

Research and Reporting Highlighted needs in Medical Education

Romanian National Report

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ABSTRACT

This report aims to develop common references for VET in orthopedy and rehabilitation.

The Document introduces a brief picture of learning needs in Orthopedics and Rehabilitation Profession and e-learning training approaches, by a national research, study and analyses on labour market demands based on surveys and questionnaires addressed to the target group and potential users

A further analysis of training expectations and lacks is available as well.

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1.1. PURPOSE OF THE REPORT

Increasing the quality of vocational skills requires the development of world-class VET systems. Increasing transversal and basic skills alone will not be sufficient to generate growth and competitiveness, and there is still too much distance between the educational environment and the workplace. VET must be able to react to the demand for advanced vocational skills, tailored to the regional economic context. It also needs to be an open door for those who want to access higher education, as well as individuals who need to update skills

The need for harmonisation development of an unitary system in medical education across Europe with common standard procedures is a well known fact. All EU medical graduates should have equal chances to practice all over EU. Our project focuses on the project partners identification of common needs that EU educational and training systems are facing and that can be met only by a common effort.

The present report represents a national research on labour market demands for Romania, aiming to reflect needs' identification for our target group on the use of the orthopedic and rehabilitation procedures at work place, based on surveys and questionnaires.

In order to attain this goal, analysis of learners' actual knowledge and of knowledge needs for identifying the current performances and gaps was carried on, as well as analysis of the VET in orthopedics and rehabilitation, correlated with the use of orthopedic and rehabilitation procedures in practice. The last part of the report tries to identify the ways for introducing orthopedic surgical procedures and rehabilitation protocols after surgery into the work environment. The aim of this report has a special value as needs analysis is essential for the development of the COR-skills project; the project is designed to provide solutions to clearly identified needs of the target groups and this is the reason we have dedicated a report for needs assesment. Even if the project includes an ex-ante analysis of the needs on EU context, this was based on EU literature, reports and researchers for medical education in general and previous needs assesment in ORTHO e-man. Needs assesment of the target group will now foccus on specific issues (orthopedy, rehabilitation, gait assesment) and must

be carried on in order to integrate further outcomes of COR-skills project into national and/or sectoral training systems .

In this way the present research aims to:

1. analyse the vocational training needs in orthopaedics and rehabilitation and state of art of medical e-learning in Romania;
2. define the needs of the target group
3. identify gait assesment level in medical education in Romania;
4. describe the reference levels, certification principles and VET methods and programmes in the field of orthopaedics and rehabilitation in Romania

Identification of initial requirements must be followed by their validation against the project objectives, identification of best solutions how this will be achieved and identification of best resources and tools in order to create an interdisciplinary on-line collaborative platform with specific learning tools and content, supporting participants in acquisition of skills in the field of orthopedy and rehabilitation directly linked to their needs, expectatives and labour market requirements.

1.2. TARGET GROUP

1.2.1. Foreseen target groups and indicators

According to project work plan and indicators, Romanian direct target group (primary target group) includes organizations and individuals that will be direct users of the project results. For Romania we foresee about 100 trainees for both training modules represented by: medical doctors in orthopedics and rehabilitation, kinesitherapists, physiotherapists. The medical professionals can be on different levels of training and different working places (specialists, residents in course of gaining competence in echography, in continuous medical training, public or private health institutions).

In terms of organisations the target includes:

- Vocational training organizations and other training providers
- Universities, colleges and other providers of medical education
- Public and private Health Institutions
- Professional associations

The indirect Target Group (secondary target group) includes individuals and organizations related to the direct target group of the project, as follows:

- Staff in the medical educational system in participant countries, including individuals with local responsibility for educational programs at all levels of the continuum—for example, deans and their staff, department chairs, and responsible for resident training programmes in orthopedy and rehabilitation from organisations with whom project partners are networking.

- Institutional officials at clinical orthopedic and rehabilitation departments, as directly interested in CME of their employees
- Accreditors, certifying and licensing bodies. Organizations that accredit educational programs/providers at continuing level of medical education
- Medical education and related associations in the field of orthopedics and rehabilitation; national organizations

This group will function as key stakeholders and will be involved in dissemination activities, evaluation of outcomes, in reaching the target group. Reaching this group will be done by the networks of each partner organisation. For Romania we estimate:

- Min 10 institutional officials/managers
- Min 10 professionals in the medical educational system
- Min 10 members of professional organisations and accreditors

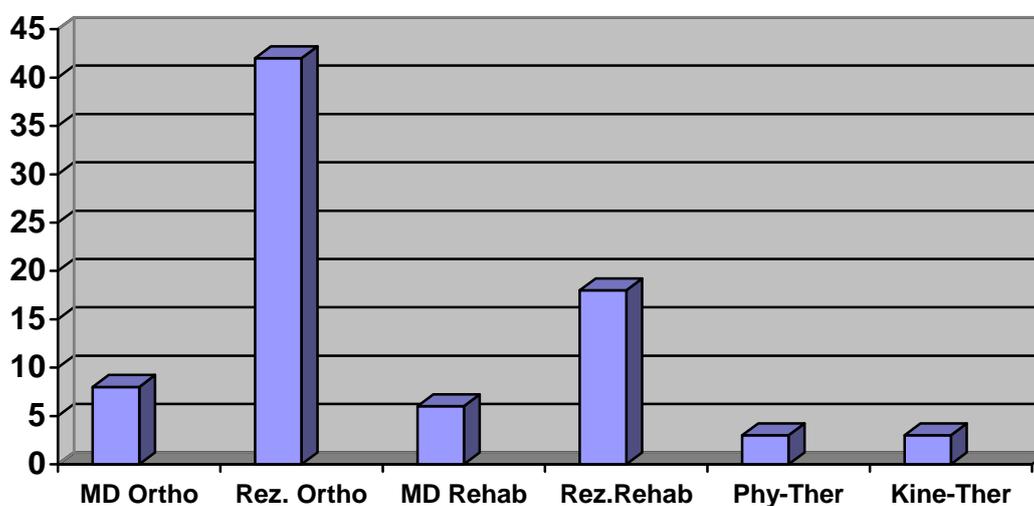
Long-term beneficiaries are certain interest groups that will benefit from the project outcomes on a long term basis like medical doctors that will benefit of the training programme after the project ends, due to inclusion of courses into CME. The dissemination plan indicates scanning activities to identify broader target groups with a potential interest in the results, so they will be targeted by our dissemination as potential trainees after the end of the project. The estimated number of persons for Romania is min. 50/year.

