

**MINISTRY OF HEALTH OF UKRAINE
DONETSK NATIONAL MEDICAL UNIVERSITY**

METHODOLOGICAL GUIDELINES FOR CONDUCTING THE “NURSING PRACTICE” PRACTICAL TRAINING FOR THIRD-YEAR MEDICAL STUDENTS

Kropyvnytskyi 2024

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First Edition

These methodological guidelines are intended for practice supervisors from the departments responsible for the “Patient Care” Practical Training, undertaken by second-year students pursuing the second (Master’s) level of higher education in the specialties 222 “Medicine” and 228 “Paediatrics” at healthcare institutions.

The guidelines describe the aim, objectives, and programme of the practical training, as well as materials related to its organisation and implementation, and provide samples of the required reporting documentation. The publication also includes a methodology for conducting the final assessment.

The materials have been prepared in accordance with the Standards for master’s degree Training in the specialties 222 “Medicine” and 228 “Paediatrics”.

INTRODUCTION

Nursing Practice is a fundamental component of the training of future physicians. It contributes to the further development of essential practical skills and professional competencies required for future clinical practice in healthcare. Its relevance lies in ensuring the delivery of high-quality healthcare through the professional activities of nursing personnel, implementing preventive, therapeutic, and rehabilitation measures within the healthcare system, expanding professional competencies and autonomy in clinical decision-making, and promoting a holistic approach to patient care that encompasses physical, psychological, and social support.

1. Description of the Educational Component

According to the curriculum, Nursing Practice is undertaken in the sixth semester, when higher education students have acquired relevant knowledge in the basic educational components, including Medical Biology, Medical and Biological Physics, Human Anatomy, Physiology, Bioorganic and Biological Chemistry, Microbiology, Virology and Immunology. At this stage, students have also begun studying clinical components, including Propaedeutics of Internal Medicine, Propaedeutics of Paediatrics, and General Surgery, with which the practical training Programme is integrated.

In turn, Nursing Practice provides the foundation for the subsequent study of clinical components, including Internal Medicine, Paediatrics, Surgery, Anaesthesiology and Intensive Care. This involves vertical integration with these components and the development of students' ability to apply nursing knowledge and skills during their further education and future professional practice.

Nursing Practice is conducted during the sixth academic semester and is completed successively in three inpatient departments: Internal Medicine, Surgery, and Paediatrics. The practice comprises three modules:

Content Module I. Main duties and professional activities of a nurse in an Internal Medicine Department.

Content Module II. Main duties and professional activities of a nurse in a Surgical Department.

Content Module III. Main duties and professional activities of a nurse in a Paediatric Department.

The total duration of the educational component is 210 hours, equivalent to 7 ECTS credits.

2. Aim and Objectives of the Educational Component

The **Aim** of teaching the educational component "Nursing Practice" is to enable students to master the basic techniques of professional nursing practice based on a thorough knowledge and understanding of the physiological functioning of the patient's body, while adhering to the principles of medical ethics and deontology.

The **Objectives** of the practical training are to acquire the basic theoretical knowledge required to ensure comfortable conditions for patients during their stay in an inpatient healthcare setting and to provide appropriate patient care at all stages of treatment; to develop essential practical skills related to the professional activities of inpatient nurses; to develop the ability to determine and assess the patient's general condition and vital signs, as well as to apply the principles of meeting the body's basic physiological needs; and to foster moral, ethical, and deontological qualities in students in their professional communication with patients.

Upon completion of the “Nursing Practice” practical training, the student should know:

- the basic principles of professional nursing practice, as well as the fundamental principles of medical ethics and deontology in patient care;
- the basic requirements for organizing the work of nurses in inpatient departments in internal medicine, surgery, and paediatrics;
- the basic requirements and procedures for disinfection, pre-sterilization cleaning, and sterilization of medical instruments;
- the basic principles of preparing patients for laboratory and instrumental examinations, including specific considerations for children of different ages;
- the techniques of subcutaneous, intramuscular, and intravenous injections, including specific considerations for administering injections to children of different ages;
- the principles of providing first aid in cases of major emergencies and injuries.

Ability to Apply Knowledge in Practical Situations

In inpatient departments of internal medicine and paediatrics:

- demonstrate the techniques of subcutaneous, intramuscular, and intravenous injections, including age-specific considerations for children;
- demonstrate the correct procedures for priming transfusion sets and administering intravenous infusions;
- demonstrate the methods and techniques for collecting blood samples for a complete blood count, blood glucose testing, biochemical analysis, and bacteriological examination;
- determine blood glucose levels using a glucometer and detect ketone bodies in urine using a rapid test;
- explain the basic requirements for disinfection and pre-sterilization cleaning of medical instruments and perform quality control of pre-sterilization cleaning to detect residual blood and detergents;
- demonstrate knowledge of the main stages of sterilization of reusable medical instruments;
- apply the basic principles of preparing patients, including children, for endoscopic examinations (gastroscopy, rectosigmoidoscopy, and colonoscopy) and ultrasound examination of the abdominal organs;
- demonstrate various methods and techniques of bowel cleansing;
- collect stool samples for the detection of helminths, occult blood, coprological examination, and intestinal microbiota assessment;
- demonstrate the procedures for collecting urine samples for analysis according to the Zimnitsky, Nechiporenko, Addis-Kakovsky, and Amburge methods;
- properly prepare probes, catheters, and other medical devices for performing medical procedures;
- explain the mechanisms of the therapeutic effects of physiotherapy procedures, including hydrotherapy, phototherapy, and electromagnetic therapy, and demonstrate knowledge of the techniques used to perform them;
- demonstrate the skills required to provide first aid in cases of deterioration of a patient's condition during physiotherapy procedures;
- ensure the proper organization of therapeutic nutrition for patients, including children of different ages, in an inpatient setting.

