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COMMENTS 55

REPORTS

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Virpi Sulosaari, Päivi Erkkö & Leena Walta

MEDICATION COMPETENCE
REQUIREMENTS OF A
GRADUATING REGISTERED NURSE
Towards national consensus



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Turku University of Applied Sciences
Turku 2010

ISBN 978-952-216-132-1 (PDF)
ISSN 1459-7756 (electronic)

<http://julkaisut.turkuamk.fi/isbn9789522161321.pdf>

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I BACKGROUND

Nurses play a key role in the safe and efficient medication care of patients (e.g. Manias & Bullock 2002a; Manias 2009). Therefore, nurses are expected to possess good medication skills, knowledge and decision making competence when implementing assignments within medication care (Sulosaari, Suhonen & Leino-Kilpi 2009). The implementation of medication care is one of the most important (e.g. O'Shea 1999) and at the same time, most high-risk assignments of a registered nurse because errors may lead to severe consequences for both the patient (Andersson & Webster 2001) and the nurse's or nurse student's career (Wolf, Hicks & Serembus 2006).

The core competence of medication care has to be acquired during the basic nursing education because a nurse is expected to be competent to implement safe and appropriate medication care immediately after graduation (e.g. Wright 2005). The task of the universities of applied sciences is to enable and ensure nurses' adequate medication competence, in an increasingly more demanding working environment within social and healthcare services. The demands on the nurses' medication competence increase continually because new, more efficient, and in terms of implementation, more demanding medicines are developed, and more severely ill patients and patients with multiple diagnosis can be treated with medication. In addition, the ageing population and its associated problems with polypharmacy, create specific challenges to a nurse's medication competence (STM 2006; Ndosi & Newell 2009; Sulosaari, Suhonen & Leino-Kilpi 2009). New challenges also come with a proposal of nurses' restricted rights to prescribe medicines; if accepted, this new law also requires adequate education in medication competence of nurses.

Finnish (Murtola 1999; Veräjänkorva 2003, Grandell-Niemi 2005) and international (e.g. Ives et. al. 1997, Ndosi & Newell 2009) research has revealed inadequacies in medication competence of nurses and nurse students. Earlier research has pointed out that the basic education of nurses does not provide adequate medication competence (Latter et. al. 2001; Bullock & Manias 2002; Manias & Bullock 2002a; 2002b; Morrison-Griffiths et. al. 2002). Also, the content and amount of medication education seems to vary from one educational institution to another (e.g. STM 2006; Manias 2009). The development of medication education requires not only a description of the education but also a description that is at par with the competence required of a graduating registered nurse.

2 DEVELOPING THE REQUIREMENTS FOR REGISTERED NURSES' MEDICATION COMPETENCE

In 2005, Turku University of Applied Sciences began to develop the medication passport to support and ensure nurse students' medication competence (see Sulosaari & Erkkö 2008). The first version of the passport was taken to use in the fall of 2006 in the degree program of nursing. While developing the passport, it became clear that there was a need for a national medication passport that would indicate a student's medication competence. To take up this challenge, Turku University of Applied Sciences started a development project. In order to create a national medication passport, it was necessary to first describe the nurses' skills and competence criteria more extensively than was done in a report from the Ministry of Education (2006). Nationally, the Ministry of Social Affairs and Health also had concerns about the diversity of medication education and the level of medication competence of graduating nurses. It was also evident that besides nurses, documenting and identifying the medication competence of other health care professionals was necessary, and the creation of a medication passport for students in various education programs in health care was also needed. Subsequently, an expert working group was created, consisting of representatives of several degree programs (table 1). The description of the requirements and criteria of medication competence was started for nurses. The requirements and criteria for medication competence for other health care professionals will be created later.

