FUNDAMENTALS OF NURSING

TEACHER'S GUIDE SENIOR SIX ASSOCIATE NURSING PROGRAM

First Edition

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FOREWORD

Dear Teacher,

The Rwanda Basic Education Board is pleased to present this Teacher's Guide for the Associate Nursing Program. This guide is designed to support competence-based teaching and ensure consistency in delivering the Fundamentals of Nursing subject.The Rwandan educational philosophy aims to help student-associate nurses achieve their full potential, preparing them to address community health needs and pursue career opportunities.

To enhance education quality, the government of Rwanda emphasizes the alignment of teaching materials with the syllabus. Effective teaching relies on the relevance of content, pedagogical approaches, assessment strategies, and instructional materials. The guide focuses on activities that promote learning, allowing students to develop ideas and make discoveries.

In a competence-based curriculum, learning involves actively building knowledge and skills through activities, scenarios, and real-life applications. Your role as a teacher includes:

- Planning lessons and preparing teaching materials.
- Organizing group discussions and collaborative learning.
- Engaging students through active learning methods such as inquiry, research, and group work.
- Supporting and facilitating the learning process by valuing student contributions and guiding them towards integrating their findings.

This guide is divided into three parts:

1) Explains the book's structure and provides methodological guidance.
2) Offers sample lesson plans for reference.
3) Provides detailed teaching guidance for each concept in the student book.

Although the guide includes answers to student book activities, please review each question and activity before assessing student responses.

I extend my gratitude to everyone involved in developing this guide, including the Ministry of Health, University of Rwanda, and other institutions. Special thanks go to faculty members, nurses, midwives, teachers, illustrators, designers, Health Workforce development staff/MoH, and REB staff for their dedicated work.

Dr. MBARUSHIMANA Nelson

Director General, REB

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Table of Contents

FOREWORD iii

ACKNOWLEDGMENT iv

1.0. About the teacher's guide 1

1.1. Structure of the guide..... 1

1.2. Methodological guidance 1

UNIT 1: HUMAN NUTRITION AND DIETETICS 18

1.1. Key unit competence 18

1.2. Prerequisites (knowledge, skills, attitudes and values)..... 18

1.3. Cross-cutting issues to be addressed..... 18

1.4. Guidance on the introductory activity..... 18

1.5. List of lessons/subheadings..... 20

1.6. Summary of the unit..... 74

1.7. Additional information for teachers..... 74

1.8. Answers to end unit assessment 75

1.9. Additional activities..... 87

UNIT 2: NURSING ASSESSMENT OF ENDOCRINE SYSTEM 95

2.1. Key unit competence 95

2.2. Prerequisites (knowledge, skills, attitudes and values)..... 95

2.3. Cross-cutting issues to be addressed..... 95

2.4. Guidance on the introductory activity..... 96

2.5. List of lessons/subheadings (including assessment)..... 98

2.6. Summary of the unit..... 106

2.7. Additional information for the teacher 107

2.8. Answers of the end unit assessment 108

2.9. Additional activities 115

UNIT 3: NURSING ASSESSMENT OF NEUROLOGICAL SYSTEM. 118

3.1. Key unit competence 118

3.2. Prerequisites (knowledge, skills, attitudes and values).....118

3.3. Cross-cutting issues to be addressed.....118

3.4. Guidance on the introductory activity.....119

3.5. List of lessons/subheadings (including assessment)..... 120

3.6. Summary of unit 128
3.7. Additional information for teachers 129
3.8. Answers to end unit assessment 131
3.9. Additional activities 132
UNIT 4: NURSING ASSESSMENT OF SENSORY SYTEM 134
4.1. Key unit competence 134
4.2. Prerequisites (knowledge, skills, attitudes and values) 134
4.3. Cross-cutting issues to be addressed 134
4.4. Guidance on the introductory activity 135
4.5. List of lessons/subheadings (including assessment) 136
4.6. Summary of the unit 148
4.7. Additional information for teachers 148
4.8. Answers to end unit assessment 149
4.9. Additional activities 149
UNIT 5: INTRODUCTION TO COMMUNITY HEALTH NURSING 152
5.1. Key unit competence 152
5.2. Prerequisites (knowledge, skills, attitudes and values) 152
5.3. Cross-cutting issues to be addressed 152
5.4. Guidance on the introductory activity 152
5.5. List of lessons/subheadings (including assessment) 153
5.6. Summary of the unit 243
5.7. Additional information for teachers 244
5.8. Answers to the end unit Assessment 244
5.9. Additional activities 257
5.9.1. Remedial activities 257
5.9.2. Consolidation activities 259
5.9.3. Extended activities 260
UNIT 6: PRIMARY HEALTH CARE 262
6.1. Key unit competence 262
6.2. Prerequisites (knowledge, skills, attitudes and values) 262
6.3. Cross-cutting issues to be addressed 262
6.4. Guidance on the introductory activity 262

6.5.List of lessons/subheadings (including assessment) 265
6.6. Summary of the unit 295
6.7. Additional information for teachers 297
6.8. Answer to the end unit assessment 300
6.9. Additional activities 301
6.9.1. Remedial activities 301
6.9.2. Consolidation activities 304
6.9.3. Extended activities 306
UNIT 7:INTRODUCTION TO ENVIRONMENTAL SANITATION 310
7.1. Key unit competence 310
7.2. Prerequisites (knowledge, skills, attitudes and values) 310
7.3. Cross-cutting issues to be addressed 310
7.4. Guidance on the introductory activity 311
7.5. List of lessons/subheadings (including assessment) 312
7.6. Summary of unit 338
7.7. Additional information for teachers 339
7.8. Answers to end unit assessment 342
7.9. Additional activities 345
UNIT 8:INTRODUCTION TO PALLIATIVE CARE 349
8.1. Key unit competence 349
8.2. Prerequisites (knowledge, skills, attitudes and values) 349
8.3. Cross-cutting issues to be addressed 349
8.4. Guidance on the introductory activity 349
8.5. List of lessons/subheadings (including assessment) 350
8.6. Summary of the unit 380
8.7. Additional information for teachers 380
8.8. Answers to end unit assessment 381
8.9. Additional activities 388
8.9.1. Remedial activities 388
8.9.2. Consolidation activities 389
8.9.3. Extended activities 391
REFERENCE 396

PART I. GENERAL INTRODUCTION

1.0. About the teacher's guide

This book is a teacher's guide for Fundamentals of Nursing subject, for senior four in Associate Nursing program. It is designed to accompany student book and intends to help teachers in the implementation of competence-based curriculum specifically Fundamentals of Nursing syllabus.

As the name says, it is a guide that teachers can refer to when preparing their lessons. Teachers may prefer to adopt the guidance provided but they are also expected to be more creative and consider their specific classes' contexts and prepare accordingly.

1.1. Structure of the guide

This section presents the overall structure, the unit and sub-heading structure to help teachers to understand the different sections of this guide and what they will find in each section.

Overall structure

The whole guide has three main parts as follows

- **Part I: General introduction**

This part provides general guidance on how to develop the generic competences, how to integrate cross cutting issues, how to cater for students with special educational needs, active methods and techniques of Fundamentals of Nursing and guidance on assessment

- **Part II: Sample lesson plan**

This part provides a sample lesson plan, developed and designed to help the teacher develop their own lesson plans.

- **Part III: Unit development**

This is the core part of the guide. Each unit is developed following the structure below. The guide ends with references.

Each unit is made of the following sections:

– Unit title: from the syllabus
– Key unit competence: from the syllabus
– Prerequisites (knowledge, skills, attitudes and values)

This section indicates knowledge, skills and attitudes required for the success of the unit. The competence-based approach calls for connections between units/topics within a subject and interconnections between different subjects. The teacher will find an indication of those prerequisites and guidance on how to establish connections.

– **Cross-cutting issues to be addressed**

This section suggests cross cutting issues that can be addressed depending on the unit content. It provides guidance on how to come up with the integration of the issue. Note that the issue indicated is a suggestion; teacher are free to take another cross-cutting issue taking into consideration the learning environment.

– **Guidance on the introductory activity**

Each unit starts with an introductory activity in the teacher's book. This section of the teacher's guide provides guidance on how to conduct this activity and related answers. Note that students may not be able to find the right solution but they are invited to predict possible solutions or answers. Solutions are provided by students gradually through discovery activities organized at the beginning of lessons or during the lesson.

– **List of lessons/sub-heading**

This section presents in a table suggestion on the list of lessons, lesson objectives copied or adapted from the syllabus and duration for each lesson. Each lesson / subheading is then developed.

– **End of each unit**

At the end of each unit the teacher provides the following sections:

- Summary of the unit which provides the key points of content developed in the teacher's book.
- Additional information which provides additional content compared to the student book for the teacher to have a deeper understanding of the topic.
- End unit assessment which provides answers to questions of the end unit assessment in the teacher's book and suggests additional questions and related answers to assess the key unit competence.
- Additional activities :(remedial, consolidation and extended activities). The purpose of these activities is to accommodate each student (slow, average and gifted) based on the end of unit assessment results.

Structure of each sub heading

Each lesson/sub-heading is made of the following sections:

Lesson /Sub heading title 1: ……..

Prerequisites/Revision/Introduction:

This section gives a clear instruction to teacher on how to start the lesson.

- **Teaching resources**

This section suggests the teaching aids or other resources needed in line with the activities to achieve the learning objectives. Teachers are encouraged to replace the suggested teaching aids by the available ones in their respective schools and based on learning environment.

- **Learning activities**

This section provides a short description of the methodology and any important aspect to consider. It provides also answers to learning activities with cross reference to student's book.

- **Exercises/self-assessment activities**

This provides questions and answers for exercises/ application activities.

1.2. Methodological guidance

1.2.1. Developing competence

Since 2015 Rwanda shifted from a knowledge based to a competence based curriculum for pre-primary, primary and general secondary education. For Associate Nursing Programs, it is in 2021 that the competence based curriculum was embraced. This called for changing the way of learning by shifting from teacher centered to a learner centered approach. Teachers are not only responsible for knowledge transfer but also for fostering teacher's learning achievement, and creating safe and supportive learning environment. It implies also that a student has to demonstrate what he/she is able to do using the knowledge, skills, values and attitude acquired in a new or different or given situation.

The competence-based curriculum employs an approach of teaching and learning based on discrete skills rather than dwelling on only knowledge or the cognitive domain of learning. It focuses on what learner can do rather than what learners know. Students develop basic competences through specific subject unit competences with specific learning objectives broken down into knowledge, skills and attitudes. These competences are developed through learning activities disseminated in learner-centered rather than the traditional didactic approach. The students are evaluated against set standards to achieve before moving on.

In addition to specific subject competences, students also develop generic competences which are transferable throughout a range of learning areas and situations in life. Below are examples of how generic competences can be developed in Fundamentals of nursing:

Generic competence	Examples of activities that develop generic competences
Critical thinking	• Describe the relationship and interdependence of sciences • Observe, record, interpret data recorded during experiments • Identify and use the applications of Fundamentals of Nursing concepts to solve problems of life and society
Research and Problem solving	• Research using internet or books from the library • Design a project for making bioplastics • Design a questionnaire for data collection during field visit
Innovation and creativity	• Create an experiment procedure to prove a point • Develop a graph to illustrate information • Design a data collection survey/questionnaire • Conduct experiments with objectives, methodology, observations, results, conclusions • Identify local problems and ways to resolve them
Cooperation, Personal and Interpersonal management and life skills	• Work in Pairs • Small group work • Large group work
Communication	• Organise and present in writing and verbally a complete and clear report of an experiment • Observe, record, interpret the results of a measurement accurately. • Select and use appropriate formats and presentations, such as tables, graphs and diagrams.
Lifelong learning	• Exploit all opportunities available to improve on knowledge and skills. Reading scientific journals to keep updated.

1.2.2. Addressing cross cutting issues

Among the changes in the competence based curriculum is the integration of cross cutting issues as an integral part of the teaching learning process-as they relate to and must be considered within all subjects to be appropriately addressed. The eight cross cutting issues identified in the national curriculum framework are: genocide studies, environment and sustainability, gender, Comprehensive Sexuality Education (CSE), Peace and Values Education, Financial Education, standardization Culture and Inclusive Education.

Some cross cutting issues may seem specific to particular learning areas or subjects but the teacher needs to address all of them whenever an opportunity arises. In addition, student should always be given an opportunity during the learning process to address these cross cutting issues both within and out of the classroom so as to progressively develop related attitudes and values.

Below are examples on how crosscutting issues can be addressed in Biology:

Cross-cutting issues	Examples on how to integrate the cross-cutting issues
Inclusive education	Involve all students in all activities without any bias. Eg: Allow a student with physical disability (using wheelchair) to take notes or lead the team during an experiment.
Gender	Involve both girls and boys in all activities: No activity is reserved only to girls or boys. Teacher should ensure equal participation of both girls and boys during experiments as well as during cleaning and tidying up related activities after experiments.
Peace and Values Education	During group activities, debates and presentations, the teacher will encourage studentsto help each other and to respect opinions of colleagues.
Standardization culture	Some lessons involve carrying out experiments. Instruction should be clear for students to always check if they are not using expired chemicals or defective apparatus. In addition, when performing experiments students have to record data accurately. For tasks involving calculations, they have to always present accurate results.
Environment and sustainability	In order to avoid the environment pollution, before, during or after experiments students avoid throwing away chemicals anywhere; special places or appropriate containers should be used. Students also have to be aware of the impacts of the use of hydrocarbons as fuels, halogenoalkanes, and plastics on the environment.
Financial Education	When performing experiments, students are encouraged to avoid wasting chemicals by using the quantities that are just required. They are required to also avoid spoiling equipment and other materials…

1.2.3. Attention to special educational needs specific to each subject

In the classroom, students learn in different way depending to their learning pace, needs or any other special problem they might have. However, the teacher has the responsibility to know how to adopt his/her methodologies and approaches in order to meet the learning needs of each student in the classroom. Also teacher must understand that students with special needs need to be taught differently or need some accommodations to enhance the learning environment. This will be done depending on the subject and the nature of the lesson.

In order to create a well-rounded learning atmosphere, teacher needs to:

- Remember that students learn in different ways so they have to offer a variety of activities (e.g. role-play, music and singing, word games and quizzes, and outdoor activities).
- Maintain an organized classroom and limits distraction. This will help students with special needs to stay on track during lesson and follow instruction easily.
- Vary the pace of teaching to meet the needs of each student-teacher. Some students process information and learn more slowly than others.
- Break down instructions into smaller, manageable tasks. Students with special needs often have difficulty understanding long-winded or several instructions at once. It is better to use simple, concrete sentences in order to facilitate them understand what you are asking.
- Use clear consistent language to explain the meaning (and demonstrate or show pictures) if you introduce new words or concepts.
- Make full use of facial expressions, gestures and body language.
- Pair a student who has a disability with a friend. Let them do things together and learn from each other. Make sure the friend is not over protective and does not do everything for the student-teacher. Both students will benefit from this strategy
- Use multi-sensory strategies. As all students learn in different ways, it is important to make every lesson as multi-sensory as possible. Students with learning disabilities might have difficulty in one area, while they might excel in another. For example, use both visual and auditory cues.

Below are general strategies related to each main category of disabilities and how to deal with every situation that may arise in the classroom. However, the list is not exhaustive because each student is unique with different needs and that should be handled differently.

Strategy to help students with developmental impairment:

- Use simple words and sentences when giving instructions.
- Use real objects that the student can feel and handle, rather than just working abstractly with pen and paper.
- Break a task down into small steps or learning objectives. The student should start with an activity that s/he can do already before moving on to something that is more difficult.
- Gradually give the student less help.
- Let the student work in the same group with those without disability.

Strategy to help students with visual impairment:

- Help students to use their other senses (hearing, touch, smell and taste) to play and carry out activities that will promote their learning and development.
- Use simple, clear and consistent language.
- Use tactile objects to help explain a concept.
- If the students has some sight, ask them what they can see. Get information from parents/caregivers on how the student manages their remaining sight at home.
- Make sure the student has a group of friends who are helpful and who allow the students to be as independent as possible.
- Plan activities so that students work in pairs or groups whenever possible.

Strategy to help students with hearing impairment:

- Strategies to help students with hearing disabilities or communication difficulties
- Always get the students attention before you begin to speak.
- Encourage the student to look at your face.
- Use gestures, body language and facial expressions.
- Use pictures and objects as much as possible.
- Ask the parents/caregivers to show you the signs they use at home for communication use the same signs yourself and encourage other students to also use them.
- Keep background noise to a minimum.

Strategies to help children with physical disabilities or mobility difficulties:

- Adapt activities so that student who use wheelchairs or other mobility aids, or other students who have difficulty moving, can participate.
- Ask parents/caregivers to assist with adapting furniture e.g. The height of a table may need to be changed to make it easier for a student to reach it or fit their legs or wheelchair under.
- Encourage peer support friends can help friends.
- Get advice from parents or a health professional about assistive devices.

1.2.4. Guidance on assessment

Each unit in the teacher's guide provides additional activities to help students achieve the key unit competence. Results from assessment inform the teacher which student needs remedial, consolidation or extension activities. These activities are designed to cater for the needs of all categories of learners; slow, average and gifted learners respectively.

Assessment is an integral part of teaching and learning process. The main purpose of assessment is for improvement. Assessment for learning (**Continuous/formative assessment)** intends to improve student-teachers' learning and teacher's teaching whereas assessment of learning/summative assessment intends to improve the entire school's performance and education system in general.

Continuous/ formative assessment

It is an ongoing process that arises out of interaction during teaching and learning process. It includes lesson evaluation and end of sub unit assessment. This formative assessment plays a big role in teaching and learning process. The teacher should encourage individual, peer and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods.

In Year two textbook, formative assessment principle is applied through application activities that are planned in each lesson to ensure that lesson objectives are achieved before moving on. At the end of each unit, the end unit assessment is formative when it is done to give information on the progress of students and from there decide what adjustments need to be done. Assessment standards are taken into consideration when setting tasks.

Summative assessment

The assessment done at the end of the term, end of year, is considered as summative. The teacher, school and parents are informed on the achievement of educational objectives and think of improvement strategies. There is also end of level/ cycle assessment in form of national examinations.

1.2.5. Student teachers' learning styles and strategies to conduct teaching and learning process

There are different teaching styles and techniques that should be catered for. The selection of teaching method should be done with the greatest care and some of the factors to be considered are: the uniqueness of subjects, the type of lessons, the particular learning objectives to be achieved, the allocated time to achieve the objective, instructional available materials, the physical/sitting arrangement of the classroom, individual student teachers' needs, abilities and learning styles.

There are mainly four different learning styles as explained below:

d) Active and reflective learners

Active learners tend to retain and understand information best by doing something active with it, discussing or applying it or explaining it to others. Reflective learners prefer to think about it quietly first.

e) Sensing and intuitive learners

Sensing learners tend to like learning facts while intuitive learners often prefer discovering possibilities and relationships. Sensors often like solving problems by well-established methods and dislike complications and surprises; intuitive learners like innovation and dislike repetition.

f) Visual and verbal learners

Visual learners remember best what they see (pictures, diagrams, flow charts, time lines, films, demonstrations, etc).; verbal learners get more out of words (written and spoken explanations).

g) Sequential and global learners

Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly "getting it."

1.2.5. Teaching methods and techniques that promote the active learning

The different student learning styles mentioned above can be catered for, if the teacher uses active learning whereby students are really engaged in the learning process.

What is Active learning?

Active learning is a pedagogical approach that engages students in doing things and thinking about the things they are doing. In active learning, learners are encouraged to bring their own experience and knowledge into the learning process.

The role of the teacher in active learning

- The teacher engages students through active learning methods such as inquiry methods, group discussions, research, investigative activities and group and individual work activities.
- He/she encourages individual, peer and group evaluation of the work done in the classroom and uses appropriate competence-based assessment approaches and methods.
- He provides supervised opportunities for students to develop different competences by giving tasks which enhance critical thinking, problem solving, research, creativity and innovation, communication and cooperation.
- Teacher supports and facilitates the learning process by valuing student-teachers' contributions in the class activities.

The role of learners in active learning

Learners are key in the active learning process. They are not empty vessels to fill but people with ideas, capacity and skills to build on for effective learning. A learner engaged in active learning:

- Communicates and shares relevant information with other learners through presentations, discussions, group work and other learner-centred activities (role play, case studies, project work, research and investigation)
- Actively participates and takes responsibility for their own learning
- Develops knowledge and skills in active ways
- Carries out research/investigation by consulting print/online documents and resourceful people, and presents their findings
- Ensures the effective contribution of each group member in assigned tasks through clear explanation and arguments, critical thinking, responsibility and confidence in public speaking
- Draws conclusions based on the findings from the learning activities.

Some active techniques that can be used in Biology

The teaching methods strongly emphasised in the competence Based Curriculum (CBC) are active methods. Below are some active techniques that apply in sciences:

a) Practical work/ experiments:

Many of the activities suggested in Fundamentals of Nursing curriculum as well as in the teacher's book are practical works or experiments.

Practical work is vital in learning Biology; this method gives the student the opportunity to implement a series of activities and leads to the development of both cognitive and hands-on skills. The experiments and questions given should target the development of the following skills in student-teachers: observation, recording and report writing, manipulation, measuring, planning and designing.

A practical lesson/Experiment is done in three main stages:

- **Preparation of experiment**: Checking materials to ensure they are available and at good state; try the experiment before the lesson; think of safety rules and give instructions to lab technician if you have any.
- **Performance of experiment**: Sitting or standing arrangement of student-teachers; introduction of the experiment: aims and objectives; setting up the apparatus; performing the experiment; write and record the data.
- **Discussion**: Observations and interpreting data; make generalisations and assignment: writing out the experiment report and further practice and research.

In some cases, demonstration by the teacher is recommended when for example the experiment requires the use of sophisticated materials or very expensive materials or when safety is a major factor like dangerous experiments and it needs specific skills to be learnt first.

In case your school does not have enough laboratory materials and chemicals, experiments can be done in groups but make sure every student participates. You can also make arrangements with the neighbouring science school and take your students there for a number of experiments

b) Research work

Each student or group of students is given a research topic. They have to gather information from internet, available books in the library or ask experienced people and then the results are presented in verbal or written form and discussed in class.

c) Project work

Fundamentals of nursing teachers are encouraged to sample and prepare project works and engage their students in, as many as possible. Students in groups or individually, are engaged in a self-directed work for an extended period of time to investigate and respond to a complex question, problem, or challenge. The work can be presented to classmates or other people beyond the school. Projects are based on real-world problems that capture learners' interest. This technique develops higher order thinking as the students acquire and apply new knowledge in a problem-solving context.

d) Field trip

One of the main aims of teaching Fundamentals of Nursing in Rwanda is to apply its knowledge for development. To achieve this aim we need to show to students the relationship between classroom science lessons and applied sciences. This helps them see the link between science principles and technological applications.

To be successful, the field visit should be well prepared and well exploited after the visit:

Before the visit, the teacher and student:

- agree on aims and objectives
- gather relevant information prior to visit
- brainstorm on key questions and share responsibilities
- discuss materials needed and other logistical and administrative issues
- discuss and agree on accepted behaviours during the visit
- Visit the area before the trip if possible to familiarise yourself with the place

After the visit

When students come back from trip, the teacher should plan for follow-up. The follow-up should allow students to share experiences and relate them to the prior science knowledge. This can be done in several ways; either: Students write a report individually or in groups and give to the teacher for marking. The teacher then arranges for discussion to explain possible misconceptions and fill gaps. Or students write reports in groups and display them on the class notice board for everyone to read.

Main steps for a lesson in active learning approach

All the principles and characteristics of the active learning process highlighted above are reflected in steps of a lesson as displayed below. Generally, the lesson is divided into three main parts whereby each one is divided into smaller steps to make sure that students are involved in the learning process. Below are those main parts and their small steps:

1) Introduction

Introduction is a part where the teacher makes connection between the current and previous lesson through appropriate technique. The teacher opens short discussions to encourage students to think about the previous learning experience and connect it with the current instructional objective. The teacher reviews the prior knowledge, skills and attitudes which have a link with the new concepts to create good foundation and logical sequencings.

2) Development of the new lesson

The development of a lesson that introduces a new concept will go through the following small steps: discovery activities, presentation of student-teachers' findings, exploitation, synthesis/summary and exercises/application activities, explained below:

Discovery activity

Step 1

- The teacher discusses convincingly with students to take responsibility of their learning

- He/she distributes the task/activity and gives instructions related to the tasks (working in groups, pairs, or individual to instigate collaborative learning, to discover knowledge to be learned)

Step 2

- The teacher let the students work collaboratively on the task.
- During this period the teacher refrains to intervene directly on the knowledge
- He/she then monitors how the students are progressing towards the knowledge to be learned and boost those who are still behind (but without communicating to them the knowledge).

Presentation of student-teachers' productions

- In this episode, the teacher invites representatives of groups to present the student-teachers' productions/findings.
- After three/four or an acceptable number of presentations, the teacher decides to engage the class into exploitation of the student-teachers' productions.

Exploitation of student-teachers' productions

- The teacher asks the students to evaluate the productions: which ones are correct, incomplete or false
- Then the teacher judges the logic of the student-teachers' products, corrects those which are false, completes those which are incomplete, and confirms those which correct.

Institutionalization (summary/conclusion/ and examples)

- The teacher summarises the learned knowledge and gives examples which illustrate the learned content.

Exercises/Application activities

- Exercises of applying processes and products/objects related to learned unit/ sub-unit
- Exercises in real life contexts
- Teacher guides students to make the connection of what they learnt to real life situations. At this level, the role of teacher is to monitor the fixation of process and product/object being learned.

3) Assessment

In this step the teacher asks some questions to assess achievement of instructional objective. During assessment activity, students work individually on the task/activity. The teacher avoids intervening directly. In fact, results from this assessment inform the teacher on next steps for the whole class and individuals. In some cases, the teacher can end with a homework assignment.

PART II: SAMPLE LESSON PLAN

Teacher's name……**School name**…….

Term	**Date**	**Subject**	**Class**	**Unit N°**	**Lesson N⁰**	**Duration**	**Class size**
1	To be specified	Fundamentals of nursing	Senior 6	2	1 of 8	80 Min	30 Students
Type of Special Education Needs and number of learners			Students with hearing impairment				
Unit Title		Primary health care					
Key unit Competence		To be able to Apply the principles and components of health promotion to prevent diseases and promote health of communities					
Title of the lesson		Concept of primary health care					
Plan for this class (Location: In/outside)		In Class-room					
Instructional objectives (inclusive to reflect needs of whole class)		Provided with theoretical knowledge and practical skills and shaping good attitudes, the learners will be able to apply the concept of primary health care in their professional activities.					
Learning Materials (for all learners)		Primary healthcare books, teaching tools (projector and computer) and learning materials.					
References		Kozier & Erb's. (2018). *Fundamentals of Nursing: Concepts, Process and Practice* (4th Ed). Pearson Australia. Craven, R. F., Hirnle, C. J., & Jensen, S. (2013). *Procedure checklists for Fundamentals of Nursing Human Health and Function* (7th Ed). Lippincott Williams & Wilkins. Burton, M. A., & Ludwig, L. J. M. (2015). *Fundamentals of Nursing Care: Concepts, Connections & Skills* (2nd Ed). F. A. Davis Company. Philadelphia. Erb, K., Snyder, B., Buck, F., & Yiu, F. (2018). *Fundamentals of Canadian Nursing: Concepts, Process, and Practice* (4th Ed). Pearson Canada Inc. Ministry of Health, (2018), *Fourth Health Sector Strategic Plan Of July 2018-June 2024.* Buse K., Heggenhougen K. H., Quah S. R. (2010), *Health Systems Policy, Finance and Organization,* WHO, Geneva Switzland					

Timing for each Step	Description of teaching and learning activity		Competences and cross cutting issues to be addressed
	Small group discussion about concept of Primary health care, and the objectives of its establishment.		
	Tutor's activities	**Learner's activities**	
1. **Introduction** **(5minutes)**	Through questioning, the teacher ask the learners what they think is primary health care The teacher also asks the learners what they think as objectives of primary health care The teacher also will ask the learners what they think is a role of a nurse in the primary health care The teacher ensures the students are in their groups of 5-6 person to discuss on the given **learning activity 2.2.1.** Teacher share the objectives of the lesson with the learners and ask students to show the link between learning objective and Key unit competence	Students think in their small groups and discuss with each other the primary health care concept and the objectives of primary health care Learners get into their group while they are thinking on asked introductory questions Three volunteers describe the relationship of the key unit competence and the learning objectives of the lesson	Critical thinking as learners are thinking about the asked questions. Communication as students discuss with their colleagues
2. **Development of the lesson**			
2.1 **Discovery activity**	The teacher introduces the lesson by the learning activity and welcome them to discuss about the concept of primary health care, types and its objectives.	Students get in their respective groups Students start to brainstorm on the given questions	Cooperation, interpersonal management and life skills: Students share ideas in groups.

	Teacher moves around in groups and guides them as they attempt to answer the questions. The teacher pays a special attention to students with disabilities	Students prepare the presentation to share with other group members Student analyze the information read and try to conceptualize. Learners pays attention to the guidance and ask questions when required	Students learn to respect each other's opinions and presentation preparation Interpersonal relationship and effective communication Infection control and prevention,
2.2 **Presentation of findings (15minutes)**	Teacher invites back students from the group to present their discussions Teacher asks further questions to make sure that even students with special education need are involved in the learning process.	Each group their findings and supplement each other The groups exchange their ideas and opinions while learning	Communication skills during the presentation Lifelong Learning. These competences will be developed from presentation of their works, working in groups, and from producing a poster

2.3 **Exploitation of student's findings (10 minutes)**	The teacher asks other groups if they agree on what the group has said and comments on each presentation. Invite the representative of each summarize what they have captured	Students follow the presentations from their colleagues carefully and their practices. Students ask questions to their colleague while learning the new skills. Students practice skills of hand washing/rubbing and gloving skills	Hands on skills while trying to hand wash/ rub and gloving. Learners use critical thinking in answering questions from their colleagues and trying to perform skills
2.4 **Synthesis**	The teacher helps the students to come up with a summary of primary health care concept and its objectives The teacher provide more information on primary health care basing on what the students have presented.	Students with the guidance of the teacher manage to come up with the summary of primary health care concept and its objectives	Inclusive Education: Taking into account of students with lower limb impairment by facilitating them to have a sit. Communication skills developed through the discussion Technical skills on hand hygiene and gloving techniques

2.5 **Conclusion** **5 minutes**	Randomly, choose three students to summarize what has been covered from this lesson	Students summarize lesson and they complement each other	Communication skills while summarizing the lesson Confidence to answer questions
3. **Assessment**	Ask student to answer the self-assessment activity in the student book. Teacher also may ask what is the benefits	Student-teacher answer to the self-assessment activities and other questions asked by the teacher	Cross cutting issues: Peace and value education During group activities, debates and presentations, the teacher will encourage learners to help each other and to respect opinions of colleagues, and to respect each other Inclusive education: The students with hearing impairments can do the assessment in writing to ensure they are with others
Comments on the lesson delivery	The lesson was conducted very nice since every learner was involved and is capable to achieve the key competence of the lesson		

PART III. UNIT DEVELOPMENT

UNIT 1 HUMAN NUTRITION AND DIETETICS

1.1. Key unit competence

Assist adequately in preparation of a balanced diet to community, family and individuals.

1.2. Prerequisites (knowledge, skills, attitudes and values)

Associate Nurse Students will learn better Nutrition and Dietetics if they have understanding on: Biology, Health assessment; Nursing Ethics and Professional Code of Conduct. Ask associate Nurse Students to describe those concepts

1.3. Cross-cutting issues to be addressed

a) Gender education

The Nurse educator should ensure equal participation of both girls and boys during teaching and learning activities such as classroom work and skills simulation.

b) Peace and values education

During group and pair activities, presentations and discussion, the Nurse educator should encourage the associate nurse students to help one another and to have mutual respect of opinions

c) Financial education

During skills laboratory activities, the Nurse educator should encourage associate nurse students to manage consumable materials economically by using the required quantities. The students are also required to avoid damage of non-expendable equipment.

1.4. Guidance on the introductory activity

- Before beginning the first lesson of Nutrition and Dietetics unit, the nurse educator should ask the associate nurse students to attempt the introductory activity 1. This activity aims at enabling the students to discover the main content of the unit and attract their attention to learn.
- The Nurse educator should introduce the unit with pictures provided on introductory activity 1. He/she should proceed as follows:
- Ask students to observe the pictures of introductory activity displayed in students' books, or project slide with pictures of introductory activity 1 and allow students to see for two minutes.

- Request students to work in pair and answer the questions related to the pictures of introductory activity 1. They should use 3 minutes to provide responses.
- Allow students to brain storm the results from peer discussion in 5 minutes.

Expected answers to the introductory activity

Learners may not be able to find the right solution but they are invited to predict possible solutions or answers:

1) Picture A communicates about a child suffering from marasmus. The child is thin (loosed sub-cutaneous fat), and is reduced to “skin and bones”. Picture B informs about a child with kwashiorkor characterized among other signs by change in skin and hair color (to a rust color) and texture, loss of muscle mass, failure to gain weight, edema (swelling) of the ankles, feet, and belly; etc. Picture C informs about a female nurse proving nutritional health education to a young mother. Picture D is about a mother who is breastfeeding a baby with care. Picture “E” talks about a mother who is preparing food/drink for a happy child. Picture F informs about family happy meal time. It shows good habit/culture because all members of family meet together to share meal time.

2) Pictures A and B include children in poor health status (with protein energy malnutrition) while the child in picture E is healthy (good health status).

3) Health education that is being done in picture C equips client with knowledge and skills enabling him/her and his family to have good nutritional status. Breast feeding the baby in picture D is a crucial since the breast milk provides the baby with all nutrients needed to grow and survive until 6 months when supplementary food should be introduced. Sharing mealtimes for all family members in picture F is very important because mealtimes are looked forward to as a period for family discussion and interaction.

4) Associate nurse students may guess that the lesson is going to focus on nutritional disorders and their related diet management activities such as breast feeding, nutritional health education, good foods habits and cultures. The Nurse educator should consider the ideas of students and then inform them about what they shall expect to learn from this unit.

1.5. List of lessons/subheadings

#	Lesson title	Learning objectives	Number of periods
Theoretical lessons			
1	Breast feeding	Describe the advantages of breast feeding for mother and baby. Explain the contra-indications of breast feeding. Describe the teaching points for breast feeding.	2
2	Formula-feeding	Explain when formula feeding is recommended. Describe the three major classes of infant formulas. Describe the advantages of formula feeding to the infant. Explain the disadvantages of formula feeding to the infant	2
3	Supplementary feeding	Identify the most required vitamins and minerals and their food sources for supplementary feeding	2
4	Childhood special considerations	Describe the main nutrients required for promoting the growth of children. Explain the healthy eating practices for children.	2
5	Special considerations and nutritional disorders in Adolescents	Describe the nutritional needs in adolescents Describe the factors that influence adolescent's diet and the ways to enhance healthy eating. Describe common nutritional disorders in adolescence and their management.	2
6	Special nutrition in pregnancy	Describe the nutrients required to pregnant woman	2
7	Maternal Diet during Lactation	Describe the required diet during lactation	2
8	Special geriatric nutritional needs	Describe the nutritional needs of elderly people.	2

9	Food security and availability	Discuss food security and availability in terms of causes of food insecurity, its consequences and community-based Actions to address food and nutrition insecurity.	2
10	Food contamination and spoilage	Discuss the measures for preventing food contamination and spoilage.	2
11	Food preservation and storage	Discuss the methods/techniques for preservation and storage of foods.	2
12	Food habits	Discuss the factors that influence eating habits to promote a healthy lifestyle	2
13	Factors affecting the choice of food	Discuss the factors that affect the choice of food for promoting proper nutritional practices in all age groups	2
14	Protein-energy malnutrition	Discuss the different types of protein energy malnutrition and their management.	2
15	Specific vitamin deficiencies	Discuss the different vitamin deficiencies and their nutritional management.	2
16	Specific mineral deficiencies	Discuss the different minerals deficiencies and their nutritional management.	2
17	Over-nutrition conditions	Discuss Overweight/ Obesity and their management.	2
18	Assessment of nutritional status of a client	Conduct a comprehensive assessment of the nutritional status of a client	2
19	Oral feeding	Practice oral feeding for patients under the supervision of Nurse educator	2
20	Nasogastric tube feeding	Practice feeding for patient with nasogastric tube under the supervision of Nurse educator.	2
Skills lab practical lessons			
21	Oral feeding practice.	Practice independently the technique of oral feeding in simulation lab	2
	Nasogastric feeding practice.	Practice independently the technique of nasogastric feeding in simulation lab	2
	Assessment of nutritional status of a client (practice).	Perform a comprehensive assessment of the nutritional status of a client in a simulated environment.	2
22	End unit assessment	Assist adequately in preparation of a balanced diet to community, familyand individuals.	2

Lesson 1: Breast feeding

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the advantages of breast feeding for mother and baby.
- Explain the contra-indications of breast feeding.
- Describe the teaching points for breast feeding

b) **Teaching resources**

Pictures, students' text books, fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slides and Fundamentals of nursing text books.

c) **Prerequisites/Revision/Introduction**

The students should have understanding of Biology, Nursing Ethics and Professional Code of Conduct, human anatomy and physiology of woman breast in order to learn better this lesson.

d) **Learning activities 1.1.**

Guidance

Before introducing this unit, the Nurse educator should introduce the whole unit. He/she should ask the learners to attempt the introductory activity 1 as it is guided above and then attempt the activity 1.1 which leads the learner to the first lesson of this unit.

The Nurse Educator should proceed as follows for helping learners to achieve lesson 1 objectives:

Facilitate the learner to form the small groups of 3 to 6 learners.

State to the learners the activity 1.1 that is presented in student book and ask the learners to discuss (in groups) and respond to the related questions.

Ask the learners to use fundamentals of nursing and nutrition text books taken from the library or internet. The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics.

During group work, the nurse educator should shift the conversation to the learners. Allow the learners to discuss and ensure that the discussion stays on the activity 1.1 at hand. Encourage shy learners to speak up so that everyone has a chance to share their thoughts.

After 15 minutes, the Nurse educator should ask the learner to stop the group discussion and be ready for presentation.

Two or 3 groups should present. The Nurse educator allows the group to direct the discussion; and act as a referee and intercede only when necessary. Ensure that no one learner dominates the discussion.

The Nurse educator should summarize the key points of the discussion periodically. Provide feedback on learners' comments when appropriate.

Use the contributions of each learner and provide reinforcement. Point out differences or similarities among the ideas presented by different people.

At the end of the lesson the Nurse educator should conclude the discussion with a summary of the main ideas. He / She should also ask questions to assess the achievement of lesson 1 objectives (see questions on self-assessment 1.1)

Answers to learning activity 1.1.

1) The learner may (or may not) provide the following answer: picture A is about a mother who is breast feeding his/her baby. Picture B shows a mother who is correcting breast milk with a pump in a sanitary bottle.
2) The learner may (or may not) respond that breastfeeding is important because breast milk contains nutrients/food for the growth and survival of the baby.
3) The learner may (or may not) answer that he/she is going to learn about breast feeding.
4) The following answers for question 4, are expected from associate nurse learners:

The advantages of breast feeding for baby

Breast colostrum is the most superior and well-designed nutrition for your baby in the first few days of life. Brest milk provides superior nutrition to the baby and increases resistance to infections. Breastfeeding promotes the proper development of the baby. Breastfed infants tend to have higher IQs (intellectual quotients) due to good brain development early in life. Breastfeeding promotes mother-baby bonding. In the long term, breastfed babies have a decreased risk of malnutrition, obesity and heart disease compared to formula fed babies.

The advantages of breast feeding for mother

The baby's sucking causes a mothers uterus to contract and reduces the flow of blood after delivery. During lactation, menstruation ceases, offering a form of contraception. Mothers who breastfeed, are less likely to develop breast cancer later in life. Hormones released during breast-feeding create feelings of warmth and calm in the mother.

Contra-indications of breast feeding

It may be contraindicated to the mother to breastfeed her child in some cases. For example: Galactosemia in the infant, illegal drug use in the mother, and active tuberculosis. Breast feeding may be also be contraindicated in case of HIV/AIDS due to the risk of acquiring HIV through breast milk. The use of certain drugs, such as radioactive isotopes, antimetabolites, cancer chemotherapy agents, lithium, and ergotamine constitutes a contraindication during breast feeding.

Teaching points for breast feeding

The infant should be allowed to nurse for 5 minutes on each breast on the first day to achieve letdown and milk ejection. By the end of the first week, the infant should be nursing up to 15 minutes per breast. In the first few weeks of breastfeeding, the infant may nurse 8 to 12 times every 24 hours.

Mothers should offer the breast whenever the infant shows early signs of hunger, such as increased alertness, physical activity, mouthing, or rooting.

After breastfeeding is well established, eight feedings every 24 hours may be appropriate. The first breast offered should be alternated with every feeding so both breasts receive equal stimulation and draining.

Even though the infant will be able to virtually empty the breast within 5 to 10 minutes once the milk supply is established, the infant needs to nurse beyond that point to satisfy the need to suck and to receive emotional and physical comfort. The supply of milk is equal to the demand—the more the infant sucks, the more milk is produced.

Infants age 6 weeks or 12 weeks who suck more are probably experiencing a growth spurt and so need more milk.

Water and juice are unnecessary for breastfed infants in the first 6 months of life, even in hot climates. Early substitution of formula or introduction of solid foods may decrease the chance of maintaining lactation.

Infants weaned before 12 months of age should be given iron-fortified formula, not cow's milk. Both feeding the infant, more frequently and manually expressing milk will help to increase the milk supply.

Breast milk can be pumped, placed in a sanitary bottle, and immediately refrigerated or frozen for later use. Milk should be used within 24 hours if refrigerated or within 3 months if stored in the freezer compartment of the refrigerator.

Answers to self-assessment 1.1.

The Nurse educator should ask the associate nurse learners to respond individually or in pairs or in groups to the questions provided in student book under the title of self-assessment 1.1., in order to evaluate their understanding of the lesson

1) **Answers:**
   The advantages of exclusive breast feeding until six months are the followings:

- Breast feeding help to develop a healthy immune system
- It increases resistance to infections
- Brest milk provides superior nutrition to the baby
- Breastfed babies have a decreased risk of malnutrition
- It decreases the risk lactose intolerance
- Breastfeeding promotes the proper development of baby's jaw and teeth and good brain development

The teaching points for breast feeding to the mother include:

- The infant should be allowed to nurse for 5 minutes on each breast on the first day to achieve let down and milk ejection.
- In the first few weeks of breastfeeding, the infant may nurse 8 to 12 times every 24 hours.
- Mothers should offer the breast whenever the infant shows early signs of hunger
- The first breast offered should be alternated with every feeding so both breasts receive equal stimulation and draining.
- By the end of the first week, the infant should be nursing up to 15 minutes per breast
- Do not give supplementary food before 6monts
- Breast milk can be pumped, placed in a sanitary bottle, and immediately refrigerated or frozen for later use.
- Milk should be used within 24 hours if refrigerated or within 3 months if stored in the freezer compartment of the refrigerator.

Lesson 2: Formula feeding

a) Learning objectives

At the end of this lesson, learner should be able to:

- Explain when formula feeding is recommended
- Describe the major classes of formula feeding
- Describe the advantages of formula feeding to the infant.
- Explain the disadvantages of formula feeding to the infant

b) Teaching resources

Pictures, students' text books, fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slides and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

The Nurse Educator ask learners to identify the contra-indications of breast feeding. The responses may include:

Galactosemia in the infant, illegal drug use in the mother, and active tuberculosis. Breast feeding may be also be contraindicated in case of HIV/AIDS. The use of certain drugs, such as radioactive isotopes, antimetabolites, cancer chemotherapy agents, lithium, and ergotamine constitutes a contraindication during breast feeding.

d) Learning activities 1.2.

Guidance

- Help learner to form the small groups of 5 learners in order to do the activity 1.2.
- State to the learners the activity 1.2 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- During group work, the nurse educator will pass around groups guiding and facilitating them and make sure that the discussion focus on the activity 1.2
- Ask the learners to use fundamentals of nursing and nutrition text books taken from the library or internet. The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics.
- Identify any 2 groups randomly to present their group work to their classmates by writing the main points on the chalkboard.

- The nurse educator asks other group members to add any ideas about what the two groups have presented, if they have them.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- Provide feedback on learners' comments when is required.
- Identify the differences or similarities among the ideas presented by different learners.
- The Nurse Educator should summarize the key points of each group presentation.
- At the end of the lesson the Nurse Educator should conclude the discussion with a summary of the main ideas.
- The nurse educator will end the lesson by asking learners to do the questions of self-assessment 1.2 in student book in order to assess the achievement of lesson 2 objectives

Answer to leaning activity 1.2.

1) Picture A is indicating powder milk prepared in jug and in a baby bottle. The picture B is mentioning Soya milk powder in a box.

2) The picture C is showing someone who is preparing baby's milk in a cup. Beside the cup there is a baby bottle. The pictures D indicates a mother feeding a baby using baby bottle

Allow the associate nurse learners to attempt the questions of the self assessment 1.2 given in the student book. The task may be done in reserved time within the lesson or as homework.

Answers to self-assessment 1.2.

1) There are three major classes of infant formulas:
   a. Milk-based formulas prepared from cow milk with added vegetable oils, vitamins, minerals, and iron. These formulas are suitable for most healthy full-term infants.
   b. Soya-based formulas made from soy protein with added vegetable oils (for fat calories) and corn syrup and/or sucrose (for carbohydrate). These formulas are suitable for infants who cannot tolerate the lactose in most milk-based formulas or who are allergic to the whole protein in cow milk and milk-based formulas.

c. Special formulas for low birth weight (LBW) infants, low sodium formulas for infants that need to restrict salt intake, and “predigested” protein formulas for infants who cannot tolerate or are allergic to the whole proteins (casein and whey) in cow milk and milk-based formulas.

2) The disadvantages of formula feeding are:

- **Lack of antibodies:** Formula feeds don’t have the antibodies found in breast milk. As a result, formulas can’t provide to the child with immunity against infection and illness the way breast milk does.
- **Unable to match the complexity of breast milk:** Formulas can’t measure up to the complexity of breast milk in the way it changes with baby’s needs.
- **There’s a need for planning and organization:** Breast milk is always available and at the right temperature, but formula feeds require planning to ensure that you have all the things you need to prepare it. You must make sure you don’t run out of stock to avoid making late-night trips to the store. Also, you must ensure that all the necessary supplies (like bottles and nipples) are clean, easily accessible, and ready to use. You will have to feed the child 8-10 times in 24-hours, so if you’re not organized, you can easily get overwhelmed.
- **Formula can be expensive:** Baby formula is quite expensive. The most expensive type is ready-to-feed formulas, followed by the concentrated type. The least expensive is the powdered formula. Special formulas, such as soy and hypoallergenic, can cost even more than the ready-to-feed formulas.
- **It may cause gassy tummy and constipation:** It’s more likely for formula-fed babies to have gassy tummy and constipation than breastfed babies.
- **It may increase the risk of infections:** Often formulas need to be mixed with water. So if the water is not 100% free of bacteria or other germs, there is a risk of infection, and in the first 12 months, this can lead to serious complications for the baby.

3) Advantages of formula-feeding are the following:

- **Time and frequency of feedings:** Formula-fed babies usually eat less often than breastfed babies since formula feeds take longer to digest.
- **Diet:** Formula feeds are very important for a mom who needs to be on a medication that might harm the baby.
- **Convenience and Flexibility:** Your partner or anyone can feed Your Child at any time without you having to pump, and store breast milk, especially if that isn’t an option. You don’t need to find a private place to nurse in public.

Lesson 3 : Supplementary feeding

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Identify the most required nutrients (vitamins and minerals, etc.) and their food sources for supplementary feeding

b) **Teaching resources**

Pictures, students' text books, real things like fruits and vegetables that contain the required nutrients, fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slide and a flipchart or chalk/ pen writing board.

c) **Prerequisites/Revision/Introduction**

The students should have understanding of Biology, especially the principles of nutrition. They should also demonstrate knowledge of Nursing Ethics and Professional Code of Conduct for learning better this lesson.

d) **Learning activities 1.3.**

Guidance

- For facilitating the lesson 1.3., the nurse educator should use group teaching learning method with brain storming as follows:
- Share the lesson 3's learning objectives to the learners
- Clearly state the pictures and the related questions of the activity 1.3 as indicated in student book.
- Organize learners in pair and inform them about the available learning resources such as text books, internet, student book, etc.
- Ask learners to discuss on the given questions for 10 minutes and inform them to write down the answers to questions.
- Stop the learners peer discussion and ask some pair of learners to brain storm the product from their discussion.
- Maintain a written record on a flipchart or writing board of the main ideas and suggestions from learners.
- Involve all of the learners and provide positive feedback in order to encourage more input. Review written ideas and suggestions periodically to stimulate additional ideas.

- Use computer made slides and projector and conclude the lesson by summarizing the lesson content and reviewing all of the suggestions and ideas; and by asking some questions to learners to ensure that the lesson's objectives are achieved (the educator may use questions of self-assessment 1.3. for evaluation).

Answers to leaning activity 1.3.

1) The Nurse educator may expect the learners to respond that pictures A and B display a variety of foods including fruits, vegetables, eggs, water, potatoes, milk, etc.
2) The learners may answer that pictures C and D communicate about the mothers who are feeding the children with spoon. They may also say that the used kind of foods include fruits, milk, source/soup, etc.
3) The Nurse educator may expect learners to guess that they are going to learn about Supplementary/complementary feeding

   The nutrients/foods required during supplementary (complementary) feeding: the iron-fortified infant cereal is traditionally the first solid food introduced. Some experts recommend offering meat as one of the first complementary foods because of its iron and zinc content. If there is a positive family history for food allergies, milk, eggs, wheat, and citrus fruits should be introduced cautiously. Peanuts and peanut butter should be avoided because of the potential for severe allergic reaction. One hundred percent (100 %) fruit juice should not be introduced until after 6 months of age, recognizing that it provides no nutritional benefits over whole fruit. Vitamins (D, K) and minerals (Iron, Fluoride) should be supplemented. Cow's milk is higher in nutrients such as protein, calcium, phosphorus, sodium, and potassium.

Answers to Self-assessment 1.3.

1) In order to prevent iron deficiency anaemia, the baby should be exclusively breast-fed during the first 4–6 months, then there will be the introduction of iron-fortified infant cereal, other iron-rich foods (e.g. strained meats) and enhancers of iron absorption (vitamin C, e.g. fruit) from 6 months.
2) Cow's milk is higher in nutrients such as protein, calcium, phosphorus, sodium, and potassium.
3) Nutrients in solid foods should be emphasized in order to avoid excesses and deficiencies resulting from cow's milk as supplementary food during weaning period.

Lesson 4: Childhood special considerations

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the main nutrients required for promoting the growth of children.
- Explain the healthy eating practices for children

b) **Teaching resources**

Pictures, students' text books, foods like fruits and vegetables that contain the required nutrients during childhood, fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slides and a flipchart or chalk/pen writing board

c) **Prerequisites/Revision/Introduction**

The students should have understanding of child growth and development prior to learning this lesson. The Nurse educator should also revise shortly the previous lesson (that is supplementary feeding) before proceeding with lesson 1.4.

d) **Learning activities 1.4.1**

Guidance

- First the Nurse educator starts lesson 1.4 with short revision of last lesson (1.3.) and check if the learners have enough knowledge of child growth and development.
- Secondary, the Nurse Educator introduces activity 1.4 to learners with presentation of the related pictures and underlying questions.
- The educator should clearly describe the activity to all students/learners, and ask if any clarification is needed.
- Thirdly, the educator should classify the leaners randomly, in small groups of 5 learners (each group) and tell members that all small groups should work on all questions of activity 1.4 shown in student book.
- The learners should be instructed to choose a recorder who should keep the answers to questions. The learners should be aware of time frame for group work (15 minutes). The educator informs the learners that 2 groups will be chosen randomly to report after completing the activity 1.4.
- While the groups are at work the nurse educator move among the learners to monitor the work of each group, remind students of the task and time limit, and offer suggestions to groups that are having difficulties or straying from the main task.

- The Nurse educator should remind learners when there are 5 minutes remaining, and instruct them to follow the presentation when it is due time.
- After the groups have completed their activity, bring them together as a large group to discuss orally the activity.
- After groups' presentations, the Nurse educator should summarize the group activity by stressing the main points and relating them to the learning objectives.

Answers to learning activity 1.4.

1) The Student may answer that the child in picture A is feeding him/her-self under the caring support of her mother. In picture B, the mother is spoon-feeding his/her child who is not willing to eat.
2) In both pictures A and B, the children are taking food, however in different manner: Child in picture B is entirely dependent upon her parent or caregiver, while the child in picture A needs little help for nutritional needs. Child nutrition is very important for child growth and development. An important consideration is that eating habits determined in childhood may be important determinants of child health in later life.

The teacher should ask the students to respond individually or in pairs or in groups to the questions provided in student book under the title of self-assessment 1.4., in order to evaluate their understanding of the lesson.

Answers to self-assessment 1.4:

1) Important concerns during childhood include excessive intakes of calories, sodium, and fat, especially saturated fat. Nutrients most likely to be consumed in inadequate amounts are calcium, fiber, vitamin E, magnesium, and potassium.
2) Family meals promote social interaction and allow children to learn food-related behaviors. Parents should be recommended to provide and consume healthy meals and snacks and avoid or limit empty-calorie foods.
3) It's important that children get a balanced diet that includes lean proteins, whole grains, fruits and vegetables, and a small amount of healthy fats. The proteins build muscles and other tissues in children's bodies. Plus, it helps them boost their immune systems. Good sources include: fish, chicken, lean meats, nuts, eggs, milk, yogurt, string cheese, peanut butter, etc.

Lesson 5: Special considerations and nutritional disorders in adolescence

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the nutritional needs in adolescents
- Describe the factors that influence adolescent's diet and the ways to enhance healthy eating.
- Describe anorexia nervosa and bulimia disorders in adolescence and their management

b) **Teaching resources**

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slides, and Fundamentals of nursing text books.

c) **Prerequisites/Revision/Introduction**

The students should have understanding of biology, biochemistry, nursing ethics and professional code of conduct, anatomy and physiology during adolescent ages.

d) **Learning activities 1.4.2.**

Guidance

The Nurse Educator should proceed as follows for helping learners to achieve lesson 5 objectives:

- Help learner to form the small groups of 5 learners in order to do the activity 1.5.
- Ask to the learners to do the activity 1.5 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them and make sure that the discussion focus on the activity 1.5
- Ask the learners to use fundamentals of nursing and nutrition text books taken from the library or internet. The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics.
- Identify any 2 groups randomly to present their group work to their classmates by writing the main points on the chalkboard.
- The nurse educator asks other group members to add any ideas about what the two groups have presented, if they have them.

- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- Identify the differences or similarities among the ideas presented by different learners.
- The Nurse Educator should summarize the key points of each group presentation.
- At the end of the lesson the Nurse Educator should conclude the discussion with a summary of the main ideas.
- The nurse educator will end the lesson by asking learners to do the questions of self-assessment 1.5 in student book in order to assess the achievement of lesson 5 objectives.

Answers to learning activity 1.4.2.

1) Picture A and B are showing adolescents male and female respectively, who are observing themselves in a mirror and found that they are looking bad, they are not well shaped.
   Picture C, D and F are indicating people who are respectively ready to eat so much food prepared on a plate, eating a big hamburger and someone who is eating then going to vomiting and returning to eat then going again for vomiting. Those pictures are showing a bad eating habit. This is different to the picture F which is illustrating parents and children eating together on one table. They are looking happy. It is an image of a good eating habitl

e) Self-assessment 1.5.

Allow the associate nurse learners to works individually or in pairs on the questions of the self-assessment 1.5 given in the student book.

Answers to Self-assessment activity 1.5.

1) The most required nutritional needs during adolescence age:

   Energy needs increase to meet greater metabolic demands of growth. Daily requirement of protein also increases. Calcium is essential for the rapid bone growth of adolescence, and girls need a continuous source of iron to replace menstrual losses. Boys also need adequate iron for muscle development. Iodine supports increased thyroid activity, and use of iodized table salt ensures availability. B-complex vitamins are necessary to support heightened metabolic activity.

2) Many factors other than nutritional needs influencing the adolescent's diet, include: concern about body image and appearance, desire for independence, eating at fast-food restaurants, peer pressure, and fad diets.

3) Anorexia nervosa causes the adolescent to drastically reduce calories, causing altered metabolism, which results in hair loss, low blood pressure, weakness, amenorrhea, brain damage, and even death if the weight declines too far.

4) The treatment of anorexia nervosa requires: Development of a strong and trusting relationship between the client and the health care professionals involved in the case. The adolescent should learn and accepts that weight gain and a change in body contours is normal during adolescence. There is need to focus on nutritional therapy so that the adolescent understands the need for both nutrients and calories and how best to obtain them. Individual and family should be counselled in order to make sure that the problem is understood by everyone. Close supervision should be done by the health care professional. For achieving the desired results, there is need of time and patience from all involved.

5) Bulimics are said to fear that they cannot stop eating. They tend to be high achievers who are perfectionist, obsessive, and depressed. They generally lack a strong sense of self and have a need to seem special. A bulimic usually binges on high-calorie foods such as cookies, ice cream, pastries, and other forbidden foods. While eating, the binge can take only a few moments or several hours—until there is no space for more food. It occurs when the person is alone. Bulimia can follow a period of excessive dieting, and stress usually increases the frequency of binges. The adolescent alternately binges and purges by inducing vomiting and using laxatives and diuretics to get rid of ingested food

6) The treatment of bulimia treatment usually includes limiting eating to mealtimes, portion control, and close supervision after meals to prevent self-induced vomiting. Diet therapy helps teach the adolescent basic nutritional facts so that he or she will be more inclined to treat the body with respect. Psychological counselling will help to understand his or her fears about food. Group therapy also can be helpful.

Lesson 6: Special nutrition in pregnancy

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the nutrients required to pregnant woman

b) **Teaching resources**

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, Personal computer, projector and slides and fundamentals of nursing text books.

c) **Prerequisites/Revision/Introduction**

The students should have understanding of biology, biochemistry, nursing ethics and professional code of conduct, maternal child health.

d) **Learning activities 1.6.**

Guidance

The Nurse Educator should proceed as follows for helping learners to achieve lesson 6 objectives:

- The Nurse Educator helps learners to form the small groups of 6 learners in order to do the activity 1.6.
- Request the group to do the activity 1.6 that is presented in student book or shown on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them.
- Ask the learners to use fundamentals of nursing and nutrition text books given by nurse educator.
- The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics.
- Ask 2 groups to present their group work to the whole class.
- Give opportunity to students to add any missing point or clarification to what the two groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The Nurse Educator should summarize the key points of each group presentation.
- Nurse Educator the summary of the lesson on black board or use Powerpoint presentation and share it with students
- The nurse educator will end the lesson by asking learners to do the questions of self-assessment 1.6 in student book or formulate his/her own in order to assess the achievement of lesson 6 objectives.

Answers to learning activity 1.6.

1) Picture A and B are showing pregnant woman, foods on table.
2) The picture A is showing a mother who is eating and the picture B a mother in front of many fruits on the table.

3) The picture C is showing the food indicated for pregnant women

e) **Self-assessment 1.6.**

Ask the learners to work individually or in pairs on the questions of the self-assessment 1.6. Given in the student book.

Answers to Self-assessment activity 1.6.

The quality of nutrition during pregnancy is important, and food intake since the first trimester includes balanced portions of essential nutrients with emphasis on quality. **Protein** is essential for the growth and development of fetus. The pregnant women should eat two to three portions of protein rich foods every day including lean meat, poultry, seafood, eggs, legumes, tofu, nuts and seeds.

Calcium intake is especially critical in the third trimester, when fetal bones are mineralized. It is especially important for the growth of strong bones. Foods rich in calcium include dairy products such as milk, yoghurt, and cheese. Plant sources include tofu, green leafy vegetables and fortified foods.

Iron needs to be supplemented to provide for increased maternal blood volume, fetal blood storage, and blood loss during delivery. However, by focusing on eating a variety of iron-rich foods, you should be able to get all the iron you need from foods. Foods high in iron include red meat such as beef, lamb and eggs, lean beef and poultry. Plant sources include spinach, pulses and whole grain cereals, dark green, leafy vegetables, citrus fruits. Iron absorption can be increased from plant sources by eating them with foods rich in vitamin C, like fruits and vegetables.

Folic acid intake is particularly important for deoxyribonucleic acid (DNA) synthesis and the growth of red blood cells. Inadequate intake can lead to fetal neural tube defects, anencephaly, or maternal megaloblastic anemia (e.g. liver, nuts, dried beans and lentils, eggs).

Lesson 7: Maternal diet during lactation

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the required diet during lactation

b) **Teaching resources**

Pictures, student books, fundamentals of nursing and nutrition text books form the library or internet, computer, projector, and power point slides.

c) **Prerequisites/Revision/Introduction**

The Nurse educator will start the lesson by making a review on the previous lesson talking about special nutrition in pregnancy.

d) **Learning activity 1.7**

Guidance

The Nurse Educator should proceed as follows for helping learners to achieve lesson 7 objectives:

- The Nurse Educator helps learners to form the small groups of 6 learners in order to do the activity 1.7.
- Request the group to do the activity 1.7 that is presented in student book or shown on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them.
- Ask the learners to use fundamentals of nursing and nutrition text books given by nurse educator.
- The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics.
- Ask 2 groups to present their group work to the whole class.
- Give opportunity to students to add any missing point or clarification to what the two groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The Nurse Educator should summarize the key points of each group presentation.
- Nurse Educator the summary of the lesson on black board or use PowerPoint presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 1.7 in student book or formulate your owns in order to assess the achievement of lesson 7 objectives.

Answers to the learning activity 1.7

1) The food presented on the picture A and B are fruits, vegetables, potatoes, meat, fish and milk.

2) It may help the lactating the mother on picture B to prevent diseases and have enough breast milk

e) **Self-assessment 1.7**

Ask students to work individually on the questions of the self-assessment 1.7 given in the student book.

Answers for Self-assessment 1.7

The healthy diet consumed during pregnancy should continue during lactation.

The lactating mother will use approximately 500 **calories** above their normal total daily calorie needs to produce breast milk.

Another nutritional consideration during lactation is **fluid intake**. It is suggested that breastfeeding mothers drink a glass of fluid every time the baby nurses and with all meals

For many **vitamins and minerals**, requirements during lactation are higher than during pregnancy. In general, an inadequate maternal diet decreases the quantity of milk produced, not the quality. The exceptions are thiamin, riboflavin, vitamin B6, vitamin B12, vitamin A, and iodine: prolonged inadequate maternal intake of these nutrients reduces their amount in breast milk and may compromise infant nutrition. While maternal supplements can correct inadequacies, there are no consistent recommendations concerning the use of supplements during lactation.

The food to be discouraged are:

Spicy, a**lcohol, caffeine, seafood consumption, intolerant to cow milk, garlic, Peanuts allergic,** high **mercury content, broccoli, gassy problems, citrus fruits.**

Lesson 8: Special geriatric nutritional needs

a) Learning objectives

At the end of this lesson, learners will be able to:

- Describe the nutritional needs of elderly people.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

The Nurse educator will start the lesson by making a review on food category including energetic foods, protecting foods, and building foods.

d) Learning activity 1.8

Guidance

The Nurse Educator should proceed as follows for helping learners to achieve lesson 8 objectives:

- Helps learners to form the small groups of 5 learners in order to do the Learning activity 1.8
- Request the group to do the Learning activity 1.8 that is presented in student book or shown it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them.
- The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics for more information.
- Ask 2 groups to present their group work to the whole class.
- Ask other students to add any missing point or clarification to what the groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The Nurse Educator should summarize the key points of each group presentation.
- Nurse Educator do the summary of the lesson on black board or use Power Point presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 1.8 in student book or formulate your owns in order to assess the achievement of lesson 8 objectives.

Answers to the Learning activity 1.8

1) The picture A illustrate fruits, vegetables, grains, meat and milk, picture B is indicating an old man and woman who are happy and eating together on the same table, Picture C is showing an old woman feeding an old man. The picture D illustrates old women who is not willing to eat.
2) The group of vegetables help in body protection, meat and milk are building and grains provide body energy

e) Self-assessment 1.8

The nurse educator asks students to work individually on the questions of the self-assessment 1.8 given in the student book.

Answers to the activity 1.8

Answers for Self-assessment 1.8

1) Inadequate nutrition and fluid intake can result in serious problems such as malnutrition and dehydration. Poor nutrition practices can contribute to the development of osteoporosis and skin ulcers, and can complicate existing conditions, such as cardiovascular disease and diabetes mellitus.

2) **Sources of food components that may be emphasized in the diets of older Adults**

Food Component	Sources
Vitamin A	Green and orange vegetables, especially green leafy vegetables; orange fruits, liver, milk
Vitamin D	Milk, fortified soy milk, fatty fish, some fortified ready-to-eat cereals
Vitamin E	Vegetable oils, margarine, salad dressing made with vegetable oil nuts, seeds, whole grains, green leafy vegetables, fortified cereals
Calcium	Milk, yogurt, cheese, fortified orange juice, green leafy vegetables, legumes
Magnesium	Green leafy vegetables, nuts, legumes, whole grains, seafood, chocolate, milk
Potassium	Fruit and vegetables, legumes, whole grains, milk, meats
Fiber	Whole grains; legumes; fruit and vegetables, especially the skin and seeds

Lesson 9: Food security and availability

a) Learning objectives

At the end of this lesson, learners will be able to:

- Discuss food security and availability in terms of causes of food insecurity, its consequences and community-based actions to address food and nutrition insecurity.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books

taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

Introduce the lesson by asking student different ways people use to find foods to supply their families' need.

d) Activity 1.9

Guidance

- Helps students to form the small groups of 5 learners in order to do the activity 1.9
- Request the group to do the activity 1.9 that is presented in student book or shown it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them.
- The learners may also use the student book of Fundamentals of nursing, unit of Nutrition and dietetics for more information.
- Ask 2 groups to present their group work to the whole class.
- Ask other students to add any missing point or clarification to what the groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The Nurse Educator should summarize the key points of each group presentation.
- Nurse Educator do the summary of the lesson on black board or use Power Point presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 1.9 in student book in their group.

Answers to the activity 1.9

1) The picture A illustrates a mother with her children who are looking like they do not get enough food. The picture B is showing parents and their child who are shopping food.
2) People on image A are looking to have a health problem, poor, and may have a low economic status while those on picture B are looking healthy, and having resources to by food in a high market.

e) Self-assessment 1.9

The nurse educator asks students to work individually on the questions of the self-assessment 1.9 given in the student book.

Answers for Self-assessment 1.9

1) **The levels of food security are: Global food availability** refers to the total amount of food that is produced globally. Currently, global food availability would be more than adequate to meet the *energy* needs of the entire world's people if the provision of food was equally distributed.

   National food availability refers to the amount of food available for consumption by a country's population. This supply of food consists of total agricultural production (cash crops, livestock, and food crops), net food imports (imports minus exports), food aid, and food stocks. A country is self-sufficient if it is able to produce 100% (or more) of its national food requirements.

   Household Food Security: Global food availability refers to the total amount of food that is produced globally. Currently, global food availability would be more than adequate to meet the *energy* needs of the entire world's people if the provision of food was equally distributed.

   National food availability refers to the amount of food available for consumption by a country's population. This supply of food consists of total agricultural production (cash crops, livestock, and food crops), net food imports (imports minus exports), food aid, and food stocks. A country is self-sufficient if it is able to produce 100% (or more) of its national food requirements.

   Household Food Security: ***(1)*** Households need **physical access, (2) Economic access and** (3) ***Socio-political access.***

2) **The causes of food insecurity include:**

   At national level the causes may include high and volatile food prices, financial and economic shocks, climate change, and epidemic outbreaks of human disease and crop and livestock disease. Other factors may be: the general social, economic, and political environment prevailing at national level; the presence of natural shocks or conflict; the quality of commercial and trade policies; the commitment of the political leadership to hunger reduction

   The food insecurity at the household level include shocks in production (e.g., harvest failure), market (e.g., lost employment), or household expenditure (e.g., emergency medical costs resulting in less money available for food).

