Horizon Scanning in Medical Education: 2020 Vision
Ben Gurion University of the Negev
Beer Sheva, Israel
27-30 August 2000

Conference Programme
and
Abstracts

Section 1: Sand Information about the Conference
Section 2: Blue Conference Programme
Section 3: White Abstracts

The material is being mailed in the present format to reduce postage costs and to make it easier to transport. A specially designed binder will be available at the registration desk.

PLEASE DO NOT REMOVE FROM LIBRARY
Annual Conference

Conference Program

and

Abstracts

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Contents

Welcome from Professor Shimon Moses ........................................ ii
Local Organising Committee

Welcome from the AMEE Executive Committee and Secretariat. ............... ii
AMEE Executive Committee

List of Sponsors ........................................................................ iii
Accommodation and tours organisation ....................................... iii

Section 1: Information about the Conference

Conference venue ....................................................................... 1

General information

How to reach Beer Sheva ................................................................. 1
Transport in Beer Sheva ................................................................. 1
Banks .......................................................................................... 2
Currency exchange ....................................................................... 2
Restaurants .................................................................................. 2
Cafés .......................................................................................... 3
Shopping malls ............................................................................ 3
What to expect on the Sabbath .................................................... 3
Weather and dress code ............................................................... 3
Smoking policy for Conference .................................................. 3
Conference hotels ........................................................................ 4
Conference noticeboard ............................................................... 4
Messages ..................................................................................... 4
Email contact .............................................................................. 4
Courier/mail service ...................................................................... 4
CME accreditation and certificates of attendance ......................... 5
Registration information .............................................................. 5

Information on the academic programme

Short communications .................................................................. 6

Information for presenters........................................................... 6
Role of the chairperson ................................................................ 7
Role of the opening discussant ................................................... 7

Posters

Information for presenters ........................................................... 7
Role of the chairperson ............................................................... 8
Role of the opening discussant ................................................... 8
Medical Teacher Poster Prize ...................................................... 8

Workshops

Conference ................................................................................ 8
Post-conference ......................................................................... 8
<table>
<thead>
<tr>
<th>Section 2: Conference Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturday 26 August</td>
</tr>
<tr>
<td>Sunday 27 August</td>
</tr>
<tr>
<td>Session 1: Plenary 1</td>
</tr>
<tr>
<td>Session 2: Short Communications</td>
</tr>
<tr>
<td>Session 3: Large Group Sessions</td>
</tr>
<tr>
<td>Session 4: Workshops 1</td>
</tr>
<tr>
<td>Monday 28 August</td>
</tr>
<tr>
<td>Session 5: Large Group Sessions</td>
</tr>
<tr>
<td>Session 6: Short Communications</td>
</tr>
<tr>
<td>Session 7: Posters</td>
</tr>
<tr>
<td>Tuesday 29 August</td>
</tr>
<tr>
<td>Session 8: Short Communications</td>
</tr>
<tr>
<td>Session 9: Workshops 2</td>
</tr>
<tr>
<td>Session 10: Plenary 2</td>
</tr>
<tr>
<td>Post-Conference Workshops</td>
</tr>
<tr>
<td>Social and Accompanying Persons</td>
</tr>
<tr>
<td>Conference Social Programme</td>
</tr>
<tr>
<td>Bedouin Feast and Sound and Light</td>
</tr>
<tr>
<td>Accompanying Persons Programme</td>
</tr>
<tr>
<td>Pre- and Post-conference Tours</td>
</tr>
<tr>
<td>Section 3: Abstracts</td>
</tr>
</tbody>
</table>
Welcome from Professor Shimon Moses, Chairperson of the Local Organising Committee

Dear Participants

On behalf of the Local Organising Committee, it is my pleasure to welcome you to Beer Sheva to participate in the year 2000 AMEE Conference.

At the founding of Ben Gurion University of the Negev’s Faculty of Health Sciences in 1974, the late Professor Moshe Prywes formulated institutional objectives and applied educational concepts which were then considered innovative, but which have since been adopted by many medical schools worldwide. The goal was the creation of a professionally well-qualified humane and empathic physician with a sensitivity to psychosocial and cultural aspects of medicine and who would be favourably inclined to a career in primary care community medicine.

Among the ideas incorporated into the program from the outset were: an emphasis on the personal qualities of the students as determined by an extensive interview process, a preparatory summer course, early clinical exposure, teaching of communications skills, system-based and integrated components in the curriculum, supervised self-learning, community-based teaching, student empowerment, and continual self-examination.

The Faculty, which began with 36 students in 1974, has since established the Rekanati School for the Allied Health Professions in the Community, a program for Laboratory Sciences, a School for Emergency Medicine, and two years ago, in collaboration with the Columbia University School of Medicine, an MD Program in International Health and Medicine for non-Israeli students. In addition a few months ago the Council for Higher Education in Israel approved the establishment of a School of Pharmacy. All these plus an extensive graduate program in the health sciences have raised the number of students enrolled in the Faculty to almost 1400. What started as the Beer Sheva Experiment became for many the Beer Sheva Experience, and many consider it even as the Beer Sheva Model.

