



SCIENTIFIC-METHODICAL BACKGROUND SYSTEM OF MEDICAL STUDENTS' EDUCATION FROM DISCIPLINE CHILD'S SURGERY, ORTHOPAEDY AND TRAUMATOLOGY IN UKRAINE
НАУЧНО-МЕТОДИЧЕСКАЯ ОСНОВА СИСТЕМЫ МЕДИЦИНСКОГО ОБРАЗОВАНИЯ СТУДЕНТОВ ПО СПЕЦИАЛЬНОСТИ «ДЕТСКАЯ ХИРУРГИЯ, ОРТОПЕДИЯ И ТРАВМАТОЛОГИЯ» В УКРАИНЕ

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Abstract .Improvement preparation of specialists is a national task, standing before specialists of a higher school. In the conditions of the higher medical education reformation and innovative transformations of the society in Ukraine increasing requirements to the quality of doctors' preparation. Requirements to a quality of preparation doctors increasing constantly, that carried out to the search of new forms and methodologies of educational process. Standartization of educational process, using different forms of educating, should be focused on the maximal realization of self-preparation activity and initiativeness of students, which are laying on a basis of Bologna process. Future doctor is, foremost, a specialist, which must be able to make a decision oriented on the life and health of his patients.

The important task at the creation of any program is development the system of estimation knowledge and skills of students in points. Current, intermediate and final control is documented in the individual plan of educational process of student. In this document, converting the amount of points is carried out estimations by a scale ECT.

Fungal development in the area of medical knowledge and proposes of an innovative transformations of society should provide a new system of requirements and education tasks. Perfection of the teaching methods, development and progress of new forms of teaching, acquire on a modern stage an important value in the student preparation.

On the condition of observance all enumerated requirements, after graduation from the institution, government should get a formed skilled specialist capable independently and together with colleagues to accept the self-weighted decisions in a certain real situation, using in their professional activity those high spiritual qualities, which chould formed and developed his teachers in the process of educating, taking into account changes in our society.

Keywords: Bologna process, child's surgery, educational process, independent work of students.

Introduction.

Improving professional training is a state task for the experts of higher



education. In terms of reforming a higher medical education and innovative transformation of society in Ukraine are increasing demands for quality of the doctors training. In a context of Bologna process provides harmonization of educational process, using various forms of training designed to the independence and initiative activity of students. Training of self-employment with using innovative technologies – is one of the main tasks of higher education.

Independent work of students (IWS) contributes to this problem. According to the requirements of European credit transfer system to the self-study includes an independent student classroom work, under the guidance of a teacher and independent work of students outside of the classes.

Curriculum "Pediatric Surgery" should be based on a typical cross-cutting curriculum "Surgery" and involves the study of this discipline at the V -VI courses of education in the speciality "Medicine" and "Pediatrics."

Quality of training doctors is constantly growing, requiring new forms and methods of conducting the educational process. In the standard of Bologna system supposed to unify the educational process, using various forms of training designed to the independence and initiative activity of students. The future doctor is primarily a specialist, which should be notable to independently decide the problems, which focused on the life and health of his patients.

Results and discussion.

For building a training program, according to the credit-transfer basis were included elements of IWS to each module, which carried out educational distribution of hours allocated to an individual work and preparing of educational tasks for independent work.

At 5-course students should study the following independent work of students (IWS) with mandatory supervision of a teacher in the practical classes or exams:

№	Theme	Number of hours	Type of control
1.	Preparation for practical classes - theoretical preparation and practical skills.	4	Current control on practical classes
2.	Independent study of themes which are not included to the plan of classes:		
2.1	Deontology of a childhood.	1,0	
2.2	Features of antibiotic treatment at the children.	1,0	
2.3	Rare forms of inactivation of the intestines at the children.	1,0	
2.4	Babies have complication of the festering-used for setting inflammation diseases.	1,0	
2.5	Children have a puncture of joints.	1,0	
2.6	Toxic-septic shock at the children.	1,0	
2.7	Laparocentesis at the children.	1,0	
2.8	Laparoscopy technique at the children.	1,0	



