

THE MARITIME MEDICINE AS A FREE ELECTIVE COURSE FOR MEDICAL STUDENTS AT THE MEDICAL UNIVERSITY - VARNA

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SUMMARY

From the countries in Southeast Europe, only in Bulgaria, at the Medical University - Varna (MU-Varna) there is a training in the discipline "Maritime Medicine". The course is revealed by the Academic Board of the MU-Varna on 26 March 2007 at the initiative of assoc. prof. Hristo Bozov, MD, PhD, and with the support of Prof. Anelia Klisarova, MD, PhD, DSc - Rector of MU-Varna. For a short period of three years a team of doctors and other professionals succeeded in meeting the public need for the creation and development of this new medical discipline. The course includes 24 lectures and 6 practical classes. Speakers and instructors are lecturers from the Medical university -Varna, the Naval hospital - Varna to the Military Medical Academy (MMA - Varna), the Naval Academy - Varna (NA-Varna), the Naval Forces, the Naval Base - Varna and the Bulgarian Red Cross - Varna (BRC). It is held with great interest by students and ends with a 2-days rowing march to Tsonevo dam, together with the marina "Varna - S.T." and the medical university club "Sky and tourism". The new course will be conducted during the summer semester of the academic year 2010-2011 and the expecting volunteers have been already enrolled.

Key words: maritime medicine, Medical University - Varna, free elective discipline, MBAL-Varna

INTRODUCTION

The idea of creating the Maritime Medicine course was conceived in 2007 and was widely supported by representatives of the Medical University, the Naval Academy - Varna and the Military Medical Academy - Varna (7,3). Before 2007 various fields of maritime medicine are taught at the Naval Hospital - Varna (now Multiprofile Hospital for Active Treatment - Varna to MMA) (2). There is evidence of medical knowledge and treatment by various methods associated with the sea (1,4,6).

The need for introduction of a separate discipline in the training of medical students is imposed because of the specific pathology, faced by doctors in the seaside cities like Varna. Methods of treatment are also specifically and partially covered in the syllabus. At the same time good experience and knowledge have been gained in the organization of some important aspects of the maritime medicine (5).

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In this area there is a necessity of good clinical knowledge to increase the effectiveness of medical care and reduce practice errors.

Currently Maritime Medicine is a free elective course in Medical University - Varna. The implementation as a separate specialty and research funding has been under development.

MATERIALS AND METHODS

The "Maritime medicine" is new free elective discipline that is conducted at the Medical University - Varna. The course includes 30 hours as a total - 24 lectures and 6 practical classes. Speakers are lecturers from the Medical University -Varna, the Naval hospital - Varna to the Military Medical Academy and the Naval Academy - Varna (NA-Varna).

The practical classes are conducted mainly at the Naval Base - Varna to the Naval Forces and the Bulgarian Red Cross - Varna (BRC).

The article includes also information about the results of 55 medical students who took part during the first and second training.

Exposure

The opening took place on 11 November 2008 in the building of the Medical University "Prof. dr. Paraskev Stoyanov" - Varna. The presentation was made by the Rector Prof. Anelia Klisarova, MD, PhD, DSc. Head of the course is Assoc. prof. Hristo Bozov, MD, PhD.



Picture 1

Course is lasting one semester each academic year. Students who attend are from the fourth, fifth and sixth classes in Medicine specialty. There were 24 participants in the first course which was held in the spring semester of school year 2008 - 2009. Second course took place before the winter semester of 2009 - 2010 school year. The number of students provided for participation was increased to 31 due to their enormous interest. Besides the numbers of participants at the beginning of each course, additional waiting lists are made for next year. The new course will be conducted during the summer semester of school year 2010 - 2011.

Professionals from various specialties at the Medical University - Varna, Naval Hospital and Naval Academy were invited as speakers. The interest of foreign lecturers was attracted.

The course is conducted in twelve lectures in two school hours and four practical classes - two in one school hour and two are conducted in two school hours. The total number of hours is thirty. Lectures and practical training include basic knowledge and skills from different disciplines and areas that are related to the specifics of the marine medicine. Special interest among students excited the practical classes held in the Naval Base, Naval Academy (NA-Varna) and Naval Hospital to the Military Medical Academy (MMA-Varna).

