



Наукові перспективи  
Видавнича група



## СУЧАСНІ АСПЕКТИ МОДЕРНІЗАЦІЇ НАУКИ: СТАН, ПРОБЛЕМИ, ТЕНДЕНЦІЇ РОЗВИТКУ

у рамках роботи Видавничої групи  
*"Наукові перспективи"*

Матеріали XLII Міжнародної науково-  
практичної конференції (07 березня 2024 року,  
м. Мілан (Італія) дистанційно)



Мирного неба!  
Більшої України!



**Міжнародний економічний інститут (Есеніце, Чехія)**  
**Central European Education Institute (Братислава, Словаччина)**  
**Національний інститут економічних досліджень (Батумі, Грузія)**  
**Казахський національний університету імені аль-Фарабі (Казахстан)**  
**Інститут філософії та соціології Національної Академії Наук**  
**Азербайджану (Баку, Азербайджан)**  
**Батумський навчальний університет навігації (Батумі, Грузія)**  
**Регіональна Академія Менеджменту (Казахстан)**  
**Всеукраїнська Асамблея докторів наук з державного управління**  
**(Київ, Україна)**  
**Асоціація науковців України (Київ, Україна)**  
**Університет Новітніх Технологій (Київ, Україна)**  
**Міждержавна гільдія інженерів консультантів (Київ, Україна)**  
**Інститут освіти Азербайджанської республіки (Баку, Азербайджан)**

*у рамках Видавничої групи «Наукові перспективи»*

## **СУЧАСНІ АСПЕКТИ МОДЕРНІЗАЦІЇ НАУКИ: СТАН, ПРОБЛЕМИ, ТЕНДЕНЦІЇ РОЗВИТКУ**

*Матеріали XLII-ої Міжнародної науково-практичної конференції  
07 березня 2024 року, м. Мілан, Італія (дистанційно)*

**2024 р.**

**International Economic Institute s.r.o. (Jesenice, Czech Republic)**  
**Central European Education Institute (Bratislava, Slovakia)**  
**National Institute for Economic Research (Batumi, Georgia)**  
**Al-Farabi Kazakh National University (Kazakhstan)**  
**Institute of Philosophy and Sociology of Azerbaijan National Academy of  
Sciences (Baku, Azerbaijan)**  
**Batumi Navigation Teaching University (Batumi, Georgia)**  
**Regional Academy of Management (Kazakhstan)**  
**Ukrainian Assembly of Doctors of Sciences in Public Administration  
(Kyiv, Ukraine)**  
**Association of Scientists of Ukraine (Kyiv, Ukraine)**  
**University of New Technologies (Kyiv, Ukraine)**  
**Interstate Consultants Engineers Guild (Kyiv, Ukraine)**  
**Institute of Education of the Republic of Azerbaijan (Baku, Azerbaijan)**

*within the Publishing Group “Scientific Perspectives”*

# **MODERN ASPECTS OF MODERNIZATION OF SCIENCE: STATUS, PROBLEMS, DEVELOPMENT TRENDS**

*Materials of the 42th International Scientific and Practical Conference  
March 7, 2024, Milan (Italy)*

**2024**

DOI: <https://doi.org/10.52058/42>

УДК 001.3-048.35:0/9](06)

C91

*Схвалено до друку Президією Всеукраїнської Асамблеї докторів наук з державного управління (Рішення № 2/3-24, від 04.03.2024)*



Матеріали конференції індексуються у міжнародній пошуковій системі Google Scholar

### **Організаційний комітет конференції:**

*І.В. Жукова* – кандидат наук з державного управління, доцент; *Є.О. Романенко* – доктор наук з державного управління, професор, Заслужений юрист України; *О.М. Непомнящий* - доктор наук з державного управління, професор, Заслужений будівельник України; *О.І. Дацій* - доктор економічних наук, професор, Заслужений працівник освіти України; *О.М. Макаренко* - доктор медичних наук, професор; *Маркета Павлова* – директор Міжнародного економічного інституту (Чехія); *Юрій Кійков* - доктор інформатики, доктор технічних наук у галузі розвитку освіти (Чехія); *Володимир Бачишин* - доцент кафедри економіки (Словаччина); *Гумеїр Гусейн Ахмедов* – доктор педагогічних наук, професор (Азербайджан); *Петер Ошват* - доцент юридичного факультету (Словаччина); *Л.С. Ахметова* - доктор історичних наук, професор політології, професор кафедри ЮНЕСКО (Казахстан); *Бадрі Гечбаїя* - доктор економічних наук, професор, Асоційований професор Батумського державного університету ім. Шота Руставелі (Грузія).

**Секретар:** *А.С. Ковальчук* - здобувач ступеня доктора філософії (PhD).

Сучасні аспекти модернізації науки: стан, проблеми, тенденції розвитку: матеріали XLII-ої Міжнародної науково-практичної конференції / за ред. І.В. Жукової, Є.О. Романенка. м. Мілан (Італія): ВАДНД, 07 березня 2024 р. 301 с.

У матеріалах XLII-ої Міжнародної науково-практичної конференції висвітлені оригінальні дослідницькі та оглядові розвідки з теоретичних та прикладних аспектів державного управління, права, економіки, історії, педагогіки, психології, техніки та інших галузей науки для їх інтеграції у європейський, світовий науковий простір.