We want to share our experience with you as, together, we scan the horizon and establish a vision for medical education in the year 2020. We are happy you came and hope the Conference, and your visit to Israel, will prove to be a rewarding experience.

Shimon Moses
Chairperson, Local Organising Committee

Local Organising Committee

The Committee represents all four Medical Schools in Israel:

☐ The Hebrew University and Hadassa Medical School
☐ The Sackler School of Medicine, Tel Aviv University
☐ The Medical School of the Technion, Haifa
☐ Joyce and Irving Goldman Medical School, Faculty of Health Sciences, Ben-Gurion University of the Negev

Dr Dan Benor
Professor Rosalie Ber
Professor Robert Cohen
Professor Shimon Glick
Dr Yakov Henkin
Dr Hannah Kedar
Professor Eytan Lunenfeld
Professor Carmi Margolis
Professor Shimon Moses (Chairperson)
Dr Neta Notzer
Dr Baruch Weinreb
Mr Asaf Toker (Student Representative)

Local Administration:

Mrs Erica Rosenstock  erica@bgu.mail.bgu.ac.il
Ben Gurion University of the Negev, Faculty of Health Sciences, P O Box 653, Beer Sheva, Israel
Tel: +972 (0)7 647 7408; Fax: +972 (0)7 647 7632
Welcome from the AMEE Executive Committee and Secretariat

Dear AMEE Members and Conference Participants

Scanning the horizon in medical education is a true AMEE goal, and where better to hold our annual conference which looks to the future of medical education than in Beer Sheva? Our hosts, the Faculty of Health Sciences of Ben-Gurion University of the Negev, has for many years been renowned for its innovation, and has made a distinguished intellectual and educational contribution to the world of medical education. It has set us all an example to follow: the close integration of medical education and health care services.

The AMEE annual meeting – one of the cornerstones of AMEE’s activities – provides the opportunity for participants to present their experiences and ideas relating to health care professions education, and to learn from those of others. This year we have extended the programme to a full three days to allow time to fit in the many and varied topics of interest to participants. As well as the usual combination of plenaries, short communications, workshops, posters and an exhibition, this year we have introduced a new feature – large group sessions – in which panels of experts will present their views on a specific topic, as an introduction to a general discussion between the panel and the audience. In keeping with the visionary theme of the meeting, plenary and large group session presenters have been asked to indulge in a degree of speculation about what the future may hold for their specialist area. This we hope may lead to some “blue sky” thinking about the future of medical education. These speculations are X-rayed in the light of today. Almost 250 abstracts have been accepted for short communications and posters, reflecting what is happening in health care professions education worldwide.

Speakers in the plenaries and large group sessions have written papers based on their presentations and these will be published in Medical Teacher 2000, 20, 5. A copy of this issue is provided free of charge in the conference wallets so that you can read the papers in advance of the presentations.

Each evening, our Israeli hosts have arranged social events to give you the opportunity to meet socially and to make new acquaintances as well as renewing old ones.

On behalf of AMEE, I hope your participation in the AMEE 2000 Annual Conference in Beer Sheva is enjoyable and rewarding.

Jørgen Nystrup
President - AMEE

AMEE Executive Committee

President: Dr Jørgen Nystrup (Denmark)
Secretary/Treasurer: Professor Ronald Harden (UK)
Committee Members: Professor Margarita Barón-Maldonado (Spain)
Professor Ralph Bloch (Switzerland)
Professor Ioan Bocsan (Romania)
Professor Florian Eitel (Germany)
Professor Shimon Moses (Israel)
Professor Dominique Perrotin (France)
Ex-officio Members: Professor Hans Karle (World Federation for Medical Education)
Professor Andrzej Wojtczak (Past President of AMEE)
AMEE Administrator: Mrs Pat Lilley
Email: p.m.lilley@dundee.ac.uk
AMEE Secretary: Miss Tracey Martin
Association for Medical Education in Europe
University of Dundee, 484 Perth Road, Dundee DD2 1LR, UK
Tel: +44 (0)1382 631953; Fax: +44 (0)1382 645748
Email: t.r.martin@dundee.ac.uk
Web: http://www.dundee.ac.uk/meded/amee/
Sponsors

We are most grateful to the following Organisations for their generous support of the Conference:

☑ Ben-Gurion University of the Negev, Beer Sheva
☑ The Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva
☑ The Soroka University Medical Center
☑ Bank Hapoalim, Beer Sheva
☑ Municipality of Beer Sheva.

