family	- To monitor and manage patients - To record the progress of patients to provide continuing care

Checklist of the procedure for washing patients' hair in the bed

No	Steps	Achievement level		
		Achieved	Not achieve	Remark
1	Prepare equipment			
2	Prepare for the patient			
3	Turn off the fan, close the door, and the curtains			
4	Put the patient's head in to the washing tray			

5	Use a small towel to cover the eyes and use the cotton ear plugs			
6	Comb the hair from the root to the end			
7	Wet the hair Rub shampoo in to the hair and wash the head Rinse the hair to remove all of lather from shampoo			
8	Ensure the patient is in the comfortable posture in the bed, dry the hair with a clean towel and a hair dryer			
9	Measure the amount of hair loss, assess the condition of the hair and the scalp			
10	Dispose of equipment; write records			

4. Skin hygiene (bathing) for patients

4.1. Bathing types and application

- *Bath with water*
  - + Full-body bathing in the bed: for patients who stay in bed all time due to broken bones, paralysis, coma, surgery ...
  - + Partial bathing in the bed means bathing some parts of the patient's body such as hands, face, armpits, and perineal area that are likely to cause discomfort, superinfection if not bathed. The bathing is used for patients who are weak but still able to carry out partially their own hygiene needs or with the nurses assisting as require.
- *Waterless bath:* A bath with a solution without water

  To support for patients who are unable to have a normal bathing in a tub or a shower, but they can regularly clean their bodies easily and comfortably, preventing the growth of harmful microorganisms on their skin.
- *Tub bath:*
  - + The patients sit or lie in the tub.
  - + For patients who can bathe by themselves but still need the support of the nurses.
- *Shower bath:*
  - + The patients sit or stand under the flows of water. A shower bath can make the patients feel cleaner.
  - + For all patients who can bathe independently without the support from the nurses.

4.2. Do not apply for

- The patients in serious situations
- The patients with multiple wounds

4.3. Principles of skin hygiene

- Ensure privacy for the patient during bathing.
- Provide skin care in the order of priority of the patient.
- Avoid getting cold for the patient
- Check water temperature before bathing the patient, use low pH soaps.
- Ensure safety for patients: elderly people should bathe too carefully because their skin becomes dry. Do not take a bath with hot water after dinner to avoid heart attack or bleeding in the brain...
- Consider the patient's cultural needs of bathing.
- Consider the patient's habits of personal hygiene, using hygiene products and appropriate time for daily personal hygiene.

4.4. Practical procedure for bathing a patient

No	Procedure	Reason
1	Prepare equipment: - Washbowl with warmwater - Thermometer - Gauze sponges - Kocher forceps - Soap / shower gel - Towels - Clean clothes - Covering clothes - Bedspread - Nylon sheets - Bath mat - Clean gloves - Bedpan - Curtains	Convenient to perform
2	Prepare for the patient - Inform and explain to the patient/his family the need of bathing. - Guide the comfortable position of bathing to the patient - Offer toileting (if necessary)	The patient understands and cooperates well
A. Assist the patient to bathe in a tub or with a shower (identify the possibility of patient's self-care)		
1-2	Perform steps 1 and 2 above	
3	Prepare a safe bathroom: - Check the cleanliness of the shower, bathtub. - Place a mat in the bathtub	- To prevent the risk of slipping or falling due to the slippery tub
4	Display "in use" sign on the bathroom door.	- To ensure privacy for the patient
5	Assist the patient as needed in bathing. Assist the patient to put on his bathrobe and slippers in the bathroom.	- To avoid falling - To avoid getting cold

6	Instruct the patient on how to use the signals when they need support and help. Instruct the patient on how to use bath tools: hot / cold faucets	- To take precaution of incidents - To avoid hurt the patient (skin burning due to hot water)
7	Adjust the water temperature	- To prevent skin burning or to avoid getting cold
8	Guide the patient to use grab bars in the bathroom. Warn the patient not to use the bath oil in the tub because it can make the surface of the tub slippery.	- To prevent the risk of slipping and falling
9	Ask the patient not to stay in the tub for more than 20 minutes. Check the safety of the patient every 5 minutes.	- Soaking the body in warm water for a long time can lead to vasodilation and circulatory stasis, cause the patient become dizzy or faint.
10	The nurse comes back to the bathroom when receiving the signal of the patient and knock the door before entering.	- To ensure privacy for the patient.
11	For the weak patient, it is necessary to drain out all water before the patient gets out of the tub, assist the patient to get out (if needed).	- To prevent the patient from falling
12	Cover the patient with a towel and help dry the body of the patient	- To avoid getting cold
13	Assist the patient to wear clean clothes, slippers and cover the patient with a dry towel	- To keep the body of the patient warm
14	Assist the patient to return to bed, lie or sit in a comfortable position	- To provide relaxation after bathing
15	Clean the bathtub or shower. Dispose of equipment	- To reduce the risk of microbial transmission
16	Wash hands	- To reduce the risk of microbial transmission
17	Observe the patient's condition of skin, pay attention to existing pains or problem areas	- To assess the cleanness of skin and skin condition after bathing
18	Assess the comfort and feeling of the patient	- To assess the effectiveness of bathing
19	Write records: - Date and time of bathing. - Water temperature, bath gel or soap, bathing time. - The condition of the patient's skin before and after bathing. - The health status of the patient before, during and after bathing. - Name of the nurse.	- To monitor the progress of the patient's health - To record the progress of the patient to support for continuing care

B. Bathe the patient in the bed		
1-2	Perform steps 1 and 2 above	
3	Turn off the fan, close the door and the curtains	To avoid getting cold for the patient, ensure the patient's privacy and do not affect other patients.
4	The nurse washes her hands as required or quickly cleans hands with sanitizer solution, wears clean gloves	- To reduce the risk of microbial transmission
5	Lower the bed side which near to the nurse, assist the patient to stay nearby the nurse. Adjust the patient's bed in the appropriate position	- To avoid the patient falling when changing positions. - To help the nurse easily and smoothly bathe the patient.
6	Replace the covering cloth for patients. Check the temperature of the water.	- To prevent dirty materials in the old cloth from the patient after bathing - To avoid getting cold for the patient
7	Collect dirty bedding as regulated	- To minimize the transmission of microorganisms.
8	- Undress the patient (start with the side is free for movements then the side in restricted condition) - Put a towel under the patient's head.	- To help remove clothes for the patient easily and avoid further hurting the patient. - To avoid wetting the bedspread.
9	Wash the patient's eyes: - Use warm water, do not use soap. - Wrap a hand of the nurse with a towel to form a washing mitt. Dip it into water and squeeze it well. Use the two upper corners of the washing mitt to clean the patient's eyes. Wash from the head of the eyes to the end. Use a warm towel to wash away scales in the eyelids. Moisten the scaly areas with the warm towel for 2-3 minutes and then clean the areas. Dry eyes gently.	 - Soap can cause the patient's eyes irritation - The washing mitt can keep moistness and warmness for longer time than a towel. The edges of the towel are prevented from rubbing the patient's eyes, and prevent water from dropping on the patient's covering cloth or on the bedspread. Washing the eyes from the head to the end helps prevent substances from entering the lacrimal glands. Avoid strong washing because it can cause inside damage of the patient's eyes.

10	***Wash and dry forehead, cheeks, nose, neck and ears.*** (shaving if needed) After using cleanser, wash the face of the patient with clean water	- To clean the face, neck and ears of the patient - To promote comfort of the patient
11	***Wash the forearms of the patient:*** - Arms and forearms: Uncover the patient's forearms, put a nylon sheet and a towel under the forearms. Wash the forearms from wrists to the armpits with a towel, warm water, soap/ shower gel, then clean again with water and dry (same steps for both forearms). - Two hands: Cover the bed with a nylon sheet then put a basin of water on the bed to wash the hands and fingers (from wrists), then dry hands.	- To avoid wetting and making the bed dirty - To clean hands - To promote circulation
12	Change water, check the temperature of the water.	To provide clean water, the suitable temperature for the patient.
13	***Wash the chest*** - Uncover the chest, abdomen, and armpits. - Cover the abdomen, and chest with a towel - Lift up the towel by one hand while another hand carries out washing the chest and armpits of the patient (be careful with the chest skinfolds) - Dry the patient's chest and cover it with a towel.	- To reveal bathing area - To ensure privacy and keep warm for the patient. - To clean the chest area - To ensure privacy and keep warm for the patient.
14	***Wash the abdomen*** - Lift up the towel by one hand while another hand carries out washing the abdominal and umbilical areas (pay special attention to the skinfolds in the areas). Clean one side, then move to another side in the direction of the abdominal muscles. - Dry the abdominal and umbilical areas with a clean towel and cover the areas with a cloth	- To clean the abdomen - To ensure privacy and keep warm for the patient.

15	***Wash the legs*** - Bathe the patient's legs: uncover the legs of the patient, put a nylon sheet and a cotton towel under the legs, use a cleansing cloth to wash from ankles to groins with warm water and soap / shower gel, wipe again with clean water and dry the legs (same steps for both legs) - *Bathe the patient's feet:* place the nylon sheet and a basin of water on the bed, put each foot in the basin and rinse the foot and toes. - Dry the feet and change the water.	- To clean the feet of the patient - To make the patient feel comfortable - To avoid getting cold
16	***Wash buttocks and back*** - Assist the patient to prone or lie on one side. Place a towel under the patient's buttocks - Uncover buttocks (to ensure privacy for the patient). Bathing from the waist up to the shoulder, then from the waist to the buttocks with warm water, soap/shower gel, wipe with clean water, dry the area (pay attention to the folds in the area of buttocks and anus).	- Convenient for bathing the back and buttocks - To clean the buttocks and the back - To make the patient feel comfortable - To clean the folds of the buttocks and anus, which containing bacteria and retaining feces, urine.
17	Change water, wear clean gloves	- To prevent hand infections and to avoid carrying substances excreted by the patient's body.
18	***Genital hygiene*** - *The patient cleans by himself:* + Assist the patient to lie on his back + Cover the patient's body with a towel + Uncover the genital area + Assist the patient to wash by himself - *The patient cannot wash by himself:* + Place the nylon sheet and a bedpan under the patient's buttocks + Uncover the perineum of the patient + The male patient: Lift up the penis slightly with gauze, wash the glans and the penis. Clean the foreskin carefully. + The female patient: Leave the patient on her back and legs.	- To ensure privacy for the patient - Some patients with partial bathing ability often prefer to wash their genitals by themselves. - To prevent water discharge from making the bed dirty - Convenient to proceed - To eliminate dirt and bacteria in the folds.

	Use forceps and gauze sponges to clean the folds thoroughly, wash from front to back, from outside to inside (do not do the opposite), rinse the area under the flows of water, apply soap/skin cleaning solution, wash again with water (every washing must replace the new gauze) and finally rinse the anus and dry the area of the perineum. - Remove the bedpan	- To make the patient feel comfortable
19	Remove gloves	- To prevent cross infection
20	Apply lotion or cream for the patient (if he asks it)	- Moisturize the skin, prevent skin become dry, cracked
21	Assist the patient to wear clothes. Brush the patient's hair	- To make the patient feel comfortable.
22	Write records: - Date and time of bathing. - Water temperature, the type of lotion, bathing time. - The condition of the patient's skin before and after bathing. - The health status of the patient before, during and after bathing. - Name of the nurse.	- To monitor and manage patients - To record the progress of patients to provide continuing care

Checklist of the procedure for bathing a patient

No	Steps	Achievement level		
		Achieved	**Not achieve**	**Remark**
1	Prepare and check equipment			
2	Prepare for the patient			
Assist the patient to bathe in a tub or with a shower				
1-2	Perform steps 1 and 2 above			
3	Prepare a safe bathroom			
4	Display "in use" sign on the bathroom door			
5	Assist the patient to put on his bathrobe and slippers in the bathroom			
6	Instruct the patient on how to use bath tools: hot / cold faucets			

7	Adjust the water temperature			
8	Ask the patient not to stay in the tub for more than 20 minutes			
9	The nurse comes back to the bathroom when receiving the signal of the patient			
10	Assist the patient to get out of the tub			
11	Cover the patient with a towel and help dry the body of the patient			
12	Assist the patient to wear clean clothes, slippers			
13	Assist the patient to return to bed, lie or sit in a comfortable position			
14	Dispose of equipment			
15	Assess the comfort and feeling of the patient			
16	Write records			
Bathe the patient in the bed				
1-2	Perform steps 1 and 2 above			
3	Turn off the fan, close the door and the curtains			
4	Wash hands and wear clean gloves			
5	Adjust the patient's bed in the appropriate position			
6	Replace the covering cloth for patients Check the temperature of the water			
7	Collect dirty covering cloths as regulated			
8	Undress the patient Put a towel under the patient's head			
9	Wash the patient's eyes with warm water			
10	Wash and dry forehead, cheeks, nose, neck and ears			
11	Wash the forearms of the patient			
12	Change water, check the temperature of the water.			
13	Wash the chest of the patient			
14	Wash the abdomen of the patient			
15	Wash the legs of the patient			
16	Wash buttocks and back of the patient			
17	Change water, wear clean gloves			

18	Genital hygiene for the patient			
19	Remove gloves, and dispose of equipment			
20	Assist the patient to wear clothes.			
21	Write records			

LESSON TEST

1. Choose the best answer:

Question 1: Purpose of hygiene care of patients:

A. Reduce the risk of hospital infection
B. Promote the comfort of the patient, and prevent infection
C. Prevent complications
D. Support treatment of diseases

Question 2: Before bathing for the patient in bed, the nurse must:

A. Explain the procedure to the patient for his consent
B. Prepare necessary equipment as needed
C. Identify the patient's overall condition
D. Explain the overall condition to the patient

Question 3: Take oral care of unconscious patients, special attention should be paid to:

A. Avoid water entering in the lung
B. Clean all surfaces of the teeth
C. Clean the tongue and palate
D. Apply aseptic techniques

Question 4: Apply bed shampoo to the patient who has

A. Brain injury causing increased intracranial pressure
B. High fever
C. Broken thighbone
D. All hospitalized patients

Question 5: Not bathing the patient with

A. Broken forearm
B. Paralysis
C. Dermatitis
D. Shock

Question 6: Not apply bed shampoo to the patient who has

A. High fever, delirium or convulsions
B. head injury
C. Acute pain, respiratory failure
D. Cardiovascular collapse, abnormal blood pressure, increased intracranial pressure

Question 7: Procedure for bed bathing for patients:

A. Forearms, legs, chest, abdomen, back and buttocks
B. Chest, abdomen, forearms, legs, back and buttocks
C. Forearms, chest, abdomen, legs, back and buttocks
D. Forearms, chest, abdomen, back, buttocks, and legs

2. Case study

Case 1

The patient Nguyen Thi A, 76 years old, had a stroke, suffering from paralysis in the left side of her body. She has taken hospital treatment for ten days, now she is the stable condition. The nurse identifies the appearance of scaly patches on the skin; long nails and toenails; oily scalp, dirty hair.