Матеріали будуть корисними та цікавими науковцям, викладачам, педагогам-практикам, представникам органів державної влади та місцевого самоврядування, здобувачам вищої освіти, громадсько-політичним діячам, а, також, усім, хто цікавиться міжнародним досвідом реалізації інноваційних освітніх процесів.

*Матеріали подані в авторській редакції. Відповідальність за зміст та орфографію матеріалів несуть автори.*

© автори, 2024

© Видавничу група «Наукові перспективи», 2024

© Всеукраїнська Асамблея докторів наук з державного управління, 2024

© Асоціація науковців України, 2024



## ЗМІСТ

### СЕКЦІЯ 1. НАЦІОНАЛЬНА БЕЗПЕКА

<b>Романенко Є.О., Літвін Л.Ю., Бурнатний В.</b> <i>В Україні запровадив спеціальний прикордонний режим.....</i>	14
---	----

### СЕКЦІЯ 2. ДЕРЖАВНЕ УПРАВЛІННЯ, САМОВРЯДУВАННЯ І ДЕРЖАВНА СЛУЖБА

<b>Романенко Є.О.</b> <i>Процес переходів парафій УПЦ МП в ПЦУ.....</i>	18
--	----

<b>Романенко Є.О.</b> <i>Завод «Радикал» – повільний ртутний Чорнобиль у Києві.....</i>	22
--	----

<b>Романенко Є.О., Літвін Л.Ю.</b> <i>Україна Стала повноправним учасником ініціативи Federated Mission Networking.....</i>	26
--	----

<b>Галенда Р.В.</b> <i>Обґрунтування необхідності вдосконалення єдиної державної системи цивільного захисту.....</i>	31
---	----

<b>Красников Є.В.</b> <i>Впровадження комунікативного підходу до прийняття управлінських рішень.....</i>	35
---	----

<b>Споришев К.О.</b> <i>Вплив невизначеності обстановки на якість прийняття управлінських рішень в системі державного управління силами безпеки України.....</i>	39
---	----

<b>Телень В. Ю.</b> <i>Сучасний стан функціонування систем управління якістю в органах місцевого самоврядування України.....</i>	42
---	----



**Ноняк М.В.**

*Право людини на мир: історичний аспект*.....86

**Орловська І.Г.**

*Мотивація здобувачів освіти як обов'язкова складова успішної  
правничої освіти*.....90

**Салманова О. Ю., Діденко О. М.**

*Щодо визначення особливостей відбору кандидатів на службу до  
ФБР США у порівнянні зі службою в державному бюро розслідувань  
України*.....93

**Федосова О.В.**

*Шляхи вдосконалення нормативно-правового забезпечення боротьби з  
організованою злочинністю*.....97

**Юсіфова Севіндж**

*Особливості правового регулювання суспільних відносин у сфері  
охорони здоров'я в умовах воєнного стану*.....107

#### СЕКЦІЯ 4.

#### ПЕДАГОГІКА, ОСВІТА, ФІЛОСОФІЯ ТА ФІЛОЛОГІЯ

**Borzenko O.P.**

*Sound nature of language*.....105

**Kishchuk V.V., Bartsikhovskiy A.I., Dmitrenko I.V., Bondarchuk O.D.,  
Lobko K.A, Isnyuk A.S., Hrytsun Ya.P., Skichko S.V., Shamray S.O.**

*Combined methods education in the ukrainian medical university at the  
military condition according national Pirogov Memorial Medical University  
(Vinnytsya) ent-department experience*.....109

**Motuz K.**

*Formation of volitional qualities of students' personalities during classes in  
gymnastics*.....123

**Semyonova L.S., Shevchenko T.M., Romanyuta I.A.**

*Contribution of scientists of our native land to the development of natural  
sciences and the study of human biology*.....126



*Матеріали XLII-ї Міжнародної науково-практичної конференції  
(07 березня 2024 року, м. Мілан (Італія), дистанційно)*

**Kishchuk V.V.**

Professor, Head of the Department of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Bartsikhovskiy A.I.**

Associate Professor of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Dmitrenko I.V.**

Associate Professor of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Bondarchuk O.D.**

Associate Professor of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Lobko K.A.**

Associate Professor of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Isnyuk A.S.**

assistant of the department of ENT diseases  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Hrytsun Ya.P.**

Associate Professor of ENT Diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*

**Skichko S.V.**

assistant of the department of ENT diseases,  
*National Pirogov Memorial Medical University,  
Vinnytsia, Ukraine*



**Shamray S.O.**

assistant of the department of ENT diseases,  
*National Pirogov Memorial Medical University,*  
*Vinnitsya, Ukraine*

### **COMBINED METHODS EDUCATION IN THE UKRAINIAN MEDICAL UNIVERSITY AT THE MILITARY CONDITION ACCORDING NATIONAL PIROGOV MEMORIAL MEDICAL UNIVERSITY (VINNYTSYA) ENT-DEPARTMENT EXPERIENCE**

Recently, the adaptation of theoretical and practical training methods to work in Ukrainian wartime conditions has gained critical importance. In previous years, under the epidemiological restrictions due to the COVID-19 pandemic, a remote form of education developed and spread. Elements of distance education can also be used in the conditions of russian military terrorism against Ukraine.