TABLE 1. *Members of the expert working group.*

Members of the expert working group at Turku University of Applied Sciences
MNSc, senior lecturer Virpi Sulosaari, degree program in nursing (Turku)
MSSc, Nursing teacher, senior lecturer Päivi Erkkö, degree program in nursing (Turku)
Lic. Health sciences, principal lecturer Leena Walta, degree program in radiography and radiation therapy (radiographers)
Lic. Ed., Nursing teacher, principal lecturer Paula Yli-Junnila, degree program in dental hygiene (dental hygienist)
MNSc, lecturer Jaana Forsbacka, degree program in nursing (Salo)
PhD, principal lecturer Jari Säämänen, degree program in emergency care nursing
PhD, Nursing teacher, principal lecturer Hanna-Maarit Riski, degree program in medical laboratory technology (medical laboratory technologist)

The development of the requirements and criteria for graduating registered nurses' medication competence began in 2008. In the first phase, the contents and requirements for competence were considered within national regulations and recommendations (see e.g. STM 2006; OPM 2006). In the next phase (i.e. description of the foundations of the requirements for medication competence), a systematic literature review about the basic medication competence of nurses was conducted (see Sulosaari et al. 2009). For instance, Bloom's taxonomy of the different levels of learning was utilized when the criteria were composed. The first draft of the requirements for medication competence was completed in December 2008. In the next phase, the draft was sent for evaluation to teachers in health care programs in Turku, Satakunta, and NOVA Universities of Applied Sciences. In April 2009, a draft for the description of nurses' medication competence was presented to the National Health Care Network of Universities of Applied Sciences, a body appointed by the Rectors' Conference of Finnish Universities of Applied Sciences (ARENE) and instituted by the Ministry of Education. In its meeting, the Network instituted the National Expert Panel to Development of Medication Education (LOKKA). The mandate of this LOKKA-panel was to evaluate the requirements for medication competence and to promote the creation of a national medication passport based on competence criteria.

Members of the LOKKA-Panel come from all the Finnish universities of applied sciences which offer education in health care. The Panel met in October 2009, and based on the received feedback, reworked the requirements for nurses' medication competence. With minor changes, The National Health Care Network approved the descriptions and criteria for nurses' medication competence in its meeting in December 2009. The phases of this national development process are described in Figure 1. The LOKKA-Panel continues its work towards the development and adoption of a national medication passport in the fall of 2010.

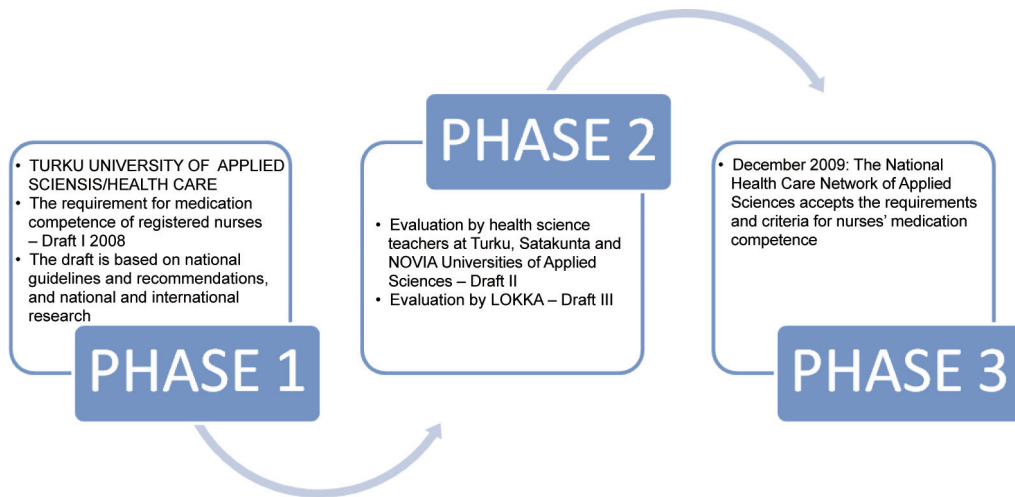


FIGURE I. *Phases in the national collaboration towards developing the requirements for registered nurses' medication competence.*

3 THE USE AND APPLICABILITY OF THE REQUIREMENTS FOR REGISTERED NURSES' MEDICATION COMPETENCE

Description of the requirements and criteria of medication competence for a graduating nurse can be used to assess and develop curricula and implementation plans in universities of applied sciences. The competence requirements and criteria form the foundation for a national medication passport. The goal of the passport is to support the development of nurse students' medication competence in different learning environments, and to ensure adequate learning and level of medication competence at the time of graduation.