1.2.1. Target group respondents

We registered a number of 92 respondents.

The number of respondents, from each category mentioned above was:

- 8 medical doctors in orthopedics (specialists) and 42 residents in orthopedics
- 6 medical doctors in rehabilitation and 18 residents in rehabilitation
- 3 kinesitherapists
- 3 physiotherapists
- 4 stakeholders and managers
- 7 professionals in the medical educational system.

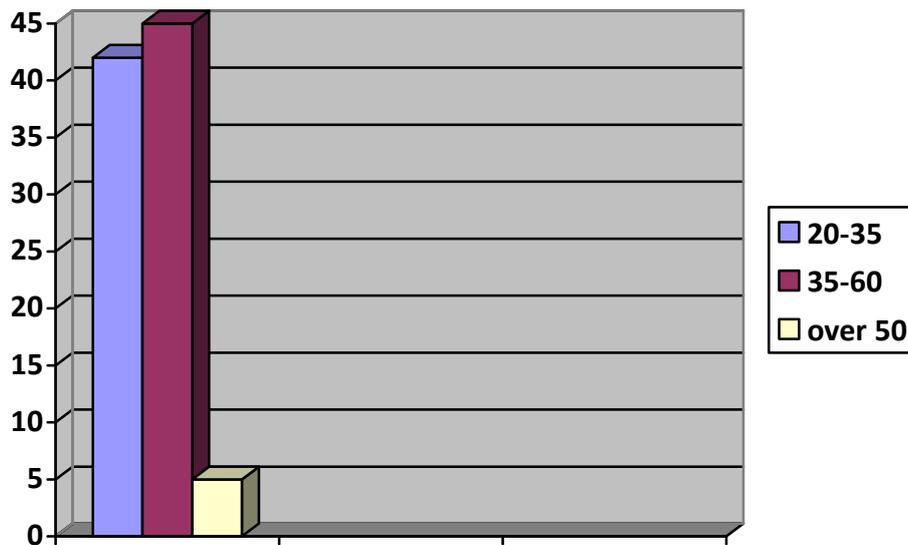




For the rehabilitation target group, 3 respondents were members of national professional organisations, 15 were members of international professional organisations and 3 were not included in any professional organisation. For the orthopaedic target group all the respondents were members of Romanian Society of Orthopaedics and Trauma SOROT.

Regarding the age of respondents we registered the following groups:

Age (years)	20-35	36-50	Over 50
Nr. of respondents	42	45	5



1.3. EVALUATION METHODOLOGY

Romanian National Report has been conducted gathering results come from a fieldwork survey and documentary research.

FIELD WORK

A specific type of questionnaire has been designed for each specific category of target group. Questionnaires were developed, taking into consideration the structure of the target group. In this way we have developed 3 types of questionnaires administered to representatives of target group (Medical doctors in orthopaedics, Rehabilitation Professionals, Managers and Academic Medical Staff)- annex 1-3

The aim of these questionnaires was to evaluate the perceived level of IT ability and accessibility, the experiences and attitudes of the target groups towards e-learning and clinical skills training.

Questionnaires were distributed via various means: by direct contact (during meetings, courses, team building, etc), by email or, in few cases, as a basis for phone interviews. E-mails to invite to contribute to the survey and fill the questionnaire have been sent to the main contacts representatives of target group.

The respondents were contacted from February 15 th to March 15 th. Afterwards, responses provided have been collected, processed and summarized.

DOCUMENTARY RESEARCH

The research summarized all the information gathered from Universities institutional websites, Ministry of Education, Research, Youth and Sport, private and public training agencies, professional networks and associations, professional organization active in medical field.

1.4. EVALUATION RESULTS

1.4.1. For Rehabilitation Professionals

Number of respondents: 30

Quest. 1. referred to the periodicity of accessing the internet and the answers were as follows:

	%
Daily	70%
2-3 times a week	13%
Weekly	1,7%

We can see that most of the respondents access daily the internet, which is a good point for the level of using basic ICT tools.

Quest. 2. refers to the use of the internet for improving the professional career. The respondents gave different answers, enlisting most of the respondents as using daily/weekly the Internet.

	%
Daily	36,6
Weekly	46,6
Monthly	16,8

Quest 3. leads to familiarity with e-tools, and, according to the professional levels of the respondents, the answers covered the whole range.

%	I have heard		I can	
	Never heard	but never used	manage with help	I can use it
Chat	-	43,3	26,7	30
Wiki	6,6	13,3	-	80
Audio-conference	-	63,3	-	36,7
Video-conference	-	43,3	-	57,7
Forum	-	30	-	70
Email groups	-	13,3	-	87,7
Internet/Mobile learning	-	-	-	100

Residents are the most confident with digital tools. They are familiar and use Chat, Audio conferencing, Video conferencing, Forum, e-mail groups, Internet Mobile/Mobile. Also, some of them use WIKI, while all have heard about it.

Medical Doctors, even with a strong and long work experience are not very familiar or they do not call themselves users of "new" electronical tools. All of them are not familiar or never heard of WIKI and Internet Mobile/Mobile learning, while some of them heard about these issues but never used. At the other side, all of respondents can use Chat, Forum and e-mail groups

Quest.4 reffers to the main categories of information that the medical professionals require and how often they you use them.

The answers presented showed that according to professional levels, most of responses refer daily and weekly to all the information sources. Also, the information which weekly and monthly stirs attention and interest is linked to Clinical issues, Medication, Medical Events, Science and Research and News.

