Life Healthcare
NURSING COLLEGE
Life Healthcare Group (Pty) Ltd
EDUCATION FOR SERVICE EXCELLENCE

MODULE GUIDE

INTRODUCTION TO PHARMACOLOGY

DIPLOMA IN NURSING – 1ST YEAR

Life Healthcare

Making life better

Contents

PART A: GENERAL INFORMATION

1. Introduction to this module

Welcome to the Pharmacology module for the Diploma in Nursing (R171) first year programme. You would have gone through the college induction at this stage and therefore we hope that you have a good understanding of the college processes and all the structures we have in place to help support you in your studies.

The student will be equipped with the knowledge and skill of pharmacodynamics and pharmacokinetics, drug interactions, special precautions and cultural considerations, introduction to drug calculations, legal, professional and ethical responsibilities to the administration of patient medication and the understanding of pain and pain management and provide appropriate health education.

Success will only be achieved through commitment to your studies!

Your Nurse Educator wish you well.

2. Purpose of the module

The Module in Pharmacology is a 5-credit fundamental learning module on NQF level 5 which prepare the student to function as a knowledgeable and competent nurse practitioner. The student will be equipped with the knowledge and skill of pharmacodynamics and pharmacokinetics, drug interactions, special precautions and cultural considerations, introduction to drug calculations, legal, professional, and ethical responsibilities to the administration of patient medication and the understanding of pain and pain management and provide appropriate health education. The competencies will allow the student to recognise therapeutic responses to drugs and drug adverse reactions to ensure patient safety and to respond to patient's needs accordingly. The student will be able to render safe nursing care within a legal and ethical framework throughout the different lifespan in various healthcare settings.

3. Overview of the module

Pharmacology is the branch of biology and medicine that is concerned with the study of the chemical characteristics, effects, and uses of drugs and their effects on the body. This involves studying how drugs interact with other molecules in the body and how they affect the body.

Phases for drug action to occur include:

1. **Pharmaceutic** (dissolution) Phase: This is the first phase of drug action. A drug in solid form (tablet or capsule) must disintegrate into small particles to dissolve into a liquid, a process known as dissolution. For example, in the GIT, a drug must be in a solution first before it can be absorbed.
2. **Pharmacokinetic** Phase: The process of movement of the drug to achieve drug action /desired effect. The nurse must observe adverse drug effects and report such findings promptly. Four processes involved here are: **A**bsorption, **D**istribution, **M**etabolism/Biotransformation, and **E**xcretion (ADME).
3. **Pharmacodynamic** Phase: The mechanism of action or physiological effect that drugs have on the body. The effect may be desirable or harmful.

Principles of drug administration:

- Nurses are accountable for the safe administration of medication. They must check that the dosage is correct and not contraindicated.
- Nurses must also observe and report the effects (desirable and undesirable) of the medications administered. Appropriate action to be taken as demanded by the specific situation (e.g. anaphylactic reaction).

Five Rights of drug administration:

1. Right Client/Patient. Check the identification bracelet/client number as per protocol.
2. Right Drug. Client to receive the correct, prescribed drug. Do assessment of the patient as required prior to administration of the specific drug when such is indicated (e.g. checking of pulse or BP)
3. Right Dose. Dose to be correctly calculated and must be within the recommended range for that drug (e.g. paediatric or adult). Discuss with prescribing Doctor /Pharmacist any doubts.

4. Right Time. The time the dose has to be given. Example: Daily, twice a day, three times a day, etc.
5. Right Route. How the drug will be administered. Example: orally, intramuscularly, and rectally. Administer at the correct site for injections. Do not change the route on your own. Doctor must revise/change the prescription accordingly.

Patient Rights related to medication administration:

- Right Assessment. Check Pulse, BP, Blood Glucose level when necessary.
- Right Documentation. Correct charting and prompt reporting of effects.
- Right Education. Obtain informed consent and give appropriate education related to the medication.
- Right Evaluation. Observe and report effectiveness of the medication according to Protocol.
- Right to refuse medication. Provide appropriate information to facilitate acceptance of medication. Report accordingly if medication is denied.

Generic Name is related to the chemical name and is independent of the manufacturer (e.g., paracetamol/acetaminophen). Generic names are usually recognized internationally.

Trade names are designated and patented by the manufacturer (e.g., Panamol).