Question:

1. Identify and determine care services for the patient A?
2. Provide appropriate hygiene care interventions for the patient A?
3. Perform hygiene care for the patient A: shampooing at bed, supporting for oral hygiene, assisting to have a bath tub or shower *(playing role of assumed patients in assumed situations)*

Case 2

Ms. Le Thi N., 42 years old, a tailor; She had a traffic accident that broke her right leg bones. She had surgery after 4 days in the hospital. Current situation: the patient is awake and some facial wounds is healing. She wants to take a bath and wash her hair.

Question:

1. As a nursing care provider, please choose the appropriate way to care of the patient N?
2. Describe and explain which contents of nursing care to help Ms. N., which contents the nurse guide the patient to take selfcare?

Case 3

Mr. Nguyen Van Nam, 50 years old, suffered from pains in the lumbar spine III-IV and spinal cord injury. He has been treated at the Neurology Department for 6 days. At the moment, Mr. Nam has suffered from pneumonia due to prolonged lying.

Question:

1. What should the nurse pay attention to perform oral hygiene for Mr. Nam?

2. Mr Nam does not want to brush his teeth after meals because at home he did not have the habit of brushing, only using toothpicks and rinsing his mouth after eating. What should the nurse do before taking oral care of the patient? *(present in details)*
3. When the nurse is providing oral hygiene to Mr Nam, he says that he has difficulty in breathing and feels uncomfortable; How will the nursing care provider handle?
4. Clean eyes, face, neck, ears for the patient *(perform on assumed patients or situations)*

Answers

1. Choose the correct answer

Question 1: B
Question 2: D
Question 3: A
Question 4: C
Question 5: D
Question 6: B
Question 7: C

Competency based assessment checklist for Hygiene care of patient

No	Practice	Achievement level		
		Can do independently (2)	**Can do with support (1)**	**Can not do or do wrongly (0)**
1	Identify the needs of the patient on hygiene care			
2	Perform oral care techniques under the proper procedure in accordance with the patient's condition.			
3	Perform bathing techniques under the proper procedure in accordance with the patient's condition.			
4	Perform shampooing techniques under the proper procedure in accordance with the patient's condition.			
5	Guide the patient/his family to take selfcare in accordance with the needs of the patient.			

REFERENCES

1. Ministry of Health (2010). *Guide to practice 55 basic nursing techniques, Volume I,* Education Publishing House, Vietnam.
2. Ministry of Health (2012). *Lectures on nursing skills,* Medical Publishing House, Hanoi.

LESSON 13

PATIENT MOVEMENT SUPPORT

OBJECTIVES

1. Identify patient, select means of transport in accordance with techniques of patient moving assistance (Competency 1.1; 1.2; 2.1; 2.2; 3.1; 4.1; 4.3)
2. Perform / coordinate implementation of techniques supporting patients with moving that ensure proper procedure and safety (Competency 2.3; 2.4; 3.2; 4.4; 4.5; 4.6; 4.7; 5.1; 6.1; 6.2; 8.1; 8.2; 15.2; 16.3; 18.3; 20.1; 24.1; 25.2)

CONTENT

1. Introduction

Movement of the body is a combination of musculoskeletal system and nervous system to maintain balance of the body when lifting, folding, moving, carrying out daily activities and enabling human to perform activities without effort of the muscles.

The level of movement has a great influence on physiology and development process of each individual. When the level of movement is limited, many functional systems in the body will be at risk of impairment. Poor mobility may lead to changes in function of cardiovascular system, decline in normal metabolic function, increase risks of pulmonary complications, tumor growth and changes in the urinary system. The severity of mobility decline depends on the age, health status, diet and level of immobility that the patient has previously experienced. These adverse effects are more influential in the elderly patients suffering from chronic diseases than younger patients.

Nurses often take care of patients in a state of inactivity or limited movement, thus playing an important role in taking care of posture, moving patients safely, and minimizing the risks caused by immobility or movement restriction. Maintaining the -functional posture, applying a technique of rotating and moving patient safety will help the patient being active in movement and also not hurt the nurse during nursing care.

Skills to support patients for moving include:

- Carrying the patient.
- Moving the patient from bed to stretcher and vice versa.
- Transporting the patient by wheelchair, stretcher or brancard.
- Moving the patient stretcher into / out of car.

2. General principles to move patients

- Only move the patient when indicated, and the time and date of moving must be recorded. Must bring full documents, medical records to hand over the patient to the receiving place.
- When moving, make sure to be gentle and careful, especially for those who are seriously ill, such as cardiovascular disease, patient after surgery, patient with spinal fractures, patient with broken femur... to avoid for patient from pain and from more being annoyed.
- Must prepare documents in advance when moving patient from this department to another department, taking them for testing, radiography… In case of moving to another room, it is required to inform the related department to prepare bed for patient.
- When moving, patient must be covered with blanket or cloth and protected from rain and sunshine.
- When moving patient by stretcher, trolley,.., cushion for patient is required.

3. Application

All seriously patients who cannot move by themselves (move patients from one department to another, the elderly, the disabled ...) as directed by the doctor.

4. Techniques for supporting to move patients

4.1. Identification

- Whole conditions of patients: perception, vital signs (stability of pulse, blood pressure)
- Muscle strength (two legs, two arms)
- Action of joints and muscle systems
- Medical condition:
  + Vertigo, dizziness, postural hypotension ...
  + Paralysis or no movement (spasticity or weakness of the muscle)
  + In case of fracture or amputation
  + Acute or chronic disease
- Endurance level: pain, discomfort
- The degree of fatigue in moving
- Symptoms that are dangerous to the lives of patients
- Keep the balance while sitting on the bed or at the bedside: being tend to swing or fall to one side
- Risk factor:
  + Risk of falls when moving: people with neurological diseases, weak mobility, osteoporosis, cognitive disorder, vision disorder and balance changes.

+ Risk of shock, fainting when moving.
+ Risk of injury
+ Risk of displacement of transmission system and drainage system ...

4.2. Equipment

- Transportation means:
  + Car
  + Stretcher or brancard
  + Chair
  + Hand wheelchair
  + Bed
  + Patient moving devices
  + Slider board
- Prepare emergency medicine and tools depending on the state of the patient
- Personal items: Drinking water, drinking cup, pot, basin, spittoon ...
- Nylon against rain, blanket, pillow

4.3. Procedure

4.3.1. Helping patients get up and get out of bed

- Applicable to cases where the patient has lain for a long time, after surgery as directed by the doctor.

No.	Implementation steps	Reason
1	***Preparation of patient***	
	Patient gets dressed, not let the patient get cold.	To keep the patient warm.
	Explain for patient and the patient's family to understand clearly reasons for sitting up and getting out of bed.	To put the patient and the family at ease. The patient, the family know the benefits and cooperate well with the nurse.
	Remind the patient and the family members what is needed.	
Helping patient get up and get out of bed		
2	Check the records, observe the patient's condition to make sure the patient could get out of bed.	To avoid postural hypotension.
3	*Helping patient sit upright in bed*	
	The patient lies on his back, one arm of the nurse is placed under patient's shoulder to support his/her neck and spine, the other arm against the bed surface then help the patient sit up gently by pushing the arm on the bed surface.	To make sure the patient gets up safely.

4	*Helping patient get out of bed*	
	The patient is close to the bedside, turn the patient to the side facing the nurse.	To prepare patient to slowly move to the edge of the bed and prevent falls.
	The nurse stands opposite, near the patient's hips, legs spread out and one leg near the top of the bed. One arm placed under the shoulder lifts head and neck, one arm supports the thigh for the legs to hang down on the bed. Observe facial expressions, count pulse, ask patient, have the patient warmly get dressed.	The position of the firmly standing nurse with centre of gravity towards the patient to maintain balance while moving.
	Support the patient to stand up, the nurse's left hand rests on the patient's left armpit, the right arm slips through the hips, hold the patient for walk. After walk, take the patient back to bed, let him lie comfortably. Observe the situation of patient.	To help patient movement safely.
5	*Carrying the patient from bed to chair*	
	The nurse stands in front of patient, one leg in front of the other, two hands rest on patient's armpits, the patient put his/her hands on the nurse's shoulder (if there is no contra-indication, the patient can lean his/her arms when standing up).	To help patient balance blood pressure and reduce the risk of dizziness or fainting when the patient moves to the chair.
	The nurse slightly bend over to take the patient out of bed, turn to place the patient on the chair.	To make sure the nurse moves in the same direction as the patient.
	Let patient sit comfortably. Observe the situation of patient.	Let patient sit comfortably. Observe the situation of patient.

Technical Checklist for supporting patient get up and get out of bed

No.	Content	Achievement level		
		Achieved	**Not achieve**	**Remark**
1	Identify patient			
2	Prepare equipment and means			
3	Check records			
A. Helping patient stay upright in bed				
1-3	Perform steps 1 – 3 above			
4	The patient lies on his/her back			
5	The nurse places one arm under the shoulder to support the neck and cervical spine, the nurse's other arm leans against on the bed surface.			

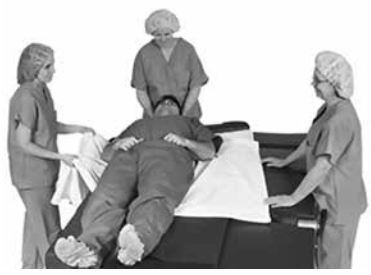
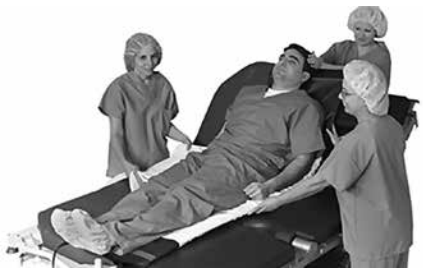
6	Support patient to sit up gently			
B. Carrying patient get out of bed				
1-3	Perform steps from 1 – 3 above			
4	The patient is close to the bedside, turn the patient to the side facing the nurse.			
5	The nurse helps the patient sit up with the legs hanging down on the bed.			
6	Observe facial expressions, count pulse, ask patient, have the patient warmly get dressed.			
7	Help the patient stand up, carry him for walk.			
8	After walk, take the patient back to bed, put him lie comfortably.			
9	Observe the situation of patient.			
C. Moving patient from bed to chair				
1-3	Perform steps from 1 – 3 above			
4	The nurse stands in front of the patient, one leg in front of the other, two arms assist the patient's armpits.			
5	The patient put his/her arms on the nurse's shoulder.			
6	The nurse slightly bend over to take the patient out of bed, turn to place the patient on the chair.			
7	Let the patient sit comfortably.			
8	Observe the situation of patient.			

4.3.2. Moving patient from bed to stretcher

Applicable to patients who move to another department/room, the elderly, patients with paralyzed legs, patients with broken legs.

No.	Implementation steps	Reason
1	***Preparation of patients***	
	The patient gets dressed well, not leave him cold while moving.	To keep the patient warm.
	For the patient with bone fractures, burn, severe injuries that need to be bandaged, fixed with a front brace to limit pain, prevent shock - faint while moving.	To prevent shock-faint.
	If the patient is under infusion due to the fact that the patient has just completed surgery or post-operation, the related infusion item must be carried while moving.	

	Explain to the patient and the family to understand the reasons for the change of department/room.	To leave the patients and their families at ease. The patient, the patient's family know the benefits and cooperate well with the nurse.
	Remind the patient and the family members what is needed.	
	Before moving, patient must be identified and re-examined carefully.	To apply appropriate transfer method.
A. Moving patient from bed to stretcher		
1	Perform step 1 above	
2	Lock the wheels and bed carefully.	To ensure safety for patient.
3	Position the stretcher parallel at least 1m away from the bed or place it perpendicular to the bottom or top	
4	*Supporting patient with 2-3 nurses*	
	The strongest and highest nurse stands at the head of the patient: - The first person supports the patient's neck, shoulders and back; - The second person supports the patient's waist and buttocks; - The third person supports the patient's thighs and legs;	
	On the count of three, lift the patient up, hold him/her against the chest.	To ensure safety for patient.
	Turn half way to gently place the patient on the stretcher.	
5	*Stretcher is placed parallel and close to bed* With 2 persons or 4 persons (patient lies on the rubber drawsheet)	
	One person stands on the side of the stretcher, one person on the other side of the bed.	It is convenient for the nurse to easily carry out movement of patient.
	Both roll the drawsheet in hand to keep the heaviest parts.	To ensure safety for patient.
	A person lifts the patient slowly onto the stretcher.	
B. Moving patient onto handy stretcher		
1	Perform step 1 above	
2	Two persons carry top and bottom of stretcher respectively, stand close to the patient' bed, position surface of stretcher alongside edge of bed.	