The description of medication competence, developed in national collaboration, defines medication competence at the base level without special skills associated in various health care environments. The Ministry of Social Affairs and Health requires that employers ensure the medication competence of nurses at regular intervals, after graduation. The description of medication competence that has been developed to support the development of medication education and competence at universities of applied sciences enables the assessment of a nurse's base competence, and the recognition of his/her special skills in different social and health care organizations.

4 DESCRIPTION OF KEY CONCEPTS

Medication care

Medication care is an activity within health care and, in terms of the activity itself and the rights of patients, falls within the legislation of health care regardless of whether the person acts within the services of health care or social affairs. The term '*medication care*' refers to the administration of prescribed medication to the patient and it can be *indirect and/or direct*. The patient or the staff at a ward/outpatient department is responsible for the indirect medication care, which can be carried out in various ways. Medication care may be preplanned or can take place according to a situation at hand (STM 2006).

Self-care medicines

'Self-care medicines' are medicines that can be bought in pharmacies without a prescription (STM 2006).

Medication care via natural routes

The above term refers to medicines and the state of medicines that can be administered via natural routes such as orally or anally, without special procedures (STM 2006).

Medicine

'Medicine' refers to administration of a preparation or substance with the intention of, through internal or external use, curing, alleviating, or preventing an illness or its symptoms. A 'medicine' is also a preparation or combination of preparations used internally or externally to revive, repair, or change vital functions through a pharmacological, immunological, or metabolic effect, or to clarify the state of health or reason for an illness (STM 2006).

Learning environments of medication competence

- theoretical education (e.g. lectures, theoretical assignments)
- in-class practice at the university of applied sciences
- clinical practice in various facilities and working environments in health care.

Medication care- and medication error

The above terms refer to a preventable harmful event in the medication care process. More specifically, the term refers to erroneous administration of medicines, mistakes in medication care, and resulting health- and life- endangering situations (STM 2006).

Medication process

The term 'medication process' refers to the process in medication that starts with identifying the patient's need for medication and prescribing a medication, and includes several phases in planning, implementing, and evaluating medication care. The process can be considered on two levels: a) a general level that concerns all phases in medication care including medication management in a care facility, protocols in medication care, and ensuring medication competence, and b) the level of implementing the medication care of a patient under the responsibility of a doctor, including the assessment of medication need (where nurses participate with their specific roles) and the planning, implementation, evaluation, and documentation/communication of medication care.

Medication maintenance

The term refers to the acquisition, use preparation, mixing, storage, and delivery of medicines, and the passing of information about medication care to various social and health care units such as wards, outpatient department, or patients. The operative units of medication maintenance include pharmacies, hospital pharmacies, wholesale pharmacies, and pharmaceutical factories (STM 2006).

Medication plan

A medication plan is a written plan in the care facility/organization that describes the core factors and processes of medication care and blood transfusion therapy (STM 2006). In social and health care services, it is a tool to define and control various areas of medication care in a facility (Lääkelaitoksen määräys 7/2007).

Preparation of a medicine for use

The term 'preparation of a medicine for use' refers to one or more actions it is necessary to conduct with the pharmaceutical product before it is ready to be administered to the patient (Lääkelaitoksen määräys 7/2007).

Medicines in gaseous form

'Medicines in gaseous form' are gases or mixtures of gases used because of their pharmaceutical effect, and meant to be given to a patient in doses for a therapeutic, diagnostic, or prophylactic purpose. A medicine in gaseous form has been manufactured and inspected according to the best practices in the production of medicines (Lääkelaitoksen määräys 6/2007).

Core selection of pharmaceutical products

The term 'core selection of pharmaceutical products' refers to a selection of medicines that has been defined by experts and approved by the care facility/organization, and that conform to the pharmaceutical needs of medication care. It consists of medicines that are continually used in the facility, and to some other medicines that are used less frequently but are vital. The core selection helps to unify and direct the acquisition and use of medicines in the facility, and to monitor the extent and fiscal efficiency of their use (STM 2006). The core selection of medicines consists of all medicines regularly used in a health care district, hospital, public health clinic, or other facility (Lääkelaitoksen määräys 7/2007).