%	Daily	Weekly	Monthly
Clinical issues	30	46,7	23,3
Medical Legislation		10	90
Medication	30	36,7	23,3
Medical events	13,3	16,7	60
News Publications	56,7	26,7	16,6
Science & Research	30	43,3	26,7

Quest. 5 tries to make an overview regarding the means that the target group would prefer to improve their professional career. All types of proposed mehods were found suitable by the respondents, 76% enlisted e-learning in order to update and improve skills and knowledge.

	%
Classical courses	86,7
Workshops	80
e learning	76,7

Quest. 6 evaluates the interest of respondents in e-learning. Hopefully 93 % of respondents for this question are interested in e-learning and its features and capacities.

	%
Yes	93,3
No	6,7

Quest. 7 explore the the interest of respondents in mobile learning. Surprisingly, almost all respondents are interested in it as a mean and tool for learning.

	%
Yes	96,7
No	2,3

Quest. 8. reffers to the target group interest regarding e-learning and the domains of interest and the answers showed that 90% of respondents looked for e-learning courses in Internet until the moment. Regarding the medical areas of interest, responses were various and covering a whole spectrum, nevertheless, more than 60% enlisted rehabilitation medicine together with orthopaedics, traumatology, rheumatology and neurology.

	%
Yes	90
No	10
Pediatrics	20
Reumatology	53,3
Phisical and Rehabilitation	
Medicine	63,3
Neurology	36,7
Orthopedics	60
Traumatology	56,7
Oncology	2,3

Quest. 9 explores the amount of time that our target group think are necessary to refresh their knowledge and improve skills and competencies. The great range of responses went for 200-300 hours followed by 300-400 hours.

	%
< 100	6,7
100-200	13,3
200-300	46,7
300-400	30
>400	3,3

Quest. 10-11 evaluate the disponibility of the respondents in using an e-learning platform for continuous education on payment basis. All of the respondents turned to free online platform, while some of them agreed with paid type but contribution from employees was mentioned.

Quest 12. regards the language for the course information.

It was surprisingly to see that 56,6% prefer both English and Romanian for course information and content.

	%
Romanian	23,3
English	20
Romanian and English	56,7

Quest. 13. wishes to identify the lower limb pathology that would interest mostly the target group.

Most of the respondents are interested in both congenital and post-traumatic pathologies.

%	Yes	No
Congenital	86,7	13,3
Post-traumatic	100	-
Inflammatory	96,7	3,3
Degenerative	100	
Tumoral	96,7	3,3

Quest. 14-15. refers to the specificity of methods that the respondents would be interested in, on on line basis.

According to the professional levels, all learning topics were checked with comparative results.

%	Yes	No
Kinetotherapy/ Hidro – Balneo- kinesitherapy	100	-
Massage	93,3	6,7
Electrotherapy	86,7	13,3
Magnetotherapy	73,3	26,7
Other preformed physical modalities	93,3	6,7
Techniques for orthosis/prosthesis	90	10
Occupational therapy	90	10
Balneology	96,7	3,3
All of the above	80	20

Quest. 16-17. evaluate the use of human gait analysis in practice.

Even if 100% of respondents are familiar with the concept, all of them use gait analysis by clinical observation and only 2 (6,7%) use also computerized methods in their practice.

Quest.18. wishes to identify the interest of the target group in learning about application of gait analysis in rehabilitation and 100% of respondents are interested in.

Quest 19-20 explore the interest of the target group in sharing their knowledge by a Forum on medical topics and sharing experiences for second opinion. 80% of respondents showed a great interest in using a forum on medical topics, meanwhile all of them are interested in getting a second opinion on on-line basis.

1.4.2. For Orthopaedic Professionals

Number of respondents: 50

Quest. 1. Referred to the periodicity of accessing the internet and the answers were as follows:

	%
Daily	96
2-3 times a week	4
Weekly	-

We can see that 96% of the respondents access daily the internet, which is a good point for the level of using basic ICT tools.

Quest. 2. refers to the use of the internet for improving the professional career. The respondents gave different answers, enlisting most of the respondents as using daily the Internet.

	%
Daily	84
Weekly	16
Monthly	-

Quest 3. leads to familiarity with e-tools, and, according to the professional levels of the respondents, the answers covered the whole range.

	Never heard of it	I have heard but never used it	I can manage with help	I can use it
%				
Chat	-	68	-	32
Wiki	-	-	-	100
Audio-conference	4	28	32	36
Video-conference	4	28	40	28
Forum	-	4	4	92
Email groups	-	8	-	92
Internet/Mobile learning	-	-	32	68

Most of respondents are the most confident with digital tools. They are familiar and use Chat, Audio conferencing, Video conferencing, Forum, e-mail groups, Internet Mobile/Mobile. Also, all of them use WIKI.

Quest.4 refers to the main categories of information that the medical professionals require and how often they use them.

The answers presented showed that most of responses refer daily and weekly to all the information sources. Also, the information which weekly and monthly stirs attention and interest is linked to Clinical issues, Medication, Medical Events, Science and Research and News and the less is medical education.

%		Daily	Weekly	Monthly	
	Clinical issues	100	8	88	4
	Medical Legislation	4	50	-	50
	Medication	100	8	90	2
	Medical events	100	-	24	76
	News Publications	8	-	50	50
	Science & Research	92	-	69,5	29,5

Quest. 5 tries to make an overview regarding the means that the target group would prefer to improve their professional career. 48% of respondents enlisted e-learning in order to update and improve skills and knowledge, the some % evaluated workshops as main method, and only 8% preferred classical courses.

	%
Classical courses	8
Workshops	48
e learning	48

Quest. 6 evaluates the interest of respondents in e-learning. Hopefully 100 % of respondents for this question are interested in e-learning and its features and capacities.

	%
Yes	100
No	-

Quest. 7 explore the the interest of respondents in mobile learning. All respondents are interested in it as a mean and tool for learning.

