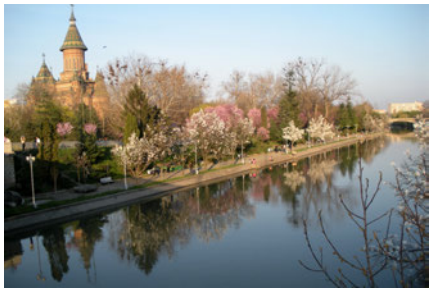
ÖGHD
Österreichische Gesellschft
für Hochschuldidaktik

UMFT
University of Medicine
and Pharmacy
VICTOR BABEŞ
Timişoara

16. Grazer Konferenz

Timisoara | 19. - 21. April 2012

Curriculum planning and assessment



Conference Venue:

Victor Babes University of Medicine and Pharmacy
Timisoara, Romania
2 Eftimie Murgu Square, Ro-300041, Timisoara, Romania

Organizers: University of Medicine and Pharmacy, Timisoara
Österreichische Gesellschaft für Hochschuldidaktik

Conference Program:

Richard März, Medical University of Vienna, ÖGHD
Jörg-Ingolf Stein, Medical University of Innsbruck, ÖGHD
Marius Raica, University of Medicine and Pharmacy, Timisoara

Local Organisers:

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Next conference:

17th Graz Conference, 2013
The "17th Graz Conference on Medical Education" will take place at the Medical University of Innsbruck in April 2013.

Plans for the future:

2014 - Salzburg
2015 - Graz

1 Inhalt/Contents

2 Foreword – after the concerence

Dear Participants of the 16th" Graz Conference,

Thank you for participating in this conference thus making it a remarkable event: For the first time the conference took place abroad from Austria and for the first time stundents participated in great number, allowing an intense dialog about teaching and learning. For me it was not an interesting conference but also extremly motivating to further improve and develop teaching.

This online program will contain most of the material presented at the conference. If available, simply click the link "material" close to the title of the respective presentation.

Furthermore I ask you to help me improving this program:
If you find any printing error or mistake, please do not keep it for yourself, communicate it by sending an email to `herbert.plass@meduniwien.ac.at`. In particular please check the spelling of names, are there all special characters like Š, ó, ç, ... If you miss your name in the list of participants at the end of the program, please tell me!

I am looking forward to meet you again in Innsbruck!
Herbert Plass

3 Programmübersicht - Program Overview

Mittwoch - Wednesday 18. April 2012		
Preconference Workshops		
9:00	Preconference Workshops	a) Ellinger, Raica b) Plass, Kremser

Donnerstag - Thursday 19. April 2012		
9:00	Registration	
10:00	Begrüßung/Welcome	Raica, Stein, März
10:30	Lecture	Taylor
11:30	Lecture	März
12:00	Lunch	
13:30	Lecture	Richard
14:30	Coffee	
15:00	Workshops 1	a) Seitz b) Stein c) Taylor
18:00	Opening Ceremony Posterparty	März, Stein (Moderation)

Freitag - Friday 20. April 2012		
9:00	Lecture	Schmidts
9:45	Coffee	
10:15	Workshops 2	a) Schmidts, Himmelbauer b) Wiener, Plass c) Jippes
13:00	Lunch	
14:00	Lecture	Fischer
14:45	Coffee	
15:15	Workshops 3	a) Fischer b) Bari c) Csanyi
18:45	Gala Dinner at “Baroque Palace” Students’ party	
9:00 18:00	EMEDIQUAL students’ day	c.f. special program

Samstag - Saturday 21. April 2012		
9:00	Lecture	Reibnegger
	Lecture	Lischka
10:00	Coffee	
10:30	Round Table	New achievements in Romanian medical curriculum
13:00	Abschluß/Closing Remarks	März
13:30	End of Conference	
18:00	Excursion to “Schwaben Haus”	

4 Workshops

Preconference Workshop	Facilitator	location
Mittwoch/Wednesday 9:00 - 16:00		
0a	Ellinger, Raica	Histology Departament
0b	Plass, Kremser	Dragan Hall
Workshop	**Facilitator**	**location**
Donnerstag/Thursday 15:00		
1a	Seitz	Senate Hall
1b	Stein	Iagnov Hall
1c	Taylor	Dragan Hall
Freitag/Friday 10:15		
2a	Schmidts, Himmelbauer	Senate Hall
2b	Wiener, Plass	Iagnov Hall
2c	Jippes	Dragan Hall
Freitag/Friday 15:15		
3a	Fischer	Senate Hall
3b	Bari	Iagnov Hall
3c	Csanyi	Dragan Hall

Workshop 0a, 18. 4. 2012, 9:00

Virtual Microscopy

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Curricular reforms efforts and the intake of novel educational strategies are challenging the traditional microscope-based teaching of histology. Thus, online microscopical methods have become en vogue over the last decade. The rapid progress in this technology was driven by research, routine clinical and teaching applications and because of the high analysis throughput rate making it interesting in industrial research.

The history of virtual microscopy dates back to the early 1960s; a broader acceptance of this new technology remained reserved until the late 1990s, mainly since the technological basis is linked to advancements of computer and internet technologies. Currently, storage capacities, processing speeds etc. have made virtual microscopy feasible for the microscopical community, to scientists, pathologists and teachers of histology and pathology. Such, in many instances virtual microscopy already has become a routine tool for microscopists, questioning the way we te ach, learn, diagnose and research with microscopic images.

Well-known optical companies now offer smart systems in their assortment; developments direct from the processing of fixed and stained tissues to living unstained cells. Virtual microscopy is a method of digitizing microscope specimens and viewing the produced virtual slides on a computer screen.

Focussing on the use in teaching, virtual microscopy allows viewing of virtual slides by large numbers of students. The virtual slide, as the key component of a virtual microscopy system, allows digital images of whole slides to be easily stored, archived, retrieved, annotated, duplicated, distributed, or integrated into various data sets and viewed over open or private computer networks. Basically in the working out of virtual slides is the truthful reflection of the real histological sections neither loosing any information nor artificially adding false data to the image. Using virtual microscopy, we take advantage of our collections of histological slides providing the best sample for everyone, being simultaneously available for teachers and students.

Thus, advantages of digital slides might be:

- Production of an infinite number of copies for an infinite number of individuals
- use time and location independent
- use by more than one person in more than one location simultaneously
- digital archiving and easy handling in catalogues,
  - availability to everyone
  - classification and easy retrieval by topics
  - providing with annotations
  - interlinking with different disciplines.

These items may lead to a large reduction in the time and expense required to organise and run these sessions and finally to enhanced quality of the earning experience. Digital slide systems for education should consider that image data are deliverable in a form easily accessible by all users and the interface is intuitive and requires little or no training to use. The final data set should combine didactics and practice and monitor student's progress and reasoning. Students should be guided by annotations, however the system should offer more than one way to use it, and whenever possible, didactic cases should bring context to abstract knowledge. In order to make use of the potentialities the virtual microscope should interact with the teaching and/or learning surrounding in a blended learning principle with clean-cut objectives.

References:

Virtual microscopy and virtual slides in teaching, diagnosis and research. In: Advances in Pathology, Microscopy & Molecular Morphology. J. Gu, R.W. Ogilvie Eds., CRC Press 2005.

Enhanced virtual microscopy for collaborative education. M.M.Triola, & W.J. Holloway, BMC Medical Education 2011,11,4.

Workshop 0b, 18. 4. 2012, 9:00

Adapting teaching methods to learning behaviour

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The way students learn has been changing during the last years. A multimedia environment dominates and changed (and is still changing) the behavior of the so called "Generation Y". Students no longer learn in a linear way, but they want to collect information at any time and at any place for any topic that comes up. The way students acquire knowledge closely resembles a mind-map. Thus teaching has to be adapted, new strategies and methods are needed. A "guest lecturer" will demonstrate his abilities (movie). The workshop participants are then requested to reflect on this lecture. The outcome will be documented by using a mind-map.

The desire to collect information "at any time and at any place" could be met with an on-line learning platform. An outline for an on-line course will be developed by the participants. On-line courses used at the Medical University of Vienna will be shown and discussed.

Of course, in-class activities still are not out-of-date, but they should evolve from a simple lecture to more structured methods. What makes a lecture boring and what are the possibilities to hold the students' attention? Some possibilities to do so are discussed and elaborated in the course of the workshop. Participants will also discuss methods how to keep students following in-class activities and will also shortly experience the learning strategy "Team Based Learning" which is highly accepted by the students in Vienna.

We will also try to find out when and how the use of an audience response system (ARS) can be helpful for teaching and learning? Participants will deelop their own small projects which will be demonstrated during the workshop. Also, since an ARS will be used throughout the workshop, participants will, on their own, find out the advantages/disadvantages of the use of an ARS. The final part of the workshop will offer enough space for open discussion and exchange of ideas.

Workshop 1a, 19. 4. 2012, 15:00

PhD in Europe? – PhD in Europe!

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At first glance the situation in SE Europe seems to be almost hopeless for young med/bio scientists honestly interested to invest their engagement, their own money, and valuable life-time into research. So the first point of the workshop is an overview over some oportunities for PhD candidates in Germany and neighboring countries. In addition the urgent needs for PhD education in SE Europe Med Faculties will be listed and discussed.

This includes:

- Improvement of equipment and providing (modest) stipends
- A political independent committee in the Ministry of Science evaluating research proposals according to the international standard
- Development of a master plan for graduate & postgraduate science education
- Funding of research in the country according to European recommendations and promises
- Founding and financing competitive graduate schools

Having in mind that SE Europe governments as well as EU in fact do not take care of a competitive PhD education with the consequence that many young students will go to centers of excellent in Aachen, Amsterdam, Cambridge, Copenhagen,....Vienna, Zurich, brain drain is resulting. However, instead of resignation with a small budget a lot can be done locally to improve the situation:

- Start founding core facilities so that the often valuable equipment is available to all researchers – the fight against the door lockers
- Concentrate the research to few, precise topics, find your research niche
- Start a benefit program by allocation of research money to the successful groups, obvious by publications, external funding and successful international cooperation
- Start twinning PhD Programs with elected international partners in order to improve the science level
- Develop a master plan for research at the faculty level.

Workshop 1b, 19. 4. 2012, 15:00

Paediatric clinical training and assessment of 6th year students in the medcial curriculum Innsbruck

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One of the major concerns in medical curricula is teaching and assessing practical skills. Many curricula changes focussed on clinical aspects and shifted available teaching hours from theoretical to practical courses. These “hands on“ courses are only possible in a setting with sufficient patient availability and small groups of students. Although some technical skills can also be taught in a skills lab first, they still have to be then used in real life.

In the Innsbruck medical curriculum the last, 6th year is dedicated to the clinical and practical training of students. They have to do 6 modules, 3 of which are mandatory - family medicine, surgery, internal medicine lasting 8 weeks – and others they can chose for 4 weeks the department from a list – including Paediatrics- of main interest and importance according to the definition of the curriculum committee.

Students are assigned to one ward within a 1:1 setting, one mentor and one student and should be integrated into the daily work, getting their own patient’s responsibility from admission to discharge. Under supervision they take the history, do necessary examinations discuss diagnosis and therapy including prescriptions.

They have a logbook with all necessary information about the module and a weekly schedule where it is the student’s responsibility to fill in their duties and tasks as discussed and decided together with the mentor.

The **assessment** consists of structured elements like Mini-CEX = Mini-Clinical-Exercises and DOPS = Direct Observation of Procedural Skills.

Both have defined general criteria like clinical decision making, organisation and efficiency professionality and specific ones like technical skills or counselling being graded with a scoring from 1(lowest) - 10points. At least once a week one of these has to be don and documented, with the chance for comments and suggestion to improve the performance.

After a term of 4 weeks a final colloquium, again structured,is mandatory and at the final score given. The highest score for one assessment could be 50 points, thus after 4 weeks 200 would be the upmost scoring. Minimum of 120 is required to pass. In addition verbal assessment is given too.

One advantage of more integrated and practically oriented teaching with real patients lies in the combination of skills and attitudes! Which is another major focus of current modern curricula and can be achieved easily by this supervised practical training.

The Workshop will first give an overview of the current structure and state of the clinical training and then discuss its feasibility and advantages/disadvantages for Paediatrics, maybe leading to changes and improvement.

Workshop 1c, 19. 4. 2012, 12:15

Using adult learning theories to plan assessment

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When students learn they follow a clear sequence of four learning domains, recall, elaboration, organisation and reflection. One of the difficult aspects of designing assessment is working out which learning domains we are testing with each type of question or activity. Another is ensuring that we are not only testing recall. The final problem is determining how to give meaningful and useful feedback to the students following or during the assessment. Based on a simple plan of adult learning we will work in pairs or small groups to either develop or improve our assessment strategies, to meet each of these objectives.

Workshop 2a, 20. 4. 2012, 10:15

Toolbox of the assessment of clinical skills

Michael Schmidts, Monika Himmelbauer
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Assessment in education is a complicated challenge today. There is a large debate about the tools that are useful to measure student learning. Outcomes assessment can help identify problems in many fields: For example it can establish a need for increasing the emphasis of particular skills areas in the curriculum. Or it can tell you whether or not your students are learning what you want them to learn.

We will present and give some hands-on experience on clinical skills assessment methods (OSCE, Mini-CEX, DOPS, portfolio, formative workplace assessment, programmatic assessment). Workshop participants will discuss the advantages and disadvantages of each method and finally setup an assessment plan for their own educational needs.

At the end of the workshop participants

- know different methods of the assessment of clinical skills
- know some advantages and disadvantages of each method
- can choose and apply suitable methods for their own educational needs
- can set up an assessment plan for clinical skills course(s) and/or programs.

This workshop is interactive and those attending will work in small groups applying the concepts learned throughout the workshop. It is opened for everybody interested in the topic of assessment of clinical skills (students, teachers, program coordinators, skills lab administrators, deans).

Workshop 2b, 29. 4. 2012, 10:15

Team Based Learning - An effective learning strategy

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Team-Based Learning is a well-defined instructional strategy that is beeing employed increasingly in medical education. This approach allows a single instructor to manage multiple small groups simultaneously in one classroom and has the potential to promote active, small group, interactive learning without requiring large numbers of faculty facilitators. The structure of the team-based learning sequence fosters a very high level of content learning by giving students several passes at increasing their understanding of the course material. The first pass occurs at the level of individual study of the material before class activities, a task for which they are held accountable on the first individual test. Then, during the four steps of the Readiness Assurance Process, students increase their understanding by trying to answer questions individually and through group discussion, reviewing the assigned readings to make appeals, and receiving additional focused input from the instructor being an expert in his field.

References

Michaelsen LK, Baumann Knight A, Fink LD. Team-based learning: A transformative use of small groups. Westport (CT): Praeger; 2002.

Thompson BM, Schneider VF, Haidet P, Levine RE, McMahon KK, Perkowski LC, Richards BF. Team-based learning at ten medical schools: two years later. Med Educ. 2007;41:250-7.

Wiener H, Plass H, März R. Team-based learning in an intensive course format for 1st Year Medical students. Croat Med J. 50; 69-76, 2009

Workshop 2c, 29. 4. 2012, 10:15

How ready for curriculum change is your medical school? A practical tool to improve the chance of successfully implementing changes in your school.

Mariëlle Jippes[1], Erik Driessen[1], Gerard D. Majoor[2], Nick J. Broers[3], Wim H. Gijselaers[4]; Cees P.M. van der Vleuten[1]

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Introduction: In the whole world many medical schools are changing their curriculum but it is still unclear which factors promote successful change. Earlier research found that 'organizational readiness for change' (ORC) is a critical precursor to successful implementation of change. We developed and validated an instrument to measure a Medical School's Organisational Readiness for Curriculum change (MORC).

Intended outcomes: Practical information how you could asses the readiness for change in your medical school. Practical advice on how you could use the outcomes of an analysis with MORC to increase the chance of successful change implementation in your school.

Structure: Introduction on the concept of ORC. Next, individual completion of the MORC instrument and determination of areas which have highest priority for improvement. Afterwards, discussion in groups of four from which minimally one person is from a medical school currently in a change process. Within the small groups we will try to develop strategies with which the areas of highest priority can be improved. Finally, the small groups will present their areas of highest priority and their developed strategies.

Who should attend: Staff members or management of medical schools that are preparing or implementing a curriculum change. All other interested persons in curriculum change are welcome.

Workshop 3a, 20. 4. 2012, 15:15

What´s next: Challenges for future curriculum reform projects

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The workshop should identify future needs for curriculum reforms. Therefore, a needs assessment will be performed by participants based on their experiences. Based on this joint needs assessment, curiculuar challenges, the related learning goals and routes for implementation in an idealized medical school will be identified and discussed.

Workshop 3b, 20. 4. 2012, 15:15

Teaching biomedical informatics in 2012: Difficulties and possible solutions

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Although biomedical informatics lacks a clear and theoretically-grounded definition, there is a general consensus on its involvement in the training of health professionals. Since medical education is fully packed with traditional disciplines (anatomy, physiology, surgery, etc.) and also with new, challenging subjects like molecular biology or genetics, it is very difficult to find the appropriate time slice in the curriculum for the proper training of medical informatics.

Although there are acceptable recommendations on what makes up an informatics curriculum, medical schools teach what they consider important, what can be financed and what can be forced into the tight time frame. Medical professionals and institutions emphasize the need of the continuing medical education (CME) for maintaining and improving knowledge, skills, competence and performance. In contrast, in several countries, including Hungary there is no national concept in CME that would cover certain specific fields such as medical informatics. With the overall growth of informatics, the medical education system should also provide programs at both graduate and post-graduate levels. While there is a wide consensus as to the importance of this urgent need, several factors hamper the construction and operation of a CME system in medical informatics. In particular:

1. lack of involvement of health informatics in the core curriculum of most medical schools
2. limited human and instrumental resources of educational institutions, including medical and nursing schools
3. competence and skill level are not defined and measured
4. there are no comprehensive education programs available

In our workshop, we describe the most important factors influencing education in general, and in Hungary and at our faculty in particular. Our department is responsible for teaching medical informatics for students in medicine, dentistry, pharmacy and nursing. In addition, we provide courses for post-graduate students in various PhD programs focusing on specific aspects of info-communication involved in all phases of research. We summarize our teaching experience gained during the past ten years and we display how we teach biomedical informatics to different groups of health professionals. We call attention to the need of defined basic skills and knowledge in informatics for each level of the health care education. We emphasize that even with limited resources it is possible to create and maintain valuable training programs especially with effective trans-border cooperation.

Workshop 3c, 20. 4. 2012, 15:15

Course Design according to Bologna: competence based, transparent and comparable

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Intended learning outcomes

- At the end of the workshop participants are able to
- look at the whole process of learning and teaching from the perspective of its outcomes.
- formulate intended learning outcomes for their respective course or module
- suggest appropriate learning environments
- suggest appropriate teaching methods
- suggest appropriate assessment strategies

Content

- difference between information, knowledge and competence
- difference between (teaching) goals, learning objectives and intended learning outcomes
- principles of knowhow development and competence development
- importance of motivation, activity and responsibility
- (new) roles and tasks of teachers

Methods

- brainstorming / activation of previous knowledge
- (short) theoretical inputs
- practical exercises (writing learning outcomes)
- discussion
- `www.learning-outcomes.net`
- online support after the workshop / conference (if needed and wanted)

Requirements:

- participants are askede to bring their course or module descriptions, particularly goals, aims and learning objectives.

5 Lectures, Round Table Discussion

Alle Veranstaltungen/All events in “Senate Hall”

	Tag Day	Zeit Time
Taylor	Donnerstag/Thursday	10:30
März	Donnerstag/Thursday	12:30
Richard	Donnerstag/Thursday	13:30
Schmidts	Freitag/Friday	9:00
Fischer	Freitag/Friday	14:00
Reibnegger	Samstag/Saturday	9:00
Lischka	Samstag/Saturday	
Discussion	Samstag/Saturday	10:30

19. 4. 2012, 10:30

Using adult learning theories to plan assessment

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Assessment in most medical schools tends to evolve, depending on the interests and enthusiasms of the staff involved. This is particularly the case where the assessment is the responsibility of individual teachers. In a perfect world assessment will be overseen by specialists at Medical School level, and integrated to parallel the clinical world as closely as possible. If the world is less than perfect, then individual departments or teachers will need to make decisions for themselves.