   Other factors may include: rapid population growth conflict and/or civil war, and extreme production fluctuation, limited or lack of employment, lower level of

saving, high rate of natural erosion and/or natural disasters, poor health and sanitation and deforestation

Lesson 10: Food contamination and spoilage

a) Learning objectives

At the end of this lesson, learners will be able to:

- Describe routes of contamination of food
- Discuss the measures for preventing food contamination and spoilage.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books

c) Prerequisites/Revision/Introduction

Introduce the lesson by asking student by asking students to brainstorm about different ways used at home for keeping food safely.

d) Learning activity 1.10

Guidance

- Helps students to make the small groups.
- Provide to students the pictures, Fundamentals of nursing books,
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 1 group to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator write the summary of the lesson on black board or use Power Point presentation and share it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.10 in student book
- Asking learners to write it and do it as a home work.

Answers to the learning activity 1.10

- The picture A, B, C, D, E and F are showing respectively meat in a closed box, no covered food on a plate, meat in open air, foods in an open box, food on a plate and fingers touching them, and rice and vegetables on the plate
- Flies are on the foods.

e) Self-assessment 1.10

Write on the black board or use Power Point presentation the questions of self-assessment 1.10 in student book and ask learners to write it and do it as a home work.

Answers for Self-assessment 1.10

1) Routes of food contamination are:

Air and dust: Microorganisms are found everywhere in our environment. Many types of microbes can be found in air and dust, and can contaminate food at any time during food preparation or when food is left uncovered.

Soil, water and plants: Many microorganisms present in soil and water may contaminate foods. Microorganisms also grow on plants and can contaminate food if care is not taken to remove them by washing or inactivate them by cooking.

Gastrointestinal tract: The intestines of all humans and animals are full of microorganisms, some of which are beneficial but others are pathogenic. Bacterial pathogens such as Salmonella, Campylobacter and Escherichia coli are common examples.

Food handlers: The term food handler can be applied to anyone who touches or handles food, and this includes people who process, transport, prepare, cook and serve food. The presence of microorganisms on the hands and outer garments of food handlers reflects the standard of hygiene in the environment and the individuals' personal hygiene.

2) General measures for keeping food spoilage?

(1) Hands should always be clean whenever food is handled. Hot water and soap should be used to wash hands after going to the bathroom, before handling cooked foods, and after handling raw food.

(2) A person who is ill should not prepare food.

(3) During food preparation, contact between hands and the mouth, nose, or hair should be avoided. Likewise, coughing and sneezing over foods are forbidden. Tissues or handkerchiefs should be used to prevent contamination.

(4) Tasting food with fingers and utensils used during preparation is not advised, even if the cooking temperature is very hot.

(5) Buy fresh foods on the day of consumption when possible, or use before the expiry date (if indicated).

(6) Do not buy foods with any of the danger signs

(7) Frozen food should be thawed in a refrigerator, not put in warm water or left out to thaw.

(8) Store foods at the right temperature and covered.

Lesson 11: Food preservation and storage

a) Learning objectives

At the end of this lesson, learners will be able to:

- Describe different food preservation techniques
- Discuss the methods/ for storage of foods.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

Introduce the lesson by reviewing with student the previous lesson related to measures for preventing food contamination and spoilage.

d) Learning activity 1.11

Guidance

- Helps students to make the small groups.
- Provide to students the pictures of food stored,
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 1 group to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.

- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.11 in student book
- Asking learners to write it and do it as a home work.

Answers to the learning activity 1.11

The picture A and B are showing respectively foods conserved in bottles, vegetables conserved in transparent covers.

e) Self-assessment 1.11

Write on the black board or use Power Point presentation the questions of self-assessment 1.11 in student book and ask learners to write it and do it as a home work.

Answers for Self-assessment 1.11

1) Simple household food preservation techniques are the following:

a. Drying: A number of foods (fruits, vegetables, tubers-cassava, and potatoes) which cannot be stored for long in their fresh state without spoiling can be preserved by drying. Before drying, there should be enough sunshine and foods should be sliced in small pieces for them to dry faster. Dried fruits can be eaten in their dry state (e.g. dried jackfruit), vegetables and potatoes need to be cooked by boiling in water while dried cassava can be ground into flour and used later.

b. Smoking: Smoking meat and fish is a highly recommended method for prolonging their storage life. The fish is first cooked over a high fire and then smoke-dried in one to five days (and nights) over a low fire. Fresh-dried fish keeps for up to a week, while hard-dried fish (keeping fish in salt for several weeks) keeps for several months.

c. Salting: Salting is a simple food preservation method that can be used to prolong the shelf life of food for a few days. When added to foods, salt takes out moisture and retards microbial growth and replication.

d. Boiling: Boiling of foods kills food microbes. Perishable foods can be boiled, cooled and kept in clean containers and then used within a day.

2) Storage

a. Storage of cereals, bread, flour, and rice:

Bread needs to be stored in its original package at room temperature. It should be used within 5 to 7 days or else it will grow moulds (a sign of spoilage). Cereals - depending on the quantities and level of dryness - may be stored at room temperature in tightly closed containers to keep out moisture and insects. Properly dried cereals packaged in sacs can be stacked on racks in a dedicated food store. Due attention should be taken to keep out rats that normally feed on stored food. Grain raw rice can be stored in closed containers at room temperature and used within one year. Once cooked, rice should be eaten immediately in the absence of refrigeration.

b. **Storing fresh vegetables:**

Proper storage of fresh vegetables helps to maintain their quality and retain nutrient value. Most fresh vegetables need to be stored under low temperatures in areas which are neither humid nor damp. If available, fresh vegetables can be stored in a clay pot fridge.

c. Storing fresh fruits:

All fresh fruits generally need to be stored in a cool area, preferably in a clay pot fridge. Fruits have a tendency to either be contaminated by other foods and or to absorb odors from other foods. They therefore need to be kept separately.

d. Storing milk and milk products:

Milk is a highly perishable food and yet very nutritious. To prolong its shelf life, milk should never be left at room temperature for a long time as it spoils quickly. Care must be taken to keep milk in clean covered containers that should be left to stand in a cool place. Unrefrigerated milk should be used within a day.

e. Storing meat and fish:

Meat (including poultry), fish, eggs and milk are the best sources of proteins in the human diet. Given their high protein and moisture content, these products are highly perishable. It is for this reason that these products will spoil faster than others - however well prepared and stored. One big contributor to the faster spoilage of fresh cuts of meat is the fact that these usually contain spoilage bacteria on the surface that can grow quickly, producing slime and causing spoilage after a few days. Meat should be prepared and eaten within 24 hours of purchase/slaughter.

Thinly cut pieces of meat are more susceptible to spoilage given the larger surface area for bacterial action. Meat and meat products should be used within a few days. If the meat cannot be used within a day, it is advisable to dry, smoke or salt it before storing it.

Like meat, fresh fish should be eaten immediately. Never store fish in water as this

leads to loss of nutrients from the fish. In order to store fish for longer, it should be smoked.

f. Storing Root Tubers (Cassava, Sweet Potatoes):

Most root tubers may not be stored well for long after harvest; however, root tubers keep longer than other vegetables, fruits, meat, milk, etc. When tubers will not be prepared within a few days, care should be taken to avoid bruising them.

Cassava tubers can also be piled into plenty and watered daily to keep them fresh or coated with a paste of mud to preserve their freshness.

g. Storing Root Tubers (Cassava, Sweet Potatoes):

Most root tubers may not be stored well for long after harvest; however, root tubers keep longer than other vegetables, fruits, meat, milk, etc. When tubers will not be prepared within a few days, care should be taken to avoid bruising them.

Cassava tubers can also be piled into plenty and watered daily to keep them fresh or coated with a paste of mud to preserve their freshness

Lesson 12: Food habits

a) Learning objectives

At the end of this lesson, the learners will able to:

- Discuss Food taboos and etiquette.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

The introduction focus on the lesson by reviewing with student the previous lesson related to measures for preventing food contamination and spoilage.

d) Learning activity 1.12

Guidance

- Helps students to make the small groups.
- Provide to students the pictures of food and people who are eating.
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 1 group to present to others their responses.

- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.12 in student book
- Asking learners to write it and do it as a home work.

Answers to the activity 1.12

The picture A , B,C and D are showing respectively food habits

e) Self-assessment 1.12

The nurse educator read and writes on black board the questions of self-assessment 1.12

Answers for Self-assessment 1.12

1) A food taboo refers to the act of abstaining from certain foods by reason of culture or religion. Food taboos dictate what may or may not be eaten, and by whom, at what periods certain foods may or may not be eaten, and which foods can or cannot be eaten together.
2) It is said that Bashi people like to eat meat and Masaye people like milk.

Lesson 13: Factors affecting the choice of food

a) Learning objectives

At the end of the lesson, the learners will be able to:

- Determine the factors that affect the choice of food for promoting proper nutritional practices in all age groups

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

In the introduction the nurse educator will ask to 3 to 4 students to identify their preferred food and the reason.

d) Learning activity 1.13

Guidance

- Helps students to sit in the small groups.
- Provide to students the pictures of food and people who are eating.
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 1 group to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.13 in student book
- Asking learners to write it and do it in group of 4 students.

Answers to the learning activity 1.13

1) The picture A is showing a person surrounded by different types of foods and asking her-self what food to choose. The picture B is indicating food in 4 groups.
2) The food should be categorized in: vegetables and fruits, proteins foods and whole grains.

e) Self-assessment 1.13

The nurse educator read and writes on black board the questions of self-assessment 1.13

Answers for Self-assessment 1.13

1) The students may respond that the way they eat is influenced by: interactions with other groups, heritage from family members, their economy, religion, believes about the health properties of foods, manipulation (advisement) by television, radio, magazines, and other media messages, availability of food items at market or at the local grocery store, health status like allergy to certain foods, having chronic diseases (diabetes mellitus, heart diseases, etc.).
2) The amount of food the students eat may depend on many factors, including age, sex, activity, size, and individual variations.
3) The likes and dislikes of students about foods may be determined by cultural values, attitudes, customs, and psychological factors. An individual's cultural background largely determines what is eaten as well as when and how it is eaten. All types of customs, whether rational or irrational or beneficial or injurious, are found in every part of the world. Many foods take on symbolic meanings related to major life events (e.g., birth, death, weddings). From ancient times, ceremonies and religious rites involving food have surrounded certain events and seasons. Food gathering, preparing, and serving have followed specific customs, many of which remain intact today.

Lesson 14 Protein-energy malnutrition

a) Learning objectives

At the end of this lesson, learners will be able to:

- Discuss the different types of protein energy malnutrition and their nursing management.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

For starting the lesson, the teacher will have to review with students the Childhood special considerations food related.

d) Learning activity 1.14

Guidance

- Help students to sit in the small groups.
- Provide to students the pictures of food and people who are eating.
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 2 groups to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.14 in student book
- Asking learners to write it and do it in group of 4 students.

Answers to the learning activity 1.14

The picture A is showing a child who is having cachexia the next one is having a big abdomen, legs edema. The picture B is indicating a head with fewer hairs.

e) Self-assessment 1.14

The nurse educator read and writes on black board the questions of self-assessment 1.14

Answers for Self-assessment 1.14

Clinical signs:

The clinical signs and symptoms of **kwashiorkor** are: change in skin and hair color (to a rust color) and texture**, fatigue, diarrhea, loss** of muscle mass**,** failure to grow or gain weight**,** edema (swelling) of the ankles, feet, and belly, damaged immune system, which can lead to more frequent and severe infections**,** irritability, flaky rash and shock.

Clinical manifestations: marasmus is characterized by the classic features of starvation, including: growth reduction, absence of body fat (loss of sub-cutaneous fat, and marked wasting of muscles (the child is reduced to “skin and bones”).

Prevention:

Prevention measures for kwashiorkor and Marasmus:

Teach parents through health education:

a) Nutritional education as:

- Breast feeding is the best. –infant must eat soil food (at 6 months).

- Good food is the mixed food. – Breast milk should end slowly at 2 yrs.

b) Immunization.

c) Teaching about family planning & birth space.

d) Prevention of emotional disturbances.

e) Early treatment of any disease as diarrhea

The nursing management includes:

Nursing care plan to PEM:

Nursing diagnosis:

1) Imbalanced nutrition less then body requirements related to lack of parents’ knowledge, economic factors, and inability to absorb nutrition or inadequate food intake.

2) Deficit fluid volume related to diarrhea & vomiting.

3) Subnormal body temperature caused by loss of body heat related to loss subcutaneous fats.

4) Risk for infection related to malnutrition, decrease immunoglobulin.

The usual approach to treatment

1) First phase is the stabilization phase (24-48 Hours): correction of dehydration and antibiotic therapy to control infection

2) Second phase (an additional week to 10 days): continued antibiotic therapy

And initial diet administration: to provide maintenance requirements of energy and protein (75 cal/ kg/24hrs and 1 gm /kg /24hrs). Lactose free milk may be initially given, followed by humanized milk. Correct the electrolyte & vitamin deficiency

3) Third phase: The child’s appetite is returning and the infections are usually under control. A diet provides up to 150 kcal/ kg/24hrs and 4 gm /kg /24hrs of protein.

Iron therapy. Blood transfusion is required in case of anemia, serious infection and bleeding tendency (15- 20 ml/kg).

Lesson 15: Specific vitamin deficiencies

a) Learning objectives

At the end of this lesson, the leaners will be able to:

- Discuss the physical characteristics of people with vitamin deficiencies and their Nutritional management.

b) Teaching and Learning resources

Pictures, students' text books, Fundamentals of nursing and nutrition text books taken from the library or internet, computer, projector and slides, and Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a review on nutrition disorders.

d) Learning activity 1.15

Guidance

- Help students to sit in the small groups.
- Provide to students the pictures of food and people who are eating.
- Write the activity on black board or use power point slide.
- Request the students to discuss about the pictures and respond to the questions
- Pass around groups guiding and facilitating them.
- Ask 2 groups to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students

- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.15 in student book
- Asking learners to write it and do it in group of 4 students.

Answers to the learning activity 1.15

The picture A is showing a person who is looking weak in front of fruits and vegetables. The picture B is indicating vitamin C and B food sources.

e) Self-assessment 1.15

The nurse educator read and writes on black board the questions of self-assessment 1.15

Answers for Self-assessment 1.15

1) characteristics of the people with:

Vitamin A deficiencies:

Deficiency in Vitamin A results in growth reduction and visual problems. Xerophthalmia may occur in vitamin A deficiency and is characterized by conjunctivitis, abnormal and severe dryness of the surface of the cornea and conjunctiva. Bitot's spots (white, soft deposits on the conjunctiva) and night blindness may also occur.

Vitamin B1 (thiamine) deficiencies:

The deficiency is commonly known as beriberi. **'Dry beriberi'** refers to the development of neurological problems, such as Wernicke's encephalopathy (ataxia, confusion, nystagmus and sixth cranial nerve palsy), peripheral and motor neuropathy. '**Wet beriberi'** refers to the development of neurological problems with additional heart failure.

Vitamin B2 (riboflavin) deficiencies:

A deficiency of riboflavin results in lesions on the muco-cutaneous surfaces of the mouth (angular stomatitis, atrophic lingual papillae and magenta tongue), cracked, bleeding lips and glossitis. Itchy perineum and hair loss may be seen. There may also be neurological sequelae with photophobia and ataxia.

Riboflavin deficiency is often accompanied by iron deficiency – possibly as a result of impaired absorption.

Vitamin C deficiencies:

A deficiency in vitamin C, better known as 'scurvy', is characterized by swollen, bleeding gums, wiry hair, anaemia and a predisposition to infections, and easy bruising.

2) The good dietary sources of:

Vitamin A: carrots, oily fish, liver and liver products. They also include fortified margarine and fat spreads, fish liver oils, dairy products (milk, cheese, cream and butter), egg yolks, peaches, apricots and mangoes, tomatoes and red peppers and dark-green leafy vegetables (such as spinach).

Vitamin B1 (thiamine): Thiamine is not evenly distributed in cereal grains – most of it is present in the outer 'germ' layer. Other good sources include: yeast and yeast extract, wholegrain cereal foods, pork, nuts and pulses.

Vitamin B2 (riboflavin): yeast and yeast extract, liver and offal meats, green, leafy vegetables, eggs, milk and dairy products and cereals and cereal products

Vitamin C: Fruits and fruit juices (particularly citrus fruits, strawberries, kiwi fruit, berries, currants and guava) Some green vegetables (such as green peppers, broccoli, cabbage and spring greens); however, significant losses can occur during storage and cooking.

Lesson 16: Specific mineral deficiencies

a) Learning objectives

At the end of this lesson, learners will be able to;

- Discuss the different minerals deficiencies, it's consequences their nutritional management.

b) Teaching and Learning resources

- Pictures, students' text books,
- Fundamentals of nursing and nutrition text books or internet
- Personal computer, projector and slides
- Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a review on nutrition disorders.

d) Learning activity 1.16

Guidance

Help students to sit in the small groups.

Provide to students the pictures of food and people who are eating.

Write the activity on black board or use power point slide.

Request the students to discuss about the pictures and respond to the questions

Pass around groups guiding and facilitating them.

Ask 2 groups to present to others their responses.

Ask other students to add any missing point or ask questions to what the group has presented.

Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.

Summarize and identify the key points.

Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students

End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.16 in student book

Asking learners to write it and do it individually.

Answers to the learning activity 1.16

1) The picture A is showing vegetables, fruits, eggs and grains.
2) The person on the picture B is look weak and sick.
3) The lack of those foods may lead to malnutrition, lack of vitamins and minerals

e) Self-assessment 1.16

The nurse educator will write on black board the questions of self-assessment 1.16

Answers for Self-assessment 1.16

1) The consequences resulting from the lack of:

Folic acid: megaloblastic anaemia, atrophic tongue and growth retardation

Zinc: Deficiency results in poor hair quality and hair loss. Changes in the skin result in crusty lesions around the nose and mouth, followed by fingers, toes and the perineal area. The patient may go on to develop diarrhoea, mental confusion and depression. There is also an increased susceptibility to infections, as zinc has a critical role in immune-competence. Its deficiency in childhood results in

stunted growth. Zinc is also thought to play a role in taste acuity, and a loss of taste (hypogeusia).

Iron: its deficiency lead to a reduced ability to transport oxygen around the body, brain and muscle function, and wound healing, increased susceptibility to infection. Iron deficiency, with or without anemia, results in a wide range of defects in immune function

2) The good dietary sources of:

Folic iron: liver, green vegetables, yeast extract, pulses and some fruits (oranges and orange juice)

Zinc: red meat, fish and shellfish, milk and milk products, poultry, and eggs. Other sources of zinc include bread and cereal products, green, leafy vegetables and pulses, although these all have a lower bioavailability.

Iron: Red meat, liver and offal, poultry and fish (contain smaller amounts)

Cereal products and fortified breakfast cereals; these can contribute significant amounts of non-haem iron, but this is less well absorbed than iron from meat products (haem iron). Other good sources of non-haem iron include green leafy vegetables, dried fruit, pulses, nuts and seeds.

Lesson 17: Over-nutrition conditions

a) Learning objectives

At the end of this lesson, learners will be able to:

- Discuss causes and complications of Overweight/ Obesity and their management.

b) Teaching and Learning resources

- Pictures, students' text books,
- Fundamentals of nursing and nutrition text books or internet
- Personal computer, projector and slides
- Fundamentals of nursing text books.

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a review on food habits.

d) Learning activity 1.17

Guidance

Help students to sit in the small groups.

Provide to students the pictures of food and people who are eating.

Write the activity on black board or use power point slide.

Request the students to discuss about the pictures and respond to the questions

Pass around groups guiding and facilitating them.

Ask 2 groups to present to others their responses.

Ask other students to add any missing point or ask questions to what the group has presented.

Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.

Summarize and identify the key points.

Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students.

End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.17 in student book

Asking learners to write it and do as homework.

Answers to the learning activity 1.17

1) People on pictures A and B are having excessive weight while people on pictures C and D are looking having a good health with normal weight. They are doing physical exercises.
2) The physical activities which are being done by the person on picture C and, help to get a nice body function, prevent diseases and excess weight

e) Self-assessment 1.17

The nurse educator will write on black board the questions of self-assessment 1.17

Answers for Self-assessment 1.17

1) The complications resulting from obesity: Obesity significantly increases mortality and morbidity. It is associated with a wide variety of comorbidities, including diabetes, hyperlipidemia, fatty liver disease, obstructive sleep apnea, gastro-

esophageal reflux disease, vertebral disk disease, osteoarthritis, and increased risk of certain cancers. **Abdominal obesity**, part of the **metabolic syndrome**, increases the risk of coronary heart disease and type 2 diabetes. Obesity increases the risk of complications during and after surgery and the risk of complications during pregnancy, labor, and delivery. Higher body weights are associated with higher mortality from all causes. Obesity increases the risk of complications during and after surgery and the risk of complications during pregnancy, labor, and delivery. Higher body weights are associated with higher mortality from all causes. Obesity presents psychological and social disadvantages. In a society that emphasizes thinness, obesity leads to feelings of low self-esteem, negative self-image, depression, and hopelessness Negative social consequences include stereotyping; prejudice; stigmatization; social isolation; and discrimination in social, educational, and employment settings.

2) The dietary management of obesity: A healthy lifestyle that includes a diet that has a generous content of fiber-rich foods, is moderate in fat, is low in sugar, and has a low energy density. One of the secrets for losing weight is to engage in high levels of physical activity (approximately 1 hour per day), eating a low-calorie, low-fat diet, eating breakfast regularly, self-monitoring weight, and maintaining a consistent eating pattern across weekdays and weekends.

Here are additional rules that are helpful for people trying to lose weight:

1. Eat small portions.
2. Eat breakfast every day.
3. If a person wishes to have sweet-tasting beverages, then replace sugar with synthetic sweeteners.
4. Avoid buying foods that encourage overeating, and don't have the "wrong" foods easily accessible. If you can't resist chocolate, then keep chocolate out of easy reach.
5. Stay away from buffets or other locations where overeating is made easy.
6. Try to identify factors that trigger overeating. For example, many people react to stress by overeating. Reducing stress is one example of changing behavior so that overeating is avoided.
7. Buy a pedometer. These devices count the number of steps walked. An appropriate goal is 10,000 steps per day.
8. Join a group that actively supports weight loss, increased fitness, and healthful eating. This could be, for example, a commercial organization or a group of friends.

9. Eating at regular, frequent intervals may help prevent extreme hunger and reduce the risk of binge eating. Meal patterns should be individualized.
10. Measure weight frequently,
11. Watching TV for a limited period of time,
12. not letting a small weight gain become a big weight gain, and
13. Pharmacotherapy is adjunctive therapy in the treatment of obesity. Drugs are not effective in all people, and they are only effective for as long as they are used.
14. Surgery to promote weight loss therapy involves limiting the capacity of the stomach. Gastric bypass also circumvents a portion of the small intestine to cause mal absorption of calories. Both types effectively promote weight loss but are tools, not magic strategies.
15. Bariatric surgeries require lifelong changes in eating behaviors to ensure continued success. The postsurgical diet progresses from clear liquids to pureed food to a soft diet. Small, frequent meals are necessary to avoid overstretching the pouch. Sugars are avoided to decrease the risk of dumping syndrome. Nutritional deficiencies are a lifelong risk, requiring preventative supplementation.
16. Perhaps most important of all: be determined!

Lesson 18: Assessment of nutritional status of a client

a) Learning objectives

At the end of this lesson, leaners will be able to conduct a comprehensive assessment of the nutritional status of a client.

b) Teaching and Learning resources

- Printed or soft pictures, students' text books
- Fundamentals of nursing and nutrition text books or internet
- Personal computer, projector and slides
- Fundamentals of nursing text books

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a review on food habits.

d) Learning activity 1.18

Guidance

Help students to sit in the small groups.

Provide to students the pictures of food and people who are eating.

Write the activity on black board or use power point slide.

Request the students to discuss about the pictures and respond to the questions

Pass around groups guiding and facilitating them.

Ask 1 group to present to others their responses.

Ask other students to add any missing point or ask questions to what the group has presented.

Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.

Summarize and identify the key points.

Nurse Educator writes the summary of the lesson on black board or uses Power Point presentation and shares it with students

End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 1.18 in student book

Asking learners to write it and do it in group of 4 students.

Answers to the learning activity 1.18

On the picture A the health care provider is measuring the height of a child. On the picture B; he/she is measuring the Mid-Upper Arm Circumference, Picture C: measurement of an old man weight and picture D indicate the measurement of weight of a pregnant woman.

e) Self-assessment 1.18

Answers for Self-assessment 1.18

1) The common anthropometric measurements include weight, height, MUAC, head circumference, skinfold and body mass index (BMI).

2) The clinical signs and symptoms of nutritional deficiencies based on physical examination of the following organs:

   a. Skin, hair, and mucous membranes include dermatitis (may suggest marasmus, deficiency of: niacin, riboflavin, zinc, biotin, essential fatty acid, vitamin A). Pigmentation changes (may indicate: marasmus, niacin deficiency). Pressure ulcers/delayed wound healing (may

show kwashiorkor, diabetes). Pallor (deficiency of iron, copper, folic acid, vitamin B12 or E)

b. Eyes: Night blindness, xerophthalmia, Bitot's spots, keratomalacia (vitamin A deficiency)

c. Abdomen: Diarrhoea (niacin, folic acid, vitamin B12 deficiency; marasmus), Ascites (kwashiorkor, alcoholism)

3) The laboratory tests and acceptable limits that are useful for determining malnutrition problems relating to the following nutrients are:

a) Carbohydrate: **Laboratory Test is** plasma glucose; **Acceptable Limits:**70–120 mg/100 ml

b) Iron: **Laboratory Test is** Hemoglobin; **Acceptable Limits:** male 14 mg/100 ml and female 12 mg/100 ml

c) Calcium: **Laboratory Test is** Serum calcium; **Acceptable Limits** 9.0–11.0 mg/100 ml

Lesson 19: Oral feeding

a) Learning objectives

At the end of this lesson, leaners will be able to practice oral feeding for patients under the supervision of Nurse educator.

b) Teaching and Learning resources

- Printed or soft pictures, students' text books
- Fundamentals of nursing and nutrition text books or internet
- Personal computer, projector and slides
- Fundamentals of nursing text books

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a review of the last lesson (that is "aassessment of nutritional status of a client").

d) Learning activity 1.19

Guidance

The teacher should facilitate lesson 1.19 in a simulated practice setting (skills lab) where will be demonstration of oral feeding technique. In preparing the lesson 1.19, the teacher should set up the skills lab as realistically as possible. He/ She should avail anatomic models and any equipment or supplies that would be needed.

He / She should proceed as follows:

- Help students to be in pair of 2 students. With use of power point slide, provide students with pictures of food and people who are eating. Request the students to discuss about the pictures and respond to the related questions.
- In skills lab the teacher then clarifies the objectives of the lesson 1.19 (that is to practice oral feeding for a simulated patient under the supervision of the teacher)
- The teacher should present the initial information (that is short theoretical review of oral feeding procedure).
- The teacher should provide clear instructions: During oral feeding simulation, one student acts as associate nurse. The other four students observe and write down the comments as regards to what went well and wrong referring to the check list of steps of oral feeding. The exercise should take 15 minutes in each small group of five students. The teacher will provide feed-back at the end of the simulation conducted by student.
- Discuss how the students should perform oral feeding: the student should be in skills lab. They should use model (mannequin) and a check list for oral feeding. After proofreading the check list in small groups of five students, they should ask questions for clarification. Then they prepare the required materials; and pass through the steps indicated on the check list and perform oral feeding.
- The teacher should allow the student to perform oral feeding on model and observe together with remaining students what is going on, compared to what is required on the check list.
- At the end of the procedure (after 15 minutes), the teacher stop the student and ask the student who demonstrated the procedure to criticize him/her-self on the basis of the check list. Then the students' observers should be given opportunity to provide their comments starting with positive and then negative ones.
- The teacher should provide the students the occasion for asking questions. He / she should also ask questions to check students understanding.
- The teacher should end up the lesson on oral feeding with short demonstration session emphasizing on the areas where there is students' weakness and provide the students with feedback to reinforce learning

Note: the check list to be used for oral feeding procedure in simulation lab is the following:

Table 1.2.61 Checklist for the oral feeding technique

SN	Steps	Yes	No
	Preparation		
1	Wear clean uniform		
2	Tie hair properly		
3	Remove watch and jewellery		
4	Wash hands		
5	Be aware of food reactions, its side effects and its interactions with the treatment at hand.		
6	Check patient's medical prescription		
7	Identify the patient		
8	Assess patient's clinical status to determine decreased level of consciousness, nutritional deficits, head or neck surgery, facial trauma, or impaired swallow, patient's ability to understand and co-operate, physical and psychological condition.		
9	Assess patient for food allergies.		
10	Perform physical assessment of abdomen, including auscultation for bowel sounds before feeding		
11	Obtain baseline weight and review serum electrolytes and blood glucose measurement.		
12	Assess patient for fluid volume excess or deficit, electrolyte abnormalities, and metabolic abnormalities (e.g., hyperglycemia).		
13	Verify health care provider's order for type of formula, rate, route, and frequency.		
14	Check expiration date of feed and check for damage		
15	Ensure patient's privacy		
16	Evaluate the patient's ability to understand and co-operate		
17	Inform and explain the patient/family: objective, procedure, etc. of care		
18	Get patient's consent		
	Equipment		
19	Stethoscope and tongue blade for assessment		
20	Washcloths and towels		
21	Adaptive utensils as necessary for self-feeding		
22	Oral hygiene supplies		
	Implementation of oral feeding		
	Prepare patient's room for mealtime:		
23	a. Perform hand hygiene. Clear over-bed table.		

24	b. Help patient to sit in comfortable position in chair or place bed in high-Fowler's position. If patient is unable to sit, turn him or her on side with head of bed elevated.		
25	Prepare patient for meal: a. Help patient with pain relief and elimination needs and help him or her perform hand hygiene before meals.		
26	b. Help patient put in dentures and put on eyeglasses or insert contact lenses if used.		
27	Ask in which order patient would like to eat his or her meal. Ask about desired seasonings. Help patient to cut food in bite size pieces if unable to do independently.		
24	Use adaptive eating and drinking aids as needed according to your assessment (e.g., two-handled cup with lid, plate with plate guard, utensils with splints, and utensils with enlarged handles).		
29	Identify food placement for disoriented, visually impaired, or easily fatigued patients by locating on plate as if plate were a clock.		
	Feed patient in manner that facilitates chewing and swallowing:		
30	a. Older adult: Feed small amounts at a time, observing biting, chewing, swallowing, and fatigue between bites; be sure that patient has swallowed food.		
31	b. Neurologically impaired patient: Feed small amounts at a time and assess for ability to chew, manipulate tongue to form bolus, and swallow. Check for food left inside cheeks (pocketing).		
32	Provide fluids as requested. Encourage patients not to drink all liquid at beginning of meal.		
33	Talk with patient during meal.		
34	Use meal as opportunity to educate patient (e.g., topics related to nutrition, postoperative exercises, discharge plans).		
35	Help patient with hand hygiene and performing mouth care.		
	C. Completion of the procedure		
36	Help patient to return to resting position, leave head elevated 30-45 degrees for 30-60 minutes after meal.		
37	Return patient's tray to appropriate place		
38	Eliminate waste		
39	perform hand hygiene		
40	Record and sign the administration of food on the monitoring document by providing clear specifications as follows: feeding hour, administered quantity, patient's reactions.		

Answers to the learning activity 1.19

1) On the picture A the health care provider is standing beside a child who is taking food from a plate. On the picture B the health care provider is feeding an old woman who is looking unable to feed herself.
2) The person on picture A is able to feed himself but assisted while the person on the picture B is unable to feed herself, she needs someone else to do it.

e) Self-assessment 1.19

Answers for Self-assessment 1.19

1) The rational for putting the patient in high-Fowler's position during oral feeding is that this position helps to facilitate swallowing and reduce aspiration risk.
2) The associate nurse or family should talk with patient during meal because meal should be a pleasant event and conversation promotes socialization.
3) The required equipment for oral feeding are:

- Stethoscope and tongue blade for assessment
- Washcloths and towels
- Tongue blade
- Adaptive utensils as necessary for self-feeding
- Oral hygiene supplies

Lesson 20: Nasogastric tube feeding

a) Learning objectives

At the end of this lesson, leaners will be able to practice feeding for patient with nasogastric tube under the supervision of Teacher.

b) Teaching and Learning resources

- Prepared skills Lab
- Prepared materials for nasogastric tube feeding
- Printed or soft pictures, students' text books
- Fundamentals of nursing and nutrition text books or internet

- Personal computer, projector and slides
- Fundamentals of nursing text books

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a short review on oral feeding.

d) Learning activity 1.20

Guidance

The teacher should facilitate lesson 1.20 in a simulated practice setting (skills lab) where will be demonstration of nasogastric tube feeding technique. In preparing the lesson 1.20, the teacher should set up the skills lab as realistically as possible. He/ She should avail anatomic models and any equipment or supplies that would be needed.

He / She should proceed as follows:

- Help students to be in pair of 2 students. With use of power point slide, present students with pictures indicated in the student book activity 1.20. Request the students to discuss about the pictures and respond to the related questions.
- In skills lab the teacher then clarifies the objectives of the lesson 1.20 (that is to practice nasogastric tube feeding technique for a simulated patient)
- The teacher should present the initial information (that is short theoretical review of nasogastric tube feeding procedure), and then demonstrate nasogastric tube feeding procedure to each small group of six students.
- After demonstration of the procedure, the teacher should allow students to practice nasogastric feeding procedure after providing the following clear instructions: you are going to simulate nasogastric tube feeding technique; one student should act as associate nurse. The other five students observe and write down the comments as regards to what went well and wrong referring to the check list of steps of nasogastric tube feeding. The exercise should take 15 minutes in each small group of six students. The teacher will provide feed-back at the end of the simulation conducted by student.
- The teacher should observe together with remaining students what is going on, compared to what is required on the check list.
- At the end of the procedure (after 15 minutes), the teacher stops the student and ask the student who demonstrated the procedure to criticize him/her-self on the basis of the check list. Then the students' observers should be

given opportunity to provide their comments starting with positive and then negative ones.

- The teacher should provide the students the occasion for asking questions. He / she should also ask questions to check students understanding.
- The teacher should end up the lesson on nasogastric tube feeding with provision of feedback to reinforce the students' learning.

Answers to the learning activity 1.20

1) The picture A indicates cow milk in a cup. Picture B shows a nurse pouring milk into a big syringe. The image C indicates a hand taking a syringe connected to patient's nasogastric tube while the picture D is showing a nurse feeding a patient trough a nasogastric tube.
2) The importance of the activities on pictures C and D is to feed a patient who is having a nasogastric tube and who is unable to swallow.

e) Self-assessment 1.20

Answers for Self-assessment 1.20

1. Indications for Nasogastric tube feeding include the following:

a) Situations in which normal eating is not safe because of high risk for aspiration: Altered mental status, swallowing disorders, impaired gag reflex, dependence on mechanical ventilation, certain esophageal conditions (strictures, or dysmotility), and delayed gastric emptying – inability to safely and adequately consume oral intake.

b) Clinical conditions that interfere with normal ingestion or absorption of nutrients or create hypermetabolic states: Surgical resection of oropharynx, proximal intestinal obstruction or fistula, pancreatitis, burns, and severe pressure ulcers.

c) Short-term feeding (< 6 weeks) with functional gastrointestinal tract

d) Conditions in which disease or treatment-related symptoms reduce oral intake: Anorexia, nausea, pain, fatigue, shortness of breath, or depression.

2. The teacher should instruct students to perform nasogastric tube feeding with use of the following check list for nasogastric feeding:

S/N	Steps	Yes	No
	a. Preparation		
1	Wear clean uniform		
2	Tie hair properly		

3	Remove watch and jewelry		
4	Wash hands		
5	Be aware of food reactions, its side effects and its interactions with the treatment at hand.		
6	Check patient's medical prescription		
7	Identify the patient		
8	Assess patient's clinical status to determine potential need for tube feedings, decreased level of consciousness, nutritional deficits, head or neck surgery, facial trauma, or impaired swallow, patient's ability to understand and co-operate, physical and psychological condition.		
9	Assess patient for food allergies.		
10	Perform physical assessment of abdomen, including auscultation for bowel sounds before feeding		
11	Obtain baseline weight and review serum electrolytes and blood glucose measurement.		
12	Assess patient for fluid volume excess or deficit, electrolyte abnormalities, and metabolic abnormalities (e.g., hyperglycemia).		
13	Verify health care provider's order for type of formula, rate, route, and frequency.		
14	Check expiration date of feed and check for damage		
15	Ensure patient's privacy		
16	Evaluate the patient's ability to understand and co-operate		
17	Inform and explain the patient/family: objective, procedure, etc. of care		
18	Get patient's consent		
	Equipment		
19	Trolley or disinfected tray		
20	A container with liquid or semi liquid food at room temperature or a disposable feeding bag, tubing, or ready-to-hang system		
21	50-60mL or larger "Janet" Syringe		
22	Clean gloves		
23	Protection for the patient		
24	A cup of clean water to rinse the catheter		
25	Clean gauze / tissue to wipe the patient's mouth, if necessary		
26	Stethoscope		
27	Kidney dish		
28	Enteral infusion pump for continuous feedings if applicable		
29	pH indicator strip		

30	Document (file) for recording the frequency and administered quantity		
31	Prescribed enteral formula		
	Implementation		
32	Identify patient		
33	Perform hand hygiene. Apply clean gloves		
34	Obtain formula to administer: Verify correct formula and check expiration date; note condition of container. Provide formula at room temperature.		
35	Prepare formula for administration: a) Use aseptic technique when manipulating components of feeding system (e.g., formula, administration set, connections).		
36	b) Shake formula container well. Clean top of canned formula with alcohol swab before opening it.		
37	c) For closed systems, connect administration tubing to container. If using open system, pour formula from brick pack or can into administration bag (see illustration).		
38	Open roller clamp and allow administration tubing to fill. Clamp off tubing with roller clamp. Hang container on intravenous (IV) pole.		
39	Place patient in high-Fowler's position or elevate head of bed at least 30 degrees (preferably 45 degrees). For patient forced to remain supine, place in reverse Trendelenburg's position.		
40	Verify tube placement. Observe appearance of aspirate and note pH measure.		
	Check gastric residual volume (GRV) before each feeding (for bolus and intermittent feedings) and every 4 to 6 hours (for continuous feedings):		
41	– Draw up 10 to 30mL air into syringe and connect to end of feeding tube.		
42	– Inject air into tube. Pull back slowly and aspirate total amount of gastric contents.		
43	– Return aspirated contents to stomach unless volume exceeds 250mL.		
44	– Do not administer feeding when a single GRV measurement exceeds 500mL or when two measurements taken 1 hour apart each exceed 250mL.		
45	– Flush feeding tube with 50mL of water		
46	Before attaching feeding administration set to feeding tube, trace tube to its point of origin. Label administration set, "Tube Feeding Only."		

	Intermittent gravity drip:		
47	– Pinch proximal end of feeding tube and remove cap. Connect distal end of administration set tubing to feeding tube and release tubing.		
48	– Set rate by adjusting roller clamp on tubing or attach tubing to feeding pump. Allow bag to empty gradually over 30 to 45 minutes. Label bag with tube-feeding type, strength, and amount. Include date, time, and initials.		
49	– Change bag every 24 hours: Continuous drip method		
	Continuous drip method:		
50	- Connect distal end of administration set tubing to feeding tube as in Step 10a.		
51	- Thread tubing through feeding pump; set rate on pump and turn on.		
52	Advance rate of tube feeding gradually, as ordered.		
53	Flush tubing with 30mL water every 4 hours during continuous feeding, before and after an intermittent feeding. Have registered dietitian recommend total free water requirement per day and obtain health care provider's order.		
54	When patient is receiving intermittent tube feeding, cap or clamp end of feeding tube when not being used.		
55	On completion of feed, flush the tube with 10-20 CC of water or until the tube is clear (or volume as recommended on dietetic regimen). The plunger must be used for flushing to achieve optimum flushing of the tube and prevent blockage.		
56	Close the clamp on the NG tube then disconnect the syringe and recap the feeding port.		
57	Wipe the mouth		
	C. **Completion of the procedure**		
58	Position the patient comfortably and appropriately		
59	Arrange personal effects of the patient and put them within reach.		
60	Thank the patient for his or her collaboration		
61	Eliminate waste		
62	Dispose of supplies and perform hand hygiene		
63	Provide a health education related to the patient's health condition		
64	Wash hands		
65	Record and sign the administration of food on the monitoring document by providing clear specifications as follows: feeding hour, administered quantity, patient's reactions, and possible residues		

Guidance on skills lab

The teacher should work hand in hands with the skills lab technician, arrange early the schedule (book the time) for his/her students, make sure that all materials and mannequins are in good condition to be used in teaching activity. He / she should also work with other teachers for Objective Structured Clinical Evaluation (OSCE) for the sake of assisting students to achieve timely the unit objectives.

1.6. Summary of the unit

This unit entitled “Human Nutrition and Dietetics” aimed at enabling nurse students to “assist adequately in preparation of a balanced diet to community, family and individuals”. In order to achieve this competence, the unit discussed breast feeding – its advantages and contraindications and teaching points; formula feeding; and Supplementary feeding which should starts in normal way after six months of exclusive breast feeding. The discussed topics include also special considerations in childhood and adolescent period. An increased need in calories and other nutrients like proteins, vitamins and minerals is observable during childhood and parents have to be carefully about the eating habits of those children in order to help them to eat health foods. Anorexia Nervosa and bulimia are the main eating disorders occurring during adolescent age.

A balanced diet during pregnancy and lactation has to be taken into consideration for improving mothers and child health. Nutrition plays an important role in health maintenance, rehabilitation, and prevention and control of disease among elderly people. It is important to provide a well-balanced diet to older adults while considering their normal physiologic changes as they are aging. The psychosocial and pathologic changes commonly seen in aging have impact on elderly people’s nutritional status. The nutritious foods availability, their mode of conservation, good eating habits and food choice promote a healthy life. The other aspects discussed are vitamins and minerals deficiencies, protein-energy malnutrition and over-nutrition conditions and their management. The unit ends with nutrition assessment and the techniques of oral feeding and nasogastric feeding for people in needs.

1.7. Additional information for teachers

In order to teach effectively the nursing procedures included in this unit, the teacher has to master basic skills in fundamentals of nursing such as oral feeding, nasogastric tube feeding, etc.

Even though this unit focuses on nutrition and dietetics, some maternal child health related topics were included into the unit. Therefore, the teacher is expected to have enough prior knowledge and skills in antenatal care and postnatal care, Children development stages (from neonatal age, infant, toddlers, pre-schooler age, school age and adolescent) including their physical and psychosocial development.

1.8. Answers to end unit assessment

Answers to the questions of the unit (Nutrition and dietetics) assessment

1) **A**
2) **A**
3) **B**
4) **D**
5) **The factors that influence eating habits/food choice:**

PHYSICAL FACTORS	PHYSIOLOGIC FACTORS
Available food supply, food technology, geography, agriculture, and distribution, sanitation and housing, season and climate, season and climate, storage and cooking facilities	Allergies, disability, health and disease, status, heredity, nutrient and energy needs, therapeutic diets.
SOCIAL AND ECONOMIC FACTORS	**PSYCHOLOGIC FACTORS**
Advertising and marketing, culture, general and nutrition education, income, political and economic policies, religion and social class, social problems, poverty, alcoholism, and drug abuse	Habits, preferences, emotions, cravings, personal food acceptance, positive or negative experiences and associations.

6) **The different nutritional disorders found in children aged less than five years and their management**

The nutritional disorders found in children include macronutrients and micronutrients deficiencies. The most common macronutrients are protein energy malnutrition (Kwashiorkor and Marasmus). The micronutrients deficiencies are categorized into vitamin and mineral deficiencies.

Kwashiorkor: The main cause of kwashiorkor is not eating enough protein or other essential vitamins and minerals. The Signs and symptoms of kwashiorkor are**:** change in skin and hair color (to a rust color) and texture**,** fatigue**,** diarrhea**,** loss of muscle mass**,** failure to grow or gain weight**,** edema (swelling) of the ankles, feet, and belly**;** damaged immune system, which can lead to more frequent and severe infections**;** irritability**;** flaky rash and shock. The management of Kwashiorkor is as follows:

Prevention: through health education to parents about:

a) Nutritional education as:

- Breast feeding is the best. – infant must eat soil food (at 4-6 months).
- Good food is the mixed food. – Breast milk should end slowly at 2 yrs.

b) Immunization.

c) Teaching about family planning & birth space.

d) Prevention of emotional disturbances.

e) Early treatment of any disease as diarrhea.

Curative:

a) Hospitalization.

b) Rehydration: by oral fluids & solution to maintain electrolytes. In severe cases blood transfusion (10ml/kg) may be prescribed.

Marasmus: It is due to both protein and energy deficiencies; it can occur in anyone with severe malnutrition but usually occurs in children. The marasmus is characterized by the classic features of starvation, including: growth reduction, absence of body fat (loss of sub-cutaneous fat, and marked wasting of muscles (the child is reduced to “skin and bones”).

The management of marasmus is as follows:

1) Preventive: as mentioned in Kwashiorkor.

2) Curative: Treatment of causes. b) Treatment of complications. Diet: Increase calories & protein (of high biological value). Increase vitamins & minerals (Vegetables & fruits). Give parenteral fluid & blood transfusion if it is prescribed. Provide Antibiotics & anti diarrhea drugs if they are prescribed.

Vitamins and minerals are essential nutrients in human body because they act in concert; they perform hundreds of roles in the body. They help shore up bones, heal wounds, and boost human immune system. They also convert food into energy, and repair cellular damage. Their deficiencies affect the whole-body function. Their main food sources include vegetables and fruits, food from animals (eggs, meat, milk, etc).

7) The specific diets for management of the adolescents with Anorexia nervosa and Bulimia

For adolescent suffering from anorexia nervosa, there is need of the development of a strong and trusting relationship between the client and the health care professionals involved in the case. The adolescent should learn and accepts that weight gain and a change in body contours is normal during adolescence. There is need to focus on nutritional therapy so that the adolescent understands the need

for both nutrients and calories and how best to obtain them. Individual and family should be counselled in order to make sure that the problem is understood by everyone. Close supervision should be done by the health care professional. For achieving the desired results, there is need of time and patience from all involved.

In case of bulimia, the management usually includes limiting eating to mealtimes, portion control, and close supervision after meals to prevent self-induced vomiting. Diet therapy helps teach the adolescent basic nutritional facts so that he or she will be more inclined to treat the body with respect. Psychological counselling will help to understand his or her fears about food.

8) Prevention of iron deficiency anemia to an infant?

In order to prevent iron deficiency anaemia, the baby should be exclusively breast-fed during the first 4–6 months, then there will be the introduction of iron-fortified infant cereal, other iron-rich foods (e.g. strained meats) and enhancers of iron absorption (vitamin C, e.g. fruit) from 6 months. There is a need of using iron-fortified formula for infants weaned early from the breast or formula fed from birth. The introduction of unmodified cow's milk should be delayed until at least 9–12 months of age.

The other good dietary sources of iron include:

- Red meat, liver, poultry and fish (contain smaller amounts)
- Cereal products and fortified breakfast cereals; these can contribute significant amounts of non-haem iron, but this is less well absorbed than iron from meat products (haem iron).
- Other good sources of non-haem iron include green leafy vegetables, dried fruit, pulses, nuts and seeds.

Having a good source of vitamin C (for example fruit or fruit juice) with foods that contain non haem iron can enhance the absorption of iron.

Iron and zinc compete for absorption, that is why it can be a disadvantage for people to self-supplement with either of these nutrients unless there is a proven deficiency and they are under medical supervision.

9) What nutrients should be mostly recommeded for promoting the growth of children

It's important that children get a balanced diet that includes lean proteins, whole grains, fruits and vegetables, and a small amount of healthy fats. The proteins build muscles and other tissues in children's bodies. Plus, it helps them boost their

immune systems. Good sources include: fish, chicken, lean meats, nuts, eggs, milk, yogurt, string cheese, peanut butter, etc.

10) Foods that should be discouraged to eat or drink to a lactating Woman?

It may be contraindicated to the mother to breastfeed her child in some cases like when the mother is using certain drugs, such as radioactive isotopes, antimetabolites, cancer chemotherapy agents, lithium, and ergotamine. Those drugs constitute a contraindication during breast feeding.

Highly flavored or spicy foods may impact the flavor of breast milk but need only be avoided if infant feeding is affected.

Caffeine and alcohol are excreted in breast milk and should be avoided. Lactating mother should cut down the quantity of chocolate while breastfeeding.

Some babies could be intolerant to cow milk. After consuming dairy products, if the baby shows symptoms like colic and vomiting, it means that the intake of the dairy products should stopped for a while.

The smell of garlic can affect the smell of breast milk. Some babies hate it while others like it. Therefore, garlic may be stopped if the baby is uncomfortable while nursing.

Until the mothers wean their babies, they avoid peanuts, especially if their family has a medical history of allergies to peanuts. Peanuts allergic proteins might pass to the produced breast milk, and then reach the baby.

A lactating mother should not consume fish more than twice a week. It is best to avoid fish that has high mercury completely.

If you had broccoli for dinner the previous day, then you should not be surprised when your baby has gassy problems the next day. Other gassy foods **like onions, cabbage, cauliflower, and cucumber should be avoided while breastfeeding in case the baby doesn't tolerate them.**

11) The food components and their sources that should be emphasized in the diets of older Adults.

Food Component	Sources
Vitamin A	Green and orange vegetables, especially green leafy vegetables; orange fruits, liver, milk
Vitamin D	Milk, fortified soy milk, fatty fish, some fortified ready-to-eat cereals
Vitamin E	Vegetable oils, margarine, salad dressing made with vegetable oil, nuts, seeds, whole grains, green leafy vegetables, fortified cereals
Calcium	Milk, yogurt, cheese, fortified orange juice, green leafy vegetables, legumes

Magnesium	Green leafy vegetables, nuts, legumes, whole grains, seafood, chocolate, milk
Potassium	Fruit and vegetables, legumes, whole grains, milk, meats
Fiber	Whole grains; legumes; fruit and vegetables, especially the skin and seeds

12) The causes of food insecurity

At national level the causes may include high and volatile food prices, financial and economic shocks, climate change, and epidemic outbreaks of human disease and crop and livestock disease. Other factors may be: the general social, economic, and political environment prevailing at national level; the presence of natural shocks or conflict; the quality of commercial and trade policies; the commitment of the political leadership to hunger reduction.

The food insecurity at the household level include shocks in production (e.g., harvest failure), market (e.g., lost employment), or household expenditure (e.g., emergency medical costs resulting in less money available for food).

Other factors may include: rapid population growth conflict and/or civil war, and extreme production fluctuation, limited or lack of employment, lower level of saving, high rate of natural erosion and/or natural disasters, poor health and sanitation and deforestation.

13) The general measures for preventing food spoilage include:

(1) Hands should always be clean whenever food is handled. Hot water and soap should be used to wash hands after going to the bathroom, before handling cooked foods, and after handling raw food.

(2) A person who is ill should not prepare food.

(3) During food preparation, contact between hands and the mouth, nose, or hair should be avoided. Likewise, coughing and sneezing over foods are forbidden. Tissues or handkerchiefs should be used to prevent contamination.

(4) Tasting food with fingers and utensils used during preparation is not advised, even if the cooking temperature is very hot.

(5) Buy fresh foods on the day of consumption when possible, or use before the expiry date (if indicated).

(6) Do not buy foods with any of the danger signs

(7) Frozen food should be thawed in a refrigerator, not put in warm water or left out to thaw.

(8) Store foods at the right temperature and covered.

(9) Eat meals as soon as possible after preparation.

(10) Use clean covered containers for fetching water.

(11) Use a safe water supply, or else boil all water before use.

(12) Wash hands with soap and water before food preparation, before eating meals, and after touching animals, dirty areas, or soil or after visiting the bathroom.

(13) Keep food covered.

(14) Cook food thoroughly or to the correct internal temperature.

(15) Wash all food preparation and eating utensils thoroughly with water and soap before use.

(16) Wash all fruit and vegetables before peeling or eating.

(17) Do not cough, spit, or touch the body during food preparation.

(18) Keep rubbish bins closed at all times.

(19) Keep animals away from food preparation areas.

14) Simple household food preservation techniques are the following:

a. **Drying:** A number of foods (fruits, vegetables, tubers-cassava, and potatoes) which cannot be stored for long in their fresh state without spoiling can be preserved by drying. Before drying, there should be enough sunshine and foods should be sliced in small pieces for them to dry faster. Dried fruits can be eaten in their dry state (e.g. dried jackfruit), vegetables and potatoes need to be cooked by boiling in water while dried cassava can be ground into flour and used later.

b. **Smoking**: Smoking meat and fish is a highly recommended method for prolonging their storage life. The fish is first cooked over a high fire and then smoke-dried in one to five days (and nights) over a low fire. Fresh-dried fish keeps for up to a week, while hard-dried fish (keeping fish in salt for several weeks) keeps for several months.

c. **Salting**: Salting is a simple food preservation method that can be used to prolong the shelf life of food for a few days. When added to foods, salt takes out moisture and retards microbial growth and replication.

d. **Boiling**: Boiling of foods kills food microbes. Perishable foods can be boiled, cooled and kept in clean containers and then used within a day.

15) The storage methods of fruits; vegetables; cereals, milk, and cassava.

a. Storing fruits:

All fresh fruits generally need to be stored in a cool area, preferably in a clay pot fridge. Fruits have a tendency to either be contaminated by other foods and or to absorb odors from other foods. They therefore need to be kept separately.

b. Storing fresh vegetables:

Proper storage of fresh vegetables helps to maintain their quality and retain nutrient value. Most fresh vegetables need to be stored under low temperatures in areas which are neither humid nor damp. If available, fresh vegetables can be stored in a clay pot fridge.

c. Storage of cereals:

Cereals - depending on the quantities and level of dryness - may be stored at room temperature in tightly closed containers to keep out moisture and insects. Properly dried cereals packaged in sacs can be stacked on racks in a dedicated food store. Due attention should be taken to keep out rats that normally feed on stored food. Grain raw rice can be stored in closed containers at room temperature and used within one year.

d. Storing milk:

Milk is a highly perishable food and yet very nutritious. To prolong its shelf life, milk should never be left at room temperature for a long time as it spoils quickly. Care must be taken to keep milk in clean covered containers that should be left to stand in a cool place. Unrefrigerated milk should be used within a day.

e. Storing Cassava

Most root tubers may not be stored well for long after harvest; however, root tubers keep longer than other vegetables, fruits, meat, milk, etc. When tubers will not be prepared within a few days, care should be taken to avoid bruising them.

Cassava tubers can also be piled into plenty and watered daily to keep them fresh or coated with a paste of mud to preserve their freshness.

f. Storing Root Tubers (Cassava, Sweet Potatoes):

Most root tubers may not be stored well for long after harvest; however, root tubers keep longer than other vegetables, fruits, meat, milk, etc. When tubers will not be prepared within a few days, care should be taken to avoid bruising them.

Cassava tubers can also be piled into plenty and watered daily to keep them fresh or coated with a paste of mud to preserve their freshness.

16) What are the cultural factors affecting food choices?

Each particular society that identifies itself with a common denominator (e.g., ethnicity, religion, geographic location, and lifestyle) has its own unique cultural food pattern.

Culture involves much more than the major and historic aspects of a person's communal life (e.g., language, religion, politics, location). It also develops from all of the habits of everyday living and family relationships, such as preparing and serving food. In a gradual process of conscious and unconscious learning, cultural values, attitudes, customs, and practices become a deep part of individual lives. Although part of this heritage may be revised or rejected as adults, people are ultimately responsible for shaping their own lives and passing traditions on to the subsequent generations as they see fit.

Food habits are among the oldest and most deeply rooted aspects of a culture. An individual's cultural background largely determines what is eaten as well as when and how it is eaten. All types of customs, whether rational or irrational or beneficial or injurious, are found in every part of the world. Many foods take on symbolic meanings related to major life events (e.g., birth, death, weddings). From ancient times, ceremonies and religious rites involving food have surrounded certain events and seasons. Food gathering, preparing, and serving have followed specific customs, many of which remain intact today.

Many different cultural food patterns are part of family and community life. These patterns have contributed special dishes or modes of cooking to people eating habits. Older members of the family use traditional foods more regularly, with younger members of the family using them mainly on special occasions or holidays.

Nevertheless, traditional foods have strong meanings and bind families and cultural communities in close fellowship. Individual tastes and geographic patterns will vary, but general food patterns are connected with culture and have a strong influence on how people eat.

Assumptions about dietary patterns cannot be made, but knowledge of the variety of unique traditional foods provides a rudimentary understanding of the range of possible food choices. Such an understanding of various cultural food patterns is valuable when providing dietary guidance as a health care professional.

17) Difference between Kwashiorkor and Marasmus in terms of their clinical features, prevention.

Clinical signs:

The clinical signs and symptoms of **kwashiorkor** are: change in skin and hair color (to a rust color) and texture**,** fatigue**,** diarrhea**,** loss of muscle mass**,** failure to grow or gain weight**,** edema (swelling) of the ankles, feet, and belly, damaged immune system, which can lead to more frequent and severe infections**,** irritability, flaky rash and shock.

Clinical manifestations: marasmus is characterized by the classic features of starvation, including: growth reduction, absence of body fat (loss of sub-cutaneous fat, and marked wasting of muscles (the child is reduced to "skin and bones").

Prevention:

Prevention measures for kwashiorkor and Marasmus:

Teach parents through health education:

a) Nutritional education as:

- Breast feeding is the best. –infant must eat soil food (at 6 months).

- Good food is the mixed food. – Breast milk should end slowly at 2 yrs.

b) Immunization.

c) Teaching about family planning & birth space.

d) Prevention of emotional disturbances.

e) Early treatment of any disease as diarrhea

18) The clinical characteristics of the people with vitamin A and C deficiencies:

The clinical characteristics of the people with vitamin A deficiency are:

Growth reduction and visual problems. Xerophthalmia may occur in vitamin A deficiency and is characterized by conjunctivitis, abnormal and severe dryness of the surface of the cornea and conjunctiva. Bitot's spots (white, soft deposits on the conjunctiva) and night blindness may also occur.

The clinical characteristics of the people with vitamin A deficiency are: Swollen, bleeding gums, wiry hair, anaemia and a predisposition to infections, and easy bruising.

19) The good dietary sources of the Vitamin A; B1 (thiamine); and C:

Good dietary sources of Vitamin A are: carrots, oily fish, liver and liver products. They also include fortified margarine and fat spreads, fish liver oils, dairy products (milk, cheese, cream and butter), egg yolks, peaches, apricots and mangoes, tomatoes and red peppers and dark-green leafy vegetables (such as spinach).

Good dietary sources of Vitamin B1: outer 'germ' layer. Other good sources include: yeast and yeast extract, wholegrain cereal foods, pork, nuts and pulses Good dietary sources of Vitamin C: Fruits and fruit juices (particularly citrus fruits, strawberries, kiwi fruit, berries, currants and guava) Some green vegetables (such as green peppers, broccoli, cabbage and spring greens)

20) The good dietary sources of (a) folic acid (b) iron (c) Zinc:

a) **Folic acid:** liver, green vegetables, yeast extract, pulses and some fruits (oranges and orange juice)

b) **Iron:** Red meat, liver and offal, poultry and fish (contain smaller amounts). Cereal products and fortified breakfast cereals; these can contribute significant amounts of non haem iron, but this is less well absorbed than iron from meat products (haem iron). Other good sources of non-haem iron include green leafy vegetables, dried fruit, pulses, nuts and seeds.

c) **Zinc:** red meat, fish and shellfish, milk and milk products, poultry, and eggs. Other sources of zinc include bread and cereal products, green, leafy vegetables and pulses, although these all have a lower bioavailability.

21) The dietary management of obesity

The dietary management of obesity focus on a healthy lifestyle that includes a diet that has a generous content of fiber-rich foods, is moderate in fat, is low in sugar, and has a low energy density. One of the secrets for losing weight is to engage in high levels of physical activity (approximately 1 hour per day), eating a low-calorie, low-fat diet, eating breakfast regularly, self-monitoring weight, and maintaining a consistent eating pattern across weekdays and weekends.

Here are additional rules that are helpful for people trying to lose weight:

- Eat small portions.
- Eat breakfast every day.
- If a person wishes to have sweet-tasting beverages, then replace sugar with synthetic sweeteners.

- Avoid buying foods that encourage overeating, and don't have the "wrong" foods easily accessible. If you can't resist chocolate, then keep chocolate out of easy reach.
- Stay away from buffets or other locations where overeating is made easy.
- Try to identify factors that trigger overeating. For example, many people react to stress by overeating. Reducing stress is one example of changing behavior so that overeating is avoided.
- Buy a pedometer. These devices count the number of steps walked. An appropriate goal is 10,000 steps per day.
- Join a group that actively supports weight loss, increased fitness, and healthful eating. This could be, for example, a commercial organization or a group of friends.
- Eating at regular, frequent intervals may help prevent extreme hunger and reduce the risk of binge eating. Meal patterns should be individualized.
- Measure weight frequently,
- Watching TV for a limited period of time,
- not letting a small weight gain become a big weight gain, and
- Pharmacotherapy is adjunctive therapy in the treatment of obesity. Drugs are not effective in all people, and they are only effective for as long as they are used.
- Surgery to promote weight loss therapy involves limiting the capacity of the stomach. Gastric bypass also circumvents a portion of the small intestine to cause mal absorption of calories. Both types effectively promote weight loss but are tools, not magic strategies.
- Bariatric surgeries require lifelong changes in eating behaviors to ensure continued success. The postsurgical diet progresses from clear liquids to pureed food to a soft diet. Small, frequent meals are necessary to avoid overstretching the pouch. Sugars are avoided to decrease the risk of dumping syndrome. Nutritional deficiencies are a lifelong risk, requiring preventative supplementation.
- Perhaps most important of all: be determined!

22) The common anthropometric measurements:

The common anthropometric measurements include weight, height, MUAC, head circumference, skin fold and body mass index (BMI).

Weight

Weighing is usually the first step in anthropometric assessment and a prerequisite for finding weight-for-height z-score (WHZ) for children and BMI for adults. Weight is strongly correlated with health status. Unintentional weight loss can mean poor health and reduced ability to fight infection. Low pre-pregnancy weight and inadequate weight gain during pregnancy are the most significant predictors of intrauterine growth retardation and low birth weight.

Height

Measuring length or height requires a height board or measuring tape marked in centimeters (cm). Measure the length for children who are under 2 years of age or less than 87 cm long. Measure height for children of 2 years and older who are more than 87 cm tall and for adults.

The head circumference (HC) is the measurement of the head along the supra orbital ridge (forehead) interiorly and occipital prominence (the prominent area on the back part of the head) posterior. It is measured to the nearest millimeter using flexible, non-stretchable measuring tape around 0.6cm wide. HC is useful in assessing chronic nutritional problems in children under two years old as the brain grows faster during the first two years of life.

Mid-Upper Arm Circumference (MUAC)

MUAC is the circumference of the left upper arm measured at the mid-point between the tip of the shoulder and the tip of the elbow, using a measuring or MUAC tape. MUAC measurements in millimeters (mm) are more accurate than measurements in cm. Use MUAC to measure all pregnant women and women up to 6 months postpartum. MUAC is not currently recommended for infants under 6 months and should not be used to assess nutritional status in people with edema.

Skinfold measurement is a technique to estimate how much fat is on the body. It involves using a device called a caliper to lightly pinch the skin and underlying fat in several places. This quick and simple method of estimating body fat requires a high level of skill to get accurate results. The seven skin sites for skinfold measurement are the followings: triceps, chest/pectoral, midaxillary, subscapular, suprailiac, abdominal, and thigh.

Body Mass Index (BMI)

BMI is an anthropometric indicator based on weight to-height ratio. It is used to classify malnutrition in non-pregnant/non-postpartum adults. BMI is not an accurate indicator of nutritional status in pregnant women or adults with edema.

$$BMI = \frac{(Weight(Kg)}{Height(m)^2}$$

BMI	Nutritional status
< 18.5	Underweight
18.5–24.9	Normal weight
25.0–29.9	Overweight
30.0–39.9	Obesity
>40.0	Severely obese

23) The rational for putting the patient in high fowler's position during oral feeding

The rational for putting the patient in high-Fowler's position during oral feeding is that this position helps to facilitate swallowing and reduce aspiration risk.

24) The indications for nasogastric tube feeding include the following:

a) Situations in which normal eating is not safe because of high risk for aspiration: Altered mental status, swallowing disorders, impaired gag reflex, dependence on mechanical ventilation, certain esophageal conditions (strictures, or dysmotility), and delayed gastric emptying – inability to safely and adequately consume oral intake.

b) Clinical conditions that interfere with normal ingestion or absorption of nutrients or create hypermetabolic states: Surgical resection of oropharynx, proximal intestinal obstruction or fistula, pancreatitis, burns, and severe pressure ulcers.

c) Short-term feeding (< 6 weeks) with functional gastrointestinal tract

d) Conditions in which disease or treatment-related symptoms reduce oral intake: Anorexia, nausea, pain, fatigue, shortness of breath, or depression.

1.9. Additional activities

1.9.1. Remedial activities

1) Within the skills Lab collect all materials required for nasogastric feeding technique and perform an intermittent nasogastric feeding on the mannequin respecting the steps as indicated on the check list.
2) Describe the bad eating practice of children and advices to be given to parents.

3) Describe the breast-feeding technique

Answers to remedial activities

1) Check list of nasogastric feeding (see it in end unit assessment 1)
2) Bad eating practices of children:

As children get older, they consume more foods from non -home sources and have more outside influences on their food choices. School, friends' houses, childcare centers, and social events present opportunities for children to make their own choices beyond parental supervision.

Children who are home alone after school prepare their own snacks and, possibly, meals.

Advices to be given to parents

Children who eat dinner with their families at home tend to have higher intakes of fruits, vegetables, vitamins, and minerals and lower intakes of saturated and trans-fatty acids, soft drinks, and fried foods. Family meals promote social interaction and allow children to learn food-related behaviors. Parents should provide and consume healthy meals and snacks and avoid or limit empty-calorie foods.

1) Breast feeding technique

The breast-feeding technique has 3 main parts: effective positioning for the mother, effective positioning for the baby, attaching the baby to the breast.

a) Effective positioning for the mother

A comfortable position is a prerequisite of comfortable breastfeeding. A woman who has recently given birth, especially one new to breastfeeding, may need some help with this. After a caesarean section, or where the perineum is very painful, lying on her side may be the only position a woman can tolerate in the first few days after birth. It is likely that she will need assistance in placing the baby at the breast in this position, because she has only one free hand. When feeding from the lower breast it may be helpful to raise her body slightly by tucking the end of a pillow under her ribs. Once the woman can do this unaided, she may find this a comfortable and convenient position for night feeds, enabling her to get more sleep. Alternatively, the mother may prefer to sit up to feed her baby, it is particularly important that the mother's back is upright at a right-angle to her lap.

Both (arms) lying on her side and sitting correctly in a chair with her back and feet supported enhance the shape of the breast and allow ample room in which to manoeuvre the baby.

b) Effective positioning for the baby

The baby's body should be turned towards the mother's body so that the baby is coming up to her breast at the same angle as her breast is coming down to the baby. The more the mother's breast points down, the more the baby needs to be on his back. The advice to have the baby tummy to tummy may be mistakenly taken to imply that the baby should always be lying on his side. However, taking account of the angle of the dangle might be more useful. If the baby's nose is opposite his mother's nipple, being brought to the breast with the neck slightly extended, the baby's mouth will be in the correct relationship to the nipple.

c) Attaching the baby to the breast

The baby should be supported across the shoulders, so that slight extension of the neck can be maintained. The baby's head may be supported by the extended fingers of the mother's supporting hand or on the mother's forearm. It may be helpful to wrap the baby in a small sheet (Vancouver wrap), so that his hands are by his side. If the newborn baby's mouth is moved gently against the mother's nipple, the baby will open his mouth wide. As the baby drops his lower jaw and darts his tongue down and forward, he should be moved quickly to the breast. The intention of the mother should be to aim the baby's bottom lip as far away from the base of the nipple as is possible. This allows the baby to draw breast tissue as well as the nipple into his mouth with his tongue. If correctly attached, the baby will have formed a *teat* from the breast and the nipple.