“PKV”-medicines

“PKV”- medicines are medicines that mainly affect the central nervous system (STM 2006) are referred in the international literature as controlled drugs. They include pharmaceutical products that have been specified as PKV-medicines in the catalogue of pharmaceutical products, approved by the National Agency for Medicines. They are also mentioned in the pharmaceutical product catalogue approved by the National Agency of Medicines as medicines with active agents that can be delivered only per prescription, and in said catalogue are equipped with a prefix Z, ZA, P, or PA (Lääkelaitoksen määräys 3/2006; see Lääkelaitoksen ohje 5.6.2009).

Non-conformity

A ‘non-conformity’ is any event that deviates from an agreed plan or action concerning the products, procedures, systems, and environments of health care, and can lead to a dangerous situation or adverse outcome. (Stakes and Lääkehoidon kehittämiskeskus Rohto 2006).

Prescription medicine

A prescription medicine is a medicine that can be delivered from a pharmacy only with a prescription from a medical doctor, dentist, or veterinarian (STM 2006).

High-risk medications

‘High-risk medications’ are medicines with a particular risk or any possibility of misuse associated with their proportioning to doses, handling, or storage (Lääkelaitoksen määräys 7/2007).

Intravenous therapy

The term ‘intravenous therapy’ refers to intravenous medication, fluid therapy and parenteral nutrition, and the associated preparation of dilutions and their preparation for use. In addition, the term refers to activities required by intravenous therapy, such as mastering the cannulation of a peripheral vein (STM 2006).

Health care units

The term refers to various organizations within the social and health care system such as health care regions or private organizations that offer health care services.

Facility

A ‘facility’ is a health care facility within the social and health care system where nursing students perform their clinical practice. Such facilities include wards and outpatient department..

MEDICATION COMPETENCE REQUIREMENTS OF A GRADUATING REGISTERED NURSE

I FOUNDATIONS OF THE NURSING PROFESSION FOR MEDICATION MANAGEMENT

LEARNING GOALS	LEARNING CRITERIA
Acts as a nursing practice representative in the collaborative team of a patient/client, doctor, and other members of a medication team when deciding upon and delivering a client's/patient's medication care.	<ul style="list-style-type: none"> • Identifies the role and responsibility of nursing practice in the medication process for a patient in outpatient and/or hospital care. • Acts as a representative of the nursing practice in the team implementing a client's/patient's medication (for instance during a doctor's round). • For her /his part, is responsible for the individual, efficient, safe, purposeful, and economical delivery of medication care according to the doctor's prescription.
Adheres to ethical principles in his/her actions throughout the medication process.	<ul style="list-style-type: none"> • Understands the ethical instructions in nursing practice and health care, and is committed to applying them towards the patient's interests in medication delivery. • Recognizes ethical questions and problem situations in medication delivery, for instance when related to culture or worldview, and adheres to ethical principles in his/her actions.
In his or her actions, adheres to the regulations, instructions, and recommendations that guide medication management.	<ul style="list-style-type: none"> • Is familiar with the most recent regulations, instructions, and recommendations regarding medication care and its delivery and acts accordingly. • Understands the nurse's responsibilities and obligations in implementing medication care. • Understands the significance of the regulations that govern medication safety and adheres to them in his/her practice. • Is familiar with medication instructions and licensing practices in the respective organization and acts accordingly.
When making decisions about medication care or management, systematically relies on evidence-based information.	<ul style="list-style-type: none"> • By relying on different sources, is able to make use of the multidisciplinary and reliable knowledge required in implementing safe medication care. • Is familiar with the central pharmacological and pharmacy knowledge regarding medication care of different patient/client groups and is capable of applying this knowledge when making decisions about a patient's/client's medication care. • Understands the link between the human anatomy and physiology and the reception, phases, and effects of medicines in the body. • Knows the agents and the desired, side, adverse, and combined effects of the pharmaceutical products used in the treatment of the most common illnesses. • Is capable of critically assessing the applicability of medication knowledge in implementing the medication care of a patient/client. • Justifies the decisions about and practical actions in a patient's/client's medication care with the most up-to-date knowledge.
Develops and maintains his/her medication competence	<ul style="list-style-type: none"> • Recognizes the student's own medication competence and areas in need of development. • Actively develops the nurse's own medication competence.