There have been considerable moves in our understanding of the way people learn, and in this talk I will discuss the way in which our new understandings can help us rationalise and improve the way we assess our students. There are four domains which we might like to assess. In order of increasing complexity they are recall, elaboration, organisation and reflection. Different assessment methods allow us to test different domains of learning, but each has their disadvantages in terms of delivery or marking. In the end, all assessment is a compromise between educational theory and practicality, but by understanding the theory we can get the best compromise.

The final element of assessment is how to give feedback. In the talk I will address each of these issues in turn.

19. 4. 2012, 11:30

MEDINE 2: An EU Network Project

Richard März

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A characteristic of Medical Education across the European Union (EU) is a complete lack of harmonisation: Structures, standards, and content of medical education programmes are not consistent. The transparency and comparability of qualifications are limited and even the titles conferred vary. This is clearly at cross-purposes with the stated – and lived – goal of mobility.

The MEDINE2 Thematic Network in Medical Education in Europe (1) is funded from 10/2009 until 3/2013. It builds on the work of the MEDINE Network, 2004-2007 (2, 3). About 95 medical faculties and medical universities from all EU countries have joined forces to make the outcomes of European medical education more comparable and to fit contemporary needs. The project is organized in 7 development work-packages:

1. MEDINElingua: web-based resources to support the learning of medical terminology
2. Toolkit to promote openness and mobility in medical education and training in Europe: proper implementation of ECTS in the life long learning in medicine
3. Tuning Process for medical education: set of products to enable individual medical schools to evaluate their learning outcomes against the Tuning framework
4. Tuning 1^{st} cycle degrees in medicine: using Tuning methodology, an agreed set of learning outcomes/competences for 1^{st} cycle Bachelor degrees in medicine will be generated
5. Curriculum trends in medical education in Europe in the 21^{st} century: positions, aspirations and actions of European medical schools will be ascertained
6. Integration of the Bologna Process within medical schools in Bologna countries: can the Bologna Process be integrated with desired curriculum developments and can it serve as a basis for the implementation of these trends in medical education
7. Integration of the research component in European medical education: clarify and promote the integration of research in the medical curriculum with a focus on the 3^{rd} cycle

Preliminary results from several work-packages will be presented.

References:

1. http://medine2.com/
2. Cumming AD, Ross MT (2008) The Tuning Project (medicine) - learning outcomes / competences for undergraduate medical education in Europe. Edinburgh: The University of Edinburgh. Available online: www.tuning-medicine.com http://medine2.com/
3. Van Schravendijk C et al. (2007) Full report of MEDINE TF-5: Exploring and developing links between medical education and research. Available online: http://gf.vub.ac.be/BaMaWorkshop/tf5report.pdf

19. 4. 2012, 13:30

Undergraduate medical curriculum. Offering the students a choice between a clinical-oriented curriculum, basic sciences, or medical humanities.

Isabelle Richard, Guillaume Nicolas, Gilles Simard, Regis Coutant, Jerôme Febvre, Laurence Stéphan, Francois Jemain, Jean-Paul Saint-André
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Context: Reforms in undergraduate medical curricula tend to focus on early introduction of clinical material. Competency based assessments often reduce the place of basic sciences. This evolution is in part due to the feeling that basic science teaching in the first years of medical studies is encyclopedic, induces short time memory learning strategies, and is on the whole inefficient. Nevertheless this tendency has raised several types of concern. Debates remain as to how much of basic science knowledge remains necessary for students to understand medicine and the evolution of diagnosis and therapeutic procedures. Basic scientific knowledge is also a prerequisite for involvement in biological research, at the time where the construction of MD/phD curricula is clearly recognized as a priority.

Methods: The medical school of the University of Angers has recently implemented a reform of the curricula of the second and third years of medical studies. The choice has been that of designing a curriculum consisting in 70% of a core clinical-based curriculum, and 30% of additional courses to be chosen within one of the three following categories.

More basic sciences. This stream includes 6 modules : Biostatistics, Discovery of biological regulations, From the gene to the cell, Imaging the response to cancer therapy, Functional explorations, and a project. The objective is to allow students in-depth study of some fundamental biological mechanisms. The project is in most cases the literature review of a specific question and the first step to a personal research project conducted during the third year. The aim is to give students who are interested in science generic tools to understand medicine and develop a scientific approach. The teaching is mainly organised in small groups, using interactive methods and continuous assessment of student's production rather than end of term tests.

Early patient contact. This stream includes further teaching on medical psychology, a module focused on the approach of patients with chronic diseases, a clinical approach of functional explorations, and bedside teaching. The assessment is in part based on ECOS.

More medical humanities. This stream includes tutorials and lectures dealing with a large scope of social sciences for medicine (Philosophy, sociology, psychology, law, economics, forensic medecine). The assessment is mainly based on an essay.

The students were asked to rank the options in order of preference and guaranteed to be enrolled in one of their two preferred options. Academic results were not considered for allocation. The maximum number of student in each stream was pre-determined.

Results: 176 students expressed their choice. The first choice was early clinical contact for 119, more basic sciences for 24, and more medical humanities for 24. Due to constraints in the number of students in each stream, 47 students were allocated to their second choice (medical humanities in 16 cases and basic science in 31 cases).

The program is currently running for the first edition. Both students and teachers seem to be satisfied with the format. Formal assessment is not yet available. Comparison of the academic results of the three groups on the core-curriculum modules will be performed.

Discussion/Conclusion: A large majority of second year medical students choose a more clinically oriented curriculum if they are offered the option. Among the other students, the interest for basic sciences and medical humanities is almost balanced.

The influence of our first year curriculum which is almost exclusively basic sciences and takes place in a highly competitive context should be kept in mind when generalizing these conclusions to other systems.

Considering the poor level of evidence on which to rely in the design of curricular reforms, offering within the same institution different programs for different students can be preferable to a single policy.

20. 4. 2012, 09:00

High quality performance judgements in situations with low budget constraints

Michael Schmidts
DEMAW, Medical University of Vienna, Vienna, Austria

michael.schmidts@meduniwien.ac.at

The valid and reliable assessment of clinical competence (e.g. in an OSCE) is a challenge when ressources are limited. The presentation focuses on strategies to solve this "low budget / low reliability" dilemma in observational assessments based on new developments in performance assessment like sequential testing, knowledge on skills exams and/or programmatic assessment.

20. 4. 2012, 14:00

Size matters: Lessons and challenges from curriculum reforms at a small and a large German medical school

Martin Fischer
Ludwig-Maximilians University, Munich, Germany

martin.fischer@med.uni-muenchen.de

The presentation will summarize lessons learnt from curriculum reform projects in Germany at the small medical school in Witten/Herdecke and the large medical school at Ludwig-Maximilians-University in Munich. The experiences will be used to derive challenges for future reform cycles ahead of us.

21. 4. 2012, 09:00

External evaluation/accreditation/certification as a tool for improvement of study programmes as well as a powerful means for overcoming internal opposition against change

Gilbert Reibnegger
Medical University of Graz, Graz, Austria

gilbert.reibnegger@medunigraz.at

Major curricular changes and reforms always bear some risk of failure. Moreover, frequently they evoke fears and resistance among the involved teaching staff. External evaluation/accreditation/certifcation not only are important tools to get sound and objective feedback about the general appropriateness of the reform direction chosen; they also may precipitate and overcome internal opposition in a most elegant manner. The presentation will focus on the experiences we made at the Medical University of Graz.

21. 4. 2012, 09:00

Does accreditation have benefits or is it just work? Why we did it in Vienna

Martin Lischka
DEMAW, Medical University of Vienna, Vienna, Austria

martin.lischka@meduniwien.ac.at

The process of voluntary accreditation of the undergraduate medical curriculum in Vienna will be described and compared to situations where accreditation is a legal requirement. Some experiences, achievements, possible benefits and unintended effects will be outlined.

21. 4. 2012,10:30

Round Table: New achievements in Romanian medical curriculum

Chair: Rudolf Mallinger, Vienna

Participants

Rudolf Mallinger (Chair)	Vienna
Marius Raica	Timisoara
Anca Buzoianu Radu Oprean Valentin Munteanu	Cluj-Napoca
Dragomir Serban	Iasi
Claudia Banescu	Tagu-Mures
Ion Mandrila Sorin Dinescu	Crajova
Richard März	Vienna
Gilbert Reibnegger	Graz

21. 4. 2012,10:30

Round Table: New achievements in Romanian medical curriculum

Improved medical education by systematic correlation of preclinical and clinical knowledge and skills

Dragomir Nicolae Serban[1], Radu Iliescu[1], Ionela Lăcrămioara Serban[1], Ovidiu Petris[2], Beatrice Gabriela Ioan[3], Dragos Pieptu[4], Laurentiu Sorodoc[5], Petru Cianga[6], Doina Azoicai[7]

[1]Department of Physiology
[2]Nursing Department
[3]Department of Forensic Medicine
[4]Department of Plastic Surgery and Reconstitution
[5]Department of Internal Medicine
[6]Department of Immunology
[7]Dean of Fedical Faculty
Grigore T. Popa University of Medicine and Pharmacy, Iasi, Romania

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Medical schools are faced with various challenges from students, doctors, patients, entire society. They respond by improving instructional design and tools, including study guides, simulations, e-Learning. Medical efficacy, efficiency and performance are conditioned by the doctors' competence, based on thorough understanding of pathological processes and of remedies action, from molecules and cells up to the organism level, and on to population health status.

The relation between preclinical and clinical study disciplines is crucial for an equilibrated cumulative-integrative curriculum, with an optimal ratio between linear and non-linear components and judicious placement of the latter. A detailed catalogue of knowledge and skills (subject of our recent workshop within eMEDIQUAL project), is required for such a curriculum, based on optimal association between:

1. gradual accumulation of clinical/paraclinical knowledge and skills
2. systematic trans-disciplinary recall of previously acquired knowledge and skills

This way preclinical foundations become even more formative and application-oriented, while keeping up with the high progress rate in biomedical science. We are seeking the most suitable solutions for harmonization of preclinical disciplines and their transformation for better integration with the clinical ones. To facilitate learning, instructional design should focus on clinical skills, problem- and team-based learning, simulations (from simple to the complex and versatile ones, as HumMod), e-learning. All these should subserve progress from a teacher-centered and content-

oriented approach to a student-centered and learning-oriented one, where we have reached a stage of extension and reinforcement (interactive procedures, emphasys on practical relevance, supervision/control of practical classes by course responsibles). PBL is one good choice; student-centered and learning-oriented, flexible knowledge, problem solving skills, intrinsic motivation, encompasses even elements of the competing approaches (studying worked examples, guidance fading). Variable background of first year students can definitely be counteracted not only by a delineated pre-medical program, but also by preclinical disciplines working together to provide a fast and smooth students passage from high school essentials in Biology, Chemistry and Physics to their initiation in biomedicine.

Romanian e-MEDIQUAL partners have recently introduced for study years 1-2 the new discipline of (primary) Clinical Abilities; our original study guides, modern simulations and other support tools are already in use. This will foster the use and relevance of clinical extensions provided in lectures and practical classes from preclinical disciplines. Irrespective of academic delineations, the content should always focus on theoretical and practical information essential for the students to gradually develop clinical orientation and skills, helped by multi-disciplinary connections and by clear learning objectives.

Acknowledgments:
These data are part of the POSDRU project no 86/1.2/S/63815 EMEDIQUAL from the FSE-POSDRU 2007-2013.

6 Posters

Posterparty: Donnerstag, 18:15, Main Lobby
Die Poster können Donnerstag zwischen 09:00 und 12:45 Uhr aufgehängt werden und müssen bis Freitag 14:30 Uhr entfernt sein!

Posterparty: Thursday, 18:15, Main Lobby
Please mount your posters on Thursday between 09:00 and 12:45 and remove them at the latest by Friday 14:30!

U.M.F.T.

Universitatea de Medicină şi Farmacie "Victor Babeş", Timişoara
UMFVBT

Elena Ardeleanu[1], Daniela Gurgus[1], Adrian Gruici[1], Viorel Pârvulescu[2]

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1-Family Medicine Department, University of Medicine and Pharmacy "Victor Babeş" Timişoara
2-Family Medicine Department, University of Medicine Craiova

Medical Education in Family Medicine Residency at University of Medicine and Pharmacy "Victor Babeş" Timişoara

Background - Development of Family Medicine Residency Programms in our country with specific goals, objectives, strategies and educational activities has shown a positively impact on the quality of activity of the general practitioners.

Some History of Family Medicine Residency in Romania

- 1990: The Rumanian Health Ministry establishes the Family Medicine Speciality and Residency
- 1994: The first Family Medicine Department is founded at the Medical University of Constanţa
- 1991-2001: Family Medicine Residency in UMFVBT is coordinated by the Medical Policlinics Department
- 2001: Family Medicine Department is founded in UMFVB
- Since 2009 Family Medicine Residency is coordinated by the Family Medicine Department
- At the present we coordinate the activity of a total number of 412 residents, of which 227 are normal time residents and 185 are partial time residents.

Family Medicine Residency learning activities are based on:

- Practical stages with tutors in GP offices in Timisoara
- Theoretical courses of 2 hours/ week at the Family Medicine Department (100 course hours)
- Small tutorial group sessions/2 hours a week, with a tutor from the didactic stuff of the Family Medicine Department
- Health promotion activities in schools, community, social institutes in collaboration with charity organizations.

Romanian Curriculum for Family Medicine Residency consists of *Three Years of education*, containing the following:

- 2 stages of family medicine of 3 and 9 months,
- internal medicine 4 months, pediatrics 4,5 months,
- surgery 2 months,
- gynecology 2 months,
- infectious diseases 2 months,
- oncology 2 months,
- health management and epidemiology 1 month,
- neurology 1 month,
- psychiatry 1 month and
- ethics 2 weeks.

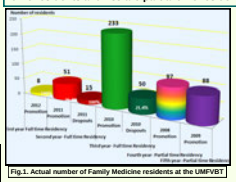

Fig.1. Actual number of Family Medicine residents at the UMFVBT

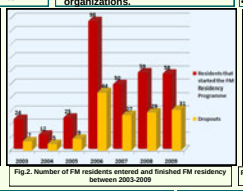

Fig.2. Number of FM residents entered and finished FM residency between 2003-2009

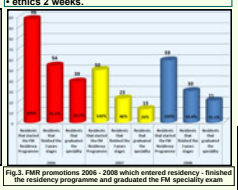

Fig.3. FMR promotions 2006 - 2008 which entered residency - finished the residency programme and graduated the FM speciality exam

Quality of FM Residency

- Good expression of thoughts and ideas of family medicine residents
- Good communicators
- Good interdisciplinary team workers
- Independent learners, excellent in retrieving new information
- Comparable achievements of all residents in knowledge
- Comparable abilities of all residents in patient problems solving
- Superior practical skills.

The necessity of an integrated medical curriculum in FM residency

- Medical problems in family medicine are never monodisciplinary
- Integration of clinical sciences is needed
- Patients problems solving in family medicine requires integration of knowledge
- Learning in this context is more effective
- An integrated curriculum offers the best context of health care practice.

Changes produced on Educational Concepts

From teaching – transfer of knowledge – to better Learning – construction of knowledge – collaborative learning – knowledge in context – knowledge + practical application.

- Partnership between our department and family medicine professional associations, romanian and foreign universities, health care providers and the National Center of FM Studies
- Evaluation of residents satisfaction by anonymous questionnaires about satisfaction with tutors, working groups, group sessions, case presentations, courses, volunteering and with the subject as a whole.

Role of the tutorial session group

- Possibility to work in team
- More effective learning in this context, formulate objectives, stimulate applying knowledge and self study
- Development of communication skills
- Offers learning through simulated patient problems
- Assures a better introducing to health and medical problems of the patients and their family.

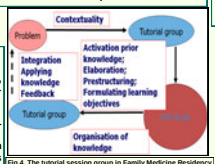

Fig.4. The tutorial session group in Family Medicine Residency

Tasks of the FM resident in the Session Group

- To carry out 5 consultations, including to establishing the diagnosis and treatment, analyzed constructively by colleagues and the tutor in the session group
- Case presentations of 5 patients seen at their every day work in the family medicine office, which are discussed with the tutor in the group session
- Presentation of 3 topics of the curriculum of family medicine residency (e.g. prevention at different age groups, the relationship physician-patient, patient education and counseling, clinical and laboratory evaluation at the family physician office, diagnostic and treatment of common diseases, emergency care, home visits and prescription, organizational and administrative characteristics of the family physician office, optimal management etc.)
- Acquisition of clinical reasoning skills
- Exercises on selection of drugs, development of prescribing skills based on rational selection of drugs
- Development of skills with the informatics medical program of the Health Care System
- To solve different social problems of the patient, family and community.

How to improve FM residency in future

- Earlier contacts of students with doctor-patient encounters in family medicine offices
- Motivate the residents to learn and improve achievements, to enjoy study
- Better application / use of knowledge
- Learn to apply knowledge of (patho) physiology in clinical practice
- More dual learning: theory and practice
- Develop superior practical skills
- Patients problems solving in context of reality
- Learn to work in teams, with patients and with health care professionals
- More collaborative learning, which prepares better residents for the future activities
- Periodical assessment of knowledge
- Utilize computer technology on a large scale
- Find collaborators in the European Community for training romanian family residents to achieve european standards
- Join efforts and resources with all professional associations, appreciate our complementary roles and opportunities for increasing collaboration, communication towards common goals, share together the increasing demands of improving health care and avoid duplicate work.

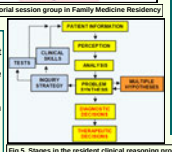

Fig.5. Stages in the resident clinical reasoning process

Future Changes needed in Family Medicine Residency Curricula

- Resident centred learning, based on the graduate profile
- Interdisciplinary curriculum
- Integrated curriculum
- Provide concepts & general principles
- Collaborative learning
- More efficient introduction of residents in medical research
- Assurance of better learning facilities.

Problems of Family Medicine Residency

- Overloading and fragmentation of curricula needs to be changed
- Relationship of same topics in different disciplines is lacking: no horizontal integration
- Not best and most efficient learning and application of knowledge
- The gap between theory and practice
- Lack of all necessary practical skills of FMR
- Enormous amount of residents in some study years
- Time constraints of residents and faculty teachers
- Insufficient interest and adherence among the residents
- Great number of residents dropouts
- Reduced possibility of finding a FM work place

References

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2. Elie A. Akl. Curricula for teaching the content of clinical practice guidelines to family medicine and internal medicine, 2009, available at www.implementationscience.com/content4/i/59/
3. Eugeniu Ilicea - Fundamentul in Medicina de Familie, editura Ovidius, Constanţa, 2005

Conclusions and Future Perspective

We consider that all those who share the great and difficult responsability of family medicine residency by teaching and training must assure a continuing development of Family Medicine residency and a better cooperation to achieve high standards of family health care in our country.

Poster 1

Medical Education in Family Medicine Residency

Elena Ardeleanu[1], Daniela Gurgus[1], Adrian Gruici[1] Viorel Parvulescu[2]

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In Romania the Curriculum for Family Medicine Residency consists of three years of education, containing the following:

- 2 stages of family medicine of 3 and 9 months,
- internal medicine 4 months, pediatrics 4,5 months,
- surgery 2 months,
- gynecology 2 months,
- infectious diseases 2 months,
- oncology 2 months,
- health management and epidemiology 1 month,
- neurology 1 month,
- psychiatry 1 month and
- ethics 2 weeks.