Of course, distance education has certain advantages: unloading the transport system and freeing up housing resources with a corresponding economic effect, the possibility of remote regions communication with the world's leading educational and scientific centers. However, it is necessary to solve additional problems in time of distance learning:

- 1) appropriate material and technical support need to purchase and specific computer skills have to acquire;
- 2) additional costs for technical support of stable and high-quality two-way communication;
- 3) impossibility of detailed discussion of the real clinical case which was planned according the work program;
- 4) a certain technical difficulties and a lot of time, which have to be spent for correct visualization large amount of medical data (anatomical, physiological, clinical, endoscopic etc.);
- 5) the difficulties of correctly determining the level of active assimilation of knowledge.

Of course, the development of specific clinical practical skills is critical in medical school. Department of ENT diseases of Vinnitsya National Medical University named after M.I. Pirogov has some positive experience to implement remote education in the clinical otorhinolaryngology with the minimization of its negative features [1, 4, 5, 6, 14, 15, 16, 17, 18].

First of all, for the organization of remote classes, it is necessary to purchase appropriate material and technical support and specific computer programs to acquire. There is no way to avoid material costs and time spent on education. It





should be noted that high-quality equipment is necessary for distance learning. According to our experience, at first, we urgently purchased microphones and video cameras. Subsequently, we were forced to look for additional opportunities for the purchase of qualitative equipment, which later became necessary for organization regional scientific and practical conferences, seminars, training courses for doctors and specialization in otorhinolaryngology.

Should be noted next technical problems that must be solved to organize remote education:

- availability of an uninterrupted power supply to protect the equipment,
- availability of equipment for accessing the Internet and a contract with the provider,
- availability of a high-quality video camera, microphone and speakers or headphones (in the case of the need to conduct several classes by different teachers in one storage room which is protected from racist bombings),
- of course, the presence of the personal computer, preferably with the possibility of monitor expansion (two monitors for each computer with a video card that supports their operation in independent mode). Expanding the monitor (use of an additional (second) monitor) significantly increases the possibilities and comfort of simultaneous demonstrations and visual contact with the audience. Thus, a teacher can observe the reaction of a group of students of higher medical education on one monitor and slow down or repeat the explanation of the demonstration material on another (non-duplicated software) monitor.

It should be remembered that for the organization of remote learning, it is necessary to purchase licensed software. According to our experience, attempts to use for remote classes Remote, Skype, Zoom etc., programs which freely available in the Internet, have met with certain functional limitations. First of all, these restrictions manifested in the impossibility of performing a large number of classes at the same time according to the schedule or the limitation of the session duration. Additional difficulties were manifested by constantly changing the schedule, restarting the software and, accordingly, classes. Therefore, the university manager was forced to ensure the work of all teachers and students of the VNMU named after M.I.Pirogov licensed corporate software Microsoft Teams and Google Meet.

Generally, it should also be noted that the purchase of devices for the technical support of remote learning requires certain material costs, but organizationally it is simpler and is resolved faster. Much more time is required for detailed mastering of the software by experienced pedagogical, scientific and medical employees.

Among the minimum list of necessary software for the implementation of remote education, it should be noted:



- operating system (for example, Windows),
- browsers (for example, Google, Opera, Internet Explorer, Edge),
- programs for video conferences organization (for example, MS Teams, Google Meet, Remote, Skype, Zoom),
- software for demonstrations creation (for example, MS PowerPoint, MS Word, Photoshop and CorelDraw).

It should be remembered that each of the programs has own advantages and disadvantages, so sometimes we have to use several programs of the same direction.

However, in addition to solve the technical and software problems of remote learning is important, but it is equally important to adapt the methods of practical skills mastering, the clinical demonstration organization, and, accordingly, correction of the working programs and schedules.

Indeed, it is quite difficult in war situation to discuss about all the material detail that was planned according working program, and sometimes it is impossible to demonstrate or even acquire certain practical skills. Moreover, the amount of clinical material demonstrated with modern high-tech methods of radiological, endoscopic and laboratory examination constantly increase. The number of modern treatment methods also increase: endoscopic ultrasound, radio wave, laser, coblation surgery, which are not always described in textbooks. Therefore, there is a need for adaptation of the curriculum material to the features of remote education.

In order to optimize the working program and select the most important clinical issues in otorhinolaryngology, the level of significance of information according to the ABC procedure of V. Pareto [1, 2, 3] was analyzed.

Advantages in the discussion were primarily accented onto: 1) diseases that are most often seen at the outpatient appointment of a family doctor or an otolaryngologist; 2) urgent conditions; 3) nosologies under strict epidemiological control; 4) questions that make up the databases of the STEP-2 and STEP-3 licensing exams; 5) problematic issues that are widely discussed today at scientific and practical forums and affect changes in classifications, protocols for diagnosis and treatment of ENT diseases, 6) modern methods of diagnosis and treatment of ENT diseases that have been used in practical health care for a relatively long time, but so far have not been included in educational textbooks for the appropriate university level.

As a result of the performed analysis, it was determined that 80% of nosologies (class A) at the outpatient appointment of a family doctor were inflammatory diseases of the upper respiratory tract (tonsillitis, pharyngitis, rhinosinusitis, otitis) [4, 5, 6].

