



EuroPharmaFaculties News

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HAPPY NEW YEAR 2012
from
EAFP

**EAFP announces next annual conference :
Utrecht 24-26 May 2012**

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Call for articles : Articles on pharmaceutical education and curriculum can be submitted (dead line : February , 27th 2012)
For all information or for submission of article
contact editor : Annie.Marcincal@univ-lille2.fr

EAFP Annual Conference Pre-Programme Utrecht 24-26 May 2012

Tradition and Innovation in Pharmacy Education ; from content to process

Thursday, 24th May

- 14:00 Opening Ceremony
- 14:30 Current Pharmacists Competences and Consequences for the *Curriculum*
- 16:30 How to Better Integrate Basic Sciences in the Pharmacy *Curriculum*

- 18:45 Welcome Reception

Friday, 25th May

- 9:30 How to Accommodate New Skills in the *Curriculum*
- 11:30 How to Introduce Inter-professionalism

- 13:00 Lunch

- 15:00 General Assembly and Pharmine
- 16:00 Teaching the Teachers (research on teaching methods)

- 20:00 Closing Dinner

Saturday, 26th May

- 9:00 New ExCo meeting
- 10:00 Excursion

Report on the EAFP 2011 Lisbon conference



Professor
Lilian Azzopardi
Department of Pharmacy,
Faculty of Medicine and Surgery
University of Malta
Malta

This year's EAFP Annual Conference was held between the 23 and 25 June in Lisbon, Portugal. The conference was attended by 149 participants and 52 abstract submissions were accepted for presentation during the conference either as oral presentation (8) or as poster presentation (44). The conference in Lisbon was particular in that the EAFP Conference started with a joint session between EAFP and COIFFA (Ibero-American Congress of Faculties of Pharmacy). Professor Benito del Castillo, Past President of EAFP, is very active within COIFFA and he gave a very interesting overview of the history

and his personal participation at the developments of EAFP and COIFFA. During the congress in Lisbon, José Guimaraes Morais, General Secretary of EAFP, was appointed President of COIFFA.

During the opening ceremony of the EAFP conference, Professor Benito del Castillo was appointed Honorary President and Professors Filiz and Attila Hincal were appointed Honorary Members. Congratulations to Professor del Castillo and Professors Hincal and thank you for your dedication and contributions to pharmacy education particularly within EAFP. During his opening remarks, Professor Bart Rombaut, President of EAFP, reflected on the evolution in the pharmacy profession where new competencies are required of graduates. This has led to schools of pharmacy to develop new courses particularly in the area of pharmaceutical care and to use new methods of teaching including project-based learning. During the conference, Charlie Benrimoj from the University of Technology, Sydney, Australia, Antonio Almeida from the University of Lisbon, Portugal and Olivier Bugnon from the University of Geneva, Switzerland, presented models for the teaching of skills required by pharmacists in the provision of new pharmacy services, in collaborating with physicians and on novel pharmaceutical products.

Derek Stewart from Robert Gordon University, UK and Anthony Serracino Inglott from the University of Malta presented frameworks for courses in prescribing services. Rosalie Sagraves from the University of Illinois, USA shared an overview of the US Pharm D experience.

The conference came to an end with a session dedicated to PHARMINE where the final outcomes of this



Bart Rombaut – President of EAFP

EU-funded project were presented by Jeffrey Atkinson, Bart Rombaut, Ian Bates, Afonso Cavaco and Roberto Frontini from the European Association of Hospital Pharmacists.

The Scientific Programme was very successful in that it prompted discussions between academics from different backgrounds. The Organising Committee went into all details to ensure that delegates had a good experience in Lisbon. An enjoyable closing dinner was held near the Belen Tower. Thanks to the Organising and Scientific Committee and thank you to all participants for making the conference a success.

We hope to see you next year in Utrecht, The Netherlands.

Lilian M. Azzopardi



Serenade at EAFP 2011 conference by students from Lisbon

NEWS from PHARMINE : PHARMINE REPORT

Pharmacy Practice volume 9 (2011) issue 4

available since 12-December-2011

The 2011 PHARMINE report on pharmacy and pharmacy education in the European Union.