	%
Yes	100
No	-

Quest. 8. reffers to the target group interest regarding e-learning and the domains of interest and the answers showed that 94% of respondents looked for e-learning courses in Internet until the moment. Regarding the medical areas of interest, responses were various and covering a whole spectrum, nevertheless, 100% enlisted orthopaedics and traumatology followed by with rehabilitation medicine and neurology.

	%
Yes	94
No	6
Pediatrics	12
Reumatology	4
Phisical and Rehabilitation	
Medicine	20
Neurology	22
Orthopedics	100
Traumatology	100
Oncology	12

Quest. 9 explores the amount of time that our target group think are necessary to refresh their knowledge and improve skills and competencies. The great range of responses went for 200-300 hours followed by 300-400 hours.

	%
< 100	0
100-200	6
200-300	44
300-400	48
>400	2

Quest. 10-11 evaluate the disponibility of the respondents in using an e-learning platform for continuous education on payment basis. All of the respondents turned to free online platform, while 16% agreed with paid type.

Quest 12. regards the language for the course information.

It was surprisingly to see that 96% prefer both English and Romanian for course information and content.

	%
Romanian	44
English	56
Romanian and English	96

Quest. 13. wishes to identify the lower limb pathology that would interest mostly the target group.

All respondents are interested in post-traumatic and degenative pathologies, followed by tumoral and congenital diseases.

%	Yes	No
Congenital	32	68
Post-traumatic	100	0
Inflammatory	24	76
Degenerative	100	0
Tumoral	36	64

Question 14. Asked if orthopedic surgeons were interested in gait analysis. 68% considered that it is necessary.

Question 15. Reffers to the specificity of methods that the respondents would be interested in. Knee and hip disorders attracted more interest, followed by fractures of tibia, ankle and calcaneum.

Hip trauma	Yes 100%	No 0 %
Hip osteoarthritis	Yes 100%	No 0 %
Knee trauma	Yes 100%	No 0 %
Knee osteoarthritis	Yes 100 %	No 0 %
Surgery for neuro-muscular disorders	Yes 20%	No 80%

Ankle osteoarthritis	Yes 24%	No 56%
Fractures of tibia and ankle	Yes 100%	No 0 %
Ankle arthrodesis	Yes 16 %	No 84%
Diabetic foot	Yes 12 %	No 88%
Congenital and developmental disorders	Yes 16%	No 84%
Fractures of the calcaneum	Yes 72%	No 28%
Bone tumors	Yes 36%	No 64%

Question 16. Asked about the most probable subjects that would interest the participants in e-learning. Most attractive subjects were hip and knee arthroplasties, ligamentous surgery, articular and peri-articular fracture fixation and diaphyseal fracture fixation.

Diaphyseal fracture fixation	Yes 100%	No 0%
Articular and peri-articular fracture fixation	Yes 100%	No 0%
Hip arthroplasty	Yes 100%	No 0%
Knee arthroplasty	Yes 100%	No 0%
Knee osteotomy	Yes 80%	No 20%
Hip osteotomy	Yes 44%	No 56%
Ankle arthrodesis	Yes 16%	No 84%
Tenotomies and capsulotomies	Yes 12%	No 88%
Ligamentous surgery	Yes 100%	No 0 %

Question 17. Asked opinion to orthopedic surgeons about which part of their practice gait analysis would be useful. Most thought that it would be useful in evaluation of the patient and pre-operative planning, as well as in guiding post-op rehabilitation, rather than the surgical procedure itself.

Patient evaluation	Yes 100 %	No 0%
Pre-operative planning	Yes 100%	No 0%
Establish the timing of surgery	Yes 12%	No 88%
Guiding post-op rehabilitation	Yes 92%	No 8%
Predicting the onset of complications	Yes 16%	No 84%

Question 18. Evaluated success perception of the surgeons. Good functional results and re-integration of the patient to previous life was accepted by all.

Good functional result	Yes 100%	No 0%
No complications	Yes 96%	No 4%
Social and professional re-integration of the patient	Yes 100%	No 0%
Radiological healing, no matter the functional result	Yes 4%	No 96%

Question 19. Determined the demographics of interest distribution among the participants. In general most surgeons were interested in all aspects of the surgical procedures.

Indications for each procedure	Yes 100%	No 0%
Surgical approach	Yes 100%	No 0%
Necessary instruments	Yes 72%	No 28%
Bone preparation	Yes 56%	No 44%
Implant positioning	Yes 100%	No 0%
Tips and tricks	Yes 100%	No 0%
Possible failures and complications	Yes 100%	No 0%

Question 20 – 21 - 22. Evaluates the use of human gait analysis in practice. Only 36% of the respondents were familiar with gait analysis but they used it only by clinical observation. 100% were eager to find out more about the technique.

Question 23 – 24. Explore the interest of the target group in sharing their knowledge by a Forum on medical topics and sharing experiences for second opinion. 100% of respondents showed a great interest in using a forum on medical topics, and also all of them are interested in getting a second opinion on on-line basis.

1.4.3. For Managers and Academic Medical Staff

Quest. 1. 100% of respondents enlist the importance of continuous education for them, their employees and, more, to the patients health and life.

Quest. 2 . Continuous medical education it is compulsory as stated by the Romanian health legislation. It states that each medical doctor (or nursing professional) has to cover 40 hours.

Quest. 3 – 4. All managers are interested in both e-learning and mobile learning.

Quest. 5. 67% of the managers looked for e-learning courses on internet

Quest. 6. 97% of the managers assumed that employees in their institution are not familiar /use an e-learning platform.

Quest. 7. Regarding the medical domains for which e-learning would be useful for professional formation of employees, responses were various and covering a whole spectrum.

Quest.8. 100% of Managers will promote e-learning and e-learning platforms inside their institutions.

Quest. 9 – 10. If the platform will be free of charge, 100% of responses enlisted a large acceptance of e-learning platform for continuous education in all mentioned areas. As for paid services, 100% of responses turned to accepting the e-learning platforms but enlisted as conditions partially employees contribution or the replacement of the 40 compulsory hours with implementing the paid e-learning platform.