Among the emergency conditions in otorhinolaryngology, laryngeal stenosis and epistaxis are the most common (95%) [4, 5, 6]. During russian's military



aggression against Ukraine, one should expect shortly the appearance and predominance of clinical cases of explosive trauma of the ENT organs, primarily in the form of acubarotrauma and gunshot wounds, in the databases of the STEP-2 and STEP-3 licensed exams.

Among the nosologies that are under strict epidemiological control, more than 92% were clinical cases of diphtheria. However, clinical cases of viral diseases (for example, COVID-19) should be expected shortly to appear and predominate in the databases of licensed examinations STEP-2 and STEP-3.

Also, the most common nosologies from the database of the STEP-2 and STEP-3 licensed exams were selected by V. Pareto's ABC method. For example, clinical cases of otogenic meningitis make up more than 90% of clinical cases from the topic "Otogenic intracranial complications". Clinical cases of diphtheria and monocytic acute tonsillitis exceeded 94% of clinical cases from the topic "Acute inflammatory diseases of the pharynx" [4, 5, 6].

It is clear that in the conditions of time limitation (urgent conditions, testing), first of all, it is necessary to consider the questions selected by the ABC method of V. Pareto, which will increase the possibility of correct clinical assistance or solving test questions in 80-95% of cases.

Medical science develops constantly – new research methods appear (ultrasound, CT, MRI, PET, etc.), new immunological and immunogenetic markers of diseases are discovered [7, 8, 9], some treatment tactics were changed. One of the well-known examples of changes in approaches to treatment in clinical medicine is the indications for tonsillectomy [8, 9]. Therefore, such questions, which have already been implemented in clinical medicine, should also be discussed during ENT practical classes and lectures now, before they will appear in textbooks.

It is also necessary to discuss the treatment tactic of acute purulent otitis media, which has been implemented in Ukraine for several years under the name of "watchful waiting" and was approved by the protocol of the Ministry of Ukrainian Health Care in 2021 [10, 11]. The "watchful waiting" tactic, widespread in world medicine, allows to avoid excessive antibiotic use in the cases of acute purulent otitis media [12, 13] and to settle certain insurance and legal misunderstandings. This tactic is also not yet described in textbooks for Ukrainian medical universities.

Next working program implementation step for remote education is the creation of an appropriate visualization of clinical data. For this purpose, at the first stage, it is possible to use illustrations, photos and video materials of clinical and endoscopic investigations, ENT surgery video from open sources, including electronic. It is necessary to remember that this data have to be marked with correct citation of their source. Of course, in the further improvement of the demonstrations, it is desirable to use own illustrative material which demonstrate local peculiarities of the medical care.



In order to promote integration into the system of European health care and medical education, it is profitably to use Latin, Ukrainian and English languages simultaneously for textual explanations in each demonstration. The possibility to improve medical foreign language skills is additional positive feature of two languages with Latin terminology simultaneous usement. Two languages in one demonstration a little bit overload each slide, but on the other side, reduce the amount of files. Cause each of them can be used for teaching Ukrainian and foreign (English-speaking) students.

The advantage of multimedia illustrated presentations for practical classes and lectures with MS Office PowerPoint is the possibility of sequential demonstration of pictures and text explanations to them with an additional command or with a time delay, which stimulate memoirs about anatomical formations, clinical manifestations of diseases etc. The same demonstrations can be used to survey and assess knowledge level. Especially since the leadership of medical university insists on students, professors and dean's office employees inform about the classes and achievements of each student in the special Internet resource "Electronic journal" (<https://ez.vnm.edu.ua>). In addition, the "Electronic Journal" in the remote education system performs a large number of automated management functions with electronic registration, data processing for each structural university unit separately [14]. The software allows to plan, monitor and analyze educational activities. The university managers, professors and students have operational access to information. Each student has access to his account and can monitor the thematic schedule of classes, the score of each topic and the overall ICTS level for the subject. "Electronic journal" also allows to automatically create a different types of reports, both internal and in accordance with the requirements of the Ministry of Education and Science of Ukraine.

The next problematic feature of remote classes is the difficulties in correct determination the knowledge level, which is related not only with the quality of communication, but also with subjective factors (especially for English-speaking groups). Students have the opportunity to maintain a separate connection between themselves (isolated from the teacher), use additional gadgets (intra-channel communication devices, additional computer with a browser) or already have working demonstration obtained from other previous classes groups'. It is clear that there is no universal method to avoid these "misunderstandings" and in each case their solving can pass different ways. It is equally clear that, a short, simple and clear question, which is also visually duplicated on the screen, should have an immediate, quick, short and clear answer. That is why, long delays before answering with numerous questioning of the question, the sound of clicking keyboard buttons when a student searches for answer using Internet browsers, the reflection



in the student's glasses of the second monitor indicate an insufficient level of knowledge.