The nipple should extend almost as far as the junction of the hard and soft palate. Contact with the hard palate triggers the sucking reflex. The baby's lower jaw moves up and down, following the action of the tongue. Although the mother may be startled by the physical sensation, she should not experience pain. If the baby is well attached, minimal suction is required to hold the *teat* within the oral cavity. The tongue can then apply rhythmical cycles of compression and relaxation so that milk is removed from the ducts. The baby feeds from the breast rather than from the nipple, and the mother should guide her baby towards her breast without distorting its shape. The baby's neck should be slightly extended and the chin in contact with the breast. If the baby approaches the breast, a generous portion of areola will be taken in by the lower jaw, but it is positively unhelpful to urge the mother to try to get the whole of the areola in the baby's mouth.

1.9.2. Consolidation activities

1) Discuss the prevention of food contamination and spoilage:
2) Discuss the factors influencing food spoilage
3) You are in your home village for holiday and decide to visit your grand sister because she gave birth last month. Being there a neighbour mother came also to visit her with her child of 3 years old. The child is looking so small like 1-year-old, with cachexia, dry skin and use to have diarrhea.

a. To which pathology the child may be suffering from.

b. Which advices will you give to your grand sister in order to prevent the same problem to her child?

Answers for consolidation activities

1) Prevention of food contamination and spoilage:

To prevent contamination, food production and preparation operations need to be carefully controlled, in order to avoid exposing them to microbial, chemical and /or physical food contamination.

In order to prevent **microbial food contamination** people, have to have a habit of hand washing before and during food preparation. Attention also needs to be given to possible **chemical contamination of food**. Food can be contaminated through the misuse or mistaken handling of chemicals, including pesticides, bleach and other cleaning materials. All chemicals (detergent, disinfectant, sanitizer) used in the food preparation area should be removed before food preparation begins, to prevent any chemical contamination of the food. **Physical contaminants** include stones, pieces of glass, and metal. Physical contamination can occur at any stage of the food chain: for example, stones, bones, twigs, pieces of shell or foreign objects can enter food during handling and preparation. These materials should be removed, if possible, for example by sieving or picking out the items with clean fingers.

Food spoilage

Microbial spoilage is caused by microorganisms like fungi and bacteria. They spoil food by growing in it and producing substances that change the color, texture and odor of the food. Eventually the food will be unfitted for human consumption. Spoilage may be physical or chemical.

Physical spoilage is due to physical damage to food during harvesting, processing or distribution. The damage increases the chance of chemical or microbial spoilage and contamination because the protective outer layer of the food is bruised or broken and microorganisms can enter the foodstuff more easily.

Chemical spoilage: in this case chemical reactions in food are responsible for changes in the color and flavor of foods during processing and storage. Foods are of best quality when they are fresh, but after fruits and vegetables are harvested, or animals are slaughtered, chemical changes begin automatically within the foods and lead to deterioration in quality. Fats break down and become rancid (smell bad), and naturally-occurring enzymes promote major chemical changes in foods as they age.

2) Factors influencing food spoilage

The factors that can increase or delay the process of food spoilage include its **water content**, **environmental conditions**, **packaging and storage**. The amount of water available in a food can be described in terms of the water activity. No matter whether food is fresh or processed, the rate of its deterioration or spoilage is influenced by the environment to which it is exposed. The exposure of food to oxygen, light, warmth or even small amounts of moisture can often trigger a series of damaging chemical and/or microbial reactions. Changing the environment can help to delay spoilage (e.g., storing foods at low temperatures).

Packaging helps to protect food against harmful contaminants in the environment or conditions that promote food spoilage including light, oxygen and moisture. The type of packaging is a key factor in ensuring that the food is protected. Packaging of foods in cans, jars, cartons, plastics or paper also serves to ensure food safety if it is intact, because it provides protection against the entry of microorganisms, dust, dirt, insects, chemicals and foreign material.

3) Answers to questions of case study:

a) The child is suffering from Malnutrition (under-nutrition): That is protein energy malnutrition (Kwashiorkor –Marasmus).

b) The advices should focus on prevention through health education to parent about:

(1) Nutritional education as:

- Breast feeding is the best. –infant must eat soil food (at 4-6 months).
- Good food is the mixed food. – Breast milk should end slowly at 2 yrs.

(2) Immunization.

(3) Teaching about family planning & birth space.

(4) Prevention of emotional disturbances.

(5) Early treatment of any disease as diarrhea

19.3. Extended activities

1) Compare the advantages of breast feeding with the advantages of formula-feeding.
2) Compare kwashiorkor and obesity in terms of causes and diet management:

Answers to extended questions

1) Comparison of the advantages of breast feeding with the advantages of formula-feeding.

Advantages of breastfeeding

The colostrum is rich in proteins and provides factors that promote maturation of the gut and good digestion. Colostrum is the most superior and well-designed nutrition for your baby in the first few days of life.

The breast milk is sterile

Brest milk provides superior and complete nutrition to the baby without any other preparation, therefore fewer incidents of illness and hospitalization.

Breast feeding help to develop a body's immune system

It increases resistance to infections

Breastfed babies have a decreased risk of malnutrition

It decreases the risk lactose intolerance

Breastfeeding promotes the proper development of baby's jaw and teeth and good brain development

Breast milk is always available and at the right temperature, but formula feeds require planning to ensure that you have all the things you need to prepare it.

Mothers who breastfeed tend to lose weight and achieve their pre-pregnancy figure more easily than mothers who bottle feed**.** Mothers who breastfeed, are less likely to develop breast cancer later in life**.** Breastfeeding is more economical than formula feeding. There are fewer trips to the doctor and less money is spent on medications**.** Breastfeeding promotes mother-baby bonding**.** Hormones released during breast-feeding create feelings of warmth and calm in the mother.

Advantages of formula-feeding

Time and frequency of feedings: Formula-fed babies usually eat less often than breastfed babies since formula feeds take longer to digest.

Diet: Formula feeds are very important for a mom who needs to be on a medication that might harm the baby.

Convenience and Flexibility: Your partner or anyone can feed Your Child at any time without you having to pump, and store breast milk, especially if that isn't an option. You don't need to find a private place to nurse in public.

1) Comparison of kwashiorkor and obesity in terms of causes and diet management:

	Kwashiorkor	Obesity
Causes	The main cause of kwashiorkor is not eating enough protein or other essential vitamins and minerals change in skin and hair color (to a rust color) and texture, fatigue, diarrhea, loss of muscle mass, failure to grow or gain weight, edema (swelling) of the ankles, feet, and belly; damaged immune system, which can lead to more frequent and severe infections; irritability; flaky rash and shock	Reduced physical activity Widespread availability of highly palatable, energy-dense food. A large amount of accumulated evidence demonstrates how such food leads to excess intake of food energy – in other words, over-nutrition. Such foods have four key features: a high fat content, high refined sugar content, low fiber content, and a high energy density. The majority of human studies indicate that a high-fat diet induces excessive energy intake and hence weight gain. The next heavy factor in the obesity epidemic is sugar. In particular, sugar-sweetened beverages have a similar effect on energy balance as does dietary fat: consuming these drinks leads to spontaneous overconsumption of food. With respect to weight control fruit juices, as far as is known, have no advantage over soft drinks.

Diet management	Diet for Treating Kwashiorkor Because people with kwashiorkor have been deprived of a nutritionally adequate diet for a long time, a medical professional should monitor and plan their food regimen. Treatment should start with a gradual introduction of carbohydrate foods such as fruits, starchy vegetables, breads and cereals to provide calories. Then the persons should consume foods containing proteins such as meat, fish, poultry, eggs, soybeans and legumes. Milk and milk products are also rich in protein. However, children suffering from kwashiorkor may be lactose-intolerant and may need lactase enzyme supplements to digest milk, yogurt and cheese.	The dietary management of obesity: A healthy lifestyle that includes a diet that has a generous content of fiber-rich foods, is moderate in fat, is low in sugar, and has a low energy density. One of the secrets for losing weight is to engage in high levels of physical activity (approximately 1 hour per day), eating a low-calorie, low-fat diet, eating breakfast regularly, self-monitoring weight, and maintaining a consistent eating pattern across weekdays and weekends. Here are additional rules that are helpful for people trying to lose weight: Eat small portions. Eat breakfast every day. If a person wishes to have sweet-tasting beverages, then replace sugar with synthetic sweeteners. Avoid buying foods that encourage overeating, and don't have the "wrong" foods easily accessible. If you can't resist chocolate, then keep chocolate out of easy reach. Stay away from buffets or other locations where overeating is made easy. Try to identify factors that trigger overeating. For example, many people react to stress by overeating. Reducing stress is one example of changing behavior so that overeating is avoided.

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UNIT 2 NURSING ASSESSMENT OF ENDOCRINE SYSTEM

2.1. Key unit competence

take appropriate action based on findings of nursing assessment of Endocrine system

2.2. Prerequisites (knowledge, skills, attitudes and values)

To effectively succeed and develop clinical skills in the unit of endocrine assessment, the learner should had been learn the anatomy and physiology of endocrine glands, hygiene and comfort, vital signs and parameters, from Fundamentals of Nursing module as well as code of conduct.

2.3. Cross-cutting issues to be addressed

Predominant cross cutting issues to be addressed in the unity of nursing assessment of endocrine system are mainly inclusive education, critical thinking as well as peace and value education.

a) Inclusive education

This lesson will be done mostly via debates within groups. The teacher will encourage students to verbalize what they know and what they think should be important while assessing patient with endocrine disorders. It can be an issue to students with hearing and vision impairment to progress with others or students with limbs disorders who usually face challenges for displacement. However, to addresses these issue

- The teacher will encourage all students to support colleagues with locomotor impairment to reach their groups.
- Both teacher and students will be encouraged to speak loudly and use gestures to support learners with hearing problems.
- Student with vision issue will be encouraged to sit in the front.

b) Peace and value education

This lesson will involve student- teacher and student-student respectful interaction. Students will be encouraged to accommodate different ideas, to exchange speeches and to develop flexibility in order to focus on the important points of the lesson

c) Gender education

Inspire active participation of boys and girls in activities, not only boys. Make sure that all learners are actively involved in all learning activities. males and females should have equal rights to learn and practice the procedures of assessment of endocrine system.

2.4. Guidance on the introductory activity

Teacher will bring a photo of activity in the hole class and ask the student to form a group of 5 students. In the group formed, they be requested respond the questions of activity.

After every group will give a presenter to present their findings to the hole class.

After presentation teacher will give more clarification and complementarity to the students.

Expected answers to the introductory activity

1) In the given picture there are different endocrine glands including hypothalamus, pituitary, pineal, tyroid, thymus, adrenal gland, testis and ovaries

2) Role of each part mentioned on the picture are the following:

   Hypothalamus gland: The hypothalamus is in the lower central part of the brain. It links the endocrine system and nervous system. Nerve cells in the hypothalamus make chemicals that control the release of hormones secreted from the pituitary gland. The hypothalamus gathers information sensed by the brain (such as the surrounding temperature, light exposure, and feelings) and sends it to the pituitary. This information influences the hormones that the pituitary makes and releases.

   Pituitary gland: The pituitary gland is at the base of the brain, and is no bigger than a pea. Despite its small size, the pituitary is often called the “master gland.” The hormones it makes control many other endocrine glands. The pituitary gland makes many hormones, such as:

   - **Growth hormone**, which stimulates the growth of bone and other body tissues and plays a role in the body’s handling of nutrients and minerals
   - **P**rolactin which activates milk production in women who are breastfeeding
   - Thyrotropin which stimulates the thyroid gland to make thyroid hormones
   - Corticotropin which stimulates the adrenal gland to make certain hormones
   - Antidiuretic hormone, which helps control body water balance through its effect on the kidneys

- Oxytocin which triggers the contractions of the uterus that happen during labor

The pituitary also secretes endorphins chemicals that act on the nervous system and reduce feelings of pain. It also secretes hormones that signal the reproductive organs to make sex hormones. The pituitary gland also controls ovulation and the menstrual cycle in women.

Pineal glandis in the middle of the brain. It secretes melatonin a hormone that may help regulate when you sleep at night and when you wake in the morning.

Thyroid gland: the thyroid is in the front part of the lower neck. It's shaped like a bow tie or butterfly. It makes the thyroid hormones thyroxine and triiodothyronine. These hormones control the rate at which cells burn fuels from food to make energy. The more thyroid hormone there is in the bloodstream, the faster chemical reactions happen in the body. Thyroid hormones are important because they help kids' and teens' bones grow and develop, and they also play a role in the development of the brain and nervous system.

Thymus gland is located in the upper torso, the thymus is active until puberty and produces hormones important for the development of a type of white blood cell called a T cell.

Adrenal gland, these two triangular gland sit on top of each kidney. The adrenal glands have two parts, each of which makes a set of hormones and has a different function:

- The outer part is the **adrenal cortex**. It makes hormones called corticosteroids that help control salt and water balance in the body, the body's response to stress, metabolism, the immune system, and sexual development and function.
- The inner part is the **adrenal medulla.** It makes catecholamines such as epinephrine Also called adrenaline, epinephrine increases blood pressure and heart rate when the body is under stress.

Testis male gonads are in the scrotum, secrete androgens the most important of which is testosterone. These hormones tell a guy's body when it's time to make the changes associated with puberty, like penis and height growth, deepening voice, and growth in facial and pubic hair. Working with hormones from the pituitary gland, testosterone also tells a guy's body when it's time to make sperm in the testes.

Ovaries are female reproductive gland which are located in the pelvis. They make eggs and secrete the female hormones oestrogen and progesterone. Oestrogen is involved when a girl starts puberty. During puberty, a girl will have breast growth, start to accumulate body fat around the hips and thighs, and have a growth spurt. Oestrogen and progesterone are also involved in the regulation of a girl's menstrual cycle. These hormones also play a role in pregnancy.

3) Assessment of patient suspected of having endocrine disorder you should perform history taking and physical examination including inspection, palpation, auscultation and percussion.

2.5. List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
1	Specific history taking on endocrinology system	▪ Outline relevant questions to assess Endocrine system ▪ Collect relevant information specific to Endocrine system	2
2	General survey in endocrinology system	▪ Describe different techniques of physical examination applied to Endocrine system	2
3	Physical examination of Endocrine system	▪ Use different techniques to conduct client physical exam on endocrine system	2
4	Interpretation of specific findings in endocrine system	▪ Analyse data collected from the client health assessment of Endocrine system	2
5	Identification of client problem	▪ Analyse data collected from the client health assessment of Endocrine system	2
6	Nursing intervention based on client problem	▪ Identify different nursing interventions based of patient problem.	2
7	Skills lab (if necessary)		3
	Assessment		

Lesson 1: Specific history taking on endocrinology system

a) Learning objectives

At the end of this lesson, learner should be able to:

- Outline relevant questions to assess Endocrine system
- Collect relevant information specific to Endocrine system

b) Teaching resources

Books of fundamental of nursing and internet.

c) Prerequisites/Revision/Introduction

Student must have basic knowledge on health assessment and anatomy and physiology of endocrine glands.

d) Learning activities 2.1.

Guidance

Teacher will form a group of five students, then show the printed photo of activity and request them to discuss in group and respond to the requested question.

Answers to learning activity 2.1

1) **Answer:** In the presented picture there is a nurse who is taking a history of the patient to ward her illness.
2) **Answer:** A personal history in endocrinology system is similar like other assessment and may include information about history of present illness, allergies, surgeries, immunizations.

Answers to self -assessment 2.1

1) a. True
2) c. Frequent urination

Lesson 2: General survey in endocrinology system

This is the second lesson of Unit 6 of assessment of endocrine system will cover different techniques of physical examination applied to endocrine system.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Describe different techniques of physical examination applied to endocrine system.

b) Teaching resources

Books of fundamental of nursing from library, Internet, computer, projector, mannequin.

c) Prerequisites/Revision/Introduction

The students need to know health assessment, physical examination steps and anatomy and physiology of endocrine glands**.**

d) Learning activities 7.2.

Guidance

- Teacher will project the images of given activity.
- Ask the students to sit in groups of 5 to reflect and discuss on questions related to the given images.
- The teacher will brainstorm answers from each group and orient their ideas toward survey in endocrinology system.
- At the end the teacher will sum up student answers and then give more clarification on the survey in endocrinology system.
- All students will be allowed to ask questions and get feedback from their teacher.

Answers of Learning activity 2.2

1) Both image and B are not looking normal, because the image A show a person with shortest height and the image B show tallest man.
2) In order to know origin of the height of these patients the nurse should focus on general appearance of a patient, severity of disease, and the patient's values, social status, and personality

Answers to self-assessment 2.2.

1) While conducting general survey on endocrine system you should focus on facies features and expression, Build & Stature, Nutrition, Decubitus, Neck vein, Neck glands, Anaemia, Cyanosis, Clubbing, Jaundice, Oedema, Pulse,

Respiration, Temperature, BP, Generalized skin &nail, Extremities-Specific

2) Very short stature will be seen in dwarfism, pseudohypoparathyroidism, Turner's syndrome, or prepubertal steroid therapy

Lesson 3*: Physical exam of endocrine system*

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Use different techniques to conduct client physical exam on endocrine system

b) **Teaching resources**

Books from library, Internet, Manikins, gloves, screen for protection and video show.

c) **Prerequisites/Revision/Introduction**

Students will learn better the techniques of physical examination of endocrine system if they have prior knowledge and skills on ethic and professional code of conduct, patient positioning, anatomy and physiology of endocrine glands and health assessment.

d) **Learning activities 2.3**

Guidance

- Teacher will project a photo of activity in front of the students showing images of activity.
- Ask the students to sit in groups of 5 to observe the images and respond the related questions.
- Each group will delegate a presenter to expose their responses
- After each presentation they create an open discussion for questions, comments and teacher's clarification will be added.
- After that presentation the student will have time to ask the questions.

Answers of learning activity 2.3

1) The image above show palpation of the anterior part of the neck.

2) Palpation helps health care professional to assess for texture, tenderness, temperature, moisture, pulsations, masses, and internal organs.

Answers to Self-assessment 2.3

1) 2 examples of organs that can be assessed during palpation in endocrine system are thyroid and testis.
2) Other endocrine organs of the human body are: Pancreas , ovaries ,thymus, pituitary ,kidney

Lesson 4: Interpretation of specific findings in endocrine system

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Analyse data collected from the client health assessment of Endocrine system

b) **Teaching resources**

Books from library**,** Internet, manikins, gloves, screen for protection and video show**.**

c) **Prerequisites/Revision/Introduction**

Students will learn better the techniques interpretation of specific findings in endocrine system if they have prior knowledge and skills on general health assessment, anatomy and physiology of endocrine system, surgical and medical pathology, patient positioning**.**

d) **Learning activities 2.4.**

Guidance

- Teacher will project a photo of activity in front of the students showing images of activity.
- Ask the students to sit in groups of 5 to observe the images and respond the related questions.
- Each group will delegate a presenter to expose their responses
- After each presentation they create an open discussion for questions, comments and teacher's clarification will be added.

Answers of learning activity 2.4

The image in the given activity, show a male patient with physical appearance of female characteristic as has developed breast and pelvis.

Answers to Self-assessment 2.4.

1) Through patient's behaviour observation patient with hyperthyroidism is manifested by restless and agitation however the patient with hypothyroidism is slow and lethargic.
2) Patient with thyrotoxicosis will experience Tachycardia and atrial fibrillation.
3) True, the Patient with thyrotoxicosis will experience Tachycardia and atrial fibrillation.
4) Five Serious symptoms that might indicate a life-threatening endocrine condition are:
   - Confusion or loss of consciousness.
   - Severe low blood pressure (extreme hypotension),
   - Severe bradycardia
   - Dehydration,
   - Depression
   - Anxiety,
   - Difficulty breathing,

Lesson 5: Identification of client problem

a) **Learning objectives**

At the end of the lesson, student will be able to Analyse data collected from the client health assessment of endocrine system.

b) **Teaching resources**

- Books from library
- Internet and video show

c) **Prerequisites/revision/introduction**

To learn this lesson of identification of client problem in endocrine system, students must have basic knowledge on health assessment, anatomy and physiology of endocrine system, vital signs monitoring, surgical and medical pathology

d) **Learning activity 2.5**

Guidance

Teacher will project an image of activity and related questions, and the student in their groups of five will discuss on them and respond them on piece of paper. Each

group will delegate a presenter to expose their responses. After each presentation they create an open discussion for questions, comments and teacher's clarification will be added.

Answer to the learning activity 2.5

1) image A has two people, one has anterior neck mass and the other doesn't have any problem on his neck.
2) In image B, there is a people with posterior neck mass.
3) the difference between A and B ,is that in the image A ,there is an anterior big mass but in image B, the mass is located in posterior area of the neck .

Answer to the self-assessment 2.5.

1) answers:
   - Gigantism
   - Hyperthyroidism.
   - Hypothyroidism
2) Answer:
   - A problem with the endocrine feedback system
   - Disease
   - Failure of a gland to stimulate another gland to release hormones
   - A genetic disorder,
   - Infection
   - Injury to an endocrine gland
   - Tumor of an endocrine gland
3) Another name of acromegaly is Gigantism. It occurs if the pituitary gland produces too much growth hormone, a child's bones and body parts may grow abnormally fast. If growth hormone levels are too low, a child can stop growing in height.
4) Five Serious symptoms that might indicate a life-threatening endocrine condition are:
   - Confusion or loss of consciousness.
   - Severe low blood pressure (extreme hypotension),
   - Severe bradycardia
   - Dehydration,
   - Depression
   - Anxiety,
   - Difficulty breathing

Lesson 6: Nursing intervention based on client problem

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Identify different nursing intervention toward endocrine disorder.

b) **Teaching resources**

Books from library, Internet, manikins, gloves, screen for protection and video show**.**

c) **Prerequisites/Revision/Introduction**

To learn this lesson of nursing intervention based on client problem, student must have basic knowledge on health assessment, anatomy and physiology of endocrine system, infection prevention and control, vital signs monitoring, drug administration, surgical and medical pathology, patient positioning, bed bath and bed making**.**

d) **Learning activities 2.6.**

Guidance

- Teacher will project the question of activity, and the student in their groups of five will discuss on them and respond them on piece of paper. Each group will delegate a presenter to expose their responses. After each presentation they create an open discussion for questions, comments and teacher's clarification will be added.

Answers of learning activity 2.6

1) The diagnosis of this patient is hypothyroidism
2) Nursing management of hypothyroidism including:

Promote rest. Space activities to promote rest and exercise as tolerated.

Protect against coldness. Provide extra layer of clothing or extra blanket.

Avoid external heat exposure. Discourage and avoid the use of external heat source.

Mind the temperature. Monitor patient's body temperature.

Increase fluid intake. Encourage increased fluid intake within the limits of fluid restriction.

Provide foods high in fiber.to prevent constipation

Manage respiratory symptoms. Monitor respiratory depth, rate, pattern, pulse oximetry, and ABG.

Pulmonary exercises. Encourage deep breathing, coughing, and use of incentive spirometry.

Orient to present surroundings. Orient patient to time, place, date, and events around him or her.

Answers of Self –assessment 2.6

1) 5 actions of nurse in prevention of infection for the patient with endocrine disorders are:

- Monitoring of systemic and localized signs and symptoms of infection
- Provide private room.
- Maintain asepsis for patient at risk during nursing care.
- Screen all visitors for communicable diseases to reduce the risk of infection exposure.
- Teach patient and family members how to avoid infections (e.g., hand washing).
- Teach the patient and family about signs and symptoms of infection and when to report them to the health care provider.

2) c

2.6. Summary of the unit

This unit entitled “Human Nutrition and Dietetics” aimed at enabling nurse students to “assist adequately in preparation of a balanced diet to community, family and individuals”. In order to achieve this competence, the unit discussed breast feeding – its advantages and contraindications and teaching points; formula feeding; and Supplementary feeding which should starts in normal way after six months of exclusive breast feeding. The discussed topics include also special considerations in childhood and adolescent period. An increased need in calories and other nutrients like proteins, vitamins and minerals is observable during childhood and parents have to be carefully about the eating habits of those children in order to help them to eat health foods. Anorexia Nervosa and bulimia are the main eating disorders occurring during adolescent age.

A balanced diet during pregnancy and lactation has to be taken into consideration for improving mothers and child health. Nutrition plays an important role in health maintenance, rehabilitation, and prevention and control of disease among elderly people. It is important to provide a well-balanced diet to older adults while considering their normal physiologic changes as they are aging. The psychosocial and pathologic changes commonly seen in aging have impact on elderly people’s nutritional status. The nutritious foods availability, their mode of conservation, good eating habits and food choice promote a healthy life. The other aspects discussed

are vitamins and minerals deficiencies, protein-energy malnutrition and over-nutrition conditions and their management. The unit ends with nutrition assessment and the techniques of oral feeding and nasogastric feeding for people in needs.

2.7. Additional information for the teacher

In order to teach effectively the nursing procedures included in this unit, the teacher has to master basic skills in fundamentals of nursing such as oral feeding, nasogastric tube feeding, etc.

Even though this unit focuses on nutrition and dietetics, some maternal child health related topics were included into the unit. Therefore, the teacher is expected to have enough prior knowledge and skills in antenatal care and postnatal care, Children development stages (from neonatal age, infant, toddlers, pre-schooler age, school age and adolescent) including their physical and psychosocial development.

2.8. Answers of the end unit assessment

Answers to the end unit assessment questions

1) Hormones produced by each gland in the diagram mentioned in SB

Endocrine glands	Hormone produced	Role
Hypothalamus gland		The hypothalamus make chemicals that control the release of hormones secreted from the pituitary gland.
Pituitary gland	growth hormone	stimulates the growth of bone and other body tissues and plays a role in the body's handling of nutrients and minerals
	Prolactin	activates milk production in women who are breastfeeding
	Thyrotropin	stimulates the thyroid gland to make thyroid hormones.
	corticotropin	which stimulates the adrenal gland to make certain hormones
	antidiuretic hormone	which helps control body water balance through its effect on the kidneys
	oxytocin	which triggers the contractions of the uterus that happen during labor
	Endorphins chemicals	Act on the nervous system and reduce feelings of pain. It also secretes hormones that signal the reproductive organs to make sex hormones. The pituitary gland also controls ovulation and the menstrual cycle in women.
Pineal gland	melatonin	It help regulate when you sleep at night and when you wake in the morning.

Thyroid gland Thyroid hormones are important because they		thyroxine and triiodothyronine.	These hormones control the rate at which cells burn fuels from food to make energy. help kids' and teens' bones grow and develop, and they also play a role in the development of the brain and nervous system. The more thyroid hormone there is in the bloodstream, the faster chemical reactions happen in the body.
Thymus gland			produces hormones important for the development of a type of white blood cell called a T cell.
Adrenal gland **adrenal medulla**	**adrenal cortex**	corticosteroids	help control salt and water balance in the body, the body's response to stress, metabolism, the immune system, and sexual development and function.
	catecholamine such as epinephrine Also called adrenaline,	increases blood pressure and heart rate when the body is under stress.	

Testis		secrete androgens testosterone	These hormones tell a guy's body when it's time to make the changes associated with puberty, like penis and height growth, deepening voice, and growth in facial and pubic hair. Working with hormones from the pituitary gland, testosterone also tells a guy's body when it's time to make sperm in the testes.
Ovaries		oestrogen and progesterone	Oestrogen is involved when a girl starts puberty. Help in development of breast, accumulate body fat around the hips and thighs, and have a growth spurt. Oestrogen and progesterone are also involved in the regulation of a girl's menstrual cycle. These hormones also play a role in pregnancy.
pancreas	**Alpha cells**	secrete glucagons	to raise blood glucose level.
	beta cells	secrete insulin	to lower blood glucose level.

2) Result of overproduction and hypoproduction of each gland in the SB

Endocrine glands			Hormone produced	Hypo secretion	Hyper secretion	
Hypothalamus gland						
Pituitary gland			growth hormone(GH)	hypo secretion causes Dwarfism	Hyper secretion of it during childhood causes Gigantism and hypersecretion during adulthood causes Acromegaly,	
	Prolactin(PRL)or Lactogenic hormone (LTH) --	hyposecretion causes poor milk production in female].	Hypersecretion can disrupt normal menstrual cycles in female and causes impotence in male;			
	Thyrotropin or Thyroid-stimulating hormone(TSH)	hyposecretion causes cretinism in children and myxedema in adults.	Hypersecretion causes Grave's disease,			
	Adrenocorticotropic hormone (ACTH)	hyposecretion is rare	Hypersecretion causes Cushing's disease			
	Antidiurectic hormone (ADH)	hyposecretion causes frequent urination called diabetes insipidus]	Hypersecretion has no know effects			

	oxytocin	hyposecretion cause weak labor contraction .		Hypersecretion disorders are rare and have no known effects.	
	Follicle-stimulating hormone (FSH) -- [while	hyposecretion can cause failure of sexual maturation]		Hypersecretion causes no known effects,	
	Melanocyte-stimulating hormone (MSH)	hyposecretion causes abnormally light skin pigment].		Hypersecretion causes abnormally dark skin pigment,	
Pineal gland			melatonin		
Thyroid gland			ThyroxineT3 and triiodothyronine. T4	Hyposecretion causeshypothyroidism, similar to cretinism and myxedema	hypersecretion causes hyperthyroidism that results in a goiter or in Graves' disease.
	Calcitonin			Both hyposecretion and hypersecretion would affect normal balances of calcium and phosphate	
Parathyroid gland			parathyroid hormone (PTH)	Hyposecretion causes tetany,	hypersecretion causes osteitis fibrosa cystic.

Thymus gland				
Adrenal gland	**adrenal cortex.**	Cortisol	hyposecretion causes Addison's disease ,	hypersecretion causes Cushing's syndrome
	adrenal medulla	catecholamines such as epinephrine Also called adrenaline,	No known effects are due to hyposecretion	hypersecretion can caused hypertension, increased blood glucose level , and high heart rate].
Testis		secrete androgens testosterone		Both hyposecretion and hypersecretion and will have broad effects in male reproduction
Ovaries		oestrogen and progesterone		Both hyposecretion and hypersecretion will have broad effects in female reproduction].
pancreas	**Alpha cells**	secrete glucagons		
beta cells	secrete insulin	Hyposecretion causes diabetes mellitus where excessive glucose is present in urine,	and hypersecretion causes hyperinsulinism.	

3) Component of history taking in endocrine assessment

a. History regarding illness

The health care professional asks the patient how and when the disease started. What are aggravating factors and what are alleviating factors of the disease.

b. personal history

A personal history in endocrinology system is similar like other assessment and may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams, tests, and screenings.

c. Family history

Family history is crucial in endocrinology system because a mutated gene causes different endocrine glands in the body to develop benign and cancerous neuroendocrine tumors. Furthermore, many endocrinology systems develop along with a family because some families are exposed to develop a given disease example of diabetes.

d. Social history

The social history covers the patient's lifestyle, such as marital status, occupation, education, and hobbies. It may also include information about the patient's diet, use of alcohol or tobacco, and sexual history. Along with the chance to connect with the patient as a person, the social history can provide vital early clues to the presence of disease, guide physical exam and test-ordering strategies, and facilitate the provision of cost-effective, evidence-based care.

e. Subjective Data and objective data

Ask the patient symptoms he /she is feeling and the patient can accuse one or more of the following symptoms: dizziness, fatigue or lethargy, weight gain or loss, changes in vision, feelings of depression, irritability, or anxiety, decreased libido, change in appetite, pain, nausea and vomiting, changes in urinary or bowel habits, intolerance to heat or cold. Objective data will focus on endocrinology system which will be discussed in this unit. Always assess patient from head to toe.

4) 1B
2E
3D
4A
5C
6G
7F

2.9. Additional activities

2.9.1. Remedial activities

1) What is endocrine system
2) Outline the components of history taking during assessment of endocrine system
3) Explain the social history in the context of endocrine system

Answers to the remedial activities

1) The endocrine system is a series of glands and tissues that produce and secrete hormones, which are used by the body to regulate and coordinate vital bodily functions, including growth and development, metabolism, sexual function and reproduction, sleep and mood.
2) The history regarding illness, personal history, family history and social history, Objective data and Subjective data
3) The social history covers the patient's lifestyle, such as marital status, occupation, education, and hobbies. It may also include information about the patient's diet, use of alcohol or tobacco, and sexual history. Along with the chance to connect with the patient as a person, the social history can provide vital early clues to the presence of disease, guide physical exam and test-ordering strategies, and facilitate the provision of cost-effective, evidence-based care

2.9.2. Consolidation activities.

1) What nurse will be looking for while inspecting the endocrine system?
2) Firm lymph nodes near a goitre suggest what of the following?
    a. Thyroid cancer.
    b. Thyroid tumour
    c. Thyroid oedema
    d. Thyroid mass
3) Thyroid bruit indicates abnormally high blood flow; this occur in which disease among the following?
    a. hyperthyroidism.
    b. Hypothyroidism
    c. Hypopituitarism
    d. Hyper parathormone

4) Mainly glands synthesize hormones which are released into the circulation and act at distant sites

   a. True

   b. false

Answers to the consolidation activities

1) During inspection, a nurse inspects overall patient and note any abnormalities. He/she looks for generalized appearance, Skin color, any lesion and its location, bruises or rashes, body shape and symmetry, Size of body parts, any abnormal sounds, any abnormal odors, Inspect the neck from the front.
2) a
3) a
4) True

2.9.3. .Extended activities

Explain the following endocrine disorders

1) Hyperthyroidism
2) Hypothyroidism
3) Acromegaly
4) Addison's disease
5) Grave's disease

Answer to the extended activities

1) Hyperthyroidism: This is the Result of too much thyroid hormone. This rise everything up. You can feel anxious, experience insomnia and get hot, sweaty and flushed. You can lose weight without meaning and develop heart palpitations.

2) Hypothyroidism: occur when thyroid gland is not produce enough thyroid hormone. This is down everything and is characterised by fatigued, depression and hypersensitive to cold, weight gain and constipation.

3) Acromegaly: Acromegaly is an endocrine disorder caused by prolonged, excessive secretion of growth hormone by the pituitary gland characterized by overgrowth of body tissues, including broadening and enlargement of facial features and an increase in the size of the hands and feet.

4) Addison's disease also called adrenal insufficiency, occurs when adrenal

glands, located just above the kidneys, produce too little cortisol and, often, too little aldosterone. Addison's disease symptoms usually develop slowly, often over several months.

Often, the disease progresses so slowly that symptoms are ignored until a stress, such as illness or injury, occurs and makes symptoms worse. Signs and symptoms may include: Extreme fatigue, Weight loss and decreased appetite, darkening of your skin (hyperpigmentation), Low blood pressure, even fainting, Salt craving, Low blood sugar (hypoglycemia), Nausea, diarrhea or vomiting (gastrointestinal symptoms), Abdominal pain, Muscle or joint pains, Irritability, Depression or other behavioral symptoms, Body hair loss or sexual dysfunction in women.

5) **Graves' disease** is the most common cause of hyperthyroidism. It is an autoimmune disease in which your immune system sees the thyroid as a foreign body and attacks it. The disease causes the thyroid to grow and release too much hormone. Some people with Graves' disease also have bulging eyes due to swelling of the tissues around them

UNIT 3 NURSING ASSESSMENT OF NEUROLOGICAL SYSTEM

3.1. Key unit competence

Take appropriate action based on findings of nursing assessment of neurological system

3.2. Prerequisites (knowledge, skills, attitudes and values)

Students will learn better to take appropriate action based on findings of nursing assessment of neurological system if they have understanding of:

- Anatomy and physiology: the students should be able to recall anatomy and physiology related to, nervous system,
- *Nursing Ethics and Professional Code of Conduct*: The students should be able to recall and relate concepts of ethics and professional conduct to fundamental of nursing. Understanding the Nursing ethics and professional code of conduct will guide learners in making correct decision while performing neurological assessment.
- Also, the anatomy and physiology of integumentary system. Request them to review these concepts and system.

Anatomy refers to the internal and external structures of the body and their physical relationships, whereas physiology refers to the study of the functions of those structures. The nervous system is a complex network of nerves and nerve cells (neurons) that carry signals or messages to and from the brain and spinal cord to different parts of the body. It is made up of the central nervous system and the peripheral nervous system.

3.3. Cross-cutting issues to be addressed

Throughout teaching this unit you should relate the content being taught with the following cross-cutting issues:

e) Environment and sustainability

Nursing assessment related wastes might contain potentially harmful microorganisms that can spread in the environment and infect the habitat of all populations living organisms. Consequently, some living organism might die as a consequence of such infection. Therefore, emphasize to learners that such wastes should be appropriately handled and treated to protect and sustain the environment.

f) Inclusive education

To ensure that learning is inclusive, as a facilitator: Place learners with visual impairment in appropriate places. Those with short-sightedness (myopia) must sit on front desks in class. If you have children with impaired vision, remember to print in appropriate font size (large print). Those with long sightedness must sit on back desks

g) Gender

This course requires the participation of both girls and boys. Make sure that all learners are actively involved not only boys or girls. Gender is a socially constructed perception about the roles that men and women play in a particular culture. Gender differences involve power relations in terms of who takes decisions. The teacher will encourage the students to have in mind that gender disparities is prohibited in their interventions to avoid unequal access to quality health care. He will also take in account that gender could not bring the differences in achievement between males and females. He has to raise awareness in considering and recognizing that there is a women and girls' added vulnerability in psychological status. thus they are affected.

h) Peace and values

Throughout the lessons, the teacher will remind the students the importance of having an attitude that inspires peace and serenity. He/she will debate with students how to resolve inter-personal tensions, disputes through negotiation and peer-mediation. He will invite them to maintain a climate of peace in the school and different interventions in which they are involved.

i) Comprehensive sexuality education

The teacher will explain to the students that, it is very important and crucial to take in account about the issues related to the sexuality, because the student who is assessing patient neurologically may perform it to the different sex, therefore the students will perform it bearing in mind that it is their responsibilities to know that everyone has the right to sexual health and privacy. However, remind the students that there are the sexual transmitted diseases that they need to protect themselves from contamination during assessment.

3.4. Guidance on the introductory activity

Before starting to teach this unit of neurological assessment ask students to attempt the introductory activity of the unit. This introductory activity intends to:

- Relate the unit with students' past life experience to attract their attention
- Assess what is already known by students regarding growth and development

As a facilitator, ask the students to observe the pictures of introductory activity and encourage them to attempt answering asked questions grounded from their past experience whether they have been leaned neurologic system anatomy and physiology. Let the students know that there is no wrong answer from students as their responses are based on their past experiences. Allow students to have 2 to 3 min for observation and reflection on the pictures, then allow them to express their ideas. Consider their ideas and build on them to inform what they will learn in this unit.

Methodological steps to the introductory activity

As a facilitator, request learners to:

- Carefully observe the figures 3.1 in the student book
- In group or in pairs, request them to answer the questions related to the figures.
- Each group records the answers. Let the learners know that there are no wrong answers
- Appoint randomly any 2 groups to write their answers on the chalkboard or flipchart.
- Ask other groups members if they have something to add on what is written on the chalkboard or flipchart.

Expected answers to the introductory activity

1) On the picture a there is a picture of the brain
2) On the picture b are two kids playing
3) The brain especially the cerebrum initiates and coordinates all movements including playing movements

3.5. List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
1	Specific history taking on Neurological system	Collect relevant information specific to Neurological system	2
2	Specific physical examination of neurological system	Describe and explain different techniques of physical examination applied to Neurological system	1
3	Interpretation of specific findings on Neurological system	Analyze data collected from the client health assessment of Neurological system	2

4	Identification of client problems	Outline and understand relevant questions to assess Neurological system Identify neurological problems.	1
5	Nursing intervention based on patient's problem	Demonstrate understanding Nursing interventions basing on the patient's problem.	2
6	End unit assessment (theoretical assessment	Understanding of the neurological assessment steps and procedures.	2
7	Self-learning in Simulation lab	Perform neurological physical exam appropriately by using different techniques.	2
8	Practical assessment (OSCE)		1

Lesson 1: Specific history taking on Neurological system

This is the first lesson of the unit which should be tough in 1 period and it should also cover the **content** of **specific history taking on Neurological system.**

a) **Learning objectives**

At the end of the lesson, learners will be able to: Collect relevantinformation specific to Neurological System.

b) **Teaching resources**

The needed teaching resources are: computer, projector, illustrated pictures in the students' book and pictures for Learning activity, manila paper and or flipchart, black board and chalk.

c) **Prerequisites/Revision/Introduction**

Students will learn better the content of this lesson if they have a good understanding of anatomy and physiology of neurological system.

d) **Learning activity 3.1**

Guidance

- Before introducing the lesson, you have to introduce the whole unit.
- As a facilitator, form groups of 5 students depending on their class size
- Ask learners to attempt the attempt activity.3.1
- Move around groups guiding and facilitating them

- In mixed class, remember to form groups that contain both boys and girls as well as in presentation.
- The learning activity 3.1 is written in students' book. However, you can use the pictures and ask more questions to the learners.
- Select like 3 groups to share their answers to the whole class by requesting one student to write them on the chalkboard or flipchart.
- Ask the remaining groups to add any ideas on what other groups have presented.
- Allow the class to ask questions related to the presented topic.
- Firstly, request the members of groups which have presented to respond to the questions; secondly, if they are not able to clarify, ask the same question to other groups; finally, if all groups are not able to respond, deliver the answer to the whole class by writing on the chalkboard or flipchart and speaking loudly so that those who have low hearing ability or visual impairment get what you say.

Answers to learning activity 3.1

1) The person on the picture works using crutches and the right leg is slimer than the left leg.
2) What happened to you? When the problem started? What are associated problems do you have?

Answers to self -assessment 3.1

1) Ask about the symptoms: What are they? Which part of the body do they affect? Are they localized or more widespread? When did they start? How long do they last for? Were they sudden, rapid or gradual in onset?
2) Always start with demographic data such as name, age, sex, educational background, marital status, religion and address. Ask the patient history of the presenting illness, duration, course of the conditions, associated symptoms (other features of neurological disease). Then assess all cranial nerves.

Lesson 2: Specific physical examination of neurological system

a) Learning objectives

At the end of the lesson, students will be able to: Perform effectively and explain different techniques of physical examination applied to Neurological system.

b) Teaching resources

The needed teaching resources are: computer, projector, illustrated pictures in the students' book and pictures for Learning activity, manila paper and or flipchart, black board and chalk

c) Prerequisites/Revision/Introduction

Students will learn better the content of this lesson if they have a good understanding of basic concepts of neurological assessment

d) Learning activities 3.2.

Guidance

- As a facilitator, form groups of 5 students depending on their class size
- Ask students to attempt the attempt learning activity 3.2
- Move around groups guiding and facilitating them
- In mixed class, remember to form groups that contain both boys and girls as well as in presentation.
- The learning activity 3.2, is written in students' book. However, you can use the pictures and ask more questions to the students.
- Select like 3 or 4 groups to share their answers to the whole class by requesting one student to write them on the chalkboard or flipchart.
- Ask the remaining groups to add any ideas on what other groups have presented.
- Allow the class to ask questions related to the presented topic.
- Firstly, request the members of groups which have presented to respond to the questions; secondly, if they are not able to clarify, ask the same question to other groups; finally, if all groups are not capable to answer, provide the answer to the whole class by writing on the chalkboard or flipchart and speaking loudly so that those who have low hearing ability or visual impairment get what you say..

Answers of Learning activity 3.2

1) The image is showing a patient lying down with abnormal legs and arms flexion

Answers to self-assessment 3.2.

1) Seven steps of complete neurological assessment are Mental Status, Cranial nerve assessment, Reflex testing, Motor system assessment, Sensory system assessment and Coordination

Lesson 3: Interpretation of specific findings on Neurological system

a) **Learning objectives**

At the end of the lesson, students will be able to Analyze data collected from the client health assessment of Neurological system

b) **Teaching resources**

The needed teaching resources are: computer, projector, illustrated pictures in the students' book and pictures for Learning activity, manila paper and or flipchart, black board and chalk.

c) **Prerequisites/Revision/Introduction**

Students will learn better the content of this lesson if they have a good understanding of basic concepts of neurological assessment and specific physical examination of neurological system.

d) **Learning activities 3.3**

Guidance

- As a facilitator, form groups of 5 students depending on their class size
- Ask students to attempt the attempt learning activity 3.3
- Move around groups guiding and facilitating them
- In mixed class, remember to form groups that contain both boys and girls as well as in presentation.
- The learning activity 3.3, is written in students' book. However, you can use the pictures and ask more questions to the students.
- Select like 3 or 4 groups to share their answers to the whole class by requesting one student to write them on the chalkboard or flipchart.

- Ask the remaining groups to add any ideas on what other groups have presented.
- Allow the class to ask questions related to the presented topic.
- Firstly, request the members of groups which have presented to respond to the questions; secondly, if they are not able to clarify, ask the same question to other groups; finally, if all groups are not capable to answer, provide the answer to the whole class by writing on the chalkboard or flipchart and speaking loudly so that those who have low hearing ability or visual impairment get what you say.

Answers of learning activity 3.3

1) The most cranial nerve affected is the seven cranial nerves

Answers to Self-assessment 3.3

1) Assess the patient orientation to time, place, and person.
2) 1st Cranial nerve: Smell: sensory nerve that functions for the sense of smell.

2nd Cranial nerve: Vision: it transmits sensory information for vision in the form of electrical impulses from the eye to the brain.

4th cranial nerve: Eye movement: Motor function, controlling external eye movements

11th cranial nerve: Motor and voice: Provides motor function (movement) to two muscles essential to neck and shoulder movement, the sternocleidomastoid (SCM) and the trapezius, as well as to the larynx (voice box) and other structures in the throat

12th cranial nerve: Tongue movement.: it controls the hyoglossus, intrinsic, genioglossus and styloglossus muscles. These muscles help you speak, swallow and move substances around in your mouth

Lesson 4: Identification of client problems

This is the fourth lesson of the unit which should be tough in 1 period and it should also cover the identification of client problems.

a) **Learning objectives**

At the end of the lesson, learners will be able to:

- Outline and understand relevant questions to assess Neurological system
- Identify neurological problems.

b) **Teaching resources**

The needed teaching resources are: computer, projector, illustrated pictures in the students' book and pictures for Learning activity, manila paper and or flipchart, black board and chalk.

c) **Prerequisites**

Students will learn better the content of this lesson if they have a good understanding of anatomy and physiology of neurological system.

d) **Learning activities 3.4.**

Guidance

- Before introducing the lesson, you have to introduce the whole unit.
- As a facilitator, form groups of 5 students depending on their class size
- Ask learners to attempt the attempt activity.3.4
- Move around groups guiding and facilitating them
- In mixed class, remember to form groups that contain both boys and girls as well as in presentation.
- The learning activity 3.4. is written in students' book. However, you can use the pictures and ask more questions to the learners.
- Select like 3 groups to share their answers to the whole class by requesting one student to write them on the chalkboard or flipchart.
- Ask the remaining groups to add any ideas on what other groups have presented.
- Allow the class to ask questions related to the presented topic.
- Firstly, request the members of groups which have presented to respond to the questions; secondly, if they are not able to clarify, ask the same question to other groups; finally, if all groups are not able to respond, provide the answer to the whole class by writing on the chalkboard or flipchart and speaking loudly so that those who have low hearing ability or visual impairment get what you say..

Answers of learning activity 3.4

1) I can suspect that the patient has a problem in neurological system

Answers to Self-assessment 3.4.

1) Memory loss is a common complaint:
   a) True
   b) False

3) Parkinson's disease is a progressive nervous system disorder that primarily affects coordination
   a) True
   b) False

3) Six common neurological disorders are headaches, Epilepsy and Seizures, Stroke, Amyotrophic Lateral Sclerosis (ALS), Alzheimer's Disease and Dementia and Parkinson's Disease.

Lesson 5: Nursing intervention based on patient's problem

This is the fifth lesson of the unit which should be tough in 2 periods and it should also cover the Nursing interventions based on patient's problems

a) **Learning objectives**

At the end of the lesson, learners will be able to: demonstrate understanding of Nursing interventions basing on the patient's problem

b) **Teaching resources**

The needed teaching resources are: computer, projector, illustrated pictures in the students' book and pictures for Learning activity, manila paper and or flipchart, black board and chalk.

c) **Prerequisites/Revision/Introduction**

Students will learn better the content of this lesson if they have a good understanding of anatomy and physiology of neurological system.

d) **Learning activities 3.5.**

Guidance

- Before introducing the lesson, you have to introduce the whole unit.
- As a facilitator, form groups of 4 or 5 students depending on their class size
- Ask learners to attempt the attempt activity.3.5
- Move around groups guiding and facilitating them

- In mixed class, remember to form groups that contain both boys and girls as well as in presentation.
- The learning activity 3.5 is written in students' book. However, you can use the pictures and ask more questions to the learners.
- Select like 3 groups to share their answers to the whole class by requesting one student to write them on the chalkboard or flipchart.
- Ask the remaining groups to add any ideas on what other groups have presented.
- Allow the class to ask questions related to the presented topic.
- Firstly, request the members of groups which have presented to respond to the questions; secondly, if they are not able to clarify, ask the same question to other groups; finally, if all groups are not able to respond, provide the answer to the whole class by writing on the chalkboard or flipchart and speaking loudly so that those who have low hearing ability or visual impairment get what you say.

Answers of learning activity 3.5

1) Never try to do any intervention to try stopping seizure. However, remove all object that can harm the patient

Answers of Self –assessment 3.5

1) When the epileptic seizures cease, place the patient in the recovery position (also called lateral position)

2) **Headache**: Encourage the client to rest in a quiet, dark room, avoid noises, encourage relaxation techniques, collaborate with other health professionals to identify and treat the cause of headache

Epilepsy/Seizure: Control and assess in the patient: assess the duration of the seizure, type of seizure, the level of consciousness, the coloring of the skin and mucous membranes, provide oxygen

stroke: When a patient is having stroke, immediately call for ambulance because as he/she delays to get appropriate treatment, more serious complications develop, Note the time the first symptom occurs, Provide appropriate positioning.

3.6. Summary of unit

The neurologic assessment is key component to be assessed for every patient and it can be organized into 7 classes: mental status, cranial nerves, motor system,

reflexes, sensory system, coordination, and station and gait. The mental status is an extremely important part of the neurologic examination that is often unobserved. It is the responsibility of health care providers to assess neurological system carefully in order to have a correct diagnosis and prevent unnoticed further complications.

3.7. Additional information for teachers

Teacher should have knowledge on the following additional information:

3.7.1. The Neurologic History

The neurologic history is the most important component of neurologic diagnosis. A careful history frequently determines the etiology and allows one to begin localizing the lesion(s), aiding in the determination if the disease is diffuse or focal. Symptoms of acute onset suggest a vascular etiology or seizure; symptoms that are subacute in onset suggest a mass lesion such as a tumor or abscess; symptoms that have a waxing and waning course with exacerbations and remissions suggest a demyelinating etiology; while symptoms that are chronic and progressive suggest a degenerative disorder.

The history is often the only way of diagnosing neurologic illnesses that typically have normal or non-focal findings on neurologic examination. These illnesses include many seizure disorders, narcolepsy, migraine and most other headache syndromes, the various causes of dizziness, and most types of dementia. The neurologic history may often provide the first clues that a symptom is psychological in origin.

3.7.2. Mental status testing

The neurologic examination is typically divided into eight components: mental status; skull, spine and meninges; cranial nerves; motor examination; sensory examination; coordination; reflexes; and gait and station. The mental status is an extremely important part of the neurologic examination that is often overlooked. It should be assessed first in all patients. Mental status testing can be divided into five parts: level of alertness; focal cortical functioning; cognition; mood and affect; and thought content.

Level of Alertness (Level of Consciousness) Level of alertness is defined as the best verbal or motor response that can be elicited from the patient in response to a specific stimulus.

Structures Required for Consciousness Two neural structures are required for consciousness: the brain stem reticular activating system; and one cerebral hemisphere. Thus, a patient is unconsciousness if injury has occurred to both cerebral hemispheres or to the brain stem reticular activating system.

Focal Cortical Functioning: Aphasia, apraxia and agnosia are three examples of focal cortical dysfunction. Aphasia is inability (or impaired ability) to understand or produce speech, as a result of brain damage. Apraxia (called “dyspraxia” if mild) is

a neurological disorder characterized by loss of the ability to execute or carry out skilled movements and gestures, despite having the desire and the physical ability to perform them. Agnosia is inability to interpret sensations and hence to recognize things, typically as a result of brain damage.

a) Glasgow coma scale

Remember that a patient with neurological impairments can develop unconsciousness and to assess the level of conscience we use the Glasgow coma scale GCS). Every patient should be assessed for level of consciousness

The Glasgow Coma Scale (GCS) **is used to objectively describe the extent of impaired consciousness in all types of patients.** The scale assesses patients according to three aspects of responsiveness: eye-opening, motor and verbal responses.

The Glasgow coma scale (GCS) is a reliable and universally comparable way of recording the conscious state of a person. Three types of response are measured, and added together to give an overall score. The lower the score the lower the patient's conscious state. The GCS is used to help predict the progression of a person's condition.

The three responses measured are:

- Best motor response: maximum score of 6
- Best verbal response: maximum score of 5
- Eye opening: maximum score of 4

The lowest score for each category is 1, therefore the lowest score is 3 (no response to pain + no verbalization + no eye opening).

A GCS of 8 or less indicates severe injury, one of 9-12 moderate injury, and a GCS score of 13-15 is obtained when the injury is minor.

i. Motor Response

6 Carrying out request ('obeying command') -patient does simple things you ask.

5 Localizing response to pain.

4 Withdrawal to pain - pulls limb away from painful stimulus.

3 Flexor response to pain - pressure on nail bed causes abnormal flexion of limbs - decorticate posture.

2 Extensor posturing to pain - stimulus causes limb extension - decerebrate posture.

1 No response to pain.

ii. Verbal Response

5 Oriented - patient knows who and where they are, and why, and the year, season and month.

4 Confused conversations - patient responds in conversational manner, with some disorientation and confusion.

3 Inappropriate speech - random or exclamatory speech, with no conversational exchange.

2 Incomprehensible speech - no words uttered, only moaning.

1 No verbal response.

iii. Eye Opening

4 Spontaneous eye opening.

3 Eye opening in response to speech - that is, any speech or shout.

2 Eye opening in response to pain.

1 No eye opening.

3.8. Answers to end unit assessment

Answers to the end unit assessment questions

1) True
2) True
3) Headache: Encourage the client to rest in a quiet, dark room, avoid noises, encourage relaxation techniques, collaborate with other health professionals to identify and treat the cause of headache
4) Stroke: When a patient is having stroke, immediately call for ambulance because as he/she delays to get appropriate treatment, more serious complications develop, Note the time the first symptom occurs, provide appropriate positioning.
5) Interventions for Amyotrophic Lateral Sclerosis (ALS): Assess motor strength; presence of spasticity, flaccidity and presence contracture, Assess skin daily, especially those areas susceptible to breakdown, Promotion of activity and exercise.

6) Six common neurological disorders are headaches, Epilepsy and Seizures, Stroke, Amyotrophic Lateral Sclerosis (ALS), Alzheimer's Disease and Dementia and Parkinson's Disease.

7) A patient X with abnormalities in smell and vision. The part of neurological system to focus on while conducting your assessment.

8) Function of 9th cranial nerve (Glossopharyngeal Nerve): Facial movement, facial expression, tongue taste and tears production: Control facial movement and expression. It also carries nerves that are involved in taste to the anterior 2/3 of the tongue and producing tears (lacrimal gland).

9) Function of 7th cranial nerve (Facial Nerve): Facial movement and expression: carries nerve fibers that control facial movement and expression. The facial nerve also carries nerves that are involved in taste to the anterior 2/3 of the tongue and producing tears (lacrimal gland).

3.9. Additional activities

3.9.1. Remedial activities

1) What is neurological assessment?
2) What is the first step in neurological assessment?

Answers to the remedial activities

1) Neurological assessment is a sequence of questions and tests to check brain, spinal cord, and nerve function. The exam checks a person's mental status, coordination, ability to walk, and how well the muscles, sensory systems, and deep tendon reflexes work.
2) Taking the patient's history is habitually the first step in practically every clinical meeting

3.9.2. Consolidation activities

1) A brain disorder marked by deterioration of mental capacity, memory impairments and confusion are known as:
    a. Alzheimer's disease
    b. Parkinson disease
    c. Myasthenia gravis
    d. Paralysis

2) The term convulsion refers to:

   a. Tremors of the body
   b. a sudden, violent, irregular movement of the body, caused by involuntary contraction of muscles
   c. a sudden, violent, regular movement of the body, caused by involuntary contraction of muscles
   d. a sudden, violent, irregular movement of the body, caused by voluntary contraction of muscles

Answer to the consolidation activities

1) b
2) b

3.9.3. Extended activities

1) You receive a patient who has trauma accident, he is confused, can open eyes spontaneously and withdraw to pain. What is the Glasgow coma score of this patient?
2) You notice that he cannot feel pain on the left facial muscles. What is the nerve can be affected?
3) Discuss on the importance of 11th cranial nerve (Accessory Nerve)

Answer to the extended activities

1) Answer: 5th cranial nerve(trigeminal)
2) Answer: 5th cranial nerve(trigeminal)
3) Answer: Motor and voice: Accessory Nerve: Provide motor function (movement) to two muscles essential to neck and shoulder movement, the sternocleidomastoid (SCM) and the trapezius, as well as to the larynx (voice box) and other structures in the throat

UNIT 4 NURSING ASSESSMENT OF SENSORY SYTEM

4.1. Key unit competence

Take appropriate action based on findings of nursing assessment of sensory system

4.2. Prerequisites (knowledge, skills, attitudes and values)

To effectively succeed and develop clinical skills in the unit of assessment of sensory system, the learner should had been learn anatomy and physiology, vital signs and parameters, nosocomial infection and prevention and first aids. At the end of this unit, the student will be able to collect relevant data from the patient on sensory system, and related interpretation. The teacher will ask the students what they can do if a patient is coming for consultation with pain and redness of the eye

Possible answers:

- Ask the detailed history of the occurrence of the presenting complains
- Make the inspection of the eyes
- Provide medication (painkiller, antibiotics, antihistaminic) as per best diagnostic proposed.

4.3. Cross-cutting issues to be addressed

Predominant cross cutting issues to be addressed in the lesson of assessment of the head are mainly inclusive education, critical thinking as well as peace and value education.

a) Inclusive education

This lesson will be done mostly via debates within groups. The teacher will encourage students to verbalize what they know and what they think should be important while administer medication. It can be an issue to students with hearing impairment to progress with others or students with limbs disorders who usually face challenges for displacement.

- The teacher will encourage all students to support colleagues with locomotor impairment to reach their groups
- Both teacher and students will be encouraged to speak loudly and use gestures to support learners with hearing problems.

b) Peace and value education

This lesson will involve student- teacher and student-student respectful interaction. Students will be encouraged to accommodate different ideas, to exchange speeches and to develop flexibility in order to focus on the important points of the lesson

c) Gender education

Inspire active participation of boys and girls in activities, not only boys. Make sure that all learners are actively involved in all learning activities. Drug administration in a professional manner is done in the same way in males and in females, reason why males and females should have equal rights to learn and practice the procedures of drug administration.

d) Environment and sustainability

As a facilitator, emphasize to the learners that environment must be sustainably protected and kept safe. Medical waste may cause very serious injury and be a source of infectious contamination, this is way health providers including associate nurses have to be responsible for appropriate waste disposal.

4.4. Guidance on the introductory activity

Most of the time if a person is ill, he or she goes to the health centre or hospital and get medications. For medication to give expected outcomes, we should follow rights of drug administration, respect the instruction provided by the prescriber and be able to calculate and administer the dose of enteral, topic, intramuscular, subcutaneous and intradermal routes. The teacher will not expect the right answers from the very beginning, instead it is a matter of awaken their curiosity and open their mind for this upcoming unit.

Teacher responsibility during introductory activity:

- The teacher will ask the students to open their books on unit 4specifically on the introductory activity to a pair of students to read together and answer related questions.
- After every question's discussion, they will write their answers
- The teacher will visit all the groups for clarification and guidance
- Randomly, the teacher will choose two groups to present while others are listening, give details and clarifications as well as ask questions
- The teacher keeps the class focused on the purpose of the unit and put appropriate supplementary information.

Expected answers to the introductory activity

1) We have 6 images on picture A. They are ear, eye, brain, skin (covering the finger) and nose
2) The images on the picture A serve as sensory organs.

3) The relationship between the image in the center of picture A and the surrounding images is that the brain receive impulse from any of these sensory organs and interpret it into a meaningful response such as sight, hearing, touch, smell and taste.

4) On the picture B, the nurse is doing physical examination of the patient for sensory system

4.5. List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
1	Assessment of the head	▪ Outline relevant questions to assess the head ▪ Describe different techniques of physical examination applied of the head. ▪ Use different techniques to conduct client physical exam of the head ▪ Analyze data collected from the client health assessment of the head	2
2	Health assessment of the eye	▪ Outline relevant questions to assess the eyes ▪ Collect relevant information specific to eye assessment ▪ Use different techniques to conduct client physical exam of the eye ▪ Appreciate the relevant information on eye assessment	2
3	Assessment of the ear	▪ Formulate questions to assess the ears ▪ Collect relevant information specific to ear assessment ▪ Use different techniques to conduct client physical exam of the ear ▪ Analyze data collected from the client health assessment of ear	2

4	Assessment of the nose	▪ Elaborate appropriate questions to assess the nose ▪ Use different techniques to conduct client physical exam of the nose ▪ Analyze data collected from the client health assessment of nose	2
5	Assessment of the mouth and pharynx	▪ Make appropriate statement to be used to conduct a health history of the mouth and pharynx ▪ Collect relevant information specific to mouth and pharynx assessment ▪ Use different techniques to conduct client physical exam of the mouth and pharynx ▪ Analyze data collected from the client health assessment of the mouth and pharynx	2
6	Assessment of the skin	▪ Formulate important questions to make health history of the skin ▪ Collect relevant information specific to skin assessment ▪ Use different techniques to conduct client physical exam of the ear ▪ Analyze data collected from the client health assessment of ear ▪ Appreciate the finding of the skin assessment	2
7	End unit assess-ment (In community +Theory)		5 periods

Lesson 1: Assessment of the head

This is the first lesson of Unit of the Unit 4; Assessment of sensory system. It will cover the history taking, physical assessment, interpretation and analysis of the findings of the head.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Outline relevant questions to assess the head

- Describe different techniques of physical examination applied of the head
- Use different techniques to conduct client physical exam of the head
- Analyze data collected from the client health assessment of the head

b) **Teaching resources**

- Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.
- Rodgers J, (2020) headache history taking.

c) **Prerequisites/Revision/Introduction**

The teacher will ask the students on the anatomy and physiology of sensory organs. The students will verbalize the sensory response such as smell, hear, sight, taste and touch.

d) **Learning activities 4.1.**

Guidance

Teacher will request students to sit in group of 4 and read together the learning activity of the unit 4. He or she will ask the students to predict the scenario on the image related to the questions, discuss and answer the questions. Write the answers on post it papers then attach them on the front wall of the classroom. Two group presentations selected randomly, the remaining will give their comments and additions. All students will be allowed to ask questions and get feedback from their teacher.

Answers to learning activity 4.1

1) The picture is about a patient with headache in front of a health provider for consultation purpose
2) The person touching his head may be having a headache
3) The main steps during patient's health assessment are the history taking and physical examination. They are subcategorized under identification data, chief complaints, history of presenting illness, past health related history, family history, personal and social history and review of systems.

Answers to self -assessment 4.1

1) The physical assessment techniques used to assess the head are the inspection and palpation

2) The abnormalities which can be seen on the face during physical examination are based on facial expression and contour, asymmetry, involuntary movement, edema and mases, skin of the face and the head to objectivate any change in color, texture, thickness, hair distribution and lesions.

3) The history taking for a patient complaining about a headache will be to ask the patient to describe the characteristic of his headache, irradiation, duration, abrupt or slowly, precipitating factors, alleviating factors, home based treatment modality.

4) Mr. M was riding a bicycle, abruptly he loses control and hits the border of the road. His neighbour took him to the nearest health centre. During a complete physical assessment, the nurse realizes tenderness on the left parietal region.

   a) Tenderness is the pain provoked by palpation

   b) The assessment of the head will involve detailed assessment of the hair, scalp, skull, face and the skin.

Lesson 2: Health assessment of the eye

This is the second lesson of Unit 4of drug administration it will cover the assessment of the eye by using both history taking and physical examination.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Outline relevant questions to assess the eyes
- Collect relevant information specific to eye assessment
- Use different techniques to conduct client physical exam of the eye
- Appreciate the relevant information on eye assessment.

b) Teaching resources

Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.

Takusewanya, M (2019) How to take a complete eye history. community y eye health journal.32,107

Fotedar -Dr, D. (2018, April 2). Difference Between Myopia and Hypermetropia. Difference Between Similar Terms and Objects. http://www.differencebetween.net/science/health/difference-between-myopia-and-hypermetropia/.

Gwenhure T, Shepherd E (2019) Principles and procedure for eye assessment and cleansing. Nursing Times [online]; 115: 12, 18-20.

c) Prerequisites/Revision/Introduction

The students will review the anatomy and physiology of the eye before starting with the assessment. This process will integrate and awaken students in the upcoming topic of the history taking and physical examination of the eyes.

d) Learning activities 4.2.

Guidance

- Teacher will project the images of eyes with different clinical manifestations both normal and abnormal ones
- Ask the students to sit in groups of 5 to reflect and discussion questions related to the images.
- The teacher will brainstorm answers from each group and orient their ideas toward assessment of the eye
- First group will present the answer of first question while other groups put addition and comments and so on
- At the end the teacher will sum up student answers and then give more clarification on the assessment of the eye
- All students will be allowed to ask questions and get feedback from their teacher.

Answers of Learning activity 4.2

1) The image A illustrate an eye which is read letters of the Snellen Eye Chart, image B is about an eye with redness of the sclera while the image C represent a nurse conducting health history on a patient
2) The eye represented on image A looks healthy with whitish sclera, in addition to normal appearance of the lens, pupil, eye lashes and eye brows. On the other side, the image B stand for pathological manifestation of the eye where the sclera looks red
3) The letters illustrated on the picture A represent the Snellen Eye Chart used to test for far vision

Answers to self-assessment 4.2.

1) b. Liver diseases

2) a. Pupil should be equal, round, reactive to light and accommodate

3) The eyebrows are like hair evenly distributed; skin intact, Eyebrows symmetrically aligned; equal movement

Lesson 3: Health assessment of the ear

This is the third lesson of Unit 4, it will emphasize on the assessment of the ear and enabling the students to recognize normal to abnormal finding.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Formulate relevant questions to assess the ears
- Collect relevant information specific to ear assessment
- Use different techniques to conduct client physical exam of the ear
- Analyze data collected from the client health assessment of ear

b) **Teaching resources**

Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.

Valerie Watson,V(2021)What is ear pain?

Knott,L,Willacy, H ,(2021) Ear, Nose and Throat Examination.

c) **Prerequisites/Revision/Introduction**

Students will learn health assessment of the ear by first recalling the anatomy and physiology oy the ear. They will also describe the role of the ear in human beings.

d) **Learning activities 4.3**

Guidance

- The teacher will tell the students to image a patient with ear problem coming for consultation
- Ask the students to sit in groups of 4and enumerate possible causes of ear consultation
- Each group will delegate a presenter to expose their responses

- After each presentation they create an open discussion for questions, comments and teacher's clarification will be added.
- While student presentation and discussion, every student will take note.

Answers of learning activity 4.3

1) A person on image A is having redness of the ear and surrounding tissues with pain as per facial expression and tendency to hold the affected area
2) Both image A and B represent the ear concern, the image A is about someone with ear condition while the image B reflect otoscopic examination of the ear
3) The material being used is the otoscope, instrument used to look at the tympanic membrane through the auditory canal

Answers to Self-assessment 4.3

1) Signs and symptoms of a patient with ear problem may be otorrhea, otalgia, pinna ulceration, tympanic membrane perforation, deafness, tinnitus and vertigo.
2) The interview questions to a patient with otalgia will be in accordance to describe the ear pain, its occurrence, any possible irradiation, duration, aggravating factors, alleviating factors, home based management.
3) Conductive hearing loss is the result of interrupted transmission of sound waves through the outer and middle ear structures. It may be caused by a tear in the tympanic membrane or an obstruction, due to swelling or other causes, in the auditory canal. Whereas Sensorineural hearing loss is the result of damage to the inner ear, the auditory nerve, or the hearing center in the brain.
4) The basic tests used to measure hearing capacity of a patient are Weber and Rinne tests.