Jeffrey ATKINSON, Bart ROMBAUT.

The PHARMINE study on the impact of the European Union directive on sectoral professions and of the Bologna declaration on pharmacy education in Europe.

Jeffrey ATKINSON, Bart ROMBAUT.

Quality assurance in European pharmacy education and training.

Jose A. GUIMARÃES MORAIS, Afonso M. CAVACO, Bart ROMBAUT, Michael J. ROUSE, Jeffrey ATKINSON.

Pharmaceutical care in Poland

Skowron Agnieszka, Jachowicz Renata

Departement of Pharmaceutical Technology and Biopharmacy

Faculty of Pharmacy in Collegium Medicum Jagiellonian University

"Renata Jachowicz" <mfjachow@cyf-kr.edu.pl>

In contemporary society pharmacist's role is primarily to take care of safe and effective use of medicinal products. The way to fill this role is to extend services to pharmaceutical care as it was described by Hepler and Strand. The development in health care, including pharmaceutical care was a base for changes in area of pharmacy. Therefore academic pharmacy is in dynamic transition towards new standards. More than ten years ago pharmaceutical care was implemented as a new concept into teaching portfolio of the Faculty at the Jagiellonian University. Our experiences in pharmaceutical care education has been presented, among the others, also at EAFP annual conferences [1,2]. By reason of the fact that the academic teachers from Jagiellonian University were pioneers in this field in Poland, so our centre was responsible for the standardization of pharmaceutical care education in all faculties of pharmacy in Poland. Under the auspices of Ministry of Health and Polish Pharmaceutical Society between 2007-2009 the few meetings and conferences of pharmaceutical care academic teachers from Polish medical schools were organized. The results of the cooperation were the common syllabus and the Resolution of Deans of Faculties of Pharmacy (2008) about harmonization of pharmaceutical care education for pharmacy students. Nowadays our pharmacy graduates are well prepared to carry on pharmaceutical care as their professional activity.

Simultaneously surveys in implementation and effectiveness assessment of pharmaceutical care in Poland were performed. The first project which objective was to implement the pharmaceutical care was held on 2006 as a regional Pharmaceutical Care for Hypertension project (called FONT – which is an abbreviation of its Polish name). It showed pharmaceutical care for hypertensive patients could improve the effectiveness and safety of their therapy [3,4]. The next step was to spread the idea of pharmaceutical care across Poland to assess its cost-effectiveness, therefore the National Pharmaceutical Care for Hypertension and Diabetes project (FONTiC project) was prepared in cooperation with pharmacists from one of community pharmacy network. However the project is still on and findings are expected to be published in the next year, one of its most important result is an internet database which is used to document and analyze of pharmaceutical care process. The instructive version of the database is also used as a teaching tools by some faculties of pharmacy in Poland.

The process of changes in professional practice needs the understanding and acceptance of professionals, so they should be given an opportunity to meet and discuss their concepts and concerns about their professional future. To accomplish it, three years ago the Division of Pharmaceutical Care has been established in the Polish Pharmaceutical Society. The division associates pharmacists and its objectives is to share the idea and experience in implementation of pharmaceutical care into the practice between Polish pharmacists. It focuses on organizing courses and workshops for pharmacists, to teach them how to ensure the pharmaceutical care and to encourage them to make changes in their daily practice. Every two years the National Working Conference is organized to bring together all pharmacists interested in improving their daily practice and sharing their experience. About two hundred pharmacists from Poland have participated in Conferences in 2009 and 2011, during which they were discussing about the advantages, disadvantages and challenges of their practice. At the workshops pharmacists got acquainted with the practical aspects of pharmaceutical care, including the counseling, advice giving, patients education and improving safety and effectiveness medicinal products used in chronic diseases like arterial hypertension, asthma and diabetes. At the recent Conference in May 2011, the Professor Steve Hudson has been recalled as a one, who shared the idea of pharmaceutical care with academics from Jagiellonian University. The next Conference is planned in spring 2013 with the international speakers. The more information about conference will be announced on our website www.opiekafarmaceutyczna.com.pl.