2.9	The possibilities of ultrasound at the children.	1,0	
3.	Individual independent work of students by one of the theme on a choice: Review of the scientific literature on a choice	2,0	Current control on practical classes
	Totally	15	

At 6-course students should study the following independent work of students (IWS) with mandatory supervision of a teacher in the practical classes or final modular control:

№	Theme	Number of hours	Type of control
1.	Preparation for practical classes - theoretical training and practical skills development.	5	Current control on practical classes
2.	Self-study of themes, which are not included to the classroom plan:		
2.1	Endoscopic methods of operations.	1,0	Final module control
2.2	Emergency at the respiratory failure.	1,0	
2.3	Emergency care at the renal failure.	0,5	
2.4	Urgent help in a case of cerebral edema.	0,5	
2.5	Differential diagnostics of hydronephrosis.	0,5	
2.6	Emergency care in a case of liver failure	0,5	
3.	Individual independent work of students by one of the theme on a choice: Review of the scientific literature on a choice	3	Current control on practical classes
	Totally	12	

For qualitative performance of IWS, firstly, the methodical, material - technical and informational-computer support, should be prepared by the department. But activity of the students should be very important. The principle of activity in learning of a subject should not be interpreted as adapting of students to the new curriculum, but as an independent mastery of learning material, which were based on their own experience. An important source of cognitive activity is the experience of creativity, which provides students with both mastering the material and its transformation. At this stage, the teacher's role in the curriculum is very important. During practical classes is provided a thematic patient, which includes the collection of anamnesis, preparation plan of the examination and treatment of the patient, acquisition of the special diagnostic tools and some methods of laboratory research, evaluation of the results, definition of rational treatment tactics, development of diagnostic and



treatment algorithms, and acquisition of the practical skills. Individual plan of the educational process created at the department foresees at each lesson the acquisition of practical skills. In order to fulfill this part of independent work, presence of visual devices, dummies and educational films is primary important. By solving situational problems, we add students' knowledge of this topic. Upon completion of the several educational elements, the given program planning to conduct an intermediate control of knowledge. A student receives clinical situational task, which he carries at the extra-auditorium independently. Results of the classroom independent work must be documented at an individual curriculum. Compulsory condition for effective independent work of the student is the participation of teacher in all stages of study. Consultations, as one of the types of independent activities, are conducted by the teacher during semester and before the final occupation. These auditorium hours of independent work are regulated by the program.

An important task for creating the program is development a system for assessing students' knowledge and skills in points. The current, intermediate and final control is documented in an individual plan of the student's educational process. This document also provides the conversion a number of points in the assessment on the scale ECTS.

Non-auditing independent work, in addition to the training for practical classes, current and intermediate control, involves performing of individual work and aims at the deepening, generalizing and consolidating knowledge, applying this knowledge in practice. It involves not only the study of additional scientific literature, but the preparation of abstracts, reports, an implementation of research work. Result of the research work may be preparation of report from the scientific and practical conference. Systematization, deepening and synthesis, consolidation of the obtained data can be carried out during sessions of a student's scientific circle and in the clinic condition. During this type of activity, conditions have been created for self-realization of practical skills, in-depth study of discipline. Execution of experimental research is a special section of individual independent activity of the student and not all students could involved in it. Some of practical skills are performed in the pathological-anatomic department. Result of this activity can be reports, articles. But the main thing is the creativity of the student, which deserves the highest marks.

Activity and productivity of independent work will depend on the student's skillful knowledge from the method of mastering knowledge, ability to work with the reference material, primary sources, using various forms of control during the execution of work, objectivity and transparency of daily assessment of knowledge and during the credits. We considered that such organization of independent work of students will draw them to the systematic inquisitive understanding of a new, independent consideration of the program material.

For compliance all of these requirements – independent work is an important link in the formation of qualified specialist, able to independently make informed decisions in a particular real situation.