The curriculum of family medicine is based on practical stages with tutors in primary care offices in Timisoara. Once a week residents come to the Family Medicine Department of the University of Medicine and Pharmacy "Victor Babes" Timisoara where they have theoretical courses and since 5 years small group sessions with the didactic stuff of the Family Medicine Department. Most of the time spent in the group sessions is oriented in teaching communication skills, introducing to the problems of the patient and their families and learning through simulated patient problems. Each resident has the opportunity to make 5 consultations and then to be analyzed constructively in group discussions. Every resident prepares 5 cases seen at their every day work in the office, which are presented in group sessions and also prepares 3 papers on topics typical for family medicine (e.g. prevention at different age groups, diagnostic and treatment of common diseases, emergency care, home visits and prescription, etc.). Each year 10 residents had an exchange of experience at the Family Medicine Department at the Medical University of Craiova. During his work with the tutor the family medicine resident gets acquainted with the informatics medical program of the Health Care System. Exercises on selection of drugs and prescribing skills based on a rational selection of drugs are also effectuated.

At the end of the family medicine stages we ask the residents to fill in anonymous questionnaires about their satisfaction with tutors, working groups and with the subject as a whole. We got answers with very good assessment, especially for the group sessions and case presentations.

DENTIST'S DECISION MAKING PROCESS REGARDING TECHNOLOGY AND MATERIALS CHOSEN IN THE ATTAINMENT OF DENTAL VENEERS

Ioana – Maria Avram, Rares Dan Magheru
West University of "Vasile Goldis" Arad

A healthy and harmonious aspect of the contemporary man is a necessary request that has lately been creating pressure onthe medical team in order to realize prosthetic rehabilitation with excellent aesthetics. The dentist and dental technician haveto work together very well and keep a high level of communication, receiving and transmitting information. Until now, numerous materials, techniques and technologies have emerged to meet this need. Although some of their reliability is yet to be confirmed because of their recent release on the market, the system has gained a high rate of clinical success, thus making them suitable for every dentist to practice in his usual dental procedures. Thereby, for physiognomic restorations of the frontal dental group of the 2 dental arcades, various therapeutic alternatives can be chosen depending on physiognomic, anatomic and aesthetic characteristics of the patient. This is a schematic presentation of the steps a dentist should make in establishing a treatment plan with a potential veneering solution and the factors which can be taken into consideration when choosing between the direct and indirect veneering technique, or decide to apply an alternative type of treatment. Many logical algorithms areelaborated lately in order to arrive at a treatment plan. They help the general dentistry practitioners to make the right decision in evaluating, establishing and accomplishing the procedure stages with less difficulty.

Veneering – a conservative procedure affiliated with aesthetic dentistry because its ability to improve the shape, position, aspect and color of the tooth. A veneering treatment plan is indicated in low to moderate scale anomalies referring to aesthetic aspect of the frontal dental groups. The indications for this type of restoration are:

- Diastema
- Teeth discoloration
- Primary coronary malformation
- Destruction of the incisors angles
- Previous incorrect coronary restorations
- Vestibular extended fillings
- Receiding gums
- Vestibular exposure of the dental root
- Abrasion / erosion
- Minor position modification
- Lingual inclination of the teeth
- Teeth with voluminous pulp chamber

Is there moderate modification in what concerns:
- Color and shape
- Minor modification to the tooth

NO

Are there any major contraindications??
- Enamel destruction over 50%
- Low coronary resistance
- High position modification

YES

Proceed with other prosthetic therapeutic alternatives.

YES

NO

The following treatments may be performed:
- Teeth whitening
- Physiognomic fillings
- Coronoplasty

NO

Diagnostic WAX UP – a study process of fully visualizing the true restorative needs of the patient. The method enables the existence of a very accurate record of all the information needed in order to develop a game plan for the veneering procedure and accomplish a corresponding treatment result. It is a useful method to also motivate and promote better acceptance from the patient. Through the wax up technique well established guidelines can be followed to define the suitable shape and arrangement of the teeth. The availability of this study eases the realization of the practical stages for the followed procedure.

POSITIVE RESULT

Treatment completed

Do the following conditions exist??
- Bruxism
- Severe discoloration
- Isolated modification to one single tooth

YES

NO

	DIRECT TECHNIQUE MATERIALS COMPOSITE	INDIRECT TECHNIQUE MATERIALS CERAMIC
Durability	Good in small-to-moderate size restorations.	Strength depends greatly on quality of bond to underlying tooth structure.
Aesthetics	Transposes natural color and translucence of the tooth, but can be subject to staining and discoloration over time.	Color and translucence replicates natural tooth appearance.
Cost	Moderate cost, depends on the size of the veneers.	High cost, they require at least two office visits and laboratory services.
Visits necessary to complete treatment	One, two in case the wax-up technique is performed.	Minimum of two, more if matching aesthetics of teeth is required.

Many times, a dentist finds himself in front of a difficult aesthetic case which can be treated by applying the thin layer of the veneer over the labial surface of a tooth. The accuracy of the stages that must be done during this procedure must be maxim. This is why an adjuvant schematic presentation is always helpful. Veneering is a strong, viable alternative for prosthetic treatment in the frontal dental groups. There are many patients who need this type of restoration and each case has its particularities. By performing the stages and studies recommended through the diagram, dentists can consider both direct and indirect technique reachable, being able to appreciate the final result of their well built treatment plan. Patients are satisfied with the aesthetic result and prefer veneering instead of prosthetic treatment, if suitable.

Poster 2

Dentist's decision making process regarding technology and materials chosen in the attainment of dental veneers

Ioana–Maria Avram, Rares Dan Magheru

Faculty of General Medicine, Pharmacy and Dental Medicine, Western University "Vasile Goldiş", Arad, Romania

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Introduction: A healthy and harmonious aspect of the contemporary man is a necessary request that has lately been creating pressure on the medical team in order to realize prosthetic rehabilitation with excellent aesthetics. Until now, numerous materials, techniques and technologies have emerged to meet this need. Although some of their reliability is yet to be confirmed because of their recent release on the market, the system has gained a high rate of clinical success, thus making them suitable for every dentist to practice in his usual dental procedures. Thereby, for physiognomic restorations of the frontal dental group of the 2 dental arcades, various therapeutic alternatives can be chosen depending on physiognomic, anatomic and aesthetic characteristics of the patient.

Aim of study: This poster shows a schematic presentation of the steps a dentist should make in establishing a treatment plan with a potential veneering solution.

Materials and methods: The methods and materials used for this study were bibliography, courses and specialty articles. A number of expertise dentists were questioned about the direct and indirect method of realizing veneers. A number of dental technicians were questioned about accomplishing veneers. A number of patients were examined in a dental clinic with dental consultation kits about their personal degree of satisfaction concerning the treatment they had, which included veneers realized through different methods and materials.

Conclusions:

1. Veneering is a strong, viable alternative for prosthetic treatment in the frontal dental groups.
2. Dentists consider both the direct and indirect techniques reachable, and appreciate the final results of treatment plans including veneers.
3. Patients are satisfied by the aesthetic results and prefer veneering instead of prosthetic treatments, if suitable. Key words: decision, pressure,direct, indirect, veneering.

16th Graz Conference on Medical Education, 19. - 21. April 2012, Timisoara, Romania

Differences between rural and central surgery in medical students' surgical education

Gerwin A. Bernhardt (1, 2); Patrick Sadoghi (3); Hans-Jörg Mischinger (1, 2); Gerald Gruber (3).

(1) Division of General Surgery, Department of Surgery, Medical University of Graz, Austria; (2) Department of Surgery, District Hospital of Voitsberg, Austria; (3) Department of Orthopedic Surgery, Medical University of Graz, Austria

Introduction:

In their last year students of human medicine at Medical University of Graz have to complete ten weeks of practical surgical training. These surgical weeks can be completed at the Medical University at different clinics or at different surgical departments of rural teaching hospitals. Students should learn basic surgical skills and prepare ten case reports which they have to present at the end.

Methods:

We prepared a logbook at the district hospital of Voitsberg (see Figure 1.) as well as at the university clinic of surgery in Graz with all skills that can be learned during the practical training. The training areas were divided into three parts: operation room, outpatient clinic and ward. Furthermore all possible disease patterns of each surgical department were listed in the logbook for the students to facilitate the choice for their case reports.

Results:

At both institutions tutors are named to accompany the students during ten weeks. However, because of the small team at the district hospital all surgeons are involved in the surgical education of the students. In the outpatient clinic and the operating room of the district hospital students see a great variety of surgical problems and can easily learn basic surgical skills whereas at the university clinic they have many different surgical divisions and accordingly specialised operations and dedicated outpatient clinics. At the ward students see far more special diseases and unusual, more complex cases at the university clinic than at the district hospital; therefore it might be easier to choose patients for the necessary case reports.

Discussion:

Differences between rural and central surgery in the surgical department structure cause differences in surgical education of medical students. To benefit from both, students would need to stay half the time at the clinic and half the time at a district hospital. However, if students have decided to further specialize in a surgical discipline, we would recommend spending the time primarily with rural surgery because basic surgical skills could be learned easier there and one has a closer student-tutor relationship.

Figure 1. Information and Logbook of (rural) District Hospital

Medizinische Universität Graz

Information: gerwin.bernhardt@medunigraz.at

Poster 3

Differences between rural and central surgery in medical students' surgical education

Gerwin A. Bernhardt[1,3], Patrick Sadoghi[2], Hans-Jörg Mischinger[1,3], Gerald Gruber[2]

[1]Division of General Surgery, Department of Surgery
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Medical University of Graz, Austria
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gerald.gruber@klinikum-graz.at

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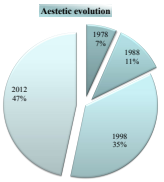
The Art to restore a smile on anyone's lips
Aesthetics

Authors: Bogdan Brigitta Coordinator : Freiman Paul
Stana Dorotheea

Introduction :

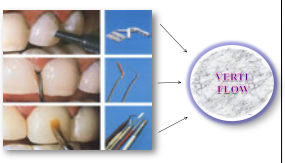
Aesthetic education nowadays is dominated by the media that stimulates and refines aesthetic taste, imposing beauty models of advertising campaigns that are promoted to encourage the increase of the hygienic education level among the population in Romania, but from this point of view it seems that we stand on one of the last places in Europe. The Hollywood smile is required, with rigorous dental alignment, healthy and white teeth, well shaped lips and a well-developed facial makeup. People desire to be attractive, it is not the contemporary world privilege but it is more obvious due to the exceeded unprecedented development of interpersonal communication. Today people are advised to be concerned by a "natural look" so that they feel good when they see their own image.

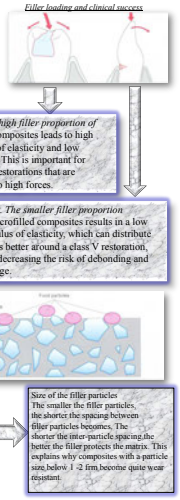


Materials and methods:

The dentist and the patient will choose together the best option for filling the space depending on the size of the restoration, aesthetics, durability and of course filling materials costs. Modern composite resins present much improved properties compared to the original formula,and the inorganic filler is composed of a mixture of different particle sizes, some sub-micron. The wide range of available colors, special means of restoration and embellishment of polymerization by photoactivation have contributed to significant improvement of this aesthetic qualities

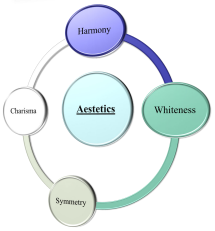
Vertl flow : is the first etch composite and adhesive fluid. It is a leader in restorative dentistry at present in Romania with the following qualities: adhesive, high adhesion strength to enamel and dentin and easy to handle. In this project we focus on the direct and indirect restorations and besides them we introduce in the discussion also the materials for them. Direct restorations and materials: ionomer glass , ionomer or composite materials. Indirect restorations and materials: inlay with photopolymerization cements , autopolymerization cements and high strenght glass ionomer cement. Also it should be noted that adjuvant materials are used, depending on the patient.





Aim of the study:

The first objective that a dentist must meet is based on saving and preserving tooth vitality, no matter what. The focus spent this recent years on the change of the ego and the freedom to spend money for themselves has led to increased demands in terms of its appearance, including cosmetic dentistry. Compliance symmetry. Symmetry is one of the main requirements in aesthetics; it refers to "regular arrangement of a form or an object" (Furtwander).



Additional tips for oral health and aesthetics of note 10!

Hygiene Phase	*Corrective Phase*	*Maintenance Phase*
➢Initial basic tartar removal ➢Caries treatment: temporary restorations, endodontics ➢Oral hygiene instruction ➢Extraction of hopeless teeth ➢Temporary splint ➢Temporary reconstructions ➢Professional tooth cleaning: Thorough supragingival and subgingival cleaning, including scaling and root planing ➢First adjustment of the occlusion; removal of severe preliminary contacts ➢Plaque control ➢Evaluation of oral hygiene ➢Reevaluation of treatment plan	➢Continuation of plaque control ➢Orthodontic pretreatment ➢Functional pretreatment with splints ➢Periodontal surgery, aesthetic periodontal surgery ➢Placement of implants ➢Restorative therapy: inlays, Veneers, partial crowns, bridges,crowns , dentures ➢ Reassessment of therapy ➢Refining the therapy, removing possible overhangs	➢Checking work performed ➢Maintenance of oral health; Prevention of new defects ➢Individual recall system based on the state of the patient's teeth and oral hygiene

Conclusions :

1. The Smile, a purely human expression, is an expression of inner feelings and it is a primitive form of communication between people.
2. The Smile, when it is pleasant and attractive it enriches not only the individual that smiles but also those who look.
3. Today, dental aesthetics is founded on a more ethically sound basis the general improvement of dental health.
4. Since the face is the most exposed part of the body, and the mouth a proeminent feature, teeth are getting a greater share of attention.

Relevant Literature

- Color Atlas of Dental Medicine Aestetic Dentistry , editors : Klaus H. Ratentschak, Herbert H. Wolf
- Aestetics in Dentistry Secound Edition Volume I. Principles, Communications,Treatment Methods , Editors : Ronald E.Goldstein,D.D.S
- Diagnosis and Treatment evaluation in cosmetic dentistry, editors : Nathan Blitz, D.D.S. in collaboration with Chip Steel, D.D.S. Corky Willhite, D.D.S

Poster 4

The Art to restore a smile on anyone's lips - Aesthetics

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Introduction: Aesthetic education nowadays is dominated by the media that stimulates and refines aesthetic taste, imposing beauty models of advertising campaigns that are promoted to encourage the increase of the hygienic education level among the population in Romania, but from this point of view it seems that we stand on one of the last places in Europe. The Hollywood smile is required, with rigorous dental alignment, healthy and white teeth, well shaped lips and a well-developed facial makeup. People desire to be attractive, it is not the contemporary world privilege but it is more obvious due to the exceeded unprecedented development of interpersonal communication. Today, people are advised to be concerned by a "natural look" so that they feel good when they see their own image.

Aim of the study: The first objective that a dentist must meet is based on saving and preserving tooth vitality, no matter what. The focus spent this recent years on the change of the ego and the freedom to spend money for themselves has led to increased demands in terms of its appearance, including cosmetic dentistry. Compliance symmetry. Symmetry is one of the main requirements in aesthetics; it refers to "regular arrangement of a form or an object" (Furtwander).

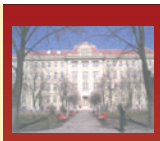
Materials and methods: The dentist and the patient will choose together the best option for filling the space depending on the size of the restoration, aesthetics, durability and of course filling materials costs. Modern composite resins present much improved properties compared to the original formula, and the inorganic filler is composed of a mixture of different particle sizes, some sub-micron. The wide range of available colors, special means of restoration and embellishment of polymerization by photoactivation have contributed to significant improvement of this aesthetic qualities. Verti flow – is the first etch composite and adhesive fluid. It is a leader in restorative dentistry at present in Romania with the following qualities: adhesive, high adhesion strength to enamel and dentin and easy to handle. In this project we focus on the direct and indirect restorations and besides them we introduce in the discussion also the materials for them. Direct restorations and materials: ionomer glass , ionomer or composite materials. Indirect restorations and materials: inlay with photopolymerization cements , autopolymerization cements and high strenght glass ionomer cement. Also it should be noted that adjuvant materials are used, depending on the patient.

Conclusions:

1. The Smile, a purely human expression, is an expression of inner feelings and it is a primitive form of communication between people.
2. The Smile, when it is pleasant and attractive it enriches not only the individual that smiles but also those who look.
3. Today, dental aesthetics is founded on a more ethically sound basis : the general improvement of dental health.
4. Since the face is the most exposed part of the body, and the mouth a proeminent feature, teeth are getting a greater share of attention

TOWARDS IMPLEMENTING A COURSE MANAGEMENT SYSTEM AT THE UNIVERSITY OF MEDICINE AND PHARMACY "VICTOR BABEȘ" IN TIMIȘOARA

Carmen Bunu Panaitescu, Diana Lungeanu, Carmen Tatu
"Victor Babes" University of Medicine and Pharmacy Timisoara



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LEARNING ↔ TEACHING

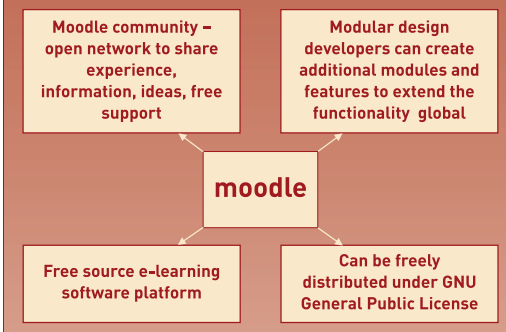
- Learning → new knowledge, skills, behavior, values, preferences → involves processing & synthesizing information
- Learning – goal-oriented & driven by motivation
- Formal learning ↔ educational system
  - involves teacher-student relationship
  - "traditional" models no longer meet students' expectations
  - medical education needs to turn to a transdisciplinary approach
- 21st century teaching → student-centered, outcome-based

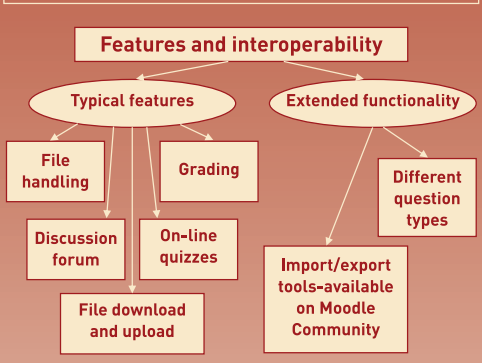
COMPUTER - SUPORTED LEARNING

- Enables interaction using the information technology and the Internet
- Can be implemented for on-line & classroom environments
- Can take place synchronously & asynchronously
- Teachers – still a vital role in facilitating learning
  - responsible for making students aware of the goals & time frame
  - clearly define the learning outcomes & assessment methods
  - build the platform of knowledge the students can further build on

web-based course management system

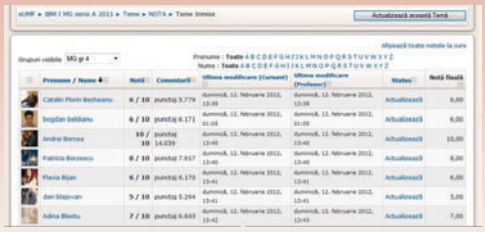
Modular Object-Oriented Dynamic Learning Environment

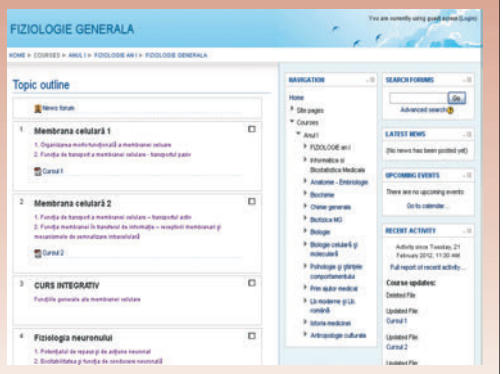




eMediqual-moodle.umft.ro
university level efforts
http://emediqual-moodle.umft.ro
•Courses:
• Physiology (Ist and IInd year)
• Medical informatics and biostatistics (Ist year)
• Medical biophysics (Ist year)

eMediqual-moodle.umft.ro example





eMediqual

POSDRU /86/1.2/S/63815

Poster 5

The benefits of implementing a course management system – the experience of the University of Medicine and Pharmacy Victor Babes Timisoara

Carmen Bunu Panaitescu, Diana Lungeanu, Carmen Tatu
Functional Sciences Department, Victor Babes University of Medicine and Pharmacy Timisoara, Romania

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The information technology in the teaching activity is currently used in our university by most departments, but the applied solutions cannot be shared, due to the fact they are redundant and incompatible with each other.