3	Two or three nurses stand close to the bed at the same side with the nurse carrying the stretcher, lift the patient up from the bed surface, and step back together.	
4	Two nurses who are carrying stretcher quickly place the stretcher to keep the patient.	
5	All three nurses gently place the patient on the stretcher.	
C. Moving patient from bed to stretcher by slider board		
	The slider board creates a flat surface under the patient so the nurse must least bend his back, thus ensuring safety for patient and nurse.	
		

Technical checklist on patient moving support from bed to stretcher

No.	Content	Achievement level		
		Achieved	Not achieve	Remark
1	Identify patient			
2	Prepare equipment and means			
A. Moving patient from bed to stretcher				
1-2	Perform steps 1 and 2 above			
3	Lock the wheels and the bed			
4	Position stretcher parallel at least 1m from the bed			

Helping patient with two-three nurses				
1-4	Perform steps 1 – 4 above			
5	- The first person supports the patient's neck, shoulders and back; - The second person supports the patient's waist and buttocks; - The third person support the patient's thighs and legs;			
6	On a count of three, lift the patient up and hold him against their chest.			
7	Turn a half of round to gently place the patient on the stretcher.			
Stretcher is placed parallel and close to bed				
1-4	Perform steps 1 – 4 above			
5	One person stands on the side of the stretcher, one person stands on the other side of the bed			
6	Both roll the drawsheet in hand to keep the heaviest parts.			
7	A person lifts the patient slowly onto the stretcher.			
B. Moving patient from bed to handy stretcher				
1-2	Perform steps 1 and 2 above			
3	Two nurses carry top and bottom of the stretcher, stand close to the patient's bed, position surface of stretcher alongside edge of the bed.			
4	Two or three nurses stand close to the bed at the same side with the nurse carrying the stretcher, lift the patient up off the bed surface, and step back together.			
5	Two nurses carrying stretcher quickly place the stretcher to keep the patient.			
6	Two nurses carrying stretcher quickly place the stretcher to keep the patient.			

4.3.3. Transporting patient's stretcher

No.	Implementation steps	Reason
A. Method of stretcher carriage by walk		
Carrying stretcher with two persons		
1	Two persons sit, one leg kneel, one leg contract.	To avoid shaking the patient while moving.
2	The person walking ahead raises the patient's head.	
3	The lead person behind carries the patient's feet.	
4	The lead person counts to three then both stand up together and carry the patient's stretcher away.	
Carrying stretcher with three persons		
1	Similar steps as carrying with 2 persons.	
2	The third person standing outside on the left side of the patient is the lead person and takes turns with the two carriers.	
Carrying stretcher with four persons		
	Each nurse stands outside at each handle of stretcher and following commands to lift and move the patient.	
B. Carrying patient's stretcher into car		
Three-person Method		
1	One nurse in car to catch the stretcher.	To ensure safety, avoid falling, shaking the patients.
2	Two nurses carry the stretcher closely to the car then bring top of stretcher ahead.	
3	The nurse in car catches the stretcher.	
4	The nurse carrying bottom of stretcher gradually moves the stretcher into car.	
5	Both nurses lift the stretcher up then keep it balance to place the stretcher on floor of the car.	
6	Tie the string (if any) to keep the stretcher safe when transporting.	
Four-person Method		
1	One nurse in car to catch the stretcher.	
2	Two nurses carry the stretcher near the car, bring top of stretcher ahead.	
3	The nurse in car catch the stretcher.	

4	The nurse moves top of the stretcher; the fourth nurse gets in car to catch the stretcher then along with the person on car transfer the stretcher into the car.	
C. Carrying patient's stretcher out of car		
Three-person Method		
1	Two nurses beneath, one nurse in car.	
2	The nurse in car removes string fixing the stretcher (if any).	
3	One of the two nurses beneath moves the bottom of stretcher.	
4	The nurse in car moves the top of stretcher.	
5	The other nurse holds top of the stretcher when it is fully out of floor of car then carry the stretcher away.	
Four-person Method		
1	Two nurses in car slowly transfer the stretcher with feet of the patient down first.	
2	Two nurses on the ground keep the stretcher when it is taken out of car.	
3	When the stretcher is moved almost, one nurse in car get off to keep the stretcher passed by the person in car.	

Technical checklist for transporting patient's stretcher

No.	Content	Achievement level		
		Achieved	Not achieve	Remark
1	Identify patients			
2	Prepare equipment and means			
A. Method of stretcher carriage by walk				
Two persons sit, one leg kneel, one leg contract				
1-2	Perform steps 1 and 2 above			
3	The person walking ahead raises the patient's head.			
4	The lead person behind carry the patient's feet.			
5	The lead person counts to three then both stand up together and carry the patient's stretcher away			
With three persons				
1-2	Perform steps 1 and 2 above			

3	The person who walks ahead raises the patient's head.			
4	The person behind carries the patient's feet.			
5	The third person standing outside on the left side of the patient is the lead person and takes turns with the two carriers.			
6	The lead person counts to three then both stand up together and carry the patient's stretcher away.			
With four persons				
1-2	Perform steps 1 and 2 above			
3	Each nurse stands outside at each handle of stretcher			
4	Following commands to lift and move the patient.			
B. Carrying patient's stretcher into car				
Three-person Method				
1-2	Perform steps 1 and 2 above			
3	One nurse in car to catch stretcher			
4	Two nurses carry the stretcher closely to the car then bring top of stretcher ahead.			
5	The nurse in car catches the stretcher			
6	The nurse carrying bottom of stretcher gradually moves the stretcher into car.			
7	Both nurses lift the stretcher up then keep it balance to place the stretcher on floor of the car.			
8	Tie the string to keep the stretcher.			
Four-person Method				
1-2	Perform steps 1 and 2 above			
3	One nurse in car to catch the stretcher.			
4	Two nurses carry the stretcher near the car, bring top of stretcher ahead			
5	The nurse in car catches the stretcher.			
6	The nurse moves top of the stretcher; the fourth nurse gets in car to catch the stretcher then along with the person on car transfer the stretcher into the car.			

C. Carrying patient's stretcher out of car				
Three-person Method: Two nurses beneath, one nurse in car.				
1-2	Perform steps 1 and 2 above			
3	The nurse in car removes string fixed with the stretcher.			
4	One nurse beneath moves the bottom of stretcher.			
5	The nurse in car moves the top of stretcher.			
6	The other nurse holds the top of stretcher when it is fully out of floor of car.			
7	Two nurses carry stretcher away.			
Four-person Method: Two nurses beneath, two nurses in car.				
1-2	Perform steps 1 and 2 above			
3	Two nurses in car slowly transfer the stretcher with feet of the patient down first			
4	Two nurses on the ground hold the stretcher when it is taken out of car.			
5	When the stretcher is moved almost, one nurse in car get off to catch the stretcher passed by the person in car.			
6	Two nurses carry the stretcher away.			

4.3.4. Moving patients from bed to wheelchair

No.	Implementation steps	Reason
1	***Preparation of patients***	
	The patient gets dressed attentively, not leave the patient cold while traveling.	To keep the patient warm
	If the patient is under infusion due to the fact that he has just completed surgery or after operation, the related infusion item must be carried while moving.	
	Explain to patient and his family the reasons for moving.	To leave patients and their families at ease The patient, the patient's family know the benefits and cooperate well with the nurse.
	Remind the patient and family members what is needed.	
	Before moving, patient must be identified and re-examined carefully.	To apply appropriate transfer method.

2	Wheelchair is placed 1m from the end of bed and its face towards the headboard. Lock the wheel, kick the pedal.	To ensure lightness and safety for patients.
Helping patient with one nurse		
1-2	Perform steps 1 and 2 above	
3	The nurse helps the patient to sit up and carry the patient gently to put on the wheelchair.	
4	Lower the pedal for the patient to put their feet on.	
Helping patient with two nurses		
1-2	Perform steps 1 and 2 above	
3	Support the patient to sit up with hanging down feet on the bed.	
4	Two persons stand on either side of the bed hold hands each other: one under patient's knees, one wraps the patient's middle of the back, two hands of patient grasp the two nurses' necks.	
5	Two nurses together pick the patient up and turn a half of round then gently put the patient on wheelchair.	

Technical checklist on supporting patient for moving from bed to wheelchair

No.	Content	Achievement level		
		Achieved	**Not Achieve**	**Remark**
1	Identify patients			
2	Prepare equipment and means			
3	Wheelchair is placed 1m from the end of bed and its face towards the headboard.			
4	Lock the wheel, kick the pedal.			
A. Support the patient with one nurse				
1-4	Perform steps 1 - 4 above			
5	The nurse helps the patient to sit up			
6	The nurse carries the patient then gently put the patient on the wheelchair.			
7	Lower the pedal for patient to put his feet on.			
B. Support patient with two nurses				
1-4	Perform steps 1 - 4 above			

5	Support the patient to sit up with hanging down feet on the bed.			
6	Two persons stand on either side of the bed hold hands each other.			
7	Two hands of patient grasp the two nurses' necks.			
8	Two nurses together pick the patient up and turn a half of round then gently put the patient on wheelchair.			

LESSON TEST

1. Choose the correct answer

Question 1: When moving the patient, please note:

A. Move as fast as possible.

B. Keep safe for patient in all aspects.

C. In the case of patient with heavy weight, the nurse supports the head first and then the legs.

D. The nurse must stand on the left to support the patient for favor of her dominant hand.

Question 2: When lifting the patient, the nurse needs to:

A. Try to lift the patient if he is too heavy.

B. Call for assistance if the person is too heavy.

C. Instruct family members to change position for the patient when he wants.

D. It is possible to position the patient optionally while supporting.

Question 3: When transporting patient, need to pay attention to:

A. Survival signs

B. Urine

C. Spirit

D. Movement function

Question 4: How to position a patient with abdominal injuries during transportation:

A. The patient lies on his back with his legs straight.j.

B. The patient lies on his side, upper legs contract and lower legs stretches.

C. The patient lies on his back, two legs contract.

D. The patient lies on his belly.

Question 5: Note when carrying the stretcher up the slope, onto the vehicle:

A. Carry head behind, lower legs

B. Carry head ahead, lower legs

C. Carry head behind, raise legs

D. Carry head ahead, raise legs

2. Select True (T) – False (F) in the following sentences:

No.	Content	True	False
1	When moving patient to wheelchair need to lock the front wheel to ensure safety for patient.		
2	Supporting patient must be gentle.		
3	When two people supporting the patient, there is no need to do the same rhythm.		
4	Wheelchair is only used for coma patient.		
5	When lifting, holding and moving patient, nurses should pay attention to survival signs of patient.		

3. Case study

Case 1

Patient Nguyen Van A., 25 years old, on the 1st day after surgery due to appendicitis. The patient complains of pain in the abdomen and incision. The patient is assigned to be moved from the recovery room after surgery to the Surgery Department 3 of hospital. As a nurse in charge of caring for patient A at the recovery room after surgery, please:

1. Identify condition of the patient
2. Determine suitable means to transport the patient. Explain.
3. Implement the techniques of transporting patient A from the recovery room after surgery to Surgery Department 3.

Case 2

Patient Tran Van T., 75 years old, is receiving treatment at the Internal Medicine Department on the 5^{th} day with a diagnosis of pneumonia. Currently, the patient is conscious, stops dyspnea, manages cough and sputum. Survival signs: pulse 96 times / minute, temperature 37^0C, blood pressure 140 / 85mmHg, breath rate 22 times / minute, SPO_2 93%. The body is thin, weak, unable to walk on his own because of pain in both legs. The patient is assigned to have a chest x-ray. As a nurse in charge of caring for patient, please:

1. Identify status of the patient B?
2. Determine suitable means to transport the patient? Explain?
3. Perform techniques transporting the patient to take chest X-rays?

Answers

1. Choose the correct answer

Question 1: B Question 2: B

Question 3: A Question 4: C

Question 5: D

3. Select True (T) – False (F)

2.1: T; 2.2: T; 2.3: F; 2.4: F; 2.5: T

Competency based assessment checklist for Patient movement support

No.	Competencies	Achievement Level		
		Can do independently (2)	**Can do with support (1)**	**Cannot do or do wrongly (0)**
1	Identify patient; select transport means in accordance with techniques of assisting the patient on moving.			
2	Implement/coordinate the implementation of techniques on patient carriage that ensure proper procedures and safety.			
3	Perform/coordinate the implementation of techniques on support of patient for moving from bed to stretcher that ensure proper procedures and safety.			
4	Perform/coordinate the implementation of techniques on carriage of patient stretcher that ensure proper procedures and safety.			
5	Implement/coordinate the implementation of techniques on assistance of patient on moving from bed to wheelchair that ensure proper procedures and safety.			