4. Teaching staff

Learning Centre	Name	Email address	Role	Consultation times
Cape Town	C. van Papendorp	Cristelle.vanPapendorp@lifehealthcare.co.za	Educator	8h00 – 15h00
East London	I. Schoeman	Ida.schoeman@lifehealthcare.co.za	Educator & Coordinator	8h00 – 15h00
East Rand	B. Sithole	Busisiwe.Sithole2@lifehealthcare.co.za	LC Support	By appointment
Kwa-Zulu Natal	J. Reddy	Jacqueline.Reddy@lifehealthcare.co.za	LC Support	By appointment
Port Elizabeth	C. Moolman	Hester.Moolman@lifehealthcare.co.za	LC Support	By appointment
Pretoria	N. Hattingh	Naomi.Hattingh@lifehealthcare.co.za	LC Support	By appointment
West Rand	Vacant		LC Support	By appointment

5. Communication channels

The following channels of communication are to be followed in the event of any problems related to your programme:

1) Your Nurse educator
2) Your programme guardian (the educator that oversees the 1st year programme in your learning center)
3) The Regional Education Manager
4) The Undergraduate Programme Manager

The following channels of communication are to be followed in the event of any problems related to your technical related issues regarding e-learning platforms:

1) Your Nurse educator
2) The Regional Education Manager

6. Timetable

- Please note class contact sessions will be arranged according to the study schedule (see Part D)
- Study and assessment schedules will be provided.
- Please be aware that classes commence at 07:00 – 16:00 with a tea and lunch break, daily.
- Please observe the academic year plan that will be provided to you.

PART B: QUALIFICATION BREAKDOWN AND OUTLINE OF THE MODULE CONTENT

7. Qualification breakdown

The exit level outcomes are the outcomes to achieve the qualification and are the generic standards for the specific qualification. The subjects are therefore aligned to the exit level outcomes so that the student can achieve the required outcomes by the end of the training period.

SUBJECT	CREDIT	Exit level outcome
General Nursing Science (Core)	302	Provide nursing care throughout the life spans in various healthcare settings Use & maintain healthcare information systems for nursing practice Manage a healthcare unit by implementing the management process Provide reproductive health care to promote and maintain optimum health of individuals and families Participate in addressing the needs of individuals, groups and communities
Foundations of Nursing Practice (core)	26	Render nursing care within a legal and ethical framework
Biological & Natural Sciences (core)	18	Apply knowledge of natural and biological sciences in nursing practice
Applied Psycho-social Sciences (Fundamental)	15	Apply knowledge of psycho-social sciences in the practice of nursing
Pharmacology (Fundamental)	15	Apply knowledge of pharmacology in nursing practice
Total	**376**	

- Core: is the essence of the qualification i.e., the essential elements of the profession you are studying towards.
- Fundamental: is the knowledge and skills that will be used throughout the programme and in professional practice.

The national Critical Cross Field Outcomes:

These are generic outcomes that all education and training programmes have to include. The aim is to ensure that student does not only develop the qualification knowledge, skills and attitudes but also skills that will make him/her a better citizen, community member and individual.

Critical Cross Field Outcomes	Contextualised in Curriculum
Identifying and solving problems using critical and creative thinking	Apply basic knowledge of nursing and apply problem-solving skills, critical thinking and creative thinking skills when providing nursing care to different individuals and age groups, in various settings
Working effectively with others to develop collaboration within the multidisciplinary team	As a member of the multidisciplinary patient care team understand and respect the different roles and responsibilities of the different team members. Provide information and collaborate as needed to ensure optimum patient care and a good working relationship within the health care teams and communities
Organising and managing oneself and one's activities responsibly and effectively	Apply time management skills learnt in planning the daily routine, carrying out specific tasks in an organised, efficient, cost effective, accountable and timely manner
Collecting, analysing, organising and critically evaluating information	Critically evaluate and analyse data collected and respond, mitigate and address any variances, efficiently and appropriately within the given circumstances
Communicate well orally and in writing	Documentation and good communication in the language of the institution is paramount in nursing practice and forms part of all aspects of practice. Communication skills learnt are applied daily in written and oral forms in practice as a nurse
Use science & technology responsibly	Use basic computer skills learnt effectively. Use the technical/electronic equipment for patient care safely and correctly. Be aware of the effect technology has on the environment and people and prevent negative effects thereof
Understand the world is a set of related systems	Understand the systems approach to nursing, in which the patient is treated effectively, appropriately and holistically within the cultural, social, political and economic system. In implementing nursing care the nurse is dependent