Accommodation and tours organisation

AMEE has chosen Ortra, Ltd, a registered travel agent, as the official organiser and travel agent for the conference. All bookings and queries about accommodation, tours and transport to Beer Sheva, should be addressed to them:

Ortra Ltd
1 Nirim Street
P O Box 9352
Tel Aviv 61092
Israel

Tel: +972 3 638 4444
Fax: +972 3 638 4455
Email: info@ortra.co.il

It is still possible to reserve places on the pre- and post-conference tours, the accompanying persons' programme and the Bedouin Feast and Sound and Light Show (see pages 46-47 for details). Please note that a credit card number is needed to guarantee late bookings (Ortra accepts all major credit cards). Representatives will be available at the Ortra desk in the registration area throughout the Conference.
Section 1

Information about the Conference
Conference Venue

The Conference, including the Post-conference Workshops, will take place on the very attractive campus of Ben-Gurion University of the Negev, Intersection of Ben-Gurion Boulevard and Rager Boulevard, Beer Sheva 84105, Israel.

A plan of the campus showing the conference rooms will be in the conference wallet.

Please note the starting time of 1000 on Sunday 27 August for the opening session, which has changed from that indicated in the preliminary programme.

General Information

How to reach Beer Sheva

Beer Sheva is Israel’s fourth largest city, with a population of 200,000. It is located at the northern end of the Negev Desert, approximately 100 km south of Tel Aviv, 120 km south west of Jerusalem and 250 km north of Eilat. Most participants will arrive at Ben-Gurion Airport in Tel Aviv, the journey to Beer Sheva taking approximately one hour 30 minutes.

Airport transfer: Participants who have already arranged airport transfers with Ortra should go to the “Tour Bus” counter (near the rent-a-car counter), after passing through customs, outside the arrival hall. The transportation company will have the names of all who have reserved transportation. In addition there will be a sign “AMEE Conference” at this desk. If you have made a reservation but have not yet notified Ortra of your flight arrival time, please do this not later than one week prior to arrival. If you have not yet arranged transfer to Beer Sheva and wish to do so, please contact Ortra (contact details on page iii) who will be pleased to do this for you. We strongly recommend you book this transportation if arriving on Saturday, due to Sabbath restrictions on public transport. The cost is US$37 per person for a shared car (Saturday 26 August only) and US$103 for an individual limousine with up to 7 seats. Transport for the return journey from Beer Sheva to Tel Aviv can be arranged at the Tour Desk in the Registration area at the Conference.

Driving to Beer Sheva: If you are driving to Beer Sheva from Ben-Gurion Airport in Tel Aviv, take route # 40 from the airport direct to Beer Sheva. Directions are signposted throughout the journey. On entering Beer Sheva, Route 40 becomes Regev Boulevard. Continue along Regev Boulevard and you will see the University campus on the left. Addresses of the Conference Hotels are on page 4.

Transport in Beer Sheva

Transport to and from the Conference hotels for the academic sessions and for the social events is provided. Taxis are recommended as a convenient and relatively inexpensive form of transport for other local journeys. Your hotel will be pleased to suggest a taxi company. Tips to drivers are optional, and by no means expected.
Banks

Bank Hapoalim on the University Campus is open at the following times:

- Monday: 0830-1300 and 1600-1830
- Tuesday: 0830-1315
- Wednesday: 0830-1315
- Thursday: 0830-1300 and 1600-1830
- Friday: 0815-1230
- Saturday: closed
- Sunday: 0830-1315

Other banks in Beer Sheva are open at similar times.

Currency Exchange

The rate of exchange at the time of going to press is 6.15 Israeli Shekels (NIS) to £1.00 and 4.00 NIS to US$1. US dollars are also usually accepted in hotels and hotel restaurants. Major credit cards are widely accepted.

Restaurants

Restaurants are usually open between 1000 and 2300 each day, except for the Sabbath (ie from Friday evening until Saturday nightfall). Those marked * are open on the Sabbath. Some restaurants add a service charge of around 12%. If no service charge, a tip of around 10% is appropriate.

- The Bulgarian Restaurant* (Balkan menu)
  112 Keren Kayement Street, Beer Sheva Mall
  Tel: 07 6289511

- El Gaucho (kosher) Argentinian grill
  17 Anelevich Street, Old City
  Tel: 07 6284422

- El Rancho (South American grill – kosher)
  3 Shazar Street, opposite Beer Sheva Theater
  Tel: 07 6287876

- Karol’s Roumanian Restaurant
  (Israeli, Roumanian grill, salads (kosher).
  Paradise Hotel, Henrietta Szold Street, Beer Sheva
  Tel: 07 6231485

- Ilia’s Restaurant (Roumanian grill – kosher)
  21 Herzl Street
  Tel: 07 627 8685

- Ikota (Moroccan – kosher)
  65 Ha’palmach Street
  Tel: 07 6232689

- Zvili’s Fishery (kosher)
  7 Ha’palmach Street
  Tel: 07 6275557

- Rigoletto (Italian – kosher)
  Heichal Hatarbut, Rager Avenue
  Tel: 07 6237630

- Jade Palace* (Chinese)
  79 Ha’histadrut Street
  Tel: 07 6275375

- Chic Bar (Grill Room – kosher)
  Desert Inn Hotel, Piano bar, 164 Tuvyyahu Boulevard
  Tel: 07 6424922