REFERENCES

1. Ministry of Health (2010). *Guidelines for practice of 55 basic nursing techniques, Vol I,* Vietnam Education Publishing House
2. Ministry of Health (2012). *Lecture on nursing skills,* Medical Publishing House, Hanoi

LESSON 14

FEEDING SUPPORT TO PATIENTS

OBJECTIVES

1. Identify demand of the patient on feeding measures. (Competency 1.1; 2.2 ;2.3; 3.1; 4.1)
2. Perform supporting the patient to eat/drink: secure the procedure, safety and correspondence with patient's clinical condition (Competency 2.3; 2.4; 3.2; 4.2; 4.4; 4.5; 4.6; 4.7; 4.9; 5; 6; 8.2; 8.3; 16.3, 20.2; 20.4; 24.1; 25.2)
3. Instruct the patient's family to support the patient eat/drink in a proper manner and in compliance with technical requirements (Competency 2.3; 4.6; 8.2)

CONTENT

1. Introduction

Nutrition is a main factor to maintain and improve health condition. Even when your body is at a complete rest without any exercise it still burns a certain amount of energy for activities insides your body to maintain life. When the body gets ill, nutritional demand becomes more important to help the body cope with illness and recover. Except for the patient who suffers from some diseases causing movement disorders, absorption, intestinal excretion (such as mechanical intestinal obstruction, intestinal paralysis, acute pancreatitis, ...), enteral feeding is often chosen, because it is suitable for gastrointestinal physiology and functions, low cost and has low risk of complications. Enteral feeding helps maintain the anatomical structure and functions of the intestinal mucosa, enables the digestive system to recover its normal condition, prevents the spread of bacteria and endotoxins from the gastrointestinal tract to circulatory system, sustains the function of other digestive organs such as pancreas and liver.

The role of a nurse is to evaluate nutritional condition, identify malnutritional risk to set up plan and provide nutritional support for the patient in a safe and effective way; Nurses have to work with the care team to check daily pathological diet as directed by doctor; actively invites officers of nutrition department to participate in nutritional consultation for related pathological cases to build up proper diet for the patient's clinical, cultural and religious condition; coordinates with infection control department to ensure food safety and hygiene.

Below are some nutritional support practices:

- Supporting the patient to eat/drink by mouth
- Nasogastric tube feeding

2. Support the patient to eat/drink by mouth

2.1. Application

Applicable to the patient with normal chewing and swallowing ability, no wound in mouth and having normal intuition.

2.2. Requirements

- Communication skills: showing good communication skill with considerate and cheerful attitude to encourage the patient to finish his/her diet.
- Nutrition knowledge:
  + Selecting food which are suitable with the patient's clinical condition, hobbies, religion; Plating food in a colorful and eyes catching way to encourage appetite of the patient.
  + Creating a funny, comfortable and suitable atmosphere for eating.
  + Instructing the patient and family on basic knowledge of nutrition and feeding procedure.

2.3. Practice supporting the patient to eat/drink by mouth

No	Procedure	Reason
1	Nurse washes hands	To prevent risk of infection
2	Devices preparation: - Feeding tray, food as designated. - A big cotton towel and 2 small cotton towels. - Bowl, plate, spoon, chopstick, cup of water. - Medical tray. - Pot of clean water. - Nylon sheet	To limit interruption during the feeding process
3	Get the patient prepared: - Explain to the patient feeding procedure, importance of nutritional elements in diet, and encourage him/her to finish diet. - Put the patient in semi upright position or let them sit to eat	To help the patient understand and cooperate To avoid reflux
4	Lay nylon sheet near to bed and place the clean water pot at convenient position to wash hands	To avoid food falling off the bed.
5	Place the medical tray in a favorable position.	To collect mouth washing water
6	Put on cotton towel ahead, clean teeth and face for the patient.	To stimulate taste and help the patient eat well.
7	If the patient uses denture, it is required to put denture in the right place and get it cleaned before eating.	To secure safety when eating, help the patient chew well and eat better.

8	Take food to the plate, rice to the bowl, check food temperature, add spices to food (if necessary).	To make it easy for the patient to eat and eat better.
9	Support the patient to eat. Use a small spoon to feed the patient (if needed). Observe the patient swallowing.	The patient has a safe and effective feeding
10	Create an enjoyable atmosphere and encourage the patient to finish diet.	Comfortable mood helps the patient eat more
11	After feeding: Instruct and support the patient to wash and wipe mouth.	To ensure hygiene for the patient.
12	Keep the patient in 30^0 - 45^0 position in 30- 60 minutes after meal.	To avoid reflux
13	Instruct the patient/family to have a rest in the bed and promptly inform medical staffs when having abnormal symptoms such as vomiting, choking, cyanosis…	To prevent and early detect complications after feeding.
14	Clean up devices - Pour leftover into container. - Wash tray and other devices with water and soap. - Hang to dry and place in specified place.	To prepare devices for next feeding.
15	Make record: - Feeding date/hour; diet - Self-eating or support needed. - Reasons why the patient eats little or does not eat. - Which food the patient cannot eat. - Name of feeding nurse.	To manage and keep track on the patient. To demonstrate compliance with current legislation.

Checklist for supporting the patient to eat/drink by mouth

No	Implementation	Achievement level		
		Achieved	**Not achieved**	**Remark**
1	Hand washing.			
2	Devices preparation.			
3	Identification of the patient's clinical condition and get the patient prepared.			
4	Lay the nylon sheet near to bed and place the clean water pot at convenient position to wash hand.			
5	Place medical tray in a favorable position.			
6	Put on cotton towel ahead, clean teeth and face for the patient.			

7	Check denture hygiene and put in right place.			
8	Take rice, food and check food temperature.			
9	Support the patient to eat. Observe the patient swallowing.			
10	Create enjoyable atmosphere and encourage the patient eating.			
11	Instruct and support the patient to wash and wipe mouth.			
12	Keep the patient in 30^0 - 45^0 position in 30 - 60 minutes after meal.			
13	Instruct the patient to have a rest and inform when having abnormal symptoms.			
14	Clean up devices.			
15	Make record.			

3. Nasogastric tube feeding

3.1. Definition

- Nasogastric tube feeding is a technique in which a plastic tube will be inserted through nose or mouth down to stomach to give nutriment to the patient who is in emergency or serious condition with self-eating ability loss.

3.2. Application

- The patient who cannot chew, swallow or has choking risk when swallowing.
- The patient who is in the process of endotracheal intubation, or tracheostomy.
- Prematurely baby born with cleft palate, cleft lip and impaired sucking.

3.3. Non-application:

- The patient with esophageal lesions such as acid, alkaline burns, throat abscess, esophageal vesicles.
- The patient with intestinal obstruction, small intestinal obstruction, pyloric stenosis.
- The patient of emesis.
- The patient with diarrhea after peritonitis or after perforation of hollow organs.

3.4 Safety principles when using nasogastric tube feeding

- Nursing staff needs to ensure that tube is located in the stomach: The method of using litmus paper is the best way to confirm the nasogastric tube is correctly placed. In case of using syringe test to check the placement of the tube, the amount of air injected into the patient's stomach is not allowed to exceed 30ml for adults and 10ml for infants.

- The placement of nasogastric tube may result to X-reflex which makes heart rate dropped so the patient's heart rate must be checked before and after tube placement.
- It is necessary to verify the tube placement and gastric content before a feeding.
- Moisture the patient's lip with water and practice swallowing reflex better as well as facilitate tube removal
- Nasogastric tube can be kept up to 7 days or be replaced after 48-72h or when tube is contaminated.
- It is not recommended to use PVC nasogastric tube in intestinal tract because this kind of material is stiff and may cause gastric erosions and ulceration, esophageal-endotracheal leak in the patient whose breathing is supported by artificial mechanical ventilation
- Tooth brushing twice a day is recommended for the patient.
- Nasogastric tube cannot be inserted when the patient suffers from rhinitis, nosebleed, and nasal polyps.

3.5 How to confirm correct tube placement in stomach (3 ways):

- Attach syringe to the tube and test gastric content.
- Immerse the tip of the tube into water to confirm the tube placement (if there are bubbles, then the tube is in the respiratory tract).
- Use a syringe and inject air into the patient's stomach then use a stethoscope to listen to the whooshing sound.

3.6 How to give nutriment into tube

- Use feeding syringe: Slowly pour the nutriment into syringe and do not rush feeding. The interval between each feeding is 4-6 hours.
- Use feeding bag: if the patient suffers from dyspepsia, food reflux, use feeding bag with roller clamp to control the drop rate to feed the patient. The patient can be fed 6-8 times/day. Feeding bag must be replaced after 24 hours.

3.7. Practice nasogastric tube feeding

3.7.1. Identification of the patient's clinical condition

- Nasal condition, nasal mucosa
- Esophagus, abdomen condition
- Condition of tube hygiene, tube storage time (if prepared for the next feeding)
- Condition of gastric content (if prepared for the next feeding)
- Tube position (if prepared for the next feeding).
- Awareness and cooperation of the patient and family.
- Identify risks.
    + Risk of misplacing tube into trachea because the patient loses swallowing reflex.
    + Risk of suffering pneumonia after tube placement.

+ Risk of tube slippery or tube removal by the patient
+ Risk of gastrointestinal infection due to impaired tube hygiene.

3.7.2. Devices

- Sterile tray
- Levine catheter (Nelaton catheter for children)

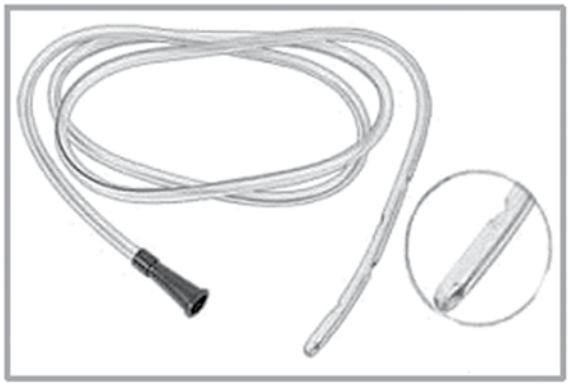


Figure 1: Nasogastric tube

Size	
6	
8	
10	
12	
14	
16	
18	
20	
22	
24	

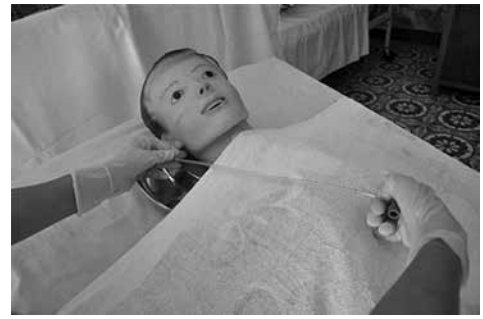
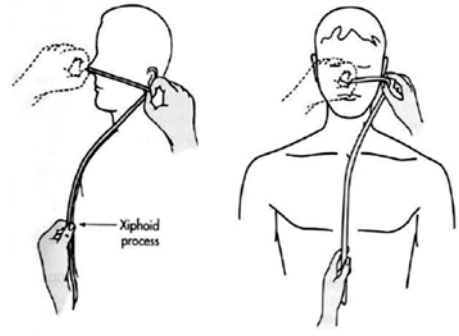
Figure 2: Sizes of tube

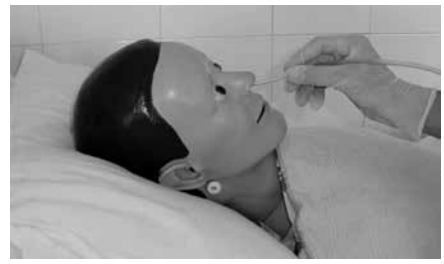
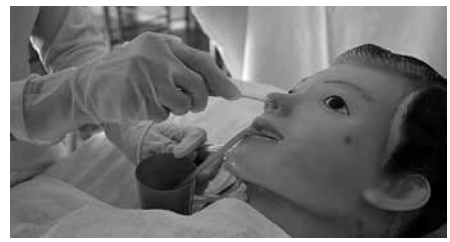
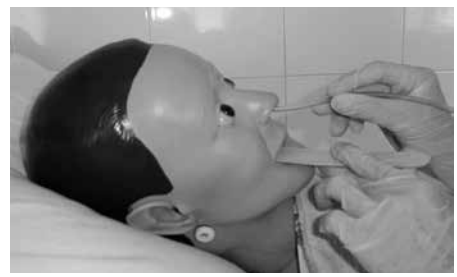
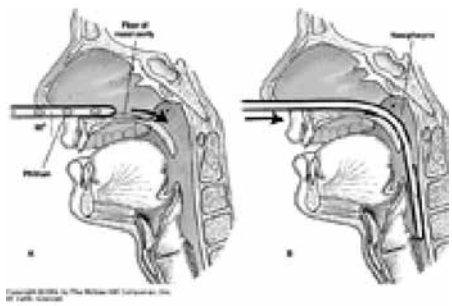
- Gauze pads
- Tongue blade
- Syringe or ascepto-syringe
- Lubricant

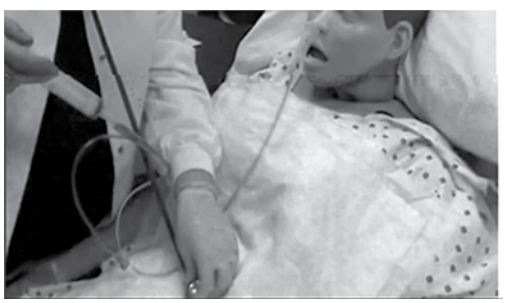
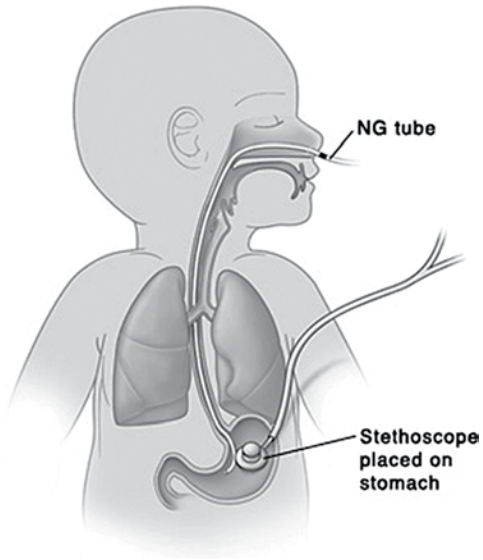
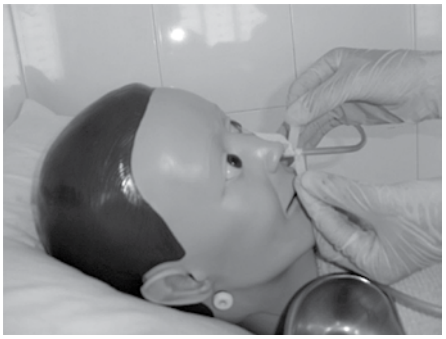
Figure 3: Syringe, asepto-syringe

