

MINISTRY OF HEALTH OF UKRAINE
Bogomolets National Medical University
Department of Pediatrics №2

GUIDELINES
to practical (seminar) classes
FOR STUDENTS

Educational discipline OK30 Pediatrics with children's infectious diseases
Discipline "Health care"
Specialty 222 "Medicine"
Department of Pediatrics № 2

APPROVED at the meeting of the Department of Pediatrics № 2 from August 27, 2026,
protocol № 1

Reviewed and approved by: Center for Pediatric Disciplines from August 28, 2026
protocol № 1

Lesson topic: Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby.

Competencies:

- To analyze the causes of perinatal and neonatal mortality.
- Determine the indications for the transfer of the newborn to perinatal centers of the III level.
- Assess the condition of the newborn according to the Apgar scale.
- Assess the gestational age of the newborn using the Ballard scale of neuromuscular and physical maturity.
- To determine the correspondence of the child's physical development to the gestational age.
- Assess for signs of respiratory failure using the Downes, Silverman-Anderson, and simplified WHO scales.
- Carry out a medical examination of the newborn.
- Determine the plan for the prevention of hemorrhagic disease, vaccination and screening examination of the child.

Purpose: Formation of professional competences to achieve the program results of training on diagnosis, treatment and prevention of diseases and their complications in newborn children.

Equipment: newborn baby dummy, set for artificial lung ventilation and oxygen therapy, neonatal stethoscope, pulse oximeter, diapers, disposable gloves, hand sanitizer.

Lesson plan and organizational structure

<i>The name of the stage</i>	<i>Description of the stage</i>	<i>Levels of assimilation</i>	<i>Time</i>
Setting educational goals and motivation Control of the initial level of knowledge, skills, and abilities	Organizational issues. Test control. Individual oral survey. Frontal interview. Learning motivation: The main task of neonatology is to preserve the life and health of children aged from birth to 28 days of life. It is believed that this age period of a person is the most important in the life of children. Knowledge of the features of the neonatal period, the principles of diagnosis and treatment of newborns will help improve the quality of life and ensure the further harmonious development of the future generation. Control of the initial level of knowledge (test control and oral survey):	*	25 min

	1. Which provision regarding the provision of medical care for a healthy newborn baby in the delivery room is correct? <i>A. Immediately after the birth of the child, the midwife places the child on the mother's abdomen, dries the child's head and body with sterile, dry, preheated diapers.</i> B. Immediately after the birth of the child, the midwife, changing the sterile gloves, clamps and cuts the umbilical cord and transfers the child to the mother's breast. C. Immediately after birth, the midwife helps to carry out the first early attachment of the baby to the mother's breast. D. Immediately after the birth of the child, the midwife measures the newborn's body temperature in the axillary region with an electronic thermometer. E. Immediately after the birth of the child, the midwife, after treating the hands, provides prophylaxis of ophthalmia to the newborn with the use of antibacterial drugs. 2. Which step of the thermal chain is correct? A. The temperature in the delivery room (operating room) is 22-24°C. <i>B. Immediate drying of the child immediately after birth with heated diapers.</i> C. «Skin-to-skin» contact should be within 30 minutes. D. Start breastfeeding 2 hours after birth. E. It is advisable to take the first bath after «skin-to-skin» contact. 3. Which sign of physical maturity according to the Ballard scale is characteristic of a mature newborn child? A. The skin is gelatinous, red. B. Many lanugo. <i>C. There are folds on the entire surface of the sole.</i> D. Flat areola of the breast gland. E. The auricle is soft, almost not twisted.		
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	4. Which rule of care for the umbilical cord remnant and umbilical wound is incorrect? A. Mandatory thorough hand washing. B. The umbilical cord remnant should not be covered with bandages. C. There is no need to treat the umbilical cord remnant with antiseptics, provided that early «skin-to-skin» contact between mother and child is ensured, followed by a joint stay. D. The child can be discharged home with an umbilical cord remnant that does not show signs of infection, provided that the medical staff provides training and the mother acquires the skills to care for the umbilical cord remnant. <i>E. In case of contamination of the umbilical cord residue (urine, stool), treat with antiseptics.</i> 5. Which rule for vaccinating newborns against hepatitis B is correct? A. Vaccination is carried out without the mother's informed consent. B. All healthy newborns are subject to vaccination against hepatitis B before discharge from the maternity hospital. <i>C. Routine preventive vaccination of children against hepatitis B (1 dose) is carried out at the age of 2 months.</i> D. Vaccination is not carried out if there is probable contact with an HBsAg “+” (positive) person in the family environment (cohabitation or care of a child). E. The vaccine is administered intradermally to newborns.		
The main stage Analysis of theoretical material Treatment of patients	Methods of skill formation: professional training, solutions to tests, typical problems a) demonstration of the thematic patient by the teacher; b) independent work - curation of patients (collection of anamnesis, objective observation, preparation of a preliminary diagnosis, preparation of an examination and treatment plan);	** * **, ***	120 min