- New York, New York* (American Style)
  Rasco Center
  Tel: 07 6650070

- Ta’annim (kosher – diary)
  Rasco Center
  Tel: 07 6234418

- Amadeus (all types)
  Herzl Street
  Tel: 07 6650085
Cafés

Apropos (kosher)
32 Herzl Street
(also in Negev Mall)
Tel: 07 6236711/5

Pitput
112 Herzl Boulevard
Tel: 07 6237708

Kapulski (kosher)
Negev Mall, Eli Cohen junction
Tel: 07 6230425

Shopping Malls

Malls are open from 0900-2100 from Sunday to Thursday and from 0900-1400 on Friday:

- Avia Mall, 49 Mivtza Yoav Street
- Negev Mall, Junction Eli Cohen Street
- Shaul Hamelech Mall, 80 Shaul Hamelech Street
- Big & B 7, Derech Hevron

What to expect on the Sabbath

The weekend in Israel is Friday and Saturday. The Sabbath starts at sunset on Friday and ends at nightfall on Saturday, and its effects vary considerably depending on the area. In Beer Sheva, most restaurants and shops are closed during this period, as is the University. Meals are served in hotels, although some menu restrictions apply. Some shops and nearly all restaurants reopen after nightfall on Saturday. Please note that if you arrive in Tel Aviv during the day on Saturday no public transport will be running to Beer Sheva, although there will be private taxis (and of course the Ortra arranged transport).

Weather and Dress Code

The summer weather in Beer Sheva is hot and dry, and it is easy to become dehydrated. Temperatures of between 35-40°C can be expected during the day, and between 23-27°C in the evenings. The conference location, the hotels and coaches are all air-conditioned. The dress code throughout the conference, both academic sessions and social events, is casual.

For the tours you should dress comfortably with light clothing and comfortable shoes. Protection from the sun should be taken into consideration (sun glasses, hats, sun cream etc.) and it is advisable to drink plenty of water. For tours to holy sites, long trousers or skirts and long sleeves are a must.

Smoking Policy for Conference

Smoking is not permitted in the University buildings, except where indicated. One of the coffee service points will be designated a smoking area. We ask for your cooperation in restricting smoking to this area, or outside the buildings.
Conference Hotels

Paradise Hotel  
Henrietta Szold Street  
Beer Sheva
Tel: 07 6405444
Fax: 07 6405445

Desert Inn  
164 Turyahu Boulevard  
Beer Sheva
Tel: 07 6424922
Fax: 07 6412772

Beit Yatsiv  
79 Ha'atzmaut Street  
Beer Sheva
Tel: 07 6277444
Fax: 07 6275735

A representative of Ortra will be available at the Paradise Hotel and the Desert Inn at certain times. Please ask at the hotel reception.

Only the Paradise Hotel is within walking distance (15 minutes) of the Conference venue. Coach transfers to and from the Conference venue will leave from the Conference hotels on Sunday, Monday and Tuesday. Please see the appropriate part of the programme for details. Transport back to the Conference hotels will leave the coach park approximately 10 minutes after the end of the session on Sunday, Monday and Tuesday evenings.

Transport to and from all the social events is provided (see appropriate place in the programme for details).

Conference Noticeboard

The Noticeboard is located by the Registration Desk. Messages and conference updates will be posted on the board and an adjacent board will be provided for messages for individuals.

Messages

Phone and fax messages can be sent to you at the AMEE Conference Registration Desk. The numbers, which will be in use from 27 August to 30 August only, will be available on our web site from 21 August, or by emailing t.r.martin@dundee.ac.uk for the information. Please note that the AMEE Office in Dundee will be closed from 1700 UK time on Thursday 24 August and after that time urgent messages can be sent to us at the Paradise Hotel in Beer Sheva until the Conference office opens on Sunday at 0800.

E-mail Contact

Several terminals for Email contact will be available. Please ask at the Registration Desk.

Courier/Mail Service

A courier collection or a mail service can be arranged via the registration desk for participants not wishing to carry conference papers home.
CME Accreditation and Certificates of Attendance

The Conference has been approved by the Royal College of Physicians of London for 24 CME credits for attending the full Conference. Certificates of attendance, conforming to the guidelines provided by the Royal College of Physicians, will be available on Tuesday 29 August from 1200 hrs and a register will be available for signature at the same time.

Registration

The registration desk is open at the following times:

Saturday 26 Aug: 1600-2200  Foyer of the Paradise Hotel, Henrietta Szold Street, Beer Sheva, before and during Welcome Reception
Sunday 27 Aug: 0800-1830  Zlotowski Student Centre
Monday 28 Aug: 0800-1730  Zlotowski Student Centre
Tuesday 29 Aug: 0800-1730  Zlotowski Student Centre
Wednesday 30 Aug: 0900-1600  Zlotowski Student Centre

To ease the congestion at the Saturday evening reception there will be four separate registration points:

Point A: Registered participants with family names beginning with A-F
Point B: Registered participants with family names beginning with G-N
Point C: Registered participants with family names beginning with O-Z
Point D: Unregistered participants, late registrants who have not paid, and those requiring further assistance.