In Surgical Inpatient Departments:

- demonstrate various methods of definitive haemorrhage control;
- identify different types of bleeding and estimate the volume of blood loss;
- perform blood group and Rh factor determination and assess the compatibility of donor and recipient blood, including individual, Rh, and biological compatibility tests;
- demonstrate the procedures for administering various types of anaesthesia;

- demonstrate resuscitation techniques, including chest compressions and artificial ventilation of the lungs;
- identify injuries to soft tissues, the skull, and the chest;
- demonstrate surgical wound management and appropriate care of injured areas;
- demonstrate techniques for applying various types of dressings and transport immobilization devices;
- organize first aid measures for patients with burns;
- identify the main clinical manifestations of purulent diseases of soft tissues and provide appropriate first aid;
- demonstrate the main measures for the prevention of tetanus, diphtheria, anthrax, and gas gangrene;
- demonstrate the principles of managing and dressing infected soft-tissue injuries.

3. Programme of the Educational Component

Content Module 1. Main Duties and Professional Activities of a Nurse in an Internal Medicine Department

Topic 1. Moral, Ethical, and Legal Foundations of Nursing in Ukraine. Organization of Work and Duties of Nurses in the Main Structural Units of a Therapeutic Inpatient Department

Ethical foundations of nursing. The Code of Ethics for Nurses of Ukraine. The Code of Ethics of the International Council of Nurses. The Florence Nightingale Pledge. Moral and legal responsibility of nurses to society. Guarantees and protection of the legal rights of nurses. List of orders of the Ministry of Health of Ukraine regulating the activities of nurses in a therapeutic department.

Structure and functions of a therapeutic inpatient department. Main units of a therapeutic inpatient department: the admission department, therapeutic departments, diagnostic departments, and clinical laboratories. Duties of nurses in the main units of a therapeutic inpatient department. Documentation maintained by nurses in various units of a therapeutic inpatient department. Basic rules for the storage of medications and medical instruments. Duties of nurses regarding the maintenance of the therapeutic and protective regimen and sanitary and hygienic conditions in a therapeutic department.

Topic 2. Organization of the Work of a Nurse in a Therapeutic Inpatient Department. Duties and Responsibilities of Ward and Treatment Room Nurses in a Therapeutic Department

Organization of the nursing station. Documentation completed by the ward nurse and rules for its maintenance. Registration of patients admitted to the department. Thermometry, measurement of blood pressure, and assessment of the pulse, with recording of the findings on the temperature chart. Working with the physician's orders sheet. Rules for administering tablet and liquid medications to patients.

Organization of the work of the treatment room nurse. Main documentation of the treatment room. Rules for the storage and accounting of medications and medical instruments in the treatment room. Prescription, accounting, and storage of potent, narcotic, and toxic substances in accordance with the current regulations.

Methods and techniques for collecting blood samples for a complete blood count, blood glucose testing, biochemical and bacteriological examinations. Preparation of the treatment table for work. Techniques for performing subcutaneous and intramuscular injections. Calculation of the dose of a reconstituted antibiotic. Rules for preparing infusion sets and performing intravenous infusions. Basic requirements for disinfection and pre-sterilization cleaning of medical instruments. Quality control of pre-sterilization cleaning for residual blood and detergents. Sterilization of reusable medical instruments.

Topic 3. Duties of the Nurse in Ensuring the Diagnostic Process in a Therapeutic Inpatient Department

Basic rules for preparing patients for gastroscopy, sigmoidoscopy, colonoscopy, and ultrasound examination of the abdominal organs. Main types of enemas and rules for their administration.

Preparation of patients and the necessary equipment for collecting stool samples for examination for helminth eggs, occult blood, and coprogram. Rules for collecting urine samples for routine analysis and for examination according to the Zimnitsky, Nechiporenko, and Addis-Kapkovsky methods, and their diagnostic significance. Preparation for and performance of gastric and duodenal intubation. Gastric lavage, methods of performing the procedure, and collection of gastric lavage fluid for examination. Preparation of probes, catheters, and tips for procedures.

Methods and techniques for recording an electrocardiogram and phonocardiogram. Basic analysis of their main components. Familiarization with the methodology of echocardiographic examination. Performance of pulmonary function tests. Duties of the nurse in the functional diagnostics unit.

Topic 4. Specific Aspects of the Work of the Treatment Room in a Therapeutic Department and the Duties of the Nurse in Ensuring Its Operation

Organization of the work of the treatment room nurse. Rules for storing medical instruments in the treatment room. Main types of compresses. Rules for applying warming, cold, and medicated compresses. Techniques for applying cupping glasses and mustard plasters, and for using a heating pad and an ice bag. Processing and disinfection of reusable medical equipment. Use of medicinal leeches and conditions for their storage. Rules for using portable and stationary inhalers. Methods and techniques for administering humidified oxygen and using an oxygen pillow.

Familiarization with the performance of physiotherapy procedures (hydrotherapy, light therapy, and electromagnetic therapy): procedures for administering physiotherapy treatments, monitoring patients, and providing first aid in case of deterioration of the patient's condition during physiotherapy procedures (the list of procedures for practical skills training is selected by the department according to the capabilities of the clinical training base).

Final assessment.

Content Module e II. Main duties and professional activities of a nurse in a Surgical Department.

Topic 1. Bleeding and Blood Loss. Blood Transfusion

Determination of the type and severity of bleeding and the volume of blood loss; methods of temporary hemorrhage control. Practical algorithm for performing a blood transfusion. Necessary conditions for infusion therapy.

Topic 2. Basic Resuscitation Measures in Critical Conditions in Surgery

Basic resuscitation measures in critical surgical conditions. Simple types of anaesthesia and mechanical ventilation equipment. Defibrillation.