The next important part of ENT education is high-quality knowledge control, which is possible with appropriate multimedia illustrative demonstrations. At the Vinnytsia National Medical University named after the M.I.Pirogov ENT-department the final module (credit) was divided into several components, among them:

1) summary of practical skills and knowledge of anatomy, physiology and methods of ENT-organs investigations. The module is summary of the propaedeutic part of otorhinolaryngology and consists of the following sections:

- preview (before the conclusion) of endoscopic methods ENT-organs investigation videos, which were performed personally by the student (in the case of off-line education – it must be checked directly during the module);

- anatomy knowledge control with schematic and real endoscopic images of anatomical formations of ENT-organs,

- control of anatomy knowledge with illustrations, photos and schematic images,

- interpretation of a tuning fork hearing examination results and differentiation between conductive and sensorineural hearing loss (in time offline classes – real tuning fork hearing investigation directly with real patients);

- interpretation of tonal threshold audiograms,

- interpretation of X-ray investigation or CT images,

- control of theoretical knowledge with two languages selective, substitution and illustrative tests;

2) clinical case discussion (analogous to the licensing exam Step II, but not of the simplified selective level – with additional questions about differential diagnosis, treatment tactics, groups of drugs, and their names) or creature of a medical case history of a real patient with clinical discussion at the end of otorhinolaryngology clinical part;

3) the short answer to the card with 3 questions at the last final class.

The overall grade for the discipline module is determined by the sum of the results of all sections of theoretical and practical training in accordance with the special table of the distribution of points, which is approved in the work program.

The special PowerPoint and PDF-editor demonstrations with two languages support and real endoscopic images of anatomical formations of the ENT organs, illustrations, photo materials, schematic images, audiograms, radiographs, tomograms, results of tuning fork hearing and test questions allow to improve visualization and speed up control. The materials are organized into cards, the numbers of which and their sequence are constantly change.



However, with all the listed positive features of distance learning, it is necessary to clearly consider its disadvantages in order to minimize them. Among the possible disadvantages of the remote medical practical classes, the following should be noted:

- the impossibility of ENT-organs examination practical skills acquiring and their constant improvement;
- restriction of communication with patients;
- restriction of real observation or certain participation in medical manipulations or surgical interventions.

It should be noted that during practical classes it is important not only to acquire certain practical skills, but also to improve some to the level of articulation. Undoubtedly, the most important practical skills that students receive in the cycle of otorhinolaryngology are otoscopy, anterior rhinoscopy, mesopharyngoscopy and indirect laryngoscopy, as well as, to some extent, posterior rhinoscopy. The level of emergency care technique [14, 15] for laryngeal stenosis [16] and epistaxis [17] should also be perfect.

Among the ways to minimize the loss of practical skills during remote medical education, the following should be noted:

- video demonstration of the correct ENT examination, reverse video demonstration of ENT examination by student to the teacher for further correction,
- demonstration of videos of real surgery, manipulations from the operation, bronchoscopic or dressing ward with interactive explanation,
- demonstration of an edited video of urgent and more usable ENT surgery or manipulations with textual explanations. Video edition has, first of all, the goal of not informative video fragments elimination (low-quality images, when endoscope lens contact with the mucous membrane, blood etc.; unprincipled manipulations, for example, washing the bronchoscope lens or heating the endoscope distal end), which allows to intensify the lesson by reducing the low-informative time.

However, with the national economy of material resources in the conditions of distance learning during the war with russian terrorist, material losses, as a rule, belong to the executor. Among the technical problems that must be solved are the purchase of video cameras and their installation in the operating, bronchoscopic, and dressing rooms; purchase of a video recorder, appropriate size monitor or video projector. The price for connecting these devices is somewhat lower. However, they are located in the different room, possibly blocks or floors. The necessary software for remote surgery demonstration is usually bundled together with the video recorder.

Of course, it seems that the mastery of the ENT examination practical skills is completely lost during distance learning. However, according to our experience,



the practical skills of classic ENT endoscopic examination acquiring and improving is possible due to work independently at home with plastic instruments for single use, which are cheaper enough and available in Ukrainian pharmacy. Of course, the teacher's control of the student investigation is important. However, the professor should spend the additional time to review student's ENT organs examination, which was recorded previously as a video file and sent back to the MS Teams workroom. Finally, student's mistakes of the ENT examination have to be corrected and explained. Usually, this type of work requires the redistribution of hours allocated to the subject and must be taken into account by the university administration.

Practical skills of the laryngeal stenosis and nosebleeds emergency care methods acquisition is somewhat more complicated and more expensive [15, 16, 17]. Video recordings of surgical interventions (including endoscopic ones) and manipulations for laryngeal stenosis and epistaxis control (conicotomy, tracheostomy, anterior and posterior nasal packing, as well as packing with hemostatic tampons, coagulation of the Kisselbach zone, etc.) [17, 18] has been collected. More difficult management of the demonstration and practical training of laryngeal intubation, anterior and posterior nasal packing with a plastic model of the head and neck directly in the ENT department classrooms or in the university simulation center. Of course, it is the way to solve distant practical skills acquisition – to print the 3D models and training at home or any other place. So far and remains a dream, the remote robotic surgery technologies in a 3D environment with augmented or virtual reality [18, 19] use to acquire practical skills of ENT examination or manipulations.