The effects of the studies as well as the cooperation with Ministry of Health were the implementation of the definition of pharmaceutical care into the law *Act of Pharmaceutical Chambers* in 2008. So the pharmaceutical care became one of the services provided by community and hospital pharmacist. In recognition to the activity in pharmaceutical care, dr Agnieszka Skowron was nominated by Polish Main Pharmaceutical Inspectorate as a permanent representative in *Committee of experts on quality and safety standards in pharmaceutical practices and care* in European Directorate for the Quality of Medicines and HealthCare of Council of Europe.

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1. Skowron A., Czech A., Jamróz W., Jachowicz R.: Impact of interdisciplinary courses on quality of teaching materials prepared by pharmacy student for patient in pharmaceutical care process, EAFP annual conference, 23-25.06.2011, Lisbon, Portugal
2. Jachowicz R., Skowron A., Mendyk A.: Interdisciplinary courses at the Faculty of Pharmacy, Jagiellonian University Medical College, Cracow. EAFP annual conference, 24-26.06.2010, Catania, Italy.
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4. Skowron A, Polak S, Brandys J. The impact of pharmaceutical care on patients with hypertension and their pharmacists. *Pharmacy Practice* 2011 Apr-Jun;9(2), p. 110-115



Prof. Dr hab. Renata Jachowicz

Educational reform in Norway to follow up on health coordination reform

Norway is one of the countries that spends the most money in the world on health, but does not get the most health in return for the money spent. A lack of contact between hospitals and local authorities is considered to be the principal obstacle to making the health service even better. To meet the challenges in the Norwegian health sector, the government is introducing a new health reform, "*the coordination reform*". The coordination reform has implications for education in the health care professions. Change is being called for, both regarding contents and structure, and pharmacy education has been a subject of particular interest.

As of today we have pharmacy education on four levels in Norway. On secondary school level leading to authorization to work as pharmacy technicians, on bachelor level leading to

authorization as prescriptionists, at master level leading to authorization as pharmacist in accordance with the EU 2005/36 directive on qualifications, and at Ph.D.-level. The pharmacy technicians work in retail pharmacies under the supervision of a pharmacist. The prescriptionist may dispense prescription medicines, but only a pharmacist may be responsible for the pharmacy.

So far the education for prescriptionists has been given at two university colleges as a three year bachelor's degree, and the five year integrated master degree in pharmacy and the Ph.D. has been given at three universities. The admission criteria have been higher for the five year master degree than for the bachelor, and the curriculum has been broader and more solidly founded on basic natural sciences. The three year bachelor degree has been very much focused on retail pharmacy and less focused on basic sciences. So far it has not been possible to transfer directly from bachelor degree to master degree studies. For instance a prescriptionist with a three year bachelor degree in pharmacy from one of the university colleges, who wants to do a master in pharmacy at the University of Oslo, will have to study an additional 3,5 years to complete the five years master degree.

A white paper is being prepared to point out in what direction the educational systems should move in order to support the coordination reform in the health sector. During a recent council meeting in Tromsø for all institutions involved in pharmaceutical education in Norway, we received the first signals from the government on what we can expect to find in the white paper.

First of all the government makes it absolutely clear that they find that there are well suited job opportunities and roles for pharmacy personnel at all four levels, technicians, prescriptionists, pharmacists and Ph.D.'s. Secondly they would like the education for prescriptionists, pharmacists and Ph.D.'s to be coordinated in a three cycle seamless curriculum (three years bachelor, two years master and three years Ph.D.). If the white paper is endorsed politically, we shall very soon have to part with the five year integrated master degree in Pharmacy. The new norm will be a 3+2 degree with full mobility across educational institutions. This means that universities will have to start bachelor programs in pharmacy in parallel to those given at the university colleges. Admission criteria for bachelor programs will have to be coordinated on a national level. Admission to master studies will be granted to bachelors with a minimum score of C for their bachelor degree.

Regarding the contents of the curricula, emphasis is put on the role of the pharmacist as a health care worker. The students must learn to understand the total complexity of the health care system, and must learn to collaborate across professions and levels of care. Emphasis is put on the student's ability to understand and support the patient's entire treatment course. It is also made clear that the bachelor and master degrees are academic educations and that the pharmaceutical profession itself must take responsibility for professional qualification. Permanent

authorization as health care personnel will only be awarded after one year's relevant practice following the academic qualification. This will be the case for all health professions, not only pharmacists.