The solution adopted for improving the quality of teaching was to implement a web-based course management system at the institutional level. We chose the Moodle software platform (`http://moodle.org`), based on a free source, cross-platform software, focusing on interaction and collaborative development, which was proved to be a great success world-wide. The benefits of this system, apart from its initial typical features (assignments, forums, files' handling, grading, messages, on-line quizzes, wikis), are linked by the fact that its modular construction allows extending the functionality using plugins (e.g. for enrollment methods, authentication methods, different question types, import/export tools – already available from the Moodle Community).

The expected result of implementing this course management system in our current educational activity is to achieve the learning objectives and outcomes, as they were identified by the Steering Group of the Tuning Project (`http://tuning.unideusto.org`), for it facilitates not only a more effective teaching in the classical course format (mostly through an easier access to the course materials), but also a cooperative teaching, combining different assessment methods (formative and summative), as well as giving regular and personalized feed-back to students.

Acknowledgments:
These data are part of the POSDRU project no 86/1.2/S/63815 EMEDIQUAL from the FSE-POSDRU 2007-2013.

An Integrate Approach to Curriculum Design: Teaching and Assessing Practical Skills (eMediqual)

A.D. Buzoianu, O. Mosteanu, V. Munteanu, S. Suciu, T. Calinici, Faculty of Medicine, UMF "Iuliu Hatieganu", Cluj-Napoca, Romania

Background and aim:

- In a traditional approach to medical education, problems about the coverage of skills areas do not arise seriously in any theoretical way.
- Implementation of a non-linear curriculum for training in advanced clinical skills represents an unmet need in most Romanian medical faculties.
- The eMediqual project (European level quality and competency in medical education and educational programs management) attempted to establish an interdisciplinary program to teach and to assess clinical skills.

Methods

- Teaching objectives and lesson formats were developed in a multistep process in order to ensure an early and consistent exposure of students to core competencies.
- A teaching program for cardiovascular pathology was structured and continuous lecturer trainings were established.
- Several clinical disciplines co-operated in order to integrate the practical skills training into the pre-existing medical curriculum.

Results:

- We applied a top-down approach for the instructional design. The goal was identified then broken down into smaller steps.
- The teacher's role was crucial in structuring the nonlinear curriculum.
- It also involved the ability to respond to students' interests as they arise and to provide deeper acknowledgement of the immediate learning situation.
- The next step will be field-testing with groups of students.

Discussion and conclusions:

- Introducing an interdisciplinary cardiovascular training and a corresponding practical skills development in a medical curriculum is feasible.
- Staff development is a key influence on the efectiveness of this type of teaching for students.
- Teaching in a clinical context and a multidisciplinary approach seem to be important factors for ensuring practical relevance.

Acknowledgments:

These data are part of the POSDRU project no 86/1.2/S/63815 EMEDIQUAL from the FSE-POSDRU 2007-2013.

eMediqual

Poster 6

An Integrate Approach to Curriculum Design: Teaching and Assessing Practical Skills (eMediqual)

Anca Dana Buzoianu, Ofelia Moşteanu, Valentin Muntean, Soimița Suciu, Tudor Calinici

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How to Write a Scientific Paper?

Şerban Comşa
Angiogenesis Research Center
University of Medicine and Pharmacy "Victor Babeş" Timişoara

"A scientist's life would be a happy one if he had only to observe and never to write." (Charles Darwin)

"Without publication, science is dead" (Gerard Piel)

Introduction

- **Research** is essential for the growth and development of any medical science.
- **The continuity and advancement** of science require researchers to publish, as this is the most efficient means for communicating scientific findings.
- **A scientific paper (SP)** is a published report describing original research results.
- **A good scientific** paper should include:
  - a well-designed and reproducible method
  - coherent and understandable results
  - a reasonable and comprehensive discussion.

Is it worth publishing?

- SP represents the outcome and recognition of an arduous process.
- SPs are helpful in funding for researches
- SPs are means for achieving professional advancement

References

- Carpenter K. Paleontology LV. Museum D. Blvd C: How to Write a Scientific Article. The Journal of Paleontological Sciences 2001, JPS.TD.07.1-9.
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- Nadim A. How to Write a Scientific Paper? ASJOG 2005, 2:255-258.
- Lin P-Y, Kuo U-R: A guide to write a scientific paper for new writers. Microsurgery 2012, 32:80-85.
- Peh WC, Ng KH. Basic structure and types of scientific papers. Singapore Medical Journal 2008, 49:522-525.

Steps in writing a scientific paper (original article)

Have an idea

Have a mentor

Research

accurate and adequate literature review

authors' guide: format for submission

Choose a target journal for publication

PLANNING TO WRITE

- ensure all the necessary information are at hand before starting to write.
- unimportant or irrelevant information must be left out.
- learn by example from the writings of others

STRUCTURE
title
authors
keywords list
abstract
introduction
methods
results
discussion
aknowledgements
references
supplementary material

ARTICLE WRITING
Project Management

- WRITE REGULARLY
- method for tracking your writing
- break the writing into manageable parts
- write quickly, to keep the flow going
- **first draft**: the goal is to get something down on paper

STYLE AND LANGUAGE

- be clear and concise
- use the active voice
- use past tense throughout your paper (exception: for known facts and hypotheses use the present tense).
- respect the conventions of standard written English
- familiarize with the scientific terminology
- do not use abbreviations (there are some exceptions)
- summarize information in your own words and then cite the source

1. METHODS

- consist of:
  - the materials used in the study
  - how these were prepared for the study
  - the research protocol
  - the outcomes and how they were measured
  - the methods used for data analysis

2. RESULTS

- the core of the paper
- report your findings clearly and concisely
- data is presented in text, tables or graphs
- each figure or graph must be able to "stand alone" with its figure legend
- present only representative data, but don't intentionally disregard conflicting data

3. DISCUSSION

- the most difficult section to write and define
- should
  - state and explain the major findings of the study
  - compare and contrast your findings with those found by similar studies
  - address the study's limitations and strengths
  - discuss the importance and relevance of your findings
  - offer suggestions for further research

4. INTRODUCTION

- should "introduce" the paper
- "A bad beginning makes a bad ending." (Euripides)
- should include:
  - a brief review of the literature
  - a presentation of the problem(s) investigated
  - a description of the method(s) used in the study

5. REFERENCES

- acknowledge the source
- refer to the guide for authors for the specific journal
- good references: credibility by demonstrating an awareness of previous works

6. TITLE

- should describe the article's content clearly and precisely
- the advertisement for the article

7. ABSTRACT

- 200 to 250 words
- it accurately reflects the content of the article

TAKE HOME MESSAGE

- Writing is more skill than talent
- Constant practice is required to improve your writing performance.
- "Practice makes perfect" (Chinese proverb)

POST-WRITING

- rework your paper several times
- let your colleagues help you
- ask a native English speaker for review

Poster 7

How to Write a Scientific Paper

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Victor Babes University of Medicine and Pharmacy Timisoara, Romania

serbancomsa@yahoo.com

Writing a scientific paper is the most common way of communicating the results of an original research to other scientists and to health professionals.

A good scientific paper should include a well-designed and reproducible method, coherent and understandable results, and a reasonable and comprehensive discussion. The format for writing a scientific paper for publication in biomedical journals has been standardized to provide a systematic and organized way to present the data.

Writing starts with planning. Good planning will shorten the time spent in writing. The process of writing a scientific paper should start before doing the research, continue during the research, and be completed after the research results have been described, analyzed and interpreted. Securing a good mentor is the first priority for a new writer and plays a key role in improving his or her writing skills. Then it is important to have an idea before starting to write, in order to select a specific field of research. Once this step is accomplished, the author should conduct an accurate and adequate literature review as this represents a crucial portion of the future paper. Consecutively, the author must choose a target journal for publication in order to study its format requirements. During the early stages of writing, it is useful to organize and enumerate each section in terms of major headings, subheadings and paragraphs. As for the content of the paper, writing requires fluency, clarity, accuracy and an economy of words. The author should use topic sentences that state the main idea clearly and directly, should choose words with care and precision and should avoid long sentences.

To cut it short, the concept “keep it simple and short” is the key to good scientific writing.

When writing has been finished, colleagues’ constructive criticism would be of considerable help. Writing is more skill than talent so that constant practice is required to improve the writing performance. Exercising this skill is vital for the scientists of our days, when science is considered either sterile or dead without publication.

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Medical University of Graz

IMPACT OF STUDY CHOICE ON THE INTEREST OF STUDENTS OF HUMAN MEDICINE VERSUS DENTAL MEDICINE BY MEANS OF THE STUDY MODULE MUSCULOSKELETAL SYSTEM

Gerald Gruber, MD(1); Birgit A. Aigner, MD (2); Gerwin A. Bernhardt, MD(3); Norbert Kastner, MD(1); Patrick Vavken, MD (4); Andreas Leithner, MD (1); Patrick Sadoghi, MD (1)

Institutions:

(1) Department of Orthopaedic Surgery; Medical University of Graz, Austria
(2) Department of General Dermatology; Medical University of Graz, Austria
(3) Division of General Surgery, Department of Surgery, Medical University of Graz, Austria
(4) Department of Orthopaedic Surgery Children's Hospital Boston, MA

Contact information:
Gerald Gruber, MD
mail to: gerald.gruber@klinikum-graz.at

Introduction:
At the Medical University of Graz, medical students (M) and dental students (D) have to successfully complete compulsory study modules. One of these modules covers fundamentals of the musculoskeletal system for medicine as well as for dental medicine. The aim of this study was two fold; to evaluate the students´ interest in the musculoskeletal module and to assess it by subjective means. We hypothesized that medical students were more interested and would rate the musculoskeletal module better than dental students.

Methods:
After completion of the module students evaluated the module using standardized forms. The following parameters were defined in both groups: achievement, motivation, general contentment, satisfaction with the virtual medical campus (VMC), contentment with respect to lectures, seminars and internships. The scale was ranging from 1 to 6,
whereby 1 had been determined "that's totally true" and 6 "does not apply at all". The results of both groups were compared with each other.

Results:
In total 47 students (27 M and 20 D) returned their forms. Achievement, motivation and general contentment reached a mean of 1.755 (M) versus 3.125 (D); these results were statistically different. Satisfaction with the VMC was at a mean value of 1.945 (M) versus 4.55 (D). Contentment with lectures had been rated with 1.855 (M) versus 2.365 (D), with seminars 1.675 (M) versus 2.25 (D), and internships with 2.195 (M) versus 2.3 (D).

Discussion:
We conclude that students of human medicine do have higher interest and better ratings compared to students of dental medicine as far as the module musculoskeletal system is concerned. Due to the low number of participants these results need to be taken with care; further evaluations are necessary.

Poster 8

Impact of Study Choice on the Interest of Students of Human Medicine versus Dental Medicine by Means of the Study Module Musculoskeletal System

Gerald Gruber, MD[1]; Birgit A. Aigner, MD[2]; Gerwin A. Bernhardt, MD[3]; Norbert Kastner, MD[1]; Patrick Vavken, MD[4]; Andreas Leithner, MD[1]; Patrick Sadoghi, MD[1]

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[2]Department of General Dermatology
[3]Division of General Surgery, Department of Surgery
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andreas.leithner@medunigraz.at patrick.sadoghi@medunigraz.at

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University of Medicine and Pharmacy "Victor Babeş" , Timişoara

Continuing Medical Education Cardiology Programs for General Practitioners

Daniela Gurguş[1], Elena Ardeleanu[1], Adrian Gruici[1], Viorel Pârvulescu[2]

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Background. The appropriate role and teaching methods of the general practitioners is a major issue in the debate about the health care system in Romania. Recently, national debate has focused on ways to increase the proportion of family physicians who deliver a close to the state of art treatment in cardiology, with the goals of improving costs and maintaining the quality of care. Little is known about the knowledge and practices of general practitioners with respect to the treatment of cardiovascular diseases. Therefore, physicians' treatment of cardiovascular diseases is an important model for assessing the knowledge and practices of generalist physicians in the fields of family medicine as compared with those of specialists in the field of cardiology.

Methods and Results. During the last 10 years the Family Medicine Department of the University of Medicine and Pharmacy "Victor Babes" of Timisoara has developed a number of 14 programs, summing a total of 57 courses, to improve the general practitioners knowledge and abilities to manage common cardiology problems. At these programs we had 1132 participants from different counties as Timiş, Caraş-Severin, Arad and Hunedoara. General practitioners interacted with patients, followed by group discussions conducted by a tutor. By using checklists, the tutor assessed the participant's cardiology skills in interviewing, physical examination and counseling of the patient. Participants discussed then the clinical cases in small groups and reviewed their performance. The small group session was followed by a discussion with a cardiologist who made a state of art diagnostic and treatment of the case. All the participants completed at the end of the program questionnaires regarding improvement of their cardiology skills and program acceptance. Data analysis obtained from questionnaires showed that the general practitioners considered to be better prepared to deal with cardiology problems after completing our program in comparison with traditional teaching methods as cardiology courses, used in continuing medical education. We were also able to demonstrate great acceptance of the program and attitudinal improvement toward cardiology issues.

Programs run from 2002 to 2012:
- Laboratory investigations in clinical medicine
- Determination of cardiovascular subclinical risk factors
- News in cardiology
- Diagnosis and treatment of cardiovascular emergencies
- Attitude of middle healthcare personnel regarding heart patient
- Priorities in development of family medicine
- Electrocardiography course
- Presentation of a clinical case
- Control of cardiovascular risk factors
- Principles of healthy eating
- Adult healthcare
- Elder healthcare
- Child healthcare
- Women healthcare

Conclusions. General practitioners are less aware of or less certain about key advances in the treatment of cardiovascular diseases. This finding underscores the need to improve the dissemination of information to generalist physicians, particularly if they are to have an enlarged role in the evolving health care system.

Universitatea de Medicina şi Farmacie "Victor Babeş" Timişoara

16th Graz Conference on Medical Education 19 - 21 April 2012

Poster 9

Continuing Medical Education Cardiology Programs for General Practitioners

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During the last 10 years the Family Medicine Department of the University of Medicine and Pharmacy "Victor Babes" of Timisoara has developed a number of 14 programs to improve the general practitioners knowledge and abilities to manage common cardiology problems. At these programs we had 1132 participants from different counties as Timis, Caras-Severin, Arad and Hunedoara.

General practitioners interacted with patients, followed by group discussions conducted by a tutor. By using checklists, the tutor assessed the participant's cardiology skills in interviewing, physical examination and counseling of the patient. Participants discussed then the clinical cases in small groups and reviewed their performance. The small group session was followed by a discussion with a cardiologist who made a state of art diagnostic and treatment of the case.

All the participants completed at the end of the program questionnaires regarding improvement of their cardiology skills and program acceptance. Data analysis obtained from questionnaires showed that the general practitioners considered to be better prepared to deal with cardiology problems after completing our program in comparison with traditional teaching methods as cardiology courses, used in continuing medical education. We were also able to demonstrate great acceptance of the program and attitudinal improvement toward cardiology issues.

MEDIZINISCHE UNIVERSITÄT WIEN

MENTORING-PROGRAMM
für Studierende der Medizinischen Universität Wien

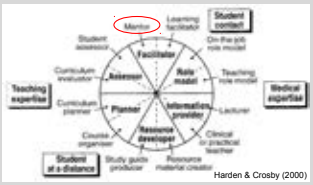
Roles of mentors for undergraduate medical students in Vienna

Angelika Hofhansl[1], Günther F. Körmöczi[2]

(1) Department of Medical Education, (2) Department of Blood Group Serology and Transfusion Medicine
Medical University of Vienna, Austria

Mentoring is of increasing importance in medical education. Implementation of a mentoring program for large institutions such as the Medical University of Vienna (3800 undergraduate students) poses a particular challenge. Since 2009 a mentoring program for medical students (third year and higher) was introduced to achieve the following primary goals:

- Intensification of exchange between students and faculty
- Support of students' professional and personal development



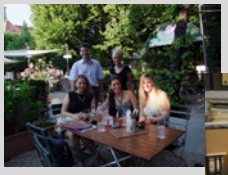
Harden & Crosby (2000)

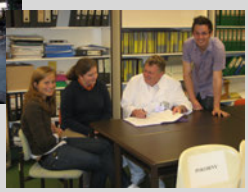
At the Medical University of Vienna, faculty mentors were chosen by their mentees according to online published profiles. . Based on voluntary participation, 117 faculty mentors and 410 students participated in the program. In a 1:5 group setting, meetings took place once per month. Discussed topics are also chosen by the mentees.
For successful implementation, a clear role definition of faculty mentors is essential. Moreover, ten specific roles were defined and every mentor is prepared for these roles in introductory trainings.

(1) Mentors are a **facilitators**, providing support and counseling for the students
(2) They give **help for self-help**
(3) They focus on **personal responsibility** and **empowerment** of the mentees
(4) They encourage also the **group's competence** for solutions
(5) All **decisions** about which questions or problems to be discussed are **made by the mentees**
(6) They regard their mentees always as **active partners**
(7) They provide **openness** and **confidentiality,** and mind a **good atmosphere** in the group
(8) They **clear their accessibilities** and **ways to communicate** with the group
(9) They **document** the discussed topics and return their documentation sheets regularly to the mentoring office.
(10) They **exchange their experiences** as mentors with other mentors regularly in chaired meetings (and ask for help, if necessary)

The mentoring meetings … n = 106 mentees	I agree rather or totally
have encouraged me to think more about my goals and objectives	*87%*
gave me useful information for my later professional life	*85%*
helped me realizing the importance of taking initiatives	*82%*
motivated me in my studies	*79%*
gave me the opportunity of getting to know different medical fields	*76%*
provided opportunities for networking	*75%*
supported my career planning	*72%*
gave me useful informations according my studies	*70%*
strengthened my self-confidence	*64%*
strengthened my belonging to the University	*52%*
helped me finding a topic for my diploma thesis	*34%*
Overall I appreciate the program as very good	***93%***

The mentor … n = 106 mentees	I agree rather or totally
fulfilled his duties as a mentor	94%
responded to my needs in an adequate way	93%
encouraged and supported me	90%
served as a role model for my professional development	90%
served as a role model for my personal development	85%
gave me help to help myself	83%





Conclusions

These promising results show that the definition of the mentors' roles meet the needs of the students as well as of the faculty. Efficient mentoring at a large university is feasible on a voluntary basis and complements the core curriculum.

Poster 10

Roles of mentors for undergraduate medical students in Vienna

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Background: Mentoring is of increasing importance in medical education. Implementation of a mentoring program for large institutions such as the Medical University of Vienna (3800 undergraduate students) poses a particular challenge. Since 2009 a mentoring program for medical students (third year and higher) was introduced to achieve the following primary goals: Intensification of exchange between students and faculty, and support of students' professional and personal development.

Design: For successful implementation, a clear role definition of faculty mentors is essential. At the Medical University of Vienna, mentors were chosen by their mentees according to online published profiles. In a 1:5 group setting, meetings took place once per month. Discussed topics are also chosen by the mentees. Moreover, ten specific mentor roles were defined beforehand. The most prominent of them are: mentors are a facilitator, providing support and counseling for the students; they focus on personal responsibility and empowerment of the mentees. They regard their mentees always as active partners and encourage also the group's competence for solutions.

Based on voluntary participation, 117 faculty mentors and 410 students participated in the program. Program evaluation covered qualitative (records of discussed topics) and quantitative data (questionnaires completed by mentors and mentees).