Critical Cross Field Outcomes	Contextualised in Curriculum
	on team decision making and planning. Holistic patient care is provided which includes recognizing the patients' family
Explore strategies to learn more effectively	Apply the study skills learnt in planning own study future studies process and uses reflective practice skills to improve own daily practices.
Participate as responsible citizens in community life	Participate in the community involvement project at the College throughout training period and apply knowledge of community health when working in the community
Be culturally & aesthetically sensitive	Apply the skills learnt when interacting with patients and colleagues of different races, cultures, religions and social standing in daily practice as a nurse
Explore education & career opportunities	Understand the career pathways available to nurses and actively seek to develop personally and professionally

Programme Credit Breakdown

The following is a summary of the first-year programme of the credit allocation per subject. Refer to the annual programme planner for the full academic programme.

Subject	Level	Credit
General Nursing Science (GNS)	5	92
Foundations of Nursing Practice (FNP)	5	16
Biological & Natural Sciences (BNS)	5	8
Applied Psycho-social Science (APS)	5	4
Pharmacology (Pharm)	5	5
TOTAL CREDIT		**125**

Subject	Theory		Work Integrated Learning	
	Theory	Reflexive	Simulation	WBL
GNS	352	12	172	364
FNP	100	11	9	40
BNS	75	5	0	0
APS	27	7	6	0
Pharm	45	5	0	0
TOTAL	**599**	**40**	**187**	**404**
	639		**591**	

The 1230 hours are divided into theory, reflective learning, simulation and work-based learning (WBL) hours as follows:

Work based learning refers to learning that takes place in the clinical environment i.e., hospitals and clinics. The aim of students working in the clinical environment is to ensure that they can apply the theory learnt in class in the actual real-world setting. Working with patients will help students develop their practical and attitude (soft) skills. There are 3 types of allocation when the student is placed in the units:

- **Clinical learning:** Students receive clinical outcomes that have to be met and are allocated to observe, practice, and assist with skills and procedures that meet the outcomes. This is done under the supervision of a registered staff nurse, professional nurse, or allocated mentor in the nursing unit. The students work with patients but do not form part of any clinical service team. The direct support of students is in the form of direct guidance by a clinical specialist or accompaniment by a clinical supervisor.
- **Role taking:** After students are found competent through formal assessment and following adequate guided practice they are allowed to practice as part of the clinical service team where they are allocated tasks in the provision of daily patient care and practice as a team member under indirect supervision.
- **Clinical accompaniment:** A deliberate, planned, and structured process to provide direct assistance and support to the students by a dedicated clinical training specialist, to ensure the achievement of learning outcomes.

- **Simulation**: refers to the acting out or mimicking of an actual or probable real-life condition, event, or situation to find a cause of a past occurrence (such as an accident), or to forecast future effects (outcomes) of assumed circumstances or factors (SANC, 2013).

Pre knowledge

- A basic understanding and skill in the use of the internet, Microsoft office, downloading documents and videos is essential.
- A good understanding of the English language is required and it is advisable to get a good medical dictionary to assist with the new medical terminology you will be introduced to.

8. Module study units/themes

Exit Level Outcome: On successful completion of this module, the student will be able to apply basic knowledge of anatomy and physiology, biophysics, pharmacology, and microbiology in the provision of nursing care.

Learning outcome	Specific learning Outcomes (SLO)
1. The student shall be able to demonstrate an understanding of pharmacodynamics and pharmacokinetics of various medication classifications in daily administration of patient medication	1.1 Terminology/ Definitions 1.2 Basic principles of pharmacology 1.3 Basic principles of Pharmacokinetics 1.4 Principles of pharmacodynamics 1.5 Common drug classifications
2. The student shall be able to demonstrate knowledge of the legal, professional and ethical responsibilities related to the administration of patient medication	2.1 Legal requirements 2.2 Ethical implications of dispensing and administration 2.3 General principles of legal requirements 2.4 Legal framework for prescribing and dispensing
3. The student shall be able to demonstrate understanding of pain and pain management	3.1 The physiology of pain 3.2 Factors that affect pain 3.3 Nursing management of pain. 3.4 Psychological pain. 3.5 Nurses caring and compassionate role