It is clear that pharmacy education in Norway needs reform in order to deliver well qualified professionals at all levels. The flexibility of a 3+2 year educational system may seem like an ideal solution in order to gain flexibility, mobility and efficiency. It is essential however that we do not reduce the standards of the education. Masters who complete a 3+2 years education must be at the same level as those who previously completed the five years integrated master. Otherwise pharmacists will not be qualified for the challenges awaiting them in the profession, and they will have a disadvantage when competing for Ph.D. positions. We expect a heated debate on pharmacy education in Norway in the months to come. Thoughts or from European colleagues on the suggested changes would be very welcome.



Karen Marie Ulshagen,
Director, School of Pharmacy, University of Oslo

From Aseptic preparation to Clinical Evaluation A new approach to Aseptic by a new teaching model

Andrea Manfrin - The Universities of Kent and Greenwich at Medway – Chatham

Education rationale

This new approach to teaching has been developed to test a new and integrated teaching method where ELT (Experiential Learning Theory) suggests that learning could be defined as the process whereby knowledge is created through the transformation of experience.

Kolb (1984) suggested that knowledge is the output of the combination of “grasping and transforming” experience.

For this teaching experience we used SimMan®, *a portable and advanced patient simulator*. This has been a fantastic experience for lecturers but also for the students. They really felt engaged in the problem based learning (PBL), they were proactive asking questions and suggesting possible solutions. The general feeling was that they went through a “grasping and transforming experience” realizing that the

clinical work on the ward and the Aseptic work in the aseptic suite are two faces of the same coin where the pharmacist has to take responsibility and make decision that can have a huge impact on people's lives.

Active learning according to Kolbe

According to Kolbe's Experiential Learning Theory (ELT 1984) the building blocks could be summarized in 6 main points:

- 1) Learning is best conceived as a process and not as an outcome. The process includes feedback which has to reflect the learning efforts. SimMan® was really focused on a process, and the feedback was in real time, prompting students' attention, lateral thinking and analysis.
- 2) All learning is re-learning. The purpose of this session was to help students to re-learn using the previous knowledge and find the way to transfer their knowledge from theory into practice making sense of the clinical situation and the clinical outcome.
- 3) Kolbe said that the learning process requires the resolution of conflicts between reflection and action and feeling and thinking.
- 4) Learning is also a holistic process of adaptation to the world. This was probably one of the most challenging task for the students, none of them realised the impact that IV preparation could have had on people life since they were involved in this teaching session.
- 5) Learning is a result from synergetic transaction between the person and the environment. The interaction in real time with a clinical situation where students were invited to judge the situation, evaluate the options and take action in a very short period of time was one of the main reasons for the introduction of SimMan®.
- 6) Finally learning is a process of creating knowledge. The SimMan® session has created new knowledge without doubts. This is also reflected in the improvement of students' performance when they were asked questions about sepsis and pulmonary embolism.

Active learning according to Bonwell

Our idea was to introduce the concept of active learning, but in order to achieve this objective we decided to pay attention to the main points suggested by Bonwell: What are the major characteristics associated with active learning? Why is active learning important? What obstacles or barriers prevent faculty from using active learning strategies? How can these barriers be overcome?

Bonwell describes active learning as a continuum that moves from very simple tasks on one end to more complex tasks on the other. This is of course a simplification of the active learning process but it helps to visualise the concept.

Administration route

The administration route was the main driver for the development of this new teaching approach because product sterility is a must when a drug has to be injected in the body. The way in which a drug could be administered in the body induces students to reflect on the impact of the preparation stage on the clinical implication and outcome.

The meaning of aseptic dispensing is the preparation and supply of sterile medical products which require some degree of manipulation before the administration stage.

The preparations which are aseptically dispensed following an authorized and validated prescription that has to be clinically checked by hospital pharmacist must fulfil not only the legal requirements such as name of the patient, name of the drug, strength, dose and other extremely important information that the hospital pharmacist must carefully check.