Despite the advantages and achievements in the organization of distance learning, as well as the technology for eliminating certain of its disadvantages, it should be noted that offline real practical training with examinations of patients, diagnostic and therapeutic manipulations is still indispensable. Undoubtedly, combined methods of training medical students in the conditions of war is rational and expedient. In addition, combined training methods are also appropriate in other emergencies besides russian terrorism against Ukraine, for example, in the case of epidemiological restrictions during the COVID-19 pandemic, the epidemic of viral hepatitis A in Ukraine etc. The combination of various methods is contribute to adequate practical and theoretical training of the medical student during the safe organization of classes in times of war condition with rational time usement.

The basis of combined training should be the well-thought-out mobility of the place and methods of practical classes in rapidly changing conditions. Therefore, the method of a practical class organization in air alert time should be changed depend on various factors, as well as their sequence and combination. For example,



an air alarm occurred long before the beginning of the lesson or immediately before it (students are still at home or have already arrived at the hospital), during the lesson (at its beginning or in the second half).

The organization of the class should provide maximum flexibility with an accent on practical training. Its main principles can be identified:

1) if the air alarm is announced long before the start of the class, it makes sense to start the class remotely (in protected conditions). The practical part can be generally postponed to the next lesson, especially if the time of transfer to the hospital is equivalent to the time until the end of the class;

2) if the air alarm is announced immediately before the lesson, then it should be started in the bomb shelter from the theoretical part. The possibility of the practical work depends on the duration of the announced air alert;

3) if the class started without an air alert, then it is necessary to start it with the practical part;

4) if the air alert is announced in the second half of the class, it is advisable to complete it with theoretical training in a bomb shelter or in some cases remotely.

5) if the duration of the lesson can be suddenly and significantly reduced, for its greatest informativeness, it is necessary to clearly highlight the issues that should be discussed in the first place. As already mentioned above, these questions and nosologies primarily include the following: 1) diseases that require urgent care (in otorhinolaryngology, they include laryngeal stenosis and epistaxis); 2) nosologies, which can be more often met in the clinical (rhinosinusitis, tonsillopharyngitis, otitis and their complications); 3) questions and clinical cases which more often encountered during testing "STEP-2", "STEP-3"; 4) the modern ideas and achievements of medical science, which already used in practical medicine, but have not yet entered in the official textbooks.

Of course, the choice of a rational method depends on the air alert announcement time before the beginning or the closely to the end of the lesson, as well as the ratio of the time to move to the bomb shelter or a place from where safe remote training is possible. There is no doubt that this mentioned principles is useable in medical universities and hospitals that are located far from the front line and are equipped with bomb shelter with a stable Internet connection and mobile computers with video projectors.

Thus, in the war situation caused russian terrorism against Ukraine, the safe education of medical students in universities, which located far from the front line, is possible with combined offline and remote education methods due to the modern computer technologies and specially equipped bomb shelter. The principles and peculiarities of work organization are demonstrated according the experience of the Vinnytsia National Medical University named after M.I.Pirogov department of otorhinolaryngology. Among them, the following can be distinguished:





- 1) the organization of the lesson should provide for maximum flexibility of methods with a primary accent on practical training;
- 2) the several workplaces (in a training room, in a specially equipped hospital bomb shelter or at the place of the medical student residence for remote classes) must be organized;
- 3) clinical discussion time spent during practical classes must be optimized with the most clinically relevant questions, which are highlighted by the ABC V.Pareto procedure (urgent conditions in otorhinolaryngology, most common diseases at the outpatient appointment; nosologies under strict epidemiological control; main pathologies that compile the databases of STEP-2 and STEP-3 licensed exams; problematic issues of the discipline, which have already been implemented in practical health care, but have not yet been included in educational programs and textbooks;
- 4) clinical data illustrations, photos and videos of clinical and endoscopic investigations, as well as surgery, must be integrated into MS Office PowerPoint with broad and detailed visualization and with textual explanations in Latin, Ukrainian and English;
- 5) a high-quality final module is possible only with appropriate multimedia illustrative presentations creation due to usement of real endoscopic images of anatomical structures of the ENT organs, illustrations, photographic materials, schematic images, audiograms, radiographs, tomograms, tuning fork hearing examination and test questions with a dynamic numbering and location in cards;
- 6) special computer devices with corporate access to Microsoft Teams and Google Meet software are required for remote education;
- 7) a combination of remote seminars with practical training at hospital and at home with anatomical 3D models can help minimize the loss of practical skills during remote classes.

### **References:**

1. Кіщук В.В., Барціховський А.І., Дмитренко І.В., Лобко К.А., Бондарчук О.Д., Рауцкіс П.А., Скічко С.В., Грицун Я.П., Шамрай С.О., Максимчук В.В. Шляхи підвищення ефективності підготовки студентів в умовах виконання Закону України «Про вищу освіту» / Імплементация закону України «Про вищу освіту» як складова академічної автономії ВНМУ ім.М.І.Пирогова»: тези доп. навч.-метод. конф., (Вінниця, 17 лют. 2016 р.). - Вінниця, 2016. - С. 67. <https://dSPACE.vnmu.edu.ua/123456789/1155>.
2. Kramp K.H., van Det M.J., Veeger N.J., Pierie J.P. The Pareto Analysis for Establishing Content Criteria in Surgical Training / J. Surg. Educ.- 2016, Sep-Oct; 73(5):892-901. doi: 10.1016/j.jsurg.2016.04.010. Epub 2016 Jun 3. PMID: 27267561. <https://pubmed.ncbi.nlm.nih.gov/27267561/>.