Topic 3. Wounds and Injuries

Wounds. Wound cleansing and primary wound management. Wound drainage and the use of antiseptic agents in wound treatment. Principles of desmurgy in wound management. First aid for closed injuries of the soft tissues, skull, and chest, as well as for fractures and dislocations. Principles of immobilization. Desmurgy in traumatology. Burns. First aid for burns, frostbite, and electrical injuries.

Topic 4. Purulent Surgery. Specific Surgical Infection

Purulent surgery. Specific surgical infections. Identification of acute purulent inflammatory processes in patients and principles of first aid. First aid and prevention of acute surgical infections with a protracted or indolent course.

Topic 5. Circulatory Disorders and Foreign Bodies. Resuscitation

Emergency measures for acute disturbances of arterial and venous circulation in organs and extremities and for foreign bodies in the body. Resuscitation.

Final assessment.

Content Module III.

Main duties and professional activities of a nurse in a Paediatric Department.

Topic 1. Specific Aspects of Deontology in the Nurse's Work with Children and Their Relatives

Legislative and regulatory acts governing the work of nurses in paediatrics departments. Duties of a paediatric department nurse. Moral and legal responsibility of the paediatrics department nurse to society. Guarantees and protection of the nurse's legal rights. Specific aspects of interactions between nurses, children, and their relatives.

Topic 2. Organization of the Nursing Station. Medical Documentation and Its Maintenance

Structure and functions of a paediatric inpatient department. Main duties of a paediatric department nurse. Organization of the nursing station. Documentation completed by the ward nurse and rules for its maintenance. Rules for handing over a shift to the next team.

Organization of the treatment room nurse's work. Main documentation of the treatment room. Rules for the storage and accounting of medications and medical instruments in the treatment room and at the nursing station. Prescription, accounting, and storage of potent, narcotic, and toxic substances in accordance with the applicable regulations.

Organization of the procedure room nurse's work. Rules for storing medical instruments in the procedure room.

Topic 3. Duties and Responsibilities of Ward and Treatment Room Nurses in a Paediatric Department

Registration of patients admitted to the department. Completion of medical records. Thermometry, measurement of blood pressure, and assessment of the pulse, with recording of the findings on the temperature chart. Working with the physician's orders sheet. Rules for administering oral medications to children.

Preparation of the treatment table for work. Techniques for performing subcutaneous, intramuscular, and intravenous injections. Calculation of the antibiotic dose. Rules for preparing infusion sets and performing intravenous infusions. Basic requirements for disinfection and pre-sterilization cleaning of medical instruments.

Topic 4. Ensuring the Treatment and Diagnostic Processes in a paediatric Inpatient Department

Main types of enemas, methods and rules for administering enemas to children of different ages.

Preparation of a sick child and the necessary equipment for collecting stool samples for examination for helminth eggs, occult blood, and coprogram. Rules for collecting urine samples from children for examination according to the Zimnitsky, Nechiporenko, and Addis-Kakovsky methods, and their diagnostic significance.

Topic 5. Practical Procedures in Paediatric Nursing

Technique for collecting throat and nasal swabs. Rules for applying a warming compress. Techniques for applying mustard plasters and using a heating pad and an ice pack. Rules for using portable and stationary inhalers. Methods and techniques for administering humidified oxygen to children and using an oxygen pillow.

Gastric lavage, methods of performing the procedure, and collection of gastric lavage fluid for examination. Preparation of probes, catheters, and tips for procedures.

Topic 6. Duties of the Nurse in Ensuring Personal Hygiene and Feeding of Children of Different Ages

Rules for positioning and latching infants at the breast during breastfeeding. Technique for bottle-feeding an infant with formula during artificial feeding.

Topic 7. Personal Hygiene and Anthropometric Assessment of Children

Administration of a hygienic bath to an infant, washing children, and specific aspects of washing girls. Techniques for eye irrigation, cleaning the ears and nose, care of the umbilical stump of a newborn, and administration of drops into the nose, eyes, and ears of a child.

Technique of anthropometric measurements (height, body weight, and chest and abdominal circumferences) in children of different ages.

Final assessment.

4. Practical Training Supervision

The ongoing educational activities of students are supervised by practical training supervisors from the departments – faculty members – and by practical training supervisors from the clinical training site (clinical site supervisors).

At the clinical healthcare facilities serving as training sites, the overall supervisor of the practical training is the Chief Executive Officer of the healthcare facility, while the direct supervisors are the heads of the relevant departments or physicians appointed by them. Practical training supervisors assess students' performance in the departments, considering their discipline (students must not have unexcused absences from practical training), the quality of their practical training diaries, including records of procedures performed and patient care skills acquired, and other relevant aspects.

Responsibilities of the Departmental Practical Training Supervisor

Before the beginning of the practical training, the departmental supervisor shall:

- familiarize themselves with the educational program (syllabi) and methodological guidelines related to the organization and implementation of the practical training;
- conduct an assessment and documentation review of the clinical training site;
- obtain the necessary documentation from the Educational and Methodological Department, including student lists, methodological guidelines, and other relevant materials.

During the practical training, the departmental supervisor shall:

- monitor the practical training of each student, including their performance and discipline;
- provide methodological guidance to students and assign tasks to each student undergoing practical training;
- assess the final level of students' acquisition of practical skills in accordance with the approved lists;
- indicate in the practical training diary the sections that require further completion or improvement;
- assess students' practical skills at the patient's bedside;
- assess the quality of students' medical documentation;
- sign students' practical training diaries;
- participate in the final assessment scheduled by the educational program for the relevant educational component;
- within three days after completion of the practical training, submit a written report on its results to the University Practical Training Supervisor.