For those registering from Sunday onwards there will be one desk for those who have already submitted registration Form A and have paid, one for those who have not yet registered and/or paid, one for information on hotels and tours and one for general information. Please note that payment is essential before registration can be completed. Credit cards (Mastercard and Visa) are accepted, Sterling cheques, Traveller’s cheques or Cash (Sterling, US Dollars or Israeli Shekels).
Information on the Academic Programme

An overview of the programme is shown on page 10. On page 11 is a personal diary form on which you may like to note the presentations you particularly want to attend.

Short communications: these are scheduled for sessions 2, 6, and 8. In each session there are ten simultaneous groups of short communications each with a theme. The room in which each group will take place is indicated in the grid on page 10. Participants may move between sessions, but are asked to do so only at the end of each presentation. Each presenter has been allocated a ten minute presentation followed by five minutes for discussion. A 15 minute period has been allocated at the end of the session for a general discussion, led by an opening discussant. Each session will also have a chairperson.

Posters: posters will be on show throughout the Conference in the Zlotowski Student Center. Five simultaneous themed poster sessions will take place on Monday 28 August. The sessions will start with viewing of the posters for 30 minutes, followed by a group discussion. Those wishing to attend the sessions should meet by the poster boards relating to the session at 1400.

Information for Presenters of Short Communications

The following guidelines will help ensure the smooth-running of sessions. Many comments and suggestions have been received by participants at previous conferences and some of these are incorporated in the instructions below:

Audio-Visuals: Students familiar with use of the equipment will be available, and qualified technicians will be on hand for more specialised support. An OHP and a 35 mm slide projector are available in every room.

Data projection: where requested in advance, a data projector, and technical assistance, will be available although participants must supply their own lap-top computer. Please arrive at your short communication session as early as possible to allow time for testing.

Slide viewing area: room 302, Goldberger Building, may be used for slide viewing and some spare carousels will be available, although some participants may wish to bring their own.

To help the session run smoothly:

☐ Please arrive ten minutes before the scheduled start of the session and introduce yourself to the chairperson.

☐ Keep strictly to the time allotted for your presentation. This is essential. The Chairperson will remind you when your time limit has expired and will then ask the audience for questions.

☐ Please speak slowly and clearly.

☐ Ensure your overheads and slides are clear, that there is not too much text to read in the limited time available and that the type is large enough to be legible by those sitting at the back of the room.

Whilst not obligatory, a single page hand-out, giving the key messages from your presentation, is always appreciated. As a rough indication you could expect between 30-50 participants in the audience.
Role of the Chairperson in the Short Communications

- Before the session starts, check that the speakers and opening discussant are present;
- Introduce each speaker according to the programme, and tell him/her when the allotted 10 minute presentation period is over (a timer will be provided);
- Allow 5 minutes for discussion between presentations;
- If a speaker is not present, arrange for the 15 minute period to be used for further discussion; the next presentation should not start until the scheduled time;
- To allow participants to move between rooms it is essential that the timing shown in the programme is strictly adhered to;
- Ask the opening discussant to lead off the discussion at the end of the session;
- Draw the session to a close and thank participants.

Role of the Opening Discussant in the Short Communications

- Lead off the discussion with a 5 minute contribution, introducing the topic in the context of the papers presented and highlighting the key points arising from the papers, prior to a group discussion.

Information to Presenters of Posters

As we are unable to gain access to the University building on Saturday, posters should preferably be mounted between 0800 and 1000 on Sunday 27 August, or at any time up until 1200 on Monday. Posters will be grouped in themes, and the identification number, name(s) of the author(s) and title of the poster will be clearly labelled on each poster board. There will be five simultaneous sessions, each with between 9 and 14 posters.

Poster boards are 1m wide and 2.2m high, and the fixing used is double-sided tape, which will be supplied. The display area starts 10 cm from the floor, i.e. the height of the display area is 2.1m.

To help the poster sessions run smoothly:

- Poster presenters should meet by the poster boards allocated to the session at 1355 on Monday 28 August, and make themselves known to the chairperson.
- Presenters should stand by their posters, and be prepared to answer questions. It is useful to have some photocopied handouts (approximately 40-80) for distribution, with the key messages of the poster.
- After viewing the posters the group should go to the room allocated for the discussion, where the chairperson should ask the opening discussant to lead off the discussion. Authors of posters will not be expected to make a formal presentation of their poster but to introduce them and to respond to queries about their work during the discussion period.
- It is helpful if the presenter can indicate on his/her poster board an alternative time when he/she will be available (e.g. a lunch or coffee break) in case anyone who cannot attend the session would like to discuss the poster.
Role of the chairperson in the poster sessions

- Before the sessions starts, check that the presenters and opening discussant have arrived;
- Look at each of the posters and talk with the presenters, with a view to leading off the discussion
- At an appropriate time (1430 hrs is suggested) lead the group to the room allocated;
- Draw the session to a close and thank participants.

Role of the opening discussant in the poster sessions

- Meet the chairperson and presenters by the poster boards at 1355 on Monday 28 August.
- Look at each poster and discuss them with the presenter.