Lesson 4: Health assessment of the nose

This is the fourth lesson of sensory assessment unit; it will look at the history taking and physical examination of the nose and related management.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Elaborate appropriate questions to assess the nose
- Use different techniques to conduct client physical exam of the nose

- Analyze data collected from the client health assessment of nose
- Manage nose problems

b) **Teaching resources**

- Knott,L,Willacy,H,(2021) Ear, Nose and Throat Examination
- Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.

c) **Prerequisites/Revision/Introduction**

The students speak out their basic knowledge on the anatomy and physiology of the nose and possible management of nasal problems**.**

d) **Learning activities 4.4.**

Guidance

- Teacher will ask the students to go on the learning activity 4 of the fourth unit
- Ask the students to sit in groups of 2 to observe the images and discuss on the related questions.
- After 10 minutes, the teacher will randomly select groups to present
- Allow class discussion after every question and respond properly, teacher will help them to clarify the answers.
- Summarize and conclude the lesson.
- While student presentation and discussion, every student will take note.

Answers of learning activity 4.4

1) The image A represents the external view of the nose whereas the image B represents the nasal cavity
2) A patient with nose problems may complain about rhinorrhea, nose obstruction, bleeding, pain, itching, sneezing.
3) The physical examination used the nose are inspection and palpation

Answers to Self-assessment 4.4.

1) The common causes of consultation of the nose arerhinorrhea, nasal congestion, loss of smell, pain, itching and epistaxis.
2) When assessing the nose using otoscope, note the color, swelling, bleeding,

exudate. In case of exudate reports related characteristic such as clear, mucopurulent or purulent. In viral rhinitis the mucosa will be increasingly red and swollen whereas in allergic rhinitis the mucosa will be pale, blue or red.

3) The questions to ask a patient with rhinorrhea as chief complain will be reflect the characteristic description of the rhinorrhea, duration, occurrence pattern, aggravating and alleviating factors as well as home-based management.

4) The causes of epistaxismay be inflammation, perforation and ulcerationto the lower anterior of nasal septum, some medications may also induce septal ulceration such as cocaine and amphetamine.

Lesson 5: Assessment of mouth and pharynx

This is the fifth lesson of the sensory system assessment unit, it will cover the history taking and physical assessment of the mouth and pharynx

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Make appropriate statement to be used to conduct a health history of the mouth and pharynx
- Collect relevant information specific to mouth and pharynx assessment
- Use different techniques to conduct client physical exam of the mouth and pharynx
- Analyze data collected from the client health assessment of the mouth and pharynx.

b) **Teaching resources**

- Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.
- Knott,L,Willacy,H ,(2021) Ear, Nose and Throat Examination
- Internet**.**

c) **Prerequisites/Revision/Introduction**

To facilitate better this lesson, students must have basic knowledge and skills on ethic and professional code of conduct, nosocomial infection control and prevention and anatomy and physiology of human sensory system**.**

d) **Learning activity 4.5.**

Guidance

- Teacher will request students to open books precisely reach to the learning activity 4.5
- Ask the students to sit in groups of 5 to observe the images and discuss on the related questions.
- Each group will delegate a presenter to expose their responses
- After each presentation they create an open discussion for questions and comments.
- Teacher will allow to address question toward presenter, if unable to respond teacher will intervene by more clarification and appropriate responses.
- While student presentation and discussion, every student will take note
- Summarize and conclude the lesson.

Answers of learning activity 4.5

1) The illustration is about the oral or buccal cavity
2) The most common consultation problem of the mouth is toothache, gingival bleeding, difficulty swallowing, candida related conditions.
3) Gingiva looks pale in white people and brown to black in black people due to the influence of melanine.

Answers of Self –assessment 4.5

1) The findings that indicate gingivitis are redness of the gingiva and swelling of the interdental papillae.
2) The oral cancer is more prevalent in men of greater than 50 years, smokers and alcohol consumers
3) The inspection of the lips will be based on its color, moisture, ulcers, cracking or trauma and note any deviance from normal anatomy is to be considered during physical assessment.
4) Consider the illustration in the student book then memorize different part of the oral cavity and make a peer assessment of your oral cavity. Describe all the parts of the oral cavity as inspected from your colleague.

Lesson 6*: Assessment of the skin*

This is the sixth lesson of the Sensory assessment. This lesson will focus on history taking and physical assessment of the skin.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Formulate important questions to make health history of the skin
- Collect relevant information specific to skin assessment
- Use different techniques to conduct client physical exam of the ear
- Analyze data collected from the client health assessment of ear
- Appreciate the finding of the skin assessment Demonstrate empathy and respect of client during the nursing care practice

b) Teaching resources

- Bickley, L. S., & Szilagyi, P. G. (2009). Guide to Physical Examination and History taking.
- 10 of the Most Common Skin Conditions: Photos and Treatments
- Anderson ,L,A,(2021)10 of the Most Common Skin Conditions: Photos and Treatments
- Internet, Manikins with different skin characteristics, clean gloves

c) prerequisites/Revision/Introduction

The prior knowledge that learners must have should be related to the anatomy and physiology of the skin and infection preventions standard.

d) Learning activities 7.6.

Guidance

- Teacher will bring printed copies in class showing images of skinwith normal and abnormal characteristics.
- Put the student in small group of 6 students
- Allow student to discuss on the given image and answer questions
- The teacher asks every group to present their findings

- Allow others to ask questions to the presented group, if they are not able to respond properly teacher will help them to clarify the responses.
- During presentation and discussion students will take notes of the key concepts.

Answers of learning activity 4.6

1) The images A, B and C manifest facial hyperpigmentation, folded skin due to aging effect and a young facial skin of a white lady respectively.
2) The skin on image b is normal considering the aging process which provoke reduced elasticity then allow easy folding.
3) The characteristic of a normal skin are based on its color uniformity which may accommodate some degree of hyperpigmentation to the parts exposed to sun, no edema, ulceration, crackles and trauma.

Guidance to the self-assessment

Ask student-teachers to work individually or in pairs or in groups to answer the questions of application activity 4.6

Answers of Self-assessment 4.6

1) We assess for the color, moisture, texture, temperature, uniformity and hydration status
2) The acne is caused by blockage of hair follicles, sebaceous gland and hormonal changes starting with puberty.
3) The common skin conditions in children atopic dermatitis, skin candidiasis, infectious diseases, impetigo, cellulitis, and acne.
4) To assess the skin, we use inspection and palpation
5) The health education will include: washing hands with soap and warm water frequently, avoid direct contact with the skin of other people who have an infection, clean things in public spaces, such as gym equipment, before using them, don't share personal items, such as blankets, hairbrushes, or swimsuits, sleep for at least seven hours each night, drink plenty of water, avoid excessive physical or emotional stress, eat a nutritious diet and get vaccinated for infectious skin conditions, such as chickenpox.

4.6. Summary of the unit

The assessment of sensory system includes ways to identify clinical significant data the head, eye, ear, nose, mouth, throat and the skin. The unity is also designed to interpret specific findings, identify patient problem and offer nursing interventions. Each component here need a detailed assessment to be able to plan timely interventions. Remember to exercise regularly to become familiar with the nursing assessment of sensory system.

4.7. Additional information for teachers

The common problems of the eyes are pain, discharge, decreased visual acuity, diplopia and vision loss. Decreased visual acuity known as the inability to see clearly generally occurs with refractive errors. In nearsightedness, or myopia, vision at a distance is unclear. In farsightedness, or hyperopia, vision in close view is unclear. Diplopia, or double vision occurs when the extraocular muscles are misaligned. Ocular discharge may occur in one or both eyes and may be little or abundant. The discharge may be purulent, foamy, mucoid, cheesy, serous, or clear or may have a yellow-like or white appearance. Eye discharge commonly results from inflammatory and infectious eye disorders such as conjunctivitis. Eye pain may indicate an emergency and requires immediate management. Trauma from a foreign body can cause corneal damage or abrasion which may result into eye pain. Any structure of the eye can result into vision loss. Types of vision loss include central vision loss, peripheral vision loss, or a blind spot in the middle of an area of normal vision.

The common problems on the assessment of the nose include discharge, obstruction, epistaxis and flaring. The causes of epistaxis are coagulation disorders, trauma, hematologic disorders, renal disorders and Hypertension. The nasal flaring refers to nostril dilation that occurs during inspiration. It can be normal to some extent during quiet breathing but clear regular flaring is abnormal to indicate respiratory distress. Nasal stuffiness and discharge are known as obstruction of the nasal mucous membranes accompanied by secretions. The main causes are common cold, sinusitis, trauma, allergies, exposure to irritants deviated septum.

To assess the skin, use inspection and palpation. We observe the skin's overall appearance. Then inspect and palpate the skin area by area, focusing on color, moisture, texture, turgor, and temperature. Get to know the reasons for localized areas of bruising, cyanosis, pallor, and erythema. Check for uniformity of color and hypopigmented or hyperpigmented areas. To examine for cyanosis, inspect the conjunctivae, palms, soles, buccal mucosa, and tongue. Look for dull, dark color. To examine for edema inspects the area for decreased color and palpate for tightness. For erythema, palpates the area for warmth. The jaundice is examined by inspecting the sclera for a yellowish color. The skin pallor is inspected via the sclera, conjunctiva, buccal mucosa, lips, tongue, nail beds, palms, and soles. The purplish

red dots indicate petechia. For skin rashes palpate the area for skin texture changes. Common skin changes to consider are benign or malignant lesions. Lesions may be benign, such as a benign nevus, or mole. However, changes in an existing growth on the skin or a new growth that ulcerates or doesn't heal could indicate cancer or a precancerous lesion. Skin malignancies are usually characterized by asymmetric lesion, irregular border, color variation, more than 6mm of diameter and elevated or enlarging lesion.

4.8. Answers to end unit assessment

Answers to the end unit assessment questions

1) The infectious diseases of the skin originate from varicella zoster virus, candida albicans, staphylococcus aureus and measles
2) The otoscope is inserted differently in children and adult patients downward backwards and upward backwards respectively to make straighten the auditory canal in order to insert the otoscope safely to visualize the tympanic membrane.
3) The deviation uvula present during buccal cavity assessment is an indication of vagus nerve paralysis
4) The healthy lips appear with uniform color, moist with no ulceration, crackles and trauma.
5) The signs and symptoms of tonsilitis include swelling, redness, difficult swallowing are the most common signs for tonsilitis.
6) The paranasal and frontal sinuses are the only palpable sinuses

4.9. Additional activities

4.9.1. Remedial activities

1) What is the primary organ of the integumentary system and why is called so?
2) What are the main layers of the skin?
3) What do you understand by throat?
4) Tell briefly the nasal examination

Answers to the remedial activities

1) The primary organ of the integumentary system is the skin because it is where the other parts come out such as hair, fingernails, and toenails
2) There are three main skin layers which are: the epidermis, the dermis and the subcutis

3) Is a muscular tube that extends from the back of the nose to the neck. It contains the pharynx, larynx, tonsils and adenoids, and serves as a passage way for air, food and liquid.
4) Is usually performed with a headlight or mirror and a handheld speculum that allows us to examine the nasal septum and turbinates closely. The nose will often be examined before and after application of a decongestant nose spray.

4.9.2.Consolidation activities

1) What are the four accessory structures of the skin?
2) What are the four main functions of the skin?
3) Discuss different eye disorders
    a. Myopia (Farsightedness)
    b. Hypermetropia (near-sightedness)
    c. Cataract
4) What are the types of hearing loss?
5) Explain different hearing loss.

Answers to the consolidation activities

1) The accessory structures of the skin include the sweat glands, sebaceous glands, hair, and nails.
2) The 4 main functions of skin are:
    a. To cover and protect the deeper tissues from injuries, dying and invasion from foreign organisms.
    b. Contains the peripheral endings to sensory nerves.
    c. Regulation of body temperature.
    d. Excretory and absorbing abilities

3) a. Myopia (Farsightedness): Some people can see objects close to them clearly but cannot see distant objects. They need a concave lens to see the distant objects clearly.

b. Hypermetropia (near-sightedness): Some people cannot see close objects clearly but can see distant objects. They need a convex lens to see nearby objects.

c. Cataract: Sometimes, particularly in old age, eyesight becomes foggy. It is due to the eye lens becoming cloudy. When it happens, patients are said to have CATARACT. There is a loss of vision. It is possible to treat

this disorder. The opaque lens is removed and a new artificial lens is inserted

4) There are three main types of hearing loss: conductive, sensorineural, and mixed.

5) a. Conductive hearing loss results from an issue in the ear canal, eardrum, or middle ear.

   b. Sensorineural hearing loss is typically caused by damage to the hair cells of the inner ear, but it can also result from auditory nerve damage.

   c Mixed hearing loss is a combination of conductive and sensorineural issues.

4.9.3. Extended activities

1) During the initial assessment of a patient, the nurse observes the presence of bright red drainage on the eye dressing. What should be the nurse's first action?

2) How is vision accomplished?

3) Which part of the ear takes sound waves and turns them into vibrations?

4) What are the dangers of cotton swabs?

5) What are the techniques of nose mouth and throat assessment?

Answers to the extended activities

1) Report the findings to the physician.
2) Vision is accomplished through four steps. Light goes into the eye then transferred to the back of the eye. Next transduction occurs then finally the information goes to the brain and that's how we make out what we see
3) Middle ear
4) Cotton swabs can cause punctured ear drums and hearing loss. In severe cases, the cotton swab can damage many sensitive structures behind the ear canal and cause complete deafness, prolonged vertigo with nausea and vomiting, loss of taste function, and even facial paralysis.
5) Position the patient sitting up with his or her head at your eye level. If a person wears dentures, offer a paper towel and ask the person to remove them. The equipment needed for the assessment of the nares would include an Otoscope with short, wide-tipped nasal speculum attachment, and penlight

UNIT 5 INTRODUCTION TO COMMUNITY HEALTH NURSING

5.1. Key unit competence

Provide basic community interventions

5.2. Prerequisites (knowledge, skills, attitudes and values)

Associate Nurse Students will learn better the unit of introduction to community health nursing if they have prior understanding on: Communicable and non-communicable diseases; Maternal and Child health, Nursing Ethics and Professional Code of Conduct. The teacher should ask the learners to describe those concepts as review before this unit.

5.3. Cross-cutting issues to be addressed

a) Gender

The teacher should ensure equal participation of both girls and boys during teaching and learning activities such as classroom work and skills simulation.

b) Peace and values education

During group and pair activities, presentations and discussion, the teacher should encourage the learners to help one another and to have mutual respect of opinions.

5.4. Guidance on the introductory activity

In introducing this unit 5, the teacher should ask the learners to attempt the activity 5 as shown in the student book, under unit 5: introduction to community health nursing.

This activity aims at enabling the learners to discover the main content of the unit and attract their attention to learn.

The teacher should proceed as follows:

- Ask students to observe the pictures of introductory activity displayed in students' book, or project slide with pictures of introductory activity 5 and allow students to observe them for two minutes.
- Request students to work in pair and answer the questions 1 related to the pictures A, B, C, and D and question 2 of introductory activity 5. They should use 3 minutes to provide responses.
- Allow students to brain storm the results from peer discussion in 5 minutes.

Expected answers to the introductory activity

1) Picture A communicates about community members attending a community health event like community health assessment and problems' identification. Picture B shows a health care provider who is delivering a health talk to community members. Picture C indicates the health personnel who is measuring a client blood pressure. Picture D designates a female care provider who is helping an older man to walk with a walker.

2) The learner may guess that the lesson is going to focus community health activities such as community health assessment, health problems identification, health education, etc. The Nurse educator should consider the ideas of learners and then inform them about what they shall expect to learn from this unit.

5.5. List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
Theoretical sessions			
1	Concepts definition	▪ Explain concepts used in community health	2
2	History of community health Nursing	▪ Describe the history of community health nursing	2
3	Objectives, purposes and principles of community health nursing	▪ Identify the objectives of community health nursing ▪ Find out the purposes of community health nursing ▪ Outline the principles of community health nursing	2
4	Characteristics of community health nursing	▪ Explain the characteristics of community health nursing	1
5	Community Health in Rwanda	▪ Explain the responsibilities of community health workers ▪ Explain the selection, training, and retention of Community Health Workers ▪ Discuss the issues encountered by community health program in Rwanda	2

6	Characteristics of a community	▪ Explain the important characteristics of a community ▪ Characterize the different types of a community	1
7	Characteristics and functions of a healthy community	▪ Explain the characteristics of a healthy Community ▪ Explain the roles and Responsibilities of Community Health Nurse ▪ Find out the core functions of community health nursing practices	1
8	Determinants of health and the factors affecting community health	▪ Explain health issues related to determinants of health ▪ Describe the factors affecting community health	1
9	Community health needs assessment	▪ Describe the types of community needs assessment ▪ Explain the methods of community health needs assessment ▪ Describe the sources of data in community health assessment ▪ List the steps of community health needs assessment.	2
10	Community education	▪ Describe the factors that affect the readiness to learn ▪ Explain the learning domains that should be considered in teaching/learning process ▪ Describe how certain active teaching methods are used during health education session ▪ Describe how certain teaching materials/aids should be used during health education session ▪ Describe the Scheme of health education session	2
11	Advocating for the community	▪ Explain the purpose, goals and objectives of advocacy for the community health. ▪ Outline the advocacy methods ▪ Find out the principles of advocacy ▪ Explain the approaches to advocacy ▪ Explain the advocacy strategies	2

12	Home based care	▪ Outline the principles of home-based care ▪ Find out the purposes, goals and objectives of home-based care ▪ Explain the types of Home Based Care	2
		Practical Sessions	
13	Community health needs assessment	▪ Collaborate with community members and representatives, community- based organizations, community health providers and other members of the team in advocating for the community. ▪ Participate in the development of an overall health plan for the community ▪ Demonstrating culture sensitivity while interacting with community members ▪ Respecting all age – categories of community members ▪ Maintain a grooming image all times	3
14	Community education	▪ Educate individuals, families and community members how to prevent communicable and non- communicable diseases ▪ Collaborate with community members and representatives, community- based organizations, community health providers and other members of the team in provision of community education. ▪ Participate in the development of an overall health plan for the community education. ▪ Apply community health care principles in assessing, diagnosing and planning for the community care education ▪ Demonstrating culture sensitivity while interacting with community members ▪ Respecting all age – categories of community members	3

15	Home based-care	▪ Provide nursing care in the community, including disaster and community home-based nursing care. ▪ Collaborate with community members and representatives, community- based organizations, community health providers and other members of the team in provision of home based care.	
16		▪ Provide nursing care in the community, including disaster and community home-based nursing care. ▪ Demonstrating culture sensitivity while interacting with community members ▪ Respecting all age – categories of community members	2
17	Advocating for the community	▪ Apply community health care principles in assessing, diagnosing and planning for advocating for the community ▪ Advocate for the community health	2
18	End unit assessment		2

A. Theoretical sessions

Lesson 1: Concepts definition

a) Learning objectives

At the end of this lesson, learners will be able to explain concepts used in community health

b) Teaching and Learning resources

- Students' text books,
- Community health and/or public health text books taken from the library or internet
- Personal computer, projector and slides
- Fundamentals of nursing text books.

c) Prerequisites

The students should have understanding of Communicable and non-communicable diseases; Maternal and Child health, Nursing Ethics and Professional Code of Conduct in order to learn better this lesson.

d) Learning activity 5.1.1

Guidance

Before introducing this unit, the teacher should introduce the whole unit. He/she should ask the learners to attempt the introductory activity 5 as it is guided above and then attempt the learning activity 5.1.1 which leads the learner to the first lesson of this unit.

The teacher should proceed as follows for helping learners to achieve the objectives of lesson 5.1.1:

Facilitate the learner to form the small groups of 3 to 6 learners.

State to the learners the learning activity 5.1.1 that is presented in student book and ask the learners to discuss (in groups) and respond to the related questions.

Ask the learners to use fundamentals of nursing and community health nursing text books taken from the library or internet. The learners may also use the student book of public health nursing.

During group work, the teacher should shift the conversation to the learners. Allow the learners to discuss and ensure that the discussion stays on the learning activity 5.1.1 at hand. Encourage shy learners to speak up so that everyone has a chance to share their thoughts.

After 15 minutes, the teacher should ask the learner to stop the group discussion and be ready for presentation.

Two or 3 groups should present. The teacher allows the group to direct the discussion; and act as a referee and intercede only when necessary. Ensure that no one learner dominates the discussion.

The teacher should summarize the key points of the discussion periodically. Provide feedback on learners' comments when appropriate.

Use the contributions of each learner and provide reinforcement. Point out differences or similarities among the ideas presented by different people.

At the end of the lesson the teacher should conclude the discussion with a summary of the main ideas. He / She should also ask questions to assess the achievement of lesson 5.1.1 objectives (see questions on self-assessment 5.1.1).

Answers to the learning activity 5.1.1

The learner may define the given terms as follows:

Health:

Health is defined in the WHO constitution of 1948 as: A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity.

A community:

In recent nursing literature, community has been defined as "a collection of people who interact with one another and whose common interests or characteristics form the basis for a sense of unity or belonging" (e.g., a community of residents of a small town).

An aggregate:

It is a population group with common characteristics. Aggregates are subgroups or subpopulations that have some common characteristics or concerns (e.g., an aggregate of pregnant teens within a school district)

Social determinants of health:

These are the social conditions in which people live and work. The health status of a community is associated with a number of factors, such as health care access, economic conditions, social and environmental issues, and cultural practices, and it is essential for the community health nurse to understand the determinants of health and recognize the interaction of the factors that lead to disease, death, and disability. Indeed, individual biology and behaviours influence health through their interaction with each other and with the individual's social and physical environments.

Community health nursing:

It is the use of systematic processes to deliver care to individuals, families, and community groups with a focus on promoting, preserving, protecting, and maintaining health.

Public health:

Public health is the Science and Art of (1) preventing disease, (2) prolonging life, and (3) promoting health and efficiency through organized community effort for: (a) sanitation of the environment, (b) control of communicable infections, (c) education of the individual in personal hygiene, (d) organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and (e) development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birth right of health and longevity.

Primary prevention:

It relates to activities directed at preventing a problem before it occurs by altering susceptibility or reducing exposure for susceptible individuals. Primary prevention consists of two elements: general health promotion and specific protection. Health promotion efforts enhance resiliency and protective factors and target essentially well populations. **Examples** include promotion of good nutrition, provision of adequate shelter, and encouraging regular exercise. Specific protection efforts reduce or eliminate risk factors and include such measures as immunization and water purification.

Secondary prevention:

It refers to early detection and prompt intervention during the period of early disease pathogenesis. Secondary prevention is implemented after a problem has begun, but before signs and symptoms appear. It targets those populations that have risk factors. Mammography, blood pressure screening, scoliosis screening, and Papanicolaou smears are examples of secondary prevention.

Tertiary prevention:

It targets populations that have experienced disease or injury and focuses on limitation of disability and rehabilitation. Aims of tertiary prevention are to keep health problems from getting worse, to reduce the effects of disease and injury, and to restore individuals to their optimal level of functioning. Examples include teaching how to perform insulin injections and disease management to a patient with diabetes, referral of a patient with spinal cord injury for occupational and physical therapy, and leading a support group for grieving parents.

e) Self-assessment 5.1.1

The teacher should ask the learner to respond individually or in pairs or in groups to the questions provided in student book under the title of self-assessment 5.1.1., in order to evaluate their understanding of the lesson 5.1.1.

Answers for self-assessment 5.1.1

1) :At least 4 social determinants of health:

- Individual behaviors such as tobacco use, alcohol consumption, diet, physical activity
- Individual biology (genetics, age, gender);
- Physical and social and environment factors
- Health care access,

- Economic conditions,
- Cultural practices,
- The interaction of the factors that lead to disease, death, and disability

2) Differentiate a community from an aggregate:

A community can be defined the following ways:

1. "A social group of any size whose members reside in a specific locality, share common government and often have a common cultural and historical heritage."
2. "A group linked by a common policy"
3. "A social, religious, occupational, or other group sharing common characteristics or interests and perceived or perceiving itself as distinct in some respect from the larger society within which it exists."

An aggregate is defined as: the classification of individuals within a community based on certain characteristics which they possess in common. Examples of aggregates are senior citizens or the elderly. (The common characteristic is the age); pregnant women (common characteristic is pregnancy), Teenagers (common characteristic is age), Mental health patient (Disease condition) diabetics (Disease condition), etc.

The main difference between a community and an aggregate is that a community is made up different kinds of individuals, in order words, different aggregates while an aggregate is the community split into different categories.

3) Differentiate community based nursing from community health nursing

Community-based nursing and community health nursing have different goals. Community health nursing emphasizes preservation and protection of health, and community-based nursing emphasizes managing acute or chronic conditions. In community health nursing, the primary client is the community; in community-based nursing, the primary clients are the individual and the family. Finally, services in community-based nursing are largely direct, but in community health nursing, services are both direct and indirect.

4) With examples, differentiate physical health from psychological health

Physical health, which is one of the components of the definition of health, could be defined as the absence of diseases or disability of the body parts. Physical health could be defined as the ability to perform routine tasks without any physical restriction. The following examples can help you to understand someone who is physically unhealthy:

- A person who has been harmed due to a car accident
- A farmer infected by malaria and unable to do their farming duties
- A person infected by tuberculosis and unable to perform his or her tasks.

Psychological health: Sometimes it can be really hard from the outside to tell if the person is struggling with mental health issues, but at other times they show symptoms that suggest a lack of self-awareness or personal identity, or an inability of rational and logical decision-making.

At other times it might be apparent that they are not looking after themselves and are without a proper purpose in their life. They may be drinking alcohol and have a non-logical response to any request. You may also notice that they have an inability to maintain their personal autonomy and are unable to maintain good relationships with people around them. So how do we recognize a mentally healthy adult? The mentally healthy adult shows behavior that demonstrates awareness of self, who has purpose to their life, a sense of self understanding, self-value and a willingness to perceive reality and cope with its difficulties.

The mentally healthy adult is active, hardworking and productive, persists with tasks until they are completed, logically thinks about things affecting their own health, responds flexibly in the face of stress, receives pleasure from a variety of sources, and accepts their own limitations realistically. The healthy adult has a capacity to live with other people and understand other people's needs. It is sometimes considered that the mentally healthy person shows growth and maturity in three areas: cognitive, emotional and social.

5) With examples, differentiate the 3 levels of prevention commonly described in nursing practice

The primary, secondary and tertiary levels of prevention are differentiated as follows:

Primary prevention:

It relates to activities directed at preventing a problem before it occurs by altering susceptibility or reducing exposure for susceptible individuals. Primary prevention consists of two elements: general health promotion and specific protection. Health promotion efforts enhance resiliency and protective factors and target essentially well populations. **Examples** include promotion of good nutrition, provision of adequate shelter, and encouraging regular exercise. Specific protection efforts reduce or eliminate risk factors and include such measures as immunization and water purification.

Secondary prevention:

It refers to early detection and prompt intervention during the period of early disease pathogenesis. Secondary prevention is implemented after a problem has begun, but before signs and symptoms appear. It targets those populations that have risk factors. Mammography, blood pressure screening, scoliosis screening, and Papanicolaou smears are examples of secondary prevention.

Tertiary prevention:

It targets populations that have experienced disease or injury and focuses on limitation of disability and rehabilitation. Aims of tertiary prevention are to keep health problems from getting worse, to reduce the effects of disease and injury, and to restore individuals to their optimal level of functioning. Examples include teaching how to perform insulin injections and disease management to a patient with diabetes, referral of a patient with spinal cord injury for occupational and physical therapy, and leading a support group for grieving parents.

Lesson 2: History of community health Nursing

a) Learning objectives

At the end of this lesson, learners will be able to describe the history of community health nursing

b) Teaching and Learning resources

- Students' text book of fundamentals of nursing,
- Text books of community health nursing or public health nursing that may be taken from the library or internet
- Personal computer, projector and slides

c) Revision

The teacher asks learners to define some terms/concepts of community health including: health, community and community health nursing.

The responses may include the following:

Health is defined in the WHO constitution of 1948 as: A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity. Here below, there discussion of each of those components of health (that is physical, mental (or psychological), and social well-being).

Community is defined as "a collection of people who interact with one another and whose common interests or characteristics form the basis for a sense of unity or belonging".

Community health nursing is the use of systematic processes to deliver care to individuals, families, and community groups with a focus on promoting, preserving, protecting, and maintaining health.

d) Learning activity 5.1.2

Guidance

The teacher should proceed as follows for helping learners to achieve the objectives of lesson 5.1.2:

- Help learner to form the small groups of 5 learners in order to do the learning activity 5.1.2.
- State to the learners the learning activity 5.1.2 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related question.
- During group work, the nurse educator will pass around groups guiding and facilitating them and make sure that the discussion focus on the learning activity 5.1.2
- Ask the learners to use Community health nursing and fundamentals of nursing text books taken from the library or internet. The learners may also use the student book of Fundamentals of nursing, unit of introduction to community health nursing.
- Identify any 2 groups randomly to present their group work to their classmates by writing the main points on the chalkboard.
- The teacher asks other group members to add any ideas about what the two groups have presented, if they have them.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- Provide feedback on learners' comments when is required.
- Identify the differences or similarities among the ideas presented by different learners.
- The teacher should summarize the key points of each group presentation.
- At the end of the lesson the teacher should conclude the discussion with a summary of the main ideas.
- The teacher will end the lesson by asking learners to do the questions of self-assessment 5.1.2 in student book in order to assess the achievement of lesson 5.1.2 objectives.

Answers to the learning activity 5.1.2

The question asked in student book is as follows: by the use of community health nursing books and internet resources, found out at least three key periods of the history of community health nursing and explain them.

The learner may provide the following response:

Public health nursing as a holistic approach to health care developed in the late nineteenth and early twentieth centuries. Public and community health nursing evolved from home nursing practice, community organizations, and political interventions on behalf of aggregates.

Florence Nightingale, the woman credited with establishing “modern nursing,” began her work during the mid-nineteenth century. Historians remember Florence Nightingale for contributing to the health of British soldiers during the Crimean War and establishing nursing education. Florence Nightingale used remarkably public health principles and distinguished scientific contributions to health care reform. The work of Nightingale emphasized on environmental determinants of health. She also focused on the aggregate of British soldiers through emphasis on sanitation, community assessment, and analysis; the development of the use of graphically depicted statistics; and the gathering of comparable census data and political advocacy on behalf of the aggregate.

In 1902, Wald persuaded Dr. Ernest J. Lederle, Commissioner of Health in New York City, to try a school nursing experiment. Henry Street lent a public health nurse named Linda Rogers to the New York City Health Department to work in a school (Dock and Stewart, 1925). The experiment was successful, and schools adopted nursing on a widespread basis. School nurses performed physical assessments, treated minor infections, and taught health to pupils and parents. In 1909, Wald mentioned the efficacy of home nursing to one of the officials of the Metropolitan Life Insurance Company. The company decided to provide home nursing to its industrial policyholders, and soon the United States and Canada used the program successfully. The growing demand for public health nursing was hard to satisfy. In 1910, the Department of Nursing and Health formed at the Teachers College of Columbia University in New York City. A course in visiting nursing placed nurses at the Henry Street settlement for fieldwork. In 1912, the newly formed National Organization for Public Health Nursing elected Lillian Wald its first president. This organization was open to public health nurses and to those interested in public health nursing. In 1913, the Los Angeles Department of Health formed the first Bureau of Public Health Nursing (Rosen, 1993). That same year, the Public Health Service appointed its first public health nurse. At first, many public health nursing

programs used nurses in specialized areas such as school nursing, TB nursing, maternal-child health nursing, and communicable disease nursing. In later years, more generalized programs have become acceptable. Efforts to contain health care costs include reducing the number of hospital days. With the advent of shortened hospital stays, private home health agencies provide home-based illness care across the United States. The second half of the century saw a shift in emphasis to cost containment and the provision of health care services through managed care. Traditional models of public health nursing and visiting nursing from home health agencies became increasingly common over the next several decades, but waned toward the end of the century owing to changes in health care financing.

e) Self-assessment 5.1.2

The teacher should allow the learners to attempt the questions of the self-assessment 5.1.2 given in the student book. The task may be done in reserved time within the lesson or as homework.

Answers for Self-assessment 5.1.2

1) Answer:

Public health nursing as a holistic approach to health care developed in the late nineteenth and early twentieth centuries. Public and community health nursing evolved from home nursing practice, community organizations, and political interventions on behalf of aggregates.

2) Answer: Florence Nightingale, is the woman credited with establishing “modern nursing,

3) Answer:

Pre-recorded Historic Times

From the early remains of human habitation, anthropologists recognize that early nomadic humans became domesticated and tended to live in increasingly larger groups. Aggregates ranging from family to community inevitably shared episodes of life, health, sickness, and death. Whether based on superstition or sanitation, health practices evolved to ensure the survival of many aggregates. For example, primitive societies used elements of medicine (e.g., voodoo), isolation (e.g., banishment), and fumigation (i.e., use of smoke) to manage disease and thus protect the community for thousands of years.

Lesson 3: Objectives, purposes and principles of community health nursing

a) Learning objectives

Identify the objectives of community health nursing

Find out the purposes of community health nursing

Outline the principles of community health nursing

b) Teaching and learning resources

- Students' text book of fundamentals of nursing,
- Community health nursing or public health nursing text books taken from the library or internet
- Personal computer, projector and slides
- a flipchart or chalk/pen or chalk writing board

c) Prerequisites

The students should have understanding of key concepts/terms defined in lesson 5.1.1. They should also demonstrate knowledge of Nursing Ethics and Professional Code of Conduct for learning better this lesson.

d) Learning activity 5.1.3

Guidance

For facilitating the lesson 5.1.3., the teacher should use group teaching learning method with brain storming as follows:

Share the lesson 5.1.3's learning objectives to the learners

Clearly present to the students the learning activity 5.1.3 as indicated in student book.

Organize learners in pair and inform them about the available learning resources such as text books, internet, student book, etc.

Ask learners to discuss on the given questions for 10 minutes and inform them to write down the answers to questions.

Stop the learners peer discussion and ask some pair of learners to brain storm the product from their discussion.

Maintain a written record on a flipchart or writing board of the main ideas and

suggestions from learners.

Involve all of the learners and provide positive feedback in order to encourage more input. Review written ideas and suggestions periodically to stimulate additional ideas.

Use computer made slides and projector and conclude the lesson by summarizing the lesson content and reviewing all of the suggestions and ideas; and by asking some questions to learners to ensure that the lesson's objectives are achieved (the teacher may use the questions of self-assessment 5.1.3. for evaluation).

Answers to the learning activity 5.1.3

1) The teacher may expect the learners to respond that the purposes or aims of Community Health Nursing are:
   - To promote health and efficiency;
   - Prevention and control diseases and disabilities;
   - Need based health care to prolong life.
2) The learners may answer that the following are the principles of community health nursing:
   - Health services should be based on the needs of individuals and the community.
   - Health services should be suitable to the budget; workers and the resources.
   - Family should be recognized as a unit and the health services should be provided to its members.
   - Health services should be equally available to all without any discrimination of age, sex, caste religion, political leaning and social or economic level *etc*.
   - Health education is an important part of community health nursing. It should be preplanned, suitable to conditions, scientifically true and effective.
   - Community health nursing should be provided continuously, without any interruption.
   - Preparation and maintenance of records and reports is very important in community health nursing.

- Community health nurses and other health workers should be guided and supervised by highly educated and skilled professionals.
- Community health nurse should be responsible for:
  - Responsible for professional development.
  - Should continuously receive in-service training and continuing education.
  - Should follow professional ethics and standards in her work and behaviour.
  - Should have job satisfaction.
- Must have effective team spirit while working in the community.
- Timely evaluation is must for community services.

e) Self-assessment 5.1.3

The teacher should ask the learners to respond individually or in pairs or in groups to the questions provided in student book under the title of self-assessment 5.1.3., in order to evaluate their understanding of the lesson.

Answers to self-assessment 5.1.3:

1) The goals and objectives of Community Health Nursing are the following:

- To assess the need and priorities of vulnerable group like pregnant mother, children and old age persons;
- To provide health care services at every level of community including health education, immunization,
- To make community diagnosis;
- To evaluate the health programs and make further plans;
- To prevent disabilities and providing rehabilitation services;
- To provide referral services at various health care levels;
- To increase life expectancy;
- To enhance the standard of nursing profession through:
  - Conducting nursing research.
  - Provide quality assurance in community health nursing.
  - Performing the role of nurse epidemiologist.
- To improve the ability of the community to deal with their own health problems

- To strengthen the community resources
- To prevent and control communicable and non-communicable diseases
- To provide specialized services

2) The following are the principles of community health nursing:

- Health services should be based on the needs of individuals and the community.
- Health services should be suitable to the budget; workers and the resources.
- Family should be recognized as a unit and the health services should be provided to its members.
- Health services should be equally available to all without any discrimination of age, sex, caste religion, political leaning and social or economic level etc.
- Health education is an important part of community health nursing. It should be preplanned, suitable to conditions, scientifically true and effective.
- Community health nursing should be provided continuously, without any interruption.
- Preparation and maintenance of records and reports is very important in community health nursing.
- Community health nurses and other health workers should be guided and supervised by highly educated and skilled professionals.
- Community health nurse should be responsible for:
    - Responsible for professional development.
    - Should continuously receive in-service training and continuing education.
    - Should follow professional ethics and standards in her work and behaviour.
    - Should have job satisfaction.
- Must have effective team spirit while working in the community.
- Timely evaluation is must for community services

Lesson 4: Characteristics of community health nursing

a) Learning objectives

Explain the characteristics of community health nursing

b) Teaching and learning resources

- Students' text book of fundamentals of nursing, the unit of introduction to community health nursing.
- Text books of community health nursing and public health nursing taken from the library or internet
- Personal computer, projector and slides
- a flipchart or chalk/pen or chalk writing board

c) Revision

Before proceeding with lesson 5.1.4, the teacher should revise shortly the previous lesson 5.1.3 (that is Objectives, purposes and principles of community health nursing).

d) Learning activity 5.1.4

Guidance

First the teacher starts lesson 5.1.4 with short revision of last lesson (5. 1.3.) and check if the learners have enough knowledge of the objectives and principles of community health nursing.

Secondary, the teacher introduces learning activity 5.1.4 to learners with presentation of the related questions.

The teacher should clearly describe the activity to all students/learners, and ask if any clarification is needed.

Thirdly, the teacher should classify the leaners randomly, in small groups of 5 learners (each group) and tell members that all small groups should work on all questions of learning activity 5.1.4 shown in student book.

The learners should be instructed to choose a recorder who should keep the answers to questions. The learners should be aware of time frame for group work (15 minutes). The teacher informs the learners that 2 groups will be chosen randomly to report after completing the learning activity 5.1.4.

While the groups are at work the teacher move among the learners to monitor the work of each group, remind students of the task and time limit, and offer suggestions

to groups that are having difficulties or straying from the main task.

The teacher should remind learners when there are 5 minutes remaining, and instruct them to follow the presentation when it is due time.

After the groups have completed their activity, bring them together as a large group to discuss orally the activity.

After groups' presentations, the teacher should summarize the group activity by stressing the main points and relating them to the learning objectives.

Answers to the learning activity 5.1.4

The learner is expected to provide response like the following: Eight characteristics of community health nursing are particularly most important to the practice of this specialty:

1) The client or "unit of care" is the population.
2) The primary obligation is to achieve the greatest good for the greatest number of people or the population as a whole.
3) The processes used by public health nurses include working with the client(s) as an equal partner.
4) Primary prevention is the priority in selecting appropriate activities.
5) Selecting strategies that create healthy environmental, social, and economic conditions in which populations may thrive is the focus.
6) There is an obligation to actively reach out to all who might benefit from a specific activity or service.
7) Optimal use of available resources to assure the best overall improvement in the health of the population is a key element of the practice.
8) Collaboration with a variety of other professions, organizations, and entities is the most effective way to promote and protect the health of people.

e) Self-assessment 5.1.4

The teacher should ask the learner to respond individually or in pairs or in groups to the questions provided in student book under the title of self-assessment 5.1.4., in order to evaluate their understanding of the lesson.

Answers to self-assessment 5.1.4:

The question asked is “explain the eight characteristics of community health nursing”. The following are eight characteristics of community health nursing that are particularly most important to the practice of this specialty:

1) The client or “unit of care” is the population.

Community health nursing is population-focused, meaning that it is concerned for the health status of population groups and their environment. A population may consist of the elderly, scattered group with common characteristics, such as people at high risk of developing heart disease, battered women living throughout a county. It may include all people living in a neighborhood, district, census tract, city, state, or province. Community health nursing’s specialty practice serves populations and aggregates of people.

2) The primary obligation is to achieve the greatest good for the greatest number of people or the population as a whole.

Community health nurses are concerned about several aggregates at the same time, service will, of necessity, be provided to multiple and overlapping groups; the ethical theory of utilitarianism promotes the greatest good for the greatest number.

3) The processes used by public health nurses include working with the client(s) as an equal partner.

In order to achieve the goal of community health which is” “to increase quality and years of healthy life and eliminate health disparities”, clients’ health status and health behavior will change if people accept and apply the proposals (developed in collaboration with clients) presented by the community health nurse.

4) Primary prevention is the priority in selecting appropriate activities.

In community health nursing, the promotion of health and prevention of illness are a first-order priority. It focuses also on positive health, or wellness. These include services to mothers and infants, prevention of environmental pollution, school health programs, senior citizens’ fitness classes, and “workers’ right-to-know” legislation that warns against hazards in the workplace. Less emphasis is placed on curative care.

5) **Selecting strategies that create healthy environmental, social, and economic conditions in which populations may thrive is the focus.**

The wish of community health nursing is to create healthy environments for our clients, so that they can thrive and not simply survive.

6) **There is an obligation to actively reach out to all who might benefit from a specific activity or service**.

We know that some clients are more prone to develop disability or disease because of their vulnerable status (e.g., poverty, no access to health care, homeless). Outreach efforts are needed to promote the health of these clients and to prevent disease. In acute care and primary health care settings, like emergency rooms or physician offices, clients come to you for service. However, in community health, nurses must "focus on the whole population and not just those who present for services" and seek out clients wherever they may be.

7) **Optimal use of available resources to assure the best overall improvement in the health of the population is a key element of the practice**.

It is vital that community health nurses ground their practice in research, and use that information to educate policy makers, and population about best practices. They have to put more effort on the utilization of the available personnel and resources effectively and prudently in order to assure the best overall improvement in the health of the population for a long time.

8) **Collaboration with a variety of other professions, organizations, and entities is the most effective way to promote and protect the health of people**.

Community health nurses must work in cooperation with other team members, coordinating services and addressing the needs of population groups. This inter-professional collaboration among health care workers, other professionals and organizations, and clients is essential for establishing effective services and programs. Individualized efforts and specialized programs, when planned in isolation, can lead to fragmentation and gaps in health services.

Lesson 5: Community Health in Rwanda

a) Learning objectives

- Explain the responsibilities of community health workers
- Explain the selection, training, and retention of Community Health Workers
- Discuss the issues encountered by community health program in Rwanda

b) Teaching and Learning resources

- Students' text book of fundamentals of nursing
- Text books of community health nursing and public health nursing taken from the library or internet
- Personal computer, projector and slides

c) Revision

The students should revise the characteristics of community health nursing before undertaking the lesson 5.1.5 of community health nursing in Rwanda.

d) Learning activity 5.1.5

Guidance

The Nurse Educator should proceed as follows for helping learners to achieve the objectives of the lesson 5.1.5:

Help learner to form the small groups of 5 learners in order to do the learning activity 5.1.5.

Ask to the learners to do the activity 5.1.5 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.

Pass around groups guiding and facilitating them and make sure that the discussion focus on the learning activity 5.1.5

Ask the learners to use fundamentals of nursing and community health nursing books taken from the library or internet. The learners may also use the student book of Fundamentals of nursing, unit of introduction to community health nursing.

Identify any 2 groups randomly to present their group work to their classmates by writing the main points on the chalkboard.

The teacher asks other group members to add any ideas about what the two groups have presented, if they have them.

Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.

Identify the differences or similarities among the ideas presented by different learners.

The teacher should summarize the key points of each group presentation.

At the end of the lesson, the teacher should conclude the discussion with a summary of the main ideas.

The teacher will end the lesson by asking learners to do the questions of self-assessment 5.1.5 in student book in order to assess the achievement of lesson 5.1.5 objectives.

Answers to the learning activity 5.1.5

1) Discussion of **the importance of community health program** in the community and its implementation:

The program aimed at increasing uptake of essential maternal and child clinical services through education of pregnant women, promotion of healthy behaviors, and follow-up and linkages to health services.

The most important achievements in the health sector include an increase in facility based deliveries, the introduction of maternal and child death audits at all health facilities, an increase in vaccination coverage. CHWs make follow-up of all pregnant women, and provision of community-based FP services. CHWs are currently testing all suspected cases of malaria with a rapid diagnostic test and providing treatment when indicated to children younger than 5 years of age who have malaria within 24 hours.

Program **implementation**

In each village of approximately 100–150 households, there is one CHW in charge of maternal health, called an **ASM** (Agent de Sante Maternelle) and two multidisciplinary CHWs called **Binômes** (one man and one woman working as a pair) providing basic care and integrated community case management (ICCM) of childhood illness. CHWs are full-time, voluntary workers who play a very key role in extending services to Rwanda's village communities. The CHWs are supervised most directly by the cell coordinator and the in-charge of community services at the catchment-area of the health center.

In 2010, the Government of Rwanda introduced FP as a component of the national community health policy, and CHWs were trained not only to counsel but also to provide contraceptive methods including pills, injectables, cycle beads (for use with natural FP), and condoms.

2) Answer on how the community health workers (CHWs) are selected, their responsibilities and reporting:

Selection:

CHWs come from the villages in which they live. They must be able to read and write and be between the ages of 20 and 50 years. They also must be willing to volunteer and be considered by their peers to be honest, reliable, and trustworthy. They are elected by village members in a process that involves gathering the volunteers and villagers on the last Saturday of the month (Umuganda, or community service day) and voting "with their feet" in a literal sense. The process has been described (in conversation) as one that involves community members lining up in front of the person they support. The individual with the most support is recruited.

Responsibilities:

Three CHWs, with clearly defined roles and responsibilities, operate in each village of approximately 100–150 households. ASMs have been trained to identify pregnant women, make regular follow-ups during and after pregnancy, and encourage deliveries in health facilities where skilled health workers are available. In addition to following up pregnant women and their newborns, the ASM also screens children for malnutrition, provides contraceptives (pills, injectables, cycle beads, and condoms), promotes prevention of Non-Communicable Diseases (NCDs) through healthier lifestyles, preventive and behavior change activities and carries out household visits.

Between 2008 and 2011, Rwanda introduced ICCM of childhood illness (for childhood pneumonia, diarrhea, and malaria) nationwide. Binômes were trained and equipped to: (a) provide ICCM (assessment, classification, and treatment or referral of diarrhea, pneumonia, malaria, and malnutrition in children younger than 5 years of age; including treatment with antibiotics, zinc, and antimalarials) (b) malnutrition screening (c) community-based provision of contraceptives, (d) DOT for TB, (e) prevention of NCDs, (f) preventive and behavior change activities and (g) household visits. They are in charge to detect cases of acute illness in need of referral, and to submit monthly reports.

Reporting:

CHWs now use Rapid SMS to submit reports and communicate alerts to the district level and to hospitals or health centers regarding any maternal or infant deaths, referrals, newly identified pregnant women, and newborns in the community.

3) CHWs supervision

There are two community health workers, called "cell coordinators", who are heads of all CHWs at the cell level, and whose aim is to follow up, and thereby strengthen, CHWs' activities.

The specific roles and responsibilities of the cell coordinator at the cell level include

the following:

(1) Visiting of community health workers in order to monitor their activities on a monthly basis.

(2) Follow up and verify if CHW has patient registers, and if they are correctly filled out and well-kept.

(3) Monitor if drugs are distributed correctly and if these drugs are not expired and well-kept

(4) Compilation of reports of drugs that have been used by CHW in that cell and requisition of drugs at health centers

(5) Supervision of the *binome* and a household that was recently attended to by a CHW

(6) Check if CHW does post-visit for children she/he recently treated

(7) Supervise CHW on how well she/he is able to sensitize the community on family planning usage

(8) Verification of reports brought for compilation if they have been sent by telephone

(9) (m'*Ubuzima*)

The cell coordinator is aided by an assistant cell coordinator, who is responsible for:

- Monitor if the ASM has registers and these registers are filled correctly
- Follow up and see if the ASM refers pregnant women for ANC visits at the health center (HC)
- Follow up and verify if the ASM has sent RapidSMS reports for pregnant mothers confirmed by health provider
- Verify if the ASM has Misoprostol drugs and the drugs are not expired

e) Self-assessment 5.1.5

At the end of the lesson, the teacher should permit the learners to works individually or in pairs on the questions of the self-assessment 5.1.5 given in the student book.

Answers for Self-assessment 5.1.5

1) Discussion on the responsibilities of an ASM

ASMs have been trained to identify pregnant women, make regular follow-ups during and after pregnancy, and encourage deliveries in health facilities where

skilled health workers are available. In addition to following up pregnant women and their newborns, the ASM also screens children for malnutrition, provides contraceptives (pills, injectables, cycle beads, and condoms), promotes prevention of Non-Communicable Diseases (NCDs) through healthier lifestyles, preventive and behavior change activities and carries out household visits.

2) Explanations of the main activities of Binomes

Binômes were trained and equipped to: a) **provide ICCM** (assessment, classification, and treatment or referral of diarrhea, pneumonia, malaria, and malnutrition in children younger than 5 years of age; including treatment with antibiotics, zinc, and antimalarials) b) malnutrition screening c) community-based provision of contraceptives, d) DOT for TB, e) prevention of NCDs, f) preventive and behavior change activities and g) household visits. They are in charge to detect cases of acute illness in need of referral, and to submit monthly reports.

3) How are CHWs selected?

CHWs come from the villages in which they live. They must be able to read and write and be between the ages of 20 and 50 years. They also must be willing to volunteer and be considered by their peers to be honest, reliable, and trustworthy. They are elected by village members in a process that involves gathering the volunteers and villagers on the last Saturday of the month (Umuganda, or community service day) and voting “with their feet” in a literal sense. The process has been described (in conversation) as one that involves community members lining up in front of the person they support. The individual with the most support is recruited.

4) Identify the coverage area of CHW activities

The coverage area of CHWs is their village with approximately 100–150 households.

5) Discuss the issues encountered by CH program in your country

The challenges faced by the Rwanda CHW program are similar to challenges faced by CHW programs in other countries. These include (1) the financial and administrative difficulties in supporting and continuing to build the capacity of CHWs as they increase in number and as the scope of their work expands; (2) the challenge of supervising and effectively equipping CHWs to perform their duties; and (3) low community participation in the health sector and the strong influence of traditional beliefs and traditional medicines. As the number of CHWs has risen rapidly in Rwanda and as their tasks have increased, the Government of Rwanda faces a constant battle to increase the capacity of CHWs and to provide them with the equipment and supplies they need. Refresher trainings are too few and provision of essential equipment is delayed due to insufficient financial resources. Field

supervision of CHWs and the transfer of skills and knowledge to the communities to foster ownership and enhance sustainability is a continuing challenge. Each CHW is supposed to be supervised by either the In-Charge of Community Health or the cell coordinator on monthly basis. However, recent findings show that supervisory visits occur only quarterly

Lesson 6: Characteristics of a community

a) Learning objectives

- Explain the important characteristics of a community
- Characterize the different types of a community

b) Teaching and Learning resources

- Pictures indicated in student book of fundamentals of nursing,
- Personal computer, projector and slides
- Pen or chalk writing board.
- Allender, J., Rector, C., & Warner, K. (2014). Community & Public Health Nursing: Promoting the Public's Health (8th ed.). Elsevier. doi: 10.1016/b978-0-323-08968-2.00001-6
- Dossey, B. M., & Keegan, L. (2009). Hsolistic Nursing: A Handbook for Practice (5th ed.).Jones & Bartlett Learning.doi: 10.1016/b978-0-323-06910-3.00001-5
- Scott, P. A., & Long, T. (2013).Key Concepts and Issues in Nursing Ethics (1st ed.).Elsevier.doi: 10.1016/b978-0-323-04538-1.00001-1
- Boyd, M. A., & Zerwekh, C. M. (2015s).Nursing Diagnosis Manual: Planning, Individualizing, and Documenting Client Care (3rd ed.).Elsevier Health Sciences.doi: 10.1016/b978-1-4160-5701-0.00001-0

c) Revision

The learners should be helped to revise the previous lesson on community health nursing in Rwanda before introducing lesson 5.1.6.

d) Learning activity 5.1.6

Guidance

The teacher should proceed as follows for helping learners to achieve lesson 5.1.6 objectives:

- The Nurse Educator helps learners to form the small groups of 6 learners in order to do the activity 5.1.6.

- Request the group to do the activity 5.1.6 that is presented in student book or shown on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them.
- Ask the learners to use fundamentals of nursing and community health nursing text books given by teacher.
- The learners may also use the student book of Fundamentals of nursing, unit of introduction to community health nursing.
- Ask 2 groups to present their group work to the whole class.
- Give opportunity to students to add any missing point or clarification to what the two groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The teacher should summarize the key points of each group presentation.
- The teacher summarizes the lesson on black board or with use of Power point presentation and share it with students
- The teacher will end the lesson by asking learners to do the questions of self-assessment 5.1.6 in student book or formulate his/her own questions in order to assess the achievement of lesson 5.16 objectives.

Answers to the learning activity 1.6

The teacher may expect the following answers from the learners:

1) Commonly, the pictures A and B are showing people who are enjoying meal/ drinking time during festival.
2) The people in both pictures may be living in the community.
3) The picture A differs from picture B in terms of general appearance and cleanliness (dirtiness in picture A and cleanliness in B); the environment in which the festival is happening (traditional way in A and modern fashion in picture B).

e) Self-assessment 5.1.6

At the end of the lesson, the teacher should request the learners to work individually or in pairs on the questions of the self-assessment 5.1.6 given in the student book.

Answers for Self-assessment 5.1.6

1) Explanations of 13 most important characteristics of a community in general

Community has the following 13 most important characteristics or elements:

(1) A group of people:

A group of people is the most fundamental or essential characteristic or element of community. This group may be small or large but community always refers to a group of people. Because without a group of people we can't think of a community, when a group of people live together and share a common life and binded by a strong sense of community consciousness at that moment a community is formed. Hence a group of people is the first pre-requisites of community.

(2) A definite locality:

It is the next important characteristic of a community. Community is a territorial group. A group of people alone can't form a community. A group of people forms a community only when they reside in a definite territory. The territory need not be fixed forever. A group of people like nomadic people may change their habitations. But majority community are settled and a strong bond of unity and solidarity is derived from their living in a definite locality.

(3) Community Sentiment:

It is another important characteristic or element of community. Without community sentiment a community can't be formed only with a group of people and a definite locality. Community sentiment refers to a strong sense of awe feeling among the members or a feeling of belonging together. It refers to a sentiment of common living that exists among the members of a locality. Because of common living within an area for a long time a sentiment of common living is created among the members of that area. With this the members emotionally identify themselves. This emotional identification of the members distinguishes them from the members of other community.

(4) Naturality:

Communities are naturally organised. It is neither a product of human will nor created by an act of government. It grows spontaneously. Individuals became the member by birth.

(5) Permanence:

Community is always a permanent group. It refers to a permanent living of individuals within a definite territory. It is not temporary like that of a crowd or association.

(6) Similarity:

The members of a community are similar in a number of ways. As they live within a definite locality they lead a common life and share some common ends. Among the members similarity in language, culture, customs, and traditions and in many other things is observed. Similarities in these respects are responsible for the development of community sentiment.

(7) Wider Ends:

A community has wider ends. Members of a community associate not for the fulfilment of a particular end but for a variety of ends. These are natural for a community.

(8) Total organized social life:

A community is marked by total organised social life. It means a community includes all aspects of social life. Hence a community is a society in miniature.

(9) A Particular Name:

Every community has a particular name by which it is known to the world. Members of a community are also identified by that name. For example people living in sector of Nkombo is known as “Abanyenkombo”.

(10) No Legal Status:

A community has no legal status because it is not a legal person. It has no rights and duties in the eyes of law. It is not created by the law of the land.

(11) Size of Community:

A community is classified on the basis of its size. It may be big or small. Village is an example of a small community whereas a nation or even the world is an example of a big community. Both the type of community is essential for human life.

(12) Concrete Nature:

A community is concrete in nature. As it refers to a group of people living in a particular locality we can see its existence. Hence it is concrete.

(13) A community exists within society and possesses distinguishable structure which distinguishes it from others.

2) Discussion on the characteristics of urban people.

Home decreasing is a disturbing feature of city community. The home problem in a big city is very acute. The middle class have insufficient accommodation. The child doesn’t get any play space. Energy and speed are the traits of a city. The people work at a speed, day and night which stimulates other to work. People indulge in too

many activities. Cities are consumers of population. Facilities for preserving health such as hospitals and medical specialist are many and excellent. City has more heterogeneous than the village. It is most favorable propagation ground of new biological and cultural hybrids. The personal traits, the occupations, the cultural and the ideas of the members of the urban community vary widely.

Class extremes characterize urban community. In a city, the people rolling in luxury and living, in grand mansion as well as people live in street. The best forms of ethical behavior and the worst racketeering are both to be bound in cities. Superior creativeness and chronic unemployment are similar. The city is the home of opposites. In some cities, residents may treat the strangers they meet as not human beings. They meet with speak without knowing each other's name. A citizen may live for several years in a city and may not know the names of one-third of the people who live in the same city area.

Life is quite different in towns and cities than in the village. Traditions, customs and modes do not have much influence over those living in urban areas. Family life is less disciplined, and there is no community support. There is much more mixing among people of very different backgrounds. This brings about changes in habits and attitudes. Family conflicts are common. For the individual's, and for families coming to live in the urban area, conscious efforts need to be made to form good friendships and to live in harmony with others. There are many opportunities for joining social groups for various activities. People need to take up the challenge for forming a new community even in the city, for mutual help and action to solve problems.

The main urban problems may be listed as follows:

(1) Growth of slums

(2) Lack of employment, leading to poverty, under – nutrition, disease, and anti-social activities. Failure of people to adjust, causing mental illness or delinquency.

(3) Crime and delinquency, begging and prostitution.

(4) Overcrowding in dwellings, buses and streets.

(5) Failure in administration (e.g. public services such as refuse collection and disposal) to cope with the rapid growth of the population.

(6) Road accidents.

(7) Health problems due to overcrowding and to stress of urban living.

(8) Political and industrial unrest and conflicts.

Lesson 7: Characteristics and functions of a healthy community

a) Learning objectives

- Explain the characteristics of a healthy Community
- Explain the roles and Responsibilities of Community Health Nurse
- Find out the core functions of community health nursing practices

b) Teaching and Learning resources

Student's text books of fundamentals of nursing, unit of introduction to community health nursing.

Text books of community health nursing and public health nursing taken from the library or internet.

Personal computer, projector and slides

Flip chart, pen or chalk writing board.

c) Revision

The Nurse educator will start the lesson by making a review on the previous lesson talking about the characteristics of a community.

d) Learning activity 5.1.7

Guidance

The teacher should proceed as follows for helping learners to achieve the objectives of lesson 5.1.7:

- The teacher helps learners to form the small groups of 6 learners in order to do the Learning activity 5.1.7.
- Request the group to do the Learning activity 5.1.7 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating the learning process.
- Ask the learners to use fundamentals of nursing and community health nursing text books.
- Ask 2 groups to present their group work to the whole class.
- Give opportunity to learners to add any missing point or clarification to what the two groups have presented.

- Let the members of groups which have presented to respond to the asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The teacher should summarize the key points of each group presentation.
- The teacher should summary the lesson on black board or use Power point presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 5.1.7 in student book or formulate your owns in order to assess the achievement of lesson 5.1.7 objectives.

Answers to the activity 5.1.7

Characteristics of healthy community

These include the following:

- The healthy community ensures that community resources are available to all members and groups within the community. It ensures there is access to appropriate health care services that focus on both treatment and prevention for all members of the community; a clean and safe physical environment; and roads, schools, playgrounds, and other services to meet the needs of the people in that community
- Emergency preparedness: a healthy community has a well-organized base of community resources available to meet the needs and to intervene in a crisis or natural disaster.
- Ability to solve problems. Community detects, investigates, and dissects problems and collaborates and coordinates a response among members and groups to meet their identified needs.
- Communication through open channels. *It e*nsures that communication remains open and information flows among all members and groups in every direction within the community.
- Resolution of disputes through legitimate mechanisms
- The healthy community ensures there is participation by citizens in decision making and subgroups participate in community affairs. It provides opportunities for and encourages participation of individuals and groups in decision making related to issues affecting the community.
- A high degree of wellness among its citizens: the healthy community focuses on promoting a high level of wellness and health among all members and populations within the community.

- A healthy community has an awareness of its members, populations, and subgroups as being part of the community.
- The historical and cultural heritage is promoted and celebrated.
- There is a diverse and innovative economy.
- There is a sustainable use of available resources for all.

Roles and responsibilities of a community health nurse

In general the community health nurse performs the following functions according to her roles:

Clinician Role or Direct care provider

She provides a continuous and comprehensive care to the family, group of people and community at large. She emphasizes more on promotive and preventive health care. The community health nurse approaches the family and persuades them to implement promotive and preventive measures. Care during illness is beneficial gaining acceptance, trust and confidence.

She also provides care during illness for which usually the family members come forward to seek help. As care is given, the nurse educates and helps the family members to develop their abilities and overcome their barriers so that they can take care of their health and nursing needs, promote their health and prevent illness. The care is provided at home, clinic, school, work place etc.

Health educator:

The community health nurse educates the individual, family, groups of people and the community at large. Health education thus given focuses on promoting health, preventing illness and aspects related to care during illness and rehabilitation & disability prevention. The nurse conducts planned health education sessions for organized community groups e.g., school children, antenatal mothers, eligible couples, elderly etc. Health education for the family is planned and implemented as part of the family care plan. The community nurse assesses the knowledge, attitudes, values, beliefs, behaviours, practices, stage of change, and skills of the community people and provides health education according to knowledge level. The community health nurses are involved in giving incidental/casual/spontaneous health education according to the situation. (Washing of hands before a child eats).

Counsellor:

The community health nurse helps individual, families and the community at large to recognize and understand their problems to be solved, find solutions with-in resources and implement feasible and acceptable solutions.

Resource person:

The community health nurse explores community resources in terms of money, manpower, material, agencies etc. She makes use of these resources in helping individual, family groups and community to meet their health and nursing needs.

Care manager/ Managerial Role:

The community health nurse implements the care which is planned for the family and community. She directly provides the care with the active participation of family and community members. She makes use of family and community resources. She guides the family and community and refers when required. She maintains a record of the care given to families and the community. The community health nurse evaluates the effectiveness of care given in terms of change in health status, health behavior, reduction in illness, improvement in clinic attendance-immunization & rate of utilization of the community health services.

As a manager the nurse exercises administrative direction towards the accomplishment of specified goals by assessing clients' needs, planning and organizing to meet those needs, directing and controlling and evaluating the progress to assure that goal are met.

Planner:

The community health nurse while giving comprehensive care to family and community, she/he makes a plan on the basis of identified health problems and health & nursing needs. She/he plans with other team members to provide appropriate care.

Research Role:

In the researcher role community health nurses engage in systematic investigation of any untoward change in health behavior and health status of the community, people, their surroundings, and unusual occurrence of disease. She/he carries out collection, and analysis of data to solve problems and enhance community health nursing practice. Based on the research results, a community nurse improve their service quality and improve their health accordingly, for examples by providing information, health education to people to improve their behavior and health status, working with the family and providing direct care during illness, notification to health authority about communicable disease.

Advisor:

The community health gives some suggestions on practical situation which requires immediate actions and where there is little scope of health education. For example, in case of a client with diabetes mellitus, the community health nurse advices with concern on the foods to be included and avoided according to the socio –economic condition of the individual & family.

Advocate Role:

The issue of clients' rights is important in health care today. Every patient or client has the right to receive just equal and humane treatment. A community health nurse is an advocate of patient's rights about their care. They encourage the individuals to take the right food for maintaining health, the right drugs for the treatment, and the right services at the right place where ever needed. They provide sufficient information to make necessary health care decisions, promote community awareness of significant health problems.

Collaborator Role:

Community health nurses seldom practice in isolation. They must work with many people including clients, other nurses, physicians, social workers, and community leaders, therapists, nutritionists, occupational therapists, psychologists, epidemiologists, biostatisticians, legislators, etc. as a member of the health team.

Leader Role:

Community health nurses are becoming increasingly active in the leader role. As a leader, the nurse instructs influences or persuades others to effect change that will positively affect people's health. The leadership role's primary function is to use a change of health policy based on community people's health; thus, the community health nurse becomes an agent of change.

Core functions of community health nursing

The four core functions of community health nursing practices are displayed below:

- Identification of community culture and resources that lead as a key factor in the community health care delivery system.
- Evaluate community health conditions, health risks, and problems to identify the health-care demands of the people.
- Plan and implementation of comprehensive community health interventions, care, services, and programs.
- Develop health policy at the local community level to drive policies/ agreements at the state and national levels for collaborative endeavors and actions.

e) Self-assessment 5.1.7

The teacher should ask students to work individually on the questions of the self-assessment 1.7 given in the student book. This exercise should be done at the end of the lesson 5.1.7.

Answers for Self-assessment 5.1.7

1) Giving the four core functions of community health nursing practices

The four core functions of community health nursing practices are displayed below:

- Identification of community culture and resources that lead as a key factor in the community health care delivery system.
- Evaluate community health conditions, health risks, and problems to identify the health-care demands of the people.
- Plan and implementation of comprehensive community health interventions, care, services, and programs.
- Develop health policy at the local community level to drive policies/ agreements at the state and national levels for collaborative endeavors and actions.

2) Mentioning any 4 characteristics of a healthy community

These include the following:

- The healthy community ensures that community resources are available to all members and groups within the community. It ensures there is access to appropriate health care services that focus on both treatment and prevention for all members of the community; a clean and safe physical environment; and roads, schools, playgrounds, and other services to meet the needs of the people in that community
- Emergency preparedness: a healthy community has a well-organized base of community resources available to meet the needs and to intervene in a crisis or natural disaster.
- Ability to solve problems. Community detects, investigates, and dissects problems and collaborates and coordinates a response among members and groups to meet their identified needs.
- Communication through open channels. It ensures that communication remains open and information flows among all members and groups in every direction within the community.
- Resolution of disputes through legitimate mechanisms
- The healthy community ensures there is participation by citizens in decision making and subgroups participate in community affairs. It provides opportunities for and encourages participation of individuals and groups in decision making related to issues affecting the community.

- A high degree of wellness among its citizens: the healthy community focuses on promoting a high level of wellness and health among all members and populations within the community.
- A healthy community has an awareness of its members, populations, and subgroups as being part of the community.
- The historical and cultural heritage is promoted and celebrated.
- There is a diverse and innovative economy.
- There is a sustainable use of available resources for all.

3) Explaining any 2 roles and responsibilities of a community health nurse.

Some key roles and responsibilities of community health nurse are discussed below:

Clinician Role or Direct care provider

She provides a continuous and comprehensive care to the family, group of people and community at large. She emphasizes more on promotive and preventive health care. The community health nurse approaches the family and persuades them to implement promotive and preventive measures. Care during illness is beneficial gaining acceptance, trust and confidence.

She also provides care during illness for which usually the family members come forward to seek help. As care is given, the nurse educates and helps the family members to develop their abilities and overcome their barriers so that they can take care of their health and nursing needs, promote their health and prevent illness. The care is provided at home, clinic, school, work place etc.

Health educator:

The community health nurse educates the individual, family, groups of people and the community at large. Health education thus given focuses on promoting health, preventing illness and aspects related to care during illness and rehabilitation & disability prevention. The nurse conducts planned health education sessions for organized community groups e.g., school children, antenatal mothers, eligible couples, elderly etc. Health education for the family is planned and implemented as part of the family care plan. The community nurse assesses the knowledge, attitudes, values, beliefs, behaviours, practices, stage of change, and skills of the community people and provides health education according to knowledge level. The community health nurses are involved in giving incidental/casual/spontaneous health education according to the situation. (Washing of hands before a child eats).