Methodological supervision and final assessment are carried out by faculty members of the relevant departments of DNMU. The final assessment of the content module of the practical training is conducted on the last day of the practical training. The final assessment of each module is conducted by the Head of the relevant department together with the faculty members of the respective department. In accordance with applicable regulations, the final assessment of the module may additionally be conducted according to a schedule approved by the Educational and Methodological Department.

Responsibilities of Practical Training Supervisors from the Clinical Base

Practical training supervisors from the clinical base shall:

- familiarize themselves with the practical training program (syllabi) and methodological guidelines related to the practical training;
- introduce students to the staff of the relevant departments and familiarize them with the working conditions, including the layout of the facilities, bed capacity, sanitary and hygienic regimen, patient population, and other relevant conditions;
- monitor the scope and level of students' acquisition of practical skills;
- review and sign students' entries in their practical training diaries daily;
- provide an objective assessment of each student's performance and evaluate the quality of their practical training.

5. Duration and Format of the Practical Training

Independent work in the relevant clinical department is carried out as part of the "Patient Care" practical training according to the schedule approved by the Educational and Methodological Department.

The duration of the practical training (independent student work) for second-year students is 15 working days (60 hours). The practical training consists of three content modules: Internal Medicine, Surgery, and Paediatrics.

Each content module lasts 5 working days, with a working day consisting of 4 to 5 academic hours.

The clinical bases for the practical training may include departments of regional, district, and municipal hospitals.

6. Legal Liability of Students During Practical Training

During practical training, students are responsible for the work assigned to them and for the results of such work within the scope of their duties as student trainees, including duties performed in the capacity of junior medical personnel. Therefore, students must fully understand the legal implications of their actions and refrain from any unlawful conduct.

During practical training, students are required to comply fully with the internal labour regulations of the healthcare facility. Students should be aware that violations of labour, academic, or workplace discipline may result in disciplinary liability. Disciplinary violations during practical training include failure to comply with instructions and orders issued by the supervisors of the healthcare facility, unauthorized absence, lateness, and negligent performance of assigned duties.

In addition, if a student trainee causes material damage to a healthcare facility, the student may bear full or partial financial liability in accordance with applicable legislation, irrespective of whether disciplinary measures have been imposed.

A disciplinary sanction may be imposed no later than one month from the date on which the violation is identified and no later than six months from the date on which it was committed (Articles 147 and 148 of the Labor Code of Ukraine).

Students undertaking practical training are required to:

- arrive at the practical training site on time;
- fully complete all tasks stipulated by the practical training program and the instructions of the practical training supervisors;
- familiarize themselves with and strictly comply with occupational health and safety requirements, safety regulations, and workplace sanitary requirements;
- comply with the internal labour regulations applicable at the healthcare facility;
- be responsible for the assigned work and its results within the scope of their duties as student trainees;

- maintain the practical training diary and other reporting documentation required by the practical training program;
- upon completion of the practical training, submit to the faculty member of the relevant department a digital report documenting completion of all tasks stipulated by the program, together with a properly completed and duly signed practical training diary.

7. List of Questions for the Final Assessment

In Internal Medicine:

1. Organisation of work and duties of a nurse in the main structural units of a therapeutic inpatient department.
2. Thermometry, measurement of blood pressure, and assessment of pulse with recording of the data on the temperature chart.
3. Organisation of the work of a treatment-room nurse. Rules for the storage and recording of medicinal products and medical instruments in the treatment room.
4. Methods and techniques for collecting blood samples for a complete blood count, blood glucose testing, biochemical and bacteriological investigations.
5. Main routes of parenteral administration of medicinal products. Preparation of the treatment table for work. Methods and techniques of subcutaneous injections.
6. Main routes of parenteral administration of medicinal products. Preparation of the treatment table for work. Methods and techniques of intramuscular injections.
7. Use of transfusion medicinal products. Methods and techniques of intravenous injections.
8. Rules for preparing intravenous infusion sets and administering intravenous infusions. Basic requirements for disinfection and pre-sterilisation cleaning of medical instruments.
9. Sterilisation of reusable medical instruments.
10. Duties of a nurse in ensuring the diagnostic process in a therapeutic inpatient department. Basic rules for preparing patients for gastroscopy, sigmoidoscopy, colonoscopy, and ultrasound examination of the abdominal organs.
11. Main types of enemas and rules for their administration. Preparation of patients and the necessary equipment for stool collection for examination for helminth eggs, occult blood, and coprological analysis.
12. Rules for collecting urine samples for analysis according to the Zimnitsky and Nechiporenko methods and for urinalysis.
13. Methods and techniques of electrocardiogram recording. Analysis of its main components.
14. Specific features of the work of the treatment room in a therapeutic department and the duties of the nurse in ensuring its operation. Main types of compresses. Rules for applying warming, cold, and medicinal compresses. Techniques for applying cupping devices and mustard plasters.
15. Methods and techniques of administering humidified oxygen and using an oxygen cushion. Rules for using portable and stationary inhalers.

In Surgery:

1. Bleeding and its types. Methods for assessing blood loss. Assessment of the severity of a patient's condition in acute blood loss. Methods of temporary and definitive haemostasis.
2. Blood groups and the Rh factor. Methods for determining blood groups and the Rh factor. General principles of blood transfusion. Required investigations before the procedure.
3. Blood transfusion: procedure, indications, contraindications, and complications.
4. Types of anaesthesia and the duties of a nurse during infiltration, regional, and epidural anaesthesia. Equipment required for inhalational anaesthesia and the role of an anaesthetic nurse during the procedure. Technique of endotracheal anaesthesia.
5. Basic life support measures: indications, contraindications, and techniques of artificial ventilation and closed-chest cardiac massage. BLS methodology.