Results: Both mentees and mentors showed high acceptance of this setting, including group size, frequency of meetings and mentoring efficacy. More than 90% of mentees stated that their mentor fulfilled his duties and responded to their needs in an adequate way.

Conclusions: These promising results show that the definition of the mentors' roles meet the needs of the students as well as of the faculty. Efficient mentoring at a large university is feasible on a voluntary basis and complements the core curriculum.

Dissertations in the Institute of Behavioural Sciences at the Medical Faculty of the University Szeged (1990-2012)

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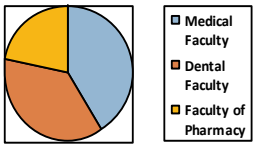
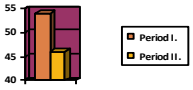
Introduction: In Hungary Medical-, Dental- and Pharmacy-Students must write a dissertation as part of the final assessment for their degree to receive the doctorate. The students should work on self-selected or on teacher-suggested topics, they must also demonstrate the use of the scientific method, as well as document and present their results of working at scientific level. The research profile of our institute is based on the disciplines of "Medical Humanities", they however other research methods require than the medical researches and clinical studies. This study is intended to examine the dissertations in the archive of the institute of behavioural sciences (covering the period from 1990 to 2012) to ascertain trends of research topics and research methods.

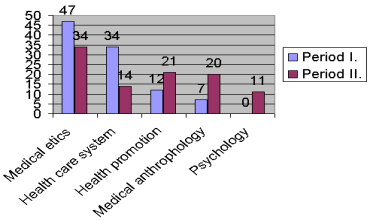
Material and Method: At present the archive includes 282 dissertations written by students of tree Faculties: Medical Faculty 199 (71%), Dental Faculty 52 (18%); Faculty of Pharmacy 31 (11%). The data were analyzed using statistical methods.



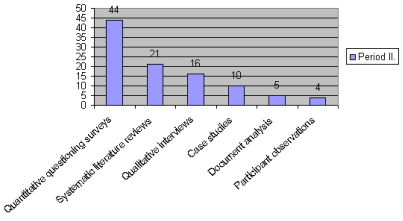
Results: Period I. from 1990 to 2000 = 151 Dissertations (54%)
Period II. from 2000 to 2012 = 131 Dissertations (46%)



Subjects



Methods



Conclusion: Around the turn of the millennium changes can be documented: thematic enlargement of research background on the one hand; diversity in research methods of the students on the other hand. During the study period an unequivocal tendency is to be ascertained: the number of the purely theoretical-analytical works reduced, practically-oriented subjects came to the front more and more. Independent research or project-shaped adaptation of problems is often complemented with realizable ideas and solution proposals.

References: Kuhnigk, O. et al.: Nutzen und Stolpersteine wissenschaftlicher Forschung in der hochschulmedizinischen Ausbildung.. GMS Z Med Ausbild. 2010;27(5): Doc72
Metcalfe,D: Involving medical Students in research. J R Soc Med 2008:101;102-103.
Editorial: medical students and arts and humanities research – fostering creativity, inquisitiveness, and lateral thinking. J Med Ethics: Medical Humanities 2003;29:103.

Poster 11

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Erzsébet Kapocsi, Katalin Barabás
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Introduction: In Hungary Medical-, Dental- and Pharmacy-Students must write a dissertation as part of the final assessment for their degree to receive the doctorate. The students should work on self-selected or on teacher-suggested topics, they must also demonstrate the use of the scientific method, as well as document and present their results of working at scientific level. The research profile of our institute is based on the disciplines of "Medical Humanities", they however other research methods require than the medical researches and clinical studies. This study is intended to examine the dissertations in the archive of the institute of behavioural sciences (covering the period from 1990 to 2012) to ascertain trends of research topics and research methods.

Material and Method: At present the archive includes 282 dissertations written by students of tree Faculties: Medical Faculty 199 (71%), Dental Faculty 52 (18%); Faculty of Pharmacy 31 (11%). The data were analyzed using statistical methods.

Results: We made a distinction between two periods:

- Period I. from 1990 to 2000;
- Period II. from 2000 to 2012.

151 (54%) by the whole dissertations were written in the first period; and 131 (46%) in the second period. Subjects in the period I.: medical ethics 71 (47%), health care system and health care services 51 (34%), health promotion and disease prevention 18 (12%), medical anthropology 11 (7%). Methods in this period: predominantly theoretical and/or historical analysis; systematic literature reviews. Subjects in the period II.: medical ethics 45 (34%), health promotion and disease prevention 27 (21%), medical anthropology 26 (20%), health care system and health care services 18 (14%), psychology 15 (11%). Methods: quantitative questioning surveys 57 (44%), systematic literature reviews 28 (21%), qualitative interviews 21 (16%), case studies 13 (10%), document analysis 7 (5%) participant observations 5 (4%).

Conclusion: Around the turn of the millennium changes can be documented: thematic enlargement of research background on the one hand; diversity in research methods of the students on the other hand. During the study period an unequivocal tendency is to be ascertained: the number of the purely theoretical-analytical works reduced, practically-oriented subjects came to the front more and more. Indepen-

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Teaching and learning blood group serology and transfusion medicine in the integrated Medical Curriculum Vienna

MEDICAL UNIVERSITY OF VIENNA

Günther F. Körmöczi, Angelika Hofhansl

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Background

The medical specialty „Blood Group Serology and Transfusion Medicine" (BGS-TFM) deserves general awareness and representation in medical curricula: it has high relevance for a major proportion of patients, especially regarding pretransfusion testing and multiple aspects of hemotherapy.

Design

At the Medical University of Vienna, 640 undergraduate medical students are educated per year. The current teaching and learning modalities of BGS-TFM-related issues in the integrated Medical Curriculum Vienna are presented.

Results

Based on defined learning objectives, BGS-TFM-specific teaching starts in the fourth semester: in the main BGS lecture (two academic hours; ah), an introduction into immunohematology is given. Here, key aspects are blood group systems and antigens, allo- and autoimmunization against red cells, as well as the principles of blood group typing, antibody detection and compatibility testing. In parallel, the TFM lecture (2ah) details characteristics of selected blood products and highlights the basics of red cell, platelet and plasma transfusion therapy. In addition, the most important transfusion-related side effects are discussed. Both lectures are complemented by learning material provided online, and are assessed by multiple choice questions at the end of the semester. This theoretical input is followed by recently reformed hands-on courses on BGS in the fifth semester: during 2ah, each student is required to perform serological ABO and RhD typing, red cell antibody screening and crossmatching (**Figure 1**) under careful tutorial supervision (**Figure 2**). All individual laboratory results have to be recorded on a work sheet to train clinical documentation (**Figure 3**). A step-by-step online paper aids in preparation of this practical course. Industry sponsoring of laboratory materials was recently introduced to provide sufficient course equipment. The successful implementation of this module is shown by convincing evaluation results. Finally, in the seventh semester, a course on TFM (2ah) covers correct indications and practice of transfusion therapy and the bedside test (**Figure 4**). Further teaching activities include elective seminars on immunohematology and clinical TFM, aside from continuous supervision of diploma theses.

Discussion

Important BGS-TFM areas, such as prenatal testing for maternofetal incompatibility or transplant immunology, are not yet sufficiently covered within the curriculum. Aside from this, adequate student assessment (e.g., OSCE) needs to be further developed. Moreover, a future goal is standardization of format and contents of BGS-TFM at different medical schools in Austria.

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Figure 1

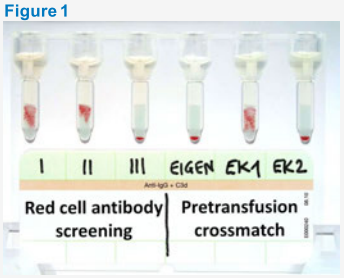


Figure 2

Figure 3

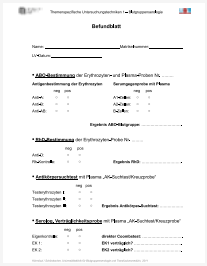
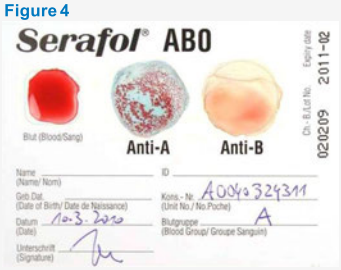


Figure 4



Poster 12

Teaching and learning blood group serology and transfusion medicine in the integrated Medical Curriculum Vienna

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The International Consortium of Higher Medical Institutions.

Leonid Kovalchuk, Inna Sakharova, Nataliya Lisnychuk, Oleksandra Oleshchuk
Ivan Horbachevsky Ternopil State Medical University, Maydan Voli 1 Ternopil, 46001, Ukraine

In order to improve and modernize medical education one of the most important aspects is collaboration between different medical institutions. The «International scientific-educational innovative-technological consortium of higher medical institutions and institutions of physical education and sports» (hereinafter – the Consortium) was organized at our university. It is a voluntary international group of higher medical establishments.

Members of the Consortium deal with:

- training of medical specialists and scientific personnel in health care systems
- physical education and sports (in particular, human health, physical rehabilitation, fitness and recreation)
- scientific and technological innovation in the field of medical education and sports.

The interests of the Consortium are various and include many aspects of education, scientific research and different questions related to health care and sport. For example, the educational activity of the Consortium is oriented towards:

1. Practically oriented training and improvement of the efficiency of mastering practical skills (OSCE, OSPE).
2. Methods and practices of distance learning.
3. Implementation and development of methods for objective evaluation of students' knowledge (by the introduction of independent testing centers).

The current members of the Consortium who have already signed collaboration agreement are: Ternopil State Medical University (Ukraine), National University of Physical Education and Trades of the Sport (Kyiv, Ukraine), Siberian Branch of Russian Academy of Medical Sciences (Novosibirsk, Russian Federation) and Medical University of Astana (Astana, Kazakhstan). There are also official agreements with the Charles University in Prague, First Faculty of Medicine (Czech Republic), International Career Consulting, Inc. (USA), Medical University of Vienna (Austria), The Russian State Medical University (Moscow, Russia), Tbilisi State Medical University (Georgia), Kirov State Medical Academy (Russia), "Swietokrzyska Szkola Wyzsza w Kielcach" (Poland).

We are looking forward to future collaboration with additional medical institutions. Detailed information about our goals, activities and principles are presented on the website www.consortium-univ.te.ua.

Poster 13

The International Consortium of Higher Medical Institutions

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- International Career Consulting, Inc. (USA)
- Medical University of Vienna (Austria)
- The Russian State Medical University (Moscow, Russia)
- Tbilisi State Medical University (Georgia)
- Kirov State Medical Academy (Russia)
- "Swietokrzyska Szkola Wyzsza w Kielcach" (Poland).

We're looking forward for the further collaboration with the different medical institutions.

The detailed information about the goals, activities and principles of the Consortium organization is presented on the website `http://www.consortium-univ.te.ua`.

Poster 14

Integrating CanMed, SCLO and Tuning project (Medicine) competencies into the undergraduate Medical education curriculum at Graz Medical University

Adelheid Kresse, Sabine Vogl, Regina Roller-Wirnsberger, Doris Wagner, Angelika Hofer, Karl Öttl, Thomas Griesbacher, Andreas Wedrich

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Background: In order to comply with the contemporary demand any medial curriculum is faced with, i.e. to be competency-oriented as well as outcome-based, we sought to re-evaluate and wherever necessary remedy our 8 years ago established reform curriculum of undergraduate medical education.

Summary of work: Unlike other undertakings of how to re-define and/or rejuvenate medical curricula, where a small expert group focuses on the major part of creative work which later on is more or less just faithfully handed over to department heads and teaching coordinators for implementation (with the impending danger that implementation might never happen), we sought from the beginning to involve as many people concerned with implementation as possible right from the beginning. Thus, 5 'core groups' concerned with different chronological segments of the curriculum (core group 1-3), as well as two teams concerned with the implementation of learning outcomes (core group 5) and assessment (core group 4) were established. The team concerned with learning outcomes prepared a computer-based interactively accessible hybridized version of the learning outcomes of CanMeds, the Swiss Catalogue of Learning Objectives for Undergraduate Medical Training (SCLO) and the Tuning Project Medicine in a threefold manner, i.e. symptoms-oriented, clinical faculty-based and role-oriented according to the role definitions to be achieved within pre-graduate Medical education.

Summary of results: The project to be presented here is a currently still ongoing process. However, first results are presenting themselves in the sheer amount of lively discussions in various departments and subsequent changes in contents of teaching and modes of assessment in teaching programs that are changing already. Even the initial part of our medical curriculum that is not covered in any of the above-mentioned catalogues for learning outcomes in Medical education, i.e. preclinical teaching, is now aroused and obviously compelled to come up with their own learning objectives to be followed up by subsequent clinical teaching modules.

Conclusions: Although the process is currently not nearly completed, the involvement from the beginning of as many 'executors of teaching' as possible seems to be the safest predictor of anything, thought up with the best possible outcome in mind, to actually come to life later on.

Poster 15

Implementation of an additional test part to the BMS for selecting dental students at the Medical University of Graz

Simone Manhal[1], Hans-Christian Caluba[2], Daniel Ithaler[2], Heide Maria Neges[2] and Gilbert Reibnegger[3]

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At the Medical University of Graz a selection procedure has been developed which consists of a basic natural science knowledge test, called the BMS (basic knowledge test for medical studies), a test on the comprehension of texts and a Situational Judgement Test. The impact of the BMS on drop out rates (Reibnegger et al., 2011) and the successful completion of the first part of the study programme (Reibnegger et al., 2010) has already been shown.

For the selection of dental students a new test was implemented in 2011. Basically practical skills should be assessed because of the necessity to work accurately as a dentist and to be able to develop a precise three-dimensional conception. Therefore manual skills were tested by wire bending tasks and a test of mirrored drawing of symmetric figures (see figure). Two dentists who are part of the teaching staff of our university assessed the precision, evenness and congruence of the bending as well as the contour accuracy of the drawings by using reference points. First experience and conclusions of the test implementation with 179 participants (97 male, 82 female) will be presented.

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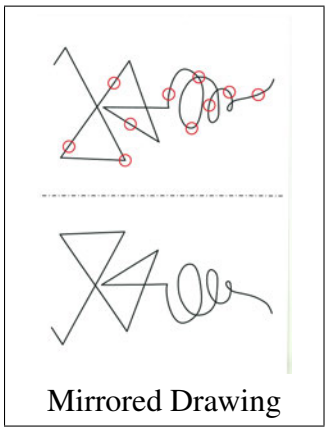
Progress of medical students after open admission or admission based on knowledge tests. Medical Education, 44, 205-214. Reibnegger, G., Caluba, H.-C., Ithaler, D., Manhal, S., Neges, HM., & Smolle, J. (2011). Dropout rates in medical students at one school before and after the installation of admission tests in Austria. Academic Medicine, 86, 1040-1048.



Mirrored Drawing

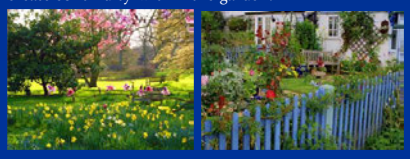
Curriculum design: The "English garden" model.

Valentin Muntean
Faculty of Medicine, "Iuliu Hatieganu" University of Medicine, Cluj-Napoca, Romania.

Background/rationale:
Classic English cottage garden evoke a natural feeling, looking as if no planning was necessary to create their beauty.

What was done:
When designing an English garden three steps should be followed.

The first step is to select three to four main colors to create continuity within the garden.



The main longitudinal themes of curriculum are basic sciences, clinical skills and examination objectives.

Although free flowing, English gardens do need a certain amount of structure.

The structure of curriculum is provided by the study guides, the personal learning plans, the learning portfolios, mentoring and peer review.

A third important ingredient in an English garden is the "accessories": a gate, a bench or a water feature.

In this model of curriculum the "accessories" are provided by the authentic activity in the communities of practice.

Conclusions:
The "English garden" model for curriculum design refers to the active involvement of learners in authentic activities within specific communities of practice, and is based on our cultural background and available teaching sta and infrastructure.

Take-home messages:
The "English garden" model of curriculum is grounded on the theories of cognitive apprenticeship and situated learning.

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Poster 16

Curriculum design: The “English garden” model.

Valentin Muntean
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Background/rationale: Classic English cottage garden evoke a natural feeling, looking as if no planning was necessary to create their beauty.

What was done: When designing an English garden three steps should be followed. The first step is to select three to four main colors to create continuity within the garden. The three main longitudinal themes of curriculum are basic sciences, clinical skills and clinical presentations / examination objectives. Although free flowing, English gardens do need a certain amount of structure. The structure of curriculum is provided by the study guides, the personal learning plans, the learning portfolios, mentoring and peer review. A third important ingredient in an English garden is the "accessories" or in other words, the structures or the "whimsy": a gate, a bench or a water feature. In this model of curriculum the “accessories” are provided by the authentic activity in the communities of practice the learner is exposed during the training period.

Conclusions: The “English garden” model for curriculum design refers to the active involvement of learners in authentic activities within specific communities of practice, and is based on our cultural background and available teaching staff and infrastructure.

Take-home messages: The “English garden” model of curriculum is grounded on the theories of cognitive apprenticeship and situated learning.

Junior Bálint groups as a mean of preventing burn-out

Annabella Obál, Katalin Barabás

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Burnout can be defined „as an experience of physical, emotional and mental exhaustion, caused by long-term involvement in situations that are emotionally demanding". Medical students experience a high level of stress during their years of training and will have to cope with emotionally demanding situations everyday in their future profession. It is important to teach students different kinds of coping methods to deal with these difficult situations and thus prevent burning out.

Bálint group is an internationally well-known method for examining the doctor-patient relationship. Junior Bálint group for students was invented by Professor Boris Luban-Plozza in Milano in 1969. Junior Bálint groups help students to look beyond the surface of a challenging situation or interaction and, thus understand the emotions and reactions that they evoked in them. The method also enhances the student's ability of psychosomatic thinking and teaches the students to work in teams. It also gives a chance for students to state their opinions in a safe, secure atmosphere about topics which are emotionally challenging to them.

The Junior Bálint group of the University of Szeged consists of 10 students, from years third through fifth. The group meets once a month, each session is one and a half hour long. This group has been working together for a year.

Traditional Bálint groups deal with patient cases. Since medical students in Szeged don't have too much experience in the clinical setting the topics discussed are not only limited to patient encounters.

The topics of this specific group can be classified into four categories:

- Negative role models
- Patient encounters
- Personal life experiences
- The future of young doctors in Hungary

Bálint groups may also be a resource of improving job satisfaction, reducing burn-out, enhancing empathy and help understand doctor-patient relationship. Starting to work in Bálint groups in the years of medical training can be beneficial to students.

References:
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Torppa, A.M.(2008) A qualitative analysis of student Balint grooups in medical education: Contexts and triggers of case presentations and discussion themes. Patient Education and Counseling, 72,5-11

Poster 17

Junior Bálint groups as a mean of preventing burn-out

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On our poster we present the method of Junior Bálint groups and show the topics which were discussed during the sessions. The topics point out the sensitive areas which should be attended to.

Poster 18

Increasing relevance and context of teaching improves medical students' attitudes towards learning contents in chemistry and their appreciation of chemistry teachers

Karl Oettl, Simone Manhal, Daniel Ithaler, Hans-Christian Caluba and Gilbert Reibnegger
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Medical students in the first study years frequently think that basic sciences like chemistry and physics are irrelevant for studying medicine and performing practical medical work [1]. Therefore, acceptance and - as a possible consequence - transfer and long term retention of basic science knowledge are low [2].

We tried to improve the medical students' acceptance of chemistry courses by increasing the relevance of contents and accenting medical and everyday issues by illustrating contents with examples [2, 3]. The first 2 study modules (M01 and M02) of the curriculum of human medicine (5 weeks each) at the Medical University of Graz comprise contents of biophysics, chemistry and – to a lesser extent – anatomy. Altogether both modules include 46 h lecture, 11 h seminars and 8 h practical work in chemistry.