PART C: TEACHING, LEARNING AND ASSESSMENTS

9. Teaching and learning strategy

A blended teaching and learning approach and strategies are followed to enhance student-centeredness. These strategies may include direct and e-learning instructions, cooperative learning, activity-based strategies, and independent learning will be utilised. Examples of such strategies are:

Direct instructions:

- Formal lectures to clarify core concepts and principles. Active student participation is encouraged.
- Videos
- Interactive presentations
- Flip classroom

E-learning instructions:

- Moodle
- Narrated PowerPoint Presentations
- Informal diagnostic assessment - Pre and post class assessment Quizzes

Cooperative learning strategies:

- Peer teaching
- Group work

Activity-based strategies:

- Integration of theory and practice while placed for work integrated learning through applying the principles of the pharmacology module.

Independent learning:

- Reflection
- Independent reading

10. Assessment strategy

Knowledge of pharmacodynamics and pharmacokinetics of various medication classifications in daily administration of patient medication, basic knowledge of the legal, professional and ethical responsibilities related to the administration of patient medication, Knowledge of pain and pain management within applicable scope of practice.

The Pharmacology is an exit level module that will be assessed continuously using various assessment instruments, methods and tools throughout the semester. The purpose of assessment is to (1) monitor the level of learning taking place (diagnostic), (2) enhance learning and to (3) establish whether the student has achieved the required learning outcomes in the various units of the module.

The assessment strategy followed in this module includes diagnostic, formative, and summative assessments to identify misconceptions, provide feedback to students on academic progress and for formal assessment. The objective is to assess students using a multitude of differing assessment methods, to provide evidence of learning which has been assessed with valid, reliable and authentic instruments and techniques.

The exam entry mark will be determined by three assessments with weighting as follows:

Exam entry mark (50%) = Pre class activities (25%) + Post class quiz (25%)

Exam mark = written exam (50%)

A final mark of 50 % is required to pass.

Final mark = Exam entry (50%) + exam mark (50%)

The scores obtained in the three formative assessments will be collectively calculated to determine the exam entry mark. The exam entry mark and examination mark will then each contribute 50% to the final year mark. The summative assessment will consist of one hour exam paper written at the end of the year during the college's formal examination period.

Diagnostic and formal assessment will be done throughout the year in the form of student presentations, case study discussions, simulated skills feedback, tests, an assignment, a practical skills assessment and a final written examination. In order to develop reflective thinking skills, feedback will not only be provided from the lecturer but also peer group and self-reflection on learning by the student.

Students will receive feedback in writing and verbally on all formative assessments within one weeks of the date they were completed and will be entered into the Electronic Student Management System (ESMS) for students to track their progress throughout the semester. Feedback will enable students to better understand what was expected and how they can improve their performance to meet the outcomes of the specific units and module. Answer Guides will be discussed in detail with students. Individual discussions between Nurse Educator and students will be encouraged. Evidence of the abovementioned formative and summative assessments will be kept in the electronic module file which is kept at the College's Archives as well as being recorded on College's ESMS. Summative assessment results will be published in accordance with the College's' assessment and moderation policy.

11. Assessment plan

Assessment Type	Description	Method	Weighting (%)	Due Date
Pre-class activities	Self-directed activities for class preparation SLO: 1.1 + 1.2 + 1.5 + 2.2 + 2.3 + 2.4 + 3.4 (35 marks)	Online	45 %	During block
Post-class quiz	Self-directed quizzes after class attendance SLO: 1.3 + 1.4 + 1.5 + 2.1 (40 marks)	Online	55%	After block
Exam	SLO 1.2 + 1.3 + 1.4 + 1.5 + 2.3 + 2.4 + 3.1 + 3.2 + 3.3 (50 Marks)	Online	100%	Semester 2 exam week

12. Pass requirements

The exam entry mark will be determined by three assessments with weighting as follows:
Exam entry mark = Pre-class activities (45%) + Post class quiz (55%)
Exam mark = written exam (100%)

A final mark of 50% is required to pass.
Final mark = Exam entry (50%) + exam mark (50%)

Re-examination requirements in accordance with the College's assessment and moderation policies will be applied.