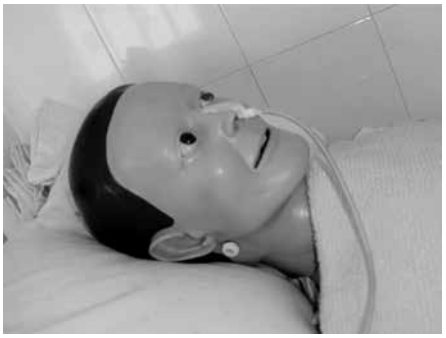
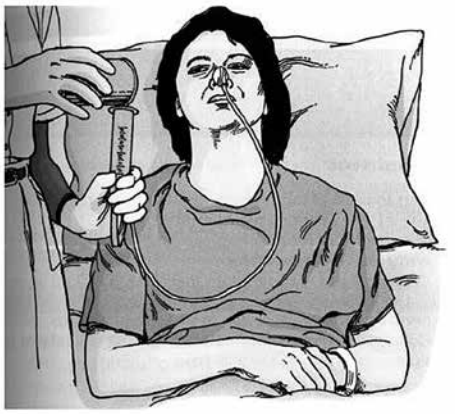
- Clean tray
- Medical forceps keeper
- Nutriment pot – nutriment quantity depends on the patient's clinical condition and doctor's order; nutriment can be milk, soup, fruit juice, liquid food…at the degree of 370C
- Water glass
- Clean bowl
- Cotton swaps
- Large cotton towel
- Nylon sheet
- Clean gloves
- Lubricant
- Stethoscope; testing paper
- Hand sanitizer
- Adhesive tape, medical scissor
- Pin; elastics
- Medical tray
- Drainage bag
- Partition (if perform on the patient's bed)

3.7.3. Procedure

No	Procedure	Reason
1	Get the patient prepared - Explain to the patient and his/her family the procedure of tube placement and encourage the patient to follow nurse's instruction during tube placement. - Set up apron - Put the patient in 30 - 60^0 position with one side turned face or sit. Put infants, unconscious patients in side - lying position and lower head of bed.	To ensure the patient understand and cooperate with the procedure To ensure privacy for the patient without affecting other patients. This position makes it easy to place tube and avoids food reflux.
2	Nurse: washes hands, checks and arranges devices properly.	Infection control; To avoid interruption during implementation and make it convenient to execute.
3	Put on nylon sheet and cotton towel for the patient.	To keep hygiene for the patient.
A. Tube placement		
1-3	Perform steps from 1 – 3 above	
4	Gently clean 2 nostrils (if placing tube through nose), avoid irritation of nasal mucus production	To prevent cross infection from nose to stomach during tube placement.
5	Place medical tray next to the patient's cheek.	To collect fluid flowing out.
6	Put on gloves.	To prevent infection.
7	Measure tubing (do not let tube touch the patient when measuring.). • From bridge of nose to earlobe, from earlobe to the sternum. • From molar tooth to the navel.	To correctly measure the length from nose to sternum   *Figure 4: Measure tube*

8	Mark measured length with adhesive tape.	To make sure tube is correctly positioned  *Figure 5: Mark with adhesive tape*
9	Lubricate 7-10cm of tube with lubricant or immerse tube into water.	To facilitate the passage of the tube. To avoid damaging the gastrointestinal mucosa
10	Pass tube via nose (or mouth) to the pharynx in upper direction. Instruct the patient to swallow small sips of water (if possible).	To facilitate tube passage to pharynx  *Picture 6: Pass tube via nose*  *Picutre 7: Swallow sips of water*
11	Check the tube's pharynx passage.	To mark passed position 
		 *Figure 8: Check the tube's pharynx passage by tongue blade*

12	Advance the tube into esophagus then to stomach: instruct the patient to swallow, and advance the tube as the patient swallows (2,5 -5 cm tube per swallowing) until marked position is reached.	To reduce patient irritation and avoid coughing/vomiting and tube misplacement into trachea.
13	Confirm tube positioning: + Aspirate sample of gastric content, assess color and characteristics of aspirated content by litmus paper.  + Inject 20-30 ml air bolus into stomach and use stethoscope to listen to the sound (infants < 10 ml.) 	To confirm the right tube position in the stomach 
14	Secure tube with adhesive tape.	To avoid tube pulled out  *Picture 9: Use tape to fix tube position*
		 *Picture 10: Secure tube position on nose*

		
B. Tube Feeding		
1	Attach syringe or asepto-syringe to the feeding tube. Flush water through the tube.	To facilitate nutriment feeding. To lubricate tube and avoid nutriment leftover in the tube.
2	Feeding: Place syringe 20cm higher than stomach. Slowly pour some of the nutriment into the syringe and keep slowly pouring nutriment into the syringe until the required amount of nutriment has been given. Nurse can instruct family to feed the patient. * *If the feeding tube is already in place from last feeding:* - Before feeding, use a 50ml syringe to check and remove nutriment leftover from last feeding to quantify amount of nutriment for this feeding.	To limit gastric irritation and vomiting. To avoid air entering into stomach.  *Picture 11: Pour nutriment into syringe*
3	Flush tube by 20ml warm water.	To remove nutriment leftover and nutriment fermentation in the tube.
4	Clamp the tube. Disconnect the syringe from the tube. Allow to dry and close the cap.	To prevent air and insects from entering into the tube.
5	Secure the tube to the patient's close if he/she can walk or to pillow if the patient needs to be secured to the bed).	To make it convenient and tidy for the patient.
6	Clean mouth and nose of the patient.	To keep hygiene for the patient.
7	Keep the patient in 30 - 60^0 posture during 30 - 60 minutes after feeding. Observe the patient condition and symptoms after feeding (pay attention to reflux symptom).	To prevent reflux.
8	Put the patient lying in a comfortable posture	To comfort the patient.
9	Clean devices, wash and allow to dry.	To maintain devices and prepare for next feeding.

10	Make record: - Feeding date/time. - Tube placement time - Quantity, color, characteristics of aspirated gastric content. - Nutriment type and quantity - Patient's clinical condition when inserting tube, during and after feeding. - Other interventions during tube placement - Name of nurse in charge	To follow up and take care of the patient. To demonstrate compliance with current legislation.
C. Tube removal *(Change tube or stop tube feeding)*		
1	Remove adhesive tape on nose/cheek of the patient.	To facilitate tube removal
2	Clamp the tube, use gauze pad to slowly remove the tube.	To avoid gastric content falling into trachea
3	Wipe the patient's mouth and nose.	To help the patient be comfortable
4	Clean devices and wash hands.	To control contamination
5	Make record: - Tube removal time - Other interventions when removing tube	To assess nurse in charge To demonstrate compliance to current legislation

Technical checklist for nasogastric tube feeding

No	Procedure	Achievement Level		
		Achieved	**Not achieve**	**Remark**
1	Get the patient prepared			
2	Nurse washes hands, Check and arrange devices			
3	Put on nylon sheet and cotton towel to cover neck and chest for the patient.			
Tube placement				
4	Clean nostrils			
5	Put medical tray next to the patient's cheek.			
6	Put on non-sterile gloves.			
7	Measure tube			
8	Mark measured tube position			
9	Lubricate tube			
10	Insert tube via nose (or mouth) to pharynx			

11	Check the tube's pharynx passage			
12	Advance the tube into esophagus then to stomach			
13	Confirm tube positioning			
14	Fix the tube			
Feeding				
15	Connect syringe to the tube, flush the tube			
16	Pour nutriment slowly, constantly into the syringe. ** Check leftover/the remaining content before feeding (if prepared for the next feeding)*			
17	Wash the tube with warm water			
18	Clamp or cap the tube.			
19	Fix the tube's position after feeding			
20	Wipe and wash the patient's mouth & nose.			
21	Keep the patient in the feeding position in 30' And follow up after feeding			
22	Put the patient lying in a comfortable position			
23	Clean devices, wash and allow to dry			
24	Make record			
Tube Removal				
25	Remove adhesive tape			
26	Clamp the tube, use gauze pad to slowly remove the tube.			
27	Wipe the patient's mouth and nose.			
28	Clean devices and wash hands			
29	Make record			

LESSON TEST

1. Choose the best answer

Question 1: How do you confirm tube placement?

A. Aspirate gastric content through tube
B. Place stethoscope on epigastrium
C. Measure the length of tube
D. Immerse tube into water to check

Question 2: Right position of the patient when placing tube?

A. Lying on, head at low position
B. Lying on the back with face up or sit
C. Lying in 30 - 60^0 position
D. Lying on one side

Question 3: Disadvantages of Nasogastric tube feeding; EXCEPT FOR

A. Sufficiently provide nutrition for the patient as required
B. The patient does not have good appetite
C. Do not facilitate salivary gland function
D. May cause reflux

Question 4: Patient Nguyen Van H, who is 78 years old, was admitted to the hospital with diagnosis of pneumonia. Currently, after 3 days of treatment, the patient is getting better but his family claimed that the patient has eaten very little because of lingering cough, tiredness and poor appetite. Examination showed white coated tongue, bad breath.

- Nursing intervention to help the patient improve appetite is:

A. Instruct the patient to use more cough remedies
B. Instruct the patient to keep oral hygiene and support the patient to eat.
C. Build up sweet diet for the patient
D. Place nasogastric tube

Question 5: At the room No 5 of Orthopedics and Traumatology Department, there is a 25 years old patient admitted to the hospital after a traffic accident with face & head injured, lower lip placed 8 sutures, tooth #1, 2 in the upper jaw broken. 3 days after admission, his mouth is still sore and he has bad appetite. What should a nurse do to meet the patient's nutritional requirement?

A. Prepare fluid and digestive food and support the patient to eat by mouth
B. Instruct the patient to eat by straws
C. Apply nasogastric tube feeding
D. Request doctor to apply intravenous feeding for the patient

Question 6: Mr. Nguyen Van D, who is 76 years old, was admitted to the hospital due to a stroke. Examination recorded that the patient was awake but suffered from a slight hemiplegia with the philtrum deviated to one side. He could be able to eat and swallow. To secure nutrition of the patient, what should a nurse do?

A. Prepare fluid and digestive food and support the patient to eat by mouth
B. Apply nasogastric tube feeding
C. Instruct the patient to eat by using straws
D. Apply intravenous feeding for the patient

2. Case study

Case 1

Patient Nguyen Van H, who is 78 years old, was admitted to the hospital with diagnosis of pneumonia. Currently, after 3 days of treatment, the patient is getting better but his family claimed that the patient has eaten very little because of lingering cough, tiredness and poor appetite. Examination indicated white coated tongue, bad breath and many teeth lost.

Question:

1. Identify clinical condition of Mr. H?
2. What is the suitable feeding method for this patient and rationale? What should a nurse do to help the patient have better appetite?
3. Practice supporting Mr. H to eat/drink? *(select a patient from clinical department or perform on a model – if available)*

Case 2

Mr. Nguyen Van M, who is 70 years old, has a 10 years medical history of hypertension. He was admitted to the hospital in an emergency and diagnosed with cerebral infarction. Clinical condition of Mr. M: weight loss, headache, contactable, difficult to speak, left side body weakness, pulse: 80 times / minute, blood pressure: 170/90 mmHg, breathing rate: 20 times / minute, body temperature: 37oC. Doctor assigned nasogastric tube feeding.

Question:

1. Identify clinical condition of this patient?
2. Explain the reason for assigning nasogastric tube feeding for this patient?
3. Practice nasogastric tube feeding procedure? *(practice on model)*

Case 3

Patient Pham Thuy L, who is 3 days infant, was born with cleft lip and cleft palate. Currently, the baby unable to breastfeed.

What are proper nursing methods for this patient and why?

ANSWERS

1. Choose the best answer

Question 1: A
Question 2: C
Question 3: A
Question 4: B
Question 5: C
Question 6: A

Competency based assessment checklist for Feeding support to patients

No	Competencies	Assessment Level		
		Can do independently (2)	**Can do with support (1)**	**Cannot do or do wrongly (0)**
1	Competency based assessment checklist for Feeding support to patients			
2	Perform supporting the patient to eat/drink by mouth: secure the procedure, safety and correspondence with the patient's clinical condition			
3	Perform nasogastric tube feeding: secure the procedure, safety and correspondence with the patient's clinical condition			
4	Instruct the patient's family to support the patient eat/drink in a proper manner and in compliance with technical requirements.			

REFERENCES

1. Ministry of Health (2010). *Practice guidelines for 55 basic nursing techniques,* Vietnam Education Publishing House
2. Ministry of Health (2012). *Lecture of nursing skills,* Medical Publishing House, Ha Noi

LESSON 15

MEDICATION PRACTICE TO PATIENTSS

OBJECTIVES

1. Identify patients before giving medication (Competency 3.1; 4.1; 4.3; 6.1; 7.1; 7.2; 7.5)
2. Effectively, safely and properly perform the techniques of giving medication, including injection to patients (Competency 2.3, 2.4; 3.2; 4.2; 4.4; 4.5; 4.6; 4.7,4.9; 5.1,5.2; 6.1; 7.2; 7.3; 7.4; 7.6; 7.7; 8.2; 8.3; 9.1; 9.2; 9.3; 9.4; 16.3; 18.3; 20.4; 20.6; 24.1; 24.4; 25.2)
3. Early detection of abnormal manifestations on patients when taking drugs and making appropriate treatment decisions (Competency 7.4; 9.1; 9.2)

CONTENT

1. Introduction

Drug is an active substance used for the purpose of treatment, prevention, health improvement and diagnosis.