6. Wounds: definition and classification. Primary surgical wound management. Types of sutures. Basic rules for their application and removal.
7. Antiseptic agents for irrigating purulent wounds. Techniques for irrigating drainage tubes and replacing drains in patients with purulent wounds.
8. Structure of clean and contaminated dressing rooms. The role of the nurse in organising the sanitary-hygienic regimen in contaminated and clean dressing rooms.
9. Modern methods of surgical hand antisepsis for surgeons and operating-room nurses. Methods and techniques of preparation of the operative field.
10. Basic instruments and principles of their selection for venesection, tracheostomy, pleural puncture, and primary surgical wound management.
11. Desmurgy: definition. Main types of dressings and methods of their application. Methods of treating clean and purulent postoperative wounds. Specific features of dressing techniques.
12. Injuries of the skull, chest, and extremities. First aid measures for patients with closed injuries.
13. Rules for transporting patients with injuries of the skull, chest, spinal column, and extremities. Preventive measures to prevent the development of traumatic shock and pneumothorax.
14. Signs of bone fractures and dislocations. First aid for fractures. Specific features of the use of transport immobilisation devices. Types of splints. Rules for applying a plaster splint.
15. Burns. Methods for determining the extent of burn injury and the severity of a patient's condition using the "Rule of Nines". Burn shock and burn disease: clinical manifestations, diagnosis, and treatment.
16. Frostbite: clinical manifestations, first aid, and infusion therapy.
17. Acute purulent diseases of soft tissues (furuncle, carbuncle, abscess, phlegmon, and felon): classification, clinical manifestations, and treatment.
18. Treatment and prevention of gas gangrene, tetanus, wound diphtheria, and anthrax. Main signs of necrosis, gangrene, ulcers, and foreign bodies. Techniques for managing necrotic and ulcerated areas of soft tissues.
19. Indications for urinary catheterisation. Technique of urinary catheterisation in men and women. Types of urethral catheters. Care of patients with a Foley catheter.
20. Indications for nasogastric tube insertion. Technique of nasogastric tube insertion. Irrigation of a nasogastric tube.

In Paediatrics:

1. Basic deontological principles of nursing care for children and their relatives.
2. Basic duties of a nurse in a paediatric department.
3. Organisation of the work of the nursing station in a paediatric department. Documentation completed by the ward nurse and rules for its maintenance. Rules for handing over duties to the next shift.
4. Organisation of the work of a treatment-room nurse in a paediatric department. Main documentation, rules for the storage and recording of medicinal products and medical instruments.
5. Specific features of thermometry, blood pressure measurement, and pulse assessment in children.
6. Rules for administering medicinal products orally to children.
7. Specific features of subcutaneous, intramuscular, and intravenous injections in children.
8. Rules for calculating the dose of an antibiotic for a child of a specific age.
9. Specific features of the use of mustard plasters, hot-water bottles, and ice packs in children.
10. Rules for collecting urine samples from children for examination according to the Zimnitsky, Nechiporenko, and Addis-Kakovsky methods and their diagnostic significance.
11. Rules for breastfeeding and proper positioning of infants at the breast. Technique of bottle-feeding in artificially fed infants. Technique of mixed feeding in children.
12. Specific features of administering drops into the nose, eyes, and ears of children.
13. Methods of anthropometric measurements (height, body weight, chest and abdominal circumference) in children of different ages.

14. Methods of administering humidified oxygen to children of different ages and using a metered-dose inhaler and a nebuliser.

Upon completion of the practical training, the student shall submit the following documents to the Departmental Practical Training Supervisor:

- a properly completed practical training diary;
- a consolidated digital report.

The practical training diary (Annex 1) is the student's individual record. The student shall make chronological entries documenting all activities performed personally or in which they participated. Based on the entries in the practical training diary, a final report for each discipline (Annex 2–4) shall be prepared, summarizing the total number of procedures performed, practical skills acquired and practiced, and other relevant activities.

Records of the work performed shall be reviewed and signed daily by the Practical Training Supervisor from the Clinical Base.

At the end of each training cycle, the practical training diary and digital report shall be signed by the Head of the relevant clinical department, the Practical Training Supervisors from the Clinical Base, and the Departmental Practical Training Supervisor, and shall be certified with the official seal of the healthcare facility.

Annex 1. Sample Nursing Practice Diary for the Therapeutic, Surgical, and Paediatric Profiles.

MINISTRY OF HEALTH OF UKRAINE
DONETSK NATIONAL MEDICAL UNIVERSITY
DIARY

of Nursing Practice in the Therapeutic (Surgical, Paediatric) Department

Higher education
students _____

(surname, first name, patronymic)

Faculty of Medicine No. _____ Year: _____ Group: _____

Place of practical training: _____

Period of practical training: from _____ to _____

Head of Practical Training from the Department: _____

(position, surname, first name, patronymic)

Head of Practical Training from the Clinical Base: _____

(position, surname, first name, patronymic)

General Director (Director for Medical Affairs) / Chief Physician: _____

Official Seal

Sample Daily Record of Work Performed

Date, Time	Description of the Work Performed	Practical Skill Performed
21.02.26 09.00	Methodology and Technique for Recording an Electrocardiogram. Analysis of Its Main Components.	Participated in Electrocardiogram (ECG) Recording.
09.30	Measurement of Blood Pressure, Pulse Assessment with Recording of the Data on the Temperature Chart. Working with the Medication Administration Record.	Together with the nurse, participated in measuring blood pressure and pulse and

		recording the measurements on the observation chart.
10.00	Methodology and Technique for Performing Intramuscular Injections.	Participated in Performing Intramuscular and Subcutaneous Injections.
10.30	Rules for Priming Transfusion Sets and Performing Intravenous Infusions.	Under the supervision of the nurse, primed intravenous infusion sets in accordance with established procedures.