After adjourning to the room allocated, the chairperson will ask the opening discussant to lead off the discussion. Give a five minute introduction to the key points for discussion and invite comments from the group.

Medical Teacher poster prize

Taylor and Francis Ltd, the publishers of Medical Teacher, has generously agreed once again to sponsor a prize of £150 to be awarded for the best poster at the Conference. Posters will be judged, by a Committee, on the following criteria:

- How well are the key messages communicated through the poster?
- Does the poster arouse the interest of the viewer?
- Is the poster attractive?

The winner will be announced at the start of the final plenary session on Tuesday 29 August. In addition to the prize money, the winner will receive one year’s individual membership of AMEE, which includes a personal copy of Medical Teacher.

Workshops

Conference Workshops

Workshops in Session 4 are listed on page 21 and those in Session 9 on pages 42-43. Email addresses of the organisers are given in case participants require further information. A full description of the workshop content is given in the Abstracts.

Please complete and return the enclosed workshop choice form to the AMEE Office. There is no charge for attending conference workshops. A list of workshops and attendees will appear on the notice board adjacent to the Registration area. As places in some workshops may be limited, pre-booking is advised.

Post-Conference Workshops

Please note the changed times for the post-conference workshops from those which appeared in the preliminary programme, details of which appear on page 45. Pre-booking via the AMEE Secretariat is essential, and a small charge is made.
Exhibition

An exhibition by academic and commercial organisations will be on show in the Zlotowski Student Centre. Exhibitors can set up their stands from 0800 on Sunday 27 August and should take them down by Wednesday morning 30 August.

Computer Assisted Learning (CAL) Demonstration

The Ben-Gurion Medical School is the leading school in Israel in the use of computer assisted learning in its curriculum. Recently, a joint committee of all four medical schools in Israel is studying ways to cooperate in this resource-demanding field. Since 1994 the Medical School has been adding to its library of computer assisted learning software, and implementing additional software packages into official course work requirements. Currently, over a dozen computer applications are significant parts of courses in the medical school, and many other software packages are available for student use.

During the Conference, computers will be set up with some of the software packages used in the medical school curriculum. The abilities of these software packages will be demonstrated, and as well there will be the opportunity for hands-on experience. Emphasis will be placed on software packages demonstrating advantages computers have over other methods of teaching, e.g. simulations, models and imaging capabilities.

Software packages being demonstrated include:
- SimBioSys cardiovascular physiology, arterial blood gases, and ACLS programs
- Microscopic anatomy, radiologic anatomy
- Electrophysiology models
- ECG tutorial applications
- Hematology microscopy
- Cardiology tutorials

Other computer applications will be available for hands-on experimentation, as space and time allow. The computers will be set up in Conference Hall A, Kreitman Building. Please see the notice board by the registration desk for times of the demonstrations. Dr Shlomi Codish, Head of the Computer Assisted Learning unit, will be pleased to discuss the packages with interested participants.

Abstracts

Abstracts will appear on the Conference web site http://www.dundee.ac.uk/MedEd/AMEE/conf2000.htm soon after the conference. If there are any changes to be made to your abstract as it appears in the programme, please contact the Registration Desk or the AMEE Secretariat in Dundee.

Conference Evaluation

We welcome feedback on which aspects of the Conference you have enjoyed, and the things you have found less satisfactory. Suggestions for speakers and workshop organisers for future conferences are much appreciated. Please complete the evaluation form in your conference pack and either leave it in the box on the registration desk or send it to the AMEE Office.
## Programme Overview

<table>
<thead>
<tr>
<th>Session</th>
<th>0900-1030</th>
<th>1030-1100</th>
<th>1100-1230</th>
<th>1230-1300</th>
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<th>1600-1700</th>
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</tr>
</thead>
</table>

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**Workshops** - Please see Session 4 of the programme for list of topics

**Workshops** - Please see Session 9 of the programme for list of topics
<table>
<thead>
<tr>
<th>TIME</th>
<th>SUNDAY</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>0845</td>
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Section 2

Conference Programme
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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1600-2200</td>
<td>Registration Desk open at Paradise Hotel, Henrietta Szold Street, Beer Sheva</td>
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<tr>
<td>2010</td>
<td>Coaches collect from Desert Inn</td>
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<tr>
<td>2015</td>
<td>Coaches collect from Beit Yatsiv</td>
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<tr>
<td>2030-2230</td>
<td>Welcome Reception at Paradise Hotel. Drinks and a light buffet by the pool, and the opportunity to register for the Conference.</td>
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<tr>
<td>2230</td>
<td>Coaches depart for Desert Inn and Beit Yatsiv</td>
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</tbody>
</table>
Sunday 27 August