Quest. 11. 100% of managers prefer Romanian language for the course information. But for most of them, English it is accepted.



1.5. General Overview of the Process - Results assessment and interpretation

Analysing the field survey results and the documentary research, the general conclusions could be gathered in the following categories:

- The knowledge of new means for training/assessment must be continuously updated;
- The knowledge of theory and its empirical use and terminology;
- Use of training/assessment methods and tools which fit the medical areas;
- The impact of assessment on the teaching/learning process and on teacher/instructor;
- The continuous improvement of various abilities development while using new means and techniques of training/assessment;
- Practicing the training/assessment abilities and the feedback continuously reported;
- The possibility of application and use of knowledge and competences gained based on the new means and techniques for training/assessment.

Accordingly, the results were checked taking into account the professional level.

Therefore, the following groups were covered:

1. Medical doctors
2. Residents
3. Other medical professionals: physiotherapists, kinesiologists
4. Managers

1. Medical doctors

All respondents underlined the importance of IT implementation in medicine while mentioning various fields where IT could be beneficial.

Also, they all mentioned the importance of IT field for the continuous improvement and knowledge updating.

They use weekly/monthly the enlisted sources of information and continuously train in any relevant topic. They share the area from good knowledge of e-tools



and distance learning methodologies to having no knowledge of the issues. All use email and internet. They would like to spend from 60 to 365 hours per year for training, but the schedule and work planning do not allow them the fulfilment.

Even if their experience in e-learning is not well defined, they all trust the methods and means for the topics enlisted. Even strongly empirical topics and subjects are of interest when linked to e-tools and an acceptance of free of charge or paid (partially contribution from employees) is obvious.

2. Residents

Even if never participated in distance learning, students and residents have competencies, training needs and expectations various from those of the above categories. They use and are familiar with e-tools and they heard about distance and mobile learning. They weekly/monthly sometimes, on a daily basis, check sources of information such as new jobs and career opportunities, European new techniques, technologies, publications and Science and Research last innovations.

They use email, internet, e-tools and social network and they often checked or looked for distance courses.

Based on these facts, the necessity for the project are quite high in Romania and, together with a high quality of classes, topics, subjects and teaching/learning materials and methods will prove to be successful among Romanian medical vocational training.

1.6. Accreditation/certification of new competencies

Main issues taken into consideration in our project were to achieve validation of training by CME credits. For this reason it is important to present the certification system in each country and to make early contact with correspondent ECM office and will act as stipulated by national regulations regarding the crediting criteria in CME. Also it is important to take care if creditation is available for CME programs via the Internet, online, or by interactive informational support offered. For this reason each report will present specific details linked to these 2 aspects.

Postgraduate medical education in Romania.

Postgraduate medical and pharmaceutical education provides specialization and professional development of individuals with higher education in the medical field, in order to acquire improve the level of knowledge, skills and abilities necessary to increase the quality of care and level of performance in health.

It is coordinated by the Ministry of Health. Strong links are realised with the Romanian Medical College of Physicians (CMR), Romanian Dental College, Romanian College of Pharmacists, Order of Biochemists, Biologists and Chemists in Romanian Health System. together with Ministry of Education, Youth and Sports

Types of postgraduate medical education forms in Romania.

Postgraduate medical education forms include:

a) the actual forms of CME, represented by postgraduate education courses and postgraduate distance education courses;

Continuing Medical Education (CME) is defined by the total quantum of planned training activities on theoretical and practical level, developed by medical doctors, with the aim of gaining or improving the knowledge, skills and professional attitudes, with the final goal of increasing the quality of medical act and performance level in specific domains, for the benefit of medical assistance of the patient. CME activities are quantified by units of credit, known as CME credits. This is accredited by the European Accreditation Council for Continuing medical Education (EACCME) and provided with European CME credits.

Permanent forms of postgraduate medical education are the courses of continuing education or continuing medical training, continuing professional

training workshops and internships for professional development or adjustment or vocational reorientation.

b) other forms of postgraduate education, credited as professional titles and qualifications, for which CME credit is added to the score calculation of the medical doctor, and represented by: residency, specializing in a specialty other than the basic one, acquisition of certificates of complementary studies, master and doctoral studies.

The credit system in continuous medical education in Romania

According to the Decision no. 2 of 23 January 2009, issued by the Romanian Medical College, under art. 406, 414 and 431 of Law no. 95/2006 on healthcare reform, the National Council of the Romanian College of Physicians decided on establishing a credit system of continuous medical education, upon which it is possible to evaluate the professional training of doctors, the criteria and rules for credit forms of continuing medical education, and the rules and criteria for accreditation of continuing medical education providers.

CME credits are granted in relation to the hours actually spent in the CME activity. For an hour of effective CME activity is given up to one CME credit. For a day of actual work is granted a maximum of 6 credits CME. Equivalence to the previous credit system is: an CME credit equals one hour of CME.

Management of CME activities is conducted by the Romanian College of Physicians by the national continuing medical education program in accordance with the procedures provided for in this Decision, directives and recommendations of the European Community (EC) or with agreements and mutual recognition of credits as established with European Union of Medical Specialists/European Accreditation Council for Continuing Medical Education (UEMS/EACCME), and with other medical authorities or professional bodies on European and national level, involved by the nature of their work, in education or continuing professional development of physicians.

Credits earned by doctors from participating in CME activities contribute to the composition score of medical professional. Assessment score for a professional doctor is done regularly, at a 5-year period.

The minimum number of CME credits that a doctor needs to accumulate for regular professional evaluation is 200 for 5 years, set by the date of evaluation, or 40 annually for retirees seeking the annually approval for extended activity.

Participation in CME activities should be mainly in the field of specialisation. It is admitted that maximum one third of the minimum score to be represented by the educational activities of other specialty medical fields than basic.

Necessarily, at least one third of required CME credits must be represented by participation in courses.

If medical doctors do not realize the minimum number of CME credits, free right to practice is suspended, according to the law, pending to the realization of the requested number of credits.