Student's Signature _____

Signature of the head nurse _____

Signature of the head of practical training from the base _____

8. Methodology and Tools for Standardized Assessment of Current Educational Activities and Final Assessment

The assessment of students' independent practical work (IPWS) and the final assessment (FA) are conducted on the last day of practical training. The final assessment is administered by a committee consisting of the Head of the relevant department and members of the department.

The module grade is determined as the sum of the scores awarded for current assessment of the content modules (in points), based on the assessment of practical skills in accordance with the list specified in the practical training program.

The maximum number of points awarded to students for completion of the module is 200 points, including 120 points (60%) for current educational activities (content modules) and 80 points (40%) for the final assessment.

Assessment of the Student's Individual Work

Points for individual assignments are awarded to the student only upon their successful completion and defence. The diary is the reporting document for practical training and must be properly completed and formatted (see Annex 4). The grade for the student's independent individual work is calculated as the average score obtained for the completion of the full list of practical skills and competencies in each of the three content modules: Internal Medicine, Surgery, and Paediatrics (see Annexes 1–3).

The arithmetic mean of the scores for the content modules is converted into points. The total score for the independent practical work of students (IPWS) ranges from 72 to 120 points.

Students who have completed the practical training program, properly completed all required reporting documents, and received at least 72 points for current educational activities are admitted to the final assessment.

Criteria for Assessing the Final Assessment (FA)

The final assessment (FA) is conducted in accordance with the *Regulations on the Organization and Conduct of Assessment Procedures, Make-up of Missed Classes, and Improvement of Students' Academic Ranking at Donetsk National Medical University*, enacted by Order No. 397 of Donetsk National Medical University dated September 2, 2019.

Regulations on the Organization and Conduct of Assessment Procedures, Make-up of Missed Classes, and Improvement of Students' Academic Ranking • Donetsk National Medical University (dnmu.edu.ua)

The assessment of students' independent practical work (IPWS) at practical training sites and the final assessment (FA) are conducted on the last day of practical training.

The final assessment of practical training is standardized and is recorded as the arithmetic mean grade on a four-point grading scale, considering the following components:

1. Assessment of students' knowledge, skills, and practical competencies based on the digital report (Annexes 1–3);
2. Assessment of students' knowledge during the interview conducted as part of the practical training assessment, including oral questioning, the use of tests and/or case-based tasks, and demonstration of practical skills.

The FA procedure requires students to acquire and demonstrate the knowledge, skills, and practical competencies specified in the practical training program for second-year students in three content modules: Internal Medicine, Surgery, and Paediatrics.

Based on the results of the FA, each student receives three grades: Internal Medicine, Surgery, and Paediatrics. The arithmetic mean of these three grades constitutes the final grade for the practical training assessment, which is subsequently converted into points for the FA.

The final assessment is considered successfully completed if the student obtains at least 60% of the maximum FA score, i.e., at least 48 points. This number of ECTS points corresponds to the sum of the traditional grades of "3" (satisfactory).

Rating Matching Scale

The result obtained on a 200-point scale is converted into the traditional four-point system and the ECTS system according to the following table:

Grade in 200-point system	Grade on the traditional four-point scale	Grade in ECTS system
180-200	5	A
164-179	4	B
150-163		C
135-149	3	D
120-134		E
<120	2	FX

Annex 2. Digital report on the Work Completed During Nursing Practice Within the Scope of Duties of a Therapeutic Department Nurse (SIS)

Higher education students _____ 3rd-year student, Faculty of Medicine
No. ____, Group ____ Based at Municipal Hospital No. ____, City of _____

№	Content of practical training	Number of procedures performed	Score
1.	Completion of Medical Documentation in a Therapeutic Department, the Maintenance of Which Is the Responsibility of the Nurse	1-3-5	3-5
2.	Thermometry, measurement of blood pressure, and assessment of the pulse, with recording of the findings on the temperature chart. Working with the physician's orders sheet	5-7-10	3-5

3.	Methods and techniques for collecting blood samples for a complete blood count, blood glucose testing, and biochemical and bacteriological examinations	1-2-3	3-5
4.	Main routes of parenteral drug administration. Preparation of the treatment table for work. Methods and techniques for performing subcutaneous injections	1-3-5	3-5
5.	Main routes of parenteral drug administration. Preparation of the treatment table for work. Methods and techniques for performing intramuscular injections	1-3-5	3-5
6.	Administration of transfusion solutions and medicinal products. Methods and techniques for performing intravenous injections	1-2-3	3-5
7.	Rules for preparing infusion sets and performing intravenous infusions	1-2-3	3-5
8.	Basic rules for preparing patients for gastroscopy, sigmoidoscopy, colonoscopy, and ultrasound examination of the abdominal organs	1-3-5	3-5
9.	Methodology and technique of electrocardiogram recording. Analysis of its main components	4-6-8	3-5
10.	Main types of compresses. Techniques for applying cupping glasses and mustard plasters, and for using a heating pad and an ice pack	1-2-3	3-5
Maximum score			72-120

Annex 3. Digital report on the Work Completed During Nursing Practice Within the Scope of Duties of a Surgical Department Nurse (SIS)

Higher education students _____ 3rd-year student, Faculty of Medicine
No. ____, Group ____ Based at Municipal Hospital No. ____, City of _____

№	Content of practical training	Number of procedures performed	Score
1.	Measurement of blood pressure	2-4-6	3-5
2.	Temporary control of bleeding (pressure dressing, etc.)	2-4-6	3-5
3.	Definitive control of bleeding. Wound tamponade: technique and selection of materials. Application of fixation materials for bleeding control	1-2-3	3-5
4.	Determination of blood group and Rh factor	1-2-3	3-5
5.	Blood Group Compatibility Test. Detection of an Incompatibility Reaction and Subsequent Management	1-2-3	3-5
6.	Rh Compatibility Test. Actions in Case of a Positive Incompatibility Reaction	1-2-3	3-5