2 MULTI-PROFESSIONAL COLLABORATION IN MEDICATION MANAGEMENT

LEARNING GOALS	LEARNING CRITERIA
In multi-professional collaboration, participates in making decisions regarding a patient's/client's medication care	<ul style="list-style-type: none"> • The student is familiar with the medication plan of the unit in charge and recognizes the nurses and student's own role in a multi-professional team. • Recognizes the situations that need to be reported and/or require care instructions from the doctor or other professionals participating in the medication administration, management, and delivery. • When necessary, negotiates the issues regarding medication delivery with the doctor or other professionals participating in the medication administration, management, and delivery. • The student gradually takes steps to become a consulting medication care specialist.
On his/her part, ensures that the information passed to other members of the medication team about a patient's/client's medication delivery is relevant, accurate, and up- to-date.	<ul style="list-style-type: none"> • The student can report and document the vital information about his /her actions and observations associated with delivering medication care. • The student is able to make use of the information other professionals participating in medication care have reported. • The student takes into consideration the regulations regarding confidentiality and privacy in multi-professional communication.

3 MEDICATION MANAGEMENT AS NURSING PRACTICE AT DIFFERENT STAGES OF MEDICATION PROCESS

3.1 Medicine maintenance

LEARNING GOALS	LEARNING CRITERIA
For his /her part, the student is responsible for the availability of medicines necessary in outpatient care.	<ul style="list-style-type: none"> • Ensures the continuity of medication care by seeing to it that the client/patient has the necessary medicines in hand. • Recognizes the economic aspects of acquiring medicines (generic substitution, reference pricing, health insurance).
For his/her part, the student is responsible for the availability of medicines necessary in hospital care.	<ul style="list-style-type: none"> • The student is able to use the core medicine selection in his/her unit of clinical practice. • The student is able to order and acquire pharmaceutical products: <ul style="list-style-type: none"> • Medicines in the core medicine selection • Medicines that have been released for consumption with a special license from the National Agency for Medicines. • Medicines that contain alcohol • Medicines that mainly affect the central nervous system. • Narcotics • Blood products • Medicines that are in gaseous form • Patient specific medicines, for instance cytostatics • Medicines for patient's during on-call hours
Ensures the correct transportation and storage of medicines at the different stages of the medication process so that the efficiency, safety, and usability of the medicine are not compromised.	<ul style="list-style-type: none"> • Adheres to the storage instructions given by the manufacturer of a medicine and required by regulations. • Knows the tasks associated with the care and maintenance of the medicine cabinet and acts responsibly on his /her part. • Ensures the appropriate handling, storage, and accounting of narcotic drugs. • Ensures the storage of a ready-to-use medicine in order to avert the risk of confusion when the medicine is delivered. • Ensures that first aid medicines are always available quickly and ready to be used.
Ensures the proper disposal of medicines so that they do not cause harm to human health or to the environment.	<ul style="list-style-type: none"> • Sorts disposable pharmaceutical products according to the instructions of the care facility. • Sends unused, unusable, expired, or banned pharmaceutical products to a pharmacy/hospital dispensary/wholesale pharmacy.
By adhering to the written instructions of the hospital dispensary/ wholesale pharmacy and the working facility, ensures the proper ordering, storage, handling, and disposal of gaseous pharmaceutical products and other medicines that, due to their form or handling, require special skills or equipment (for instance radioactive materials).	<ul style="list-style-type: none"> • Follows the instructions about how to store, handle, and dispose of medicines that contain gases and other medicines that require special knowledge and skills. • Is able to operate equipment used to store and handle gaseous pharmaceutical products and other pharmaceutical products that require special knowledge and skills.
When acquiring, storing, handling, or disposing of medicines, takes into consideration the principles of efficiency, safety, rationality, and economic efficiency.	<ul style="list-style-type: none"> • Acts economically when delivering medication. • The student takes into consideration occupational safety when acquiring, storing, handling, and disposing of medicines.