	c) clinical examination of the patient with the participation of the teacher. Differential diagnosis, evaluation of clinical data, results of laboratory and instrumental research, treatment; d) acquisition and practice of practical skills	* , ** , *** ** , ***	
The final stage Control of the final level of training General evaluation of the student's educational activity Informing students about the topic of the next lesson	Skills control methods: individual control of practical skills and their results. Analysis and assessment of work results. Control of the final level of training (situational tasks): 1. A newborn child from the 1st pregnancy at 39 weeks, the 1st physiological delivery was born with a weight 3200 g, a height 52 cm. Condition at birth: skin is pink, acrocyanosis, loud cry, reaction to tactile stimulation is active, there is spontaneous motor activity, heart rate - 130 per minute. Assess the condition of the child according to the Apgar scale (number of points), compliance of physical development indicators with gestational age according to centile indicators. To which gestational age group does the child belong? Reply: The Apgar score is 9 points. The physical development of the child corresponds to the gestational age, the body weight of the full-term child corresponds to the 50th percentile, height - the 90th percentile. Full-term baby. 2. A newborn child from the 1st pregnancy, the course of which was complicated by preeclampsia, was born at the 37th week of the 1st delivery with a weight 1800 g, a height 42 cm. Condition at birth: pink skin, acrocyanosis, loud cry, reflex reaction to suction from the upper respiratory tract, a reaction in the form of a grimace, slight flexion of the limbs, no spontaneous motor activity, heart rate - 100 per minute. Assess the condition of the child according to the Apgar scale (number of points),	*	35 min

	compliance of physical development indicators with gestational age according to centile indicators. To which group does the child belong according to gestational age and body weight? Reply: The score on the Apgar scale is 7 points. The physical development of the child does not correspond to the gestational age, the body weight is less than the 10th percentile, the height corresponds to the 10th percentile. A premature baby. Low birth weight.		
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Learning levels: * introductory, ** reproducible, *** reconstructive, **** creative.

Recommended reading:

1. Pediatrics (neonatology, hematology, endocrinology): Teaching and methodological manual / Edited by O.P. Volosovets. – Kyiv: MEDPRINT, 2023. – 432 p.
2. Nelson Textbook of Pediatrics, 2-Volume Set, 20th Edition, 2020 by Robert M. Kliegman, Bonita M.D. Stanton, Joseph St. Geme and Nina F Schor, 5315 p.
<https://www.eu.elsevierhealth.com/nelson-textbook-of-pediatrics-2-volume-set-9781455775668.html>
3. Bayle A.L. Gestational age: website. MSD Manual, 2025. URL: <https://www.msdmanuals.com/uk/professional/pediatrics/perinatal-problems/gestational-age> (дата звернення: 29.07.2026).
4. On approval of the Procedure for organizing the provision of perinatal and neonatal care: Order of the Ministry of Health of Ukraine dated 08.05.2026 No. 599 / Ministry of Health of Ukraine. – Kyiv, 2026. – Registered with the Ministry of Justice of Ukraine on May 22, 2026 under No. 728/46122.
<https://ips.ligazakon.net/document/re46122>
5. On approval of the Unified Clinical Protocol of Specialized Medical Care "Initial, Resuscitation and Post-Resuscitation Care for Newborns": Order of the Ministry of Health of Ukraine dated 03/26/2025 No. 536.
<https://www.dec.gov.ua/mtd/pochatkova-reanimacziyna-ta-pislyareanimacziyna-dopomoga-novonarodzhennyh/>
6. On approval of the Unified Clinical Protocol for secondary (specialized) and tertiary (highly specialized) medical care "Respiratory distress syndrome in premature infants": Order of the Ministry of Health of Ukraine dated 05.05.2021 No. 873.
<https://zakon.rada.gov.ua/rada/show/v0873282-21#Text>
7. On ensuring expanded neonatal screening in Ukraine: Order of the Ministry of Health of Ukraine dated 01.10.2021 No. 2142 (as amended by the orders of the Ministry of Health of Ukraine dated 12.11.2021 No. 2523, dated 09.06.2022 No. 991, dated 13.10.2022 No. 1867). Registered with the Ministry of Justice of Ukraine on October 29, 2021 under No. 1403/37025.