Counsellor:

The community health nurse helps individual, families and the community at large to recognize and understand their problems to be solved, find solutions with-in resources and implement feasible and acceptable solutions.

Resource person:

The community health nurse explores community resources in terms of money, manpower, material, agencies etc. She makes use of these resources in helping individual, family groups and community to meet their health and nursing needs.

Care manager/ Managerial Role:

The community health nurse implements the care which is planned for the family and community. She directly provides the care with the active participation of family and community members. She makes use of family and community resources. She guides the family and community and refers when required. She maintains a record of the care given to families and the community. The community health nurse evaluates the effectiveness of care given in terms of change in health status, health behavior, reduction in illness, improvement in clinic attendance-immunization & rate of utilization of the community health services.

As a manager the nurse exercises administrative direction towards the accomplishment of specified goals by assessing clients' needs, planning and organizing to meet those needs, directing and controlling and evaluating the progress to assure that goal are met.

Planner:

The community health nurse while giving comprehensive care to family and community, she/he makes a plan on the basis of identified health problems and health & nursing needs. She/he plans with other team members to provide appropriate care.

Research Role:

In the researcher role community health nurses engage in systematic investigation of any untoward change in health behavior and health status of the community, people, their surroundings, and unusual occurrence of disease. She/he carries out collection, and analysis of data to solve problems and enhance community health nursing practice. Based on the research results, a community nurse improve their service quality and improve their health accordingly, for examples by providing information, health education to people to improve their behavior and health status, working with the family and providing direct care during illness, notification to health authority about communicable disease.

Advisor:

The community health gives some suggestions on practical situation which requires immediate actions and where there is little scope of health education. For example, in case of a client with diabetes mellitus, the community health nurse advices with concern on the foods to be included and avoided according to the socio –economic condition of the individual & family.

Advocate Role:

The issue of clients' rights is important in health care today. Every patient or client has the right to receive just equal and humane treatment. A community health nurse is an advocate of patient's rights about their care. They encourage the individuals to take the right food for maintaining health, the right drugs for the treatment, and the right services at the right place where ever needed. They provide sufficient information to make necessary health care decisions, promote community awareness of significant health problems.

Collaborator Role:

Community health nurses seldom practice in isolation. They must work with many people including clients, other nurses, physicians, social workers, and community leaders, therapists, nutritionists, occupational therapists, psychologists, epidemiologists, biostatisticians, legislators, etc. as a member of the health team.

Leader Role:

Community health nurses are becoming increasingly active in the leader role. As a leader, the nurse instructs influences or persuades others to effect change that will positively affect people's health. The leadership role's primary function is to use a change of health policy based on community people's health; thus, the community health nurse becomes an agent of change

Lesson 8: Determinants of health and the factors affecting community health

a) Learning objectives

- Explain health issues related to determinants of health
- Describe the factors affecting community health

b) Teaching and Learning resources

- Students' text book of fundamentals of community health
- Text books of community health nursing and public health nursing taken from the library or internet

- Personal computer, projector and slides
- Pen or chalk writing board.

c) Revision/introduction

The teacher should start the lesson by making a review on characteristics and functions of a healthy community.

d) Learning activity 5.2

Guidance

The teacher should proceed as follows for helping learners to achieve lesson 5.2 objectives:

- Helps learners to form the small groups of 5 learners in order to do the Learning activity 5.2
- Request the group to do the Learning activity 5.2 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them to learn.
- The learners may use the text book of community health nursing from library or internet. He/she may also use student book of Fundamentals of nursing, especially the unit of introduction to community health nursing.
- After 10 minutes, the teacher should request 2 groups to present their group work to the whole class.
- Ask other students to add any missing point or clarification to what the groups have presented.
- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The teacher should summarize the key points of each group presentation.
- The teacher do the summary of the lesson on black board or use Power Point presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 5.1.8 in student book or formulate your owns in order to assess the achievement of lesson 8 objectives.

Answers to the activity 5.2

1) Explanations of any 2 determinants of health

At the population level, better health can be attributed to higher standards of living, good nutrition, a healthier environment, and having fewer children. Furthermore, public health efforts, such as immunization and clean air and water, and medical care, including management of acute episodic illnesses (e.g., pneumonia, tuberculosis) and chronic disease (e.g., cancer, heart disease, diabetes mellitus), may also contribute significantly to the increase in life expectancy.

Health and illness are influenced by a web of factors, some that can be changed (e.g., individual behaviors such as tobacco use, diet, physical activity) and some that cannot (e.g., genetics, age, gender). Other factors (e.g., physical and social environment) may require changes that will need to be accomplished from a policy perspective.

2) A short description on each of the following factors affecting the community health nursing:

Physical factors:

- Industrial development: Communities that are industrially developed are more likely to be affected by numerous diseases due to the toxic waste products from the industries that are released into water bodies and the atmosphere and due to congestion of settlement leading to slum development hence contagious diseases compared to areas that are not industrially developed. Water contamination from industrial discharge and air pollution may be ones of the consequences of industrial development.
- Community size: A densely populated or over populated community can easily be attacked by communicable diseases
- Geographical location: Some communities are more prone to diseases due to the geographical location. For example, some communities located in swampy areas are more prone to diseases, especially during heavy rains these communities are affected by floods which can lead to manipulation of organisms causing disease. If the water is stagnant, there is risk of spread of organisms which cause diseases such as malaria and diarrhea disease.
- Environment: A clean environment is very vital to the proper health of a community which minimizes the occurrence and transmission of diseases, unlike a dirty environment which easily leads to outbreak of diseases.

Social/Cultural factors:

- Traditions Beliefs: Beliefs or traditions such as female genital mutilation (FGM) possessed by communities greatly affect the health of its people.
- Economy: A community that is economically well off has low chances of suffering from disease breakouts because they have proper health care and water drainage systems unlike a poor community.
- Government: since the government involves planning, implementing and provision of community services such as water supply, medical supplies and other needs which can directly affect the community health
- Educational factors: poor education or illiteracy affects the health of a community when people don't have education on how they can prevent themselves from diseases. For example, health education on the use of mosquito treated nets to prevent malaria, health education on the environmental hygiene so as to prevent diseases such as cholera and trachoma.

This is about the ways in which communities organize their resources such as taxes which can be very helpful in control of diseases and supply of sufficient and efficient medical care, even in times of crisis. Unlike communities without proper accountability of their taxes which can partly be allocated to the health sector, may suffer from lack of adequate resources to prevent diseases, protect and promote the health of its citizens.

Individual behavior:

Community health is greatly influenced by individuals, their personal health, habits, etc.

In order to achieve a healthy community, it requires a team work for example in the following in activities:

- Proper disposal of waste products from individuals' compound,
- Clearing all stagnant water in the compound to prevent harboring of mosquitoes,
- Active smokers to quit smoking to avoid passive smokers thus preventing lung cancer, Abstinence from sexual activities and for sexually active individuals to use protection to prevent the spread of HIV/AIDs and STDs etc.

e) Self-assessment 5.2

The teacher asks students to work individually on the questions of the self-assessment 5.2 given in the student book.

Answers for Self-assessment 5.2

1) Description of the 4 factors that affect the health of the community:

The factors affecting community health can be grouped into: Physical factors, Social/Cultural factors, Community organization, and Individual behavior

a. Physical factors

- Industrial development: Communities that are industrially developed are more likely to be affected by numerous diseases due to the toxic waste products from the industries that are released into water bodies and the atmosphere and due to congestion of settlement leading to slum development hence contagious diseases compared to areas that are not industrially developed. Water contamination from industrial discharge and air pollution may be ones of the consequences of industrial development.
- Community size: A densely populated or over populated community can easily be attacked by communicable diseases
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- Environment: A clean environment is very vital to the proper health of a community which minimizes the occurrence and transmission of diseases, unlike a dirty environment which easily leads to outbreak of diseases.

b. Social/cultural factors

- Traditions Beliefs: Beliefs or traditions such as female genital mutilation (FGM) possessed by communities greatly affect the health of its people.
- Economy: A community that is economically well off has low chances of suffering from disease breakouts because they have proper health care and water drainage systems unlike a poor community.
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to prevent malaria, health education on the environmental hygiene so as to prevent diseases such as cholera and trachoma.

c. Community organization

This is about the ways in which communities organize their resources such as taxes which can be very helpful in control of diseases and supply of sufficient and efficient medical care, even in times of crisis. Unlike communities without proper accountability of their taxes which can partly be allocated to the health sector, may suffer from lack of adequate resources to prevent diseases, protect and promote the health of its citizens.

d. Individual behavior

Community health is greatly influenced by individuals, their personal health, habits, etc. In order to achieve a healthy community, it requires a team work for example in the following in activities:

- Proper disposal of waste products from individuals' compound,
- Clearing all stagnant water in the compound to prevent harboring of mosquitoes,
- Active smokers to quit smoking to avoid passive smokers thus preventing lung cancer, Abstinence from sexual activities and for sexually active individuals to use protection to prevent the spread of HIV/AIDs and STDs etc.

Thus proper individual healthy living can greatly promote a healthy community.

1) Explanations of the issues related to biology and individual behavior as determinants of health:

   Individual biology and behaviors influence health through their interaction with each other and with the individual's social and physical environments. Thus, policies and interventions can improve health by targeting detrimental or harmful factors related to individuals and their environment. Some causes of death resulting from individual behavior are: tobacco, poor diet and physical inactivity, alcohol consumption and its association with accidents, suicides, homicides, and cirrhosis and chronic liver disease. Other leading causes of death are microbial agents, toxic agents, motor vehicle crashes, firearms, sexual behaviors and illicit use of drugs.

Lesson 9: Community health needs assessment

a) Learning objectives

- Describe the types of community needs assessment
- Explain the methods of community health needs assessment
- Describe the sources of data in community health assessment
- List the steps of community health needs assessment.

b) Teaching and Learning resources

- Students' text books of fundamentals of nursing, specifically the unit of introduction to community health nursing,
- Text books of community health nursing and public health nursing taken from the library or internet
- Personal computer, projector and slides
- Chalk or pen writing board.

c) Introduction/revision

The teacher should introduce the lesson by reviewing the previous lesson on Determinants of health and the factors affecting community health. He/she should also establish the relationship between the previous lesson and the new one.

d) Learning activity 5.3

Guidance

- Helps students to form the small groups of 5 learners in order to do the Learning activity 5.3
- Request the group to do the Learning activity 5.3 that is presented in student book or show it on slide using projector, and ask the learners to discuss in groups and respond to the related questions.
- Pass around groups guiding and facilitating them to learn.
- The learners may use the text book of community health nursing. He/she may also use the student book of Fundamentals of nursing, the unit of introduction to community health nursing.
- After 10 minutes of group work, the teacher should request 2 groups to present their group work to the whole class.
- Ask other students to add any missing point or clarification to what the groups have presented.

- Let the members of groups which have presented to respond to asked questions and if they are not able to respond, ask the same question to other groups and help them to clarify the answer.
- The teacher should summarize the key points of each group presentation.
- The teacher do the summary of the lesson on black board or use Power Point presentation and share it with students
- At the end of the lesson, ask learners to do the questions of self-assessment 5.3 in student book in their group.

Answers to the activity 5.3

1) The meaning of community health assessment

Assessment for nurses means collecting and evaluating information about a community's health status to discover existing or potential needs and assets as a basis for planning future action. Community needs assessment is the process of determining the real or perceived needs of a defined community.

2) Discussion of the types of community assessment

Here below there is a short description of the types of community needs assessment.

Familiarization or Windshield Survey

A familiarization assessment is a common starting place in evaluation of a community**.** It involves studying data already available on a community, then gathering a certain amount of first hand data in order to gain a working knowledge of the community. Such an approach may utilize a **windshield survey**—an activity often used by nursing students in community health courses and by new staff members in community health agencies. Nurses drive (or walk) around the community of interest; find health, social, and governmental services; obtain literature; introduce them-selves and explain that they are working in the area; and generally become familiar with the community and its residents. This type of assessment is needed whenever the community health nurse works with families, groups, organizations, or populations. The windshield survey provides knowledge of the context in which these aggregates live and may enable the nurse to better connect clients with community resources.

Problem-Oriented Assessment

A second type of community assessment, **problem oriented assessment**, begins with a single problem and assesses the community in terms of that problem.

The problem-oriented assessment is commonly used when familiarization is not sufficient and a comprehensive assessment is too expensive. This type of assessment is responsive to a particular need. The data collected will be useful in any kind of planning for a community response to the specific problem. Data should address the magnitude of the problem to be studied (e.g., prevalence, incidence), the precursors of the problem, information about population characteristics, along with the attitudes and behaviors of the population being studied.

Community Subsystem Assessment

In community subsystem assessment, the community health nurse focuses on a single dimension of community life. For example, the nurse might decide to survey churches and religious organizations to discover their roles in the community. What kinds of needs do the leaders in these organizations believe exist? What services do these organizations offer? To what extent are services coordinated within the religious system and between it and other systems in the community? Community subsystem assessment can be a useful way for a team to conduct a more systematic community assessment. If five members of a nursing agency divide up the ten systems in the community and each person does an assessment of two systems, they could then share their findings to create a more comprehensive picture of the community and its needs.

Comprehensive Assessment

Comprehensive assessment seeks to discover all relevant community health information. It begins with a review of existing studies and all the data presently available on the community. A survey compiles all the demographic information on the population, such as its size, density, and composition.

Key informants are interviewed in every major system—education, health, religious, economic, and others. Key informants are experts in one particular area of the community or they may know the community as a whole. Examples of key informants would be a school nurse, a religious leader, key cultural leaders, the local police chief or fire captain, a mail carrier, or a local city council person. Then, more detailed surveys and intensive interviews are performed to yield information on organizations and the various roles in each organization. A comprehensive assessment describes the systems of a community, and also how power is distributed throughout the system, how decisions are made, and how change occurs.

Because comprehensive assessment is an expensive, time-consuming process, it is not often undertaken. Performing a more focused study, based on prior knowledge of needs is often a better and less costly strategy. Nevertheless, knowing how to conduct a comprehensive assessment is an important skill when designing smaller, more focused assessments.

Community Assets Assessment

The final form of assessment presented here is **assets assessment**, which **focuses on the strengths and capacities of a community rather than its problems.** The type of assessment depends on variables such as the needs that exist, the goals to be achieved, and the resources available for carrying out the study.

Assets assessment begins with what is present in the community. The capacities and skills of community members are identified, with a focus on creating or rebuilding relationships among local residents, associations, and institutions to multiply power and effectiveness. This approach requires that the assessor **looks for the positive**. Assets assessment has three levels:

1. Specific skills, talents, interests, and experiences of individual community members such as individual businesses, cultural groups, and professionals living in the community.
2. Local citizen associations, organizations, and institutions controlled largely by the community such as libraries, social service agencies, voluntary agencies, schools, and police.
3. Local institutions originating outside the community controlled largely outside the community such as welfare and public capital expenditures.

The key, however, is linking these assets together to enhance the community from within. The community health nurse's role is to assist with those linkages.

3) Description of the methods of community assessment

Four important methods are discussed here: surveys, descriptive epidemiologic studies, community forums or town meetings, and focus groups.

Surveys

A survey is an assessment method in which a series of questions is used to collect data for analysis of a specific group or area. Surveys are commonly used to provide a broad range of data that will be helpful when used with other sources or if other sources are not available.

To plan and conduct community health surveys, the goal should be to determine the variables (selected environmental, socioeconomic, and behavioral conditions or needs) that affect a community's ability to control disease and promote wellness. The nurse may choose to conduct a survey to determine such things as health care use patterns and needs, immunization levels, demographic characteristics, or health beliefs and practices.

The survey method involves **self-report**, or **response to predetermined questions**, and can include questionnaires, telephone or in person interviews. It can also be combined with other measures.

The process of gathering data consists to interview *key informants* in the community. These may be knowledgeable residents, elected officials, or health care providers. It is essential that the community health nurse recognize that the views of these people may not reflect the views of all residents.

Descriptive Epidemiologic Studies

A second assessment method is a **descriptive epidemiologic study**, which examines the amount and distribution of a disease or health condition in a population by person (Who is affected?), by place (Where does the condition occur?), and by time (When do the cases occur?).

In addition to their value in assessing the health status of a population, descriptive epidemiologic studies are useful for suggesting which individuals are at greatest risk and where and when the condition might occur. They are also useful for health planning purposes and for suggesting hypotheses concerning disease etiology.

Geographic Information System Analysis

The geographic information systems (GIS) “mapping and visualization of health disparities and their relationship to the geographical location of health care services can allow for better resource allocations to disparate and underserved populations”.

It is now commonly used in community health assessment, in general, and for specific populations and problems. For example GIS has been useful in identifying air pollutant risk exposure, planning or rapid public health response during a natural disaster, and identification of colorectal screening resources for medically underserved communities.

GIS data are often combined with field observation or census data and other survey results to provide powerful visualizations of data for analysis and intervention.

Community Forums or Town Hall Meetings

The community forum or town hall meeting is a qualitative assessment method designed to obtain community opinions. It takes place in the neighborhood of the people involved, perhaps in a school gymnasium or an auditorium. The participants are selected to participate by invitation from the group organizing the forum.

Members come from within the community and represent all segments of the community that are involved with the issue. For instance, if a community is contemplating building a swimming pool, the people invited to the community forum might include potential users of the pool (residents of the community who do not

have pools and special groups such as the Girl Scouts, elders, and disabled citizens), community planners, health and safety personnel, and other key people with vested interests. They are asked to give their views on the pool: Where should it be located? Who will use it? How will the cost of building and maintaining it be assumed? What are the drawbacks to having the pool? Any other pertinent issues the participants may raise are included. This method is relatively inexpensive, and results are quickly obtained. A drawback of this method is that only the most vocal community members, or those with the greatest vested interests in the issue, may be heard.

This format does not provide a representative voice to others in the community who also may be affected by the proposed decision. This method is used to elicit public opinion on a variety of issues, including health care concerns, political views, and feelings about issues in the public eye, such as gangs.

Focus Groups

This fourth assessment method, focus groups, is similar to the community forum or town hall meeting in that it is designed to obtain grassroots opinion. However, it has some differences. First, only a small group of participants, usually 5 to 15 people, is present. The members chosen for the group are homogeneous with respect to specific demographic variables. For example, a focus group may consist of female community health nurses, young women in their first pregnancy, or retired businessmen.

Leadership skills are used in conjunction with the small group process to promote a supportive atmosphere and to accomplish set goals. The interviewer guides the discussion according to a predetermined set of questions or topics. The best use of focus group data includes not only analysis of individual communications, but of the interactions between participants.

Nurses who conduct focus groups must carefully select participants, formulate questions, and analyze recorded sessions. These sessions can produce greater interaction and expression of ideas than surveys and may provide more insight into an aggregate's opinions. In addition to encouraging community participation in the identification of assets and needs, focus groups may lay the groundwork for community involvement in planning the solutions to identified problems.

Major advantages of focus groups are their efficiency and low cost, similar to the community forum or town hall meeting format. A focus group can be organized to be representative of an aggregate, to capture community interest groups, or to sample for diversity among different population groups. One example is a research study involving youths and adults. Eight focus groups were held to determine perceptions of healthy diet and exercise among parents and children. Whatever the purpose, however, some people may be uncomfortable expressing their views in a group situation.

4) Identify the sources of data in community assessment

Data sources can be primary or secondary, and they can be from international, national, or local sources.

Primary and Secondary Sources

Community health nurses make use of many sources in data collection: Community members, including formal leaders, and informal leaders. The community members can frequently offer the most accurate insights and comprehensive information. Information gathered by talking to people provides **primary data**, because the data are obtained directly from the community. **Secondary sources** of data include people who know the community well and the records such people create in the performance of their jobs. Specific examples are health team members, client records, community health (vital) statistics, census bureau data, reference books, research reports, and community health nurses. Because secondary data may not totally describe the community and do not necessarily reflect community self-perceptions, they may need augmentation or further validation through focus groups, surveys, and other primary data collection methods.

International Sources

International data are collected by several agencies, including the World Health Organization (WHO) and its six regional offices and health organizations. In addition, the United Nations and global specialty organizations that focus on certain populations or health problems, such as the United Nations Children's Fund, are major sources of international health-related data. The WHO publishes an annual report of their activity, and international statistics for diseases and illness trends can be found on the Internet. Information from these official sources can give the nurse in the local community information about immigrant and refugee populations he serves.

National Sources

Community health nurses can access a wealth of official and nonofficial sources of national data. Official sources develop documents based on data compiled by the government. Example of national data sources: National Institute of Statistics of Rwanda, Ministry of Health, Rwanda through its department like Rwanda Biomedical Center, etc

e) Self-assessment 5.3

The teacher asks students to work individually on the questions of the self -assessment 5.2 given in the student book.

Answers for Self-assessment 5.3

1) Discuss the Sources of data for community health needs assessment.

The community health nurse can look in many places for data to enhance and complete a community assessment. Data sources can be primary or secondary, and they can be from international, national, or local sources.

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2) Describe different methods used for community health assessment.

Community health needs may be assessed using a variety of methods.

Surveys

A survey is an assessment method in which a series of questions is used to collect data for analysis of a specific group or area. Surveys are commonly used to provide a broad range of data that will be helpful when used with other sources or if other sources are not available.

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Leadership skills are used in conjunction with the small group process to promote a supportive atmosphere and to accomplish set goals. The interviewer guides the discussion according to a predetermined set of questions or topics. The best use of focus group data includes not only analysis of individual communications, but of the interactions between participants.

Nurses who conduct focus groups must carefully select participants, formulate questions, and analyze recorded sessions. These sessions can produce greater interaction and expression of ideas than surveys and may provide more insight into an aggregate's opinions. In addition to encouraging community participation in the identification of assets and needs, focus groups may lay the groundwork for community involvement in planning the solutions to identified problems.

Major advantages of focus groups are their efficiency and low cost, similar to the community forum or town hall meeting format. A focus group can be organized to be representative of an aggregate, to capture community interest groups, or to sample for diversity among different population groups. One example is a research study involving youths and adults. Eight focus groups were held to determine perceptions of healthy diet and exercise among parents and children. Whatever the purpose, however, some people may be uncomfortable expressing their views in a group situation.

3) What are the steps in conducting community health needs assessment?

The following are the required steps in conducting a needs assessment:

(a). Identify aggregate for assessment

(b). Identify required information

(c). Select method of data gathering

(d). Develop questionnaire or interview questions

(e). Develop procedures for data collection

(f). Train data collectors

(g). Arrange for a sample representative of the aggregate

(h). Conduct needs assessment

(i). Tabulate and analyze data

(j). Identify needs suggested by data

(k). Develop an action plan

Lesson 10: Community education

a) Learning objectives

- Describe the factors that affect the readiness to learn
- Explain the learning domains that should be considered in teaching/learning process

- Describe how certain active teaching methods are used during health education session
- Describe how certain teaching materials/aids should be used during health education session
- Describe the Scheme of health education session

b) Teaching and Learning resources

- Students' text books of fundamentals of nursing
- Community health nursing or public health nursing text books
- Personal computer, projector and slides
- Chalk or pen writing board.

c) Prerequisites/Revision/Introduction

Introduce the lesson by asking students to brainstorm about the previous lesson of community health needs assessment.

d) Learning activity 5.4.1

Guidance

- Helps students to make the small groups.
- Provide to students the fundamentals of nursing books or orient them on some reference books to look from the library or internet,
- Write the activity on black board or use power point slide.
- Request the students to respond to the questions
- Pass around groups guiding and facilitating the learning process.
- After some few minutes of group discussion, ask 1 group to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- The teacher writes the summary of the lesson on black board or use Power Point presentation and share it with students
- End of the lesson by writing on black board or use Power Point presentation the questions of self-assessment 5.4 in student book

- Asking learners to write it and do it as a home work.

Answers to the activity 5.4.1.

1) Discussion of different methods that may be used for providing health education

Method	Definition	Domain(s) of learning
Individual counselling	Individuals are given advice during visits to clinics or at home. It focuses on individual needs	Knowledge
Brainstorming	Method in which a list of ideas, thoughts, or alternative solutions that focus on a specific topic of problem is generated. Brain storming stimulates thought and creativity and is often used along with group discussion.	Knowledge
Mass media	Dissemination of information to a large group of people. It utilizes communication techniques such as TV broadcasts, internet, newspapers, radio, magazines and exhibitions. It is used during contingency periods when information needs to reach the people fast.	Knowledge
Case study	Method using realistic scenario that focus on a specific issue, topic, or problem. Students typically read, study, and react orally or in writing to the case study individually or in small groups.	Primarily knowledge and attitude
Clinical simulation	A presentation of a real or hypothetical patient management situation (a representation of a simulated patient management situation; it may involve models or simulated patients).	Knowledge, skill (especially cognitive skills) and attitude
Demonstration	Method in which the teacher presents the steps necessary for the implementation of a procedure or a clinical task or activity.	Skill
Discussion	Interactive process in which learners share their ideas, thoughts, questions, and answers in a group setting with a facilitator.	Knowledge and attitude

Facilitated practice	Opportunity for learners to practice or apply (with models simulated patients, or real patients) the content presented in theoretical sessions. The teacher explains procedures or routines, demonstrates tasks, models the correct performance of the skill, and observes and interacts with learners while providing ongoing feedback.	Knowledge, skill and attitude
Interactive presentation	Verbal presentation of information by the teacher, in which presentation of content is supplemented with a variety of questions, interactions, visual aids, and instructional materials. Also known as a lecture or illustrated lecture.	Primarily knowledge
Role play	Learning activity in which learners play out roles in a simulated situation that relates to one or more learning objectives.	Knowledge, some skills, particularly communication skills, and attitude.
Study trip	Learning situation outside the regular classroom, in which learners travel to another location in a facility or outside the facility.	Primarily knowledge

What do you understand for the factors that affect readiness to learn among community health members

Factors that affect readiness to learn are the followings:

Physiologic factors: Age, gender, disease process currently being treated, intactness of senses (hearing, vision, touch, and taste), and pre-existing condition.

Psychosocial factors: Sociocultural circumstances, occupation, economic stability, past experiences with learning, attitude toward learning, spirituality, emotional health, self-concept and body image, sense of responsibility for self.

Cognitive factors: Developmental level, level of education, communication skills, primary language, motivation, reading ability, learning style, problem-solving ability.

Environmental factors: Home environment, safety features, family relationships/ problems, caregiver (availability, motivation, abilities), other support systems.

Developmental considerations: It is helpful for the nurse to understand various theories of development. Just as the need to learn will be different at various age levels, the cognitive domain will differ and life experiences will differ. For example, teaching a 6-year-old girl about insulin administration will be different from teaching a 24-year old woman, which would in turn be different from teaching a 69-year-old woman.

The nurse must consider these factors when developing teaching plans.

2) Discussion of any four teaching materials used for providing a community health education session

a. A writing board:

A writing board is the most commonly used visual aid. It can display information written with chalk (chalkboard or blackboard) or special pens (whiteboard). You can use a writing board for announcements, informal discussions, brainstorming sessions, and note taking.

b. A flipchart:

A flipchart is a large tablet or pad of paper, usually a tripod or a stand. You can use a flipchart for displaying prepared notes or drawings as well as for brainstorming and recording ideas from discussions.

c. Use Video:

Videos can be very versatile visual aids. Videos can be used by a single learner for individual learning, by a group of learners for independent learning, or by the teacher for involving learners in a discussion.

d. Leaflets:

Leaflets are the most common way of using print media in health education. They can be a useful reinforcement for individual and group sessions and serve as a reminder of the main points that you have made. They are also helpful for sensitive subjects such as sexual health education.

e. using computer generated slides: refer to student book

e) Self-assessment 5.4.1

Write on the black board (or use Power Point presentation) the questions of self-assessment 5.4 as presented in student book and ask learners to respond to them and or do them as a home work.

Answers for Self-assessment 5.4.1

1) Explain 5 factors that affect the readiness to learn

Factors that affect readiness to learn are the followings:

Physiologic factors: Age, gender, disease process currently being treated, intactness of senses (hearing, vision, touch, and taste), and pre-existing condition.

Psychosocial factors: Sociocultural circumstances, occupation, economic stability, past experiences with learning, attitude toward learning, spirituality, emotional health, self-concept and body image, sense of responsibility for self.

Cognitive factors: Developmental level, level of education, communication skills, primary language, motivation, reading ability, learning style, problem-solving ability.

Environmental factors: Home environment, safety features, family relationships/ problems, caregiver (availability, motivation, abilities), other support systems.

Developmental considerations: It is helpful for the nurse to understand various theories of development. Just as the need to learn will be different at various age levels, the cognitive domain will differ and life experiences will differ. For example, teaching a 6-year-old girl about insulin administration will be different from teaching a 24-year old woman, which would in turn be different from teaching a 69-year-old woman.

2) Explain 3 domains of learning

Teaching and learning occur in three **learning domains**: cognitive, affective, and psychomotor. All three domains must be considered in all aspects of the teaching and learning process. Thus, the nurse must assess the client's need, readiness, and past experience in the cognitive, affective, and psychomotor domains.

Cognitive learning involves mental storage and recall of new knowledge and information for problem solving. Sometimes this domain is referred to as the critical thinking or knowledge domain. An example of cognitive learning is seen in the client who has recently been diagnosed with insulin-dependent diabetes. Not only will this client need information about diet, insulin, and exercise, but he or she will also need to use the information to formulate menus and an exercise plan. In addition, as blood sugar levels fluctuate, a client with diabetes must alter food intake and exercise. All this requires cognitive learning.

Affective learning involves feelings, attitudes, values, and emotions that influence learning. This is also referred to as the attitude domain. In the last decade the role emotion plays in learning has been speculated to be the most influential of all the domains in impacting motivation, thus the first domain that educators should assess. For example, the client who has just been identified as having diabetes may have to talk about his or her feelings about having diabetes before being ready to learn about insulin. Some of the client's feelings may stem from his or her prior knowledge and preconceived ideas about diabetes.

Psychomotor learning consists of acquired physical skills that can be demonstrated.

This may be referred to as the skill domain. For example, the client with newly

diagnosed insulin-dependent diabetes must learn to give self-injections, which will require learning the skill of using syringes.

3) Describe how the following teaching methods should be used during health education session: lecture, demonstration, role play.

a. Lecture

Planning the presentation:

i. Review the objectives.

ii. Prepare an outline of key points and presentation aids such as visual materials

iii. Note questions for students

iv. Note reminders for planned activities

v. Note reminders to use specific visual aids.

vi. Note summary questions or other activities

Introducing the presentation:

vii. State the objective(s) of the presentation as part of the introduction.

viii. Use a variety of introductions to capture interest, make learners aware of the objectives, and create a positive learning climate.

ix. Relate the content to previously covered and related topics

Using effective presentation skills:

i. Follow a plan and use an outline

ii. Communicate clearly with students. Project your voice, move about the room, provide clear transitions between topics, and maintain eye contact.

iii. Interact with learners by asking and responding to questions, using their names, and providing feedback.

iv. Use visual materials to illustrate and support main points.

Using questioning techniques during a presentation:

i. Target questions to the group and to individuals.

ii. Provide feedback and repeat correct responses.

iii. Use students' names.

iv. Redirect questions that are typically or totally incorrect until the correct answer is revealed.

Summarizing the presentation:

i. Stress the main points.

ii. Relate information to the objectives.

iii. Provide an opportunity for questions.

b. Demonstration

Note that giving a good demonstration is worth a thousand words. There are four steps to a demonstration:

i. Explaining the ideas and skills that you will be demonstrating

ii. Giving the actual demonstration

iii. Giving an explanation as you go along, doing one step at a time

iv. Asking one person to repeat the demonstration and giving everyone a chance to repeat the skill demonstrated.

Qualities of a good demonstration

For an effective demonstration you should consider the following features: the demonstration must be realistic, it should fit with the local culture and it should use familiar materials. You will need to arrange to have enough materials for everyone to practice and have adequate space for everyone to see or practice. People need to take enough time for practice and for you to check that everyone has acquired the appropriate skill.

c. Role play

To facilitate a role play:

- Explain the nature and purpose of the exercise (the objectives).
- Define the setting and situation of the role play.
- Brief the participants of their roles.
- Explain what the other students should observe and what king of feedback they should give. Tell students what to look for and how to document their questions or feedback. Should they observe for verbal communication skills? The use of questioning? Nonverbal communication?
- Provide the students with questions or activities that will help them to focus on the main concept (s) being presented.

- Keep the role play brief and to the point. Be ready to handle unexpected situations that might arise (confusion, arguments, etc.).
- Engage students in a follow-up discussion. Discuss important features of the role play by asking questions of both the players and observers.
- Provide feedback, both positive and suggestions for improvement.
- Summarize what happened in the session, what was learned, and how it applies to the skill being learned.

Note: A role play will be effective only if it is clearly related to the learning objectives. Explain the objectives of the role play before beginning the activity. When the role play is completed, summarize and discuss the results of the role play and relate the role play to the learning objectives.

4) Describe how the following teaching materials/aids should be used during health education session: a writing board, a video and slides & a computer to prepare and project a presentation

a. A writing board

For using a writing board, follow the following guidelines:

- Before you start, decide what you will illustrate on the board.
- During the presentation, write the key words or phrases in order, according to the structure of the presentation.
- Remember that learners tend to copy the words and the layout as they appear on the board, so make sure that what you write on the board is what you want the learners to write in their notes.
- Keep the board clean
- Use chalk or pens that contrast with the background of the board so the learners can see the information clearly.
- Make text and drawings large enough to be seen in the back of the room.
- Underline headings and important or unfamiliar words for emphasis
- Do not talk while facing the board.
- Do not block the learners' view of the board; stand aside when you have finished writing or drawing.
- Allow sufficient time for learners to copy the information from the board.

Summarize the main points at the end of the presentation.

b. A **video**

Tips for using Videos:

- In the classroom, use several short video segments with pauses in between for explanation or discussion, rather than one long video.
- Preview the videotape to ensure that it is appropriate for the learners and consistent with the course objectives.
- Make sure that the information presented in the video is up-date with current practices and standards. If there are some differences, be sure to tell the learners about them before showing the video. If there are considerable differences, do not show the video.
- Before the classroom session, check to be sure that the video is compatible with the video player. Run a few seconds of the tape to ensure that everything is functioning properly. Cue the video to the beginning of the program or to the section of the video that you will show.
- Arrange the room so that all learners can see the video monitor or screen and hear the video.
- Prepare the learners to view the video:
    - State the objective
    - Give the learners an overview of the content they will see on the video.
    - Focus learners 'attention by asking that they look for a number of specific points as they watch the video.

Remember: Use videos as an interactive tool. When appropriate, stop the video to point out things the learners should notice, or ask questions to check their understanding. Discuss the video after it has been shown. Review the main points that the learners were asked to watch for as they viewed the video. This will make the video a much more effective teaching tool than if the learners watch it without your guidance

c. Slides & a computer to prepare and project a presentation

When preparing slides:

- Limit each slide to one main idea; detailed information should be put into a handout, not on a slide.
- Make sure slides support the text or objectives. Slides should clearly demonstrate their objective.

- Be sure that the material on the slide is legible. A good rule is that if a slide can be read by the naked eye-without a projector- it will be legible to learners in the back of the room when it is projected.
- When using a computer to develop a presentation, keep the presentation simple and clear.
- Be consistent, Use the same general style and tone throughout.
- Proofread. You are more likely to catch errors if you proofread before creating slides.
- Limit the information on each slide to one idea that can be grasped in 5-10 seconds.
- State the main idea in the title.
- Use about three to five bullets per slide. Use no more than seven lines of text.
- Limit a bulleted item to six to eight words.
- Whenever possible, use pictures, or graphs to support or replace text. Bar graphs and line graphs are effective tools to show trends and statistics. Photographs and line drawings are foe example useful for showing clinical signs and symptoms and demonstrating clinical procedures.
- Make graphics and drawings large enough to be seen easily in the back of the room. Use large lettering (at least 5 mm tall, preferably larger if printing, or 18 point or larger if using a computer).
- If you are using a computer to prepare slides use only one typeface (font) per slide. Use italics or bold to emphasize points rather than using another font.
- Make sure that technical assistance is available to deal promptly with problems. Practice the computer program for creating and projecting your presentation until you are comfortable with it.
- Avoid busy or confusing background. Use a color for the text that has a very high contrast with the background. A simple white background with dark lettering is very effective.
- I you are preparing a projected presentation, minimize the transition between slides. Use sound effects sparingly and only to emphasize a point. If there is animation, it should be used consistently throughout the presentation.
- Remember that your slides should highlight your key points. They should not contain the full text of the presentation.

- Charts and tables should be large and simple for the message to be clear.
- Always save the presentation on the computer's hard drive and on other USB like flash disk or CD-Rom in case something happens to the computer (e.g. sometimes computers "crash" or "freeze" and information can be lost if not saved.

The following are some instructions for using a slide projector:

- Arrange the room so that all learners can see the screen; make sure that there is nothing between the projector and the screen.
- Set up and test the slide projector and computer before the learners arrive
- Once the projector is on, move away from the projector to avoid blocking the learners' view of the screen.
- Face the learners, not the screen, while talking.
- Allow plenty of time for the learners to read what is on the screen and take notes, if necessary.
- Determine if all or some of the lights can be left on during the slide presentation; this will help learners pay attention and make taking notes easier.
- During presentation, avoid rushing through a series of slides. This can be very frustrating for learners. Take time to view and discuss each slide. When appropriate, ask learners questions about what they are seeing on a slide

Lesson 11: Advocating for the community

a) Learning objectives

- Explain the purpose, goals and objectives of advocacy for the community health.
- Outline the advocacy methods
- Find out the principles of advocacy
- Explain the approaches to advocacy
- Explain the advocacy strategies

b) Teaching and Learning resources

- The Students' text book of fundamentals of nursing, especially the unit of introduction to community health nursing

- The text books Community health nursing and public health nursing taken from library or internet
- Personal computer, projector and slides
- Chalk or pen writing board.

c) Prerequisites/Revision/Introduction

Introduce the lesson by reviewing with student the previous lesson related to community education.

d) Learning activity 5.4.2

Guidance

Helps students to make the small groups

Provide tasks to learners by writing the Learning activity 5.4.2 on black board or use power point presentation of concerned slide.

Request the students to discuss about the pictures and respond to the questions

Pass around groups guiding and facilitating them to learn.

Ask 1 group to present to others their responses.

Ask other students to add any missing point or ask questions to what the group has presented.

Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.

Summarize and identify the key points.

The teacher writes the summary of the lesson on black board or uses Power Point presentation and shares it with students

The teacher ends the lesson by requesting the learners to respond to the questions of self-assessment 5.4.2 found in student book

Asking learners to do it as a home work

Answers to the activity 5.4.2

1) **Discuss the purpose of advocacy, advocacy methods, and principles of advocacy**

The main purpose of advocacy is to bring about positive changes to the health of your population. Advocacy is about helping you to speak up for your community; to make sure that the views, needs and opinions of your community are heard and understood.

The goals and objectives of advocacy are to facilitate change and the development of new areas of policy, in order to tackle unmet health needs or deal with emerging health needs in a given community.

The advocacy methods are:

(1) Lobbying, this means influencing the policy process by working closely with key individuals in political and governmental structures, together with other decision makers. (2**)** Meetings*,* usually it is used as part of a lobbying strategy or negotiation, to reach a common position.

(3) Project visits are another useful tool of advocacy to demonstrate good practice and information, education and communication as various means of sensitizing the decision makers.

(4) Community organizing is another important tactic that can be used.

The principles of advocacy: the following principles may help you to get a common understanding and get support for your advocacy activities:

- Use several tools for advocacy to reach a wide audience (for example, not only the public, but also officials and decision makers), and be sure to form good relationships with your local media representatives.
- Have good relations with the private sector and all the NGOs working in the area around you. Collaborate with them and all the people who can help your advocacy work.
- Have good strategic planning.
- Use effective monitoring tools.

2) What do you understand about approaches used in advocacy?

The advocacy approach uses many different methods of reaching people. Inter-personal meetings or face-to-face approaches with the decision makers are the most effective advocacy approaches for those people. Here below certain advocacy approaches are described:

(1) "Grassroots" or "bottom-up" approaches to advocacy are based on the identification of needs and goals by community members themselves. It is defined as efforts by which groups sharing a common interest are assisted in identifying their specific needs and goals, mobilizing resources within their communities, and in other ways taking action leading to the achievement of the goals they have set collectively.

(2) top-down models emphasize the identification of needs or goals by experts outside of the community or by only the community leaders. These advocates may be professional staff of non-profit organizations, or national or international professional health organizations.

Organizing is critical to the success of advocacy efforts, whether they are conducted from a bottom-up or top-down approach. For instance, a non-profit or non-governmental organization that is spearheading efforts to improve health related services in a particular locale or to prohibit smoking must organize, at a minimum, its staff and constituents to further/promote these goals.

(3) Community organizing has been defined as ‘‘the process of organizing people around problems or issues that are larger than group members’ own immediate concerns’’. As such, it is relevant to bottom-up advocacy efforts. Community readiness is a prerequisite for mobilization for a specific goal. The stronger the community’s sense of identity, cohesion, and connectedness, the more likely it is that the community is ready to mobilize and to address a specific issue.

Organizing efforts using a bottom-up approach may rely on indigenous community organizers, that is, community leaders who are able to influence and represent the larger constituency of the community.

Other mechanisms used in bottom-up advocacy efforts include ***reliance on small groups***, often called the locus of change because they help to create a group identity and a sense of purpose, and ***town hall meetings***, which are used to inform the relevant community and to consider a variety of solutions.

3) Discussion of the advocacy strategies

Advocacy requires action, which requires that the social power of the organizations be exercised through public events that are intended and formulated to demonstrate that power. Multiple strategies through which that power can be exercised and demonstrated include advocacy through media, through courts, through legislative bodies, and through regulatory processes.

(1) Advocating through the media

Media advocacy, one of the most common advocacy strategies used to advocate on health related issues, requires the identification of issues and concerns related to the community wellbeing, an emphasis on the broader context of those concerns, the maintenance of media attention to those concerns, and the provision of ‘‘entertainment’’ to the audience hearing of those concerns.

The issues that provide the focus of the media advocacy must be appropriately framed using sound bites, which are brief, quotable statements; visual images; and social math, which explains statistical data while placing it in a relevant context. Various strategies can be used to prepare for contact with the media including:

- The development of a Fact Sheet, that briefly conveys the message to be made;
- A Source List or roster of people who are available to speak competently on the issue to be discussed;

- Talking Points, which is a listing of the main messages to be conveyed;
- A Question and Answer Sheet, which addresses in question and answer format the most commonly raised issues associated with the matter to be discussed; and
- A Press List comprised of all media outlets in a specific geographical area.

Press releases, meaning a written pitch for a particular issue, should be released to all media contact. The press release consists of no more than one page and includes the name and contact information of the media contact person on a particular issue. Other strategies that can be used to engage the media include letters to the editors of newspapers and journals, op-ed columns, interviews with reporters, the staging of media events, paid advertising, and public service announcements.

(2) Using the courts

The courts system provides yet another avenue for advocacy efforts. The process of filing a lawsuit (claim) differs across countries. The system in use in the USA is used as an example here because it may be relevant in an international, as well as national, context, as exemplified by the following situation. In 1996, after an outbreak of meningitis in Kano, Nigeria that resulted in 109 580 cases of illness and 11 717 deaths, the international pharmaceutical company Pfizer provided supplies, medical staff, and ‘‘treatment.’’ This ‘‘treatment,’’ however, consisted of Trovan (trovafloxacin), an experimental drug for the treatment of meningitis. After the departure of Pfizer’s personnel from Kano, local residents reported severe health problems. Investigations conducted by news reporters raised questions about the validity of company research documents, the apparent lack of oversight and approval of research procedures, and the failure to give effective treatment to ill people. In August 2001, the families of the children who were given Trovan (trovafloxacin) in Kano brought a lawsuit in US courts, alleging that Pfizer had violated international and national laws in carrying out its research with Trovan. This advocacy effort represented the first lawsuit in US history of non-US residents bringing a lawsuit against a private corporation for wrongful experimentation in violation of US and international law. In this lawsuit against Pfizer, the families of the children claiming injury or harm to the children by Pfizer (plaintiffs) started their lawsuit through the filing in court of a complaint, which states the nature of the claim that one party is bringing against another, the facts to support the claim, and the amount in controversy. The defendant Pfizer (the party being sued) was served with a copy of the complaint, together with a summons. The summons indicated that the defendant was required to respond to the complaint in a specified period of time or the plaintiff will win the lawsuit by default. The defendant must, in some way, respond to the complaint. Each allegation/accusation in the complaint may be admitted or denied or the plaintiff may plead ignorance. Pfizer also had the option

of filing a countersuit, that is, a lawsuit against the plaintiff or another third party. Alternatively, Pfizer could have sought dismissal of the plaintiff's lawsuit, claiming that the court has no jurisdiction (authority to hear the case) or that the plaintiff failed to state a cause of action. In fact, Pfizer actually did attempt to have the court dismiss the lawsuit. After the filing of the lawsuit and the answer by the defendant, the plaintiff and defendant will have a period of discovery, during which they will each have an opportunity to discover facts about the other side's case, the identity of expert witness being used by the other side, and weaknesses in the other side's case. The forms of discovery that are most commonly used in cases involving advocacy efforts include depositions, the questioning under oath of individuals who will be testifying for the other party, including that party; a request for the production of documents, so that one side can review documents it deems relevant but that are in possession of the other party; a request for a mental or physical examination, such as when members of a community might be claiming that they have been injured by a toxic exposure; and a request for admissions.

(3) Legislative and regulatory advocacy

Regulatory and legislative advocacy are strategies that are often used by organizations seeking to have their voices heard. Although the specific procedures vary depending upon the legal jurisdiction, the strategies are common across countries. As an example, in Australia, the Coalition on Food Advertising to Children is seeking more severe protection of children from food advertising. In Ireland, the Broadcasting Commission of Ireland is seeking consultation from interested entities in the development of an advertising code that will provide additional protections for children. In the USA, the National Association of Social Workers has been engaging in regulatory and legislative advocacy in an attempt to establish parity for mental health care and to promote child welfare.

(4) Using coalitions

Regardless of which strategies are ultimately used, the development of a coalition may be critical to the success of the advocacy effort. ‘‘Coalitions are sets of groups with a shared goal and some awareness that ‘united we stand, divided we fall’’’. Accordingly, coalitions may consist of groups of community members, groups of organizations, or both. Groups participating in a coalition must have a shared vision and mission, or intentionality that is clear to all of the participants and that is directly related to their goals and objectives. Organizations participating in the coalitions must have the structure or organizational capacity that will support such efforts, that is, the staff, volunteers, task forces, membership, and leadership, as well as a clear allocation of roles and responsibilities. **Technical assistance,** such as consultation, training, and support for advocacy efforts, may be necessary to enable organizations to build and participate in coalitions.

e) Self-assessment 5.4.2

Write on the black board (or use Power Point presentation) the questions of self-assessment 5.4.2 (presented in student book) and ask learners to work out on them as a home work.

Answers for Self-assessment 5.4.2

1) Describe briefly the approaches to advocacy

Here below certain advocacy approaches are described:

(1) "Grassroots" or "bottom-up" approaches to advocacy are based on the identification of needs and goals by community members themselves. It is defined as efforts by which groups sharing a common interest are assisted in identifying their specific needs and goals, mobilizing resources within their communities, and in other ways taking action leading to the achievement of the goals they have set collectively.

(2) top-down models emphasize the identification of needs or goals by experts outside of the community or by only the community leaders. These advocates may be professional staff of non-profit organizations, or national or international professional health organizations.

Organizing is critical to the success of advocacy efforts, whether they are conducted from a bottom-up or top-down approach. For instance, a non-profit or non-governmental organization that is spearheading efforts to improve health related services in a particular locale or to prohibit smoking must organize, at a minimum, its staff and constituents to further/promote these goals.

(3) Community organizing has been defined as "the process of organizing people around problems or issues that are larger than group members' own immediate concerns". As such, it is relevant to bottom-up advocacy efforts. Community readiness is a prerequisite for mobilization for a specific goal. The stronger the community's sense of identity, cohesion, and connectedness, the more likely it is that the community is ready to mobilize and to address a specific issue.

Organizing efforts using a bottom-up approach may rely on indigenous community organizers, that is, community leaders who are able to influence and represent the larger constituency of the community.

Other mechanisms used in bottom-up advocacy efforts include ***reliance on small groups***, often called the locus of change because they help to create a group identity and a sense of purpose, and ***town hall meetings***, which are used to inform the relevant community and to consider a variety of solutions.

2) Discuss the advocacy strategies.

Advocacy requires action, which requires that the social power of the organizations be exercised through public events that are intended and formulated to demonstrate that power. Multiple strategies through which that power can be exercised and demonstrated include advocacy through media, through courts, through legislative bodies, and through regulatory processes.

(1) Advocating through the media

Media advocacy, one of the most common advocacy strategies used to advocate on health related issues, requires the identification of issues and concerns related to the community wellbeing, an emphasis on the broader context of those concerns, the maintenance of media attention to those concerns, and the provision of ‘‘entertainment’’ to the audience hearing of those concerns.

The issues that provide the focus of the media advocacy must be appropriately framed using sound bites, which are brief, quotable statements; visual images; and social math, which explains statistical data while placing it in a relevant context. Various strategies can be used to prepare for contact with the media including:

- The development of a Fact Sheet, that briefly conveys the message to be made;
- A Source List or roster of people who are available to speak competently on the issue to be discussed;
- Talking Points, which is a listing of the main messages to be conveyed;
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(2) Using the courts

The courts system provides yet another avenue for advocacy efforts. The process of filing a lawsuit (claim) differs across countries.

The forms of discovery that are most commonly used in cases involving advocacy

efforts include depositions, the questioning under oath of individuals who will be testifying for the other party, including that party; a request for the production of documents, so that one side can review documents it deems relevant but that are in possession of the other party; a request for a mental or physical examination, such as when members of a community might be claiming that they have been injured by a toxic exposure; and a request for admissions.

(3) Legislative and regulatory advocacy

Regulatory and legislative advocacy are strategies that are often used by organizations seeking to have their voices heard. Although the specific procedures vary depending upon the legal jurisdiction, the strategies are common across countries. As an example, in Australia, the Coalition on Food Advertising to Children is seeking more severe protection of children from food advertising. In Ireland, the Broadcasting Commission of Ireland is seeking consultation from interested entities in the development of an advertising code that will provide additional protections for children. In the USA, the National Association of Social Workers has been engaging in regulatory and legislative advocacy in an attempt to establish parity for mental health care and to promote child welfare.

(4) Using coalitions

Regardless of which strategies are ultimately used, the development of a coalition may be critical to the success of the advocacy effort. ‘‘Coalitions are sets of groups with a shared goal and some awareness that ‘united we stand, divided we fall’’’. Accordingly, coalitions may consist of groups of community members, groups of organizations, or both. Groups participating in a coalition must have a shared vision and mission, or intentionality that is clear to all of the participants and that is directly related to their goals and objectives. Organizations participating in the coalitions must have the structure or organizational capacity that will support such efforts, that is, the staff, volunteers, task forces, membership, and leadership, as well as a clear allocation of roles and responsibilities. **Technical assistance,** such as consultation, training, and support for advocacy efforts, may be necessary to enable organizations to build and participate in coalitions.

3) Identify the advocacy principles.

The use of the following principles may help you to get a common understanding and get support for your advocacy activities:

- Use several tools for advocacy to reach a wide audience
  (for example, not only the public, but also officials and decision makers), and be sure to form good relationships with your local media representatives.

- Have good relations with the private sector and all the NGOs working in the area around you. Collaborate with them and all the people who can help your advocacy work.
- Have good strategic planning.
- Use effective monitoring tools.

Lesson 12: Home based care

a) Learning objectives

- Outline the principles of home-based care
- Find out the purposes, goals and objectives of home-based care
- Explain the types of Home Based Care

b) Teaching and Learning resources

- Students' text books of fundamentals of nursing, specifically the unit of introduction to community health nursing.
- Community health nursing and public health nursing taken from library or internet
- Personal computer, projector and slides
- Chalk or pen writing board.

c) Prerequisites/Revision/introduction

The teacher helps the learners to review the previous lesson related to Advocating for the community.

d) Learning activity 5.4.3

Guidance

- The teacher helps students to make randomly the small groups of work.
- Provide to students the questions of learning activity 5.4.3 as presented in student book
- The teacher may write the Learning activity 5.4.3 on black board or use power point presentation of slide with computer and projector.
- Request the students to respond to the questions
- Pass around groups in order to provide guidance and facilitate the learning process.

- Ask 1 group to present to others their responses.
- Ask other students to add any missing point or ask questions to what the group has presented.
- Let the members of group which has presented to respond to asked questions and if they are not able to respond, orient the question to other groups and help them to clarify the answer.
- Summarize and identify the key points.
- The teacher writes the summary of the lesson on black board or uses Power Point presentation and shares it with students
- The teacher ends the lesson by asking the learners to respond to the questions of self-assessment 5.4.3 that is presented in student book
- Asking learners to do self-assessment Learning activity 5.4.3 as a home work

Answers to the activity 5.4.3

1) The meaning of home based care

Home care is defined as the provision of health services by formal and informal caregivers in the home in order to promote, restore and maintain a person's maximum level of comfort, function and health including care towards a dignified death. Home Based Care (HBC) is also defined as any professional care given to sick people in their homes, which includes physical, psychosocial, palliative, and spiritual activities.

2) Who needs home based care

- Home based cares are services that may be provided to:
- Health people, someone who is aging and needs assistance to live independently; or managing a chronic health issues; recovering from a medical condition in need of assistance e.g. post deliveries or after specific treatment.; at risk people with moderate to severe functional disabilities. It includes also terminally ill persons; persons living with HIV/AIDS or any other debilitating disease and/or conditions e.g. mental illness, substance abusers; any other disadvantaged group/person in need of such care e.g. people in crisis.

3) Who may be in charge for providing home based care?

Families; caregivers from the formal system e.g. professionals like nurses, physicians, therapists; caregivers from the non-formal system e.g. NGOs;

caregivers from the informal system e.g. community health worker (CHW), volunteers, other community caregivers and church groups provide short-term or long-term care in the home, depending on a person's needs.

4) Discuss the principles and objectives of home based care?

The principles of home based care

Home-based care and community based care are:

- Holistic: they involve together physical, social, emotional, economic and spiritual aspects. Community needs, to be addressed, but integrated into existing systems.
- Person- centered: the provision of care should be sensitive to culture, religion and value systems to respect privacy and dignity (community-driven, customer-centered).
- Comprehensive, interdepartmental and all-encompassing; preventative, promotive, therapeutic, rehabilitative and palliative (multi-sectoral involvement).
- Empowering and allows capacity building to promote the autonomy and functional independence of the individual and the family or caregivers. Leadership is from within the community.
- Ensure access to comprehensive support services.
- Cover total lifespan.
- Sustainable and cost-effective resource responsibilities to be identified and shared.
- Promote and ensure quality of care, safety, commitment, cooperation and collaboration.
- Allow choice and control over to what extent partners will participate.
- Recognize diversity.
- Promote and protect equal opportunities, rights and independent living.
- Specific in what needs to be done and achieved.
- Focus on a basic and essential component of PHC.

Adhere to a basic principle in health care and development, namely community involvement.

Objectives of home based care

- To move the emphasis of care to the beneficiaries (care are given in the comfort and familiarity of home, in the community)

- To ensure access to care and follow-up through a functional referral system.
- To integrate a comprehensive care plan into the informal, non-formal and formal health system.
- To empower the family and/or community to take care of their own health.
- To empower the client, the caregivers and the community through appropriate targeted education and training.
- To reduce unnecessary visits and admissions to health facilities.
- To eliminate duplication of activities and enhance cost-effective planning and delivering of services.
- Be pro-active in approach.

5) Discuss the types of home based care

a) Personal care and companionship

Those are the care related to help with everyday activities like bathing and dressing, meal preparation, and household tasks to enable independence and safety. Those cares are also known as **non-medical care, home health aide services, senior care, homemaker care, assistive care, or companion care.**

It may include but not limited to the following:

- Assistance with self-care, such as grooming, bathing, dressing, and using the toilet,
- Enabling safety at home by assisting with ambulation, transfer (eg, from bed to wheelchair, wheelchair to toilet), and fall prevention,
- Assistance with meal planning and preparation, light housekeeping, laundry, medication reminders, and escorting to appointments,
- Companionship and engaging in hobbies and activities,
- Supervision for someone with dementia or Alzheimer's disease

Personal care and companionship does not need to be prescribed by a doctor. They are the cares provided on an ongoing basis on a schedule that meets a client's needs.

b) Private Duty Nursing Care

This type of care includes **long-term, hourly nursing care at home for adults with a chronic illness, injury, or disability.** They are also known as home-based skilled nursing, long-term nursing care, catastrophic care, tracheostomy care, ventilator care, nursing care, shift nursing, hourly nursing, or adult nursing

Examples of Private Duty Nursing Care services:

- Care for diseases and conditions such as Traumatic brain injury and /or Spinal cord injury
- Ventilator care
- Tracheostomy care
- Monitoring vital signs
- Administering medications
- Ostomy/gastrostomy care
- Feeding tube care
- Catheter care

Private duty nursing care needs to be prescribed by a professional health care specialized in the concerned domain. Those are the cares which should be provided and monitored every day 24 hours over 24 hours.

c) Home Health Care services

They are short-term, physician-directed care designed to help a patient to prevent or to recover from an illness, injury, or hospital stay. They are also known as Medicare-certified home health care, intermittent skilled care, or visiting nurse services. They may include:

- Short-term nursing services
- Physical therapy
- Occupational therapy
- Speech language pathology
- Medical social work
- Home health aide services

Home health care needs to be prescribed by a professional health care specialized in the concerned domain. The care is provided through visits from specialized clinicians or other health care provider specialized in the related domain, on a short-term basis until individual goals are met.

e) Self-assessment 5.4.3

The teacher should read and writes on black board the questions of self-assessment 5.4.3. The learners should respond to those questions in pair or individually as a home work.

Answers for Self-assessment 5.4.3

1) Identify people who need home based care

Home based cares are services that may be provided to:

Health people, someone who is aging and needs assistance to live independently; or managing a chronic health issues; recovering from a medical condition in need of assistance e.g. post deliveries or after specific treatment.; at risk people with moderate to severe functional disabilities. It includes also terminally ill persons; persons living with HIV/AIDS or any other debilitating disease and/or conditions e.g. mental illness, substance abusers; any other disadvantaged group/person in need of such care e.g. people in crisis.

2) Describe the types of home based care.

a) Personal care and companionship

Those are the care related to help with everyday activities like bathing and dressing, meal preparation, and household tasks to enable independence and safety. Those cares are also known as **non-medical care, home health aide services, senior care, homemaker care, assistive care, or companion care.**

It may include but not limited to the following:

- Assistance with self-care, such as grooming, bathing, dressing, and using the toilet,
- Enabling safety at home by assisting with ambulation, transfer (eg, from bed to wheelchair, wheelchair to toilet), and fall prevention,
- Assistance with meal planning and preparation, light housekeeping, laundry, medication reminders, and escorting to appointments,
- Companionship and engaging in hobbies and activities,
- Supervision for someone with dementia or Alzheimer's disease

Personal care and companionship does not need to be prescribed by a doctor. They are the cares provided on an ongoing basis on a schedule that meets a client's needs.

b) Private Duty Nursing Care

This type of care includes **long-term, hourly nursing care at home for adults with a chronic illness, injury, or disability.** They are also known as home-based

skilled nursing, long-term nursing care, catastrophic care, tracheostomy care, ventilator care, nursing care, shift nursing, hourly nursing, or adult nursing

Examples of Private Duty Nursing Care services:

- Care for diseases and conditions such as Traumatic brain injury and /or Spinal cord injury
- Ventilator care
- Tracheostomy care
- Monitoring vital signs
- Administering medications
- Ostomy/gastrostomy care
- Feeding tube care
- Catheter care

Private duty nursing care needs to be prescribed by a professional health care specialized in the concerned domain. Those are the cares which should be provided and monitored every day 24 hours over 24 hours.

c) Home Health Care services

They are short-term, physician-directed care designed to help a patient to prevent or to recover from an illness, injury, or hospital stay. They are also known as Medicare-certified home health care, intermittent skilled care, or visiting nurse services. They may include:

- Short-term nursing services
- Physical therapy
- Occupational therapy
- Speech language pathology
- Medical social work
- Home health aide services

Home health care needs to be prescribed by a professional health care specialized in the concerned domain. The care is provided through visits from specialized clinicians or other health care provider specialized in the related domain, on a short-term basis until individual goals are met.

3) What are the principles of home-based care and community based care

Principles of home-based care and community based care are the following:

Home-based care and community based care are:

- Holistic: they involve together physical, social, emotional, economic and spiritual aspects. Community needs, to be addressed, but integrated into existing systems.
- Person- centered: the provision of care should be sensitive to culture, religion and value systems to respect privacy and dignity (community-driven, customer-centered).
- Comprehensive, interdepartmental and all-encompassing; preventative, promotive, therapeutic, rehabilitative and palliative (multi-sectoral involvement).
- Empowering and allows capacity building to promote the autonomy and functional independence of the individual and the family or caregivers. Leadership is from within the community.
- Ensure access to comprehensive support services.
- Cover total lifespan.
- Sustainable and cost-effective resource responsibilities to be identified and shared.
- Promote and ensure quality of care, safety, commitment, cooperation and collaboration.
- Allow choice and control over to what extent partners will participate.
- Recognize diversity.
- Promote and protect equal opportunities, rights and independent living.
- Specific in what needs to be done and achieved.
- Focus on a basic and essential component of PHC.
- Adhere to a basic principle in health care and development, namely community involvement.

B. Practical sessions of introduction to community health nursing

Lesson 13: Community health needs assessment

a) **Learning objectives**

- Collaborate with community members and representatives, community-based organizations, community health providers and other members of the team in advocating for the community.

- Participate in the development of an overall health plan for the community
- Demonstrating culture sensitivity while interacting with community members
- Respecting all age – categories of community members
- Maintain a grooming image all times

b) **Teaching and Learning resources**

- Prepared materials for assessing the community health status (e.g. scale, MUAC for measuring child nutritional status)
- Text books of community health nursing and fundamentals of nursing for short review of theory
- Personal computer, projector and slides for short review of the theory related to community health assessment.

c) **Prerequisites/Revision/Introduction**

For starting this lesson, the teacher will help students to make a short review community health needs assessment.

d) **Learning activity 5.5.13.**

Guidance

The teacher should facilitate lesson 5.5.13 using a field visit method

He / She should proceed as follows:

- The teacher should select the community (e.g. village, cell, primary school, health center catchment area) where the learners should conduct community health assessment.
- The nursing school manager should contact the community authorities and get the authorization to visit/assess the community.
- The teacher should help students to be in small groups of 5-8 students.
- With use of power point slides or using a brain storming method the teacher should help the learners to review the theory of community health needs assessment.
- The teacher should then clarify to the learners the objectives of the lesson 5.5.1 (overall that is to assess the health needs of the community. For details, refer to the above mentioned specific objectives). The teacher should also communicate to students the time when they should submit the community health assessment reports.

- The teacher should help the learners to develop questionnaire or interview questions that should be used during community health needs assessment.
- The learners should be briefed about the methodology as follows: each group of 5-8 students should visit one community (e.g. school, village, restaurant, etc.). Within the community each group should work with community health workers or authorities or in charge of environmental health in that community. The group members should use the techniques/ methods of observation, interview, documents' analysis, etc. and record information about: the status of hygiene/sanitation and nutrition, prevalent health problems in the community, etc.
- At the end of data collection, each group should write down, tabulate and analyse data.
- The group should identify the health needs suggested by data, and then develop an action plan to solve the health problems identified.
- At the end of the session of community health assessment, the students should come back at school and the teacher should provide opportunity for every group to present the community assessment report.
- Then the students should be given opportunity to provide their comments about the reports presented by colleagues. They should start with positive and then negative ones.
- The teacher should provide the students with the occasion for asking questions. He / she should also ask questions to check students understanding.
- The teacher should end up the community health assessment lesson with provision of feedback related to lesson objectives in order to reinforce the students' learning.

Lesson 14: Community education

a) Learning objectives

- Educate individuals, families and community members how to prevent communicable and non- communicable diseases
- Collaborate with community members and representatives, community-based organizations, community health providers and other members of the team in provision of community education.
- Participate in the development of an overall health plan for the community education.

- Apply community health care principles in assessing, diagnosing and planning for the community care education
- Demonstrating culture sensitivity while interacting with community members
- Respecting all age – categories of community members

b) Teaching and Learning resources

- Materials for providing health education (e.g. relevant video, computer & slides and projector, etc.)
- Text books of community health nursing and fundamentals of nursing for short review of theory

c) Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a short review community health education.

d) Learning activity 5.5.14.

Guidance

The teacher should facilitate lesson 5.5.14 as follows:

- The school manager (helped by the teacher) should communicate to the community (previously assessed by students) about the health problems identified and the plan (dates, place, topics, etc.) to provide health education sessions to community members.
- With use of health education scheme presented in student book of fundamentals of nursing, the students should work in small groups of 5-8 students that were previously used during community health assessment. They should prepare a written session of community health education by filling in the recommended format/scheme.
- With use of power point slides or using a brain storming method the teacher should help the learners to review the theory of community health education.
- The teacher should then clarify to the learners the objectives of the lesson 5.5.2 (overall that is to carry out the community health education). For details, refer to the above mentioned specific objectives).
- The teacher should also communicate to students the time when they should submit the community health education reports.
- The learners should be briefed about the methodology as follows: each group of 5-8 students should go back in the community where the group performed community health needs assessment (e.g. school, village,

restaurant, etc.). Within the community each group should work with community health workers or authorities or in charge of environmental health in that community in order to gather community members in appropriate setting (e.g. conference room, classroom, etc.).

- The group members should use the relevant teaching methods and aids in delivering the health talk to community members.
- At the end of community health education, each group should write down a health education report according to the instructions from the school (e.g. the topic, the objectives, the teaching methods and aids used, the number of participants, the questions raised by the participants, how the health education was perceived by the participants, the challenges encountered and recommendations).
- At the end of the session of community health education, the students should come back at school and the teacher should provide opportunity for every group to present the community health education report.
- Then the students should be given opportunity to provide their comments about the reports presented by colleagues. They should start with positive and then negative ones.
- The teacher should provide the students with the occasion for asking questions. He / she should also ask questions to check students understanding.
- The teacher should end up the community health education practical lesson with provision of feedback related to the lesson objectives in order to reinforce the students' learning.

Lesson 15: Home based-care

a). Learning objectives

- Collaborate with community members and representatives, community-based organizations, community health providers and other members of the team in provision of home based care.
- Provide nursing care in the community, including disaster and community home-based nursing care.
- Demonstrating culture sensitivity while interacting with community members
- Respecting all age – categories of community members

b). Teaching and Learning resources

- Materials/equipment needed for home based (e.g. thermometer, blood pressure measuring machine, weight scale, etc.)
- Text books of community health nursing and fundamentals of nursing for short review of theory

c). Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a short review of community based health care.

d). Learning activity 5.5.15.

Guidance

The teacher should facilitate lesson 5.5.15 as follows:

- The school manager (helped by the teacher) should communicate to the community about the health problems identified and the plan (dates, place, topics, etc.) to provide community based health care to community members (preferably it should be the community that was previously assessed by students).
- The students should work in small groups of 5-8 students (if possible the ones that were previously used during community health assessment).
- With use of power point slides or using a brain storming method the teacher should help the learners to review the knowledge acquired in community based care.
- The teacher should then clarify to the learners the objectives of the lesson 5.5.15 (overall that is to carry out the community based care). For details, refer to the above mentioned specific objectives).
- The teacher should also communicate to students the time when they should submit the community based care reports.
- The learners should be briefed about the methodology as follows: each group of 5-8 students should choose a patient for community based care. The patient in need of community based care should be a patient suffering from a chronic health condition such as diabetes mellitus, HIV/AIDS, Hypertension, etc. As an alternative, the students (helped by the teacher) may choose a case from the health centre and then make a follow-up at community level for community based care.
- The learners should go back in the community within which each group should work with community health workers or authorities or in charge of

environmental health in that community in order to visit the selected patients.