Choice of departure times from each hotel

0745  Coaches depart Desert Inn (journey time approx 30 minutes)
0900  Coaches depart Desert Inn (journey time approx 30 minutes)
0750  Coaches depart Beit Yatsiv (journey time approx 25 minutes)
0905  Coaches depart Beit Yatsiv (journey time approx 25 minutes)
0805  Coaches depart Paradise Hotel (journey time approx 10 minutes)
0920  Coaches depart Paradise Hotel (journey time approx 10 minutes)
0800-1830  Registration Desk open in Zlotowski Student Center, University Campus
           Setting up of Exhibition in Zlotowski Student Center
           Setting up of poster displays in Zlotowski Student Center
0930-1000  Coffee

1000-1200

Session 1: Plenary (1)

Training for the Health Care Professions in the Future

Chairperson:  To be announced
Room:  Joya Claire Sonnenfeldt Auditorium

1000  1/1  The Beer Sheva Experience: an Introduction to the Conference
       Professor Shimon Moses, Chairperson of the Local Organising Committee,
       Ben-Gurion University of the Negev, Beer Sheva, Israel

1010  1/2  Selection for entry to medicine and specialist training
       Professor Shimon Glick, Ben-Gurion University of the Negev, Beer Sheva,
       Israel

1035  Discussion

1045  1/3  Curriculum strategies and content for the basic training of health care
       professionals
       Professor Rob Sanson-Fisher, University of Newcastle, Australia

1110  Discussion

1115  1/4  Postgraduate specialist training and continuing professional development
       Professor Sir Kenneth Calman, University of Durham, UK

1140  Discussion

1145  General discussion

1200-1300  Lunch in Zlotowski Student Center
### Session 2: Short Communications 1

#### Curriculum 1: Outcome-Based Education

**Chairperson:** To be announced  
**Opening Discussant:** Professor Shimon Glick, Israel  
**Room:** Auditorium 004, Kreitman Building

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Location</th>
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<tbody>
<tr>
<td>1300</td>
<td>2A/1 The importance of curriculum outcomes</td>
<td>J R Crosby, R M Harden, J S Ker, M E Friedman; <em>Dundee, UK</em></td>
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<tr>
<td>1315</td>
<td>2A/2 Making medical education responsive to community diversity</td>
<td>Nick Ross; <em>Birmingham, UK</em></td>
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<tr>
<td>1330</td>
<td>2A/3 The Scottish Learning Outcomes Project - a foundation for competent and reflective practitioners</td>
<td>J Furnace, J Simpson; <em>Aberdeen, UK</em></td>
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<tr>
<td>1345</td>
<td>2A/4 An associative database to develop learning objectives</td>
<td>Ralph Bloch; <em>Berne, Switzerland</em></td>
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<td>1400</td>
<td>2A/5 Health care education in South Africa and outcomes-based education: how far can we go?</td>
<td>Glynn Till; <em>Durban, South Africa</em></td>
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<tr>
<td>1415</td>
<td>2A/6 Standard-based education in Ukraine: are we going in the right direction?</td>
<td>I Bulakh, Y Voronenko, Y Bogachkov; <em>Kyiv, Ukraine</em></td>
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<td>1430</td>
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<td>Discussion</td>
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#### Postgraduate 1: Postgraduate and Flexible Training

**Chairperson:** To be announced  
**Opening Discussant:** Professor Sir Kenneth Calman, UK  
**Room:** Auditorium 005, Kreitman Building

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>1300</td>
<td>2B/1 Does GP training meet the needs? A study from Highland Region, Scotland</td>
<td>Jerry Jackson; <em>Inverness, UK</em></td>
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<tr>
<td>1315</td>
<td>2B/2 Towards a flexible workforce: a basis for cultural change?</td>
<td>L Leighton-Beck, F French, G Needham; <em>Aberdeen, UK</em></td>
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<td>1330</td>
<td>2B/3 Do SHO Educational Supervisors need appraisal skills training?</td>
<td>Ann Cadzow, Fiona French, Ken McIlardy, Helen Couits; <em>Aberdeen, UK</em></td>
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<td>1345</td>
<td>2B/4 Using interns' feedback as an aid in the evaluation of hospital units' suitability as training sites</td>
<td>C B Hazlett; <em>New Territories, Hong Kong</em></td>
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<tr>
<td>1400</td>
<td>2B/5 Flexible Training in England and Wales</td>
<td>J M Eaton, B Clay; <em>Bristol, UK</em></td>
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</tbody>
</table>
2B/6  Resident Training in the age of Minimally Invasive Surgery
Solly Mizrahi, Michael J Bayme; Beer Sheva, Israel

Discussion

2C  Teaching and Learning 1: On-the-Job Learning

Chairperson:  Professor Shimon Glick, Israel
Opening Discussant:  Professor Rob Sanson-Fisher, Australia
Room:  Auditorium 006, Kreitman Building

1300  2C/1  On the job learning? Or on the job learning?
Ray Phlip; Dundee, UK

1315  2C/2  Long term recollection of real patients and study tasks in a patient oriented medical curriculum in The Netherlands
B van Minnen, H J M van Rossum; Groningen, The Netherlands

1330  2C/3  Doctor-tutors vs. non-doctor-tutors: differences in test performance of students?
R R Seton-Mulder, J Wouda, J Cohen-Schotanus; Groningen, The Netherlands