Types of CME providers in Romania

The types of CME providers accredited by the Romanian College of Physicians are:

- a) Postgraduate education providers, represented by medical higher education institutions, ie universities or faculties of medicine legally accredited;
- b) providers of continuing education or training, representatives of medical higher institutions mentioned before, institutions with educational role, regional Colleges of Physicians, which can manage a medical continuous training program and other organizations recognized by the Romanian College of Physicians, in liaison with the above institutions;
- c) CME providers for distance learning represented by higher education institutions and other medical centers with a role in distance learning, but only in collaboration with a university or accredited college of medicine;
- d) suppliers of scientific events, represented by the College of Physicians, medical professional societies and medical higher education institutions mentioned before
- e) Ministry of Health, Ministry of Education, Research, Youth and Sports, Academy of Medical Sciences, medical research institutes, directions / public health authorities, and other CME providers accredited by the College of Physicians of Romania;

Criteria and rules in crediting the forms of continuing medical education in Romania

Romanian College of Physicians creditates as forms of continuing medical education, hereinafter referred to as forms of CME, medical postgraduate education forms, continuous medical education forms, events and scientific activities.

According any form of CME credits is based on completing a type of application by the CME provider, accompanied by a detailed program on hourly rate of the course

Crediting for distance CME, CMED hereinafter, is for the following types of programs:

- a) CMED mail programs, characterized by placing the student in possession of educational support in printed form, CD or personalized e-mail, fully support fully providing the basis for self-learning process, ensuring the final assessment test session by direct, face front approach, by printed questionnaire mailed or via the Internet, for magazines in electronic format;
- b) CMED programs via the Internet, online, or by interactive informational support offered, with links and specific sites and portals, or by consulting with accredited tutors for the program, with secured final testing, also personalised online access or written test hall.

The crediting criteria in CMED are:

- time browsing and learning effective program to achieve its learning objectives, which is estimated through pilot testing organized by the supplier within a maximum of 18 hour per program;
- for Internet programs, 3-5 web pages of 2,000 characters per page and with reference to a maximum of two figures or tables, are considered corresponding to an hour of effective learning, that is an CME credit;
- test assessment for Internet CMED programs will allow an access for a maximum of two attempts, containing a minimum of 10 questions for every 6 effective learning hours, with a threshold of promotion to a minimum 75% correctly answered the questions.
- participation in CMED courses organized and credited by a university or by an European or international professional organization is credited with the number of credits granted by the European or international body;

CMED programs via the Internet are credited according to the duration of effective learning appreciated, maximum 18 hours per program, corresponding to 18 credits of CME;

CMED request for creditation is made only by the provider of CMED to the Romanian Medical College, by using a credit application form, formulated and submitted at least 60 days before the start of the program.



The application shall be accompanied by a technical and pedagogical dossier of the educational programs that will include:

a) demonstration elements, namely: the overall mode of functioning of the program, the existence of a dedicated server for the CME process online, a software for management of scientific content material, a soft owner or adapted for users recording, a technical team composed of physicians and ICT specialists, a schema with the structure of the database and users, and a concrete way in which the whole process can be audited, keeping access logs and comparison with entries in the database

b) a project or program for course management, containing references to: identify and analyze requirements, reliability study, educational objectives, implementation strategy, resource analysis, knowledge assessment, project evaluation and CV and copies of qualifications acquired by sites program trainers. The organizers are obliged to submit, after the end of program, the list of participants, including personal identification number of the doctor in electronic format.

Certification of forms of continuing medical education in Romania

Certification forms of credited CME are made by local colleges of physicians, depending on the location of the form of CME, as organizer or co-organizer together with the accredited and involved suppliers of CME, bearing the stamp of the College of Physicians and of the supplier, as appropriate, and signature of the President or Vice President of the scientific professional department, together with the signature of the coordinator or person responsible for the program.

Certification of CMED programs will be done by printed original certificates. Credits earned by doctors and pharmacists, by participating in Continuing Medical Education activities, contribute to the elaboration of professional medical score.

1.7. Conclusions

The rapid pace with which medical knowledge is constantly changing and many challenges that doctors face daily must make continuous training and permanent "connecting" to everything new to become essential for medical profession, no matter the specialisation.

Precisely for the acute need to be permanent "in touch" with the findings and important issues in medicine, the new technology facilitated learning online methods gained ground in recent years in medical education, at international level and in the process of obtaining credentials for the medical profession, also influencing the methods used now in the process of learning.

Until recently, medical conferences and seminars, various specialized courses or subscription to periodicals, were the only available ways for professional improvement.

Internet approaches by "e-learning" method, changed fundamentally the modality by which doctors can get information and involvement in educational activities designed to ensure their needed continuous training.

Moreover, according to the latest statistics on the subject, further training and obtaining CME credits online will maintain its upward trend worldwide. By 2016 it is estimated that doctors will get via the internet about 50% of the required credits.

The reasons that make "e learning" so appreciated at international level relate to: very fast access from anywhere in the world to the required information, easy access (through a simple Internet connection) and which involves a much lower cost than required by traditional training methods that offered CME credits (travel, time spent, cost subscriptions, etc.), which is a very important aspect especially in the current economic climate in Romania but also abroad.

In Romania the Ministry of Education, Research, Youth and Sports initiated in 2009 the development of a Lifelong Learning Strategy with the participation of specialists and all stakeholders.

From the analyse of questionnaires utilised in our study and consultation of different databases we can draw the conclusion that in Romania, medical e-learning is at incipient level.

The interest shown for e-learning for all categories investigated in the target group is major.

Analysing the field survey results and the documentary research, the general conclusions could be gathered in the following categories:

- The knowledge of new means for training/assessment must be continuously updated;
- Use of training/assessment methods and tools which fit the medical areas of orthopaedics and rehabilitation;
- The continuous improvement of various abilities development while using new means and techniques of training/assessment;
- Introducing e-learning for topics related to orthopaedics and rehabilitation
- Introducing a forum on medical topics and sharing experiences for second opinion within our platform.
- The use of English language for all developed materials.
- Introducing training for computerised gait analysis.