Secondly, one should not neglect a postgraduate education. To improve the postgraduate training of interns should be on every department of child's surgery. New approaches to the diagnosis of developmental deficits and surgical diseases in



the children, new technologies of treatment, first of all, require revision of the standard curriculum and program of specialization (internship) for graduates of the higher medical educational institutions III-IV level of accreditation in the specialty "Pediatric Surgery".

Fast development of knowledge and innovative transformation of society sets the new requirements and objectives for education system. Improvement of teaching methods, development new forms of teaching carried out at the present stage a great importance of the student preparation.

In a process of reforming medical education, according to the requirements of Bologna Declaration, one of the most important and complex problems in the preparation of doctor remains the problem of formation medical thinking. First of all, you need to know how changing outlook of young people in the modern conditions and their relation to the future profession. Sociological survey of senior students showed that 84 % of adult students chose a profession by vocation, 12 % continued medical dynasty, and the rest respondents – because of its prestige. Most of the respondents (79%) found the attractiveness of a profession not in enrichment, but in the high professionalism. Thus, the main task of teaching staff in the department should be directed to qualitative training of the doctor.

For a qualitative training of future specialists in the field of "children's surgery", our department, which is the basic in this field of study, created a necessary methodological, material-technical and informational-computer support. But activity of the students should be primary important. Principle of activity in learning should be interpreted not as an adaptation of students to the new curriculum, but as the independent mastery of educational material, based on their own experience, using variety of resources, i.e. electronic. An important source of cognitive activity is the experience of creativity, which provides students with mastering of the material and its transformation. In this stage, the teacher's role in the curriculum is very important. During practical classes it is supposed to course the thematic patient, to master special means of diagnostics and some methods of laboratory research, including films, developed by the employees, and using of innovative technologies. In the professional sense, art of communicating with a sick children and their parents is very important. Relationship between the sick children and a doctor depends not only on the individual peculiarities of a child, his psyche, but on the personality and behavior of the doctor, his general and professional culture, adherence to the principles of ethics and deontology, deep inner of religious feeling, as the expression of compassion for the sick children and their parents. This is primarily due to the spirituality is a part of formation, which should be provided by the teacher in his personal example, taking into account the innovative transformations of our society. Direct obligation of the doctor – is destroyed the psychological obstacle, find an approach and trust at the children and their parents, creating conditions of compassion and warmth. Culture of speech in these processes is far from the last role. Overcoming communicative obstacles between a future pediatrician and a sick child should begin at the junior high school and should be improved throughout the course of teaching with the help of teachers.

"One technology is not enough. Only technology in the alliance with the



humanities sciences gives the result that makes one singing" – these words of Steve Jobs make us to teach our students with wise, kind, eternal, patriotism and devotion to the cause and people. We must know well about the past and present of Ukraine, be able to predict the future.

It is known that the most beautiful words will not find a response in the minds of students, if their confidence to the teachers, department, and its traditions disappears. Students should know that many scientists, talented doctors, and healthcare managers came to the department from the walls of the university, where they were study. Educational work at the department is aimed at the disclosing before the students scientific directions, priorities of the department. In the first lecture to the students, teacher should tell them about founders of a child's surgery in the country, in our city, and about previous leaders of the clinic, professors Khristich A.D., Syagaylo P.T., associate professor Gladkyi P.M., who have made a significant contribution to the development of modern technologies, used in the pediatric surgery.

Education of students is constantly carried out through the educational process. From the first session in a cycles of pediatric surgery, teachers conduct interviews, where an ability to correctly talk, think, correctly and clearly formulate their thoughts should be carried out. Passing the younger experience of the older generation, teachers as examples of future physicians, develop such features as intelligence, compulsive, sensitive attitude to the patient.

"When we come to the kids and see the joyful smiles and eyes of these little children, we understand how important this communication is," students say.