In fact aseptic dispensing must satisfy the following requirements: reduce risk of microbial contamination-reduce risk of particulate contamination-ensure correct dilution-ensure stability and

compatibility-ensure appropriate route and rate of administration-save clinical staff time on the wards-reduce inappropriate use of expensive drugs.

Which are the preparations that can be supplied utilizing aseptic technique?

Adult and Paediatric Parenteral Nutrition (PN) mean the administration of fluids and nutrients intravenously.

Pre-filled syringes contain drug for pain control, nausea or anti-vomiting.

Centralized Intra-Venous Additive Service (CIVAS) is used for drugs that require reconstitution and dilution before they can be safely administered.

Cytotoxic injections or bags are a real and potential hazard either for patients or staff.

In order to reduce the risk of accidental exposure to this risk of contamination with these very toxic and cancer genetic agents it is compulsory that they are stored, prepared, and supplied in a form that requires no further manipulation before administration.

In order to make the scenarios that we developed more real we introduced SimMan®.

What is SimMan® *“It is a portable and advanced patient simulator for team training. It is a computerized dummy which has realistic anatomy and clinical functionality. SimMan® enables the students to have simulation-based education and tests the students’ clinical and decision-making skills in a real time scenario. SimMan® has well-proven software and also an interactive technologically advanced suite which allows learners to practice different treatment options on patients”.*

Teaching material

We have designed new teaching materials for the students.

1. Video to show how to withdraw and inject fluids in a bag
2. Video to avoid stick injuries: the previous years a few students had stick injuries meanwhile this year with the video aid they did not.
3. We developed a book which summarizes all the activities, and every chapter has the full description of the related activity
4. SimMan®

The video aid contributed enormously to the teaching. Students were prompted immediately to pay attention to preparation and how to avoid stick injuries handling needles, syringes, bags, fluids correctly. The book gave the students a real road map to follow at each stage of the laboratory session. SimMan® made a great contribution developing a very strong link between the preparation stage and the administration stage. It highlights what could occur if the preparation stage has not been done properly. The utilization of two different scenarios prompted immediately the students to realize the great importance and responsibility attached to the aseptic component of the pharmacist work.

Students were divided as follows:

Group 1 was working with the isolator reconstituting drugs and preparing intravenous fluids;

Group 2 was writing up standard operation procedures;

Group 3 was working on contamination detecting small contaminants in the vials (which contain fluids for intravenous injections);

Group 4 was working with stability problems, gathering information about drug preparation and dealing with issues such as pH, photodecomposition, and compatibility with containers, temperature issues, handling and SimMan®.

Once the students were ready to use books to find the required information I let them answer some questions that were carefully prepared in advance. At the end of this task, I reviewed their answers and we went from the microbiology lab to clinical skills laboratory where we used SimMan®.

Assessment

Informal assessment: we interact with students, with questions and problems

Formal assessment: at the end of the laboratory we assessed their book, checked, stamped and signed.

- I. Practical and Formal Assessment

questions regarding product preparations; contaminations; environment monitoring; disinfections; intravenous additive problems such as compatibility, stability, pH; accurately withdraw and measure a very small volume of fluid from one bag; micro organism recognitions

II. Written exam : a 3 hours written exam.

Evaluation

During this process, different teaching styles were used, audio, video (because we used a video to show how to prepare sterile products), collecting and writing information about some drugs and at the end the kinaesthetic style where we gave the students a real life scenario which involved problem base learning as well. We tended to use two models, the first was pulmonary embolism and the second was sepsis. The focus of the exercise was to make students think laterally and to engage them in a real but controlled situation, where they were allowed to make hypothesis and decisions. Their decisions would have an impact on patient outcomes (SimMan®). The two aseptic issues took place during the preparation stage and they caused the two different clinical scenarios.

Bonwell underlines that there are also some risks activities related to this approach and these can be divided in two main categories related to:

a) The students where they will not participate, learn enough, do not tend to use high order skills and do not tend to enjoy the learning experience.

b) The lecturer who does not feel in control of the class, self confident, has the needed skills.