Proposals

- a. Transfer of the report to the Universities of Medicine and Pharmacy in and the Romanian Medical College of Physicians (CMR) in Romania.
- b. To inform these organizations and other bodies interested in e-learning and identified as references on our platform, about the opportunity to participate as users to courses offered by our platform.
- c. Maintaining of questionnaires on the project website appealing to visitors to help us in expanding the research to other geographical areas.

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3. Privire de ansamblu asupra sistemelor educationale in Europa si reformele actuale (Overviews on education systems in Europe and ongoing reforms) 2010 (http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/national_summary_sheets/047_RO_EN.pdf)
4. Tudor C. Clinici Instrumente informatice și de comunicație în învățământul medical tradițional și la distanță Teza de Doctorat (ICT instruments in traditional and distance medical higher education, PhD thesis), UMF Cluj http://www.umfcluj.ro/Document_Files/Doctorat-Rezumat-Teze-de-Doctorat/00000199/cpmgk_calinici.pdf
5. Istrate Ovidiu eLearning Papers • www.elearningpapers.eu , N° 5 • September 2007 • ISSN 1887-1542

OFFICIAL BODIES AND PROFESSIONAL ORGANISATIONS

1. Ministerul Educației, Cercetării, Tineretului și Sportului (Ministry of Education, Research, Youth and Sports): www.edu.ro
2. Ministerul Sănătății (Ministry of Health) <http://www.ms.ro/>
3. [Colegiul Medicilor din România](http://www.cmr.ro/) (Romanian College of Physicians) <http://www.cmr.ro/>
4. Consiliul European de Acreditare în Educație Medicală Continuă (European Accreditation Council for Continuing Medical Education) EACCME <http://www.eaccme.eu/>

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 0241.511.512

E-mail rectorat @ univ/ovidius.ro

Web <http://www.univ/ovidius.ro> [link]

Universitatea de Medicina si Farmacie CRAIOVA

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Universitatea de Medicina si Farmacie IASI

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Universitatea de Medicina si Farmacie TIMISOARA

Web <http://www.umft.ro> [link]

**OFICIAL PUBLICATIONS**

1. Ordin nr. 418 din 20/04/2005 (forma consolidata 14/03/2011) pentru aprobarea Catalogului national de programe de studii complementare în vederea obinerii de atestate de c tre medici, medici dentiti i farmaci ti, precum i a Normelor metodologice de organizare i desf urare a acestora (Order nr. 418 from 20/04/2005 (consolidated form 14/03/2011) for approval of the National Catalog of programmes in complementary studies for obtaining of certification by medical doctors, medical dentists and pharmacists, as well as for methodological rules for the organization and conduct of these studies)

<http://legislatie-sanitara.ro/?p=5994>

2. Decizia nr. 2 din 23 ianuarie 2009 emisa de COLEGIUL MEDICILOR DIN ROMÂNIA (the Decision no. 2 of 23 January 2009, issued by the Romanian Medical College)

<http://www.emedic.ro/Legislatie/468.htm>

ANNEX 1

NEEDS ASSESSMENT QUESTIONNAIRE IN ORTHOPEDICS

PERSONAL DETAILS

(These details are required for communication purposes only and will not be disclosed)

NAME: * optional

Position:

 Resident in.....

 Medical doctor specialization.....

 Member of professional organization name of organization.....

 Manager

Institution.....

Department.....

Position.....

EMAIL: * optional

*Tick the box that suits best your situation.

1. . How often do you access the internet?

 Daily 2-3 times a week weekly

2. How much do you use the internet for improving your professional career?

 Daily Weekly Monthly

3. Which of the following e-tools are you familiar with and to which extent? Tick the box that suits best your situation.

	Never heard of it	I have heard but never used it	I can manage with help	I can use it
Chat				
Wiki				
Audio conferencing				
Video conferencing				
Forum				
e-mail groups				
Internet Mobile/ mobile learning				

4. What are the main categories of information that you require? How often do you use them?

Clinical issues	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medical Legislation	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medication	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medical events	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>



News Publications Daily Weekly Monthly
 Science & Research Daily Weekly Monthly

5. How do you prefer to improve your professional career?

Classical courses Workshops e learning

6. Are you interested in e-learning?

Yes No

7. Are you interested in mobile learning?

Yes No

8. Have you looked for e-learning on internet?

Yes No

In what domains.....

9. How many hours/per year do you think are necessary to refresh your knowledge and improve skills and competencies?

.....

10. If you would have on your disposal an e-learning platform for continuous education would you apply to it if it is on free basis?

Yes No

11. If you would have on your disposal an e-learning platform for continuous education would you apply to it if it is on payment basis?

Yes No

12. What language would you prefer for the course information?

.....

13. What is the pathology, localized to the lower limb joints, that would interest you?

Congenital	Yes	No
Post-traumatic	Yes	No
Inflammatory	Yes	No
Degenerative	Yes	No
Tumoral	Yes	No

14. Would you be interested in learning about application of gait analysis in orthopedic surgery?

Yes No



15. If you would apply to an e-learning platform dedicated to lower limb orthopedic pathology (including complications), would you be interested in:

Hip trauma	Yes	No
Hip osteoarthritis	Yes	No
Knee trauma	Yes	No
Knee osteoarthritis	Yes	No
Surgery for neuro-muscular disorders	Yes	No
Ankle osteoarthritis	Yes	No
Fractures of tibia and ankle	Yes	No
Ankle arthrodesis	Yes	No
Diabetic foot	Yes	No
Congenital and developmental disorders	Yes	No
Fractures of the calcaneum	Yes	No
Bone tumors	Yes	No

16. What kind of surgical procedures for lower limb pathology would you be interested in being detailed on an e-learning platform:

Diaphyseal fracture fixation	Yes	No
Articular and peri-articular fracture fixation	Yes	No
Hip arthroplasty	Yes	No
Knee arthroplasty	Yes	No
Knee osteotomy	Yes	No
Hip osteotomy	Yes	No
Ankle arthrodesis	Yes	No
Tenotomies and capsulotomies	Yes	No
Ligamentous surgery	Yes	No