3.2 Planning of medication care

LEARNING GOALS	LEARNING CRITERIA
According to his/her own expertise, participates in defining a patient's medication care.	<ul style="list-style-type: none"> • Can identify needs associated with a patient's/client's medication care. • Considering the patient's/client's holistic situation, will gather information about the patient's/client's condition when relevant to the prescription and delivery of medication care. • Informs the doctor and other participants in the medication process about relevant issues regarding the prescription of a medicine and medication delivery. • Is familiar with the reasons for a patient's/client's medication care (in other words, why the patient/client has been prescribed a specific medication care).
The student is able to receive and record a prescription.	<ul style="list-style-type: none"> • Receives and correctly interprets different kinds of prescriptions and verifies that they are appropriate. • Clearly and correctly relays the information in a prescription to all participants in a patient's/client/s medication care and documents them in appropriate manner • Ensures that all information about the client's/patient's medication care is clear, unambiguous, and coherent with existing medication prescriptions.
Together with the patient and other participants in the patient's medication care, plans the delivery of the medication taking into consideration the patient's individual needs, the goals of the medication care and its modes of delivery, and the qualities of the pharmaceutical product.	<ul style="list-style-type: none"> • The student ensures that she/he has all the information relevant for an efficient and safe medication care, such as necessary information about the patient/client, the medicine and its effects, and the delivery of medication care. • When planning a clients'/patients' medication care, the student is able to take into consideration the client's/patient's individual circumstances and needs. • Is able to take into consideration the client's/patient's overall medication care when planning medication care • When planning clients'/patients' medication care, the student uses the information on the packaging of the medicine and in various medication data bases. • Knows the central, side, and combined effects and the maximum doses of the medicines prescribed to a patient/client. • Recognizes risk medicines, and takes into account their properties, when planning medication delivery. • Draws up a delivery plan for medication care. • When planning for medication delivery, takes into consideration the requirements set by the operational environment.

3.3 Delivery of medication care

LEARNING GOALS	LEARNING CRITERIA
Masters the appropriate handling of a medicine and its preparation for use.	<ul style="list-style-type: none"> • Ensures the maintenance of the safety and efficiency of the pharmaceutical product <i>during the entire medication process</i>: <ul style="list-style-type: none"> • When preparing a pharmaceutical product for use, adheres to the written instructions from the manufacturer and the supplier, considers the different forms of pharmaceutical products, and the different modes of their delivery to the patient. • Handles pharmaceutical products in an aseptic and careful manner. • Takes into consideration a pharmaceutical product's compatibility with other medicines, fluids, and packaging materials. • Adheres to occupational safety regulations and practices that promote occupational safety.
The student masters the correct portioning of medicines to patient-specific doses.	<ul style="list-style-type: none"> • When calculating medication dosages, is competent regarding different forms of medicines, different routes of administration to the patient, and patients of different age or with different ailments. • The student is able to portion out medicines correctly and aseptically. • Ensures that the medicine and the dose are prepared according to the prescription and are fit for use. • Identifies medicine doses in a way that ensures that the correct client/patient receives the correct medicine at the correct time.
Masters the safe delivery of the medicine to the patient/client according to the doctor's prescription.	<ul style="list-style-type: none"> • Considers the requirements set by the route and mode of administration of a medicine and the individual needs of the client/patient. • Verifies the correctness and appropriateness of the medicine, its dose, route of administration, and time of administration. • Is able to prepare the client/patient for the administration of a medicine. • Prior to administering the medicine, verifies the identity of the client/patient • When necessary, assists the client/patient with taking the medicine and ensures that the patient/client takes the medicine correctly. • The student is able to act in situations where the client/patient has not received the prescribed medicine or has received incorrect medicines. • In advance, clarifies the adverse and combined effects of medicines and the possible under- or overdoses, and acts accordingly. • Is able to proceed in situations where the client is administered a medicine against his/her will (for instance, according to the Laws of Mental Health).
The student is able to prepare for and act in situations that require immediate action (for instance anaphylaxis, resuscitation).	<ul style="list-style-type: none"> • Is able to anticipate and prevent risks and dangerous situations in medication care. • Is familiar with resuscitation and other first aid medicines. • Is prepared for medication care in the case of an anaphylaxis. • Is prepared for medication care in the case of resuscitation