3. Zhang J., Ding X., Zhou X., Chen W., Yao J., Guo Z., Chen L., Xia Y., Fan Q. Performance of HIV detection in Zhejiang province in China: The Pareto principle at work / J. Clin. Lab. Anal.- 2021.- Jun;35(6):e23794. doi: 10.1002/jcla.23794. Epub 2021 May 4. PMID: 33942384; PMCID: PMC8183946.

<https://pubmed.ncbi.nlm.nih.gov/33942384/>.

4. Kishchuk V.V., Bartsikhovskiy A.I., Dmitrenko I.V., Bondarchuk O.D., Lobko K.A., Isnyuk A.S., Hrytsun Ya.P., Skichko S.V. Current directions of ENT practical classes and lectures optimization // Сучасні аспекти модернізації науки: стан, проблеми, тенденції розвитку: матеріали ХVІІІ Міжнародної науково-практичної конференції, м. Київ; Тарту (Естонія), 07 лютого 2022 р. / за ред. Є.О. Романенка, І.В. Жукової. Київ; Тарту: ГО «ВАДНД», 2022.- С. 439-49. <http://perspectives.pp.ua/public/site/conferency/conf-18.pdf>.

5. Кіщук В.В., Барціховський А.І., Дмитренко І.В., Лобко К.А., Бондарчук О.Д., Рауцкіс П.А., Скічко С.В., Грицун Я.П., Шамрай С.О., Максимчук В.В. Принцип Парето у підвищенні ефективності підготовки студентів з оториноларингології в умовах виконання «Закону про вищу освіту» / ЖВНГХ.- 2016 (жовтень).- №5-с.- С.59-60.

<https://dspace.vnmu.edu.ua/handle/123456789/5554>.

6. Барціховський А.І., Кіщук В.В., Дмитренко І.В., Лобко К.А., Бондарчук О.Д., Рауцкіс П.А., Грицун Я.П., Скічко С.В., Максимчук В.В. Використання принципу АВС Парето для підвищення ефективності підготовки лікарів-інтернів в умовах національної стратегії побудови нової системи охорони здоров'я України / В кн.: «Проблеми та перспективи вищої медичної школи у розробці та реалізації національної стратегії побудови нової системи охорони здоров'я в Україні на період 2015-2025 р.р.» / Тез. доп. навч. метод. конф.- Вінниця.- 2015.- С.9. <https://dspace.vnmu.edu.ua/handle/123456789/5649>.

7. Дерєпа К.П., Пухлик Б.М., Барціховський А.І. Стан імунологічної реактивності хворих на алергічний риносинусит / Матеріали VІІІ з'їзду оториноларингологів України. – Київ, 1995. – С. 43-44.

[https://dspace.vnmu.edu.ua/bitstream/handle/123456789/1309/imun\\_ARC%2095.pdf?sequence=1&isAllowed=y](https://dspace.vnmu.edu.ua/bitstream/handle/123456789/1309/imun_ARC%2095.pdf?sequence=1&isAllowed=y).

8. Кіщук В.В., Дмитренко І.В., Барціховський А.І., Бондарчук О.Д., Лобко К.А., Грицун, Я. П. Сучасний підхід до консервативного лікування рекурентного (хронічного) тонзиліту на засадах доказової медицини.- Журнал вушних, носових і горлових хвороб. - 2016. - № 5\_с. - С. 62-65.

[http://www.ents.com.ua/confdoc/2016\\_kyiv.pdf](http://www.ents.com.ua/confdoc/2016_kyiv.pdf),

[https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3296/ХТ\\_Кіщук\\_2016\\_5c\\_62.pdf?sequence=1&isAllowed=y](https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3296/ХТ_Кіщук_2016_5c_62.pdf?sequence=1&isAllowed=y).



9. Лобко К.А., Мельников О.Ф., Кіщук В.В., Лобко А.Д., Бондарчук О.Д., Дмитренко І. В., Барціховський А. І. Стан місцевого імунітету при хронічному тонзиліті у вагітних.- Журнал вушних, носових і горлових хвороб. - 2011. - № 4. - С. 28-34. [http://www.lorlife.kiev.ua/2011/2011\\_4\\_28.pdf](http://www.lorlife.kiev.ua/2011/2011_4_28.pdf),

[https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3295/tons\\_im\\_preg\\_Лобко\\_2011\\_4\\_28.pdf?sequence=1&isAllowed=y](https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3295/tons_im_preg_Лобко_2011_4_28.pdf?sequence=1&isAllowed=y).

10. Клінічна настанова, заснована на доказах Гострий середній отит / Наказ МОЗ України. КН 2021-688., квітень, 2021.- 94 с. <https://www.dec.gov.ua/mtd/gostryj-serednij-otyt/>.

11. Уніфікований клінічний протокол первинної, вторинної (спеціалізованої) та третинної (високоспеціалізованої) медичної допомоги Гострий середній отит / Наказ МОЗ України. ГС 2021-688., 09.04.2021.- 34 с. <https://www.dec.gov.ua/mtd/gostryj-serednij-otyt/>.