13. Internal and external moderation

All assessments will be done according to the following policies/procedures:

- Assessment Policy for R.169 (LCL-POL-AS-007)
- Moderation Policy (LCL-POL-AS-003)
- Assessment Procedure (LCL-WP-AS-006)
- Marking of scripts Procedure (LCL-WP-AS-001)

14. Prescribed textbooks and recommended readings

Author	Title	Edition	Publishing year	Publisher
Dreyer,A, Kharwa,R, Moch,S, Thandar,Y	Pharmacology for Nurses and other healthcare workers	4th	2015	Pearson

15. Class attendance

Pharmacology is a compulsory online subject. It consists of modules, which will be presented in a virtual classroom. Virtual classroom attendance is compulsory, and the following rules will apply:

1) Students are allowed to attend a virtual classroom from home or off site provided that:
    - Each student logs on using their own device. The rationale is that attendance cannot be accurately tracked if students share a device.

- Students who do not have a suitable device will attend from their respective Learning Centre using the computers in the media lab.
- Students connecting from home need to ensure they have stable, continuous internet connection with appropriate bandwidth to allow for uninterrupted connection to the virtual class.

2) Students need to be aware of their load shedding schedule. Absence due to load shedding will be marked as “Absent “. If there is scheduled load shedding during planned virtual class times, students are required to attend class at the Learning Centre or another appropriate venue where connection is uninterrupted.
3) Students who are absent during a virtual lesson, will need to provide evidence that they have completed the outcomes within a reasonable time as stipulated by the Nurse Educator.

Attendance Management

1) Online attendance will be managed through a Microsoft Forms link that will be shared with the students by the educator presenting the class.
2) This attendance will be signed by each student 3 times during the virtual session to remain in line with SANC requirements of attendance management.
3) The educator responsible for the classroom will pull a collated attendance register at the conclusion of the virtual class and distribute the register to the educators at each learning centre.
4) Absenteeism will be managed by the educators responsible for the subject at the individual learning centre

PART D: STUDY SCHEDULE

The study schedule describes the class schedule and academic plan for meeting the learning outcomes (LO). This module will be presented as an online module, thus all the classes are attended virtually.

SEMESTER 2

Theory Block 4 (week 31): 22 – 26 September PH 24 September **Pharmacology**					
Day	**Learning Outcomes**	**Blooms**	**Periods**	**Integration**	**Resources**
Monday	**LO 1:** The student shall be able to demonstrate understanding of pharmacodynamics and pharmacokinetics of various medication classifications in daily administration of patient medication				
	Self-directed activities Complete pre-class activity for SLO 1 (1.1 + 1.2)	2	1		
	1.1 Terminology and definitions 1.2 Basic principles of pharmacology	2	6	GNS	See handout on Moodle
Tuesday	1.3 Basic principles of pharmacokinetics 1.4 Basic principles of pharmacodynamics	2-3	7		See handout on Moodle Video on Moodle
Wednesday **PH**	**Self-directed activities** Complete pre-class activities for SLO 1.5 + 2.2 + 2.3 + 2.4 + 3.4	2	8		
Thursday	1.5 Common drug classifications	2-3	3	GNS	See handout on Moodle Video on Moodle
	LO 2: The student shall be able to demonstrate knowledge of the legal, professional and ethical responsibilities related to the administration of patient medication				
	2.1 General regulations regarding medicines in SA related as found in the medicine and related substance Act 101 of 1965 2.2 Ethical implications of dispensing and administrating medicines 2.3 Legal requirements of prescribing and dispensing of medicine 2.4 Legal framework for prescribing and dispensing of medicines by nurses in SA	2-3	4	GNS	Prescribed Textbook: Pg. 3-7 See Resources in Moodle
Friday	**LO 3:** The student shall be able to demonstrate understanding of pain and pain management				
	3.1 The physiology of pain 3.2 Factors that affect the pain experience 3.3 Nursing management of pain management, of pain. 3.4 Psychological pain. 3.5 Nurses caring and compassion role	2-3	7	GNS	Textbooks: 1) P116 – 121 2) P180 – 181 3) P664 - 668

PART D: CASE STUDIES FOR DISCUSSION AND PRESENTATIONS

A nursing case study is an account of a specific patient's health patterns, problems, and progress from before admission until discharge/rehabilitation and follow-up. The extent of the health problem is determined, and medical and nursing interventions are modified or changed to resolve the problem.
The aim of the case study is to integrate theory and practice. It will give you practice in combining real clinical situations with the information in textbooks and academic journals. It is important for you, the student, to demonstrate critical and reflective thinking when analysing the patient's condition and the management thereof.
The skills you will learn are:

- how to search the literature on a specific disease entity
- how to interpret, analyse and synthesize theoretical information from a number of sources
- how theory and practice must be integrated
- how to critically analyse current practice
- how to develop academic writing skills
- how to reference your work

For this module, students are expected to investigate based on a real scenario or health issue. This is presented by the student in a class discussion or written format after the relevant information has been collected, analysed, and evaluated.