17. Do you think that gait analysis can be useful for certain aspects of orthopedic practice

Patient evaluation	Yes	No
Pre-operative planning	Yes	No
Establish the timing of surgery	Yes	No
Guiding post-op rehabilitation	Yes	No
Predicting the onset of complications	Yes	No

18. If you had to describe a successful orthopedic treatment, this would include

Good functional result	Yes	No
No complications	Yes	No
Social and professional re-integration of the patient	Yes	No
Radiological healing, no matter the functional result	Yes	No

19. When referring to orthopedic procedures, your major points of interest(s) are:

Indications for each procedure	Yes	No
Surgical approach	Yes	No
Necessary instruments	Yes	No

Bone preparation	Yes	No
Implant positioning	Yes	No
Tips and tricks	Yes	No
Possible failures and complications	Yes	No

20. Are you familiar with human gait analysis?

Yes No

21. Do you use human gait analysis in your practice?

Yes by clinical observation
Yes by computerized
methods
No

22. Would you be interested in learning about application of gait analysis in rehabilitation?

Yes No

23. Would you be interested in a Forum on medical topics?

Yes No

24. Would you be interested in sharing your own experience for second opinion?

Yes No

ANNEX 2
NEEDS ASSESSMENT QUESTIONNAIRE IN REHABILITATION
PERSONAL DETAILS

(These details are required for communication purposes only and will not be disclosed)

NAME: * optional

Position:

 Resident in.....

 Medical doctor specialization.....

 Physiotherapist specialization.....

 Member of professional organization name of organization.....

 Manager

Institution.....

Department.....

Position.....

EMAIL: * optional

*Tick the box that suits best your situation.

1. . How often do you access the internet?

 Daily 2-3 times a week weekly

2. How much do you use the internet for improving your professional career?

 Daily Weekly Monthly

3. Which of the following e-tools are you familiar with and to which extent? Tick the box that suits best your situation.

	Never heard of it	I have heard but never used it	I can manage with help	I can use it
Chat				
Wiki				
Audio conferencing				
Video conferencing				
Forum				
e-mail groups				
Internet Mobile/ mobile learning				

4. What are the main categories of information that you require? How often do you use them?

Clinical issues	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medical Legislation	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medication	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Medical events	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
News Publications	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>
Science & Research	<input type="checkbox"/>	Daily <input type="checkbox"/>	Weekly <input type="checkbox"/>	Monthly <input type="checkbox"/>

5. How do you prefer to improve your professional career?

Classical courses Workshops e learning

6. Are you interested in e-learning?

Yes No

7. Are you interested in mobile learning?

Yes No

8. Have you looked for e-learning on internet?

Yes No

In what domains.....

9. How many hours/per year do you think are necessary to refresh your knowledge and improve skills and competencies?

.....

10. If you would have on your disposal an e-learning platform for continuous education would you apply to it if it is on free basis?

Yes No

11. If you would have on your disposal an e-learning platform for continuous education would you apply to it if it is on payment basis?

Yes No

12. What language would you prefer for the course information?

.....

13. What is the pathology, localized to the lower limb joints, that would interest you?

Congenital	Yes	No
Post-traumatic	Yes	No
Inflammatory	Yes	No
Degenerative	Yes	No
Tumoral	Yes	No

14. If you would apply to an e-learning platform dedicated to the joints of the lower limb pathology, requiring surgery, would you be interested in:

Kinetotherapy/ Hidro – Balneo-kinesitherapy	Yes	No
Massage	Yes	No
Electrotherapy	Yes	No
Magnetotherapy	Yes	No
Other preformed physical modalities	Yes	No
Techniques for orthosis/prosthesis	Yes	No
Occupational therapy	Yes	No

Balneology Yes No
All of the above Yes No

15. Which of the following methods of rehabilitation, for this kind of patient, would you be most interested in?

Kinetotherapy/ Hidrokinetotherpay	Yes	No
Masage	Yes	No
Electrotherapy	Yes	No
Techniques for orthosis/prosthesis	Yes	No
Ocupational therapy	Yes	No
Balneology	Yes	No
All of the above	Yes	No

16. Are you familiar with human gait analysis?

Yes No

17. Do you use human gait analysis in your practice?

Yes by clinical observation
Yes by computerized
methods
No

18. Would you be interested in learning about application of gait analysis in rehabilitation?

Yes No

19. Would you be interested in a Forum on medical topics?

Yes No

20. Would you be interested in sharing your own experience for second opinion?

Yes No

ANNEX 3

NEEDS ASSESSMENT QUESTIONNAIRE FOR MANAGERS

(MANAGERS- Staff in the medical educational system, Institutional officials at clinical orthopedic and rehabilitation departments, Medical education and related associations in the field of orthopedics and rehabilitation; national organizations)

PERSONAL DETAILS

(These details are required for communication purposes only and will not be disclosed)

NAME: * optional

Institution
Department
Position:

EMAIL: * optional

*Tick the box that suits best your situation.

1. How important is continuous medical education for you and your employees?
.....
.....
.....

2. How many hours and /or ECTS credits do your employees need yearly for continuous medical education, according to your national health legislation?

3. Are you interested in e-learning?

Yes No

4. Are you interested in mobile learning?

Yes No

5. Have you looked for e-learning courses on internet?

Yes No

In what domains-----

6. Employees in your institution are familiar /use an e-learning platform?

Yes No

6. In what medical domains do you think that e-learning would be useful for professional formation of your employees?

7. If you would have access to an e-learning medical platform would you promote it within your institution?

Yes No

8. If you would have on your disposal an e-learning platform for continuous education would you apply to it for your employees if it is on free basis?

Yes No

9. If you would have on your disposal an e-learning platform for continuous education would you apply to it for your employees if it is on payment basis?

Yes No

Comments-----

10. What language would you prefer for the course information?
.....