Drug used for oral and topical medications - also called non-invasive medication: is to put the drug into the body of the patients without surgical intervention through the skin or into the body's organs.

Injection is one of the measures to bring drugs and nutrients into the body of the patient's body with the intervention by procedures, including intraermal, subcutaneous, intramuscular, intravenous injection.

To ensure the safe and effective use of drugs for patients, nurses must fully understand the drug and how to use it, correctly identify the patient's condition before taking the drug. In addition to ensuring the effectiveness and avoidance of confusion when taking medication, nurses shall have the skills and attitudes necessary to carry out medication for patients. During and after using drugs, nurses should actively coordinate with colleagues to advise, guide patients to detect abnormal signs to handle timely. When using the drug through parenteral, nursing staff shall ensure the principles of sterility, infection control to ensure safety for patients, injected people and the community.

This article will introduce some medication skills to patients such as:

- Give medication to patients
- Subcutaneous injection
- Intramuscular injection
- Intravenous injection

2. Skills giving medication to patients

2.1. Principles

Adhere to the principle of 5 rights when giving patients medication:

- Right individual
- Right medication
- Right dose
- Right route
- Right time

2.2. Types of drugs used in the gastrointestinal tract

- Tablets
- Powder
- Solution

2.3. Application

To patients who can drink, the drug is not destroyed by digestive secretion.

2.4. Not subject to application

- People with neuromuscular disorders
- Continuous vomit
- Esophageal stenosis
- Patients who lose the ability to swallow, coma
- Patients who are under gastric suction

2.5. Notes when taking drugs through the gastrointestinal tract

- Do not give medication to the patient if the patient has concerns or worries about taking the medicine. Nurses should explain to the patients so that they understand, feel secure, give medicines and witness the patients taking medicines to the mouth.
- Do not take several medicines at the same time (prevent drug interactions).
- Acidic drugs damage tooth enamel, before being given, they need to be diluted and given through a straw.
- After giving the patient an oily medication, add orange juice or lemon juice to relieve nausea.
- Give aspirin to patients when they are full, do not drink with alkaline medicines.
- When giving sulfamic drugs, give the patient plenty of water to avoid drug deposition in the kidneys.

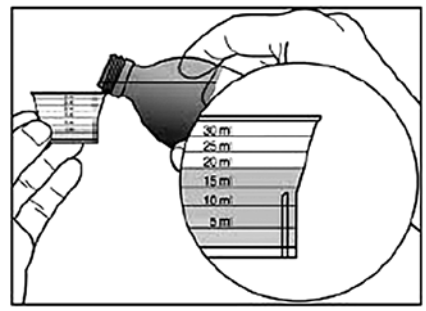
- When giving medication to children, nurses should not mix drugs in milk, nourishing fluid because the dose is easy to be deficient because the children do not drink / not eat all.
- Do not mix bitter medicines, or those taste difficult to drink with lots of water, if the taste of some drugs makes nauseous, it is recommended to suck ice after medication a few minutes.
- Diuretics must take 15 hours before sleeping.
- The best water to drink is warm water.
- Nurses need to monitor vital signs before and after giving patients medications that affect circulation and respiratory.
- Do not give the patient medication when the patient has contraindication to taking the drug or if there is a doubt about the safety of the patient when taking the drug.
- If the patient is using traditional medicine, herbal medicine, inform the doctor to avoid drug interaction.
- In case the patient is under treatment of catheter into the stomach, the medicine must be crushed and mixed with water to pump through the catheter (do not mix the medicines together without medical order)

2.6. Side effects when taking the drug through the gastrointestinal tract and its prevention methods

- Drug allergy: Should carefully ask about the history of drug allergy, perform 5 rights. If after using the drug, there are abnormal signs such as rash, itching, nausea, vomit, shortness of breath, chest tightness ... stop taking drugs immediately and handle according to the instructions of managing anaphylaxis (circular 51 by MOH on anaphylactic management).
- Stomach bleeding: when taking anti-steroidal anti-inflammatory drugs, aspirin ... take the gastric mucosal protection pills first, after meals. If the patient has abnormal symptoms such as vomiting blood, black stool, abdominal pain ... stop the medication immediately and notify the doctor for timely management.
- Drug poisoning: Cardiovascular drugs can cause poisoning, so before drinking, count heartbeat, measure blood pressure ... If it is not normal, stop taking drugs, report the doctor to handle the situation promptly.

2.7. Process of skill practice giving medication to patients

No.	Implementation steps	Reason
1	Identify, prepare patients - Compare of the right individual, - Encourage and explain to patients to be assured of medication - Guide / help the patient in proper posture: sit or lie high	- Convenient to take medicine, avoid choking medicine.

2	Prepare the medicine according to the order, check (5 rights), put in the tray	Avoid errors when taking medications
	Tablets: Use the bottle cap or tray to count the medicine	
	Liquid medicine: - Contained in bottles: Shake the bottle evenly, use a suitable measuring device (ml cup / cup, or syringe) to measure the amount of medication as directed. - Liquid drugs in small quantities (dripping): Put some water in the glass, straighten the tube to count drops and drip the number of drops as per the order.	- Make sure to take the right dose  Medication cup with ml mark
	Powder: - Powdered medicine contained in the package: split evenly and then pack separately. - Powder mixed with liquid: Shake the bottle evenly, use a suitable measuring device to measure the amount of medication as directed.	
3	Take the medicine tray to patient's room	
4	Give medication to patients	
	Take pills: - Tablets, capsules: Give the patient to self-hold and put the medicine in their mouth. It is recommended that the patient take each pill, check the mouth if there is no medicine left then take the next pill	Make sure that the patient has taken enough doses.  Give tablets to patients
	- Effervescent: Pour the pill into a glass of water, wait for the foam to disappear, and give the patient to drink	
	Drugs in water, solution or emulsion: give the medicine cup to the patient to drink by himself.	

	Powder medicine: - Stir the medicine with warm water - Give to patients to drink, drink some extra water after drinking the medicine	
	Sublingual drugs: - Put the medicine under the patient's tongue - Instruct the patient to suck until the medicine dissolves completely	The drug absorbs through the sublingual mucosa 
	Chewable medicine - Put the medicine between two teeth, guide the patient to chew the tablet - Drink more water after chewing	The drug needs saliva to be easily absorbed
5	Follow up until the patient finishes medication: - Check the amount of medicine taken - Ask the patient to open his mouth to check - Tell the patient if he/she feels an abnormal feeling immediately call the nurse	Make sure the medicine is taken in enough doses, the patient has swallowed the medicine into the stomach  Check the patient to finish the medicine
6	Clean up tools, wash hands	
7	Record documentation (care slip) date and time of medication use, name of medicine, dose, route of administration, reaction of the patient (if any)	

Technical checklist of giving medication to patients

No.	Content	Achievement level		
		Achieved	**Not achieved**	**Remark**
1	Identify, prepare patients			
2	Prepare tools and medicines according to orders, perform 5 rights *(prepare appropriately depending on the medicines)*			
3	Take the medicine tray to the patient's room			
4	Give medication to patients			

5	Follow up until the patient finishes the medicine; Advise patients			
6	Clean up tools, wash hands			
7	Record documentation			

3. Subcutaneous injection technique

Injecting under the skin is the technique of using a syringe needle to put the drug into the connective tissue under the skin.

3.1. Application

To some desirable drugs gradually (slowly) absorb into the body to promote the effect: Insulin

3.2. Not subject to application Drugs cause tissue necrosis

3.3. Location: Inject into loose connective tissue under the skin. Normally choose locations:

- 1/3 middle of the front outside the arm
- Both sides of the shoulder blades
- Around the navel, 5cm away from the navel
- 1/3 between the front, outer thighs

3.4. Accident

3.4.1. Accidents due to failure in sterility

- *Causes abscess at the injection site*

  Detection Hot redness, swelling, and the whole body may be feverish or not.

  How to solve: Warm compress, use antibiotics in cases where injections are not antibiotics (stage of inflammation); Inject abscess if the abscess is clear.

- *Spread of infectious diseases such as hepatitis, HIV...*

  Due to failure in fertility, pathogens from infected people spread to people who are not sick.

  How to solve: treatment of infectious diseases.

3.4.2. Accidents due to injection process

- Fracture, needle twisting caused by the patient or by improper injection

  Precautions: Do not submerge the needle, to prevent if the needle is broken.

- Shock due to pumping is too fast or the patient is too scared and cannot bear it.

  Precautions: Implement the principle during injection of 2 rapid 1 slow, before the injection, explain to the patients for their comfortability, avoidance of fear and anxiety

3.4.3. Drug-related complications

- The patient is painful, sterile abscess: because the drug absorbs very slowly.

  Detection Red hot swelling site.

  How to solve: Warm compress, inject abscess if necessary.

- Can cause ulcer in children such as insulin injection, quinine salts, oily substances, Hormones.
- Drug allergies and anaphylaxis: Detection Allergy, shortness of breath, rapid pulse, low blood pressure, sweating, cold limbs ...

  Precaution: Ask carefully the history before taking the medicine

  How to solve: Urgently coordinate anaphylaxis emergency.

3.5. Procedure for practicing subcutaneous injection technique

3.5.1. Identify

- Identify the right individual: compare with the order
- Identify patients' overall status and vital signs
- History of drug use and drug allergy of patients
- Identify the injection site
- Identify attitudes and knowledge of patients / family members when using drugs

3.5.2. Tools and medicines

- Injectable drugs as prescribed
- Sterile tools: Suitable syringes and needles: injection 1-3 ml; needles, Needles taking medicine; Antiseptic: alcohol 70; Antibacterial cotton / gauze; kelly forcep and cylindrical tube stand
- Other tools: Kelly forcep and clean tray; Anaphylactic emergency medicine box; Quick hand antiseptic solution; Table of medicines after use and computer (if any)
- Safety box / puncture resistance containing sharp objects; Types of garbage bags / tools as regulated

3.5.3. Steps to perform the subcutaneous injection procedure

No.	Implementation steps	Reason
1	Nurse: uniform, mask, quick hand sanitizer / hand sanitizer	
2	Perform 5 rights	Make sure the medicine is used to the right individual,
3	Check and arrange tools.	
4	Explain, motivate patients Instruct patients in a comfortable position.	Patients are comfortable, reduce worry and cooperate
5	Check the medicine, antiseptic tube / vial, use sterile gauze to break the medicine tube	

6	Tear off the syringe cover and replace the needle to take the medicine	
7	Get the medicine into the syringe, replace the needle, put the pumped syringe into the sterile tray / bag, or the newly filled bag.	
8	Reveal the injection site, choose the injection site, check the skin surface at the injection site whether there is any bruise, infection, or edema? Do not select bruised areas or signs of infection.	The abnormal or wrong injection site will interfere in drug absorption. Repeat use of the injection site will harden the fat cells (increase fat cells).
9	Sterilize injection site: use sterile cotton / gauze, antiseptic liquid, sterilize with a diameter> 10 cm (sterilize twice)	Clean microorganisms
10	Hold the syringe straight, remove air	
11*	Fast and firm needle at angles from 30 to 45^0 against the skin, or straight at 90^0 with pinched skin (if pinching the skin) - release hands after pinching the skin. Note when using heparin injection or injection pen, continue pinching the skin during injection	Fast and definitive needle will reduce the feeling for patients. The right angle of injection to prevent accident, injection into the muscle / muscle.
12	Withdraw syringe, if blood is not seen, Pump slowly from 30 seconds or more (Zaybak and Khorshid, 2006). Observe the patient's face when pumping the medicine	Pull out to test to make sure the needle does not crash into the bloodstream. Inject drugs slowly to reduce the feeling of pain for patients, allowing the medicine to gradually absorb into the lower organization
13	Tighten skin, rapidly withdraw needle, Isolate the needle into the safe box	Safe for injection and sick people
14	Sterilize injection site. Place sterile dry cotton on injection site for 30 seconds if bleeding.	
15	Instruct patients in a comfortable posture; Stay with the patient for a few minutes, and observe the signs of drug allergies?	
16	Clean up tools, wash hands	
17	Record documentation (care slip): date and time of injection, name of medicine, dose, route of administration, patient's reaction and care (if any)	

Checklist for subcutaneous injection technique

No.	Content	Achievement level		
		Achieved	Not achieved	Remark
1	Nurse: uniform, mask, hand washing / sterilize			
2	Perform 5 rights			
3	Check and arrange tools.			
4	Explain, motivate patients Instruct patients in a comfortable position.			
5	Check the medicine, sterilize the medicine tube, break the medicine tube			
6	Tear off the syringe cover and replace the needle to take the medicine			
7	Take the medicine into the syringe, replace the needle			
8	Choose the injection site, in general - 1/3 middle of the front outside the arm - Both sides of the shoulder blades - Around the navel, 5cm away from the navel - 1/3 between the front, outer thighs			
9	Sterilize injection site			
10	Purge gas in syringe			
11	Injection - Fast needle at angle 30 - 45^0 or 90^0 (if pinching the skin) - Pull out the syringe to check whether there is blood - Pump slowly, observe the patient when injecting drugs			
12	Tighten skin, fast withdraw needle			
13	Re-sterilize the injection site			
14	Help patients with comfortable posture Monitor patients after injection			
15	Clean up tools, wash hands			
16	Record documentation			

4. Intramuscular injection technique

Intramuscular injection is administered drug to the muscle mass (body part of the muscle). Muscles nourished with many blood vessels help the drugs absorb faster than subcutaneous injections.