7.	Biological Compatibility Test. Monitoring of the Biological Compatibility Test. Observation of the Patient's Condition: Signs and Symptoms of a Transfusion Incompatibility Reaction. Decision on Continuing or Discontinuing the Transfusion Procedure	1-2-3	3-5
8.	Blood Transfusion Technique. Preparation for the Procedure: Verification of Donor Blood. Use of a Blood Transfusion Set: Setting Up the Drip Infusion. Monitoring the Patient's Condition During Transfusion	1-2-3	3-5
9.	Primary Surgical Wound Management. Skills in Performing and Preparing for Primary Surgical Wound Management. Wound Disinfection: Selection of Antiseptic Agents. Preparation of the Patient for Foreign Body Removal: Rules for Wound Cleansing. Preparation of Instruments for Applying Primary Sutures or Performing Wound Tamponade	1-2-3	3-5
10.	Secondary Surgical Wound Management. Assessment of Wound Healing: Visual Assessment and Removal of Purulent Material. Wound Revision: Collection of a Specimen for Antimicrobial Susceptibility Testing. Preparation of the Surgical Site	2-4-6	3-5
11	Application of Dressings. Simple Dressings: Types and Techniques of Application (circular, spiral, spiral dressing with reverses, figure-of-eight dressing, and recurrent dressing). Complex Dressings: "turtle," "eight-shaped," Desalt dressing for joints, bridle dressing, and spica dressing. Participation in and algorithms for applying immobilization dressings: plaster, plastic, and splint dressing	2-4-6	3-5
12.	Transport Immobilization. Immobilization of the Upper Extremities: Use of Splints and Orthoses. Immobilization of the Lower Extremities: Fixation from the Hip to the Foot. Patient Transportation: Basic Rules	2-4-6	3-5
13.	Organization of First Aid for Burns, Frostbite, and Electrical Injuries. Burns: Cooling and Application of Sterile Dressings. Frostbite: Gradual Rewarming and Application of a Thermal-Insulating Dressing. Electrical Injury: Termination of Contact with the Electrical Current and Resuscitation Measures	1-2-3	3-5
14	First Aid for Purulent Infection. Wound Cleansing: Disinfection and Removal of Exudate. Use of Drains: Indications for Drain Placement. Elements of Wound Dressing with Antiseptic Ointments	1-2-3	3-5
15.	Methods of Prevention and First Aid for Specific Infections. Prevention: Vaccination and Protective Measures. Antibacterial Therapy: Selection of Appropriate Agents. Post-Exposure Prophylaxis Following Contact with Infected Material	1-2-3	3-5
16	Artificial Respiration: Mouth-to-Mouth and Mouth-to-Nose Techniques. Mouth-to-Mouth Technique. Mouth-to-Nose Technique and Indications for Its Use. Monitoring the Patient's Condition: Assessment of Effectiveness	1-2-3	3-5

17	Artificial Ventilation Using a Bag-Valve Mask (Ambu Bag) and Defibrillator Use. Use of the Ambu Bag: Ventilation Technique. Defibrillator Connection and Setup: Shock Energy Settings. Monitoring the Results of Resuscitation	1-2-3	3-5
18	First Aid for Circulatory Disorders. Assessment of Breathing and Pulse: Rapid Assessment. Cardiac Massage: External Chest Compressions. Maintenance of Blood Pressure: Administration of Medications	1-2-3	3-5
19	First Aid for Foreign Bodies in the Body. Foreign Bodies in the Eyes and Respiratory Tract. Foreign Bodies in the Gastrointestinal Tract: Patient Support. Transportation to a Specialist for Removal	1-2-3	3-5
20	Methods of Drug Administration in Surgical Practice. Classification and Accessibility	2-4-6	3-5
Maximum score			72-120

Annex 4. Digital report on the Work Completed During Nursing Practice Within the Scope of Duties of a Paediatric Department Nurse (SIS)

Higher education students _____ 3rd-year student, Faculty of Medicine
No. ____, Group ____ Based at Municipal Hospital No. ____, City of _____

No	Content of practical training	Number of procedures performed	Score
1.	Completion of Medical Documentation in the Specialized Department	1-3-5	3-5
2.	Assessment of Vital Signs in a Sick Child: Measurement of Blood Pressure, Pulse Assessment, Temperature Measurement, and Evaluation of External Respiratory Function	2-4-6	3-5
3.	Administration of Medications to Patients According to the Medication Administration Record. Technique of Oral Administration of Medications to Children	2-4-6	3-5
4.	Inventory Management of Medications in the Treatment Room of the paediatric Department	1-3-5	3-5
5.	Administration of Subcutaneous and Intramuscular Injections	1-3-5	3-5
6.	Administration of Intravenous Injections and Infusions	1-3-5	3-5
7.	Collection of Throat and Nasal Swabs from paediatric Patients	1-3-5	3-5
8.	Collection of Stool and Urine Samples from Children for Various Laboratory Tests	1-3-5	3-5
9.	Mastering the Technique of Administering Humidified Oxygen to Children	1-3-5	3-5
10.	Mastering the Technique of Administering Eye, Ear, and Nasal Drops	1-3-5	3-5
11.	Mastering the Technique of Eye, Ear, and Nasal Care and Umbilical Cord Stump Care	1-3-5	3-5