- The group members should use the knowledge acquired from different modules / units and take care of the patients in the community.
- At the end of community based health care, each group should write down a community care report according to the instructions from the school (e.g. information from nursing assessment, nursing diagnoses established, nursing objectives set, nursing interventions performed (and or delegated), rationale for interventions, and information from nursing evaluation. The learners should end the report with conclusion, the challenges encountered and recommendations.
- At the end of the session of community based health care, the students should come back at school and the teacher should provide opportunity for every group to present the community health care report.
- Then the students should be given opportunity to provide their comments about the reports presented by colleagues. They should start with positive remarks and then negative ones.
- The teacher should provide the students with the occasion for asking questions. He / she should also ask questions to check students understanding.
- The teacher should end up the community based health care practical lesson with provision of feedback related to the lesson objectives in order to reinforce the students' learning.

Lesson 16: Advocating for the community

a). Learning objectives

- Apply community health care principles in assessing, diagnosing and planning for advocating for the community
- Advocate for the community health

b). Teaching and Learning resources

- Materials/equipment needed for advocating for the community (e.g. note book, pen, etc.)
- Text books of community health nursing and fundamentals of nursing for short review of knowledge of community advocacy.

c). Prerequisites/Revision/Introduction

For starting this lesson, the teacher will help students to make a short review of community advocacy.

d). Learning activity 5.5.16.

Guidance

The teacher should facilitate lesson 5.5.16 as follows:

He should group students into small groups of 5-8 students

The teacher should use a brain storming methods and ask learners to discuss about the knowledge acquired from community advocacy lesson.

The teacher should ask each group to identify one common health problem existing in the community that was previously assessed.

The teacher should help the learners to follow these 7 Steps and organize a community Advocacy Campaign:

1. **Set a Goal:** it is important to create a concrete goal to work towards. A good rule of thumb is to create a SMART goal - a goal that is **S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**ime-bound. An example of a SMART goal may be to have community members supplied with potable water starting in May 2025.
2. **Research similar groups:** Are there people or groups in other communities that have done what you are trying to do?
3. **Build a Team:** Who are the core team members? Often times, a small community advocacy campaign may rely on volunteers. Examples: decision-makers (such as community local leaders), church leaders, heads of health facilities (health centers, health posts, etc.), heads of local mass media, local non- governmental organizations, other sponsors interested in the health needs, etc.
4. **Create a Meeting Schedule:** Will you hold weekly meetings? Monthly? Where will you meet, or will it be over the phone? This is very dependent on the availability of your core team members.
5. **Create a Timeline:** Even if you aren't sure how long some steps may take, it's important to set a timeline. It's normal to move and adjust your timeline throughout the course of the campaign. However, you have to create an initial timeline to work off . Here's an example:
    - **March 1:** Establish core team members and their roles

- **March 15:** Have first weekly core team meeting
- **April 15:** Have first volunteer meeting with at least 5 volunteers
- **June 1:** Secure approval from the community local authorities

6. **Get Fundraising:** The first question to ask yourself is whether you need fundraising at all. If you do need fundraising, ask yourself where you plan to receive your funding – will you rely on small individual donations, or grants from private organizations? If it's individual donors, find a strategy to get these donations. If it's grants from private organizations, research and apply to programs that are most likely to give you funding.
7. **Communications Strategy:** How are you going to spread the information about your group or event? Will it be by handing out flyers, speaking at other organization's meetings, advertising on social media, doing local TV or radio interviews, or something else? In some cases, it may be all of these things.

A the end of this exercise of community advocacy, the students should present a written advocacy report showing how the learners passed through the all 7 steps, the conclusion, challenges and recommendations. The teacher should conclude the community advocacy practical lesson with a summary which link the lesson objectives with the exercise.

5.6. Summary of the unit

The teacher guide of introduction to community health nursing aimed at orienting the teachers on how they can help the learners to be equipped with knowledge and skills that will enable them to provide basic community health nursing interventions. The guide discussed twelve theoretical lessons and four practical learning sessions.

In general, each lesson consists of learning objectives, followed by teaching and learning resources, the learning activity, and ended by assessment activity.

The all lessons under this unit are developed on the basis of the following content: Concepts definition; history of community health Nursing; objectives, purposes and principles of community health nursing. The other content developed includes characteristics of community health nursing, determinants of health (the factors affecting community health) and community health needs assessment.

Basic community interventions are also discussed in this unit. They include community health education, advocacy, and community based care.

At the end of this unit, answers are provided to a list of various questions that were prepared in student book in order to assess the achievement of unit objectives by learners.

5.7. Additional information for teachers

In order to facilitate the learning process of the lessons included in this unit, the teacher has to master knowledge and skills of community health nursing.

The teacher should put more emphasis on the practical sessions of community health interventions namely: community health assessment, community health education, community advocacy and community based care. The teacher should make sure those community nursing interventions are practiced by students. On this exercise, the teacher should refer to practical sessions of introduction to community health nursing presented at the end of point 5.5 List of lessons.

5.8. Answers to the end unit Assessment

Note: for multiple choice questions, the key answers are highlighted in bold & blue color. For open questions, the answers are directly provided to questions asked in student book.

Answers

1	2	3	4	5	6	7	8	9	10
a	**a**	**d**	**a**	**d**	**c**	**a**	**b**	**c**	**d**
11	12	13	14	15	16	17	18	19	
b	**c**	**d**	**a**	**c**	**b**	**c**	**a**	**e**	

20. The 4 characteristics of community health nursing

1) Interdisciplinary collaboration:

Community health nursing often requires collaboration with professionals from various disciplines, such as social workers, educators, public health officials, and other healthcare providers. This interdisciplinary approach ensures that the diverse needs of the community are met through a coordinated effort. Working together, these professionals can address the social, economic, and environmental factors that affect community health.

2) Cultural competencies:

Cultural competence involves understanding and respecting the cultural beliefs, values, and practices of the individuals and communities served. Community health nurses must be culturally aware and sensitive to effectively communicate with and provide care to people from diverse backgrounds. This helps in building trust, improving patient outcomes, and reducing cultural barriers to healthcare.

3) Ethical practice:

Ethical practice in community health nursing involves adhering to moral principles such as autonomy, beneficence, non-maleficence, and justice. Nurses are expected

to respect the rights and dignity of individuals while providing care, ensuring confidentiality, and making decisions that are in the best interest of the community. Ethical practice also includes being transparent, honest, and accountable in all aspects of care delivery.

4) Advocacy:

Advocacy in community health nursing involves representing and supporting the interests of individuals and communities to improve health outcomes. This may include lobbying for policy changes, securing resources, or ensuring that vulnerable populations have access to necessary services. Community health nurses advocate at both the individual and community levels, aiming to create healthier environments and address social determinants of health.

21. The responsibilities of an ASM (Agent de Sante Maternelle).

ASMs have been trained to identify pregnant women, make regular follow-ups during and after pregnancy, and encourage deliveries in health facilities where skilled health workers are available. In addition to following up pregnant women and their newborns, the ASM also screens children for malnutrition, provides contraceptives (pills, injectables, cycle beads, and condoms), promotes prevention of Non-Communicable Diseases (NCDs) through healthier lifestyles, preventive and behavior change activities and carries out household visits.

22. The challenges faced by Rwanda community health program

The challenges faced by the Rwanda CHW program include (1) the financial and administrative difficulties in supporting and continuing to build the capacity of CHWs as they increase in number and as the scope of their work expands; (2) the challenge of supervising and effectively equipping CHWs to perform their duties; and (3) low community participation in the health sector and the strong influence of traditional beliefs and traditional medicines.

As the number of CHWs has risen rapidly in Rwanda and as their tasks have increased, the Government of Rwanda faces a constant battle to increase the capacity of CHWs and to provide them with the equipment and supplies they need. Refresher trainings are too few and provision of essential equipment is delayed due to insufficient financial resources. Field supervision of CHWs and the transfer of skills and knowledge to the communities to foster ownership and enhance sustainability is a continuing challenge. Each CHW is supposed to be supervised by either the In-Charge of Community Health or the cell coordinator on monthly basis. However, recent findings show that supervisory visits occur only quarterly, if that.

23. The 5 important characteristics of a community

Community has the following 13 most important characteristics or elements:

(1) A group of people:

A group of people is the most fundamental or essential characteristic or element of community. This group may be small or large but community always refers to a group of people. Because without a group of people we can't think of a community, when a group of people live together and share a common life and binded by a strong sense of community consciousness at that moment a community is formed. Hence a group of people is the first pre-requisites of community.

(2) A definite locality:

It is the next important characteristic of a community. Community is a territorial group. A group of people alone can't form a community. A group of people forms a community only when they reside in a definite territory. The territory need not be fixed forever. A group of people like nomadic people may change their habitations. But majority community are settled and a strong bond of unity and solidarity is derived from their living in a definite locality.

(3) Community Sentiment:

It is another important characteristic or element of community. Without community sentiment a community can't be formed only with a group of people and a definite locality. Community sentiment refers to a strong sense of awe feeling among the members or a feeling of belonging together. It refers to a sentiment of common living that exists among the members of a locality. Because of common living within an area for a long time a sentiment of common living is created among the members of that area. With this the members emotionally identify themselves. This emotional identification of the members distinguishes them from the members of other community.

(4) Naturality:

Communities are naturally organised. It is neither a product of human will nor created by an act of government. It grows spontaneously. Individuals became the member by birth.

(5) Permanence:

Community is always a permanent group. It refers to a permanent living of individuals within a definite territory. It is not temporary like that of a crowd or association.

(6) Similarity:

The members of a community are similar in a number of ways. As they live within

a definite locality they lead a common life and share some common ends. Among the members similarity in language, culture, customs, and traditions and in many other things is observed. Similarities in these respects are responsible for the development of community sentiment.

(7) Wider Ends:

A community has wider ends. Members of a community associate not for the fulfilment of a particular end but for a variety of ends. These are natural for a community.

(8) Total organized social life:

A community is marked by total organised social life. It means a community includes all aspects of social life. Hence a community is a society in miniature.

(9) A Particular Name:

Every community has a particular name by which it is known to the world. Members of a community are also identified by that name. For example people living in sector of Nkombo is known as “Abanyenkombo”.

(10) No Legal Status:

A community has no legal status because it is not a legal person. It has no rights and duties in the eyes of law. It is not created by the law of the land.

(11) Size of Community:

A community is classified on the basis of its size. It may be big or small. Village is an example of a small community whereas a nation or even the world is an example of a big community. Both the type of community is essential for human life.

(12) Concrete Nature:

A community is concrete in nature. As it refers to a group of people living in a particular locality we can see its existence. Hence it is concrete.

(13) A community exists within society and possesses distinguishable structure which distinguishes it from others.

24. Characteristics of the different types of a community

Specifically, different types of community exist and they have their particular characteristics including the ones described below:

Characteristics of village/rural Community:

The village people have a sense of unity. The relationship between people is intimate. They personally know each other; structurally and functionally the village is a unit.

In the village, people assist each other and thus they have close neighborhood relations. In the village the joint family system is retained. The agricultural occupation requires the cooperation of all the family members.

The People in the villages have deep faith in religion and duties. The village people lead a simple life. Their behavior is natural and not artificial. They are free from mental conflicts. They are hard-working; their level of moralities is high. Social crimes are less.

Ancient village community was a very small group of ten or twenty families. The feeling of familiarity was so great that if a child wandered off from the home, the parents had nothing to worry because there are numerous relatives in the village. They laid a common property. Due to lack of communication and transport the members of the community were separated due to distance.

In the modern village community, there is a rise of industrialism. Now urban group began to dominate civilization. Urbanization is increasing and dominant rural. Social forms are changing rapidly.

Rural people follow the urban forms of life. Kinship bond is broken due to increased size and mobility of population. Land is no longer cultivated jointly. They continue to work the land but then try to live in the mode of the city. Rural social forms are changed due to urbanization.

Rural communities may have their specific **major Problems such as:**

- Health problems, the most common being: Malnutrition, especially in under – five year children; communicable diseases and infection and child deaths and maternal deaths and clean water accessibility.
- Education problems – the problems of illiteracy, school dropouts, few teachers, also lack of equipment and insufficient buildings or in need of repair child labor etc.
- Problems related to transport and communications – lack of good roads, especially in rainy season, causes problems of supplies, marketing and taking the sick to hospital, etc. The problem of villages being cut off from other communities and urban facilities, results in slow progress and development.
- Problems concerning agriculture – the farmer may have problems such as insufficient water supply, especially in failure of monsoon, electricity cuts, and repair of pump-sets, tractors etc. Delay in getting supplies of seed, fertilizers, especially if he has no capital reserves.
- Labor problems – laborers may not be available when needed, or coolly demands are high. Procurement price given by Government may be too

low, or demand for products is low. Sickness and death of flocks and herds (sheep and cattle).

- Population and employment problems– Agriculture can no longer provide enough for the growing population in rural areas. Some rural communities have taken up handloom weaving or other small industries, but these are not without many problems. Young men leave the village for urban areas in search of jobs. Sometimes whole groups of families migrate to a distant place to work for a contractor (building, mining and other project). They get advances from the contractor to buy food, and soon may become 'bonded laborers' and never get bat to their own village.

a. Characteristics of urban Community:

Home decreasing is a disturbing feature of city community. The home problem in a big city is very acute. The middle class have insufficient accommodation. The child doesn't get any play space. Energy and speed are the traits of a city. The people work at a speed, day and night which stimulates other to work. People indulge in too many activities. Cities are consumers of population. Facilities for preserving health such as hospitals and medical specialist are many and excellent. City has more heterogeneous than the village. It is most favorable propagation ground of new biological and cultural hybrids. The personal traits, the occupations, the cultural and the ideas of the members of the urban community vary widely.

Class extremes characterize urban community. In a city, the people rolling in luxury and living, in grand mansion as well as people live in street. The best forms of ethical behavior and the worst racketeering are both to be bound in cities. Superior creativeness and chronic unemployment are similar. The city is the home of opposites. In some cities, residents may treat the strangers they meet as not human beings. They meet with speak without knowing each other's name. A citizen may live for several years in a city and may not know the names of one-third of the people who live in the same city area.

Life is quite different in towns and cities than in the village. Traditions, customs and modes do not have much influence over those living in urban areas. Family life is less disciplined, and there is no community support. There is much more mixing among people of very different backgrounds. This brings about changes in habits and attitudes. Family conflicts are common. For the individual's, and for families coming to live in the urban area, conscious efforts need to be made to form good friendships and to live in harmony with others. There are many opportunities for joining social groups for various activities. People need to take up the challenge for forming a new community even in the city, for mutual help and action to solve problems.

The main urban problems may be listed as follows:

a) Growth of slums

b) Lack of employment, leading to poverty, under – nutrition, disease, and anti-social activities. Failure of people to adjust, causing mental illness or delinquency.

c) Crime and delinquency, begging and prostitution.

d) Overcrowding in dwellings, buses and streets.

e) Failure in administration (e.g. public services such as refuse collection and disposal) to cope with the rapid growth of the population.

f) Road accidents.

g) Health problems due to overcrowding and to stress of urban living.

h) Political and industrial unrest and conflicts.

b. Characteristics of common-interest Community

A community also can be identified by a common interest or goal. A collection of people, even if they are widely scattered geographically, can have an interest or goal that binds the members together. This is called a **common-interest community**. The members of a church in a large urban area, the members of a national professional organization, and women who have had mastectomies are all common-interest communities. Sometimes, within a certain geographic area, a group of people develop a sense of community by promoting their common interest. Disabled individuals scattered throughout a large city may emerge as a community through a common interest in promoting adherence to federal guidelines for wheelchair access, parking spaces, toilet facilities, elevators, or other services for the disabled.

The residents of an industrial community may develop a common interest in air or water pollution issues, whereas others who work but do not live in the area may not share that interest. Communities form to protect the rights of children, stop violence against women, clean up the environment, promote the arts, preserve historical sites, protect endangered species, develop a smoke-free environment, or provide support after a crisis. The kinds of shared interests that lead to the formation of communities vary widely.

Common-interest communities whose focus is a health related issue can join with community health agencies to promote their agendas. A group's single-minded commitment is a mobilizing force for action. Many successful prevention and health promotion efforts, including improved services and increased community awareness of specific problems, have resulted from the work of common-interest communities.

c. Community of Solution

A type of community encountered frequently in community health practice is a group of people who come together to solve a problem that affects all of them. The shape of this community varies with the nature of the problem, the size of the geographic area affected, and the number of resources needed to address the problem. Such a community has been called a community of solution. Example: club against HIV/AIDS

25. The factors affecting community health

The factors affecting community health can be grouped into: Physical factors, Social/Cultural factors, Community organization, and Individual behavior

1. Physical factors

- Industrial development: Communities that are industrially developed are more likely to be affected by numerous diseases due to the toxic waste products from the industries that are released into water bodies and the atmosphere and due to congestion of settlement leading to slum development hence contagious diseases compared to areas that are not industrially developed. Water contamination from industrial discharge and air pollution may be ones of the consequences of industrial development.
- Community size: A densely populated or over populated community can easily be attacked by communicable diseases
- Geographical location: Some communities are more prone to diseases due to the geographical location. For example, some communities located in swampy areas are more prone to diseases, especially during heavy rains these communities are affected by floods which can lead to manipulation of organisms causing disease. If the water is stagnant, there is risk of spread of organisms which cause diseases such as malaria and diarrhea disease.
- Environment: A clean environment is very vital to the proper health of a community which minimizes the occurrence and transmission of diseases, unlike a dirty environment which easily leads to outbreak of diseases.

2. Social/cultural factors

- Traditions Beliefs: Beliefs or traditions such as female genital mutilation (FGM) possessed by communities greatly affect the health of its people.
- Economy: A community that is economically well off has low chances of suffering from disease breakouts because they have proper health care and water drainage systems unlike a poor community.

- Government: since the government involves planning, implementing and provision of community services such as water supply, medical supplies and other needs which can directly affect the community health
- Educational factors: poor education or illiteracy affects the health of a community when people don't have education on how they can prevent themselves from diseases. For example, health education on the use of mosquito treated nets to prevent malaria, health education on the environmental hygiene so as to prevent diseases such as cholera and trachoma.

3. Community organization

This is about the ways in which communities organize their resources such as taxes which can be very helpful in control of diseases and supply of sufficient and efficient medical care, even in times of crisis. Unlike communities without proper accountability of their taxes which can partly be allocated to the health sector, may suffer from lack of adequate resources to prevent diseases, protect and promote the health of its citizens.

4. Individual behavior

Community health is greatly influenced by individuals, their personal health, habits, etc.

In order to achieve a healthy community, it requires a team work for example in the following in activities:

- Proper disposal of waste products from individuals' compound,
- Clearing all stagnant water in the compound to prevent harboring of mosquitoes,
- Active smokers to quit smoking to avoid passive smokers thus preventing lung cancer, Abstinence from sexual activities and for sexually active individuals to use protection to prevent the spread of HIV/AIDs and STDs etc.

Thus proper individual healthy living can greatly promote a healthy community.

26. Four Characteristics of a Healthy Community

- The healthy community ensures that community resources are available to all members and groups within the community. It ensures there is access to appropriate health care services that focus on both treatment and prevention for all members of the community; a clean and safe physical environment; and roads, schools, playgrounds, and other services to meet the needs of the people in that community

- Emergency preparedness: a healthy community has a well-organized base of community resources available to meet the needs and to intervene in a crisis or natural disaster.
- Ability to solve problems. Community detects, investigates, and dissects problems and collaborates and coordinates a response among members and groups to meet their identified needs.
- Communication through open channels. *It e*nsures that communication remains open and information flows among all members and groups in every direction within the community.

27. The required steps in conducting community health needs assessment?

The following are the required steps in conducting a needs assessment:

1. Identify aggregate for assessment
2. Identify required information
3. Select method of data gathering
4. Develop questionnaire or interview questions
5. Develop procedures for data collection
6. Train data collectors
7. Arrange for a sample representative of the aggregate
8. Conduct needs assessment
9. Tabulate and analyze data
10. Identify needs suggested by data
11. Develop an action plan

28. The methods used for conducting an advocacy for a community.

Before staring advocacy the community health nurse has to select a method(s) which will be used in order get the desired results. These methods are (1) lobbying, which means influencing the policy process by working closely with key individuals in political and governmental structures, together with other decision makers. (2**)** Meetings*,* usually it is used as part of a lobbying strategy or negotiation, to reach a common position. (3) Project visits are another useful tool of advocacy to demonstrate good practice and information, education and communication as various means of sensitizing the decision makers. (4) ***C***ommunity organizing is another important tactic that can be used.

29. You are appointed to do advocacy for the people living near Kabeza industrial zone because of toxic waste coming from the industries. Identify the approaches to be used describe any two.

(1) "Grassroots" or "bottom-up" approaches to advocacy are based on the identification of needs and goals by community members themselves. It is defined as efforts by which groups sharing a common interest are assisted in identifying their specific needs and goals, mobilizing resources within their communities, and in other ways taking action leading to the achievement of the goals they have set collectively. The concept of community organizing is premised on the idea of empowerment, which is ''a process of collective reflection and action in which previously isolated individuals become leading-roles in shaping society according to their shared interests''. In contrast, (2) **top-down models** emphasize the identification of needs or goals by experts outside of the community or by only the community leaders. These advocates may be professional staff of non-profit organizations, or national or international professional health organizations.

Organizing is critical to the success of advocacy efforts, whether they are conducted from a bottom-up or top-down approach. For instance, a non-profit or non-governmental organization that is spearheading efforts to improve health related services in a particular locale or to prohibit smoking must organize, at a minimum, its staff and constituents to further these goals.

(3) Community organizing has been defined as ''the process of organizing people around problems or issues that are larger than group members' own immediate concerns''. As such, it is relevant to bottom-up advocacy efforts. Community readiness is a prerequisite for mobilization for a specific goal. The stronger the community's sense of identity, cohesion, and connectedness, the more likely it is that the community is ready to mobilize and to address a specific issue.

30. The principles of home-based care

Principles of home-based care are:

- Holistic: they involve together physical, social, emotional, economic and spiritual aspects. Community needs, to be addressed, but integrated into existing systems.
- Person- centered: the provision of care should be sensitive to culture, religion and value systems to respect privacy and dignity (community-driven, customer-centered).
- Comprehensive, interdepartmental and all-encompassing; preventative, promotive, therapeutic, rehabilitative and palliative (multi-sectoral involvement).

- Empowering and allows capacity building to promote the autonomy and functional independence of the individual and the family or caregivers. Leadership is from within the community.
- Ensure access to comprehensive support services.
- Cover total lifespan.
- Sustainable and cost-effective resource responsibilities to be identified and shared.
- Promote and ensure quality of care, safety, commitment, cooperation and collaboration.
- Allow choice and control over to what extent partners will participate.
- Recognize diversity.
- Promote and protect equal opportunities, rights and independent living.
- Specific in what needs to be done and achieved.
- Focus on a basic and essential component of PHC.
- Adhere to a basic principle in health care and development, namely community involvement.

31. The types of Home Based Care

Types of Home Based Care

(a) Personal care and companionship

Those are the care related to help with everyday activities like bathing and dressing, meal preparation, and household tasks to enable independence and safety. Those cares are also known as **non-medical care, home health aide services, senior care, homemaker care, assistive care, or companion care.**

It may include but not limited to the following:

- Assistance with self-care, such as grooming, bathing, dressing, and using the toilet,
- Enabling safety at home by assisting with ambulation, transfer (eg, from bed to wheelchair, wheelchair to toilet), and fall prevention,
- Assistance with meal planning and preparation, light housekeeping, laundry, medication reminders, and escorting to appointments,
- Companionship and engaging in hobbies and activities,
- Supervision for someone with dementia or Alzheimer's disease

Personal care and companionship does not need to be prescribed by a doctor. They are the cares provided on an ongoing basis on a schedule that meets a client's needs.

(b) Private Duty Nursing Care

This type of care includes **long-term, hourly nursing care at home for adults with a chronic illness, injury, or disability.** They are also known as home-based skilled nursing, long-term nursing care, catastrophic care, tracheostomy care, ventilator care, nursing care, shift nursing, hourly nursing, or adult nursing

Examples of Private Duty Nursing Care services:

- Care for diseases and conditions such as Traumatic brain injury and /or Spinal cord injury
- Ventilator care
- Tracheostomy care
- Monitoring vital signs
- Administering medications
- Ostomy/gastrostomy care
- Feeding tube care
- Catheter care

Private duty nursing care needs to be prescribed by a professional health care specialized in the concerned domain. Those are the cares which should be provided and monitored every day 24 hours over 24 hours.

(c) Home Health Care services

They are short-term, physician-directed care designed to help a patient to prevent or to recover from an illness, injury, or hospital stay. They are also known as Medicare-certified home health care, intermittent skilled care, or visiting nurse services. They may include:

- Short-term nursing services
- Physical therapy
- Occupational therapy
- Speech language pathology
- Medical social work
- Home health aide services

Home health care needs to be prescribed by a professional health care specialized in the concerned domain. The care is provided through visits from specialized clinicians or other health care provider specialized in the related domain, on a short-term basis until individual goals are met.

32.The 4 factors that contributed to the decline in infectious disease–related deaths during the nineteenth and early twentieth centuries.

Increased food production and better nutrition during the nineteenth and early twentieth centuries contributed to the decline in infectious disease–related deaths. Other factors were better sanitation through water purification, sewage disposal, improved food handling, and milk pasteurization. The components of “modern” medicine, such as antibiotics and immunizations, had little effect on health until well into the twentieth century.

5.9. Additional activities

5.9.1. Remedial activities

The teacher should ask slow learners students to answer the following questions:

1) In advocacy, at the _____stage of team growth, the team members begin to realize that they do not know the task, or may consider it is more difficult than they imagined. They may become irritable or blameful, but are still too inexperienced to know much about decision making. Team members argue about what actions they should take, even when they agree on the issues facing them.
    a. Norming
    b. Storming
    c. Performing
    d. Team forming
2) Identify 4 advocacy strategies
3) Mention any 5 principles of community health nursing
4) Name any 4 factors affecting community health
5) List the steps of community health needs assessment
6) Explain shortly the advocacy methods

Answers to remedial activities

1) b: storming
2) Multiple strategies through which that power can be exercised and demonstrated include advocacy through media, through courts, through legislative bodies, and through regulatory processes.

3) The following are **the principles of community health nursing**:
   - Health services should be based on the needs of individuals and the community.
   - Health services should be suitable to the budget; workers and the resources.
   - Family should be recognized as a unit and the health services should be provided to its members.
   - Health services should be equally available to all without any discrimination of age, sex, caste religion, political leaning and social or economic level etc.
   - Health education is an important part of community health nursing. It should be preplanned, suitable to conditions, scientifically true and effective.
   - Community health nursing should be provided continuously, without any interruption.
   - Preparation and maintenance of records and reports is very important in community health nursing.
   - Community health nurses and other health workers should be guided and supervised by highly educated and skilled professionals.
   - Community health nurse should be responsible for:
     - Responsible for professional development.
     - Should continuously receive in-service training and continuing education.
     - Should follow professional ethics and standards in her work and behaviour.
     - Should have job satisfaction.
   - Must have effective team spirit while working in the community.
   - Timely evaluation is must for community services.

4) The factors affecting community health can be grouped into: Physical factors, Social/Cultural factors, Community organization, and Individual behaviour
5) Steps of community health needs assessment
   The following are the required steps in conducting a needs assessment:

   (1). Identify aggregate for assessment

   (2). Identify required information

   (3). Select method of data gathering

   (4). Develop questionnaire or interview questions

   (5). Develop procedures for data collection

   (6). Train data collectors

   (7). Arrange for a sample representative of the aggregate

(8). Conduct needs assessment

(9). Tabulate and analyze data

(10). Identify needs suggested by data

(11). Develop an action plan

6) The advocacy methods are:

(1) Lobbying, this means influencing the policy process by working closely with key individuals in political and governmental structures, together with other decision makers. (2) Meetings, usually it is used as part of a lobbying strategy or negotiation, to reach a common position.

(3) Project visits are another useful tool of advocacy to demonstrate good practice and information, education and communication as various means of sensitizing the decision makers.

(4) Community organizing is another important tactic that can be used.

5.9.2. Consolidation activities

1) Cross-match the types of home based care in column A with their explanations in Column B

Column A: Types of home based care	**Column B: Explanations**
1 Personal care and companionship 2 Intermittent skilled care 3 Private Duty Nursing Care	a) They are short-term, physician-directed care designed to help a patient to prevent or to recover from an illness, injury, or hospital stay. b) Those are the care related to help with everyday activities like bathing and dressing, meal preparation, and household tasks to enable independence and safety. c) This type of care includes long-term, hourly nursing care at home for adults with a chronic illness, injury, or disability.

Answer: 1b; 2a; 3.c

2) Among the community assessment methods presented below, which one is a qualitative assessment method designed to obtain community members opinions representing all segments of the community that are involved with the issue?

a) Surveys

b) Focus Groups

c) Descriptive Epidemiologic Studies

d) Geographic Information System Analysis

e) Community Forums or Town Hall Meetings

Answer: 2.e

3) Which one of the sub-sequent advocacy approaches is defined as efforts by which groups sharing a common interest are assisted in identifying their specific needs and goals, mobilizing resources within their communities, and in other ways taking action leading to the achievement of the goals they have set collectively?

a. Grassroots'' or ''bottom-up''
b. Community organizing
c. Top-down models

Answer: 3.a.

5.9.3. Extended activities

1) Which of the following teaching method is more useful in case you are teaching a diabetic patient to inject him-self the drug of Insulin?

a. Discussion
b. Demonstration
c. Brain storming
d. Interactive presentation

Answer: 1.b

2) Which of the following types of community needs assessment involves studying data already available on a community, then gathering a certain amount of first hand data in order to gain a working knowledge of the community?

a. Problem-Oriented Assessment
b. Community Subsystem Assessment
c. Comprehensive Assessment
d. Familiarization or Windshield Survey
e. Community Assets Assessment

Answer: 2.d

3) In preparing for the community advocacy, what are the characteristics of a community needs assessment that is both valid and credible?

Answer: In advocating for the community, a community needs assessment that is both valid and credible is characterized by:

- A multidisciplinary team that includes individuals with expertise in community assessment procedures, knowledge about strategies relevant to the issue under study, and members of the population to be affected;
- Broad agreement on the objectives focus, and scope of the needs assessment;
- A study design that uses both primary and secondary data effectively;
- A realistic study design, time frame, and allocation of resources;
- A process for regular reviews and input by community representatives; and a plan for the utilization of the findings.

6.1. Key unit competence

Apply the principles and components of health promotion to prevent diseases and promote health of communities

6.2. Prerequisites (knowledge, skills, attitudes and values)

The leaners should have learnt the theories in nursing and should be able to respect the principles of nursing theories in nursing practice and the principles of ethics and professional code of conduct. In addition to that, learners should have also been exposed to the health settings.

6.3. Cross-cutting issues to be addressed

a) Inclusive education

This unit involves primary health education, health promotion and health education. All leaners are inclusive.

b) Gender education

The learners should be treated equally regardless theirs gender, they can present and report during group activities. Give a role model who are successful in real life without considering their gender, make sure that during every learning activity, both boys and girls shares and participates equally.

c) Environment and sustainability

Learners get basic knowledge from environment, they understand that the good environment can lead to good life, they have the attitude of keeping cleanness environment in order to prevent infection transmission. Help the learners to know maximum skills and attitudes on the environmental sustainability and to be responsible in caring for patients' environment.

6.4. Guidance on the introductory activity

This introductory activity will engage learners in the hygiene and comfort of the client and invite the learners to follow the next lessons.

Teacher's activity:

- Put learners into small groups of 5 learners and ask them to observe the image and discuss the given questions
- Provide guidance to each group during their discussion

- Request each group to have one member who presents their findings
- Note that learners may not be able to provide the right answers, encourage them to think more.

Expected answers to the introductory activity

1) **Answer**:

- **Create the supportive environment:** Through creating safe and secure physical and social environments provide opportunities to discuss and explore health issues and practice health-enhancing behaviors, thus supporting health education and 'making the healthier choice the easier choice'.
- **Develop personal skills:** the programmes and activities delivered to people, including health education and health information, positively influence the development of their personal skills, for example self-esteem, self-efficacy, communication, negotiation, life skills and motivation. The development of these skills has a positive impact on health.
- **Avail and improve the accessibility and affordability of primary care**: with that health system that respond to the community needs, accessible and affordable, the health of the community is optimized.
- **Strengthening their actions:** Through developing partnerships and alliances with other organizations and sectors in the community, people can build capacity and positively influence health within the wider community, which in turn, can continue to support the health of their target groups who live in the community.
- **Empowerment** of the community so as to improve the control on their decision regarding their health.
- **Equitable and fair health care service delivery:** ensuring fairness of outcomes for service users.
- **Holistic:** taking account of the separate influences on health and the interaction of these dimensions.
- Intersectoral: working in partnership with other relevant agencies/ organisations.
- **Social Change:** making changes to the physical, social and economic environment to increase their health promoting capacity.

- **Advocacy**: advocacy for good health as a major resource for social, economic and personal development, and an important dimension of quality of life

2) **Answer:** Primary health care addresses the health needs of all patients at the community level, integrating care, prevention, promotion and education. Primary health care improves the performance of health systems by lowering overall health care expenditure while improving population health and access by the following:

- **Increased Access to Health Services**: Primary care helps to increase access to health services, which is particularly important for isolated or deprived population groups that may not have the means to access these services otherwise. As the main port of entry into the healthcare system, primary care providers are available to help individuals to understand and discuss their health and any particular problems that they may be experiencing
- **Improved Quality of Care:** at primary care level, community/individuals are receiving quality service due to the all-encompassing approach to health.
- **Focus on Prevention:** Primary care places a strong emphasis on preventative interventions. These are particularly generic changes that have an impact on many aspects of health, such as breastfeeding, stopping smoking, staying physically active and eating a healthy diet
- **Early Management of Health Conditions**: Primary care practitioners are also in a position to recommend screening measures to detect early changes that could be indicative of specific diseases. This may include checking blood pressure, blood tests, breast examinations, mammograms, Pap smears and bowel cancer screening.

6.5.List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
Sub Unit One: Primary Health Care Overview			
1	Concept of primary health care	Explain the definition of PHC Describe the importance of PHC	2 periods
2	History and evolution of PHC	Explain the historical development of the primary health care	2 periods
3	Characteristics of Primary health care	Explain the characteristic of the primary health care	2 periods
4	Structure and functioning of health care system	Describe the characteristic of well-functioning health system	2 periods
5	Elements of PHC	Describe the essential components of the PHC	2 periods
6	Principles of PHC	Explain the principle of PHC Apply the principles of PHC	2 periods
7	Levels of healthcare system in Rwanda	Describe the levels of healthcare system in Rwanda and their functions	2 periods
Sub-Unit Two: Health Promotion			
8	Health promotion background	Explain the health promotion concept development	2 periods
9	Concept definition of health promotion	Explain the main approaches of Health promotion	2 periods
10	The scope of health promotion	Describe the scope of health promotion	2 periods
11	Principles of health promotion	Discuss the principles of health promotion Apply the principles of Health promotion to promote health of individuals, families and communities	2 periods
12	Main approaches to health promotion	Describe Main approaches to health promotion	2 periods
13	Basic strategies of health promotion	Discuss the strategies of Health promotion Demonstrate cultural sensitivity	2 periods
Sub-unit Three: Health Education			
14	Health education concept	Describe Health education concept	2 periods

15	Objectives of health education	Describe Objectives of health education	2 periods
16	Principles of health education	Describe Health education principles and strategies	2 periods
17	Process of health education	Explain the process of Health education Plan and implement health education of individual, families and communities to prevent diseases Demonstrate collaboration and communication skills	2 periods
	End unit assessment		2 periods

Sub Unit One: Primary Health Care Overview

Lesson 1: Concept of primary health care

This is the first lesson of the Primary health care that focuses on the essential care that human beings need for the better health. Its main objectives are to open the mind of the learners for they can know what the primary health care is really and why is it with critical importance to achieve health for all.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Explain the definition of PHC
- Describe the importance of PHC

b) Teaching resources

Books on Primary health care and health education, projector, screen

c) Prerequisites/Revision/Introduction

The main objective of this lesson is to equip learners with the knowledge, skills and attitudes of the primary health care and how the primary health care is with great importance.

d) Learning activities 6.1.1.

Guidance

Before introducing the first lesson, the teacher should have introduced the whole unit. After introducing the whole unit, the teacher has to introduce this lesson starting from the **learning activity 6.1.1.:**

- Teacher instruct learners to form groups of 5-6 and discuss the asked questions while also referring to the books that talks to the primary health care.
- Teacher also provide students with readings that help students to understand the lesson and ask them to present their findings.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to learning activity 6.1.1.

1) Primary health care is a community's first and main point of contact with the health system. It's about helping people to live the healthiest lives possible and, when they need health care, providing the right care, at the right time, right in their communities.

2)

Objectives of the primary health care are to increase the programs and services that affect the healthy growth and development of children and youth; to boost participation of the community with government and community sectors to improve the health of their community; To develop community satisfaction with the primary health care system; to support and advocate for healthy public policy within all sectors and levels of government; to support and encourage the implementation of provincial public health policies and direction; to provide reasonable and timely access to primary health care services; to apply the standards of accountability in professional practice; to establish, within available resources, primary health care teams and networks ; and to support the provision of comprehensive, integrated, and evidence-based primary health care services.

Answers to self-assessment 6.1.1.

1) Primary care is provider driven and is the entry point to the health care system. Primary nursing is a system of delivering nursing services whereby a nurse is responsible for planning the 24-hour care of a specific patient. Both these concepts are illness-oriented concepts

2) By addressing the vast majority of people's health needs across a lifetime, PHC is among the most cost-effective approaches we have to drive better health outcomes and improved quality of services while contributing to reduce inequities in health along the life course. Health systems built on strong primary health care empower individuals and communities, respond to day-to-day needs and foster trust in health workers. In times of

crisis, strong PHC boosts resilience and enables a faster, more effective response. When we invest in primary health care, we build the foundation of an effective, efficient and equitable health system and accelerate progress towards universal health coverage. This makes strengthening PHC in every community and country both a moral and strategic imperative

3) Different roles of the nurse in the primary health care are:

- **Care giver**: The caregiver role has traditionally included those activities that assist the client physically and psychologically while preserving the client's dignity. The required nursing actions may involve full care for the completely dependent client, partial care for the partially dependent client, and supportive–educative care to assist clients in attaining their highest possible level of health and wellness.
- **Communicator**: Communication is integral to all nursing roles. Nurses communicate with clients and their support people, other health care professionals, and people in the community. The quality of a nurse's communication is an important factor in nursing care. The nurse must be able to communicate clearly and accurately so that a client's health care needs are met.
- **Educator**: As a health teacher, the nurse helps clients learn about health and the health care procedures they need to perform to restore or maintain health
- **Client Advocate**: A client advocate acts to protect the client. In this role, the nurse may represent the client's needs and wishes to other health care professionals, such as relaying the client's request for information to a member of the health care team.
- **Counsellor**: Counselling is the process of helping a client recognize and cope with stressful psychological or social problems, develop improved interpersonal relationships, and promote personal growth. It involves providing emotional, intellectual, and psychological support. In contrast to the psychotherapist, who counsels individuals with identified problems, the nurse counsels primarily healthy individuals who are experiencing normal adjustment difficulties.
- **Change** Agent: The nurse acts as a change agent when assisting clients to make modifications in their own behavior.
- **Leader**: The leadership role can be employed at different levels: individual client, family, groups of clients or colleagues, or the community.

- **Manager**: Every nurse manages the nursing care of individuals, families, or communities. The nurse manager, a formal leadership role, also delegates nursing activities to ancillary workers and other nurses, and supervises and evaluates their performance

4) The Answer is **d. Primary health care is a philosophical approach to providing health care, whereas primary care provides an entry point to the health care system**

Lesson 2*: History and evolution of PHC*

As a continuation of UNIT 2, this lesson deals with the evolution of the primary health care. Which is all about the historical development of the primary health care.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Explain the historical development of the primary health care

b) Teaching resources

Books on Primary health care and health education, projector, screen.

c) Prerequisites/Revision/Introduction

The main objective of this lesson is to equip learners with the knowledge of how the Primary health care has evolved skills and attitudes of the primary health care and how the primary health care is with great importance

d) Learning activities 6.1.2.

Guidance

- Teacher makes small groups of 6 students and provide the copies of the questions of the **learning activity 6.1.2.**
- The teacher moves around groups to ensure that learners are in the right track during group discussions.
- Learners group appoint one representative to present their findings.

Answer to leaning activity 6.1.2.

1) **Answers:** there was health inequality and inequality in the world population. Short life expectancies and high mortality rates were among the concerns in the disadvantaged population. Primary Health care was established to ensure “health for all”: setting the ambitious target of “attainment by all peoples of the world by the year 2000 a level of health that will permit them to lead a socially and economically productive life”

2) **Answers:** The following are actions that have been recommended to be done in order to make PHC accessible and affordable for everyone and everywhere as affirmed by the Declaration of Alma-Ata that health is a fundamental human right and that social justice should be put at the heart of public health policy for the first time:

- Governments must make bold policy choices and invest in PHC towards UHC, addressing the underlying determinants of health and enacting policies to leave no one behind.
- Communities should take an active role in their health care and hold decision-makers accountable for results.
- Health professionals must advance quality, comprehensive, people-centered primary care that is core to integrated services for all people across the life course.
- Global health and development partners and donors should support and align with local and national policies and strategies to strengthen PHC and improve community-based care

Answers to self-assessment 6.1.2.

1) **Answers:** The Declaration of Alma-Ata set a new vision for PHC as the "first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work". Stating that PHC "constitutes the first element of a continuing health care process", it stressed its comprehensive and inter-sectoral nature and emphasized health promotion, disease prevention, the appropriate treatment of common diseases and public health measures for controlling infectious diseases (3). Furthermore, the Declaration defined PHC as "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination". It identified PHC as the key to reaching the ambitious goal of health for all "as part of development in the spirit of social justice"

Lesson 3: Characteristics of Primary Health Care

This lesson is a continuation of the previous ones and will focus mainly on knowing the characteristics of primary health care. Good **primary health care** aims at *safeguarding, promoting* and *restoring health.*

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Explain the characteristic of the primary health care

b) **Teaching resources**

Books on Primary health care and health education, projector, screen.

c) **Prerequisites/Revision/Introduction**

Good primary health care envisages of being safeguarding, promoting and restoring health. Learners, are going to be equipped with knowledge of how a good primary health care looks like and their contribution in shaping it especially in Rwanda.

d) **Learning activities 6.1.3**

Guidance

- The teacher must have read books talking about pillars of primary health care and knows which books are available in the school library for he/she can recommend it (them) to the learners.
- Teacher instructs learners to take books talking about the primary health care and guide them to the pillars of primary health care.
- Teacher makes groups of 5-6 students to discuss the asked questions in the **learning activity 6.1.3** while also preparing small presentation on their findings.

Answers to leaning activity 6.1.3

1) **Answers**

The pillars of the primary health care are:

- **Community Participation**: Community are engaged to take initiations in identifying their own health and social problems therefore, integration of promotive, preventive and curative health services are given in a unified way by the participation of the local population

- **Inter-sectoral Coordination**: the PHC ideal require good planning and allocation of resources. Multisectoral involvement makes the PHC services more available, accessible and affordable but putting needed resources
- **Use** of **appropriate Technology**: Appropriate healthcare technologies are an important strategy for improving the availability and accessibility of healthcare services
- **Availability** of **support mechanism:** Support mechanism includes that the people are getting personal, physical, mental, spiritual and instrumental support to meet goals of primary health care

2) **Answer:** the primary healthcare being client centered, refers to the involvement of the patient/Family in the decision making regarding the care provided and in turn, this will make the PHC interventions more effective and sustainable.

Answers to Self-assessment 6.1.3

1) Answers

***Scenario** 1: **Proactive and preventive focus:** the dentist was doing a checkup and he is proactive to refer for better management; **accessibility:** The 72-year old woman has found the health care services form the dentist; and **multidisciplinary collaboration:** the dentist finds that the proper management of these white lesion requires other health professionals and technology that he don't have and referred the client.*

***Scenario** 2: **multidisciplinary collaboration: the** health care team composed by different professionals provides range of services to the refugees and asylum seekers; **Accessibility**: asylum seekers and refugees are among disadvantaged people who may not access nor afford the health care services but the can access it*

2) Answer: d. rationale: Sustainability is one of the characteristics of the primary health care

Lesson 4: Structure and functioning of health care system

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the characteristic of well-functioning health system

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

This lesson will equip learners with how the health care system built, and what characteristics of a well-functioning health care system.

d) **Learning activities 6.1.4**

Teacher's activity

- The teacher should have different books available in the school library talking about the health system organisation and recommend to learners before the lesson starts.
- The teacher make learners sited in groups of 6 each and instructs them to attempt questions in the **Learning activity 6.1.4.**
- Each group present their findings while the teacher is basing on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to Learning activity 6.1.4

1) Answers

The components of health care service delivery are:

- **Service delivery**: Good service delivery is a vital element of any health system. Service delivery is a fundamental input to population health status, along with other factors, including social determinants of health.
- **Health workforce**: health workforce can be defined as "all people engaged in actions whose primary intent is to enhance health". The health workforce has a vital role in **building the resilience of communities and health systems to respond to disasters caused by natural or artificial hazards**, as well as related environmental, technological and biological hazards and risks.
- **Information**: the health information system enables health care organizations to collect, store, manage, analyze, and optimize patient treatment histories and other key data. These systems also enable health care providers to easily get information about macro environments such as community health trends as well as strengthening the health research systems for evidence based policy and decision making.

- **Medical products**: Medicines quality assurance systems play a critical role in reaching UHC goals. By ensuring the quality of essential medicines, they help deliver effective treatments that lead to less illness and result in health care savings that can be reinvested towards
- **Vaccines and technologies**: Vaccinating not only protects yourself, but also protects those in the community who are unable to be vaccinated. Technology increases provider capabilities and patient access while improving the quality of life for some patients and saving the lives of others.
- **Financing**: A good health financing system raises adequate funds for health in ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient
- **Leadership and governance**: Without strong leadership, management, and governance practices and capabilities at all levels of the health system, achieving universal Health coverage, including financial risk protection, access to L+M+G Evidence Compendium quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all," will be difficult to achieve and sustain**.**

2) For the health system to work appropriately, the following components are required: **Service delivery, Health workforce, Information, Medical products, vaccines and technologies, Financing and Leadership and governance**

Answers to Self-assessment 6.1.4.

Answer: The principles of the health system are:

- **People-centered**: when it is people centered, equity and fairness are ensured.
- **Results-oriented**: Quality management system for continual quality improvement.
- **Evidence-based**: Technocrats, academicians, politicians, community or local context and change are key divers of the health system.
- **Community-driven**: Leadership, governance accountability, transparency and sustainability.
- **Context-specific**: context is synonymous with resource-constrained environment.

- **Ethically sound**: Human rights and dignity, safety for the client, community and environment
- **Systems thinking:** Holistic view of the health system

Lesson 5*: Elements of Primary Health Care*

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Describe the essential components of the PHC

b) **Teaching resources**

Different books on Primary Health Care and Health Education, projector, screen.

c) **Prerequisites/Revision/Introduction**

There are 8 essential important elements of the primary health care; these are Education about health, prevention of locally endemic diseases, Essential drugs provision, Maternal and Child health, expanded immunization, Nutrition, Treatment of infectious diseases, and Safe water and Sanitation.

d) **Learning activities 6.1.5**

Guidance

- The teacher uses the available resources to ask learners what they think are elements of primary health care as mentioned in **learning activity 6.1.5.**
- The teacher asks any of the learners why they think these elements are with importance in primary health care.
- The teacher should base on the answers provided by the learner and build from what they know to make way of new knowledge and skills.

Answers to Learning activity 6.1.5.

1) Elements of the primary health care are:

- Health education on prevailing health problems and the methods of preventing and controlling them;
- Nutritional promotion including food supply;
- Supply of adequate safe water and sanitation;
- Maternal and child health care;
- Immunization against major infectious diseases;

- Prevention and control of locally endemic diseases;
- Appropriate treatment of common diseases and injuries; and

Provision of essential drugs

Answers to Self-assessment 6.1.5

1) These are the explanation of the primary health care elements:
   - **Education about prevailing health problems and methods of preventing and control them**: Health education is important element to communicate with the facts that help to promote the ways of healthy livings and solve basic health problems
   - **Prevention and control of locally endemic diseases:** endemic diseases are health devastating and when well controlled and prevented, it optimizes the health of the individuals.
   - **Provision of Essential drugs:** essential drugs are critical to the management diseases (communicable and non-communicable diseases) that affect the lives of the people.
   - **Maternal and child health, Family planning:** the primary health care also focuses on improvement of the maternal and child health by ensuring trained staffs to help mother while pregnant, giving birth and after birth and to care for the babies and also by availing the family planning methods to all people in need
   - **Expanded Immunization against major infectious diseases:** Immunization is the only major preventive measure against various communicable diseases such as Tuberculosis, tetanus, Diphteria, Whopping cough, Corona Virus, etc.
   - **Promotion of Food supply and proper Nutrition:** Sufficient supply of food and management of proper nutrition is necessary to get balanced diet
   - **Treatment of common infections:** In the absence of proper and time treatment on communicable diseases various rural people have died immature death.
   - **Adequate supply of safe water and basic Sanitation:** good supply of safe drinking water is and ensuring good sanitation are critically important for our good health

Lesson 6 *: Principles of Primary Health Care*

This lesson will help the learners to gain knowledge on important principles for good primary health care. Equitable distribution, Community participation, Intersectoral communication and use of the appropriate technology. These principles are applied

with the aim of promoting health of individuals/community/family in a cultural sensitive way whereby regardless to the group or culture everyone is having access.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Explain the principle of PHC
- Apply the principles of PHC

b) **Teaching resources**

Books on Primary health care and health education, projector, screen.

c) **Prerequisites/Revision/Introduction**

This lesson will equip the learners with the required knowledge to understand the principles of Primary health care. These are

d) **Learning activity 6.1.6.**

Guidance

- Teacher instructs learners to use the books talking about primary health care and its principles
- The teacher asks them to list and explain the principles of primary health care as stated in the **Learning activity 6.1.6.**
- The teacher base on what students have brought to build more knowledge on principles of the primary health care.

Answers to Learning activity 6.1.6

1) Answers:

Health promotion: or helping a community to strengthen the socioeconomic conditions that contribute to good health. The Ottawa Charter defines the prerequisites for health as peace, shelter, education, food, income, sustainable resources, social justice and equity.

Intersectoral collaboration: or recognizing that any community's health and well-being doesn't depend solely on effective health care services. Governments, businesses and organizations in other sectors are equally important in promoting the health and self-reliance of communities

Cultural sensitivity and safety: culturally acceptable to individuals and the community

Appropriate technology: or using medical technologies that are affordable, feasible and culturally acceptable to individuals and the community

Access and equity: or making sure that primary care services are available, affordable and provided equally to all individuals irrespective of their gender, age, ethnicity or location

Empowerment, Health literacy, and community participation: or involving all of community's resources in promoting health and addressing health problems at the grass roots level.

Answers to Self-assessment 6.1.6

1) Answers

- **Bottom-up and community engaged:** communities and individuals must take part in planning, organizing, and controlling PHC so that they draw in both the nations and their own resources in making their places healthier**.**
- **Priority to those in need:** PHC must be inclusive and comprehensive, giving priority to those most in need.

  Involving many counterparts: PHC must include multiple cadres of health workers—physicians, nurses, midwives, community health workers, and traditional practitioners—who work as a team and respond to the expressed needs of their community

Lesson 7: Levels of Healthcare system in Rwanda

This lesson deals with the structure of the health care system in Rwanda. The Rwandan health care system is subdivided into three main categories including *Public (fully public and government-assisted), private and traditional health facilities.*

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Define health care system
- Define the levels of health care system
- Describe the levels of health care system

b) **Teaching resources**

Books on Primary health care and health education, projector, screen.

c) **Prerequisites/Revision/Introduction**

This lesson equips students with the knowledge of the health care system and

how it function. As Rwandese, who will work within the healthcare system, learners will be equipped with the knowledge of the Rwandan health care system and its responsibilities.

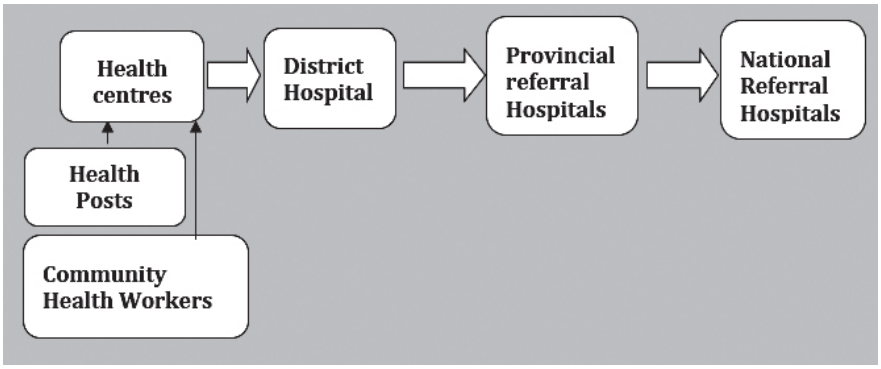
d) **Learning activity 6.1.7**

Guidance

- Teacher make groups of 6 students and instruct them to attempt questions given in the **Learning activity 6.1.7**
- Each group appoint one member to present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to Learning activity 6.1.7

1) **Answers;** Peripheral level (District hospitals, Health centres and health posts), Intermediate level and Central level



Answers to Self-assessment 6.1.7

1) **Answer:** the levels of healthcare delivery in Rwanda are: **The Central Level; The Intermediary Level** and **The Peripheral Level: DHs, HCs and HPs**
2) **Answers**: a well-functioning system should be responding to the following:
   - *Improving the health status of individuals, families and communities,*
   - *Defending the population against what threatens its health,*
   - *Protecting people against the financial consequences of ill-health,*
   - *Providing equitable access to people-centered care* and
   - *Making it possible for people to participate in decisions affecting their health and health system*

Sub-Unit Two: Health Promotion

Lesson 8: Health promotion and Background

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. Learners should possess the knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.2.1.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.2.1**
- The teacher instructs students to attempts questions on the **learning activity 6.2.1** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to the Learning activity 6.2.1

Health promotion has its roots from the early origin of human population but health promotion as a scientific discipline emerged in 1970s. The history of health promotion illustrates some of the complexities and issues that promotion continues to face today. There was a growing expectation for a new public health movement around the world, this calls the first International Conference on Health Promotion held in Ottawa in 1986. It launched a series of actions among international organizations, national governments and local communities to achieve the goal of "Health for All" by the year 2000 and beyond. Advocate, enable, and mediate were the basic strategies for health promotion identified

in the Ottawa Charter. Since then, the WHO Global Health Promotion Conferences have established and developed the global principles and action areas for health promotion.

Answers to the self-assessment 6.2.1

1) The first International Conference on Health Promotion was held in Ottawa in 1986.
2) The goal of the first International Conference on Health Promotion was "Health for All" by the year 2000 and beyond.
3) The basic strategies for health promotion identified in the Ottawa Charter were:
   - Advocate (to boost the factors which encourage health)
   - Enable (allowing all people to achieve health equity) and
   - Mediate (through collaboration across all sectors).

Lesson 9: Concept definition of health promotion

This lesson will equip learners with the background of health promotion and how it has started. It is a continuation of the Lesson Eight.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

From the previous lesson, learners have had the background of the health promotion, in this lesson they will emphasize on understanding more about the health promotion by being able to define and understand different key concepts under health promotion.

d) **Learning activities 6.2.2**

Guidance

- The teacher put learners in groups to discuss the asked question in **learning activity 6.2.2**
- The teacher instructs students to attempts questions on the **learning activity 6.2.2** and each group present their answers.

- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to the Learning activity 6.2.2

- Physical activity reduces the risk of some diseases like heart diseases, diabetes, and hypertension hence promoting health.
- Health diet helps to protect against malnutrition in all its forms, as well as a range of non-communicable diseases and other condition hence promoting health.
- Quitting can add as much as a decade to life expectancy. Reduces the risk for many adverse health effects, including poor reproductive health outcomes, cardiovascular diseases, chronic obstructive pulmonary diseases, 12 types of cancer. Benefits people already diagnosed with coronary heart disease or COPD.
- Community development encompasses a range of efforts to improve physical, economic, and social environment by promoting affordable housing, small-business development, job creation and social cohesion in low-income neighbourhoods.
- Health Promoting Schools have been recognized as a strategic vehicle to promote positive development and healthy behaviours such as physical activity, physical fitness, recreation and play, balanced nutrition, prevent tobacco use, and preventing being bullied.
- Health trainers help their clients to assess their lifestyles and wellbeing, set goals for improving their health, agree action-plans, and provide practical support and information that will help people to change their behaviours. This could include promoting the benefits of taking regular exercises and eating healthily.

Answers to the self-assessment 6.2.2

1) Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health

2) To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment

3) The determinants of the health are:
   - Access and use of health care services
   - Environment
   - Genetics

- Income
- Education level.
- Relationships with friends and family.
- Housing, employment

Lesson 10: The scope of health promotion

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. Learners should possess the knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.2.3.**

Guidance

- The teacher put learners in groups to discuss the asked question in **learning activity 6.2.3**
- The teacher instructs students to attempts questions on the **learning activity 6.2.3** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.2.3

1) Developing personal skills, through education for health, health information and life skills positively influence the development of personal skills.
2) Creating supportive environments through creating safe and secure physical and social environments to improve living and working conditions.

3) Strengthen community action, through developing partnerships and alliances with other organizations and sectors in priority community setting.

4) Delivering health public policy through the development of health-related policy internally at all sectors and levels of government.

5) Reorient the health services towards health promotion (WHO, 2009a). Advocating for the development and provision of health services that can respond to the health needs of young people

Answers to the self-assessment 6.2.3

1) Yes	2) Yes	3) Yes	4) Yes	5) Yes
6) Yes	7) No	8) Yes	9) No	10) Yes
11) No	12) No	13) No	14) Yes	15) No

Health promotion activities are classified into:

- Primary: aimed at reducing risks to the entire population. Prevention of the onset of disease through risk reduction.
- Secondary aimed at reducing risk factors for people already at risk. Prevention of disease progression through screening, etc.
- Tertiary: aimed at people suffering from ill-health, social disease or disability.

Lesson 11: Principles of health promotion

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. Learners should possess the

knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.2.4.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.2.4**
- The teacher instructs students to attempts questions on the **learning activity 6.2.4** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to the Learning activity 6.2.4

The health promotion principles are:

- **Empowerment** – a way of working to enable people to gain greater control over decisions and actions affecting their health.
- **Participative** – where people take an active part in decision making.
- **Holistic** – taking account of the separate influences on health and the interaction of these dimensions.
- **Equitable** – ensuring fairness of outcomes for service users.
- **Intersectoral –** working in partnership with other relevant agencies/ organizations.
- **Sustainable** – ensuring that the outcomes of health promotion activities are sustainable in the long term.
- **Multi-strategy:** this calls for multiple and complementary interventions and strategies across different levels working on a number of strategy area such as programs, policy development, coordination etc.

Answers to the self-assessment 6.2.4

1) D
2) E
3) F
4) A
5) B
6) C

Lesson 12: Main approach to the health promotion

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. Learners should possess the knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.2.5**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.2.5**
- The teacher instructs students to attempts questions on the **learning activity 6.2.3** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.2.5

Medical or Preventive Approach

The medical or preventive approach aims to reduce premature death by targeting the whole population or groups who are at higher risk of developing disease. Examples Immunization programs, Routine, screening for diseases such as cancer, Palliative care.

Behavioral Approach

The behavioral approach, also known as the behavior change approach, makes the fundamental assumption that healthy lifestyles are crucial to maintaining good health. Some behavior change attempts have been targeted at the whole

population, for example, 'Stoptober', the annual 28-day stop smoking campaign that was initiated by the Department of Health in 2012. Healthcare professionals who adopt the behavioral approach in their practice seek to provide individual patients with information concerning their unhealthy lifestyle behaviors and motivate them to change. Examples: Mass media campaigns (eg. Stoptober), One-to-one advice sessions.

The Educational Approach

The educational approach to health promotion assumes that increasing people's knowledge about their health will lead to healthier behavior. Nurses who adopt an educational approach provide people with knowledge and information about their health. Examples: Mass media campaigns, providing leaflets, presentations or online information, Activities which enable patients to explore their options.

Empowerment Approach

Within the context of health promotion, empowerment can be understood as "a process through which people gain greater control over decisions and actions affecting their health" An empowerment approach seeks to enable individuals and social groups to express their health-related needs and have greater involvement in decision-making regarding their health. It can be used when working directly with individual patients or whole communities. Examples: Facilitating peer-support groups, enabling groups of people to collaborate in research and service provision.

Social Change Approach

The social change approach focuses on making changes to the physical, social and economic environment to increase their health promoting capacity. This approach assumes that if the healthier choice is made the easier choice, it will become increasingly realistic for individuals to make decisions to improve their health and wellbeing. Examples: Lobbying for health public policy, Organizational changes in health services and schools.

Answers to the self-assessment 6.2.5

1) Approaches of the health promotion are:
   - Medical or preventive approach;
   - Behavioural approach;
   - Educational approach,
   - Empowerment approach;
   - Social change approach

2) Description and examples of the health promotion approach

Approach	Aim of the approach	Examples of the approach
Medical Or preventive	Reduce illness and early death through medical interventions targeted towards whole populations or at-risk groups.	Immunization programmes Routine screening for diseases such as cancer Palliative care
Behavioural	Motivate people to adopt healthy lifestyle behaviours.	Mass media campaigns(eg. stoptober) One-to-one advice sessions.
Educational	Provide sufficient information and knowledge so that people can make informed choices about their health.	Mass media campaigns Providing leaflets, presentations or online information Activities which enable patients to explore their options.
Empowerment	Facilitating individuals and communities to highlight their own health priorities and providing them with the resources (ie. skills and confidence) to enable change.	Facilitating peer-support groups Enabling groups of people to collaborate in research and service provision.
Social change	Make changes within people's social and environmental conditions that are health promoting.	Lobbying for health public policy Organizational changes in health services and schools.

3) a

4) a

Lesson 13: Basic strategies of health promotion

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the health promotion concept development
- Explain different meetings that was held to establish health promotion.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. Learners should possess the knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.2.6.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.2.6**
- The teacher instructs students to attempts questions on the **learning activity 6.2.3** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.2.6

Strategies of health promotion are;

- **Advocate**: A Combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programme.
- **Enable**: Taking action in partnership with individuals or groups to empower them, through the mobilization of human and material resources to promote and protect their health.
- **Mediate**: A process through which the different interest (personal, social, economic) of individuals and communities and different sectors (public and private) are reconciled in ways that promote and protect health.

Answers to the self-assessment 6.2.6

- **Advocate**: A Combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programme.
- **Enable**: Taking action in partnership with individuals or groups to empower them, through the mobilization of human and material resources to promote and protect their health.
- **Mediate**: A process through which the different interest (personal, social, economic) of individuals and communities and different sectors (public and private) are reconciled in ways that promote and protect health.

Sub-unit Three: Health Education

Lesson 14: Health education concept

This lesson will equip learners with the background of health education and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Describe health education concept

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Health education is defined as education that promotes an understanding of how to maintain personal health. It is one tool of the health promotion. As prerequisites, learners should possess the knowledge of health and have covered the biology of the human beings.

d) **Learning activities 6.3.1.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.3.1**
- The teacher instructs students to attempts questions on the **learning activity 6.3.1** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.3.1

1) **Answer**

   Image A: Different health topics including *Healthy eating, sexual healthy, violence prevention, safety, mental and emotional health, physical activity, alcohol, tobacco and other drugs, personal health and wellness***.**

   Image b: A health educator and her audience**.**

2) **Answer**: Teacher is teaching about nutrition as shown by images that she might be using.

3) **Answer:** Health education is one way for conducting health promotion and

illness prevention programs. Health education provides opportunities to learn about many health subjects. Health education strategies are tailored to the needs of the target audience. In an appropriate setting, health education gives information to target audiences on specific health subjects, including the health advantages and hazards they face, as well as tools to build capacity and support behavior change

Answers to the self-assessment 6.3.1.

1) **Answer**: Health education is defined as a process by which people learn about their health and more specifically, how to improve their health. It can also be defined as a development of individual, group, institutions, community and systemic strategies to improve health knowledge, attitudes, skills and behaviour.

2) **Answer**: Health education as a tool for health promotion is critical for improving the health of populations and promotes health capital.

Lesson 15: Objectives of health education

This lesson will equip learners with objectives of the health education and why it is with great importance in the health promotion.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Describe Objectives of health education.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

The objectives of health education include providing knowledge, developing positive attitudes towards health issues and promoting decision-making. Leaners should have learned the concept of the health education in the lesson above.

d) **Learning activities 6.3.2.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.3.2**
- The teacher instructs students to attempts questions on the **learning activity 2.3.2** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.3.2

1) **Answer:** Health care providers provides information about nutrition and healthy eating and the audience (parents, mothers, clients/patients, etc) will gain the knowledge about nutrition and start or continue to eat healthy food and they will live a healthier life.

2) **Answer**: Down are two objectives among others:

- To provide health information
- To maintain norms of good health

Answers to the self-assessment 6.3.2

1) **Answer:**

- To provide information about health and its value as community asset
- To maintain norms of good health
- To take precautionary and preventive measures against communicable diseases
- To render assistance to the school going children an understanding of the nature and purpose of health services and facilities
- To develop and promote mental and emotional health
- To develop a sense of civic responsibility

2) **Answers:**

- Age and development stage
- Motivation
- Readiness
- Active involvement
- Relevance
- Feedback
- Non-judgmental
- Simple to complex
- Repetition
- Timing
- Environment
- Emotions

- Physiological events
- Cultural barriers
- Psychomotor ability

Lesson 16: Principles of health education

This lesson will equip learners with the background of health promotion and how it has started.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Describe Health education principles and strategies.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

Learners should have covered the concept and the objectives of the health education in lessons.

d) **Learning activities 6.3.3.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.3.3**
- The teacher instructs students to attempts questions on the **learning activity 6.3.3** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills

Answers to the Learning activity 6.3.3

1) **Answers:** The following are principles of health education: *Interest, Participation, Known to unknown, Reinforcement, Motivation, Comprehension, Communication, Needed-based, Change behaviour, Scientific based knowledge, Rapport relationship,* and *Compare and upgrade knowledge.*

Answers to the self-assessment 6.3.3

1) **Answers:** *Interest, Participation, Known to unknown, Reinforcement, Motivation, Comprehension, Communication, Needed-based, Change*

behaviour, Scientific based knowledge, Rapport relationship, and Compare and upgrade knowledge

2) Answers:

- Individuals such as clients of services, patients, healthy individuals.
- Groups E.g. groups of students in a class, youth club.
- Community e.g. people living in a village

Lesson 17: Process of health education

This lesson will equip learners with knowledge and skills to conduct the health education session. They will develop the skills in collaboration and communication skills.

a) **Learning objectives**

At the end of lesson, learners will be able to:

- Explain the process of Health education
- Plan and implement health education of individual, families and communities to prevent diseases
- Demonstrate collaboration and communication skills.

b) **Teaching resources**

Books on Primary health care and health education, projector, screen

c) **Prerequisites/Revision/Introduction**

The learners should have covered the health educations concept, objectives and the principles.

d) **Learning activities 6.3.4.**

Guidance

- The teacher put learners in groups to discuss the based question in **learning activity 6.3.4**
- The teacher instructs students to attempts questions on the **learning activity 6.3.4** and each group present their answers.
- The teacher should base on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers to the Learning activity 6.3.4

1) Answers:

- Assessing learning needs
- Developing learning objectives
- Planning and implementing patient teaching
- Evaluating patient learning

Answers to the self-assessment 6.3.4

1) Answers

- Assessing learning needs
- Developing learning objectives
- Planning and implementing patient teaching
- Evaluating patient learning
- Documenting patient teaching and learning

2) Answers

- The patient's learning needs
- The patient's preferred learning style and readiness to learn
- The patient's current knowledge about his or her condition and health care management
- Learning objectives and goals as determined by both you and the patient
- Information and skills you have taught
- Teaching methods you have used, such as demonstration, brochures, and videos.
- Objective reports of patient and family responses to teaching
- Evaluation of what the patient has learned and how learning was observed to occur

6.6. Summary of the unit

Primary health care

Primary healthcare is a term used to describe the first contact a person has with the health system when they have a health problem or issue that is not an emergency. Any of the health care team that is the first the first point of contact for the health

system can be a primary healthcare provider. Primary health care improves the equity and access, health care performance, accountability of health systems, and health outcomes. There many factors that may affect the health system and access to health services, these are social protection, food security, education and environmental factors.