3.3.1 MEDICATION ADMINISTRATION VIA NATURAL ROUTE	
Masters the safe administration of medication to the patient/client according to the doctor's prescription, via natural and prescribed routes, and using the correct form of the medicine.	<ul style="list-style-type: none"> • Is able to portion and administer medicines correctly and safely through various natural routes (for instance orally, per rectum, through the skin, into eyes).
Masters the medicinal administration of oxygen according to the doctor's prescription.	<ul style="list-style-type: none"> • orrectly, and with precautionary measures, uses the equipment associated with supplying medical oxygen. • When supplying medical oxygen, takes into consideration the doctor's prescription and the patient's/client's special needs.
3.3.2 MEDICATION ADMINISTRATION THROUGH INJECTIONS	
The student masters the administration of a medicine to a patient/client through injection according to the doctor's prescription and considering the requirements set by the form of the medicine and the injection route.	<ul style="list-style-type: none"> • The student is able to administer a subcutaneous, intradermal, and intramuscular injection. • Knows the principles of vaccination. • The student knows the principles of medication administered to the epidural space. • The student knows the principles of medication administered to the central canal of the spinal cord. • The student knows the principles of medication administered into a joint.
3.3.3 MEDICATION, FLUID THERAPY, AND PARENTERAL NUTRITION ADMINISTRATION VIA INTRAVENOUS ROUTE	
Has acquired the skill necessary to safely administer intravenous medication, fluid therapy, and parenteral nutrition according to the doctor's prescription.	<ul style="list-style-type: none"> • Is familiar with the responsibilities and instructions set by the unit in charge regarding the delivery of intravenous medicine and fluid therapy. • To attain a safe and efficient administration, the student ensures that he/she has adequate knowledge about the intravenously administered fluid/nutrition-liquid and/or -medicine. • According to the doctor's prescription, can plan for the administration, follow-up, and evaluation of fluid and nutrition therapy. • Is prepared for the cannulation of a peripheral vein. • Can start and administer fluid therapy through a peripheral vein according to the doctor's instructions. • Can start and administer fluid therapy through a central vein according to the doctor's instructions. • Is able to monitor and assess the effects of an intravenously administered medicine. • Is able to observe a patient during fluid therapy and parenteral nutrition, and how to assess the effects of those treatments.

3.3.4 DELIVERY OF BLOOD TRANSFUSION THERAPY	
Has acquired the skill necessary to safely administer blood transfusion according to the doctor's prescription.	<ul style="list-style-type: none"> • Knows the responsibilities and special requirements associated with administering blood products. • Can plan for the administration, follow-up, and assessment of blood transfusion according to the doctor's prescriptions. • Can start and administer blood transfusion according to instructions. • Can observe the patient during and after the blood transfusion and can assess its effects. • Can monitor, assess, and report the effects of blood transfusion.
3.3.5 EDUCATING PATIENTS ABOUT THEIR MEDICATION	
Instructs and educates patients/clients and their close relatives as well as groups and organizations to safely, efficiently, and correctly use medicines, participate in medication care and follow-up, and assume responsibility of the person's own medication care.	<ul style="list-style-type: none"> • In a planned and goal-oriented manner, educates a client/patient, while taking into account the individual's needs in medication care, assessing the effects of medication care, and the appropriate handling, use, storage, and disposal of medicines. • Instructs clients/patients from their perspective with clear and uncomplicated instructions and using different methods. • When instructing a patient about medication, emphasizes the self-care duties and promotion of health of a patient/client. • Is able to educate the client's/patient's medication care to patients family members when patient is not able to take responsibility of their own care • Ensures that the nurse's instructions meet the individual's needs, are based on correct and reliable information, are timely, and are coherent with information provided by other personnel participating in medication care. • Ensures that the patient/client understands and accepts the instructions and is able to safely and rationally proceed with his/ her medication care. • Can also educate groups and organizations about medication care. • Evaluates the effects of education and how its goals have been met.
3.3.6 PROMOTING CLIENTS' ADHERENCE TO MEDICATION	
The student assesses the clients'/patients' adherence to their medication care and the factors that can affect this adherence; the student also supports patients/clients to adhere to their medication care by using a variety of methods according to the patients'/clients' individual needs.	<ul style="list-style-type: none"> • Recognizes that adherence to treatment is an important factor determining the efficiency of medication care. • The student is able to assess client's/patient's adherence to medication care, the factors that can affect this adherence, and how to take them into account when planning and delivering the patient's/client's medication care. • Uses a variety of methods and approaches to promote the client's/patient's adherence to medication care. • Motivates the patients/clients to adhere to their medication care and to use the medicines according to instructions.