The results of the pre and post questionnaire that students completed during the session were absolutely brilliant. We allocated 100 as maximum and 0 as minimum score. Question 1 was on sepsis: before SimMan® students achieved 78.5% after SimMan® 96.43% (increasing of almost 21%). Question 4 was on embolism and the score before SimMan® was 60.71% meanwhile after SimMan® students achieved 94.4% (increasing of 55%). The control group without SimMan® ranked 42.86% and 14.29% respectively on Q1 and Q4.

Students' feedback

Data showed that SimMan® had a major contribution towards student knowledge and understanding of the topics. To the question which asked if SimMan® helped to link practical and clinical aspects 32% strongly agreed and 37% agreed. To question which asked if SimMan® helped to show how contamination can occur 38% strongly agreed and 29% agreed. Results regarding the introduction of SimMan® are really encouraging: 69% of the students strongly agree and agree that this simulation helped to link the practical with the clinical aspect. Again 67% of the students strongly agree and agree that SimMan® helped to show when contamination can occur.

The combination of technology with audio, video, writing, kinaesthetic and PBL seemed to be an excellent opportunity to test this new way to deliver the idea of preparation, dilution and handling of drugs with clinical skills too. The multidisciplinary and the innovative approach to this teaching session has been the real challenge for both, lecturer and students. The outcomes are really reinforcing the concept of expanding this new teaching model.

References

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Reference of Pharmacy-related articles

The future of pharmaceutical care in France: a survey of final-year pharmacy students' opinions

Clémence Perraudin, Françoise Brion, Olivier Bourdon and Nathalie Pelletier-Fleury - *BMC Clinical Pharmacology* 2011, **11**:6 doi: 10.1186/1472-6904-11-6

Pharmacy-related conferences to come

5th January 2012 - 6th January 2012 - Drug Discovery Oxford 2012 - "Drug discovery: a job too complex for academia or industry alone?"
University of Oxford, Medical Sciences Teaching Centre, Oxford, UK.

19th February 2012 - 22nd February 2012 - GRF One Health Summit Congress Centre, Davos, Switzerland.

21st February 2012 - 23rd February 2012 - International Scientific Conference on Bacteriocins and Antimicrobial Peptides (BAMP 2012) - DoubleTree by Hilton, Kosice, Slovakia.

29th February 2012 - 9th March 2012 - BioBarriers2012 - International Conference and Workshop on Biological Barriers in vitro and in silico Tools for Drug Delivery and Nanosafety Research - Saarland University, Saarbrücken, Germany.

8th March 2012 - HIV in 2012 and the Future: We Will All Be Involved in Patients' Care
Royal Pharmaceutical Society, London, UK.

19th March 2012 - 22nd March 2012 - 8th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology - Grand Hyatt Istanbul, Istanbul, Turkey.

21st March 2012 - 23rd March 2012 - 17th Congress of the European Association of Hospital Pharmacists (EAHP) - Milan Convention Centre, Milano, Italy.

4th April 2012 - 6th April 2012 - 12th European Symposium on Controlled Drug Delivery - Hotel Zuiderduin, Egmond aan Zee, The Netherlands.

23rd April 2012 - 24th April 2012 - Optimisation of Pharmacotherapy - From Pharmacovigilance to Improved Communication - University College Cork, Cork, Ireland.

May 7th-9th, 2012. - [2012 Spring Hospital Pharmacy Conference](#)
Hyatt Regency Hotel (1-305-358-1234) in Miami, FL

[25th June 2012 - 28th June 2012](#) - IWPCPS-14 - International Workshop on Physical Characterization of Pharmaceutical Solids, - UPC, Barcelona, Spain

17th July 2012 - 20th July 2012 - 6th European Congress of Pharmacology (EPHAR 2012) - Granada, Spain.

31st August 2013 - 5th September 2013 - 73rd International Congress of Pharmacy and Pharmaceutical Sciences - Dublin, Ireland.

3rd October 2012 - 8th October 2012 - FIP Centennial Congress 2012
Amsterdam, The Netherlands.

9th October 2012 - 12th October 2012 - 19th International Congress on Palliative Care - Palais des Congrès de Montreal, Montreal, Canada.