At the end of each module a multiple choice assessment with 60 items covering all 3 subjects was performed. At the end of module 2 an evaluation containing 21 items was carried out using a 6-point Likert-type scale (1 meaning "I fully agree" and 6 meaning "I fully disagree"). Two cohorts of first semester students (group 1, academic year 2010/11, n=304 and group 2, 2011/12, n=323) were compared. All seminars and practical work lessons in chemistry as well as 21 h of the oral lectures were included in the content development process. Besides directing the focus on contents relevant to medicine the link from chemical contents to medicine and/or everyday life experiences of the students was improved by giving examples. In the assessment of M01 the results in chemistry were slightly improved in group 2 compared to group 1. In M02 the results were essentially the same in both groups. In the evaluation there was no difference in rating the items "A relation between chemistry and its application in medicine was shown" and "I think chemical topics are relevant for studying medicine" between the groups. On the other hand, the rating of the items "Chemical contents have been illustrated by examples", "The kind of presenting chemical contents encourages independent thinking", "The chemistry lessons are performed in an interesting way", "Chemistry teachers appear competent", "Chemistry teachers appear dedicated" all improved significantly in group 2

compared to group 1. None of the items was rated worse in group 2 compared to group 1.

The results are encouraging to continue the development of the chemical learning contents in terms of relevance and context.

References:

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[3] Custers E.J.F.M. Long-term retention of basic science knowledge: a review study. Adv. In Helath Sci. Educ. 15: 109-128, 2010.

Poster 19

The impact of interactive courses on medical students compared to the traditional courses. An prospective, observational study

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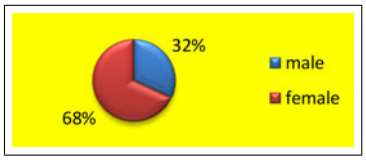
Introduction: The traditional courses transfer unidirectional the information from teacher to student, while interactive courses are suposed to make a bidirectional exchange of data.

Material and method: We conducted a prospective, observational study in the University of Medicine and Pharmacy Timisoara, over a period of 1 year 2010-2011.

We included 135 students from the University of Medicine and Pharmacy Timisoara (92 female, 43 male) that studied Orthopedy in our Department.



From the total amount of the lectures they attended, half were organized in a traditional method and half as an interactive course. We used some interactive teaching methods (eg. Reciprocal teaching – Palinscar, Jigsaw method).

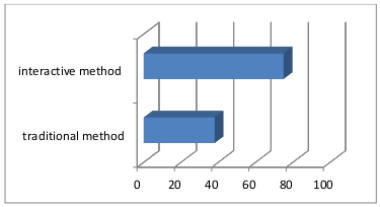
traditional method	interactive methods		
	reciprocal teaching	jigsaw method	brainstorming/ starbursting
10 lectures	10 lectures		

Results: Using observation and questionnaires during courses organized in both traditional and interactive method, we analized the response and the amount of information received and exchanged by medical students.

The research team found that during the interactive class students were nearly twice as engaged than the traditional class.

Students had better results after the interactive lectures, nearly twice as well in a test (average score 75% vs. 38%, with random guessing producing a score of 21%).

Conclusions: Using interactive courses encourages students to adopt active learning techniquesand improves their atention and their information assessment.



UMFVBT ÖGHD

16th Graz Conference on Medical Education 2012 Timişoara, ROMANIA
Curriculum planning and assessment

COMMON EUROPEAN CURRICULUM IN OCCUPATIONAL MEDICINE - EMUTOM PROJECT

Elena-Ana Pauncu[1], Florina-Georgeta Popescu[1], Madia Hanna[1],

Lutgart Braeckman[2], P.B.A. Smits[3], F.J.H. Van Dijk[3], J.F. Gehanno[4], P. Bulat[5]

1. University of Medicine and Pharmacy "Victor Babes", Timisoara, Romania
2. Ghent University, Ghent, Belgium
3. Coronel Institute of Occupational Health, Amsterdam, The Netherlands
4. Centre Hospitalier Universitaire, Rouen, France
5. University of Belgrade, Belgrade, Serbia

1 Motivation

One third of our lives are developed at the workplace, and working conditions have a large impact on active population health. In order to maintain the good health status of workers, to prevent and recognize occupational diseases and work accidents, all health professionals should know about the potentially causal relationship between work and health.

The topic, number of hours, quality and quantity of teaching occupational medicine, the class format differ in a significant way, linked at objective and subjective factors, like growing number of students, low profile of the discipline, not attractive presentations, time constraints and increasing number of new specialties.

2 Methods

EMUTOM project is financed by the European Education Agency's LifeLongLearning Programme.

The partnership is composed by educational experts and specialists in OM from 5 different universities, in five cities/countries: Ghent/Belgium (coordinator), Rouen/France, Amsterdam/the Netherlands, Timisoara/Romania, and Belgrade/Serbia.

Our project develops a five days module (25-30 hours) for undergraduate students that will be part of the core curriculum for occupational medicine offered by all participating universities and will be available for use by any educational organisation.

Initial it was made an inventory of undergraduate curricula in occupational medicine and a questionnaire for the implied stakeholders. On their bases, the overall architecture and content of the module containing different course packages is designed.

3 Results

Work packages are: management, module development, quality assurance and control, dissemination and results exploitation.

A questionnaire survey designed to obtain information on the teaching of OM to undergraduates was sent to medical schools in Europe. 105 medical schools (37%), representing nearly 100,000 undergraduate students, returned a completed questionnaire. 96 of them had specific OM lectures but the amount of teaching ranged from 2 to 80 hours with a mean of 27 hours. Overall, 53% of the faculties had less than 30 hours of OM. 89% percent of the schools had learning objectives in OM, and 79% had an OM manual or syllabus. Occupational respiratory diseases, occupational cancers, occupational toxicology and MSDs were the most frequently taught, whereas assessment of disability was taught in one third of the faculties and disability and return to work in less than one half.

The main outcome of this project is the EMUTOM website for education in the basic tenets of occupational medicine. The learning objectives, teaching formats and assessment criteria have been specified. The course will be available in English and will use a blended learning model by including both traditional face-to-face teaching and self-directed learning materials online such as case studies, student assignments, power point presentations and multimedia. The module format: 5 days taught course with both theoretical and practical components, with a workload of 84 hours (3 European credits).

An open answer questionnaire was distributed to a convenience sample of stakeholders: patients, general practitioners, insurance physicians, occupational physicians and hospital specialists. They were asked to articulate which 'work and health' competencies medical students should have at the end of the medical study.

The pilot (prototype) module is now evaluated by teachers and students. They can find easily accessible and quality learning material outlining the effect of work on health and the impact of health on work. The internet materials will be upgraded in May-June 2012, in according with the evaluators' feed-back.

The course will cover the following topics: basic principles in OM, impact of work on health, effect of health on work, and workplace health promotion.

The final EMUTOM conference will be held in Timisoara, the Romanian City of Flowers, in 24 of September 2012.

4 Conclusions

Despite the European harmonization, there are wide intra- and inter-country disparities in teaching OM.

For the development of the European Module agreements among experts and stakeholders are valuable. Our stakeholders state that all doctors should have competencies on the meaning of work for health, occupational diseases, health risks at work and fitness for work, and skills on occupational history taking. These competencies should form the basis of the European Module.

Study of this module is beneficial to all health professionals who are likely to encounter a variety of work and health issues in their daily practice.

5 EMUTOM website: www.emutom.eu

Education and Culture DG
Lifelong Learning Programme

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EMUTOM: European Module for Undergraduate Teaching in Occupational Medicine

Keywords: undergraduate teaching, occupational medicine (OM), student course, website

Poster 20

Common European Curiculum in Occupational Medicine – Emutom Project

[1]Elena-Ana Pauncu, Florina-Georgeta Popescu[1], Madia Hanna[1], Lutgart Braeckman[2], P.B.A. Smits[3], F.J.H. Van Dijk[3], J.F. Gehanno[4], P. Bulat[5]

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One third of our lives are developed at the workplace, and working conditions have a large impact on active population health. In order to maintain the good health status of workers, to prevent and recognize occupational diseases and work accidents, all health professionals should know about the potentially causal relationship between work and health. In different countries, the topic, number of hours, quality and quantity of teaching occupational medicine, the class format differs in a significant way, linked at objective and subjective factors, like growing number of students, low profile of the discipline, not attractive presentations, time constraints and increasing number of new specialties.

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Our project develops a five days module (25-30 hours) for undergraduate students that will be part of the core curriculum for occupational medicine offered by all participating universities and will be available for use by any educational organisation. Initial it was made an inventory of undergraduate curricula in occupational medicine and a questionnaire for the implied stakeholders.

Work packages are:

- management,
- module development,
- quality assurance and control,
- dissemination and
- results exploitation

The main outcome of this project is the EMUTOM website for education in the basic tenets of occupational medicine. The pilot module is evaluated by teachers and

students. They can find easily accessible and quality learning material outlining the effect of work on health and the impact of health on work. The internet materials will be upgraded in according with their suggestions. Study of this module is beneficial to all health professionals who are likely to encounter a variety of work and health issues in their daily practice The final EMUTOM conference will be held in Timisoara, the Romanian City of Flowers, in September 2012.


Guiding fundamental skills acquisition
University of Medicine and Pharmacy "Gr. T. Popa" Iasi
≥ 80% = 10;
70 ≤ ..... < 80% = 9;
65 ≤ ..... < 70% = 8;
60 ≤ ..... < 65% = 7;
55 ≤ ..... < 60% = 6;
50 ≤ ..... < 55% = 5;
< 50% = 4;
Practical
Theoretical
Practice
Practica Medicala Reala
Virtual
Real Medical Practice
availability
conformity
mentorship
summer medical practice
3 weeks
30 July - 20 August
POZIȚIA LATERALĂ DE SIGURANȚĂ
Iași
Botoșani
Bacău

Poster 21

Guiding fundamental skills acquisition

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Scientifically founded academic education recognizes the evidence according to which, after the age of 18 (eighteen), acquiring knowledge can only be made possible by practical activity, hence, DOING. However, to be able to interact with patients without jeopardizing them (for example, the risk of infection transmission caused by a flawed hand-washing technique), and without compromising the white robe (for example, by not knowing a certain technique – determining blood pressure, determining capillary blood glucose), without risking not being involved in a certain medical service, being ignored or even rejected, students need a minimal training.

A total of 16 (sixteen) procedures, was considered as fundamental to be acquired by our students: hand washing, in the version of water and soap as well as with alcoholic solutions, the stages of medical action in life-threatening situations, like cardiopulmonary arrest, laryngo-tracheal aspiration of foreign bodies ("choking on food"), associated with basic medical abilities, frequently and fundamentally used in medical practice: noninvasive blood pressure measuring, electrocardiogram recording; capillary blood glucose determination; collection of venous blood; medical positioning of the patient; patient assistance in their positioning at the edge of the bed and ambulation; the administration of solid or liquid medication; the administration of inhaled medication; peak expiratory flow determination; subcutaneous injection, intramuscular injection in gluteus and deltoid aria; oxygen administration by nasal cannula.

By the synthesis of up-to-date literature, based on scientific and medical proof, protocols had been produced to be exercised, and designed to cover all the stages that need to be completed, in a holistic approach of the patient, not as a vein or buttock carrier but as a whole, as a human being. The protocols combine communication abilities (initiating discussion, identifying the patient etc), technical aspects (positioning, geometry of the performed movements, length of time etc), evaluation and counseling in their logical sequence. In the didactical program, the whole documentation needed in order to perform these fundamental clinical maneuvers included in the curriculum is available as a protocols guide in an electronic format, available for download from the e-learning platform of University of Medicine and Pharmacy "Grigore T. Popa" Iasi, as well as on paper, as a book.

Poster 22

Katastrophen– und Spezielle Notfallmedizin Teaching Unit (TU) an der Medizinischen Universität Graz – ein Novum !

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Mit dem Mitteilungsblatt vom 02.02.2012 wurde an der Medizinischen Universität Graz eine TU eingerichtet für Themen der Speziellen Notfallmedizin sowie der Katastrophenmedizin und der Autor wurde mit der Leitung betraut.

Diese TU mit dieser Thematik ist in der Landschaft der medizinischen universitären Strukturen ein Novum in der Ausbildung der uns anvertrauten StudentInnen. Die Thematik der „Speziellen Notfallmedizin“ beschäftigt sich einerseits mit allen Aspekten der Logistik und Organisation spezieller notfallmedizinischer Situationen. Ertrinkungs- und Tauchunfälle mit der Notwendigkeit einer schnell verfügbaren, am besten mobilen, Druckkammer, Probleme der Höhenmedizin, darauf aufbauend die Versorgung und Bergung mittels Hubschrauber und der Transport des Patienten in einer bestimmten Flughöhe. Noch höher liegen die Transporte mittels Jet-Flugzeugen über mehrere Stunden, was im Aspekt der Langstreckentransporte besonders berücksichtigt wird. Vergiftungen durch Medikamente, Drogen, Pflanzen sowie durch Tiere sind Bestandteil der speziellen notfallmedizinischen Versorgung. Juridische Themen (Ärztegesetz, Patientenverfügungsgesetz, Katastrophenschutzgesetz, Rettungsdienstgesetz) müssen ebenso ausführlich vorgestellt werden. Präklinik der Verbrennung sowie die Behandlung der Verbrennungskrankheit mit Vorstellung der Verbrennungseinheit werden kompetent durch Experten gelehrt. Dazu passend werden die technischen Möglichkeiten (Entstehungsbrandbekämpfung, Bergung von Verunfallten mittels technischer Unterstützung) sowie die Kooperation mit der Feuerwehr vor Ort an der Feuerwache werden praktisch geübt. Die Disposition und besondere Problematik der verschiedenen Rettungsmittels über eine Leitstelle werden ebenso vor Ort vorgestellt und selbst in Planspielen geübt. Die besondere Problematik der „Katastrophenmedizin“, der Wechsel von der Individual- zur Versorgung mehrerer und vieler Verunfallter, die besondere Schwierigkeit der Einteilung der Patienten nach der Behandlungs- und somit Transportnotwendigkeit (Triage) werden an Hand eines computerunterstützten Simulationsprogrammes sowohl für das Großunfallereignis als auch für das noch desaströsere Ereignis einer Katastrophe geübt.

Die dafür notwendige Kompetenz eines Leitenden Notarztes, betraut mit vielen nichtmedizinischen Aufgaben, ergänzt diese besondere medizinische Organisationsform. Durch die Aufarbeitung vieler bekannter Großunfallsituationen werden

diese als Kasuistiken im Sinne von Prüfungsabläufen erarbeitet. Im Sinne einer stufenartigen Ausbildung unserer StudentInnen könnte im 1.Studienabschnitt die Erste Hilfe mit Rettungspraktikum, im 2.Studienabschnitt die „Allgemeine Notfallmedizin“ mit NAW/NEF Praktikum und im 3.Studienabschnitt die „Spezielle Notfall– und Katastrophenmedizin“ gelehrt werden.

ÖGHD
Österreichische Gesellschaft
für Hochschuldidaktik

Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara

E-LEARNING IN OCCUPATIONAL MEDICINE – NETWORM

Florina G Popescu1, Elena-Ana Pauncu1, Madia P Hanna1, Katja Radon2, Stefanie Kolb2, Johan Ohlander2

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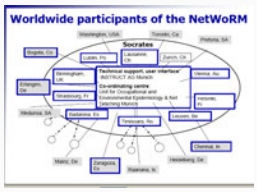
2- The Institute for Occupational and Environmental Medicine "Ludwig Maximillian" University of Munich, Germany

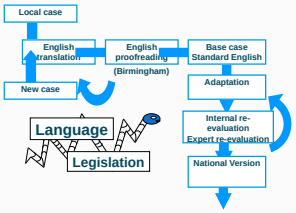
1 Introduction

Every workplace has risks that imply the probability of occupational diseases or work accidents occurrence. The occupational pathology is rarely recognized. Therefore is necessary that the medical students and postgraduates have a basic knowledge of occupational medicine (OM). OM is more preventive than curative, is not so attractive for students, implying also legislation and technical knowledge. It is not compulsory in the curriculum of all medical universities. In that context our colleagues of The Institute for Occupational and Environmental Medicine "Ludwig Maximillian" University of Munich create CASUS platform in the NeTWoRM project: Net –based Training for Work-Related Medicine. This offers an easier and more pleasant way to teach and learn occupational medicine for undergraduates and postgraduates students.



2 Methods

This European project- NeTWoRM has developed into two stages, the first one being part of the SOCRATES program (2004-2007), and the second one of the Long Life Learning Programme Leonardo Da Vinci& studies, indicators and dissemination (2008-2009). Each partner country has created a case which subsequently was translated into English. Also, each partner country translated and adapted into the national languages ten occupational medicine cases. The Romanian users were students (4th year) and resident physicians in occupational medicine. The same cases, English version this time, were used by the students of the English section.



3 Results

Romanian NetWoRM experience - cases used in UMFT

Case	Language	Author(s)
Workplace survey	fi, en, fr, ro, de	Paula Melart, Kristiina Mukala,
Patient with chronic dyspnoea needs your help!	en, pl, ro, fi, es	M. Golec, A. Gora
Work accident due to alcohol	en, ro, pl	E.-A. Pauncu, F. Gheorman, Hanna Madia, Delia Cheptanariu
They who search, will find	en, de, ro	S. Kolb
Bright like the sun	en, de, ro	K. Schmidt, J. Godnic-Cvar
Running nose and breathlessness fits	en, de, es, fr, fi, pl, ro	J. Reichert, K. Radon
Forestry worker with white fingers	en (uk), de, pl, ro, fi	J. Reichert, Riedel,
Needle stick injury (demo version)	en (uk), de, es, be, fi, pl, ro, fr	R. Fuchs, J. Reichert
Stomach cramps and anaemia	en (uk), de, es	J. Reichert, K. Radon
Flight attendant	en (uk), de, pl, ro	J. Reichert, K. Radon

Timisoara, RO Implementation

- Time of aplication:
  - 2007-2009
  - 2010-2011
- Participants:
  - students – Romanian section GM IV th year
  - Students – English section GM IV th year
  - Resident physicians of OM

	Students	Residents
Total number of users	802	70
Active users	706	51
	Mean (SD)	Mean (SD)
Spent time per case	31,11 min (27 min)	52 min (33 min)
Correct answers rate	67,84% (16%)	55% (18%)
Cards completed	94% (19%)	93% (21%)

Undergraduates participants

	Students/ years (number)	Participant students (number)	Participant students (%)	Active Participants Students (%)
2010-2011	367	340	92,64	90,29
2008-2009	383	299	78,06	87,64
2007-2008	372	163	43,81	84,04

Romanian and English undergraduates 2010-2011

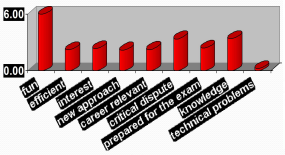
	Romanian	English	p	
Rate of correct answer	72,49%	68,9%	0,6422	NS
Spent time/case	29,22 min (±14,99)	27,28 min (±20,19)	0,5514	NS
Participation	92,76%	82,35%	0,0851	NS

Comparison 2010-2011 and 2007-2009

	Rate of correct answer (%)	Spent time/case (min)	Participation (%)
2010-2011	70,69± 29	28,22± 27	90,29
2007-2009	65 ± 24	34± 33	61,19
p	0,1043	0,0065	0,001
	NS	FS	ES

Evaluation Feedback Questionnaire

- 1 very – 6 not at all



The implementation of the cases was a success

- 80% of the users reported no technical problems
- The success rate was better in both Romanian and English students for the next cases:
  - "Workplace survey" (88,39%~ 81,59%)
  - "They who search, will find" (80,83%~77,95%)
  - "Work accident due by alcohol" (77,09%~80,38%)
- The spending time was generally directly proportional with the slides/case (1,18 min/slide)

4 Conclusions

- NeTWoRM user's reaction was positive.
- The colleagues from other romanian university had a positive reaction, but unfortunately they didn't apply for financial reasons.
- It can be used as an evaluation method as well.
- Now, there was made a free new homepage "Virtualpatient-Work. Net", which presents the virtual cases of OM in English and Spanish

5 A new look home page

Poster 23

E-learning in Occupational Medicine – NeTWoRM

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Introduction: Every workplace has risks that imply the probability of occupational diseases or work accidents occurrence. The occupational pathology is rarely recognized. Therefore is necessary that the medical students and postgraduates have a basic knowledge of occupational medicine (OM). OM is more preventive than curative, is not so attractive for students, implying also legislation and technical knowledge. It is not compulsory in the curriculum of all medical universities. In that context our colleagues of The Institute for Occupational and Environmental Medicine "Ludwig Maximillian" University of Munich create CASUS platform in the NeTWoRM project: Net –based Training for Work-Related Medicine. This offers an easier and more pleasant way to teach and learn occupational medicine for undergraduates and postgraduates students.