Programme and speakers:

Lecture part (24 hours in total):

- Marine Physiology - 2 hrs. Speaker - assoc. prof. Zlatislav Stoyanov, MD, PhD (MU-Varna)
- Diving Medicine - 5 hrs. Speaker - assoc. prof. Hristo Bozov, MD, PhD (MU-Varna)
- Marine Toxicology - 2hrs. Speaker - assoc. prof. Sneja Zlateva, MD, PhD (MMA-Varna)
- Emergency help in/at water - 2 hrs. Speaker - assoc. prof. Viliyan Platikanov, MD, PhD (MU-Varna)
- Water rescue activity - 2 hrs. Speaker - Dr. Dimitar Stavrev (MU-Varna)
- Marine Psychology - 2 hrs. Speaker - Prof. Eli Peev, MD, PhD, DMSc (NA-Varna)
- Hyperbaric oxygenation - 5 hrs. Speaker - assoc. prof. Hristo Bozov, MD, PhD (MU-Varna)
- Maritime expertise - 2 hrs. Speaker - Dr. Emil Traykov (MMA - Varna)
- Telemedicine - 2 hrs. Speakers - Prof. Anelia Klisarova, MD, PhD, DMSc (MU - Varna) and Prof. George Anoyanikis, DMSc (MU - Thessaloniki, Greece)

Table 1. Marks divided into specialties for the first training course in 2009

Subject	Marks										All	
	2	%	3	%	4	%	5	%	6	%	With course works	With no course works
1. Marine toxicology									3			
2. Hyperbaric oxygenation and diving medicine							3		4			
3. Telemedicine												
4. Marine psychology							1		2			
5. Water rescue activity							2		1			
6. First aid at water					1							
7. Marine expertise									1			
8. Marine physiology							2					
All	0	0	0	0	1	4%	8	32%	11	44%	20	4

Lectures are conducted mainly at the Medical University - Varna, but also at the MMA - Hospital base for active treatment - Varna and the building of Bulgarian Red Cross - Varna (BRC).

Practical classes (6 hours):

1. Organization of the Marine service - 2 hours. Venue: Naval Academy - Varna and the Black Sea coast. Instructor is Prof. Boyan Mednikarov (Naval Academy).
2. Medical care of dives - 2 hours. Venue: Naval Academy - Varna and the Black Sea coast. Instructors are assoc. prof. Peycho Kaloyanchev (Naval Academy-Varna) and Dr. Nicholas Shopov (Naval Forces).
3. Diving and Hyperbaric medicine - 1 hour. Venue: MMA - Hospital base for active treatment - Varna. Instructor: Dr. Milena Yaneva (MMA - Varna).
4. Marine Toxicology - 1 hour. Venue: MMA - Hospital base for active treatment - Varna. Instructor is assoc. prof. Snejana Zlateva, MD, PhD (MMA - Varna).

The team of teachers selected the coursework as a form of assessment. The topics are formulated in advance of the speakers. Participants choose the field of maritime medicine, which they will work at and produce their materials within a month.

It turns out that the coursework is very relevant, because it stimulates and enables students to develop their creative potential in the field that mostly interests them.

Table 2. Results of the first and second training courses of 2009-2010

	Score/mark						Total
	2	3	4	5	6	Without mark	
In number	0	0	4	19	20	12	55
In per cent	0	0	7.27	34.55	36.36	21.82	100

During the second semester of the course in Maritime Medicine there was a necessity to increase the numbers of participants due to the huge students' interest. Small changes to the course and practical exercises were also made to be most effective for students.

As an additional speaker was included assoc. prof. Stamat Stamatov with a lecture for the Thalassotherapy.

The analysis shows that predominate high performances, which by itself is a guarantee of a genuine, serious and deep attitude of students towards the preparation of the course work. Each participant who has written and passed a course work corresponding to the teaching requirements, is being evaluated and receives a certificate of successful completion of the Maritime Medicine course.

The top-performing student receives an award from sponsors and from the university. The prize for the first year of the course was a one-year scholarship.

Upon successful completion of students in both semesters, the leaders decided to organize additional sport activities.



Picture 2 & Picture 2.1.

Two rowing expeditions at Tsonevo dam were held, together with the marina "Varna - S.T." and the medical university club "Sky and tourism". Participants appreciated them as very useful and interesting, so it is predicted for them to become a tradition for the course "Maritime Medicine" and to be organized annually.

RESULTS

1. Exclusive interest of medical students and graduated doctors.
2. The course found its place in the curriculum of the Medical University - Varna and did not cause problems such as overlapping themes, duplication of courses, etc.
3. Lecturers from various participating organizations are highly motivated and have an interest in the development of the discipline.
4. A guarantee of the correctness of the decision to introduce the discipline into the curriculum is the increased public interest in Varna.
5. The curriculum of only 30 hours is insufficient for the serious topics of the course.

6. Practical classes cause great interest and should be considered a form and way to increase them.
7. Additional activities include people from the program and others who are interested in taking part. Therefore, these activities should be extended.
8. After clarification and implementation of the working part of the "Maritime Medicine" project, the time to start a research activity has come. To do so, the existing facilities of the participating institutions should be optimum used and MU-Varna should develop such by itself.
9. As a result of the gained experience and the set team, it is necessary to look for opportunities to participate in research projects funded at national and European level.



Picture 4

CONCLUSION

For a short period of three years, a team of doctors and other professionals succeeded in meeting the public need for the creation and development of a new medical discipline "Maritime Medicine". Leaders and lecturers work towards its continued development and expansion with the trend to introduce the discipline as a separate specialty in the training of Medical Students in the city of Varna.

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