12.	Administration of Nasal, Otic, and Ophthalmic Drops	2-4-6	3-5
13.	Technique for Performing Cleansing and Siphon Enemas; Familiarization with the Use of Medicated, Oil, Drip, and Hypertonic Enemas	1-3-5	3-5
14.	Use of a Bedpan and Urinal; Familiarization with the Use of a Rectal Gas Tube	1-3-5	3-5
15.	Provision of Hygiene Procedures for Skin and Mucous Membrane Care. Prevention of Pressure Injuries	1-3-5	3-5
Maximum score			72-120

9. Recommended Literature

Core Literature

1. Ashcheulova, T. V., Kovalova, O. M., & Sytina, I. V. (Comps.). (2018). *Praktykum z kursu "Sestrynska sprava u terapevtychnomu statsionari"* [Practical Coursebook for the Discipline "Nursing Care in a Therapeutic Inpatient Department"]. Kharkiv National Medical University. 41 p.
2. Babinets, L. S., Andriiuk, L. V., Velychko, V. I., et al. (2023). *Zahalna praktyka — simeina medytsyna: U 3 knyhakh. Knyha 1. Orhanizatsiia pervynnoi medychnoi dopomohy* [General Practice — Family Medicine: In 3 Books. Book 1. Organization of Primary Health Care]. Medicine. 448 p.
3. Iepishyn, A. V. (2020). *Propedevtyka vnutrishnikh khvorob z dohliadom za terapevtychnymy khvorymy* [Propaedeutics of Internal Medicine with Nursing Care of Therapeutic Patients]. Ternopil National Medical University "Ukrmedknyha." 766 p.
4. Kapusnyk, V., Lisovyi, V., & Olkhovska, L. (2018). *Osnovy medsestrynstva* [Fundamentals of Nursing]. Medicine. 912 p.
5. Kasevych, N. M. (2019). *Osnovy medsestrynstva v moduliakh* (3rd ed., rev.) [Fundamentals of Nursing in Modules]. Medicine. 480 p.
6. Kasevych, N. M., Petriashev, I. O., Slipchenko, V. V., et al. (2017). *Sestrynska sprava* (3rd ed., rev.; V. I. Lytvynenko, Ed.) [Nursing]. Medicine. 816 p.
7. Pasiečko, N., Yarema, N., & Martyniuk, L. (2019). *Praktychnyi posibnyk z vnutrishnoi medytsyny* [Practical Guide to Internal Medicine]. Medicine. 432 p.
8. Pasiečko, N. V. (Ed.). (2019). *Praktychnyi posibnyk z vnutrishnoi medytsyny* (2nd ed., rev.) [Practical Guide to Internal Medicine]. Pidruchnyk. 304 p.
9. Sabadyshyn, R. O., & Markovych, O. V. (2020). *Teoretychni i praktychni osnovy protsesu sestrynskoho dohliadu za patsientamy* [Theoretical and Practical Foundations of the Nursing Care Process for Patients]. Nova Knyha. 240 p.
10. Sakavka, L. S., Razinkova, L. I., & Kotsar, O. I. (2019). *Dohliad za khvorymy i medychna manipuliatsiina tekhnika* (4th ed.; L. M. Kovalchuk & O. V. Kononov, Eds.) [Patient Care and Medical Manipulation Techniques]. Medicine. 600 p.
11. Sakevych, V. D., Kazakov, Yu. M., & Trybrat, T. A. (2022). *Metodolohiia alhorytmiv vykonannia praktychnykh navychok z osnov medsestrynstva* [Methodology of Algorithms for Performing Practical Nursing Skills]. Magnolia 2006. 156 p.
12. Shehedyn, M. B., Bezkorovaina, U. Yu., & Datsko, L. P., et al. (2020). *Medsestrynstvo u vnutrishnii medytsyni* [Nursing in Internal Medicine]. Nova Knyha. 224 p.
13. Shumeiko, I. A., Lihonenko, O. V., Chorna, I. O., Zubakha, A. B., Dihtiar, I. I., & Storozhenko, O. V. (2015). *Osnovy dohliadu za khirurhichnymy khvorymy* [Fundamentals of Care for Surgical Patients]. 160 p.

14. Stasyshyn, O., Stasiuk, V., & Bandura, I. (2023). *Medsestrynstvo u vnutrishnii medytsyni* (6th ed., rev.) [Nursing in Internal Medicine]. Medicine. 565 p.
15. Sylovap, V. V., Lukashenko, L. V., Oliinyk, O. I., et al. (2017). *Osnovni oboviazky ta profesiini dii medychnoi sestry terapevtychnoho viddilennia* [Main Duties and Professional Activities of a Nurse in a Therapeutic Department]. 112 p.
16. Tarasiuk, V. S., Tytarenko, H. H., Palamar, I. V., et al. (2021). *Medsestrynstvo v pediatrii* (2nd ed.; V. S. Tarasiuk, Ed.) [Nursing in Pediatrics]. Medicine. 336 p.

Additional Literature

1. Dronov, O. I., Syplyvyi, V. O., Kovalska, I. O., Skomarovskyi, O. A., & Kriuchyna, Ye. A. (2011). *Kurs leksii z zahalnoi khirurhii* (2nd ed., suppl.) [A Course of Lectures on General Surgery]. 487 p.
2. Volosovets, O. P., Markevych, V. E., Tarasova, I. V., & Loboda, A. M. (2011). *Neonatalogiia* [Neonatology]. Sumy State University. 214 p.
3. *Propedevticheskaia pediatriia* (V. H. Maidannyk, Ed.). (2017). [Propaedeutic Pediatrics: A Textbook for Students of Higher Medical Educational Institutions]. Nova Knyha. 888 p.

10. Additional Information Resources

1. Official website of Donetsk National Medical University — <https://dnmu.edu.ua/en/>
2. V. I. Vernadskyi National Library of Ukraine — <https://www.nbuv.gov.ua/>
3. Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy at the Ministry of Health of Ukraine — <https://www.testcentr.org.ua/en/>