4.1. Application To inject many drugs; Medicines in oil and milk form; Drugs which are slowly melts: Antibiotics, glue, hormones ...

4.2. Not subject to application

Drugs that cause necrosis organization: Calcium chloride

4.3. Intramuscular injection position

- Arm: 1/3 on the front of the arm (Delta muscle), one third of the outer face of the arm (triceps brachii muscle)
- Thigh: 1/3 middle of the front outside the thigh (Wide muscle outside the thigh or straight thigh muscles)
- Buttocks: ¼ on the outside of the buttock, or 1/3 above the connection from the anterior pelvic spine with the coccyx (large buttock muscle).

4.4. Incident

- Broken needle, twisted needle: caused by sick people or improperly injected. Precautions: Hold the patient well, do not inject the needle.
- Needle the big hip nerves: due to incorrect injection of the position, needle stabbing angle is not correct. Precautions: determine the right injection site.
- Embolism: Due to oil or emulsion drugs into blood vessels. Precautions: When injecting, always try to test the syringe to see if there is blood in it? If there is no blood in the syringe, pump drug into it.
- Infected abscess: due to failure in ensuring the principle of sterility.
- Sterile abscess due to insoluble drugs such as quinine injections, hydrocortisone and insoluble oils cause abscess on the spot.

  Detection Redness and swelling in the injection site.

  How to solve: Hot packs, inject abscess if needed.
- Causing ulcers: due to injection of substances that cause tissue necrosis
- Detection The injection site is hot, red, painful, initially stiff and soft like abscess.

  How to solve: Early detection of Novocaine blocking. Heated at first. At necrosis: Thin bandages, may require injections if the necrosis is large.
- Bacterial infections:
  + Hepatitis virus caused by needle sterility is not good, needles from people with hepatitis to healthy people who will get sick. Detection after 4-6 months of injection. patients show fatigue, loss of appetite, jaundice, yellow eyes, dark urine ...
  + HIV infection, malaria parasite. How to solve: treatment of infectious diseases
- Allergy, Anaphylaxis: due to the body's reaction to the drug.

  Detection: Signs of urticaria, rapid pulse, low blood pressure, sweating, cold limbs ...

  Precautions: Ask carefully history before taking medicine

How to solve: Urgently coordinate anaphylaxis emergency.

4.5. Procedures for practicing intramuscular techniques

4.5.1. Identify

- Identify the right individual: compare patients with medical orders
- Identify patients' overall status and vital signs
- History of drug use and drug allergy of patients
- Identify the injection site
- Attitudes and knowledge of patients / family members when using drugs

4.5.2. Tools and medicines

- Injections: prepare prescribed medication,
- Sterile tools: Suitable syringes and needles: Adults: 2 - 5 ml; Newborn and young children: 0.5 - 1ml; Needle getting medicine; Antiseptic, antiseptic / cotton antiseptic

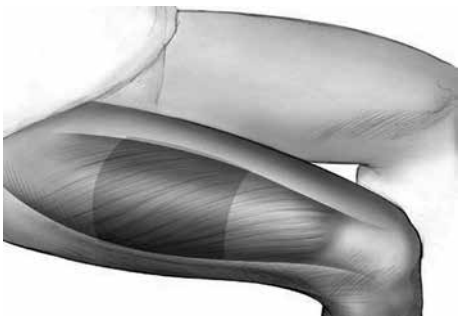
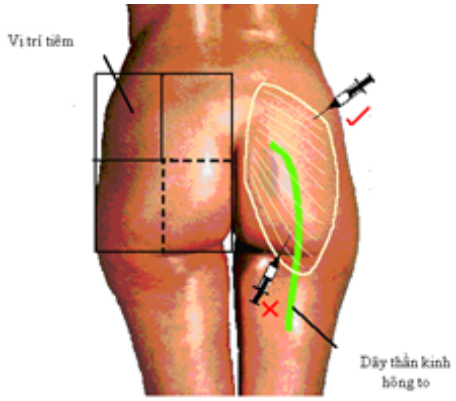
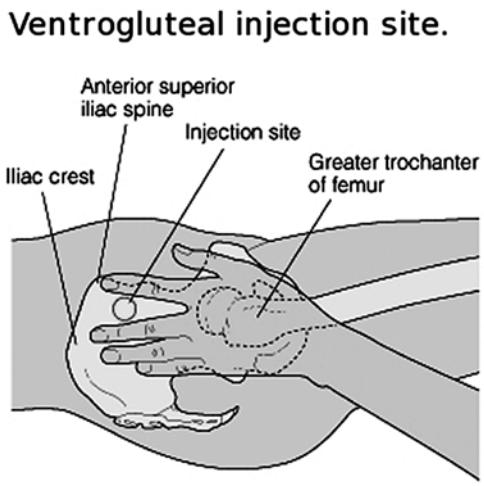
  Kelly forcep and cylindrical tube stand
- Other tools: Kelly forcep and clean tray; Emergency medicine box, Quick hand antiseptic solution, Post-use medication sheet and calculator (if available)

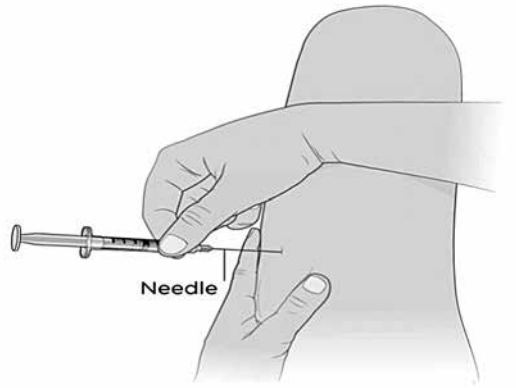
  Safety box / resistance puncture with sharp objects

  Garbage bags / tools

4.5.3. Steps to perform intramuscular injections

No.	Implementation steps	Reason
1	Nurse: uniform, mask, hand washing	
2	Perform 5 rights	Ensure exactly the right medicine will be used to right individual
3	Check tools to ensure sufficient	
4	Explain, motivate patients	The patient is comfortable and cooperative
5	Check the medicine, antiseptic tube / vial, use sterile gauze to break the medicine tube	
6	Tear off the syringe cover and replace the needle to take the medicine	
7	Get the medicine into the syringe, replace the needle, put the pumped syringe into the sterile tray / bag, or the newly filled bag.	
8	Guide appropriate posture for patients *(depending on the location of intramuscular injection)* - Inject arms, thighs: Patient sit or lie - Inject buttocks: Patient is prone	

9	***Determine the injection site;*** Check the skin surface at the injection site whether there is any bruise, infection or edema? - *Position of hand injection:* There are 2 injection sites + Middle of the Deltoid muscle - 3-5cm from the shoulder (1/3 on the connecting line from the shoulder to the elbow or anterior fibers); + Or 1/3 between the outside of the arm. - *The position of buttocks injection:* There are 3 ways to determine + Place the base of the hand on the transfer of the pelvis, the wrist is perpendicular to the femur. Use the right hand for the left buttocks and vice versa. Place thumb towards the patient's groin, index finger, middle finger, and pelvis forming a triangle. The injection position is in the middle of that triangle. + Or draw a straight line connecting the previous pelvic spine to the coccyx, divided into three equal parts, inject into the 1/3 point (1/3 point is the best injection point) + Or divide 1 buttock into 4 equal parts, inject into 1/4 on the outside - *Location of thigh injection:* 1/3 middle, the outer front of the thigh on the line from the anterior superior ilac spine to the outer edge of the patella.  *Image 1: Define the thigh injection site*	Avoid injecting into the affected skin Inject into the right position surgery to prevent the risk of nerve and blood vessel damage    *Image 2: Locate buttocks injection*

10	Sterilize injection site: Use sterile cotton / gauze, soaked in alcohol. Put cotton / gauze between the injection site and sterilize with a diameter> 10cm, clean sterilization - 2 times.	Remove microorganisms
11	*Remove air:* Hold the syringe (with medicine) to pump the syringe upright, gently pull the plunger and remove air	Prevent air accidents,
12	Instruct patients to relax, relax the injection area	To make patients less suffer from pain and bleeding
13*	*Needle into the muscle tissue:* One hand stretches the skin, the other hold the needle, needle at an angle of 60 - 90^0 to the skin surface, deeply submerge 2/3 of the needle body.	 *Image 3: Needle intramuscular injection*
14	*Inject:* Pull the piston lightly for 5 - 10 seconds. - If there is no blood flowing into the syringe, slowly inject at about 1ml / 10 seconds. - Observe the patient's face	Blood in the syringe shows that the needle tip may be in a vein. Slow injection reduces pain and reduces tissue damage.
15	Stretch the skin, remove the needle, gently press cotton / dry gauze (sterile) on the injection site, sterilize - Isolate the needle into the safe box.	Avoid bleeding at the injection site. - Safe for people who are injected and injected
16	Put the sick person in a comfortable posture *Monitor:* Stay with the patient for a few minutes, observe the signs of drug allergies? Instruct patients if there are abnormal signs, immediately report to the nurse	Timely find out the signs of drug allergies.
17	Clean up tools. Hand washing	
18	Record documentation (care slip): date and time of injection, name of medicine, dose, route of administration, patient's reaction and countermeasures (if any)	

Note: Step 13* If do incorrectly, the requirements of intramuscular injection will not be achieved..

Technical checklist for intramuscular injection

No.	Content	Achievement level		
		Achieved	**Not achieved**	**Remark**
1	Nurse: uniform, hand washing.			
2	Perform 5 rights			
3	Check tools to ensure sufficient			
4	Explain, motivate patients			
5	Re-check drugs, sterilize, break tubes / vials,			
6	Tear off the syringe cover and replace the needle to take the medicine			
7	Take the medicine into the syringe, replace the needle,			
8	Guide appropriate posture for patients *(depending on the location of intramuscular injection)*			
9	***Determine the injection site;*** Check the skin surface at the injection site whether there is any bruise, infection or edema? - *Position of hand injection:* There are 2 injection sites - *The position of buttocks injection:* There are 3 ways to determine - *Location of thigh injection:* 1/3 middle, front side			
10	*Sterilize injection site:* width> 10cm diameter, - 2 times.			
11	*Remove air:*			
12	Guide patients to relax,			
13	*Needle into the muscle tissue:* needle at an angle of 60 - 90^0 to the skin surface, deeply submerge 2/3 of the needle body.			
14	*Inject:* Slowly with a speed of 1ml / 10 seconds. - Observe the patient's face			
15	Tighten skin, withdraw needle, sterilize - Isolate the needle into the safe box.			
16	Help patients back to comfortable posture Monitor patients after injection Instruct patients to follow up on their own			
17	Clean up tools, wash hands			
18	Record documentation			

5. Intravenous injection technique

Intravenous injection is giving to the body an amount of drug under solution intravenously. Intravenous drugs are usually injected slowly or in the form of drop transmission.

5.1. Application

- Quick-acting drugs, drugs have a systemic effect: anesthetic, anesthesia, ...
- Drugs that cause pain in the tissues, induce ulcers if injected under the skin or muscle: Calciclorid ...
- Solutions need to use in a large amount isotonic, hypertonic ...

5.2. Not subject to application

- Drugs that cause strong irritation on the cardiovascular system: Adrenalin (only intravenous injection in case of an emergency when allergies are not caught, blood pressure falls ...)
- Oil injections: Testosteron ...

5.3. Injection site

- Intravenous injection is usually performed in shallow, floating, large, clear and less mobile veins.
- Some veins are often subject to injection: M-shaped veins in the elbow folds, the back of the forearm and the vein in the head (infants and young children)

5.4. Incidents

- Needle stuck: When hitting the vein, blood flows into the syringe but freezes right at the tip of the needle, causing the jammed needle, cannot inject the medicine. How to solve: Pull out the needle, replace the other needle and inject again
- Inflated injection site: When the needle is inserted into the vein, blood enters the syringe, however because it is not fixed well, let the needle go out of the vein or vein rupture. How to solve: re-adjust the needle, if not, remove the needle and redo. When the injection is finished, instruct the patient to apply heat to the hematoma or to dissolve drug quickly.
- The patient is shocked or fainted: It may be due to being too scared or due to drug reaction, because the medicine is too fast, or the needle is stabbed many times without a vein. How to solve: stop injecting, report the doctor for countermeasures
- Embolism: Do allow air to enter the lumen during the injection. If the amount of medicine is high, syringe is small, divide into several injection, it is not allowed to put the needle in the vein and remove the new injection syringe and then insert the needle already in the vein to continue pumping the medicine. This is very dangerous, air is easily accessible which causes a blockage or because the air bubbles are not completely removed when the patient is injected.

  Signal: The patient's face is pale, cough, shortness of breath or breathing suddenly stops

  How to solve: Let patients lie on the top of the slope immediately, breathe oxygen and report the doctor to coordinate for countermeasures.

- Inject into the arteries wrongly

  Signal: patients complain of pain, heat in the foot

  How to solve: must stop injecting and withdraw the needle

- Necrosis: If the injection deviates beyond the contraindications of subcutaneous injection and muscle injection such as calcicloride.

  Signal: the hot, red, painful injection site, at firstly was hard, later soft like an abscess.

  How to solve: Heat at first. During necrosis: Thin bandages, may require injections if the abscess is large.

- Whole body infection: Due to failure in performing non-sterile principle, septicemia can occur.