Material and Method: This European project- NeTWoRM has developed into two stages, the first one being part of the SOCRATES program (2004-2007), and the second one of the Long Life Learning Programme Leonardo Da Vinci& studies, indicators and dissemination (2008-2009). Each partner country has created a case which subsequently was translated into English. Also, each partner country translated and adapted into the national languages ten occupational medicine cases. The Romanian users were students (4th year) and resident physicians in occupational medicine. The same cases, English version this time, were used by the students of the English section.

Results and Discussions: The total users were: 802 students and 70 resident physicians in occupational medicine and the active users were: 706, respectively 51. The average work time spent per case was 41.55 min (31.11 min for students and 52 min for resident physicians). The rate of correct answers was 67.84% for students and 55% for physicians.

The assessment of this type of learning was performed trough a questionnaire and revealed the fact that for most users it was a pleasant and interesting way to learn, to improve knowledge, it was helpful for the exam.

Conclusion: NeTWoRM user's reaction was positive. Also, from the other university colleagues we had a positive reaction, but unfortunately they didn't apply for financial reasons. It can be used as an evaluation method as well.

Now, there was made a free new homepage "Virtualpatient-Work. Net", which presents the virtual cases of OM in English and Spanish.

Poster 24

Interdisciplinary teaching and learning: ECG diagnosis and surgical treatment of cardiac arrhythmias - Modern cardiac pacemaker, defibrillator and cardiac resynchronization therapy

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According to a recent analysis, about 50,000 patients carry pacemakers in Austria. In the EU there are 2 million patients with such devices, worldwide 1 million of these systems are implanted per year. No matter to which medical discipline a medical doctor belongs ECG diagnosis and patients with implanted cardiac rhythm assist devices are indispensable in the daily medical practice. Currently, the ECG diagnosis and thus the diagnosis of cardiac arrhythmias as well as the management of these patients is usually limited to basic skills throughout any medical curriculum. Since the indication for the procedure and pre implant diagnostics are a domain of a cardiologist and the procedure is a domain of heart surgery, an interdisciplinary teaching approach is required. This innovative interdisciplinary approach has been designed at our university in order to provide students with an insight in the basic diagnostics of cardiac arrythmias and their management.

As part of a four-week special study module, the students have the opportunity to pursue both the underlying ECG diagnosis before and after pacemaker implantation as well as the implantation techniques in the operating room and surgical outpatient rehabilitation and observance. This interdisciplinary cooperation is based on a three-stage model: In the first stage of learning students have to pass a web based training after viewing virtual teaching units made available to the basics of rhythm diagnosis, the pathology of rhythm diagnosis and treatment options. After successful completion of these trainings, students are given the opportunity, to take a two-week work experience in both rhythm diagnosis and implantation of pacemaker systems. This concept is based on close cooperation between the two disciplines. The students are completely integrated in both teams and are provided an exclusive expertise and insight.

Integration in curriculum planning and development

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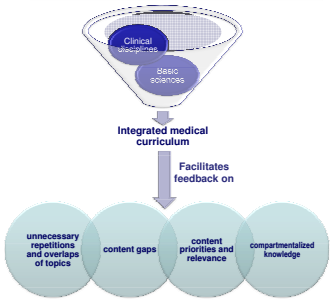
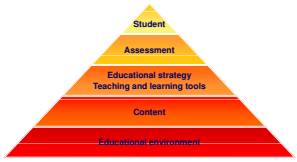
THE INTEGRATED CURRICULUM

- Aims to enhance students' ability to:
  - integrate previous and future learning,
  - link theory and professional standards to practice,
  - adapt to change.



CURRICULUM ELEMENTS



WHAT TO KEEP IN MIND?

THE INTEGRATION LADDER

- The integration ladder is a useful tool for curriculum planning and evaluation, describing the 11 positions, starting from basic teaching till the last four levels, which are the expression of integration *(see below)*.
- Moving up the ladder, there is less emphasis on disciplines, an increased need for a central curriculum, organisational structure and staff participation in curriculum planning.

CURRICULUM DESIGN – THE BRICKS

ADVANTAGES OF CURRICULUM INTEGRATION

Key points	Reasons
Integrated learning aids retention.	It is meaningful and relevant.
Integration enhances deep learning.	The student has to establish links.
Integration develops creative thinking.	It encourages the student to form his/her own opinions.
Repetition of content is reduced.	Different subjects are linked.
Reinforcement of learning.	Information learned in one area of study is utilized in another area.
An integrated curriculum promotes faculty development.	Teachers become aware of another's contributions.
In an integrated curriculum students may delve deeply into a topic of interest.	The disparate information from different areas are brought together under each topic.

DISADVANTAGES OF CURRICULUM INTEGRATION

Key points	Reasons
Teachers who are immersed in their own specialty may have difficulty at first.	Custom is a second nature!
Students display a high level of anxiety in an integrated curriculum.	If they are uncertain of the width and depth of a subject they need to master.
The main problem with an integrated curriculum is an attitudinal one.	Teachers are protective of their "territories".
An integrated curriculum may not afford students opportunities to delve deeply into a discipline of interest.	Information from different disciplines are gathered under major topics.
In an integrated curriculum, teachers spend more time in planning.	Time consuming for better learning materials.

CURRICULUM LEVELS

- Planned curriculum
  - what is supposed to be delivered by all teachers
- Delivered curriculum
  - what is actually being delivered by each teacher
- Experienced curriculum
  - what is "reaching" the student

GOALS

- Outcome-based education and assessment
- Student and community centred
- Student assistantship

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  - **Prof. Allan Cumming**
  - **Prof. Jim McKillop**
- **Harden R.M., Med Educ, 34, 2000**
- **Dr. Kieran Walsh, Curriculum Design, BMJ Learning**
- **http://www.lookstein.org/integration/curriculum_intro.htm**

OBJECTIVES

- The objectives of undergraduate training should be:
  - General medical training;
  - Preparation for postgraduate specialisation;
  - Oriented to the community health priorities;
  - Develop an attitude towards long-life, self-directed learning;
  - Develop medical knowledge, technical skills, and professionalism

Any medical curriculum should therefore focus on meeting these needs!

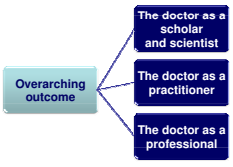
PROGRAMME GOALS

Pre-clinical training	Skills and practical experiences
• Integration of: – fundamental sciences and – basic clinical knowledge • Autonomous, self-directed learning	• Active clinical skills acquisition • Ambulatory, primary care experiences • Community-based experiences • Clinical care experiences

Clinical training

- A comprehensive, general training
- From problem analysis and synthesis to problem solving
- Transversal disciplines
- Clinical knowledge, problem-solving and patient care
- Integrate learning activities with ward activities

OUTCOMES FOR GRADUATES



Acknowledgement: POSDRU /86/ 1.2/ S/ 63815

Poster 25

Integration in curriculum planning and development

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Medical education curriculum should re-integrate basic sciences and clinical disciplines, aiming to enhance students' ability to integrate previous and future learning, to link theory and professional standards to practice, and to adapt to change.

Cognitive theories of learning suggest that an integrated approach has important benefits for learning by facilitating contextual and applied learning, and by promoting development of the well organised knowledge structures that underlie clinical reasoning (Muller J.H., 2008). Integrated teaching offers many advantages and is seen as a key factor in the delivery of an effective educational programme (Harden R.M., 2000). The need for integration in medical curriculum raised many pro and cons debates, as it was revealed by the reports on medical education, including "Educating Medical Students", and "Tomorrow's Doctors". Integration is represented as a continuum in the SPICES model for educational strategies, having the discipline-based teaching at one end and the complete integration at the other one.

In this view, the integration ladder is a useful tool for curriculum planning and evaluation, describing the 11 positions, starting from basic teaching till the last four levels which are the expression of integration: transdisciplinary - the "real world" situations; interdisciplinary - the loss of discipline perspective; multidisciplinary - with many subjects brought together, and complementary - focussed on topics. Moving up the ladder, there is less emphasis on disciplines, an increased need for a central curriculum, organizational structure and staff participation in curriculum planning (Harden R.M., 2000).

The critical points in curriculum change towards integration are linked by the following facts:

1. integration is based on correlating or linking elements
2. synchronisation and team working support integration but do not guarantee it without the linking of subjects
3. in horizontal integration linking occurs among subjects learnt at the same level, while in vertical integration, it occurs at different levels
4. the more the teacher integrates for the student, the less the student learns to integrate for himself
5. the highest integration is when the student harmonises learning with living
   `http://www.lookstein.org/integration/curriculum_intro.htm`

In curriculum planning it is important to be aware that curriculum reform is differently understood and experienced by the different stakeholders (students and faculty members, patients and the public at large), with respect to instructional method, content, faculty work and the synthesis of knowledge.

Acknowledgments:
These data are part of the POSDRU project no 86/1.2/S/63815 EMEDIQUAL from the FSE-POSDRU 2007-2013.

Left ventricular assist device implantation – an elective course offered to students of human medicine at the Medcial University of Graz

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Background. Given that The tremendous organ donors especially for heart transplantation and the technological advances in ventricular assist devices (VADs) have led to new therapeutic options. VADs supporting the left (LVAD) have emerged as the standard of care for advanced heart failure in children and adults (see Image 1). Implantation numbers are raising worldwide, especially when used as permanent support (bridge to destination, BTD). Mostly used to bridge patients to transplantation (BTT) they are now being a real alternative with a one-year survival of 86%. Bridge to recovery (BTR) especially in the long-term support might be a valid option for a small number of patients. Although there are different devices available, patient selection, pre- and intra-operative preparation, and the timing of VAD implant are important elements critical to successful circulatory support.

Image 1: Mechanical circulatory support is getting attention througout the world; especially in children.

Left Ventricualr assist device: LVAD

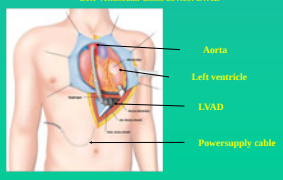

Image 2: Schema of a left ventricular assist device (LVAD) providing a continuous flow (HeartMate II; Thoratec Corp., Pleasanton, CA)

The technology and high level interdisciplinary (Surgery, Anaesthesiology, Cardiology, Intensive Care, Nursing Care, Out of hospital treatment, Technicians) field of VAD therapy requires special education and trainings for students.

Students of human medicine who are interested in the therapy of heart insufficiency and in heart surgery are offered an elective course to learn more about VAD. The theoretical part offers an e-learning based repetition of the basic anatomical, physiological and pathological knowledge as far as the cardiovascular system is concerned. Further basic structure and function of a LVADs (Image 2), different devices and a brief history overlook is given. In small groups hands-on training with special knowledge about LVADs is provided.
Finally students can take an active part in the care of patients at the outpatient ward of the Department of Surgery at the Medical University of Graz; get in contact with patients provided with a LVADs (Image 3), may assist in wound dressings and have the possibility to observe and assist in heart operations.

Image 3: Outpatients provided with a LVAD form the German Heart Centre Berlin and the Medical University Graz.

Students' learning outcomes and the detailed concept of the course will be presented and the benefit of such a specialized course for undergraduate education will be discussed.

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Poster 26

Artificial heart implantation – an elective course offered to students of human medicine at the Medical University of Graz

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Heart transplantation is still the treatment of choice for patients suffering from terminal heart failure. Given that organ donors are scarce and the technological advances in artificial hearts are rapid, the implantation of mechanical cardiovascular support systems has become more popular.

Students of human medicine who are interested in the therapy of heart insufficiency and in heart surgery are offered an elective course to learn more about artificial heart implantation. On the one hand the course offers an e-learning based repetition of the basic anatomical, physiological and pathological knowledge as far as the cardiovascular system is concerned. On the other hand students can take an active part in the care of patients at the outpatient ward of the Department of Surgery at the Medical University of Graz and have the possibility to observe and assist in heart operations.

Students' learning outcomes and the detailed concept of the course will be presented and the benefit of such a specialized course for undergraduate education will be discussed.

Poster 27

Making medical basics understandable to students of nursing science – A concept

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Basic medical knowledge is crucial for nursing scientists to effectively care for their patients and to efficiently cooperate with physicians and other health care professionals (Tanner, 2010). The knowledge and understanding needed by nursing scientists has to be profound but not as deep and specialized as in medical training (Bengtsson & Ohlsson, 2010). Students often feel ill-prepared for their work life as far as medical science is concerned (Andersson & Edberg, 2010). Therefore ties between medical expertise and education focusing on the needs and requirements of the target group have to be established (cf. Killam, Luhanga & Bakker, 2011). Curricula worldwide vary in terms of concepts and combination of subjects to train undergraduate students (Ohlen, Furaker, Jacobsson, Bergh & Hermansson, 2011).

At the Medical University of Graz students participate in a course on general and special pathology, diagnostic methods and therapy in their second semester of studies. Hence, the presented concept brings the understanding of medical terminology (i.e. Greek and Latin origin of medical terms, meaning of different pre- and suffixes, "modern" medical term, ...) and medical procedures (auscultation, percussion, palpation; sonography, X-Ray, MRT, ...), their results, benefits and risks into focus. Students obtain information they can transfer to their daily work with patients so that on the one hand medical procedures can be explained to lay people in understandable terms, and on the other hand nursing scientists can handle the information given by diagnostic findings or discharge letters and follow physicans' instructions to ensure optimal patients' care and safety.

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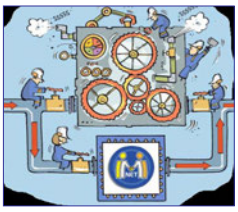

The application of Internal Market Information(IMI) in the Romanian Dental System

Camelia Szuhanek [1], Liliana Sandu [2], Andrei Linu [3]

1, 2 – Faculty of Dentistry, University of Medicine and Pharmacy "Victor Babes" Timisoara, Romania, IMIPQNET experts for health sector
3 - Project Manager, Ministry of Education, Research, Youth and Sport

Background

The Internal Market Information System (IMI) was established in order to create conditions to facilitate mobility of qualified professionals all over Europe. The main actors involved in IMI are the Competent Authorities throughout the EEA who will exchange information requests through the system. Recognition of professional qualifications is key to making the fundamental Internal Market freedoms work effectively for EU citizens.

Regarding the health professionals sector, the EU Commission considers that the shortage of workforce will not only persist in the future but is projected to increase. Therefore, standard procedures and documents for recognition and certifications are required in order to facilitate mobility between health practitioners. The IMI system also protects the patients from unskilled practitioners and safeguards the quality of services. The introduction of IMI will provide the necessary documents for automatic recognition in less than 4 weeks. It will also eliminate the need for translation and will lead to less refusal of applications due to lack of information.

IMI does not impose additional obligations on Member States beyond those already contained in internal market legislation.

IMI is a web-based application for:

- •National authorities at all levels
- •To find the right counterpart in another Member State
- •For secure exchange of information
- •In all EU languages

Revised Directive on Professional Qualifications (2005/36/EC)

- •Article 8 - Administrative cooperation
- •Article 50 - Documentation and formalities
- •Article 56 - Competent Authorities

Services Directive (2006/123/EC)

According to the Directive 2005/36, Dentistry is a sector profession with automatic recognition. Dentists represents 7.8% from the requests for professional qualifications from IMI system.

IMI addresses the following problems:

- •Language barriers – 23 official EU languages
- •Lack of clearly identified partners in other Member States
- •Different administrative structures and cultures
- •Lack of administrative procedures for cross border cooperation
- •Management of 351 bilateral relationships in EU-27.

Aim

Our paper analyses the applicability of IMI system in the dental market of Romania and identifies the difficulties of its implementation.

Material & Methods

The data was collected during the IMIPQNET POSDRU/93/3.3/S/53132 project, and was provided by the Romanian Dental Council, the Competent Authority for dentists in our country.

Results

The Romanian Dental Council has already implemented the IMI system. In the period 2009-2011, 20 IMI requests for practicing dentists were solved. From the 20 request, 2 came from Finland, 8 from The Netherlands, 1 from Belgium, 1 from France, 5 from Spain, 2 from Sweden and 1 from Luxemburg.

Delays in providing responses:

- Incomplete data about the requesting dentist:
- lack of a complete database with the practicing dentists in our country.

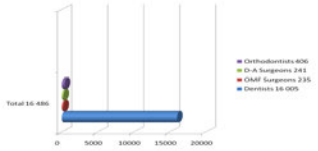

Fig. 1 The distribution of specialities in the dental field in our country.

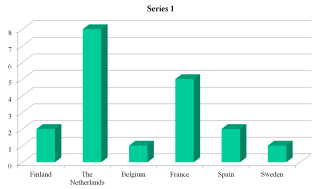

Fig. 2 The distribution of IMI requests from EU member States.

Conclusion

The Internal Market Information (IMI) System, developed by the European Commission, aims at contributing to patient safety by means of a timely and updated exchange of information among dental regulatory bodies on the good standing and scope of practice of their registrants.

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Poster 28

The application of Internal Market Information(IMI) in the Romanian Dental System

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The Internal Market Information System (IMI) was established in order to create conditions to facilitate mobility of qualified professionals all over Europe. Recognition of professional qualifications is key to making the fundamental Internal Market freedoms work effectively for EU citizens.

Regarding the health professionals sector, the EU Commission considers that the shortage of workforce will not only persist in the future but is projected to increase. Therefore, standard procedures and documents for recognition and certifications are required in order to facilitate mobility between health practitioners. The IMI system also protects the patients from unskilled practitioners and safeguards the quality of services. The introduction of IMI will provide the necessary documents for automatic recognition in less than 4 weeks. It will also eliminate the need for translation and will lead to less refusal of applications due to lack of information. According to the Directive 2005/36, Dentistry is a sectorial proffesion with automatic recognition. Dentists represents 7.8% from the requests for professional qualifications from IMI system.

Our paper analyses the applicability of IMI system in the dental market of Romania and identifies the difficulties of its implementation.

THE EFFECT OF PRACTICAL EXPERIENCE ON MEDICAL STUDENTS' SELF-ASSESSED CLINICAL SKILLS COMPETENCY

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Faculty of Medicine

Background

As medical students advance to higher levels of their education they have to be able to perform some of the basic medical procedures. Our research question: *Is there a connection between the practical experience (probation on a patient, on a manikin, or both) and Year-4, 5 and 6 medical students' self-assessed clinical skills competency?*

Summary of Work

We gave out questionnaires to Year-4, 5 and 6 medical students (N=109). They had to specify whether they have tried venepuncture, face-mask usage, endotracheal intubation, bladder catheterization, intramuscular injection application, CPR, rectal examination, ECG-recording, defibrillation and infusion set-up on a patient, on a manikin, on both or have never tried it before. They specified whether they feel competent about performing each of this procedure on a patient on their own.