12. Pappas DE, Owen Hendley J. Otitis media. A scholarly review of the evidence. *Minerva Pediatr.* 2003 Oct;55(5):407-14. PMID: 14608264. <https://pubmed.ncbi.nlm.nih.gov/14608264/>.

13. McCormick DP, Chonmaitree T, Pittman C, Saeed K, Friedman NR, Uchida T, Baldwin CD. Nonsevere acute otitis media: a clinical trial comparing outcomes of watchful waiting versus immediate antibiotic treatment. *Pediatrics.* 2005 Jun;115(6):1455-65. doi: 10.1542/peds.2004-1665. PMID: 15930204. <https://pubmed.ncbi.nlm.nih.gov/15930204/>.

14. Кіщук В.В., Дмитренко І.В., Існюк А.С., Барціховський А.І., Лобко К.А., Бондарчук О.Д., Рауцкіс П.А., Скічко С.В., Максимчук В.В., Грицун Я.П., Шамрай С.О. Електронний журнал – новий крок в реалізації інноваційних педагогічних технологій / Тези доп. навч.-метод. конф. «Сучасні методичні технології керування навчальним процесом у вищих медичних навчальних закладах».- м. Вінниця, 15 лютого 2018.- С. 71-2.

[https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3428/tezy\\_konf%20VNMU%202018\\_70\\_1p.pdf?sequence=1&isAllowed=y](https://dspace.vnmu.edu.ua/bitstream/handle/123456789/3428/tezy_konf%20VNMU%202018_70_1p.pdf?sequence=1&isAllowed=y).

15. Кіщук В.В., Барціховський А.І., Дмитренко І.В., Бондарчук О.Д., Лобко К.А., Існюк А.С., Грицун Я.П., Скічко С.В. Роль інноваційних технологій в оволодінні практичними навичками з надання ургентної допомоги в оториноларингології в умовах епідеміологічних обмежень з метою розвитку конкурентоспроможної вищої школи // Сучасні аспекти модернізації науки: стан, проблеми, тенденції розвитку: матеріали XVII Міжнародної науково-практичної конференції, м. Київ; Ларнака, 07 січня 2022 р. / за ред. Є.О. Романенка, І.В. Жукової. Київ; Ларнака: ГО «ВАДНД», 2022. С. 278-83. <http://perspectives.pp.ua/index.php/np/conf-theses>, <https://dspace.vnmu.edu.ua/123456789/5536>.



16. Кіщук В.В., Барціховський А.І., Дмитренко І.В., Шевчук Ю.Г., Бондарчук О.Д., Лобко К.А., Ліхницький О.О., Грицун Я.П., Рауцкіс П.А., Скічко С.В., Максимчук В.В., Існюк А.С. Шляхи підвищення конкурентоспроможності медичних працівників з питань надання негайної допомоги при стенозах гортані / Тези доповідей навчально-методичної конференції «Актуальні проблеми якісної підготовки медичних фахівців в умовах глобального конкурентного середовища».- Вінниця, 12 лютого 2020.- С.96-7. <https://dspace.vnmu.edu.ua/handle/123456789/4400>.

17. Кіщук В.В., Барціховський А.І., Дмитренко І.В., Бондарчук О.Д., Шевчук Ю.Г., Існюк А.С., Максимчук В.В., Рауцкіс В.П., Скічко С.В., Грицун Я.П., Лобко К.А. Шляхи покращення практичної підготовки медичних працівників з питань надання негайної допомоги при носових кровотечах в умовах дистанційного навчання / Збірник праць XIII з'їзду отоларингологів України (Одеса, 20-22 вересня 2021 р.).- Одеса, 2021.- С. 50-1. <https://dspace.vnmu.edu.ua/123456789/5539>.

18. Кіщук В.В., Барціховський А.І., Рауцкіс П.А., Скічко С.В., Дмитренко І.В., Бондарчук О.Д., Лобко К.А., Максимчук В.В., Існюк А.С., Грицун Я.П. Види і роль 3d-моделювання у формуванні практичних навичок з оториноларингології/ «Медична симуляція – погляд у майбутнє» (Впровадження інноваційних технологій у Вищу Медичну Освіту України: матеріали наук.-практ. конф. з міжнародною участю, (Вінниця, 7-8.02. 2020 р.).- Вінниця, 2020.- С. 25-6. <https://dspace.vnmu.edu.ua/123456789/5540>.

19. Khor WS, Baker B, Amin K, Chan A, Patel K, Wong J. Augmented and virtual reality in surgery-the digital surgical environment: applications, limitations and legal pitfalls / Ann. Transl. Med.- 2016.- Dec;4(23):454. doi: 10.21037/atm.2016.12.23. PMID: 28090510; PMCID: PMC5220044.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5220044/>.



*Матеріали XLII-ої Міжнародної науково-практичної конференції  
(07 березня 2024 року, м. Мілан (Італія) дистанційно)*

**СУЧАСНІ АСПЕКТИ МОДЕРНІЗАЦІЇ  
НАУКИ: СТАН, ПРОБЛЕМИ, ТЕНДЕНЦІЇ  
РОЗВИТКУ**

*Видавець: Всеукраїнська асамблея докторів наук з державного управління  
Свідоцтво серія ДК №4957 від 18.08.2015 р., Андріївський узвіз, буд.11, оф 68, м. Київ, 04070.*