PHC is also critical to make health systems more resilient to situations of crisis, more proactive in detecting early signs of epidemics and more prepared to act early in response to surges in demand for services

Health promotion

Health promotion is a science aiming at promoting health, preventing diseases, disability and premature death through education-driven voluntary behavior change activities, drawing from draws from the biological, environmental, psychological, physical and medical sciences.

Health promotion is the development of individual, group, institutional, community and systemic strategies to improve health knowledge, attitudes, skills and behavior. The purpose of health promotion is to positively influence the health behavior of individuals and communities as well as the living and working conditions that influence their health.

Health education

Health education is a social science that uses biological, environmental, psychological, physical, and medical knowledge to promote health and prevent disease, disability, and premature death through education-driven voluntary behavior modification activities.

Health education refers to purposefully built learning experiences that include some type of communication and are aimed at promoting health literacy, including knowledge and life skills that are beneficial to individual and community health.

Health education is concerned not only with the dissemination of information, but also with the development of the motivation, skills, and confidence (self-efficacy) required to improve one's health.

Health education encompasses the dissemination of information about the underlying social, economic, and environmental variables that influence health, as well as individual risk factors and risk behaviors, and health-care system utilization.

6.7. Additional information for teachers

Principles of the Alma-Ata Declarations

The Alma-Ata Declaration defines PHC as having seven principles:

- The **first** principle notes that *PHC evolves from economic and sociocultural and political circumstances so that its research base includes social science and biomedicine*.
- **Second**, *PHC must address the health concerns of a time and place, emphasize creating conditions that prevent disease, and address curative and rehabilitative services*.
- **Third**, *PHC must do things for whole populations at a time, such as community health education, safe water, a safe food supply, sanitation, and so on*.
- **Fourth**, *this population response is bigger than the health sector and must include agriculture, housing, public works, and communications, and all these relevant sectors need to coordinate*.
- **Fifth**, *communities and individuals must take part in planning, organizing, and controlling PHC so that they draw in both the nations and their own resources in making their places healthier*.
- **Sixth**, *PHC must be inclusive and comprehensive, giving priority to those most in need*.
- **Seventh**, *PHC must include multiple cadres of health workers—physicians, nurses, midwives, community health workers, and traditional practitioners—who work as a team and respond to the expressed needs of their community*.

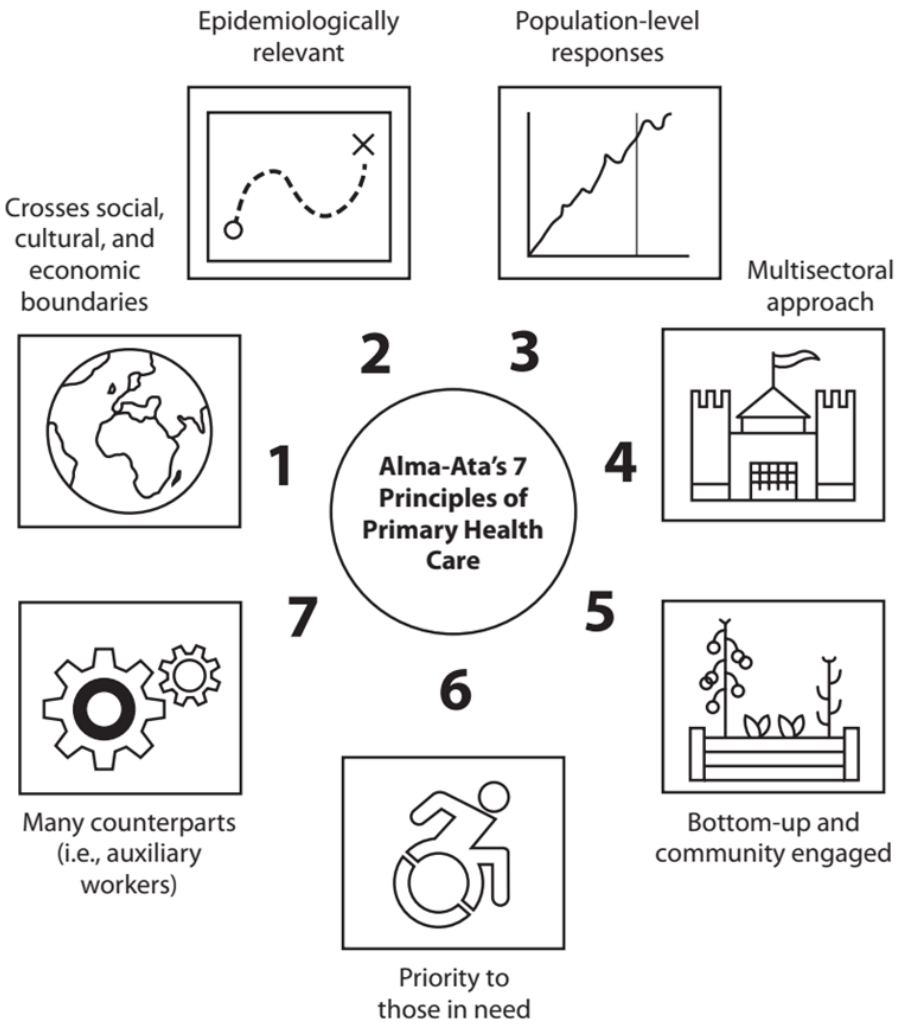


Figure 6.71 Alma-Ata 7 principles of primary health care

Health education

All sort of education involves the **teaching** and the **learning**; ***Teaching*** is a system of activities intended to produce learning that facilitates enduring changes in behaviour or ways of thinking whereas the ***learning*** is a change in human disposition or capability that persists and that cannot be accounted for solely by growth.

The teaching–learning process is intentionally designed to produce specific learning and involves dynamic interaction between teacher and learner. Each participant in the process communicates *information, emotions, perceptions, and attitudes* to the other.

The teaching process and the nursing process are much alike.

Table 01. Comparison of teaching process and nursing process

Step	Teaching process	Nursing process
	Collect data; analyse client's learning strengths and deficits	Collect data; analyse client's strengths and deficits
	Make educational diagnosis	Make nursing diagnosis
	Prepare teaching plan: ▪ Write learning outcomes ▪ Select content and time frame ▪ Select teaching strategies ▪ Select teaching resources	Plan nursing goals or desired outcomes, and select interventions
	Implement teaching plan	Implement nursing strategies
	Evaluate client learning on the basis of achievement of learning outcomes	Evaluate client outcomes on the basis of Achievement

Principles of adults learning

Nurses can use the following principles of adult learning as a guide for client teaching:

- As people mature, they move from dependence to independence. • An adult's previous experiences can be used as a resource for learning.
- Learning is related to an immediate need, problem, or deficit.
- An adult is more oriented to learning when the material is useful immediately, not sometime in the future.
- Learning is reinforced by application and prompt feedback and reflection.

Readiness to learn

A client who is ready may search out information by asking questions, reading books or articles, talking to others, and generally showing interest. The person who is not ready to learn is more likely to avoid the subject or situation. In addition, the unready client may change the subject when it is brought up by the nurse. For example, the nurse might say, "I was wondering about a good time to show you how to change your dressing," and the client responds, "Oh, my wife will take care of everything."

6.8. Answer to the end unit assessment

Answers to the end unit assessment questions

1) **b**
2) **a**
3) **b**
4) **c**
5) **a**
6) **a**
7) **b**
8) **b**
9) **b**
10) **c**
11) **d**
12) **c**
13) **b**
14) **b**
15) **d**
16) **b**
17) **d**
18) Key elements of health promotion are:
    - good governance
    - health literacy
    - health cities
    - healthy settings
    - social mobilization
19) The purpose of health promotion is to strengthen the skills and capabilities of individuals to take action and the capacity of groups or communities to act collectively to exert control over the determinants of health and achieve positive change.

6.9. Additional activities

6.9.1. Remedial activities

1) The health is best described as resource that allows a person to have:
    a. A social and spiritual life
    b. A productive social and economic life
    c. Economic well-being
    d. Physical capacity

2) Comprehensive primary health care is characterised by activities that work to change:
    a. Social and political determinants of illness
    b. Economic and educational well-being
    c. Health status in communities, regions or cities
    d. All of the above

3) Which of the following statements best illustrates the difference between primary health care and primary care?
    a. Primary health care is a theoretical approach to health care, whereas primary care is a system of delivering services.
    b. Primary health care is illness focused, whereas primary care is health promotion focused.
    c. Primary health care is a set of government standards for health care, whereas primary care provides a set of principles for delivering care.
    d. Primary health care is a philosophical approach to providing health care, whereas primary care provides an entry point to the health care system.

4) A community/public health nurse is planning an educational program about healthy choices to prevent heart disease. Which of the following variables will be the primary influence as the nurse selects content for the program?
    a. Employing agency's preferences
    b. Needs of the high-risk target group
    c. Third-party payers probable coverage of the educational program
    d. What the nurse feels most comfortable and skilled in teaching

5) Which of the following activities would be important for the nurse to complete when planning an educational program?

a. Avoid rehearsing the content or it will sound too practiced.
b. Come early to set up the audio-visual materials.
c. Remind all possible participants that early registration is required.
d. Try to get as many free handouts and freebies as possible

6) A nurse was asked to select an appropriate site for a nursing education program for adults in the community. Which of the following characteristics is most important in choosing the site?

a. Location in a building that does not charge rent for use of the space
b. Lots of room for participants to stand, walk around the room, and socialize with other participants
c. Accessibility to public transportation, location in a physically safe area, and accessibility for disabled participants
d. Location next to a police station, fire station, or other community resource

7) A nurse began by asking the audience, what do you want me to discuss? All responses were written on the chalkboard and then, as specific points were discussed, the nurse erased the item. However, the nurse often added material that was not requested. Why would the nurse add more content?

a. Because the nurse believed the additional information was entertaining and lightened the mood
b. Because the nurse knew, on the basis of personal experience, other relevant information that the audience needed
c. Because the nurse knew so much about the subject and wanted to give all the details.
d. Because the nurse was sure that the audience meant to ask about it

8) For whom are patient education programs very helpful?

a. Adults and families who can learn to avoid health problems
b. Adults and families, who will all be clients in the future
c. People who wish to learn how best to use the health care system
d. People with an identified health problem

9) What distinguishes primary health care from primary care?

a. A focus on primary, secondary and tertiary intervention
b. Provision of interventions specific to the health need
c. Works within a multidisciplinary framework

d. Planning and operation of services is centralized

10) The main aim of public health is to improve health by:

a. Providing medical intervention appropriate for the individual
b. Performing research to compare the effectiveness of treatments
c. Promoting health and preventing disease in populations
d. Providing advice on risk markers and genetics to families

11) Primary prevention is concerned with:

a. Preventing disease or illness occurring
b. Delaying the progress of an existing disease or illness
c. Maintaining current health status
d. Treatment of existing disease or illness

12) What is primary health care (PHC)?

Answers to the remedial activities

1) b
2) d
3) d
4) b
5) b
6) c
7) b
8) d
9) c
10) c
11) a
12) Primary health care is a community's first and main point of contact with the health system. It's about helping people to live the healthiest lives possible and, when they need health care, providing the right care, at the right time, right in their communities.

6.9.2. Consolidation activities

Respond to the following with True or False to the following questions:

1) Primary care is the same as primary health care T
2) Primary Prevention Promotes health and prevents illness/diseases T
3) Secondary prevention Prevents progression of the disease through early detection and intervention T
4) Tertiary prevention Promotes health and prevents illness/diseases F

Multiple choice questions, choose the right answer:

5) Health promotion is
    a. is the process of enabling people to increase control over, & to improve, their Health
    b. Consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, improving knowledge & developing life skills which are conducive to individual & community health.
    c. Is 'the degree to which individuals have the capacity to obtain, process and understand basic health information and the services needed to make appropriate health decisions'
6) A nurse educator wanted to be certain that the program participants not only learned the content but also had time to practice these new behaviors. Which of the following must the nurse be sure to include in the program?
    a. Providing positive praise for participation
    b. Allowing time for role-playing
    c. Engaging the audience in stress-reduction exercises
    d. Modeling the appropriate behaviors
7) Toward which individuals and their families are health education programs primarily aimed?
    a. Those who are acutely ill and need information to help them recover and avoid further problems
    b. Those who are healthy and can support each other in maintaining healthy lifestyles
    c. Those who must cope with an ongoing chronic disease

d. Those who have defined health problems and who can support each other in maintaining healthy lifestyles

8) Which of the following factors most influences a client's ability to learn from a health education program?

a. Clients belief that the information will be useful or enjoyable
b. Handouts given to the client
c. Nurses ability to teach
d. Setting in which the educational program is given

9) A nurse is teaching a client how to perform her own insulin injections. Which of the following should the nurse assess first to determine the client's experiential readiness to learn?

a. Culture and ethnic background
b. Educational ability
c. Family structure
d. Home environment

10) Which comment to the nurse best demonstrates a successful health education program?

a. I am going to take a 30-minute walk each day.
b. I certainly enjoyed the program, and thank you for the freebies.
c. You gave me so much new information; thank you so much.
d. Wow! I learned many things that I can use in my daily activities.

11) Primary health care focuses on:

a. Providing early diagnosis and treatment
b. Performing health surveillance measures
c. Exploring the relationship between determinants of health
d. Reducing inequity and improving effects of disadvantage

12) Sustainability refers to the ability of a program to:

a. Be uncompromising when disturbances occur in social and environmental systems
b. Identify and reduce risk factors and lifestyle behaviours affecting health
c. Meet current needs without affecting the ability of people in the future to meet their needs
d. Focus on the social, political, economic and ecological dimensions of health

13) Health literacy is best defined as the capacity of a person to:

a. Read health-related literature
b. Follow medical instruction for a specific health care problem
c. Recognise and know how to find information about a health problem
d. Access the internet

Answers to the consolidation activities

1) True
2) True
3) True
4) False
5) a
6) b
7) b
8) a
9) b
10) a
11) d
12) c
13) c

6.9.3. Extended activities

1) Which of the below are classified as "Vulnerable population"

a. People living with permanent disability, mental illness & other chronic conditions
b. People who are homeless, dealing with addiction, or experiencing family violence & abuse
c. People from certain racial & ethnic minority groups, such as indigenous Australians, new immigrants, refugees & asylum seekers
d. People with limited self-care capacity, such as the frail-aged, the very young and those with limited educational & social capacity
e. All of the above

2) Which of the following statements is a definition of a health care system?

a. Health care systems are group of people providing health services

b. Health care systems are organizations or policies in place that are designed to plan and provide medical care for people

c. A health care system is an organized, purposeful structure that consists of interrelated and interdependent elements (components, entities, factors, members, parts)

d. A health care system consists of all the activities whose primary purpose is to promote, restore and maintain health

3) How many Sustainable Development Goals (SDGs) have been agreed to, by all the world's nations, as part of the 2030 Agenda?

a. 12

b. 112

c. 18

d. 17

4) How can nurses best help expand the availability of health education programs?

a. Being entrepreneurs and asking patients to pay what they think the educational program was worth

b. Suggesting to their friends and neighbors that they lobby local health organizations to provide such health education programs

c. Teaching health education programs as unpaid volunteers in the community

d. Working politically to influence public policy regarding funding health education programs

5) All are features of health education **except**:

a. Knowledge is actively acquired

b. Develops reflexive behavior

c. The process is behavior centered

d. Appeals to reason

e. Discipline primitive desires

6) The nurse distributed written materials with culturally appropriate pictures to the small groups in the audience and began to lecture on the important content before the planned discussion period. However, no one was listening. What should the nurse have done differently?

a. Created a more interesting and entertaining lecture

b. Withheld the written materials until after the lecture

c. Let the audience discuss the material as a whole, not in small groups

d. Skipped the lecture and went directly to the discussion period

7) The nurse had a peer evaluation completed in order to improve her teaching expertise. Which of the following best describes this evaluation?

a. A summary of the evaluation that the audience completed at the end of the program

b. Another nurse observing and providing feedback on the presentation

c. Completion of an evaluation of their learning and satisfaction by participants

d. Videotaping of the presentation for further review

8) Health equity refers to the:

a. Right to fair distribution of health services

b. Disparities in health status among individuals

c. Discrimination inherent in health care

d. Statistical differences in health between groups

9) For primary health care to improve health, people must first have:

a. Access to medical services

b. Their basic needs met

c. A health promotion program

d. Electronic medical records

10) The key elements the World Health Organization sees as necessary to achieve better health for all include:

a. Decreasing inclusion in health care coverage

b. Increasing stakeholder participation

c. Centralising and standardising health service delivery

d. Reducing use of collaborative models

11) Understanding of health determinants is essential for:

a. Primary health care interventions and assessment

b. Effective programs to enable people to maintain good health

c. Organization of health services in regions or cities

d. Acute care service provision

12) What did the Ottawa Charter do for health promotion?

a. Identified conditions required for disease and illness

b. Strengthened the role of biomedical professionals in health promotion

c. Developed the strategies to be used by health promotors

d. Identified key concepts, actions and strategies od health promotion

Answer to the extended activities

1) e
2) d
3) d
4) d
5) b
6) b
7) b
8) a
9) b
10) b
11) b
12) d

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UNIT 7 INTRODUCTION TO ENVIRONMENTAL SANITATION

7.1. Key unit competence

Apply house and environmental sanitation

7.2. Prerequisites (knowledge, skills, attitudes and values)

The leaners should have learnt Fundamental of Nursing Senior 4: Unit 1, 2, 4, and 10 on nursing theories, Hygiene and Comfort, nosocomial infection control and prevention and Sociology of health and illness. Learners should also have learnt Fundamental of Nursing senior 5: Unit 11 on Communication and counselling and Fundamental of Nursing senior 6: unit 5 and 6 on Introduction to community health nursing and primary health care. The knowledge of Biology learnt in previous years will be needed in this Unit. The leaner should be able to respect the principles of ethics and professional code of conduct.

7.3. Cross-cutting issues to be addressed

a) Inclusive education

This unit involves the environment aspects and sanitation, students will be required to visit community for inspection of environmental sanitation. Teacher will make groups of leaners during the visit of community and students with blindness of one eye or with lower limb disability will be mixed with other students in order to be supported by their colleagues. Students with lower limb disability will be helped in transport to reach the community; in this condition the teacher is required to make advocacy to the school authority in order to avail transport for them.

b) Gender education

The learners should be treated equally regardless theirs gender; they can present and report during group activities. Give a role model who are successful in real life without considering their gender, make sure that during class teaching or in visit of community both boys and girls share and participate equally.

c) Environment and sustainability

Learners get basic knowledge from environment, they understand that the good environment can lead to better health; they have the attitude of keeping cleanness environment in order to prevent infection transmission. Help the learners to know maximum skills and attitudes on the environmental hygiene and sustainability and will be responsible to help community population to maintain a good environmental sanitation.

7.4. Guidance on the introductory activity

This introductory activity will involve learners in maintaining the good environmental sanitation for preventing health problems resulted from poor sanitation.

Teacher's activity:

- Put learners into small groups of 6 learners and ask them to observe the images and discuss to the given questions.
- Provide guidance to each group during their discussion and encourage active participation.
- Request each group to have one member who presents their findings.
- Note that students may not be able to provide the right answers, encourage them to think more.

Expected answers to the introductory activity

1) **Answer**:

a. Environmental aspect of image A

The image reflects poor sanitation

- Poor management of human excreta: people defect in the river
- Poor management of animal excreta: scattered stool of animal
- Use of unsafe water in different activities. (washing clothes, kid bathing and in other home activities)

b. Environmental sanitation of image B : The image B reflects poor disposal of solid wastes in neighbourhood

- Impact on people's health
- Yes the status of the above image have an impact on people's health
- Poor management of human and animal excreta will lead to oral-fecal transmission diseases, poor disposal of solid wastes will lead to direct diseases transmission or through environmental pollution.

2) **To maintain good sanitation**

- Effective management of human and animal excreta
- Safe sanitation system
- Effective management of solid wastes and other type of wastes (liquid or semi-liquid).

7.5. List of lessons/subheadings (including assessment)

#	Lesson title	Learning objectives	Number of periods
1	Introduction to environmental health	Identify different aspects of sanitation. Explain difference between sanitation and environmental sanitation.	3 periods
2	Sanitation	Identify different aspects of sanitation Explain difference between sanitation and environmental sanitation	2 periods
3	Environmental sanitation	Explain difference between sanitation and environmental sanitation	2 periods
4	Human excreta management	Discuss the five components of a sanitation system to properly manage human excreta	3 periods
5	Animal excreta management	Discuss the importance of animal excreta management.	2 periods
6	Solid waste management	Practice correctly the techniques of solid waste management	3 periods
7	Hazardous wastes management	Practice correctly the techniques of Hazardous waste management	2 periods
8	Domestic waste management	Discuss management options of waste water Practice correctly the techniques of wastes water management.	3 periods
9	Environmental sanitations inspections (theory)	Educate individuals, families and communities about how to improve housing hygiene and environmental hygiene Respect of all age-socio- economic categories of clients Practice correctly the techniques of waste water management Describe the benefits and purpose of an environmental sanitation inspection Sensitivity while interacting with different community members Observing integrity and honesty Demonstrate cultural sensitivity while interacting with different community members Maintaining a grooming appearance. Use Environmental sanitation inspection forms to gather information	2 periods

10	Environmental sanitations inspections (Practice)	Educate individuals, families and communities about how to improve housing hygiene and environmental hygiene Respect of all age-socio- economic categories of clients Practice correctly the techniques of waste water management Describe the benefits and purpose of an environmental sanitation inspection Sensitivity while interacting with different community members Observing integrity and honesty Demonstrate cultural sensitivity while interacting with different community members Maintaining a grooming appearance Use Environmental sanitation inspection forms to gather information	12 periods
11	End unit assessment (In community +Theory)		6 periods

Lesson 1: Introduction to environmental health

This first lesson of the UNIT 7: and will be taught in three periods (120 minutes). At beginning of the lesson the teacher will introduce the whole unit by starting with introductory activity to environmental sanitation. After, the teacher will continue with the first lesson.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Identify different aspects of sanitation.
- Explain difference between sanitation and environmental sanitation

b) Teaching resources

Teaching videos, projectors, screen, learners will need to wear closed shoes comfortable for field visit.

c) Prerequisites/Revision/Introduction

The main objective of this lesson is to equip learners with the knowledge, about the overview of environmental health and essential services of environmental health.

d) Learning activities 7.1.

Guidance

Before introducing the first lesson, the teacher should have introduced the whole unit. After introducing the whole unit, the teacher has to introduce this lesson starting from the **learning activity 7.1:**

- Teacher makes small groups of 6 learners and provide the copies of images from the **learning activity 7.1**. as shown in student book
- Teacher instructs learners to observe and read the given copies to attempt the given questions.
- Each group appoints one member to present what they have discussed. The teacher will allow learners to first present/demonstrate while encouraging learners to compare their responses among groups.
- The teacher should focus on the answers provided by the learners and build from what they know to make way of new knowledge.

Answers to learning activity 7.1

1) Image A and B reflect on good environmental health because there is aeration, environment is clean with good hygiene, green vegetation, good habitation, and good waste management.
2) Image C and D reflect poor environmental health because there is poor hygiene, pollutant air, noise and poor waste management.
   - **Health risk : Disease (pulmonary disease, cancer)due to air pollution from industry**
   - **Disease related to poor disposal of wastes**.

Answers to self -assessment 7.1

1. **a) Environment is** the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival. The term environment captures the notion of factors that are external to the individual.

   Environment also refers to ssurroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships

b) **Environmental health**

Environmental health comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations." (World Health Organization)

2. Environmental impacts that degrade ecosystem are: **urbanization** and **deforestation.**

3. **Environmental pollution** is the contamination of the physical and biological components of the earth/atmosphere system to such an extent that normal environmental processes are adversely affected.

   Types of environmental pollution:

   - Air
   - Water
   - Soil
   - Noise
   - Light-weight

4. Essential services of Environmental health are:

   - Monitor environmental and health status to identify and solve community environmental health problems.
   - Diagnose and investigate health problems and health hazards in the community.
   - Inform, educate, and empower people about health issues.
   - Mobilize community partnerships and action to identify and solve health problems.
   - Develop policies and plans that support individual and community environmental health efforts.
   - Enforce laws and regulations that protect environmental health and ensure safety.
   - Link people to needed environmental health services and assure the provision of health care when otherwise unavailable.
   - Assure a competent public health and personal health care workforce.

- Evaluate effectiveness, accessibility, and quality of personal and population-based environmental health services.
- Research for new insights and innovative solutions to environmental health problems

Lesson 2: Sanitation

As a continuation of environmental health. Good sanitation is a key of diseases prevention and lead to good environmental health.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Identify different aspects of sanitation
- Explain difference between sanitation and environmental sanitation.

b) Teaching resources

Teaching videos, projectors, screen, students will need to wear closed comfortable shoes for community visit.

c) Prerequisites/Revision/Introduction

Good sanitation reflects on good management of human wastes resulted from their activities. The teacher asks the learners to observe very well the given images and respond to the given questions on **leaning activity 7.2.**

d) Learning activities 7.2.

Guidance

- Teacher makes 2 groups and provide the copies of image A to the first group and copies of image B to the second group.
- Teacher instructs students to observe and read these copies to attempt the given questions
- Each group present their findings and the teacher gives to the learners' time of discussion.
- The teacher should focus on the answers provided by the learners and build from what they know to make way of new knowledge.

Answers to learning activity 7.1

1) Image A reflects on poor sanitation
   - Poor management of human and animal excreta
   - Use unsafe water for different activities such washing clothes, bathing,…

   Image B reflects poor sanitation:
   - Poor hygiene and housing of the latrine.
   - Poor knowledge about hygiene: A kid who is eating near the latrine with flies around the mango.
2) Health risk of poor sanitation on the above image include oral-fecal disease transmission like diarrhea, typhoid, shigellosis, cholera, gastroenteritis etc.
3) Measures to prevent health risk associate with poor sanitation
   - Effective human excreta management
   - Effective sanitation: e.g: Building of adequate latrine
   - Health education on hygiene.
   - Hand washing
   - Respect components of a sanitation system
   - Use of safe water

Answers to self-assessment 7.2.

1) Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes. Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces.

2) Objectives of sanitation

- **Protect and promote Health:** Keeping disease carrying waste and insects away from the people, toilets and home, break the spread of disease, prevent spreading of waterborne diseases, and improve the health and quality of life.
- **Protect environment against pollution:** Keeping disease carrying waste and insects away from the environment prevent environment from pollution (air, soil and emission) and prevent contamination of water resources (surfaces and ground water

3) Factors that contribute to poor sanitation:

- Lack of education: Poor knowledge on best hygiene practice such as hand-washing, use safe drinking water and sanitation.
- Inadequate safe water provision: Lack of sufficient water supply lead to unofficial ways of accessing water services. Limited access to safe water and long distance to access safe water lead to use of unsafe water which consequently lead to waterborne diseases.
- Urbanization/High density living: Most people in the world live in the urban areas. This has caused the burgeoning of new kind s of slums, the growth of squatter and informal housing. The high density nature of these areas along with less access to sanitation programs and products means there's a high likelihood of sewage and waste not being dealt with properly.
- Cultural practices: behavior and culture in some society lead to poor sanitation such as open defection practice. Some cultural may hinder the acceptance and support of the sanitation and hygiene program by the community.
- Poverty: lack of basic infrastructures such as toilets and waste management systems.
- Poor governance: lack of planning and resources' allocation in priority area such sanitation.

4) Benefits of improving sanitation are:

- reducing the risk of diarrhea
- reducing the spread of intestinal worms, schistosomiasis and trachoma, which are neglected tropical diseases that cause suffering for millions;
- reducing the severity and impact of malnutrition;
- promoting dignity and boosting safety, particularly among women and girls;
- promoting school attendance: girls' school attendance is particularly boosted by the provision of separate sanitary facilities; and potential recovery of water,
- Renewable energy and nutrients from faecal waste.

Lesson 3: Environmental sanitation

As a continuation of UNIT 7: Environmental sanitation plays a big role in determining an environmental health conditions.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Explain difference between sanitation and environmental sanitation

b) **Teaching resources**

Teaching videos, projectors, screen, students will need to wear closed comfortable shoes for field visit.

c) **Prerequisites/Revision/Introduction**

Environmental sanitation is a set of interventions that reduce peoples' exposure to diseases. The teacher asks the Learners to respond to the given questions on **leaning activity 7.3**.

d) **Learning activities 7.3**

Guidance

- Teacher givers the learners 10 minutes to reflect on previous lessons (introduction to environmental health and sanitation)
- After reflection teacher instructs learners to attempt to the given questions
- Teacher pick randomly 6 learners, each 2 learners will respond to one question.
- The teacher should focus on the answers provided by the learners and build from what they know to make way of new knowledge.

Answers of learning activity 7.3

1) **Environmental sanitation** is a set of interventions that reduce peoples' exposure to disease by providing a clean environment in which to live, with measures to break the cycle of disease. This usually includes hygienic management of human and animal excreta, solid waste, wastewater, and storm water; the control of disease vectors; and the provision of washing facilities for personal and domestic hygiene. Environmental Sanitation involves both behaviors and facilities that work together to form a hygienic environment.

2) **A Characteristics of good environmental sanitation**

- Good Hygiene of body and clothing
- Adequacy, safety (chemical, bacteriological, physical) of water for domestic, drinking and recreational use.
- Proper excreta disposal and liquid waste management
- Proper application of storage, collection, disposal of waste. Waste production and recycling
- Control of mammals (such as rats) and arthropods
- (insects such as flies and other creatures such as mites) that transmit disease
- Food safety and wholesomeness in its production, storage, preparation, distribution and sale, until consumption
- Physiological needs, protection against disease and accidents, psychological and social comforts in residential and recreational areas
- Communal hygiene in schools, prisons, health facilities, refugee camps, detention homes and settlement areas.
- Hygiene and safety in the workplace

3) To maintain good environmental sanitation; the following measures should be implemented:

- Awareness campaigns related to visible and non-visible health impacts of poor sanitation and aiming at behaviour change;
- Marketing the sanitation offer, targeting on people's expectations and preferences such as comfort, status, health benefits, value or safety;
- Education and training in schools and universities; Urban and rural population about the maintenance of environmental sanitation
- Provision of limited material incentives or subsidies to accelerate the improvement, construction or replacement of sanitary facilities; using the provision of water supply services as an incentive and opportunity to improve sanitation facilities.

Answers to Self-assessment 7.3

1) a) If the people are clean, no skin rashes or other pathology their sociability will rise.
2) Environmental sanitation: is a set of interventions that reduce peoples' exposure to disease by providing a clean environment in which to live, with measures to break the cycle of disease
3) The strategies that may enhance environmental sanitation improvement: The improved sanitation shall be promoted through a combination of measures:
   - Awareness campaigns related to visible and non-visible health impacts of poor sanitation and aiming at behaviour change;
   - Marketing the sanitation offer, targeting on people's expectations and preferences such as comfort, status, health benefits, value or safety;
   - Education and training in schools and universities; Urban and rural population about the maintenance of environmental sanitation
   - Provision of limited material incentives or subsidies to accelerate the improvement, construction or replacement of sanitary facilities; using the provision of water supply services as an incentive and opportunity to improve sanitation facilities
4) Environmental sanitation increase population focus and productivity because providing the optimum environment for them, both physically and mentally, will help them grow. They will grow as balanced individuals who strive to achieve the best versions of them. They will be able to focus more on their work or studies without any distractions or limitations. As a result, their productivity will increase, allowing them to achieve more growth and nourishment

Lesson 4 : Human excreta management

Human excreta should be disposed safely in order to avoid contamination of the environment, food or hands.

a) Learning objectives

At the end of this lesson, learner should be able to:

- Discuss the five components of a sanitation system to properly manage human excreta

b) Teaching resources

Teaching videos, projectors, screen, students will need to wear closed comfortable shoes for visiting community.

c) Prerequisites/Revision/Introduction

Human excreta should be well managed to avoid diseases related to poor management. The teacher asks the learners to observe very well the given images and respond to the given questions on **leaning activity 7.4.**

d) Learning activities 7.4.

Guidance

- Teacher makes small groups of 6 learners and provide the copies of images from the **learning activity 7.4. as shown in student book**
- Teacher instructs students to observe and read the given copies to attempt the given questions
- Each group appoints one member to present what they have discussed. The teacher will allow learners to first present/demonstrate while encouraging learners to compare their responses among groups.
- The teacher should focus on the answers provided by the learners and build from what they know to make way of new knowledge.

Answers of learning activity 7.4

1. **Image A and B** : poor management of human excreta: open defecation in the river , poor hygiene of toilet , preparing food nearby an open toilet and excreta, eating nearby excreta with flies , use of unsafe water **.**
2. **The sanitation problem on image A and B will lead to oral fecal disease transmission** such as cholera, diarrhea , gastroenteritis, shigellosis, intestinal worms. The faecal oral disease may lead to malnutrition, economic burden**.**
3. **How to avoid problem on image A and B**
    - Effective management of human excreta
    - Use of safe drinking water
    - Keep hygiene of toilet
    - Keep hygiene of household
    - Effective hand-washing**.**

Answers to Self-assessment 7.4.

1. The toilet to advise to family X is a dry toilet, because it operate without need of water as the family lives in rural area with difficult to access water. The following features should be considered in designing a dry toilet:

   - **The slab or pedestal** (user can sit on) base should be well sized to the pit so that it is both safe for the user and prevents storm water from infiltrating the pit (which may cause it to overflow). For smooth emptying, the slab should provide a hole for desludging with cover,
   - Slab should be at least 150 mm above the ground level with a hole covered with a lid when not in use.
   - **The hole** should be closed with a lid to prevent unwanted intrusion from insects or rodents entering the containment technology. The lid also controls odours and flies from the toilets.
   - The pit should be lined with stones or burnt clay bricks to prevent the collapse of the earth.
   - **The superstructure** should be designed and constructed so that it prevents intrusion of rainwater, storm water, animals, rodents or insects. It should also provide maximum level of privacy. Features of the superstructure include:
   - Roof should be waterproof to ensure user comfort (protection against the rain and sun)
   - Ventilation should be provided between the walls and roof for aeration,
   - Door with a locker.
   - **Accessible handwashing** facilities with soap and water should be available nearby in a location that encourages use.

2. **Components of a sanitation system are:**

User interface, Collection and storage, Conveyance, Treatment, Use and /or Disposal

   - **User interface: i**s the way in which the sanitation system is accessed.
   - **Collection and storage:** consist of collecting and soring the products generated at the user interface.
   - **Conveyance of wastes products:** Consist of empting and transport of products from one functional group to another.
   - **Treatment of fecal sludge:** consist of solid/liquid separation, dewatering

and stabilization. it helps to protect environment and public health from fecal pathogens and other contaminants

- **Disposal/Reuse:** consist of safe use and disposal of treated fecal sludge , the treated fecal sludge can be used as soil conditioner , building material, biofuel and in production of proteins

3. **Benefits of safe excreta disposal are:**
    - Soil conditioner raw form or as compost
    - Building material : cement mixture
    - Biofuel: gas, char briquettes
    - Production of proteins: animal deed and black soldier fly
4. **Urine diverting toilet** is a toilet that operates without water and separate the urines from faeces fraction. It allows practical reuse of excreta and saves water.
5. A **Cistern-Flush toilet** has the cistern behind the toilet where water is stored and released by pushing the handle for it to run into the bowl. **A pour Flush toile**t doesn't have a cistern where water is stored, water is poured by the user.

    A cistern –flush toilet requires constant water supply while a **pour flush toilet** doesn't require constant water supply.
6. **Aseptic tank:** is a watertight storage container (concrete or fiberglass) for storage as well as for physical and chemical treatment of liquid household waste.

    A septic tank is classified under collection and storage technologies in as sanitation system components.

e) Inspection of human excreta management in the community

During the Inspection of human excreta management in community, the teacher prepares check list for environmental sanitation inspection and work in collaboration with school authority, local government authority, The Community environmental health officer of nearest health centre and community health workers. Those staff must be informed before bringing the learners in community. If the teacher obtains a consent of visiting community he/ she can make small groups of 6 students, and each group will visit one village in selected cell. Each group can be assisted by teacher or community health worker and every learner must have a check list on human excreta management. Inspection of human excreta management in community will be practiced in three periods.

Lesson 5 : Animal excreta management

a) Learning objectives

At the end of this lesson, learner should be able to:

- Discuss the importance of animal excreta management.

b) Teaching resources

Teaching videos, projectors, screen, students will need to wear closed comfortable shoes for visiting community**.**

c) Prerequisites/Revision/Introduction

Management of animal excreta has a great importance on environment, health and economy. The teacher asks the learners to observe very well the given images and respond to the given questions on **leaning activity 7.5.**

d) Learning activities 7.5.

Guidance

- Teacher makes small groups of 6 learners and provide the copies of images from the **learning activity 7.5. as shown in student book**
- Teacher instructs students to observe and read the given copies to attempt the given questions
- Each group appoints one member to present what they have discussed. The teacher will allow learners to first present/demonstrate while encouraging learners to compare their responses among groups.
- The teacher should focus on the answers provided by the learners and build from what they know to make way of new knowledge.

Answers of learning activity 7.5

1. **Practices observed on image A :**
   - Poor management of animal and human excreta: excreta are scattered in the household
   - Animal are kept in open space
   - Manure are exposed to sun light , not covered
2. **Consequences of practices on image A:**
   - Risk of bad odor in their living environment

- Risk of diseases transmission from excreta
- Ineffective use of manure
- Lack of economical outcome from the use of manure

3. Good practices to advise:
   - Good management of animal and human excreta
   - Keep animal in shelter which is covered
   - Good storage of animal manure: manure should be covered.
   - Reuse of animal manure
4. Observation on Image B
   - Importance of animal excreta reuse in agriculture
   - Animal excreta used as Biogas for cooking and to give light
   - Animal excreta used as bio fertilizer to grow crops.

Answers of Self –assessment 7.5

1. **A)** Collection, storage, treatment and application
2. **Match the following items**

   1. Escherichia coli: e and **iii**

   2. Leptospira: c and **i**

   3. Shigella: d and **v**

   4. Hepatitis A: b and **ii**

   5. Rotavirus : a and **iv**
3. **Importance of animal excreta management**
   - **Environment**: Reduce detrimental environmental effects; prevent the environment impacts on air, soil, wildlife and the marine, reduces greenhouse gas emission from waste, reduces liter and odor and prevent the risks of flood.
   - **Economy:** Increases business opportunities, provides savings to business, especially in resources extraction and use, by waste prevention actions recovery and/or recycling activities, achieves economic saving by improvements in human health and the environment leading to higher productivity, lower medical costs, better environmental quality and the maintenance of ecosystem services. Capturing methane as biogas provides cooking fuel and lighting that can replace firewood and charcoal.

- **Agriculture:** used as fertilizer, promote sustainable agriculture and increase crop production.
- **Public Health:** Protects human health and safety in community and at waste management facilities, minimize the risks associated with the wastes, and improves occupational health

4. **Best practices regard to collection of manure are:**
   - Zero grazing system that consist of confinement of animals in housing with opens sheds with roofing, sloping, concrete floor, slurry pit and manger.
   - Frequent removal of manure
   - Separation of urines collection and drainage to limit nitrogen loss.
5. **Techniques of manure treatment**
   - **Drying:** urines and feces captured using bedding materials
   - **Composting:** is the natural process of decomposition of organic matter by micro -organism under aerobic condition.
   - **Anaerobic digestion:** anaerobic digestion is biological process that produces biogas

e) Inspection of animal excreta management in community

During the Inspection of animal excreta management in community, the teacher prepare check list for environmental sanitation inspection and work in colabollation with school authority, local government authority, The Community environmental health officer of nearest health center and community health workers. Those staff must be informed before bringing the learners in community. If the teacher obtain a consent of visiting community he/ she can make small groups of 6 students, and each group will visit one village in selected cell. Each group can be assisted by teacher or community health worker and every learner must have a check list on animal excreta management. Inspection of human excreta management in community will be practiced in three periods.

Lesson 6: Sold waste management

Solid waste can create significant health problems and a very unpleasant living environment if not disposed of safely and appropriately.

a) Learning objectives

At the end of this lesson, learner should be able to:

Practice correctly the techniques of solid waste management

b) Teaching resources

Teaching videos, projectors, screen, students will need to wear closed comfortable shoes for visiting the community**.**

c) prerequisites/Revision/Introduction

The most environmentally preferred strategy consists of reduction of waste production.

The teacher ask the Learners read carefully leaning **Learning activity 7.6** and respond to given questions.

d) Learning activities 7.6.

Guidance

- Teacher givers the learners 10 minutes to reflect on their home community about the way they manage wastes.
- After reflection teacher instructs learners to attempt to the given questions
- Teacher pick randomly 6 learners, each 3 learners will respond to one question
- The teacher should focus on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers of learning activity 7.6

1) Types of solid wastes observed in community may be:

- Solid or semi-solid like food wastes, rubbish, ashes and residues, etc.
- **Organic solid waste:** Wastes that are generally biodegradable and decompose in the process of which emits offensive and irritating smell when left unattended. Putrescible wastes e.g. Garbage
- **Inorganic solid waste**: Solid matter that does not decompose at any rat. This category of waste matter may be combustible depending on the type of the nature of the material they constitute. Non-putrescible wastes e.g. Rubbish

2) **Solid waste management it includes:** Solid waste management consists of four steps: storage, collection, transportation, and disposal

Answers of Self-assessment 7.6

1) Organic wastes

2) a. Supports healthy soil structure and plant growth

3) 1-C, 2-D, 3-A, 4-E, 5-B

4) a. Waste: materials, which have lost their value to their first owners. Or materials that are perceived to be of negative value.

   b Solid waste: is defined as a solid material possessing a negative economic value, which suggests that it is cheaper to discard than to use. Solid waste is another type of human wastes, which refers to the solid or semi-solid forms of wastes that are discarded as useless or unwanted.

5) The Safety precautions of burning and burying solid waste are

   - Combustible waste should always be separated from non-combustible waste before being loaded into the burn chamber.
   - The incinerator should have sufficient air pollution controls, meets specific air emission standards
   - If burning and incineration is used, the equipment chosen should be designed and sized to accommodate the waste produced, minimize fire hazard and result in the complete combustion of the waste.
   - Burn waste as far away as possible from people and items that can catch fire,
   - such as your house
   - Burn it in a pit or a barrel to prevent fire spreading
   - Bury ashes in a pit or landfill; they may have dangerous substances in them
   - Locate the site at least 500 metres away and downhill from drinking water sources.
   - Ensure that there is at least 2 metres between the bottom of the disposal pit and the highest annual groundwater level. The more distance between the bottom of the pit and the groundwater, the lower the risk of contamination.
   - Do not dispose waste in an area susceptible to flooding.
   - Locate the site in clay-like soil if possible. The smaller the soil grain size, the

- lower the risk of soil and groundwater contamination. Do not dispose waste in
- sandy areas.
- Cover waste with 0.1 metres of soil or ash regularly (e.g., daily or weekly) to reduce smells and pests, and prevent waste from blowing away.
- Construct a fence to keep animals and children out of the disposal site

e) Inspection of solid waste management in community

During the Inspection of solid wastes management in community, the teacher prepares check list for environmental sanitation inspection and work in collaboration with school authority, local government authority, The Community environmental health officer of nearest health center and community health workers. Those staff must be informed before bringing the learners in community. If the teacher obtains a consent of visiting community he/ she can make small groups of 6 students, and each group will visit one village in selected cell. Each group can be assisted by teacher or community health worker and every learner must have a check list on solid wastes management. Inspection of solid wastes management in community will be practiced in three periods.

Lesson 7: Hazardous waste management

Hazard waste is a form of wastes that can create significant health problems if not disposed safely.

a) **Learning objectives**

At the end of this lesson, learner should be able to:

Practice correctly the techniques of hazard wastes management.

b) **Teaching resources**

Teaching videos, projectors, screen, student book, learners will need to wear closed and comfortable shoes for visiting community**.**

c) **Prerequisites/Revision/Introduction**

Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment**.** The teacher asks the learners to observe very well the given images and respond to the given questions on **leaning activity 7.7.**

d) **Learning activities 7.7.**

Guidance

- Ask learners to form group of six Learners.
- Explain that they have to participate actively in the activity by responding to questions in student book
- Move around in silence to monitor if they are having some problems.
- Remember to assist those who are weak but without giving them the answers.
- Invite the group representatives to present their findings to the rest.
- Ask other students to follow carefully the presentations.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion.

Answers to Learning activity 7.7.

1. Difference or similarities between images in row A:

Difference Between Image in row A	**Similarities Between Image in row A**
Some are chemical wastes other are medical wastes Some are liquid and semi-liquid waste other are solid waste.	All are hazardous wastes All are inorganic wastes All are dangerous to our health and the environment.

2. Difference between images in row A and B

Row A	**Row B**
All are Inorganic wastes Hazardous wastes	Some are inorganic other are organic wastes Non-hazardous wastes

3. **Risks to the environment or Human health can be resulted from Image in row A if are not well handled are:**

- Inhalation, ingestion, or dermal exposure to hazardous materials can cause significant harm to humans, animals and plants, whilst the environment can and has been damaged by improper disposal. Hazardous waste presents a serious danger if:

- It's released into the air, water, or land and can contaminate the surrounding environment
- A large amount is released at one time, or if small amounts are released frequently at the same location
- It comes into contact with humans via skin contact, ingestion, or breathing in hazardous materials
- Improper storage or disposal leading to spills and leaks which can lead to fires

- Hazardous wastes can cause dermatitis to the skin, some cause asthma on long exposure, and others cause the eyes to smart and run and also tightening of the chest

Answers to self-assessment 7.7.

1. Hazardous waste: is a contaminant that is a dangerous good and is no longer wanted or is unusable for its original intended purpose and is intended for storage, recycling, treatment or disposal.

Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment.

2. Hazardous Bio-medical wastes: are from hospitals and biological research facilities. The biological waste has the capability of infecting other living organisms and has the ability to produce toxins. Biomedical waste mainly includes malignant tissues discarded during surgical procedures and contaminated materials, such as hypodermic needles, bandages and outdated drugs.
3. The information on the label must include the waste type, origin (name, address, telephone number of generator), hazardous property (flammable), and the symbol for the hazardous property (The red square with flame symbol).
4. Requirements pertaining to the storage of hazardous waste facilities:
   - The storage area should have a proper containment system. The containment system should have a collection area to collect and remove any leak, spill or precipitation;
   - No open storage is permissible and the designated hazardous waste storage area shall have proper enclosures, including safety requirements;
   - Proper stacking of drums with wooden frames shall be practiced; d. In case of spills/leaks, cotton shall be used for cleaning instead of water;
   - Signboards showing precautionary measures to be taken in case of normal and emergency situations shall be displayed at appropriate locations;

- Manual operations within storage area are to be avoided to the extent possible. In case of personnel use, proper precautions need to be taken, particularly during loading/unloading of liquid hazardous waste in drums

5. The hazardous waste treatment: Any person who generates hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators manner. Any products treated shall be disposed of or treated in accordance with the conditions set by the Regulatory Authority in consultation with the concerned stakeholders. Do not dispose hazardous waste in latrines, drainage channels, water sources or on the ground. Dispose hazardous waste in a separate landfill site from general household waste

e) Inspection of hazard waste management in community

During the Inspection of hazard wastes management in community, the teacher prepare check list for environmental sanitation inspection and work in collaboration with school authority, local government authority, The Community environmental health officer of nearest health center and community health workers. Those staff must be informed before bringing the learners in community. If the teacher obtains a consent of visiting community he/ she can make small groups of 6 students, and each group will visit one village in selected cell. Each group can be assisted by teacher or community health worker and every learner must have a check list on solid wastes management on the part of hazard wastes. Inspection of hazard wastes management in community will be done the same time with inspection of solid wastes management.

Lesson 8: Domestic waste management

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Discuss management options of wastewater

b) **Teaching resources**

Teaching videos, projectors, screen, Student book,

c) **Prerequisites/Revision/Introduction**

The main objective of this lesson is to equip learners with the knowledge and understanding of domestic waste water.

d) **Learning activities 7.8.**

Guidance

- Ask learners to form group of six students.
- Explain that they have to participate actively in the activity by responding to questions in student book
- Move around in silence to monitor if they are having some problems.
- Remember to assist those who are weak but without giving them the answers.
- Invite the group representatives to present their findings to the rest.
- Ask other students to follow carefully the presentations.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion.

Answers to learning activity 7.8.

1) The names of waste water **A: black water,** and waste water **B: Grey water.**

2) Yes there is a difference between wastes water A and B

   - Waste water A (black water) A mixture of urine, faeces and flush water along with anal cleansing water (if water is used for cleansing) and/or dry cleansing materials. Black water contains pathogens of faeces and the nutrients of urine that are diluted in flush water.
   - Waste water B(Grey water) Water generated from domestic activities; such as laundry, dish washing, bathing, cleaning and in the kitchen except water from toilets. Usually has low levels of pathogens, especially compared to black water. Any pathogens are usually from cross-contamination with excreta. Fecal pathogens can end up in grey water through hand washing after defecation, washing children after defection, and washing children's diapers. Grey water may also have other contaminants like oil, grease, soap, detergent or other household chemicals

3) Importance of managing black water and Grey water

   E**nvironmen**t: Prevent pollution of surface or ground water sources such as ocean, lakes, rivers and streams. It prevents euthrophication and pollution of sensitive aquatic systems (surface water, groundwater, drinking water reservoirs) as well as terrestrial systems (irrigated soil).

It preserve aquatic life from toxics and biological decomposition of pollutants that may kills fishes and other aquatic livings.

Public health: management of domestic waste water aim to protect public health by eliminating waterborne diseases. It creates an effective physical barrier between contaminated wastewater and user, as well as avoid odor emissions and stagnant water leading to breeding sites for mosquitoes.

Infrastructure: It prevents erosion of shelter and facilities such roads, bridges etc.

Agriculture: well treated domestic water may be used in agriculture to irrigate crops.

Economic: Treatment of domestic water aim to prevent the use of excessive water as treated water may be recycled and reused thus by reducing the cost of water.

Answers to self-assessment 7.8.

1) **Black water** Is A mixture of urine, faeces and flush water along with anal cleansing water (if water is used for cleansing) and/or dry cleansing materials. Black water contains pathogens of faeces and the nutrients of urine that are diluted in flush water.

2) **Grey water:** Water generated from domestic activities; such as laundry, dish washing, bathing, cleaning and in the kitchen except water from toilets. Usually has low levels of pathogens, especially compared to black water. Any pathogens are usually from cross-contamination with excreta. Fecal pathogens can end up in grey water through hand washing after defecation, washing children after defection, and washing children's diapers. Grey water may also have other contaminants like oil, grease, soap, detergent or other household chemicals.

3) **Overflow water:** Waste water that has spilled from wells or water points. Normally it has very low levels of pathogens. However, overflow water can quickly become contaminated with pathogens from human and animal feces when it is not well managed and causes standing water.

4) **Management of grey water:**

   The most main step in management of grey water is to control the source by reducing the amount of grey water contamination in the first place.

   The following are steps used in treating grey water:

- Collection and containment
- Treatment: physical and biological treatment, chemical wastes water management
- Reuse and disposal

5) Options to manage overflow water

- Chanel away the water to avoid standing water
- Use in agriculture for irrigation
- Overflow water may be released directly to surface water
- It doesn't require treatment before disposal

e) Inspection of domestic waste water management in community

During the Inspection of domestic wastes water management in community, the teacher prepares check list for environmental sanitation inspection and work in collaboration with school authority, local government authority, The Community environmental health officer of nearest health centre and community health workers. Those staff must be informed before bringing the learners in community. If the teacher obtains a consent of visiting community he/ she can make small groups of 6 students, and each group will visit one village in selected cell. Each group can be assisted by teacher or community health worker and every learner must have a check list on domestic wastes water management. Inspection of domestic wastes water management in community will be practiced in three periods.

Lesson 9: Environmental sanitation inspection

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Educate individuals, families and communitiesabout how to improve housing hygiene and environmentalhygiene
- Respect of all age-socio-economic categories ofclients
- Describe the benefits and purpose of an environmental sanitation inspection
- Sensitivity while interacting with different community members
- Observing integrity and honesty
- Demonstrate cultural sensitivity while interacting with different community members
- Maintaining a grooming appearance

- Use Environmental sanitation inspection forms to gather information

b) **Teaching resources**

Teaching videos, projectors, screen, Student book,

c) **Prerequisites/Revision/Introduction**

The main objective of this lesson is to equip learners with the knowledge and understanding of environmental sanitation inspection.

d) **Learning activities 7.9.**

Guidance

- Ask learners to form group of six students.
- Explain that they have to participate actively in the activity by responding to questions in student book
- Move around in silence to monitor if they are having some problems.
- Remember to assist those who are weak but without giving them the answers.
- Invite the group representatives to present their findings to the rest.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion

Answers to Learning activity 7.9

1) **Environmental inspection** is onsite inspection of environmental sanitation practices and technologies, to identify potential source and transmission of diseases related to unsafe water, poor sanitation and poor hygiene

2) **Benefits and purpose of an environmental sanitation inspection:**
   - Provide a simple and fast means of assessing and identifying hazards associated with unsanitary practices
   - Observation and inspection of community and household practice
   - Identify potential and actual risks
   - Useful in assessing small community upgrading options
   - Identify WASH practices: excreta management, hygiene, domestic wastewater
   - Management, animal excreta management, vector control and solid waste management.
   - Identify potential sources of microbiological (fecal) contamination.

- Health Promoting Schools have been recognized as a strategic vehicle to promote positive development and healthy behaviours such as physical activity, physical fitness, recreation and play, balanced nutrition, prevent tobacco use, and preventing being bullied.
- Health trainers help their clients to assess their lifestyles and wellbeing, set goals for improving their health, agree action-plans, and provide practical support and information that will help people to change their behaviours. This could include promoting the benefits of taking regular exercises and eating healthily.

Answers to self – assessment 7.9

1) **Environmental inspection form** uses standardized environmental sanitation inspection forms to ensure consistent assessments. Inspectors use appropriate forms for the situation being assessed. Questions on the form are designed in a simple way by open-ended question by Yes or No to reduce subjectivity.
2) There is a high risk of contamination when livestock sleep and live within the household. I will recommend to the family to have a shed for goats and cows and avoid to live in the same house.
3) **Yes, it is dangerous for a pregnant woman to live with cats in the household as** Cat faeces can transmit a disease called toxoplasmosis. A pregnant women infected with toxoplasmosis can pass the parasite on to their unborn child. The disease has health impacts on the child, such as vision loss, mental disability and seizures. Women who are or may become pregnant should avoid coming into contact with cat faeces, wash hands with soap after contacting soil or clean food from a garden.
4) **Data gathering method to be used in the community are observation and interview**.
5) **Environmental inspection** is onsite inspection of environmental sanitation practices and technologies, to identify potential source and transmission of diseases related to unsafe water, poor sanitation and poor hygiene.

7.6. Summary of unit

The term environment captures the notion of factors that are external to the individual. It also refers to ssurroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelationships.

Environmental health comprises those aspects of human health, including quality of

life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment.

Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes. Hazards can be physical, microbiological, biological or chemical agents of disease. Poor sanitation reduces human wellbeing, social and economic development.

Environmental sanitation includes hygienic management of human and animal excreta, solid waste, wastewater, and storm water; the control of disease vectors; and the provision of washing facilities for personal and domestic hygiene. Environmental Sanitation involves both behaviors and facilities that work together to form a hygienic environment.

Human and animal excreta should be disposed safely in order to avoid contamination of the environment, food or hands. Safe disposal of excreta is crucial to ensure a health environment and for protecting personal health.

Environmental sanitation inspection focuses on Domestic wastewater, excreta management, and Public facilities. Solid waste and vector control. Environmental sanitation inspection bases on observation and interview and uses standardized environmental sanitation inspection forms to ensure consistent assessments

7.7. Additional information for teachers

7.7.1. Zero waste management

Zero wastes is a whole system approach to resource management centered on reducing, reusing and recycling. Generally Zero waste is a philosophy of eliminating the generation of materials that have no viable or economic option for end –of-use management.

To make recycling work people buy products made from recycle.

a. Features of Zero wastes management

Zero wastes management consist of separation of garbage at the source, separate collection of each kind of waste, involvement of the community in all activities.

b. Benefits of zero waste management

Zero waste management is key to preserving good environmental health it helps in:

- Reducing, reusing and recycling can be a key part of climate change strategy to reduce our greenhouse gas emissions.
- Conserves resources and minimizes pollution
- Promotes social equity and builds community

c. Strategies to achieve zero wastes management

The following are strategies to achieve zero wastes management:

- Extended producer responsibility and product redesign
- Reduce waste, toxicity, consumption and packing
- Repair, reuse and donate
- Recycle
- Compost
- Down cycle and beneficial reuse waste based energy as disposal
- Landfill waste as disposal

7.7.2. WASH (Water, Sanitation and Hygiene)

Inadequate water, sanitation, and hygiene (WASH) conditions exist in a range of settings, from temporary refugee camps to permanent homes in large cities. Availability and access to water, sanitation and hygiene (WASH) services is fundamental to fighting the virus and preserving the health and well-being of millions.

- 1 in 4 health care facilities lacks basic water services
- 3 in 10 people lack access to safely managed drinking water services and 6 in 10 people lack access to safely managed sanitation facilities.
- At least 892 million people continue to practice open defecation.
- Women and girls are responsible for water collection in 80 percent of households without access to water on premises.
- Between 1990 and 2015, the proportion of the global population using an improved drinking water source has increased from 76 per cent to 90 per cent
- Water scarcity affects more than 40 per cent of the global population and is projected to rise. Over 1.7 billion people are currently living in river basins where water use exceeds recharge.
- 2.4 billion people lack access to basic sanitation services, such as toilets or latrines
- More than 80 percent of wastewater resulting from human activities is discharged into rivers or sea without any pollution removal
- Each day, nearly 1,000 children die due to preventable water and sanitation-related diarrheal diseases
- Approximately 70 percent of all water abstracted from rivers, lakes and aquifers is used for irrigation

- Floods and other water-related disasters account for 70 per cent of all deaths related to natural disasters.

7.7.3. Sustainable Development Goal Six

The sustainable developmental (SDGs) goal Six is to ensure access to water and sanitation for all. Under sustainable development goal six they are the following targets that should be achieved by 2030:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- 6.5 By 2030, implement integrated water resources management at all levels, including through trans boundary cooperation as appropriate
- 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- 6.A By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- B Support and strengthen the participation of local communities in improving water and sanitation management

7.7.4. Sanitation ladder

The sanitation ladder is a useful tool that is being used to monitor progress towards the sanitation target of the Millennium development goals (MDGs) and SDGs.

Table 7.7.41 the components of the SDG sanitation Ladder

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated off-site.
BASIC	Use of improved facilities that are not shared with other households.
LIMITED	Use of improved facilities shared between two or more households.
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines.
OPEN DEFECATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other

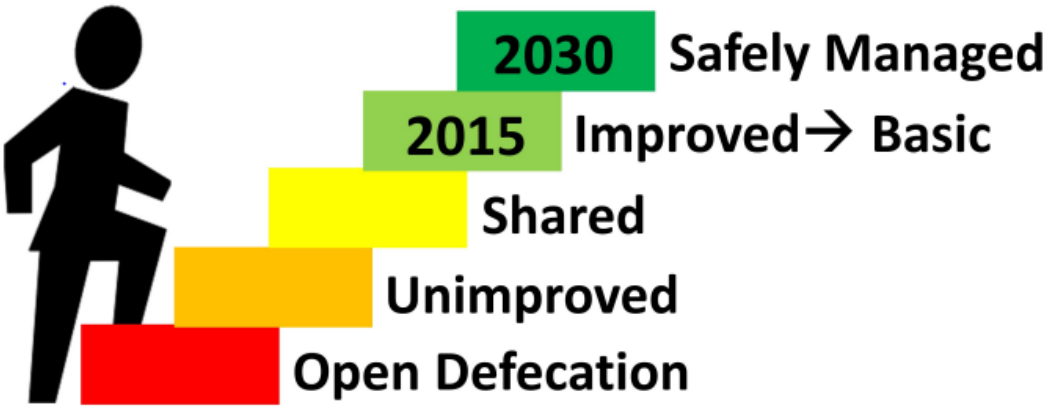

Figure 7.61 United Nation's Sustainable Development Goal (SDG) sanitation ladder (2015-2030) that adds "safely managed"2 and "shared" categories, and changes "improved" to "basic"1 from the previous Millennium Development Goal (MDG) sanitation ladder (2000-2015)

7.8. Answers to end unit assessment

Answers to the end unit assessment questions

1) **b .** Ecosystem
2) **a.** Environmental pollution
3) **a.** Lack of education
4) **d.** curing the intestinal worms

5) **b.** combination of different functional units and technologies for safe collection, transport, treatment or disposal of human waste

6) **C.** Grey water

7) Disposing human excreta safely help to avoid contamination of the environment, food or hands. Safe disposal of excreta is crucial to ensure a health environment and for protecting personal health; is one of the principal ways of breaking the fecal -oral disease transmission cycle.

8) Difference between dry toilet and wet toilet

Dry toilet	Wet toilet
A toilet that operates without flushing water.	Flush toilets; Toilets that uses water

9) Ways of treating the manure

Drying: urines and feces captured using bedding materials

Composting: is the natural process of decomposition of organic matter by micro -organism under aerobic condition.

Anaerobic digestion: anaerobic digestion is biological process that produces biogas.

10) Ways of using manure

- Place it around the plant that requires extra attention
- Cover the compost layer with soil
- Add extra compost on top by scooping out a small proportion of the soil from around the plant
- Create a shallow dip to make watering easy and for runoff to not occur

11) Precautions of burning or burying solid wastes

- Combustible waste should always be separated from non-combustible waste before being loaded into the burn chamber.
- The incinerator should have has sufficient air pollution controls, meets specific air emission standards
- If burning and incineration is used, the equipment chosen should be designed and sized to accommodate the waste produced, minimize fire hazard and result in the complete combustion of the waste.
- Burn waste as far away as possible from people and items that can catch fire,such as your house

- Burn it in a pit or a barrel to prevent fire spreading
- Bury ashes in a pit or landfill; they may have dangerous substances in them

12) Benefits of recycling solid waste

- Reduces emissions of greenhouse gases
- Prevents pollution generated by the use of new materials,
- Decreases the amount of materials shipped to landfills, thereby reducing the need for new landfills,
- Recycling companies often pay for materials, income can be generated
- Preserves natural resources, Opens up new manufacturing employment opportunities and Saves energy

13) Precautions of transporting hazardous waste

- The transportation vehicles and containers shall be suitably designed to handle the hazardous wastes and must be closed at all times;
- Vehicles shall be painted preferably in blue color to facilitate easy identification;
- Vehicle should be fitted with mechanical handling equipment for safe handling and transportation of wastes;
- The words “HAZARDOUS WASTE” shall be displayed on all sides of the vehicle in one of the official languages;
- Transporter shall carry documents of manifest for the wastes during transportation;
- The trucks shall be dedicated for transportation of hazardous wastes and they shall not be used for any other purpose;
- Each vehicle shall carry first-aid kit, spill control equipment and fire extinguisher;
- Driver(s) shall be properly trained for handling the emergency situations and safety aspects involved in the transportation of hazardous wastes;
- The design of the trucks shall be such that there is no spillage during transportation.

14) Importance of domestic wastewater management to public health

Public health: management of domestic waste water aim to protect public health by eliminating waterborne diseases. It creates an effective physical

barrier between contaminated wastewater and user, as well as avoid odor emissions and stagnant water leading to breeding sites for mosquitoes.

15) Methods used during environmental sanitation inspections are: Observation and Interview

7.9. Additional activities

7.9.1. Remedial activities

1) Define environmental impact
2) Explain three level model of environmental prevention.
3) Name two types of emptying and transportation of Feacal sludge
4) Outline four steps of doing Animal excreta management.
5) Give 2 advantages and disadvantages of Landfilling
6) Discuss the management of black water

Answers to the remedial activities

1) Environmental impact: Change to the environment (adverse or beneficial), wholly or partly resulting from the organisation's environmental aspects – ***potential change or harm.***

2) Three levels model of environmental prevention:

- **Primary prevention** involves interventions prior to the development of any signs of ill health. In the case of environmental health, strategies directed toward modifying driving forces, pressures, and state of the environment are primary prevention efforts.
- **Secondary prevention** is early detection of a health problem, prior to the onset of disease, for the purpose of intervening at an early stage to prevent the development of the disease. In environmental health this is usually a preventive effort targeting the phase when exposure has begun to occur but prior to the development of any health impacts.
- **Tertiary prevention** involves early identification and treatment of people with a disease, to prevent or forestall disability and/or death. An example of tertiary prevention is the effort to ensure that patients with asthma follow recommended guidelines for medical treatment and environmental remediation in order to reduce the frequency and severity of asthma attacks.

3) Types of empting and transporting fecal sludge are:

- Human powered emptying technologies and

- Fully motorized emptying and transportation technologies

4) Animal excreta management is done into four steps: Collection, storage, treatment and reuse or application.

5) Advantages and disadvantages of Landfilling

Advantages	***Disadvantages***
Effective disposal method if managed well Sanitary disposal method if managed effectively Energy production and fast degradation if designed as a bioreactor landfill	Fills up quickly if waste is not reduced and reusable waste is not collected separately and recycled A reasonably large area is required Risk of groundwater contamination if not sealed correctly or the liner system is damaged High costs for high-tech landfills If not managed well, there is a risk of the landfill degenerating into an open dump Once the landfill site is shut down Operation, Maintenance (O&M) and monitoring must continue for the following 50 to 100 years.

6) Management of black water

Methods and processes to manage faecal sludge (The settled contents of pit latrines and septic tanks) and sewage (Untreated wastewater which contains faeces and urine) were discussed previously in five components of a sanitation system; through collection, transport and treatment of faecal sludge from pit latrines, septic tanks or other on-site sanitation systems.

7.9.2. Consolidation activities

1) Explain how environmental sanitation provides a better quality of life.
2) What are the constitution of materials can be used to for packing hazardous waste?
3) Define domestic wastewater and name its types
4) During environmental sanitation inspection time the observation may indicate some behavioural practices. Outline 3 examples of those practices

Answers to the consolidation activities

1) Environmental sanitation provides a better quality of life in the following way: by maintaining proper sanitation and ensuring good hygiene, create the perfect environment for the community. Making the most out of living conditions, and, in doing so, it provides a better quality of life. The quality

of life provided can be measured by the lack of illnesses and diseases, the lack of psychological issues, and the growth they experience while living under your roof.

2) The materials which can be used for packing hazardous waste include: Steel; Aluminium; Natural Wood; Plywood; Reconstituted wood.

3) Domestic waste water is the wastewater that is produced due to human activities in households. They are three types of domestic water: Black water, Grey water and overflow water.

4) Observation may indicate some behavioural practices. For example, you can directly observe solid waste in drainage ditches, or the lack of a latrine facility, or animal excreta management practices, or wastewater management practices, hazardous management practices.

7.9.3. Extended activities

1) Mr. G is located in Nyamirama village is suffering from Diarrhea after drinking the river water. What is the cause of that diarrhea?
2) What can you consider while siting the on-site systems?
3) Explain the treatment systems of faecal sludge that are most appropriate in Rwanda
4) What is the consequence when animals walking through the community freely?

Answers to the extended activities

1) The cause of that diarrhea to Mr.G is poor sanitation
2) The following should be considered while siting the on-site systems:

- An on-site sanitation system must not be located over a surface water body and should be at 30 m from the edge of the flood plain of a surface water body.
- Onsite systems should be sited away from trees to prevent obstruction of their features such as ventilation pipes.
- On-site system should be constructed with enough space for easy access and movement during desludging.
- Soil conditions such as rocky outcrops, unstable ground and depressions with shallow water table should be avoided as much as possible.