RESULTS

Practical Skill	Percentage of students who tried the procedure …				Students' self-assessed clinical skills competency if they tried the procedure …			
	Nowhere	On a manikin	On a patient	On both	Nowhere	On a manikin	On a patient	On both
Venepuncture	4.6%	31.2%	35.8%	28.4%	0.0%	32.4%	48.7%	54.8%
Face-mask Usage	0.9%	53.2%	27.5%	18.3%	10%	74.1%	70.0%	70.0%
Endotracheal Intubation	1.8%	84.4%	9.2%	4.6%	0.0%	13.0%	20.0%	40.0%
Bladder Catheterization	12.8%	76.1%	6.4%	4.6%	0.0%	43.4%	57.1%	40.0%
Intramuscular Injection	30.3%	38.5%	27.5%	3.7%	15.2%	76.2%	66.7%	75.0%
CPR	0.0%	96.3%	0.9%	2.8%	/	75.2%	0.0%	100.0%
Rectal Examination	11.9%	67.9%	11.0%	9.2%	23.1%	62.2%	66.7%	90.0%
ECG-recording	22.0%	33.9%	33.9%	10.1%	4.2%	45.9%	56.8%	100.0%
Defibrillation	2.8%	97.2%	0.0%	0.0%	0.0%	51.9%	/	/
Infusion Set-up	40.4%	46.8%	10.1%	2.8%	4.5%	62.7%	81.8%	100.0%

Table 1: Students' clinical experience and level of competence

Conclusion

Practicing some clinical skills on manikins makes students feel competent enough to do it on a patient. On the other hand, some technically demanding or invasive procedures need to be performed on a real patient under the supervision of clinicians in order to make students feel competent about performing them independently.

Take-home message

Simulation seems to be an important way of making students feel competent about performing practical procedures, but in some instances learning on a patient under the supervision of a clinician is of great importance.

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Poster 29

The Effect of Practical Experience on Medical Students' Self-assessed Clinical Skills Competency

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Background: As medical students advance to higher levels of their education they have to be able to perform some of the basic medical procedures.

Our research question: Is there a connection between the practical experience (probation on a patient, on a manikin, or both) and Year-4, 5 and 6 medical students self-assessed clinical skills competency?

Summary of Work: We gave out questionnaires to Year-4, 5 and 6 medical students (N=109). They had to specify whether they have tried venepuncture, face-mask usage, endotracheal intubation, bladder catheterization, intramuscular injection application, CPR, rectal examination, ECG-recording, defibrillation and infusion set-up on a patient, on a manikin, on both or have never tried it before. They specified whether they feel competent about performing each of this procedure on a patient on their own.

Summary of Results: Students' level of competency with venepuncture, endotracheal intubation, rectal examination, ECG-recording and infusion set-up rises with the level of their practical experience – it is the smallest if they tried it on a simulator only, and it rises if they tried in on a patient or both patient and simulator. Type of practical experience seems to have no influence on students' competency when it comes to face-mask usage, bladder catheterization, intramuscular injection application, CPR and defibrillation.

Conclusions: Practicing some clinical skills on manikins makes students feel competent enough to do it on a patient. On the other hand, some technically demanding or invasive procedures need to be performed on a real patient under the supervision of clinicians in order to make students feel competent about performing them independently. Take-home Message Simulation seems to be an important way of making students feel competent about performing practical procedures, but in some instances learning on a patient under the supervision of a clinician is of great importance.

Figure 1: Table 1: Students' clinical experience and level of competence

Table 1: Students' clinical experience and level of competence

Practical Skill	Percentage of students who tried the procedure …				Students' self-assessed clinical skills competency if they tried the procedure …			
	Nowhere	On a manikin	On a patient	Both	Nowhere	On a manikin	On a patient	Both
Venepuncture	4.6%	31.2%	35.8%	28.4%	0.0%	32.4%	48.7%	54.8%
Face-mask Usage	0.9%	53.2%	27.5%	18.3%	10%	74.1%	70.0%	70.0%
Endotracheal Intubation	1.8%	84.4%	9.2%	4.6%	0.0%	13.0%	20.0%	40.0%
Bladder Catheterization	12.8%	76.1%	6.4%	4.6%	0.0%	43.4%	57.1%	40.0%
Intramuscular Injection	30.3%	38.5%	27.5%	3.7%	15.2%	76.2%	66.7%	75.0%
CPR	0.0%	96.3%	0.9%	2.8%	/	75.2%	0.0%	100.0%
Rectal Examination	11.9%	67.9%	11.0%	9.2%	23.1%	62.2%	66.7%	90.0%
ECG-recording	22.0%	33.9%	33.9%	10.1%	4.2%	45.9%	56.8%	100.0%
Defibrillation	2.8%	97.2%	0.0%	0.0%	0.0%	51.9%	/	/
Infusion Set-up	40.4%	46.8%	10.1%	2.8%	4.5%	62.7%	81.8%	100.0%

Medical University of Graz

Exam distress, somatization and quality of life at the entry exam of the medical university of Graz

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[1]Department of Medical Psychology and Psychotherapy, [2]Department of Gynecology and Obstetrics

INTRODUCTION: At the Medical University of Graz an annual entry exam is conducted for future students in medicine and dentistry since 2005. In this work we aimed to explore an association between success in the entry exam and psychosocial and psychosomatic variables including quality of life and somatization among participants.

MATERIAL AND METHODS: In this diploma thesis data were collected in relation to the entry exam 2010 and descriptively analysed. At three points of time (three weeks before, two days before, and three weeks after the exam) the following psychometric measures were applied: SOMS-7, to explore the level of somatization, HADS-D, to probe for symptoms of anxiety and depression and the WHOQOL-BREF as a measure of quality of life. Further statistical analyses of these data are planned.

RESULTS: Study participants consisted of 44 persons (25 females, 19 males). After the exam lower values in somatization, anxiety and depression and higher values in quality of life were reported as compared to before the exam. The unsuccessful subgroup showed higher values in somatization (Fig.1), and anxiety and depression compared as to the successful subgroup at all three points of time. In addition, female participants reported higher values in somatization than their male colleagues (Fig. 2).

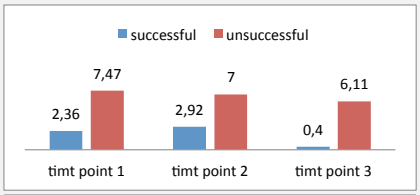
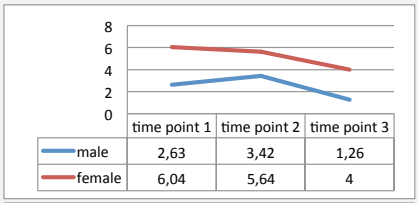


Fig 1. Mean values of number of symptoms of somatization (SOMS-7) according to success in exam



	time point 1	time point 2	time point 3
male	2,63	3,42	1,26
female	6,04	5,64	4

Fig 2. Mean values of number of symptoms of somatization (SOMS-7) according to gender

CONCLUSION: Results suggest an association between symptoms of somatization and performance in the entry exam. This finding may be particularly relevant for females. Further data analyses and future studies will be needed to better understand this interrelation.

Poster 30

Exam distress, somatization and quality of life at the entry exam of the Medical University of Graz

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Introduction: Since 2005 there is an annual entry exam at the Medical University of Graz for future students in medicine and dentistry. In this work we aimed to explore an association between participation and success in the entry exam and psychosocial and psychosomatic variables including quality of life and somatization.

Material and methods: In this diploma thesis data were collected in relation to the entry exam 2010 and descriptively analysed. At three points of time (three weeks before, two days before, and three weeks after the exam) the following psychometric measures were applied: SOMS-7, to explore the level of somatization, HADS-D, to probe for symptoms of anxiety and depression and the WHOQOL-BREF as a measure of quality of life. Further statistical analyses of these data are planned.

Results: Study participants consisted of 44 persons (25 females, 19 males). After the exam lower values in somatization, anxiety and depression and higher values in quality of life were reported as compared to before the exam. The unsuccessful subgroup showed higher values in somatization (Fig.1), and anxiety and depression compared to the successful subgroup at all three points of time. In addition, female participants reported higher values in somatization than their male colleagues (Fig. 2).

Conclusion: Results suggest an association between symptoms of somatization and performance in the entry exam. This finding may be particularly relevant for females. Further data analyses and future studies will be needed to better understand this interrelation.

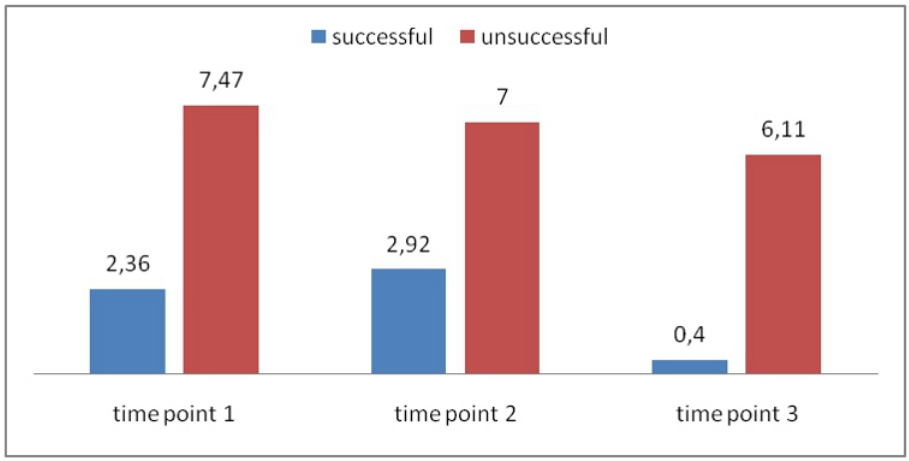
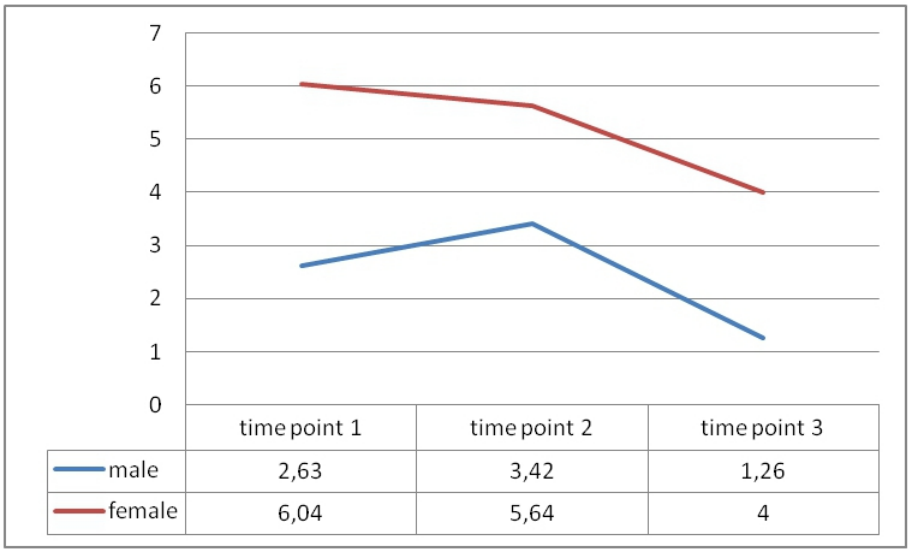


Figure 1: Mean values of number of symptoms of somatization (SOMS-7) according to success in exam



	time point 1	time point 2	time point 3
male	2,63	3,42	1,26
female	6,04	5,64	4

Figure 2: Mean values of number ofsymptoms of somatization (SOMS-7) according to gender

Poster 31

Clinical activities in everyday medical practice do students in the first semester need them?

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Students in the first semester of their medical studies are usually still very idealistic and inexperienced as far as handling of patients is concerned. Subjects which are offered in this part of the medical studies are usually highly theoretical ones - without reference to clinical settings and unrelated to the medical reality as basic skills have to be created for future subjects. Nevertheless, or precisely due to this simple lack of practice, especially students at that time of their studies usually use their first semester break for clerkships to get in contact to patients. To prepare students well for this clerkship and to enrich their theoretical teaching and learning daily routine by clinical content, the track "Introduction to Medicine" tries to apply an innovative approach.

Students in their first semester are confronted with various clinical situations from medical daily routine. They have to exercise on one and another or on clinical tools and train on precise daily medical acts like the raising of a syringe, the mirrors of an infusion, performing a correct blood pressure measurement or examination of the abdomen of a fellow student. Students are instructed by a medical teacher and afterwards have to develop the instructed activity by themselves with a specified time limit. In addition, in view of a possible surgical clerkship - activities like donning sterile gloves, a sterile sheath or surgical hand disinfection are included in the spectrum as well.

The course consistently receives positive feedback by the attendants and is visited with the utmost zeal. Until now feedback has been generated through routine evaluations feedback by the university. A questionnaire analysis is planned, however, to the effect subsequently. At present this concept as an innovative and positive way is seen to take the students step by step the fear of clinical practice and its activities, without leaving a lack of respect before them.

Students' Attitudes about the Application of Audience Response Systems in Team-based Learning

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MEDIZINISCHE UNIVERSITÄT WIEN

DEMAW

Purpose

Recently, we described the implementation of team-based learning (TBL) in an intensive course format at the Medical University of Vienna (*Wiener H, Plass H, Marz R, Croat Med J. 50; 69-76, 2009*). The present, prospectively designed study, examines students' attitudes on how the application of an Audience Response System (ARS, TED, "clicker") influences the process of TBL.

Methods

TBL was provided in an intensive course format with six 2-hours sessions over a 3-day period as an elective pharmacological review course covering the material of the second year of the medical curriculum. Students signed up for the course electronically and were randomly assigned to two equally sized cohorts. In one cohort an ARS was used, in the control cohort TBL was performed without an electronic voting system. The same instructor (HW) moderated both cohorts and identical test questions were used. Students completed a program-evaluation questionnaire (1 = strongly disagree, 6 = strongly agree) at the end of the course; the ARS cohort answered additional questions.

Table 1: Medical students questionnaire responses to TBL intensive courses (1 = strongly disagree, 6 = strongly agree).

Questionnaire item	**Control** Mean±(SD) (n = 94)	**TED voting** Mean(±SD) (n = 91)
TBL helps to assess present knowledge	5.5 ± 0.7	5.4 ± 0.8
TBL helps to get me to a higher level of knowledge	5.5 ± 0.7	5.4 ± 1.0
TBL reduces the amount of time needed for self-study	3.8 ± 1.4	4.1 ± 1.5
TBL challenged me to give my best	5.1 ± 0.9	5.0 ± 1.1
TBL had a positive impact on my learning attitudes	4.6 ± 1.3	4.8 ± 1.1
TBL is an effective, motivating learning strategy	5.4 ± 0.8	5.5 ± 0.8
The application of an TED system in TBL increases my attention		5.4 ± 0.8
The feedback of test results by an TED system supported the learning process		4.6 ± 1.3
The application of an TED system interferes with TBL		1.5 ± 0.8
Overall, I am very satisfied with this TBL approach	5.6 ± 0.6	5.6 ± 0.9

Results and Conclusion

212 students (51% females) participated in the courses offered. The response rate to the program-evaluation questionnaire was 87% (n=185). In terms of ARS the item with the largest mean score was "The application of ARS in TBL increases my attention" (5.4 ± 0.8). The mean score for "The feedback of test results by an ARS supported the learning process" was somewhat lower (4.6 ± 1.3). Students did not feel uncomfortable with the ARS in TBL as indicated by the very low mean score of the statement "The application of an ARS interferes with TBL" (1.5 ± 0.8). There was no significant difference between the two cohorts in assessment of TBL concerning knowledge acquisition and motivational dimensions. Taken together, the application of an ARS influences the process of TBL in terms of increasing attention of the students and supporting the learning process. It also made the sessions more exciting for the moderator.

Poster 32

Students‘ Attitudes about the Application of Audience Response Systems in Team-based Learning

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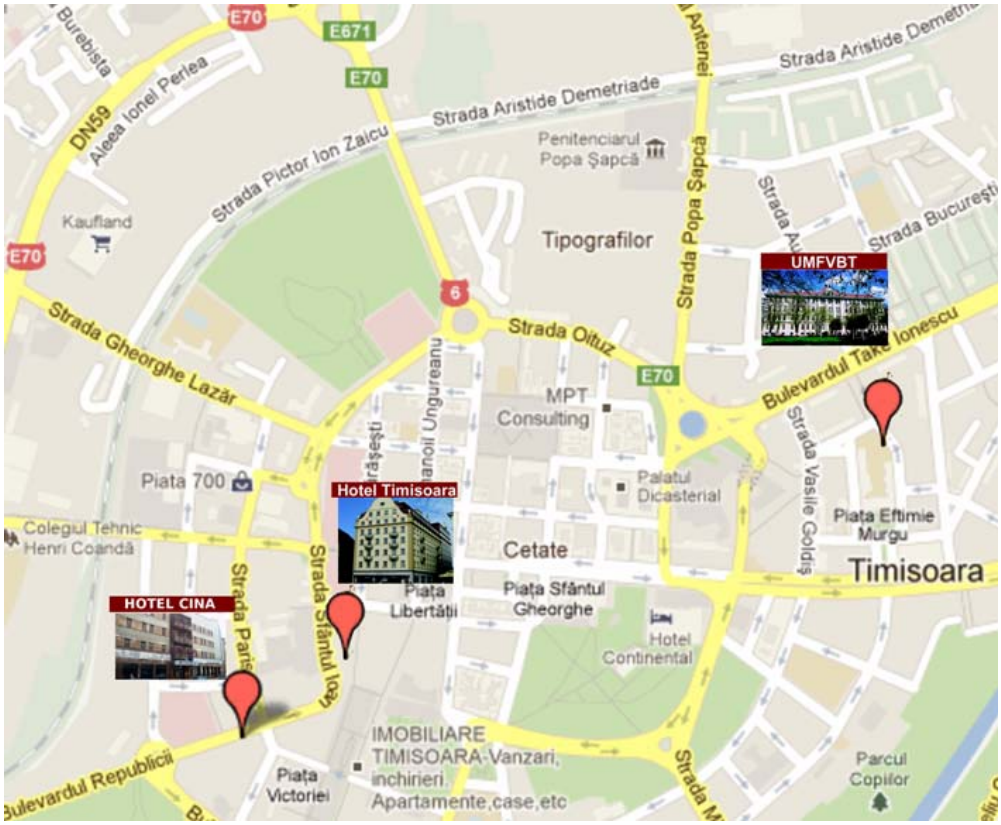
Purpose: We have previously described the implementation of team-based learning (TBL) in an intensive course format at the Medical University of Vienna (Wiener H, Plass H., März R, Croat Med J. 50; 69-76, 2009). The present, prospectively designed study, examines students´ attitudes on how the application of an Audience Response System (ARS, TED, “clicker”) influences the process of TBL.

Methods: TBL was provided in an intensive course format with six 2-hour sessions over a 3-day period as an elective pharmacology review course covering the material of the second year of the medical curriculum. Students signed up for the course on-line and were randomly assigned to two equally sized cohorts. In one cohort an ARS was used, in the control TBL was performed without any electronic voting system. The same instructor (HW) moderated both cohorts and identical test questions were used. Students completed a program-evaluation questionnaire (1 = strongly disagree, 6 = strongly agree) at the end of the course; the ARS cohort answered additional questions.

Results and conclusions: 212 students (51% females) participated in the courses offered. The response rate to the program-evaluation questionnaire was 87% (n=185). In terms of ARS the item with the largest mean score was “The application of ARS in TBL increases my attention” (5.4 ± 0.8). The mean score for “The feedback of test results by an ARS supported the learning process” was somewhat lower (4.6 ± 1.3). Students did not feel uncomfortable with the ARS in TBL as indicated by the very low mean score of the statement “The application of an ARS interferes with TBL” (1.5 ± 0.8). There was no significant difference between the two cohorts in assessment of TBL concerning knowledge acquisition and motivational dimensions. Taken together, the application of an ARS influences the process of TBL in terms of increasing attention of the students and supporting the learning process. It also made the sessions more exciting for the moderator.

7 Veranstaltungsorte/Locations

Main Lobby	Ground floor
Lobby (Coffe Breaks)	1^{st} floor
Main Amphitheater	Ground floor
Iagnov Hall	Ground floor
Senate Hall	1^{st} floor
Dragan Hall	3^{rd} floor



8 Teilnehmer/Participants

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Wir danken folgenden Firmen und Institutionen für die Unterstützung

We Innovate Healthcare