<https://zakon.rada.gov.ua/laws/show/z1403-21>

8. On the procedure for conducting preventive vaccinations in Ukraine and quality control and circulation of medical immunobiological preparations: Order of the Ministry of Health of Ukraine dated 09/16/2011 No. 595 (as amended by the orders of the Ministry of Health of Ukraine dated 08/11/2014 No. 551, dated 09/26/2016 No. 996, dated 05/18/2018 No. 947, dated 04/23/2019 No. 958, dated 10/11/2019 No. 2070, dated 07/03/2020 No. 1510, dated 02/01/2022 No. 190, dated 07/18/2024 No. 1254, dated 03/05/2025 No. 396, dated 11/14/2025 No. 1722). Registered with the Ministry of Justice of Ukraine on October 10, 2011 under No. 1159/19897.

<https://zakon.rada.gov.ua/laws/show/z1159-11#Text>

9. On approval of the Procedure for providing medical care for organizing screening and diagnostics of hearing impairments in children: Order of the Ministry of Health of Ukraine dated 04/29/2025 No. 736. URL: <https://moz.gov.ua/> (date of application: 08/24/2026).

<https://zakon.rada.gov.ua/laws/show/z0746-25#Text>

10. EFCNI, Koletzko B, Buonocore G et al., European Standards of Care for Newborn Health: Prevention of vitamin K deficiency bleeding (VKDB) at birth. 2022.

11. Ivan Hand, Lawrence Noble, Steven A. Abrams; COMMITTEE ON FETUS AND NEWBORN, SECTION ON BREASTFEEDING, COMMITTEE ON NUTRITION, Vitamin K and the Newborn Infant. Pediatrics March 2022; 149 (3): e2021056036. 10.1542/peds.2021-056036.

12. New ballards score for gestational age assessment.

<https://www.youtube.com/watch?v=pAWjTRzQxAs>

13. New Ballard Score Chapter 1. <https://www.youtube.com/watch?v=-Q0tpBHkY7M>

14. New Ballard Score Chapter 2. <https://www.youtube.com/watch?v=H5iNDcDgnkM>

15. New Ballard Score Chapter 3.

https://www.youtube.com/watch?v=m6Xn05PnC1Y&list=RDm6Xn05PnC1Y&start_radio=1

Questions for student self-preparation for practical classes:

1. Indicators of perinatal and neonatal mortality.
2. Principles of regionalization of perinatal care.
3. List of medical indications for referral of newborns for medical care in perinatal centers of level III.
4. Sequence of actions when providing medical care for a healthy newborn in the delivery room.
5. Ten steps of the "heat chain".
6. Assessment of adaptation indicators of the newborn. Apgar scale.
7. Algorithm for the initial examination of a newborn.
8. Assessment of the correspondence of the morphological and functional maturity of the newborn and the physical development of the newborn to the gestational age.

9. Assessment of the degree of respiratory failure according to the Downes, Silverman-Anderson scale or the simplified WHO scale.
10. Components of co-housing, contraindications to co-housing.
11. Rules for caring for the umbilical cord, umbilical cord remnant, umbilical wound and skin of the newborn.
12. Prevention of hemorrhagic disease of the newborn.
13. Vaccination of newborns.
14. Screening of newborns.
15. Hearing screening of newborns.

The methodological development was compiled by Assoc. Prof. Shevtsova T.I., Asst. Prof. Slyusar N.A.