One of the ways of educating students at the department is to attract students to the work in a student scholarly circle (CIS). Work in the CIS gives the opportunity to form at the pupils such features as confidence, purposefulness, persistence, and ability to reasonably organize their time. The students' interest at working in the circle is encouraged by the following forms, such as reports of the teachers at the department from different sections of surgery, demonstration of patients, evening rounds of patients with circles members, working in a dressing room. Thus, educational work is carried out through the inculcation of students with features of professionalism, love to the specialty through their own example.

During training of foreign students, in addition to the above problems, we faced with an inadequate language of training and different religious beliefs; therefore, the teacher must supervise, in order to improve the educational process and independent extra-curriculum work of foreign citizens, seeking and impartial the high moral and spiritual qualities, that are shared at all peoples in the world, bypass some information resources, content of which contradicts their religious beliefs, but without loss of informative content for the learning of disciplines.

Occupational practice begins with the first courses of training is an extremely important part of the process and requires major changes. In organizing and conducting of occupational practices, we are facing with such difficulties. Training of a general practitioner involves the ability to work with patients with therapeutic, surgical and pediatric profiles. There is a need to transfer students from one department to another. Only a single organizational approach, clear methodological support and development of innovative technologies by students could help to



achieve goals of the occupational practice. This task can be accomplished at the formation of an individual plan of practice, which allows you to master the necessary skills in profile divisions. Team's work of students from different courses is well organized. Communication of senior students with sick people takes place with the participation of the junior students, which helps them to gain experience.

It is a well-proven students participation on duty in the clinic conditions. Duty in a clinic allows the student to master various practical skills. It is particularly important to teach child's doctor to communicate not only with patients but also with their parents. Level of education of doctor depends on the health of a child.

Another important form of education in our opinion is creation centers for medical and social rehabilitation for the single, disabled, and socially unprotected citizens. Center works during extracurricular hours, students are duty in the departments as the junior nurses and nurses. Students provide medical care to all patients which need it. This increases the autonomy and cognitive activity of students. In addition to the medical care, students carry out educational work, which is simultaneously educates themselves.

Compulsory condition for the development of a spirituality and professional culture of students, is considered, participation of teacher in all stages of study. Consultations, as one of the types of development these ambiguities, are conducted by the teacher during semester and before a final occupation.

Non-auditing independent work, in addition to the preparation of practical classes, to the current and intermediate control, involves performing of an individual work. Its major purpose is deepening, generalization and consolidation of knowledge, application of this knowledge in the practice, which creates the ability to form communicative and professional skills of a future doctor. But the basic thing is the initiative, student's creativity, which deserves the highest grade and contributes to the improvement of his spiritual and professional qualities. Control this type of work is also carried out by the teacher, or by solving situational problems, computer testing of students and other innovative technologies, which makes certain conclusions about the student's mastering of a subject.

Training program envisages an increase complexity of sections from pediatric surgery with numerous years of interns training. Today, the urgent problems of the interns' training in a specialty «Child's surgery» are the following objectives. Each section of a program is assimilated during 3 years. The gaps in these sections do not allow interns to find out a complete integrity of the material, which was described, for example, proctological diseases. Part of this material, which was studied in the first year of study, is already forgotten. All this requires repetition and distracts from the present. It is difficult to carry out tests on the basic sections of pediatric surgery.

Dean's Office of Postgraduate Faculty in the State Establishment «DMA Ministry of Health of Ukraine» requires the implementation of working plans for each year of training, in accordance with a typical program, that provides unification of educational process. Therefore, department is not able to make the substantiated adjustments. At the result – there is a contradiction. The program includes 15 sections or courses of pediatric surgery. Each of them is designed for the appropriate number of hours for lectures, practical classes, seminars. Success of each section is



taken into account. Poor performance of the individual sections also requires, in our opinion, an increased number of academic hours in the next year, which should be taken from another section.

In our view, general issues of pediatric surgery, polyclinic surgery, basis of traumatology and orthopedics, burns and freezing, additional and related disciplines can be fully studied in the first year of internship (936 hours). Abdominal surgery, surgical infection, proctology should be carried out in the second year of study (644 hours), and the special sections: thoracic surgery, neonatal surgery, oncology, urgent surgery in the urology and gynecology carried out in the third year of study (332 hours). All this corresponds to the terms of training for the official program.