3.4 Evaluation of medication care

LEARNING GOALS	LEARNING CRITERIA
Is able to monitor the effects of medication care and how the goals set for the medication care have been met.	<ul style="list-style-type: none"> • Plans the follow-up of a patient's/client's medication care together with the patient/client • When assessing the effects of medication care, uses different sources of information (for instance the patient's symptoms, measurements, laboratory results). • Together with the patient/client, assesses and identifies the medication care's therapeutic effects and possible adverse and combined effects. • Is able to act based on assessment and evaluation information. • Participates in the overall assessment of a patient's/client's medication care taking into consideration the patient's/client's overall condition.
Systematically and critically evaluates the progress and outcome of the patient's/client's medication care.	<ul style="list-style-type: none"> • Assesses the progress and outcome of different phases of the medication process. • When necessary, can change the delivery plan of the medication care.

3.5 Documenting medication care and securing the flow of information

LEARNING GOALS	LEARNING CRITERIA
Understands the significance of medication reporting to patient safety and continuity of care.	<ul style="list-style-type: none"> • Ensures the safety and continuity of medication care by carefully and correctly accounting for the needs, plans, delivery, and effects of a patient's/client's medication care. • In the beginning of a treatment period and when a patient is transferred to another location for care, verifies that the information in the patient journal is accurate and up-to-date.
Takes into consideration the appropriate regulations and privacy issues regarding medication accounting and transfer of information.	<ul style="list-style-type: none"> • Documents facts about the need and planning for, and the delivery and assessment of medication, according to existing regulations and the national model for compiling patient journals in health care.

4 PROMOTION OF MEDICATION SAFETY

LEARNING GOALS	LEARNING CRITERIA
Promotes the quality of nursing care, patient safety, and occupational safety when implementing medication.	<ul style="list-style-type: none"> • The student acknowledges his/her professional duty to promote and develop the quality of nursing practice and patient safety. • Critically evaluates the nurse's and the care facility's actions regarding medication delivery. • Critically evaluates and develops his/her own competency at various stages of medication delivery. • Takes into consideration the requirements for occupational safety and sustainable development when delivering medication care. • Recognizes the nurse's responsibility in the education and development of the medication competency of students and other care professionals.
Understands the importance of the 'culture of safety' and medication plans in order to improve medication safety.	<ul style="list-style-type: none"> • Knows the medication management plan of the care facility and adheres to it when delivering medication care. • Utilizes the medication care plan of the care facility as a tool in the management of planned medication management and the development of quality care. • Develops medication safety based on regulations and evidence.
Understands the importance of monitoring adverse events in medication in order to increase patient safety.	<ul style="list-style-type: none"> • Recognizes potential risks associated with the medication process. • Recognizes possible medication deviations from the prescribed care and reports them according to the instructions of the organization. • Is able to follow principle of sincerity when a adverse event has occurred • Supports the client/patient/nearest to take part in promoting patient and medication safety • Makes use of the knowledge derived from reports to develop his/her own professional competency. • Makes use of the knowledge derived from reports to develop, on his/her part, the operations in the care facility. • Recognizes the risk of misuse of medicines and, in his/her practice, can reduce misuse.

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