1) The treatment systems of faecal sludge that are most appropriate in Rwanda are

- **Imhoff tanks**: Can treat high organic loads and are resistant to organic shock loads. Space requirements are low and Imhoff tanks can be used in warm and cold climates. As the tank is very high, it can be built underground if the groundwater table is low and the location is not flood-prone.
- **Settling/thickening tank**: It is a low-cost technology for treating faecal sludge, low operating costs can be built and repaired with locally available materials and no energy is required.
- **Unplanted drying beds**: Have low operating costs, can be built and repaired with locally available materials, no energy is required and good dewatering efficiency.
- **Anaerobic digestion** (for biogas production): It is a net energy-producing process which produces renewable energy in the form of biogas. The liquid digestate is a better fertilizer in many ways than normal chemical fertilizers. The digestate produces fewer odours when it is spread on farmland, and is less likely cause pollution of local rivers and streams and spreading untreated manure.
- **Solar drying beds**: Solar greenhouse is the use of renewable energy sources, reduces the cost of drying. The dried sewage sludge is characterized by a smaller volume and a ceramic structure, which facilitates storage and transport.
- **LaDePa (Latrine Dehydration and Pasteurization**): Converts raw FS from pit latrine, public toilets and households' septic tanks into enriched and pelletized compost, low cost technology with limited energy requirement.
- **Co-composting**: Enriches soil, helping retain moisture and suppress plant diseases and pests, reduces the need for chemical fertilizers, encourages the production of beneficial bacteria and fungi that break down organic matter to create humus, a rich nutrient-filled material

2) Animals that freely roam the community can contaminate water sources, food, people and other animals.

UNIT 8 INTRODUCTION TO PALLIATIVE CARE

8.1. Key unit competence

Apply the principles of palliative care to alleviate pain, support psychologically and spiritually the individuals, families and community during life threatening illnesses and during end of life period.

8.2. Prerequisites (knowledge, skills, attitudes and values)

Associate Nurse Students will learn better the unit of introduction to palliative care if they have prior understanding on: Anatomy and physiology, Medical-Surgical Nursing, Nursing Ethics and Professional Code of Conduct.

The teacher should ask the learners to describe those concepts as review before this unit.

8.3. Cross-cutting issues to be addressed

a) Gender

The teacher should ensure equal participation of both girls and boys during teaching and learning activities such as classroom work and skills simulation.

b) Peace and values education

During group and pair activities, presentations and discussion, the teacher should encourage the learners to help one another and to have mutual respect of opinions.

8.4. Guidance on the introductory activity

In introducing this unit 8, the teacher should ask the learners to attempt the activity 8 as shown in the student book, under unit 8: introduction to palliative care.

This activity aims at enabling the learners to discover the main content of the unit and attract their attention to learn.

The teacher should proceed as follows:

- Ask students to observe the pictures of introductory activity displayed in students' book, or project slide with pictures of introductory activity 8 and allow students to observe them for two minutes.
- Request students to work in pair and answer the questions 1 related to the pictures A, B, C, and D and question 2 of introductory activity 8. They should use 3 minutes to provide responses.
- Allow students to brain storm the results from peer discussion in 5 minutes.

Expected answers to the introductory activity

1) Commonly, people in pictures A, B, C, D and E are providing care/support to very sick persons.

2) Students are likely to answer that the unit is focusing on psychological, social and spiritual care to patients in their end life period

8.5. List of lessons/subheadings (including assessment)

#	Lesson Title	Learning Objectives	Number of Periods
1	Historical Background of Palliative Care	Define palliative care, define the scope and mission of palliative care practice, explain the history and current state of palliative care worldwide.	3
2	Components of Palliative Care	Explain the components of palliative care.	2
3	Principles of Palliative Care	Explain the principles of palliative care.	2
4	Non-pharmacological Pain Management	Explain the principles of pain management in palliative care, use non-pharmacological methods to alleviate pain.	3
5	Pain Evaluation in Palliative Care	Explain the principles of pain evaluation in palliative care.	2
6	Psychosocial Support	Offer psychosocial support to individuals in pain, their families, and the community.	2
7	Spiritual Support	Offer spiritual support to individuals in pain, their families, and the community.	2
8	Legal and Ethical Issues in Palliative Care	Explain ethical aspects and legal issues at the end of life in palliative care.	3
9	Communication in Palliative Care	Describe communication in the context of palliative care.	2
10	Communication Strategies Used in Palliative Care	Explain the strategies of communication in palliative care.	2
11	Principles of Communication in Palliative Care	Explain the basic principles of communication in the context of palliative care.	2

12	End of Life and Nursing Care	Explain and correctly carry out nursing care for the dying person.	3
13	Death and Post Mortem Care	Describe death and post mortem care, confidently carry out post-mortem care.	3
14	Resilience and Self-care	Explain resilience and self-care in the context of palliative care.	3
15	Practice of End of Life, Death, and Post Mortem Nursing Procedures in Skills Lab	Carry out correctly the nursing care of the dying person, confidently carry out post-mortem care.	15
16	**End Unit Assessment**	Assess the knowledge (paper exam) and skills (OSCE) acquired under the unit on palliative care.	2

Lesson 1: Historical background of palliative care

a) Learning objectives

- Define palliative care
- Define the scope and the mission of palliative care practice
- Explain the history and current state of palliative care around the world.

b) Teaching and Learning resources

The following resources may be used for facilitating teaching and learning process: books and videos related to palliative care; computer, projector, and screen.

Simulation lab materials, mannequins, and hand washing facilities.

c) Prerequisites/Revision/Introduction

This lesson 8.5.1 should be preceded by introductory activity 8. The teacher should also facilitate the learners to understand the meaning of palliative care, its goals and scope before the learners undertake the lesson 8.5.1.

d) Learning activity 8.1

Guidance

The teacher should use discussion method in order to facilitate learning of lesson 8.5.1. He should proceed as follows:

The teacher should first display the objectives of this lesson with use of computer and projector or writing pen board/ chalk board. He should then group students in small groups of 3to5 learners and asks each group to take 20 minutes and briefly

explain at least 4 timeline of important events in the history of palliative care. The learners should be instructed to use the internet or text books of palliative care or student book of fundamentals of nursing, unit of palliative care.

The teacher should allow the learners to discuss in small groups and ensure that the discussion stays on the topic at hand. He should encourage shy learners to speak up so that everyone has a chance to share his/her thoughts.

After the due time (20 minutes), the teacher should ask two groups to present the product from the group discussion. The other classmates should follow the presentation. At the end of presentation from the 2 groups, the teacher should ask the other learners to point out differences or similarities among the ideas presented by different 2 groups. They should also be asked to raise any additional information that they think was not presented.

The teacher should encourage all learners to be involved and ensure that no one learner dominates the discussion. He/she should intervene when the discussion moves away from the objectives.

Finally, the teacher should conclude the discussion with a summary of the main ideas on history of palliative care and how they relate to the objectives presented during the introduction of lesson .1.

Answers to learning activity 8.1

Short explanations of at least 4 timeline of important events in the history of palliative care:

1967: Palliative care was born out of the hospice movement. Dame Cicely Saunders is widely regarded as the founder of the hospice movement. She had degrees in nursing, social work, and medicine. She introduced the idea of “total pain,” which included the physical, emotional, social, and spiritual dimensions of distress. Saunders opened St. Christopher’s Hospice in London in 1967.

1969: Elisabeth Kübler-Ross published her book On Death and Dying. In this book, she defined the five stages of grief through which many terminally ill patients progress: denial, anger, bargaining, depression, and acceptance. Although we now believe dying patients do not necessarily go through these phases and that these phases do not necessarily occur in a set order, Kübler-Ross’s book and lectures raised public consciousness about care for patients at the end of life.

1974: Florence Wald, the dean of Yale School of Nursing, was so inspired by a lecture by Dr. Saunders at Yale that she went to visit St. Christopher’s in 1969. Florence Wald then founded the first hospice in the United States, in Branford,

Connecticut, in 1974. At the start of the hospice movement in the United States, most hospices were home based and volunteer led.

1974: Dr. Balfour Mount, a surgical oncologist from McGill University, coined the term "palliative care" to distinguish it from hospice care. While hospice falls under the umbrella of palliative care, palliative care can be provided from the time of diagnosis of a serious illness and concurrently with curative or life-prolonging treatment.

1990: The World Health Organization recognized palliative care as a distinct specialty dedicated to relieving suffering and improving quality of life for patients with life-limiting illness.

1997: The Institute of Medicine report "Approaching Death: Improving Care at the End of Life" noted discrepancies between what the American public wanted for end-of-life care and how Americans were experiencing end of life in the United States. With tremendous support from multiple philanthropic foundations, multifaceted efforts were made to promote palliative care.

2006: The American Board of Medical Specialties (ABMS) and the Accreditation Council for Graduate Medical Education (ACGME) recognized hospice and palliative care as its own specialty.

2010: The New England Journal of Medicine published a study by Dr. Jennifer Temel and colleagues that showed that people with lung cancer who received early palliative care in addition to standard oncologic care experienced less depression and increased quality of life and survived 2.7 months longer than those receiving standard oncologic care.

Answers to self -assessment 8.1

1) 1990: The World Health Organization recognized palliative care as a distinct specialty dedicated to relieving suffering and improving quality of life for patients with life-limiting illness.

2) 1969: Elisabeth Kübler-Ross published her book On Death and Dying. In this book, she defined the five stages of grief through which many terminally ill patients progress: denial, anger, bargaining, depression, and acceptance.

3) 1974: Dr. Balfour Mount coined the term "palliative care" to distinguish it from hospice care. While hospice falls under the umbrella of palliative care, palliative care can be provided from the time of diagnosis of a serious illness and concurrently with curative or life-prolonging treatment.

Lesson 2*: Components of palliative care*

a) Learning objectives

At the end of the lesson, learners should be able to Explain the components of palliative.

b) Teaching and Learning resources

Computer, projector and Screen; a writing pen or chalk board, flip chart, and video on palliative care. Student text book of fundamentals of nursing, specifically the unit of palliative care. Text books of palliative care as referred to in list of references.

c) Prerequisites/Revision/Introduction

Before teaching/learning this lesson, the students should revise the last lesson of historical background of palliative care.

d) Learning activity 8.2

Guidance

Before the classroom session, the teacher should run the video a few seconds to ensure that everything is functioning properly. The video may be found from this link https://www.youtube.com/watch?v=TZCI25C8tEQ or any other link judged necessary.

He/she should then state the objectives of the lesson 8.5.2 and present the video to learners.

After the video has been shown, the teacher should ask learners to discuss the main points learnt from the video show.

The teacher should subsequently help students to create small groups of work and ask them to discuss the components of palliative care using student book of fundamentals of nursing or palliative care text book taken from the library or internet. The discussion should last about 20 minutes and the students should be aware that they should choose one classmate to make presentation of the outcomes from the small group.

The teacher should allow the presentation from the 2 groups.

Successively he/she should ask the other learners to compare the recent presentation with the information they discussed in their small groups. The learners should express the similarities and differences.

The teacher should conclude the lesson with summarized presentation of the components of palliative care and establish the link with the lesson objectives.

Answers of Learning activity 8.2

1) Discussion of the components of palliative care: Palliative care incorporates the whole spectrum of care—medical, nursing, psychological, social, cultural and spiritual. Each has to be addressed in the provision of comprehensive palliative care, making a multidisciplinary approach to care a necessity

e) Self-assessment 8.2

On completion of lesson 8.2 the teacher should ask the learners to answers to questions of the self-assessment 8.2. This should be done as individual homework

Answers to self-assessment 8.2.

1) The following are the aspects of care and treatment that need to be addressed in palliative care:

Suffering/aspects of care	Care/treatment
Pain	Treatment of pain
Other physical symptoms	Treatment other physical symptoms
Psychological problems	Care of psychological problems
Social difficulties	Care of social difficulties
Cultural issues	Care for cultural issues
Spiritual concerns	Care for spiritual concerns
= Total suffering	= Multidisciplinary Palliative Care

Relieving suffering and enhancing quality of life include the following: providing effective pain and symptom management; addressing psychosocial and spiritual needs of the patient and family; incorporating cultural values and attitudes into the plan of care; supporting those who are experiencing loss, grief, and bereavement; promoting ethical and legal decision-making; advocating for personal wishes and preferences; using therapeutic communication skills; and facilitating collaborative practice

2) Explain how the various causes of suffering are interdependent

The various causes of suffering are interdependent and unrecognized or unresolved problems relating to one cause may cause or exacerbate other aspects of suffering.

Unrelieved pain can cause or aggravate psychosocial problems. These psychosocial components of suffering will not be treated successfully until the pain is relieved.

Pain may be aggravated by unrecognized or untreated psychosocial problems. No amount of well prescribed analgesia will relieve the patient's pain until the psychosocial problems are addressed

Lesson 3: Principles of palliative care

a) Learning objectives

At the end of this lesson, learners should be able to explain the principles of palliative care

b) Teaching and Learning resources

In teaching and learning this lesson, the following resources should be used: Student book of fundamentals of nursing, especially the unit of palliative care; Text books of palliative care which may be found from the internet or library; Computer& power point slides and projector for presentation, and video on palliative care And A chalk or a pen board for writing the important points of the lesson.

c) Prerequisites/Revision/Introduction

The learners should have knowledge of scope and definition of palliative care before undertaking this lesson 8.5.2. The teacher should also help the students to review the previous lesson on the components of palliative care.

d) Learning activity 8.3

Guidance

Before the classroom session, the teacher should state the objectives of the lesson 8.5.2 and present the video on palliative care to learners for 5 minutes. The video may be found from this link https://www.youtube.com/watch?v=TZCI25C8tEQ or any other link judged necessary.

After the video has been shown, the teacher should ask learners to discuss the main points learnt from the video show.

The teacher should help the leaners to form 5 small groups of work.

Subsequently, the teacher should use a learning aid (computer & projector of slides, chalk board, etc.) and present a list of 25 principles of palliative care displayed in student book.

Each group should be instructed to explain 5 given principles of palliative care. The within group work should last 30 minutes. While the groups are at work, the teacher moves among the learners to monitor the work of each group, and remind students of the task and time limit.

After the groups have completed their activity, the teacher brings them together as a large group to discuss the activity. This discussion may involve oral report from each group and responses to questions about the components of palliative care: every two (or one) group(s) should provide presentation followed by class room discussion to answer the questions raised by the learners.

At the end of the presentation, the teacher should summarize the principles of palliative care by stressing the main points and relating them to the lesson learning objectives. The summary may be presented using power point presentation of slides with computer and projector or using another teaching material like a chalk writing board, a flip chart, etc..

Answers of learning activity 8.3

1) The following principles have been informed by research-based evidence:
   - A caring attitude
   - Consideration of individuality
   - Care is patient, family and carer centered
   - Care provided is based on assessed need
   - Cultural considerations: linking the principles of ethics, humanities, and human values into every patient- and family-care experience
   - Consent
   - Choice of site of care
   - Effective communication
   - Clinical context: Appropriate treatment
   - Comprehensive inter-professional care / Multidisciplinary care
   - Care excellence
   - Consistent medical care
   - Coordinated care
   - Care should be integrated
   - Continuity of care
   - Crisis prevention
   - Caregiver support
   - Continued reassessment
   - Advance Care Planning
   - Patients, families and carers have access to local and networked services to meet their needs
   - Care is evidence-based, clinically and culturally safe and effective
   - Care is equitable
   - Scope of care
   - Timing of palliative care
   - Holistic care

Answers to Self-assessment 8.3

1) Explanations of the given principles of palliative care:

Care is integrated and coordinated

What does this mean for the patient, family and carer?

'Integration of care is an approach that aims to deliver seamless care within the health system and its interface with social care. It places people at the centre of care, providing comprehensive wrap around support for individuals with complex needs and enabling individuals to access care when and where they need it.

A more integrated healthcare system is easy to use, navigate and access. It is responsive to the specific health needs of local communities, providing them with more choice and greater opportunities to actively engage with the health system. For service providers and clinicians, integrating care supports them to collaborate more effectively across health and with social care.

Healthcare providers and patients, families and carers at times describe health services as being siloed / isolated in their care and in the systems they use to support that care. This results in care that is delayed and or fragmented and not supported with timely, transferable data that works across agencies and jurisdictions. Integrating care is vital to improving outcomes for vulnerable and at-risk populations and people with complex health and social needs.

Care is equitable

We know that some population groups and clinical cohorts do not have equitable access to care or experience care that is sub-optimal and or culturally unsafe or inappropriate.

Equity in relation to health care means that patients, families and carers have equal access to available care for equal need; equal utilization for equal need and equal quality of care for all.

Evidence shows that care to people approaching and reaching the end of life is often fragmented and under-utilized by identified population groups or clinical cohorts. These included Aboriginal people, people under the age of 65, people who live alone, and people of culturally and linguistically diverse backgrounds, people with a non-cancer diagnosis, people living with dementia and people living with a disability.

There is a growing body of evidence indicating that given a choice, patients would prefer to die at home or as close to home as possible. However, a lack of services to support that care means that many people die in acute care settings or for people

in rural and remote areas, death occurs far from their local community. A lack of after-hour support services particularly inhibits carers and family members' ability to provide home care.

The next text discusses the principles of palliative care management:

Holistic care

Palliative care must endeavor to alleviate suffering in the physical, psychological, social and spiritual domains of the patient in order to provide the best quality of life for the patient and family.

Multidisciplinary care

A multidisciplinary team approach is essential to address all relevant areas of patient care. In order to facilitate a family in crisis to establish and then achieve mutually agreed upon goals, the palliative care team integrates and coordinates the assessment and interventions of each team member and creates a comprehensive plan of care.

Effective communication

Good communication skills (including listening, providing information, facilitating decision making and coordinating care) are essential tools in palliative care and healthcare providers must develop this in order to provide effective palliative care.

Lesson 4: Non-pharmacological pain management

a) Learning objectives

- Explain the principles of management of pain in palliative care
- Use non pharmacological pain management to alleviate pain

b) Teaching and Learning resources

Books related to palliative care, projector, and screen, teaching videos, simulation lab materials, mannequins, hand washing facilities, projectors, screen.

c) Prerequisites/Revision/Introduction

The main objective of this lesson is to equip learners with the knowledge and understanding of non-pharmacological pain management used in palliative care.

However, the teacher should guide learners to review the last lesson on the principles of palliative care.

d) Learning activity 8.4

Guidance

- Ask learners to do individually Learning activity 8.5.4 in the student book.
- Provide the necessary materials (books).
- Move around in silence to monitor if they are having some problems.
- Remember to assist those who are weak but without giving them the answers.
- Invites any four students to present their findings / observations to the rest.
- Ask other students to follow carefully the presentations.
- Note on chalk board the student's ideas.
- Make sure that all students give their ideas about the activity
- Tick the correct findings and correct those ones which are incorrect and try again to complete those which are incomplete.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion.

Answers of learning activity 8.4

1) On the image, there is a female who is doing physical exercise; she is focusing much on what she is doing.

2) The physical exercise helps in good blood circulation, a person become distracted so that he/ she forget the pain, and this relaxation technic helps.

Answers to Self-assessment 8.4.

1) Non-pharmacological pain management is the way or technique used to decrease pain without medicine.

2) Psychosocial therapy/counseling, Cold application, Heat application, Guided imagery/distraction

3) **Advantages** of non-pharmacological interventions: Non pharmacological interventions lower medical costs, greater availability to patients, diversification and ease of use and greater patient satisfaction. They also reduce the likelihood of dependence on drug interventions by facilitating pain relief as the first line of treatment.

Disadvantage of non-pharmacological pain management include time consuming, may request advanced technology such as network in case of video, and need the patient cooperation and understanding its benefits for both nurses and patients in order to be a successful method.

Lesson 5: Pain evaluation in palliative care

a) Learning objectives

At the end of this lesson, learner should be able to:

- Explain the principles of evaluation of pain in palliative care

b) Teaching resources

Books related to palliative care, projector, and screen, teaching videos, simulation lab materials, mannequins, hand washing facilities, projectors, screen**.**

c) prerequisites/Revision/Introduction

Evaluation of Pain is essential component in palliative care as it acts as the connecting link between nerves, brain and spinal cord and it has a great significance in controlling the pain-related symptoms.

d) Learning activities 8.5.

Guidance

- Teacher givers the learners 10 minutes to reflect on their home community about the way they manage wastes.
- After reflection teacher instructs learners to attempt to the given questions
- Teacher pick randomly 6 learners, each 3 learners will respond to one question
- The teacher should focus on the answers provided by the student and build from what they know to make way of new knowledge and skills.

Answers of learning activity 8.5

1) In managing the patient with pain, we have to perform complete assessment physical, psychological, social and spiritual assessment
2) Pain causes distress and suffering. Pain can also increase blood pressure and heart rate, and can negatively affect healing.

Answers of Self-assessment 8.5

1) SOCRATES is used to assess pain:

   Site: Where is the pain? The maximal site of the pain;

   Onset: When did the pain start, and was it sudden or gradual? Include also whether it is progressive or regressive.

   Character: What is the pain like? An ache? Stabbing?

Radiation: Does the pain radiate anywhere?

Associations: Any other signs or symptoms associated with the pain?

Time course: Does the pain follow any pattern?

Exacerbating/relieving factors: Does anything change the pain?

Severity: How bad is the pain?

2) Managing the pain is very important as it helps ease suffering, improving patient comfort and therefore patient satisfaction. Pain control can facilitate early ambulation, adequate oxygenation and nutrition and reduce the stress. This helps the speed up the recovery time and may reduce the risk of developing depression.
3) Pain causes distress and suffering for people and their loved ones. Pain can also increase blood pressure and heart rate, and can negatively affect healing. Pain keeps people from doing things they enjoy. It can prevent them from talking and spending time with others. It can affect their mood and their ability to think

Lesson 6: Psychosocial support

a) **Learning objectives**

At the end of this lesson, learner should be able to:

Offer psycho- social support to the individuals in pain, families and community.

b) **Teaching resources**

Books related to palliative care, projector, and screen, teaching videos, simulation lab materials, mannequins, hand washing facilities, projectors, screen**.**

c) **Prerequisites/Revision/Introduction**

Psychosocial support plays a great role in mental health of patients undergoing palliative care, contributing to the minimisation of symptoms, support in daily life activities, the improvement of quality of life and preparation for death.

It is important to provide psychosocial to palliative patients and their families in various ways through a range of medical, nursing and allied healthcare professionals**.**

d) **Learning activities 8.6**
Guidance

- A day before commencement of this lesson a teacher makes small groups and provide the copies of a case study of learning activity 8.6

- Instruct students to do Learning activity 8.6 in students' book.
- Move around in silence to monitor if they are discussing the questions of Learning activity 8.6
- Find out if they have any problem and help to address it.
- Assist those who are weak but without giving them answers.
- Invite small groups to present the work discussed. Ask other students to follow carefully the presentations.
- Every two group's presentations should be followed by class discussion.
- The teacher should make sure that all students participate to the activity and re-direct the learners to the task in case there is deviation.
- The questions asked by learners should be answered by the classmates and the teacher should intervene wherever necessary.
- At the end of the lesson, the teacher should present a summary on psychosocial support and establish the link with the lesson specific objectives.

Answers to Learning activity 8.6

1)

- Fear of physical deterioration/ dying; pain/suffering; losing independence; the consequences of illness or death on loved ones
- Anger at what has happened or what may have caused/ allowed it to happen; unsuccessful treatment
- Sadness at approaching the end of life; restriction of activities due to illness
- Guilt/regret for actions; in some cases for contributing to the development of the illness
- Changes in sense of identity, adjusting to thinking of themselves as unwell/ dependent
- Loss of self-confidence, sometimes related to loss of physical functioning/ changes in appearance

2) Nursing actions that could help Mr.F alleviate his discomfort other than medication are:

- Good communication
- Helping patients understand their illness and/or symptoms
- Helping patients to understand their options and plan for the future

- Advocating on behalf of patients/those close to them to ensure they have access to the best level of care and services available
- Enabling patients and those close to them to express their feelings and worries related to the illness, listening and showing empathy, providing comfort through touch as/ when it is appropriate, e.g. holding a patient's hand or putting a hand on his or her shoulder. Also, complementary therapies such as massage
- Helping the patient or family member access any financial aid they may be entitled to (including benefits, but also charitable trusts/grants where applicable)
- Practical help with daily activities like grocery shopping
- Arranging personal/social care and organizing aids for daily living — setting up a care package, installing hand rails or other adaptations

Answers to the Self-assessment 8.6

1) a. Means actions that address both the psychological and social needs of individuals, families and communities
2) Deficiency communication result in family members experiencing feelings of abandonment, anxiety, distress and fear.
3) 3Psychosocial support is very important for patients in palliative care by reducing both psychological distress and physical symptoms through increasing quality of life, enhancing coping and reducing levels of pain and nausea with a consequent reduction on demands for hospital resources.
4) Consequences resulted from emotion to palliative patient are: fear, anger, sadness, guilt/regret, changes in sense of identity, loss of self-confidence, and confusion

Lesson 7: Spiritual support

a) **Learning objectives**

At the end of this lesson, learner should be able to: Offer spiritual support to the individuals in pain, families and community.

b) **Teaching resources**

Books related to palliative care, projector, and screen, teaching videos, simulation lab materials, mannequins, hand washing facilities, projectors, screen.

c) **Prerequisites/Revision/Introduction**

Spiritual care and support is of paramount importance in palliative care. It results in greater longevity, improved coping skills and increased hope, leading to a reduction in anxiety and depression.

d) **Learning activities 8.7.**

Guidance

- Instruct each student to do Learning activity 8.8 in student's book.
- Move around in silence to monitor if they are reading the conversation.
- Find out if they have any problem and help to address it.
- Assist those who are weak but without giving them answers.
- Invite five students to present their findings.
- Ask other students to follow carefully the presentations.
- Make sure that all students give their ideas about the activity.
- Note on chalk board / Manila paper the student's ideas.
- Tick the correct findings and correct those ones which are incorrect and try again to complete those which are incomplete

Answers to learning activity 8.7.

1) On the picture A there is a priest who is anointing a severely sick patient. On image B, there is a pastor who is praying for a sick patient.

2) I think it is accepted to perform these actions as every patient has right to practice his religions and receive all sacraments according to his or her believes. He/She has right to be respected and have supported during his darkest time of disease

Answers to self-assessment 8.7.

1) In health care system, the spiritual support services can be available either as pastoral care workers (or spiritual care workers) or be invited from outside of the health care system and are available to support palliative care team.

2) Spiritual care has positive effects on individuals' stress responses, spiritual well-being (such as the balance between physical, psychosocial, and spiritual aspects of self), sense of integrity and excellence, and interpersonal relationships. Spiritual care improves people's spiritual well-being and performance as well as the quality of their spiritual life

Lesson 8: Legal and Ethical issues in Palliative Care

a) **Learning objectives**

At the end of this lesson, learner should be able to:

- Explain ethical aspects in palliative care
- Demonstrate empathy and respect of client during the palliative care practice
- Explain the legal and ethical issues at the end of life

b) **Teaching resources**

Teaching videos, projectors, screen, Student book,

c) **Prerequisites/Revision/Introduction**

The main objective of this lesson is to equip learners with the knowledge and understanding of ethics in Palliative care. The teacher should help the learners to revise the previous lesson before undertaking this lesson 8.9

d) **Learning activities 8.8.**

Guidance

- Ask learners to form group of six students.
- Explain that they have to participate actively in the activity by responding to questions of learning activity 8.9 on ethics in palliative care in student book.
- Move around in silence to monitor if they are having some problems.
- Remember to assist those who are weak but without giving them the answers.
- Invite the group representatives to present their findings to the rest.
- Ask other students to follow carefully the presentations.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion

Answers to Learning activity 8.8

1) Is acceptable to consider the request of Mr X, as he is at terminal stage of incurable disease, resuscitation and advanced respiratory support may prolong life but not quality of life. As Mr X is conscious, he can make decision on his end of life care. The treating team should respect his directive to end of life.

2) The ethical principles respected by the treating team of Mr X are Autonomy: patient right to self-determination, patient's right to taking decision regarding his care and treatment plan

Answers to self – assessment 8.8

1) Advance care directives are derived from the ethical principles of patient' autonomy. They are oral and/or written instructions about the future medical care of a patient in the event he or she becomes unable to communicate, and loses the ability to make decisions for any reason. ADs completed by competent person ordinarily include living wills, health care proxies, and "do not resuscitate" (DNR) orders.

   Advance care directives help:

   - To Ensure that patients receive the care they want and guide the patients' family members in dealing with the decision-making burden
   - To limit the use of expensive, invasive, and useless care not requested by patients.
   - To improve the quality of end-of-life care and reduce the burden of care without increasing mortality.

2) Do not attempt resuscitation decision (DNR) may be considered in the following circumstances:

   - Patients who may not benefit from Cardio-pulmonary resuscitation(CPR)
   - Patients for whom CPR will cause permanent damage or loss of consciousness;
   - Patients with poor quality of life who are unlikely to recover after CPR.

3) Criteria to be considered by health care providers before administration of termination sedation:

   - The patient has a terminal illness.
   - Severe symptoms are present, the symptoms are not responsive to treatment, and the symptoms are intolerable to the patient.
   - A "do not resuscitate" order is in effect.
   - Death is imminent (hours to days).

4) Euthanasia is defined as good death, Euthanasia refers to deliberately ending someone's life ,usually patient with incurable diseases in severe pain in order to relieve suffering

   Types of euthanasia are:

Active euthanasia involves actions to bring about an individual's death directly. In active euthanasia, a person (generally a physician) administers a medication, such as a sedative and neuromuscular relaxant, to intentionally end a patient's life at the mentally competent patient's explicit request.

Passive euthanasia: Passive euthanasia occurs when a patient suffers from an incurable disease and decides not to apply life-prolonging treatments. More commonly referred to now as withdrawing or withholding life-sustaining therapy, involves the withdrawal of extraordinary means of life support, such as removing a ventilator or withholding special attempts to revive an individual (e.g. a 'not for resuscitation' status) and allowing the individual to die of the underlying medical condition.

5) Strategies that will help nurses to overcome constraints while caring patients in palliative care / end of life care.

- Become aware of your own values and the ethical aspects of nursing.
- Be familiar with nursing codes of ethics.
- Seek continuing education opportunities to stay knowledgeable about ethical issues in nursing.
- Respect the values, opinions and responsibilities of other health care professionals that may be different from your own.
- Where possible, participate in or establish ethics rounds. Ethics rounds use hypothetical or real cases that focus on the ethical dimensions of the care of the individual rather than the individual's clinical diagnosis and treatment.
- Serve on institutional ethics committees.
- Strive for collaborative practice in which the nurses function effectively in cooperation with other health care professionals.

Lesson 9: Communication in palliative care

a) Learning objectives

At the end of this lesson, learner should be able to describe communication in context of palliative care

b) Teaching resources

Fundamental of nursing book, internet connectivity, video, and computers.

Archer,W, Latif,A & Faull,C (2017) Communicating with palliative care patients nearing the end of life, their families and cares.

c) Prerequisites/Revision/Introduction

The students should have knowledge on ethical code of conduct before studying this lesson.

d) Learning activity 8.9

Guidance

- Teacher will bring the printed photo of Learning activity 8.10 in classroom.
- Form the groups of five students
- The teacher will ask them to discuss on given photo and respond the related question within 5min
- Thereafter each group will delegate the presenter to present their findings.
- Ask other students to follow carefully the presentations.
- Encourage active participation
- Welcome questions, comments and additions
- Stress on the correct findings and correct those ones which are incorrect and try again to complete those which are incomplete.
- Harmonize and conclude on the learned knowledge and still engage students in making that conclusion.

Answers to learning activity 8.9

1) We can encounter image A in the context of communication, when health care have some news to tell the patient, and the image B, may be one of the reaction to the given news.
2) Image A describes a health care provider in conversation with two old people and image B describe three ladies with fear of some unexpected news.

Answers to self-assessment 8.9

- Communication is the exchange of information, thoughts and feelings among people using speech or other means
- Factors influencing communication include individual preferences of the patient and family, cultural norms, the context of the situation, and the patient's stage of disease.
- Communication involves patient, family and health care provider

Lesson 10: Communication strategies used in palliative care

a) Learning objectives

At the end of this lesson, learner should be able to explain the strategies of communication in palliative care.

b) Teaching resources

Images, internet connectivity, video, and computers, student book.

c) Prerequisites/Revision/Introduction

Before teaching/learning this lesson, the learners should review the previous lesson on communication in palliative care.

Learning activity 8.10

Guidance

- The teacher will bring a printed photo of Learning activity 8.10. in class
- Form three groups
- Each group will be assigned the printed photo to discuss on.
- Teacher will ask the students in each group to discuss on the photos and respond to the given questions within 5min
- Each group will delegate one student to present their findings in front of the other students
- Ask other students to follow carefully the presentations.
- The rest of student will be requested to note down the questions, comment and additions.
- Do reinforcement on the correct findings and correct those ones which are incorrect and try again to complete those which are incomplete.
- Make sure that all students participate equally to the activity.
- Thereafter, the questions, comment and additions will be welcomed.
- The teacher will come up with response to the requested questions, more clarification and explanation of the content about strategies of communication in palliative care.
- With the student make a conclusion.

Answers to learning activity 8.10

1) In image A, the nurse use affective touching and physical proximity to the patient while discussing with him and relative. In image B nurse keeps eye contact, physical proximity and smiling to the patient while discussing. In image C, nurse use affective touch, eye contact, physical proximity and smiling while discussing with the patient.

2) Both image A,B and C describe interpersonal communication in health care setting where patient ,family and health care provider are involved, furthermore in those pictures A,B,C, nurse use different nonverbal communication strategies such as affective touch ,keep eye contact, physical proximity and smiling.

3) Affective touch in scenario of communication in palliative care decrease patient's emotion. Keeping eye contact and smiling are facial signals that denote interest and, facilitate the interaction with the patients. In addition to showing emotions, the look has an important function to regulate the flow of the conversation and establishing the bond of trust with the patients. Physical proximity: The distance that people maintain with each other during the interaction also transmits messages

Answers to self-assessment 8.10

1) Nonverbal communication strategies include:

Affectionate touch that refers to the physical contact that conveys messages of an emotional nature. Thus may include a hug, a kiss on the cheek, a caress of the hair, a firm handshake, touching hands, arms and shoulders and greeting.

Maintain eye contact and smiling: Eye contact and smiling are facial signals that denote interest and facilitate the interaction with the patients. Showing emotions, regulate the flow of the conversation.

Physical proximity: The distance that people maintain with each other during the interaction also transmits messages.

Active listening: Active listening involves the therapeutic use of silence, the conscious emission of nonverbal facial signals that denote interest in what is being said (maintaining eye contact, positive head nods), the physical proximity and orientation of the body with the trunk facing toward the person, and the use of short verbal phrases encourage continuation of the speech.

2) **Verbal communication** is divided into three groups including expression, clarification and validation.

E**xpression:** through this strategy the patient is allowed verbal expression of thoughts and feelings, facilitating her/his description and enabling the exploration of problematic areas for the patient. **Clarification** strategies help to comprehend or clarify the messages received, enabling the correction of inaccurate or ambiguous information.

Validation group helps to make the ordinary meaning of what is expressed, certifying the accuracy of the comprehension of the message received.

Lesson 11: Principles of communication in palliative care

a) Learning objectives

At the end of this lesson, the learners should be able to explain the basic principles of communication in context of palliative care.

b) Teaching resources

Teaching videos, palliative care book, internet connectivity, computer and projector.

c) Prerequisites/Revision/Introduction

The learners before learning this lesson of principles of communication in palliative should have basic knowledge on communication and counselling.

d) Learning activities 8.11.

Guidance

- The teacher will project the photos of Learning activity 8.12 in front of the student in class.
- The teacher will request the student to sit in group of five and discuss on projected photos by responding to the given question.
- The student in their groups will be requested to write down the participant's ideas.
- Thereafter, each group will delegate one student to present their findings in front of the other student.
- Ask other students to follow carefully the presentations. Ask the questions, provide addition or comment.

- Acknowledge the correct findings and correct those ones which are incorrect and complete those which are incomplete and give more clarification about principles of communication in palliative care.
- With the student make a conclusion and close the lesson

Answers to learning activity 8.11.

On the image A there is a health care provider who is standing near the patient explaining or showing some information (written in the tablet) to the patient who is sitting in the bed and on image B, the care provider is sitting with the patient by discussing on issue which is written in tablet and allow the patient also to participate.

Answers to self-assessment 8.11.

1) In palliative care communication there are two frameworks that describe the principles of communication including PREPARED and The SPIKES.

The **PREPARED** communication framework outlines key strategies that can be used when communicating with a person with a life-limiting illness, their family and cares including (P) Prepare for discussion,

(R) Relate to person,

(E) Elicit preferences from the person and their caregivers,

(P) Provide information tailored to the needs of both the person with a life limiting illness and their families and careers,

(A) Acknowledge emotions and concerns,

(R) Realistic hope,

(E) Encourage questions and further discussions

(D) Document.

The SPIKES Protocol was developed to assist healthcare professionals with breaking bad news.

SPIKES stand for:

Setting up: organize an interview with the patient

Perception: Find out what the patient knows about his or her condition

Invitation: Get patient's permission to impart bad news

Knowledge: Convey bad news at the level of the patient's comprehension

Emotions: Physician must acknowledge and respond to patient's emotions

Strategy and Summary: Summarize areas discussed, and formulate strategy and follow-up plan.

2) False

Lesson 12: End of life and nursing care

a) Learning objectives

At the end of this lesson, learner should be able to:
Explain the nursing care given to the dying person
Carry out correctly the nursing care of the dying person

b) Teaching resources

Teaching videos, hand washing facilities, projectors, and screen

c) Prerequisites/Revision/Introduction

One of the most important things nurse can do for patients who are dying is to provide the best possible care for them and their families during the last phase of life through death. The teacher asks the students to talk about the last time of life and build from that to introduce the learning activity.

d) Learning activities 8.12.

Guidance

Teacher makes the small groups of 6 students. He/she provides the copies of image taken in student book from the learning activity 8.12.

Teacher instructs students to observe and read these copies and attempt the given questions

Then after, each group present their findings and the teacher will allow 3 students from different group to presents their findings and others groups members make addition.

The teacher should focus on the answers provided by the students and build from what they know to add the new knowledge and skills.

The teacher should summarize the important points regarding end of life nursing care. He/she should also answer the questions from students.

Answer to leaning activity 8.12.

1) The similarities between image A and B is that in both images there are patients who don't have interest of people who surround them, and the people around these patients have grief.

2) We can see those images when patient is at the end of life

Answers to self-assessment 8.12.

1) Criteria that support the diagnosis of dying are a progressive deterioration in the responsiveness of the patient, decreased energy levels, becoming semi-comatose), Reduced ability to swallow and deteriorating physical function.

2) 5 stages which precede dying according to Kübler-Rossa are denial, anger: bargaining, depression, and acceptance.

3) There are three phase of dying including active, transitional and eminent phases.

Active dying phase: this phase has two typical roads. The usual road and the difficult road. The usual road is the best we can hope for when caring for persons at the end of life. It begins with sedation and lethargy and progresses to a comatose state and then death.

The difficult road includes restlessness and confusion that often progresses to unpleasant hallucinations and delirium. Myoclonus and seizures can also accompany the difficult road. Physical signs and symptoms associated with both roads including: pain, dyspnea, fatigue, cough, constipation or diarrhea, incontinence, anorexia, cachexia, nausea and vomiting, depression and seizures

Transitioning phase: In this phase, patients begin to withdraw from the physical world around him in preparation for their final journey as manifested by decreased interest in activities of life, less frequent and shorter interactions with others.

Imminent phase is defined as what is about to happen. The patient has transitioned into this last phase of the dying process and death can occur at any point now. During this phase, the body is in the process of shutting down. Multi-system organ failure often occurs and will result in some typical symptoms like Cool and clammy skin, cold extremities and rapid or irregular pulse, lethargy, confusion and restlessness, periods of apnea or Cheyne stokes respiration pattern, increased respiratory rate, inability to cough or clear secretions and presence of increased secretions, present decreased and dark urine output.

4) The major nursing responsibility for individuals who are dying is to assist them to a peaceful death. More specific responsibilities are the following:

- To minimise loneliness, fear and depression
- To maintain the individual's sense of security, self-confidence, dignity and self-worth
- To help the individual adapt to losses
- To provide physical comfort.

5) Nursing diagnoses that can be formulated while caring a dying person are:

- Hopelessness
- Powerlessness
- Risk of caregiver role strain
- Interrupted family processes

Lesson 13: Death and post mortem care

a) Learning objectives

At the end of this lesson, learner should be able to:

Describe the death and post mortem care

Carry out confidently the post-mortem care

b) Teaching / learning resources

Teaching videos, hand washing facilities, computer projectors, and screen

c) Prerequisites/Revision/Introduction

One of the most important things nurse can do for patients who died is to provide the best possible care for them and their families. Nurses are responsible for care of a body after death. Post mortem care should be carried out according to the policy of the hospital or organization. The teacher asks the students to define a death and build from that to introduce the learning activity.

d) Learning activities 8.13

Guidance

- Teacher makes small groups of 6 students and provides the copies of case study taken from student book on learning activity 8.13.

- Teacher instructs students to read the case study and attempt the given questions
- The teacher should move around, monitors groups work and handle students' difficulties.
- After 20 minutes, the teacher should group activities and request students to choose one student for presenting the work.
- The teacher will allow 3 students from different groups to present their findings and others groups' members make addition.
- The teacher should focus on the answers provided by the students and build from what they know in order to facilitate the teaching and learning of the new knowledge and skills.
- The teacher should then state the objectives of lesson 8.5.13 and bring learners in simulation lab
- Teacher print out the check list of post-mortem care
- Teacher then prepare the materials of post-mortem care
- The teacher should then demonstrate post mortem technique in simulation laboratory

Answers of learning activity 8.13

1) Answer to Q1: Ms.G is died

2) Nurses must provide post-mortem care to the body of Ms. G. like positioning the body, place dentures in the mouth and close the eyes and mouth before rigor mortis sets in. Because of the reduction in body temperature and loss of skin tone (algor mortis) after death, it is important to gently remove all tape and dressings to prevent tissue damage.

   The skin or body parts should never be pulled on. The head of the bed should be elevated and a clean pillow placed under the head immediately after death before beginning other activities in order to prevent purplish discoloration (livor mortis) of the face.

Answers of Self-assessment 8.13

1) a) Algor mortis

2) Death is defined as a state of the total disappearance of life or irreversible cassation of the functions of organs that are necessary for life including heart, lungs and brain.

3) The main reason for storing the deceased body in cool place is to delay the process of bacterial fermentation that may deteriorate the dead body.

4) Difference between heart-lung death from brain death

Heart-lung death	Brain death
Cessation of the apical pulse, respirations, and blood pressure	Occurs when the higher brain center, the cerebral cortex, is irreversibly destroyed. In this case, there is "a clinical syndrome characterized by the permanent loss of cerebral and brainstem function, manifested by absence of responsiveness to external stimuli, absence of cephalic reflexes, and apnea

Lesson 14: Resilience and self-care

a) **Learning objectives**

At the end of this lesson, learner should be able to:

Explain resilience and self-care in the context of palliative care

Demonstrate an attitude of self-care and resilience

b) **Teaching resources**

Teaching videos, projectors, screen, black board, chocks, photo

c) **Prerequisites/Revision/Introduction**

A person who has good resilience copes well under pressure and can bounce back more quickly than someone whose resilience is less developed. The teacher asks the students to talk about resilience and build from that to introduce the learning activity.

d) **Learning activities 8.14.**

Guidance

- Teacher makes the small groups of 6 students and presents the Learning activity 8.15 written in student book.
- Teacher instructs students to read Learning activity 8.15 and attempt the given questions in 10 minutes.
- Then the teacher allows 3 students from different group to present their findings and others group members make additions.
- The teacher should focus on the answers provided by the students and

build from what they know in order to teach/learn new knowledge and skills.

- The teacher should then facilitate interactively the acquisition of knowledge of self-care and resilience with use of the method of interactive lecture.

Answer to the learning activity 8.14

1) Activities done: in image A, there is a person who listening the music. In image B, the person who is posing for a photo. In image C, there are people who are praying with the others who are doing physical exercise and another one who is doing meditation. In image D, show a person who is reading a book and drinking. Image E describes a people who is sitting on table and writing in the book.

2) All of the above actions help to relieve stress; to cope with challenges, replenish energy, and enhance long-term health and well-being.

Answer to the self-assessment 8.14

1) Self-care refers to activities and practices that we can engage in on a regular basis to reduce stress, maintain and enhance our short/long-term health and well-being but resilience has been defined by the American Psychological Association as the human ability to adapt in the face of tragedy, trauma, adversity, hardship, and ongoing significant life stressors. Resilience is the ability to cope under pressure and recover from difficulties. A person who has good resilience copes well under pressure and can bounce back more quickly than someone whose resilience is less developed.

2) Psychological self-care includes the following strategies:

Take time out (trips out of town, to the beach or a weekend away). Take time away from telephones, email, social media and the internet. Make time for self-reflection. Notice your inner dialogue (listen to your thoughts and feelings). Have your own personal development and/or external supervision.

Physical self-care includes the following strategies

Get enough sleep. Regularly do physical activity that you enjoy. Eat regularly, well-balanced meals. Reduce alcohol and caffeine consumption.

Access medical care when needed (both preventative and acute). Take time off when sick. Calm the body. Release tension in healthy ways. Practice healing through movement and music. Take deep breaths. Limit or eliminate exposure to media. Balance work, play, and rest.

3) **Factors that build resilience** include personality, past experience, current circumstances and the people around. Other factors contributing to resilience include having the capacity to make realistic plans, setting goals and taking steps to carry them out – no matter how small. Resilience is as well influenced by the capacity to be connected with others and staying social. This is important to have caring and supportive relationships within and outside the work, family, and in the community. Resilience is moreover influenced by ability to have a sense of purpose in life. Resilient people should be physically stronger. They should monitor their selves and have mindfulness and the capacity to manage effectively their strong feelings and impulses in a healthy manner. To be resilient you should focus on learning and have good communication skills and

8.6. Summary of the unit

This guide aims at orienting the teacher on how he/she should enable the associate nurse learners to apply the principles of palliative care to alleviate pain, support psychologically and spiritually the individuals, families and community during life threatening illnesses and during end of life period.

The guide includes theoretical and practical lessons which should occur in simulation laboratory.

The lessons are developed in consideration of the content that was taken from the syllabus and student book of fundamentals of nursing, specifically the unit of palliative care.

The content includes the historical background of palliative care, components of palliative care, and the principles of palliative care. It also consists of non-pharmacological pain management, additional methods of non-pharmacological pain management, pain evaluation in palliative care, psychosocial and spiritual support, and Legal and ethical issues in palliative care. The other content comprises communication in palliative care, communication strategies used in palliative care, and principles of communication in palliative care. The end of life and nursing care, the death and post mortem care, post mortem care techniques, resilience and Self-care were also discussed.

The practical component includes practice of end of life, death and post mortem nursing procedures in skills laboratory.

8.7. Additional information for teachers

During the skills lab practices, the teacher work with the skills lab based staff and other teacher to facilitate the independent practices of students. There will be printed

procedural techniques checklists as written in the students' book and the skills lab will be informed one day before the practice in order to prepare accordingly.

Teacher makes 5 groups of students. Each group will have its own time of 3 periods to spend in skills lab for self-practice about post mortem care.

Teacher and teaching team will set more than two stations depending on the availability of materials. The techniques to practice are care of dying and post mortem care.

8.8. Answers to end unit assessment

Answers to the end unit assessment questions

1) The answer should include explanations of any ten of the following principles of palliative care which are presented in student book of fundamentals of nursing, the unit of palliative care:
   - A caring attitude
   - Consideration of individuality
   - Care is patient, family and carer centered
   - Care provided is based on assessed need
   - Cultural considerations: linking the principles of ethics, humanities, and human values into every patient- and family-care experience
   - Consent
   - Choice of site of care
   - Effective communication
   - Clinical context: Appropriate treatment
   - Comprehensive inter-professional care / Multidisciplinary care
   - Care excellence
   - Consistent medical care
   - Coordinated care
   - Care should be integrated
   - Continuity of care
   - Crisis prevention
   - Caregiver support
   - Continued reassessment
   - Advance Care Planning
   - Patients, families and carers have access to local and networked

services to meet their needs

- Care is evidence-based, clinically and culturally safe and effective
- Care is equitable
- Scope of care
- Timing of palliative care
- Holistic care

2) Explanation of the components of palliative care

Palliative care incorporates the whole spectrum of care—medical, nursing, psychological, social, cultural and spiritual. A holistic approach, incorporating these wider aspects of care is essential in palliative care.

Palliative care nursing reflects a "whole-person" philosophy of care implemented across the lifespan and across diverse health care settings.

Relieving suffering and enhancing quality of life include the following: providing effective pain and symptom management; addressing psychosocial and spiritual needs of the patient and family; incorporating cultural values and attitudes into the plan of care; supporting those who are experiencing loss, grief, and bereavement; promoting ethical and legal decision-making; advocating for personal wishes and preferences; using therapeutic communication skills; and facilitating collaborative practice.

In addition, in palliative nursing, the "individual" is recognized as a very important part of the healing relationship. The nurse's individual relationship with the patient and family is seen as crucial. This relationship, together with knowledge and skills, is the essence of palliative care nursing and sets it apart from other areas of nursing practice.

3) Explanation of the importance of psychosocial support

Psychosocial support is very important for patients in palliative care by reducing both psychological distress and physical symptoms through increasing quality of life, enhancing coping and reducing levels of pain and nausea with a consequent reduction on demands for hospital resources.

4) Explanation of any 5 methods/techniques of non-pharmacological pain management in palliative care

a) Guided imagery teaches you to imagine a picture in your mind. You learn to focus on the picture instead of your pain. It may help you learn how to change the way your body senses and responds to pain.

b) Music may help increase energy levels and improve your mood. It may help reduce pain by triggering your body to release endorphins. These

are natural body chemicals that decrease pain. Music may be used with any of the other techniques, such as relaxation and distraction.

c) Heat application helps decrease pain and muscle spasms. Apply heat to the area for 20 to 30 minutes every 2 hours for as many days as directed. Remember to be cautious in order to avoid to burn the patient

d) Cold application helps decrease swelling and pain. Ice may also help prevent tissue damage. Use an ice pack, or put crushed ice in a plastic bag. Cover it with a towel and place it on the area for 15 to 20 minutes every hour, or as directed.

e) Psychosocial therapy/counselling: Psychosocial therapy/counselling may involve individual counselling, family counselling and group counselling

f) Physical therapy teaches you exercises to help improve movement and strength, and to decrease pain

5) Explanation of ethical aspects in palliative care

Ethical principles guide decision making in end of life/palliative care, the following principles should be applied while providing palliative care and end of life care: autonomy, beneficence, no maleficence, fidelity, justice and veracity.

Autonomy refers to the right to make one's own decisions. It is patient's right to self-determination. Everyone has the right to decide what kind of care they should receive and to have those decisions respected.

Non-maleficence is the duty to 'do no harm'. Harm can mean intentionally causing harm, placing someone at risk of harm and unintentionally causing harm.

Beneficence means 'doing good'. Nurses are obligated to do good; that is, to implement actions that benefit individuals.

Justice is often referred to as fairness. Nurses face decisions where a sense of justice should **prevail**. Healthcare providers have an ethical obligation to advocate for fair and appropriate treatment of patients at the end of life.

Fidelity means to be faithful to agreements and promises. By virtue of their standing as professional caregivers, nurses have responsibilities to people in their care, employers and society, as well as to themselves.

Veracity refers to telling the truth. Truth telling is fundamental to respecting autonomy.

6) Explanation of the strategies of communication in palliative care

Communication in the context of palliative care consists of verbal and nonverbal.

Verbal communication strategies include interrogative nature. Verbal communication strategies consist of asking what the patients know about their condition, ask the patients how they feel, to encourage them to talk about their feelings, verbalize willingness to help, talk and/or clarify doubts, ask about the expectations of the patients regarding the treatment, ask about the interests and preferences of the patients in order to establish pleasant conversations. The strategies or techniques of **verbal communication** can be classified into three groups: expression, clarification and validation.

The strategies allocated to the e**xpression** group were those that they allow verbal expression of thoughts and feelings, facilitating their description and enabling the exploration of problematic areas for the patient. In the **clarification** group, there were the strategies that help to comprehend or clarify the messages received, enabling the correction of inaccurate or ambiguous information. The **validation** group contained the expressions that make the ordinary meaning of what is expressed, certifying the accuracy of the comprehension of the message received.

Nonverbal consist of communication five signals or **strategies including affective touch, the look, the smile, physical proximity and active listening**:

Affectionate touch refers to the physical contact that conveys messages of an emotional nature. Several actions mentioned by the professionals are: a hug, a kiss on the cheek, a caress of the hair, a firm handshake, touching hands, arms and shoulders and greeting with physical contact.

Establish/maintain eye contact and smiling: Eye contact and smiling are facial signals that denote interest and, therefore, facilitate the interaction with the patients. In addition to portraying emotions, the look has an important function: to regulate the flow of the conversation. The interruption of eye contact may denote a lack of interest in continuing the conversation, causing the interaction to be interrupted or impaired. Thus, both show essential signals for the approach and establishment of a bond of trust with the patients.

Physical proximity: The distance that people maintain with each other during the interaction also transmits messages.

Active listening: Active listening involves the therapeutic use of silence, the conscious emission of nonverbal facial signals that denote interest in what is being said (maintaining eye contact, positive head nods), the physical proximity

and orientation of the body with the trunk facing toward the person, and the use of short verbal phrases that encourage continuation of the speech, such as: and then..., and I hear you.

7) Explanation of any 6 strategies for sel-care

The following are some strategies/tips for taking care of your-self:

Physical self-care

Get enough sleep. Regularly do physical activity that you enjoy. Eat regularly, well-balanced meals. Reduce alcohol and caffeine consumption.

Access medical care when needed (both preventative and acute). Take time off when sick. Calm the body. Release tension in healthy ways. Practice healing through movement and music.

Take deep breaths. Limit or eliminate exposure to media. Balance work, play, and rest.

Emotional self-care

Know your vulnerabilities. Engage socially to avoid feeling isolated. Spend time with non-work friends, family and acquaintances. Set limits, if necessary, when others are too overwhelmed demanding of your time or energy (Give yourself time to heal and renew). Stay in contact with important people in your life.

Use relaxation skills that work best for you. Acknowledge when you have done well. Value yourself. Identify energizing /positive activities, people and places, and actively seek them out.

Reestablish a routine, if possible- allow your-self to cry or be upset. Find things that make you laugh. Express your opinion on social issues outside of work. Listen to music that soothes you.

Psychological self-care

Take time out (trips out of town, to the beach or a weekend away). Take time away from telephones, email, social media and the internet. Make time for self-reflection. Notice your inner dialogue (listen to your thoughts and feelings). Have your own personal development and/or external supervision.

Spiritual self-care

Do some forms of reflective practice (meditate, pray or reflect). Spend time in natural environments. Connect to a community or network with shared values. Be open to feeling inspiration, awe and other positive emotions. Nurture your optimism and hope. Be open to not knowing. Identify what is meaningful to you and notice its place in your life. Contribute to causes in which you believe in outside of work.

Interpersonal self-care

Schedule regular time with significant others (e.g. partner, kids, friends, family). Stay in contact with friends and networks. Make time to reply to personal correspondence. Allow others to do things for you (meet new people; ask for help when you need it). Share your feelings: good, bad or other with someone you trust.

Self-care in personal settings

Effective self-care strategies used outside of the workplace settings included a range of health behaviors, including, meditation and spiritual practice, a healthy diet, adequate sleep, and moderation of alcohol intake were considered important.

In addition to exercising for fitness, other physical activities such as yoga and massage were found to be effective self-care strategies. Rest and relaxation at home in a bath were described as effective self-care strategies when feeling overwhelmed or needing to wash away thoughts of the workplace and socializing and maintaining positive relationships with friends and family, finding harmony between personal and professional roles was consistently described as an effective self-care strategy and establishing and maintaining boundaries between home and the workplace was considered an effective self-care strategy.

Self-care in workplace settings

Self-regulation of workload is important, but often difficult to achieve. It involves being assertive about one's capacity in relation to workload and wellbeing.

Take breaks during the work day for example during lunch or between meetings; taking meal breaks, taking recreation leave for regular holidays, and taking personal leave during illness were also considered effective self-care strategies. For some, choosing to work part-time was an effective self-care strategy that provided ongoing regulation of workload in relation to other competing demands. Having a cohesive team was important and this contributed to a supportive working environment. Mindfulness exercises were an effective self-care strategy in the workplace, both in individual and group contexts. A sense of allowing oneself to be human, in the context of displaying emotion in the clinical setting, was also part of effective self-care practice.

Take time to chat with colleagues. Create uninterrupted time to complete tasks. Set boundaries with clients and colleagues. Balance your workload so that you are not overwhelmed. Arrange your work space so that it is comfortable and comforting.

8) Explanation of any 5 ways of building up resilience

Self-care practices help us to build resilience. Even by choosing to put in place

some simple and reliable activities such as exercise, hobbies and catching up with friends, we're making a real difference to our minds and bodies – releasing happy hormones, reducing stress and building healthy self-belief and habits that can support us when the 'chips are down'. Choose self-care activities and routines that include and build on these things:

a) Wellbeing

Maintain basic health: healthy lifestyle routines such as exercise, good nutrition, sleep and recreation. Practice self-reflection: regularly take time to think and identify what you honestly need in order to thrive. Choose your attitude: adopt a deliberate and constructive attitude toward life and life's challenges. Connect to positives: recall and reconnect to your values, accomplishments and sources of gratitude/joy. Flex your strengths: identify your strengths and use these more in work and life; engage in interests/hobbies. Purposeful activity: do things that provide a sense of purpose, connection and meaning in your life.

b) Stress management

Social support: spend quality time talking with mates, family and others who can support you when needed. Recognize stress: acknowledge that stress is normal and know your early signs of stress (checklists, feelings). Regulate stress: develop ways to relax and calm yourself on cue, e.g. relaxation exercises, positive thinking. Problem-solve: adopt a problem-solving approach to life's hassles – create a written action plan with options. Manage energy: work around your energy cycle (dips and peaks); use breaks and healthy energizer activities.

c) Grit

Develop self-belief: focus on what you can do; visualize success; rehearse your approach; give things a go. Reframe perspective: be realistic, identify and 'reframe' crooked/unhelpful thinking – review your thoughts. Bounce back: (growth mindset) be open to feedback, learn from mistakes and try again; revise your approach. Practice Grit: one mental toughness training activity is to persist longer with uncomfortable or boring tasks. Develop mindfulness: the ability to pay calm attention, on purpose in the present moment, non-judgmentally.

Professional help and coaching are good ways to proactively build self-care and resilience, by developing a personalized plan, around the barriers and towards one's objectives. Remember that resilience levels change over time and require active maintenance.

8.9. Additional activities

8.9.1. Remedial activities

1) In which of the following years the World Health Organization recognized palliative care as a distinct specialty dedicated to relieving suffering and improving quality of life for patients with life-limiting illness?
    a. 1974
    b. 1990
    c. 1997
    d. 2006
2) Outline 5 barriers of self- care in workplace
3) 3) Give 5 factors that facilitate self –care
4) In which circumstance a nurse should leave the tubes in place while doing post mortem care?
5) What are the effects of poor communication?
6) What is palliative care?
7) What is the primary goal of palliative care?
8) Is palliative care the same as hospice?

Answers to the remedial activities

1) b 1990
2) Answers: Being busy, workplace culture, bringing work home, self -criticism and a lack of self-worth undermined
3) Answers:
    a. Recognizing the importance of self-care.
    b. Prioritizing self-care
    c. Positive workplace cultures
    d. Leadership and positive role models
    e. Having a positive outlook,
    f. Self-awareness and positive emotions.
    g. Gratitude and taking a positive perspective,
    h. Self-compassion

4) Answer: When autopsy is requested

5) Answer: Poor communication is associated with distress, complaints and can result in the patient -family having significant misunderstanding of end-of-life processes.

6) Answer: Palliative care is health care treatment, including interdisciplinary end-of-life care, and consultation with patients and family members, to prevent or relieve pain and suffering and to enhance the patient's quality of life, including hospice care.

7) It is to help patients and families achieve the best possible quality of life.

8) Answer: Hospice care is a type of palliative care for people who are terminally ill, if the disease runs its normal course. When medical treatments cannot offer a cure, hospice provides care, comfort and support for persons with life-threatening illnesses and their families. Palliative care, by contrast to hospice, is appropriate at any stage of a serious illness, whether that illness is potentially curable, chronic or life-threatening. Palliative care is appropriate for a much broader group of patients than hospice and, unlike hospice, may be provided in conjunction with curative or life-prolonging treatment.

   Both hospice and palliative care offer a personalized plan of care, delivered by an interdisciplinary team that incorporates what is important to the patient and his or her caregivers in order to achieve the best possible quality of life for patients and families.

8.9.2. Consolidation activities

1) What are the 5 signs of resilience?
2) It is necessary to fill out three identification tags when the patient is dead. What should be written on those identification tags?
3) Discuss the location of three tags that should be completed after death
4) Respond by True or False
5) What are the signs of death when the patient is assisted with mechanical equipment?
6) Does receiving Palliative Care mean that the patient will die sooner?
7) What do you understand by a health care proxy?
8) Who is eligible for Palliative Care?
9) Do you think communication is important in palliative care? If yes, justify your answer.

Answers to the consolidation activities

1) Answers:
    a. Ability to think clearly and flexibly in changing and challenging situations
    b. Ability to regulate one's emotions (including stress) and remain emotionally composed
    c. Ability to problem-solve, make sensible decisions and mobilize the right resources that we need
    d. Ability to maintain positive connections and relationships with others who support us
    e. Ability to maintain self-belief and persist in the face of challenging circumstances.
2) Answer:
    a. deceased's name,
    b. date of birth,
    c. hospital number,
    d. room and bed number;
    e. date and time of death;
    f. and the physician's name
3) Answer:
    a. One tag will be tied to the big toe, hand, or foot.
    b. Another identification tag must be attached to the shrouded body,
    c. The third identification tag attached to the personal belongings
4) Before taking the deceased body to mortuary, the nurse must ensure that the patient's identification bracelet is removed. **False**
5) Answer:
    a. Verify identification of the patient.
    b. Determine if there are family members and/or clergy that you must notify.
    c. Determine whether or not an autopsy is to be performed. Has an autopsy permit been signed?
    d. Determine if family members would like to assist in bathing the deceased loved one.

6) Answer:
    a. Total lack of response to external stimuli,
    b. no muscular movement especially breathing,
    c. No reflexes and flat encephalogram
7) No! Studies have shown that patients with appropriate pain and symptom management often live longer and enjoy a better quality of life than those without.
8) Answer: A health care proxy (also called health care agent or power of attorney for health care) is the person appointed by the patient to make decisions on the patient's behalf when he or she loses the ability to make decision
9) Answer: Any patient with a life-limiting illness is potentially eligible for assistance. The patient may or may not be considered terminally or irreversibly ill.
10) Answer: yes, it is important in palliative care because communication between healthcare professionals and patients with terminal illness can lead to a greater sense of well-being, decreasing feelings of distress commonly experienced by those diagnosed with a terminal illness and their families. Communication in palliative care help patients to understand their disease, outcomes, patient behavior, ability to cope, both physical and psychological health, as well as patient satisfaction with care, and compliance with treatment

8.9.3. Extended activities

1) After death of a person, what the nurse should document in patient file?
2) Outline the materials needed in post mortem care
3) According to Kübler-Ross, explain 5 stages which precede dying .
4) Explain at least one of the communication principles of palliative care
5) All of the following are key elements of palliative care EXCEPT:
    a. Pain and symptom management
    b. Psychological and spiritual support
    c. Getting the patient to be DNR
    d. Coordination of care

6) Mr. Alex is seen in the office for a follow up of his disease. During the interview, which comment MOST suggest psychological distress?

   a. My leg hurt right here

   b. I am so worried about my wife

   c. I don't know how I will get to my appointment

   d. Why did I get this disease?

7) Which of the following is true about end-of-life care?

   a. It is not including a focus on the family.

   b. It is synonymous with palliative care

   c. It is defined by a specific time period.

   d. It does not include a focus on the family

8) Which of the following is the most reliable indicator of pain

   a. Patients' self-report

   b. Result of physical examination

   c. Result of functional assessment

   d. Results of multidimensional assessment

9) Which of the following is FALSE regarding spiritual needs of patients at the end of life?

   a. Spiritual care is well-defined

   b. Spirituality is considered to be separate from religious faith

   c. Spirituality has a strong protective effect against end-of-life distress.

   d. Greater spiritual well-being has been associated with decreased anxiety and depression among people with advanced disease

Answers to the extended activities

1) Answers:

   - Document time of death,
   - description of any resuscitative measures (if applicable),
   - name of the professional certifying the death,
   - any special preparation of the body for autopsy or organ and tissue donation,

- presence or absence of first-person consent,
- name of person who made the request for organ and tissue donation, if applicable,
- name of organ donation agency representative, if contacted,
- name of mortuary,
- names of family members consulted at the time of death and their relationships to the deceased,
- personal articles left on the body (e.g., dentures or glasses), jewelry taped to skin, or tubes and lines left in place,
- appearance and condition of the patient's skin during preparation of the body,
- actions taken to secure valuables and personal belongings and name of individual who received them,
- time body was transported and its destination,
- location of body identification tags,
- unexpected outcomes and related interventions and family education done

2) Answers:

- PPE (gloves, gown, mask, eye protection)
- Plastic bag for hazardous waste disposal
- Washbasin
- Washcloths
- Warm water
- Bath towel
- Clean gown or disposable gown for body as indicated by the organization's practice
- Shroud kit with name tags
- Syringes for removing urinary catheter
- Scissors
- Small pillow or towel
- Paper tape, gauze dressings

- Paper bag, plastic bag, or other suitable receptacle for patient's belongings, to be
- returned to family members
- Valuables envelope
- Gauze
- Denture cup, if needed
- Three death tags
- Three large abdominal pads or incontinence pads or diaper
- stretcher or morgue cart

3) Answers:

- **Denial**: "I feel fine."; "This can't be happening, not to me. Denial is usually only a temporary defense for the individual. This feeling is generally replaced with heightened awareness of possessions and individuals that will be left behind after death. Denial can be conscious or unconscious.
- **Anger**: Why me? It's not fair!"; "How can this happen to me?"; '"Who is to blame?"

  Once in the second stage, the individual recognizes that denial cannot continue. Because of anger, the person is very difficult to care for due to misplaced feelings of rage and envy. Anger can manifest itself in different ways.
- **Bargaining**: "I'll do anything for a few more years."; "I will give my life savings if..."

  The third stage involves the hope that the individual can somehow postpone or delay death. Psychologically, the individual is saying, "I understand I will die, but if I could just do something to buy more time..." People facing less serious trauma can bargain or seek to negotiate a compromise.
- **Depression**: "I'm so sad, why bother with anything?"; "I'm going to die soon so what's the point?"; "I miss my loved one, why go on?"

  During the fourth stage, the dying person begins to understand the certainty of death. Because of this, the individual may become silent, refuse visitors and spend much of the time crying and grieving. This process allows the dying person to disconnect from things of love and affection. It is not recommended to attempt to cheer up an individual

who is in this stage. It is an important time for grieving that must be processed.

- **Acceptance**: "It's going to be okay."; "I can't fight it, I may as well prepare for it."

  In this last stage, individuals begin to come to terms with their mortality, or that of a loved one, or another tragic event. This stage varies according to the person's situation.

4) **A: Acknowledge emotions and concerns, realistic hope, encourage question, document.**

   Explore and acknowledge fears, concerns and emotional reaction and be willing to initiate and engage in conversations about what can happen in the future and during the dying process and respond to distress where applicable.

   R: Realistic hope

   Be honest without being blunt or giving more detailed information than desired. Do not provide misleading or false information that artificially influences hope. Reassure the person that support, treatment and resources are available to control pain and other symptoms but avoid premature reassurance. Explore and facilitate realistic goals, wishes and ways of coping on a day-to-day basis, where appropriate.

   E: Encourage questions

   Encourage questions and information clarification. Be prepared to repeat explanations, check understanding of what has been discussed and whether the information provided meets personal needs and Leave the door open for topics to be discussed again in the future.

   D: Document

   Write a summary in the medical record of what has been discussed and speak or write to other key healthcare providers involved in the person's care

5) c

6) b

7) a

8) a

9) a

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