Staff of the pediatric surgery departments in the majority of medical institutions of Ukraine often asks questions, whether it is necessary to improve the postgraduate training of interns, by providing a credit transfer system of education. Dnipropetrovsk Medical Academy having such experience at the Department of Faculty Surgery and Interns' Surgery. Pediatric Surgery Department was also involved. Credit-modular system of education involves an assessment of module "Pediatric Surgery" and content modules, which it desirable to evaluate completely in a separate year of study, not to distribute it for 3 years. It was sustained. The discipline was studied in the separate parts. If the discipline is fully studied, the improvement should be aimed at the identifying years of study in a full-time part of internship and determining number of modules and content modules.

Complexity of studying a separate discipline is measured by the European system of credit units (ECTS). In the ECTS system, 60 credits (1800 hours) correspond to one year of study, 30 credits – to one semester. Generally, it corresponds to the hours of the program, taking into account adjacent and additional disciplines (1872 hours). All of this should facilitate the academic mobility of studying, free access to all educational services.

Unfortunately, neither mobility nor educational services in the departments are provided. For these goals, you need computer classes for interns, corresponding programs, which require a separate budget.

Implementation of the credit-module system is reduced to the development number of points for the test control, situational tasks, and student's surveys. According to the situational task, points for the differential diagnosis, clinical diagnosis and treatment program are taken into account. The appropriate amount of points for practical skills and filling of the medical documentation is displayed.

Our education, first of all, – is a fundamental, systemic, and continuity related to the high standards of native education, necessary condition of which is a comprehensive development of intelligence and reproduction of traditional culture. This objectives should be introduced in Europe, but not instilled a tolerance and consumption.

Lack of a systematic approach to the learning destroys formation of a person with the holistic, creative looking on the circumstances. Testing system neglects the personality of a teacher and essentially of the educational process itself. To transfer experience, carried out life examples, modern information is essential elements in the system of medical education. Therefore, Bologna Convention implies a mandatory



transition to the deprivation individuality of the relationship between "teacher- and those, who study."

According to the new standards of training, young specialist should be able to widely use a new information technologies, working with reference material, primary sources, using innovative technologies. All above promotes education of medical communication of the future doctor in his professional culture.

Conclusions.

In the modern socio-economic conditions it is impossible to form a specialist by disconnecting him from reality, processes taking place in a society. Therefore, search of opportunities for the provision of material, humanitarian assistance to disadvantaged children, at the same time, forms a civil activity, without which, in modern conditions, medical care is practically impossible. Thus, using along with traditional forms of education – education through the community centers – is perspective. On the one hand, this is a hassle and a lasting process. On the other hand, it should significantly help to improve the training of specialist, and his spiritual qualities.

Typical curriculum of post-graduate training for the surgeon-pediatrician should be refined and updated. Each section of the discipline should have a finished result. Complications are spent not by the topics, but on the sections of pediatric surgery. Transition to a credit transfer system in the internship is a premature and should not be carried out as the "fashion" on it. Primary, it should ensure the effectiveness of the educational process. In the today's socio-economic conditions, it is impossible to form a specialist by disconnecting him from reality, which is far from desirable in the economic point of view. Therefore, search of opportunities for provision of the material, humanitarian assistance to deprived children, forms a civil activity, without which, in the modern conditions, medical care is practically impossible. Thus, using along with traditional forms of education - education through the community centers - is primary nessesity. However, this is a hassle and lasting process. It would greatly help to improve training of a specialist.

In a case of compliance all these requirements after graduation from the higher medical institutions, the country received a well-educated qualified specialist, able to independently make informed decisions in a particular real situation himself and with colleagues. Finaly, a specialist should use in his professional activity the high spiritual qualities, which were forming and developing by the teachers in a process of learning, taking into account a numerous changes in our society.