STEPS TO FOLLOW:

Step 1: Read the case study and questions carefully
Step 2: Identify the issues in the case study
Step 3: Link theory to practice
Step 4: Plan your answer
Step 5: Start writing your case study feedback
Step 6: Edit and proofread (if presenting for marking)
Step 7: Submit / present in class

CASE STUDY 1

Medications administered by mouth are referred to as oral medications as they are designed to be swallowed. Medications can be administered via different routes throughout the body. Can you give examples of the various routes you know?

Learning activities:

1.1. Differentiate between pharmacokinetics and pharmacodynamics.

1.2. Discuss four main components of pharmacokinetics and how these are used to explain the various characteristics of different drugs in the body.

1.3. Mention five (5) rights of medication administration.

1.4. In a table, classify the different categories of drugs affecting the different systems of the body.

1.5. Given data from a prescription chart provided by your facilitator, calculate correct drug dosage, using different systems of drug measurement.

1.6. Complete the learning activities in the Pharmacology workbook.

1.7. Perform the appropriate clinical skills related to medication administration as indicated in your Clinical Workbook/POE.

CASE STUDY 2

Mr Basil is a 38-year-old man that visited your local clinic, accompanied by his wife, with complaints of shortness of breath, fever, fatigue and oral thrush. The community health nurse assesses him and subsequently informs him that he has a lung infection and is HIV positive. Mr Basil appears upset and thinks that he could have contracted HIV while he was involved in a relationship with another woman three years ago. Mr Basil is concerned about disclosing this information. He says: *"I do not want anyone to know about this. I will only tell her that I have pneumonia and will take prescribed treatment. She doesn't have to know more because she is not ill. If she starts to become ill, then I will tell her. What will people think of me if they get to know that I have AIDS?"*

2.1. Discuss the ethical dilemmas facing the nurse in this scenario.
2.2. Role play your response to Mr Basil if you were the community health nurse.
2.3. Any loss, such as a loss of one's health, results in a grief response. Identify the stage of grief, according to Kubler-Ross, that Mr Basil is most likely experiencing. Give reasons for your answer.
2.4. Role play how you will respond to Mr Basil's wife when she asks you about the results and what the diagnosis was. Integrate appropriate ethico-legal considerations in this situation.
2.5. Describe the current pharmacological treatment for HIV.
2.6. Explain the following ethical implications of dispensing and administrating medicines in relation to Mr Basil:
    - Constitutional rights
    - Patient rights
    - Code of Ethics

2.7. Explain the legal framework for prescribing and dispensing of medicines by nurses in SA (in terms of the special concession awarded in the Nursing Act 33 of 2005).

2.8. Explain the legal requirements relating to scheduled substances and professional practices with regards to administration of medication.

CASE STUDY 3

Ms T, a 60-year-old high school teacher, is brought to the hospital emergency department (ED) due to excruciating chest pain she experienced whilst she was climbing stairs at school that morning. On data gathering, she reports that she did not take her nitro glycerine (NTG) tablet with her to work and that this pain was worse than what she had ever experienced. She also explains that she has been struggling to lose weight in the last few months.

Ms T's vital signs on arrival at ED are:

- Blood pressure: 118/78 mmHg
- Pulse: 76
- Respiration: 22
- Temperature: 36.8˚C

Her 12-lead electrocardiogram (ECG) done will reveal ST depression and atrial fibrillation. After further investigations, she is admitted to the High Care Unit diagnosed with unstable angina pectoris.

3.1. Describe the physiology of pain.

3.2. Explain your understanding of angina pectoris.

3.2. Differentiate between acute pain, chronic pain and psychological pain. Indicate the type of pain Ms T has experienced.

3.3. Outline the possible factors that could have affected the experience of pain Ms T had.

3.4. Explain the rationale for the Nitro glycerine tablet Ms. T is taking.

3.4. Ms T was kept in hospital for a week and is cardiologist due for discharge within 24 hours 24 hours. Discuss the health education you will discuss with her in preparation for her discharge from hospital.

3.5. Briefly discuss examples pharmacological and non-pharmacological management of pain.