  Detection: high fever, chills, severe infections, blood culture (+)

- Bacterial infections:

  + Hepatitis virus caused by needle sterility is not good, needles from people with hepatitis to healthy people who will get sick. Detection after 4-6 months of injection. patients show fatigue, loss of appetite, jaundice, yellow eyes, dark urine ...

  + HIV infection, malaria parasite. How to solve: treatment of infectious diseases

- Allergy, Anaphylaxis: due to the body's reaction to the drug.

  Detection Signs of urticaria, rapid pulse, low blood pressure, sweating, cold limbs ...

  Precautions: Ask carefully history before taking medicine

  How to solve: Urgently coordinate anaphylaxis emergency.

5.5. Technical procedure for intravenous injection

5.5.1. Identify

- Identify the right individual: compare patients with medical orders
- Identify patients' overall status and vital signs
- History of drug use and drug allergy of patients
- Identify the injection site
- Attitudes and knowledge of patients / family members when using drugs

5.5.2. Tools and medicines

- Injectable drugs as prescribed
- Sterilize tools: Suitable syringes and needles: 5 - 10 ml; Needles getting medicine

  Antiseptic; Antibacterial cotton / gauze; elly forcep and cylindrical tube stand

- Other tools

  + Kelly forcep and clean tray; Anaphylactic emergency medicine box; Quick hand antiseptic solution; Wire tourniquet, hand pillow; Clean gloves

+ Table of medicines after use and computer (if any)
+ Safety box / puncture resistance
+ Types of garbage bags / tools

5.5.3. Steps to perform intravenous injection

No.	Perform	Reason
1	Nurse: uniform, mask, hand washing	
2	Perform 5 rights	Make sure to give the right medicine to the right individual
3	Check and arrange tools.	
4	Explain, motivate patients	The patient feels comfortable and cooperative
5	Check the medicine, antiseptic tube / vial, use sterile gauze to break the medicine tube	
6	Tear off the syringe cover and replace the needle to take the medicine	
7	Get the medicine into the syringe, replace the needle, put the pumped syringe into the sterile tray / bag, or the newly filled bag.	
8	Guiding appropriate posture to patients: Sit or lie	
9	Check the skin surface at the injection site whether there is any bruise, infection, or edema? - *Choose a* big, clear, less mobile vein	Avoid injecting into damaged skin areas where may affect drug absorption and injection site infection.
10	Put nylon wrap and cord tourniquet under the injection area	The veins are more prominent and convenient when the needle is inserted into a vein
11	Wear clean gloves *(when there is a risk of exposure to blood and when the hand skin is injured)*	Preventing microbial infection through contact route
12	Tie garrot above the vein, 5-10cm away from the injection site	
13	*Sterilize* injection site: wide sterilization from injection site, with diameter> 10 cm, sterilize 2 times	Remove bacteria
14*	*Remove air, insert needle into vein:* Hold the syringe to pump the syringe upright, remove air - Stretch the skin, 1 hand hold the syringe, pierce the needle at an angle 300 through the skin, push the needle into the vein 2/3 of the needle body	Preventing air accidents

15*	*Inject drugs into vein:* Check whether blood is flowing into the syringe, remove the garrot, inject the medicine slowly into vein at speed of about 1ml / 30 seconds - Observe the patient's face, observe the injection site to see if there is any swollen sign?	Blood flowing into the syringe shows that the needle is in vein. Slow injections help reduce pain and limit accidents - Early detection of abnormalities for timely countermeasures.
16	*Withdrawal of needle:* medicine finishes, stretch skin horizontally to one side 2 - 3cm from the injection site. Pull the needle into the sharps container or isolate the needle immediately	Pull the skin deflection to seal the hole caused by the needle stick, avoid the medicine to spill out and the patient does not bleed at the injection site. Safety during injection
17	Disinfect the injection site, place dry cotton on the injection site, and place the injection with a personal adhesive bandage	
18	Remove gloves and put them into bags containing infectious waste	
19	Put the sick person in a comfortable position. *Monitor:* Stay with patients for a few minutes, watch for signs of drug allergies? - Instruct patients to self-monitor	Timely detection of signs of allergic reactions
20	Clean up tools. Hand washing	
21	Record documentation (care slip) date and time of injection, name of medicine, dose, route of administration, patient's reaction and countermeasures (if any)	

Note: Step 14 *, 15 * If do incorrectly, the requirements of intravenous injection techniques will not be achieved.

Technical checklist for intravenous injection

No.	Content	Achievement level		
		Achieved	**Not achieved**	**Remark**
1	Nurse: uniform, hand washing.			
2	Perform 5 rights			
3	Check and arrange tools.			
4	Explain, motivate patients			
5	Re-check drugs, sterilize, break tubes / vials,			
6	Tear off the syringe cover and replace the needle to take the medicine			

7	Take the medicine into the syringe, replace the needle			
8	Guide appropriate posture to patients:			
9	Check the skin surface at the injection site whether there is any bruise, infection, or edema? - *Choose a* big, clear, less mobile vein			
10	Put nylon wrap and cord tourniquet under the injection area			
11	Wear clean gloves *(when there is a risk of exposure to blood and when the hand skin is injured)*			
12	*Tie garrot* 5-10cm away from the place of injection			
13	*Sterilize* injection site: diameter> 10 cm, ≥ 2 times			
14	*Remove air, insert needle into vein:* - Stretch the skin, 1 hand hold the syringe, pierce the needle at an angle 30^0 through the skin, push the needle into the vein 2/3 of the needle body			
15	*Inject drugs into vein:* Slowly inject into the TM at about 1ml / 30 seconds - Observe the patient's face, observe the injection site to see if there is any swollen sign?			
16	*Withdrawal of needle:* Place in sharp container or isolate the needle immediately			
17	Disinfect the injection site, place dry cotton on the injection site, and place the injection with a personal adhesive bandage			
18	Remove gloves and put them into bags containing infectious waste			
19	Help patients back to comfortable posture, Monitor patients after injection. Guide patients to self-monitor			
20	Clean up tools, wash hands			
21	Record documentation			

LESSON TEST

1. Choose the best answer

Question 1: Mr. An is 64 years old and has been in the history of type II diabetes for 5 years. He has to take medicine to treat Glucophage diabetes 1000mg / day. This time Mr. An is hospitalized for pneumonia. Mr. An was appointed by the doctor to take oral antibiotics

Azithromycin 500mg. Mr. An told the nurse that he had a history of penicillin allergy and he had never used Azithromycin. He is very concerned about his medication.

1. Choose the best answer to the risk of allergy to Azithromycin of Mr. An:

A. Mr. An is at risk of drug allergy, because he has a history of diabetes

B. Mr. An is at risk of drug allergy, because of his old age

C. Mr. An is at risk of allergy because he uses Azithromycin for the first time

D. Mr. An has no risk of allergy, because he has a history of allergy to Penicillin

2. What nurses should do to prevent and take early action if Mr. An is allergic to Azithromycin?

A. Break down the pill and let Mr. An drink it many times

B. Watch closely for abnormal signs after giving medication and managing

C. Explain Mr. An for his comfortability

D. Test for Mr. An

3. While in the hospital, Mr. An was given a blood test, the test results showed that his liver function was not good. The doctor appointed him to take insulin to treat diabetes instead of oral medication. Mr. An was very anxious and worried about having to inject Insulin himself at home.

3.1. Please instruct Mr. An on insulin injection issues (injection time, insulin dose, injection site selection, injection, monitoring after injection)

(Performed by role play)

3.2. Please indicate the appropriate amount of medication when performing subcutaneously injection

A. Less than 1 ml / time of injection

B. 1 to 2 ml / injection

C. 2 to 3 ml / injection

D. Less than 5 ml / time of injection

Question 2: Patient Le Thanh N. 65 years old, diagnosis of interstitial pneumonia. The doctor prescribed intravenous Zinacef 750mg x 10ml distilled water (3 times / day).

1. Select the first step the nurse must do before mixing the drug, explaining why?

A. Wash hands as regulated

B. Turn on the cap and take enough distilled water

C. Evaluate the weight of patients

D. Exactly check the medication book and the doctor's prescription

2. What nurses should do after removing the cover of the vial, explain why?

A. Pump enough amount of solute into the vial

B. Disinfect the bottle cap with alcohol

C. Draw 4ml of air in the vial to reduce the pressure inside the vial

D. Plug the vented needle into the cap

3. When the nurse performed intravenous injection to Mr. N, after withdrawing the needle, the injection site often bleed and get bruised. The patient and the family are very worried. How will the nurse handle?

A. After injection: Stretch the skin, withdraw the needle

B. After injection: Stretch the skin, withdraw the needle, explain to the patient and family members for their comfortability

C. After injection: Stretch the skin, withdraw the needle, insert a small piece of cotton on the injection site and fix it with adhesive tape; explain to the patient and family members for their comfortability

D. Ask the doctor to switch to intramuscular injection

Question 3: Patient Nguyen Van L. 55 years old, under treatment of cirrhosis due to first-day C-hepatitis, weighs 60kg. Doctors give orders: Biceps injection Vitamin K; 5mg / ml x 4 tubes (at 9 hours, 15 hours)

1. Which of the following syringes is best used to inject the biceps to the patient, explaining the reason?

A. 1 ml syringe

B. 3 ml syringe

C. 5ml syringe

D. 10ml syringe

2. When performing intramuscular injection to the patient, the nurse withdraws the piston to test if there is blood flowing out of the syringe; Select the most appropriate way of handling in this situation, explain why you choose that way?

A. Continue pumping the medicine.

B. Pull out the needle and inject in another position.

C. Pull out the needle, throw away the medicine and start over again.

D. Remove the needle, replace the needle and inject in another position.

3. Which of the following symptoms shows that patients have nerve damage after intramuscular injection?

A. Urticaria, wheezing, difficulty breathing

B. The patient feels pain during injection

C. Pain, itching and numbness at the injection site 2 hours after injection

D. Swelling, pain increased after 24 hours of injection

2. Practice situation

Situation 1

Huong is 5 years old and goes to hospital for treatment with the reason of high fever 39^0C, swelling in the ankles and joints. Diagnosed acute rheumatic fever. The doctor appointed to take

antipyretics, antibiotics, oresol... She cries, doesn't want to drink Oresol. Her mother was very worried about how to give her enough Oresol as prescribed by the doctor.

Question:

1. How can nurse handle when Huong does not take Oresol: (choose 1 answer among 4 answers below)
   A. Assist family members to force her to take the prescribed amount of Oresol
   B. Instruct her mother to give milk instead of Oresol
   C. Coordinate with her mother to persistently encourage her to take small sips until she finishes the prescribed amount
   D. Ask doctor to prescribe an infusion instead of Oresol.
2. When discharged from the hospital, the child was assigned to buttock injection 1 month / time to prevent acute rheumatic fever. Her mother was worried that buttocks injection might cause sciatica, so she recommended arm injection (delta muscle). If you are assigned to take care of Huong in the above context, how will you explain to her mother?
3. Perform buttocks technique (performed in simulator or choose the patient in the department who are ordered buttocks injection)

Situation 2

Patient Nguyen Thi L. 78 years old, went to the hospital to treat rheumatoid arthritis. Doctor prescribed anti-inflammatory analgesics and gastric mucosal protection drugs; Both drugs are taken orally.

Question

1. Instruct patient/family members how to use these medicines.
2. Mrs L., an elderly woman, fastidious, not lucid sometimes. Every day when nurse gives medicine to her, her daughter often takes medicine, then gives her medicine and water to drink by herself. How can the nurse can make sure that Mrs. L takes enough of the daily dose?

Situation 3

Patient Nguyen Van T, 52 years old, went to hospital to treat diabetes 1. Nurses ordered subcutaneous injection of Wosulin N40UI x 8 units at 17:00.

Question:

1. Choose the best way to identify the right person and explain why you chose it?
   A. Ask the patient's name and compare with the medicine name.
   B. Ask the patient's name, hospital admission number and compare with the prescription record.
   C. Ask for name from family members and patients
   D. Look at the name of the patient at the bedside and compare it with the name of the medicine.
2. Mr. T. did not understand why he had to constantly change the injection site, Nurse explained to the patient the purpose of rotating the insulin injection site: (choose one best answer)

A. Reducing the risk of nutritional disorders of subcutaneous fat layer at the injection site.

B. Let insulin be taken anywhere in the body.

C. Reduce the risk of infection by injection.

D. Minimize pain from insulin injections.

3. Implementation of injecting techniques to patients? (Select patients with order for subcutaneous injection in clinical departments)

Answer

1. Choose the best answer

Question 1: 1C, 2B, 3.2 A

Question 2: 1D, 2D, 3C

Question 3: 1C, 2D, 3C

Situation 1: 1: C

Situation 3: 1: B; 2: A

Competency based assessment checklist for Medication practice to patients

No.	Competency	Achievement level		
		Can do independently (2)	**Can do with support (1)**	**Cannot do or do wrongly (0)**
1	Identify patients before giving drugs			
2	Implement effectively, safely and properly technical procedures giving medicines to patients.			
3	Implement effectively, safely, and properly follow the technical procedure of subcutaneous skin injection.			
4	Implement effectively, safely and strictly with the technical procedures of intramuscular injection to patients.			
5	Perform effectively, safely and properly technical procedures of intravenous injection.			
6	Early detection of abnormal manifestations on patients when taking drugs and making appropriate treatment decisions.			

REFERENCES

1. Ministry of Health (2010). *A guide to practicing 55 basic nursing techniques, volume 2,* Vietnam Education Publishing House.
2. Ministry of Health (2012). Guidance on safe injection in medical examination and treatment facilities - issued together with Decision 3671 / QD - BYT dated September 27, 2012
3. Ministry of Health (2012). *Nursing practice skills.* Medical publishing house, Hanoi.