1345  2C/4  Teaching principles of drug therapy with ‘cognitive apprenticeship’
Melanie C M Ehren, Richard P Koopmans; Amsterdam, The Netherlands

1400  2C/5  On-the-job learning - the clinical environment
Miriam Friedman Ben-David; Dundee, UK

1415  2C/6  A learning experience with a difference
Alina Marszalek, Susan B Higgins-Opitz, Mark Tufts; Congella, South Africa

1430  Discussion

2D  New Learning Technologies 1: The Internet

Chairperson:  Dr Stewart Petersen, UK
Opening Discussant:  Dr Charles Friedman, USA
Room:  202, Goldberger Building

1300  2D/1  Impact of the use of a virtual learning environment on the medical curriculum
P G M de Jong, H E Idenburg, M J P Vergeer; Leiden, The Netherlands

1315  2D/2  Support of medical students in the utilization of the most current information in the year 2020
M R Fischer, M Maleck, M Holzer; Munich, Germany

1330  2D/3  Facilitating interaction in web based teaching
Chris Hughes; Sydney, Australia
<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<th>Authors/Location</th>
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<tr>
<td>1345</td>
<td>2D/4</td>
<td>Web-based Patient Management Problems: Development of OCCAM</td>
<td>C Melville, D Collins, S Bostock; Staffordshire, UK</td>
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<tr>
<td>1400</td>
<td>2D/5</td>
<td>The use of print and non-print learning resources among medical students: a survey</td>
<td>P Frey, D Hofer; Bern, Switzerland</td>
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<td>1415</td>
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<td>2 E</td>
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<td><strong>Clinical Teaching</strong></td>
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<td><strong>Chairperson:</strong> Professor Gonul Peker, Turkey</td>
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<td><strong>Opening Discussant:</strong> Dr Louis Pangaro, USA</td>
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<td>1300</td>
<td>2E/1</td>
<td>Will current trends in medical education expand the horizons for ward-based teachers? A dichotomy of medical students’ responses</td>
<td>J Coupe, R Watson et al; Leeds, UK</td>
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<td>1315</td>
<td>2E/2</td>
<td>What patients are our Pediatrics students seeing in outpatient clinics?</td>
<td>Pedro Herskovic, Alicia Vásquez, Macarena Bonacic, Francisco Bustamante, Pilar Hernández, Jorge Herskovic, Carmen G Lagos, Carolina Pastene, Francisca Salas; Santiago, Chile</td>
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<td>1330</td>
<td>2E/3</td>
<td>“Harvey” Grand Rounds</td>
<td>Stuart Pringle, Shihab Khogali, Ray Newton, Don Brown, Joy Crosby, Miriam Friedman, Ronald Harden, Michael Gordon; Dundee, UK</td>
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<td>1345</td>
<td>2E/4</td>
<td>Assessment of the constructivist approach to cardiology teaching</td>
<td>H Mei-Ling Ball, Joy R Crosby, Sarah C Rennie, Shihab Khogali, Stuart Pringle; Dundee, UK</td>
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<td>1400</td>
<td>2E/5</td>
<td>A Clinical Clerk Crisis Clinic: innovative education and effective treatment</td>
<td>Jodi Lofchy; Toronto, Ontario, Canada</td>
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<td><strong>Staff Development 1</strong></td>
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<td><strong>Opening Discussant:</strong> To be announced</td>
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<td>1300</td>
<td>2F/1</td>
<td>A teachers’ training course in medical education. A follow-up study</td>
<td>Maria-Eugenia Ponce-de-Leon, Rogelio Lozano-Sanchez, Maria-del-Carmen Ruiz-Alcocer; Tlahpan, Mexico</td>
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<td>1315</td>
<td>2F/2</td>
<td>Preparing faculties for the next generation: a program on teaching students how to teach</td>
<td>Angel M Centeno, Alejandra Blanco, Soledad Campos; Buenos Aires, Argentina</td>
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</table>
2F/3 Faculty development for nurses: a strategy to influence our nursing community
Alejandra Blanco, Gretal Desmery, Angel Cantona; Buenos Aires, Argentina

2F/4 The postgraduate diploma in professional teaching observation and reflective practice
Diana Kelly, Dane Goodman; London, UK

2F/5 A brief programme to increase interest in and quality of teaching in non-faculty medical staff
A Philipson, C-F Wahlgren; Stockholm, Sweden

2F/6 Evaluating the SCOTS course?
Linda Leighton-Beck, Gellisse Bagnall, Ann Cadzow; Aberdeen, UK

Discussion

Assessment 1: Clinical
Chairperson: Dr Hannah Kedar, Israel
Opening Discussant: Dr William Burdick, USA
Room: 205, Goldberger Building

2G/1 Specialist Training Assessment: France and U.S. - A Cultural Comparison
J Armbruster, C Seguin; Paris, France

2G/2 Construct validity of a newly designed formative assessment tool for use with basic surgical trainees (BST).
A M Paisley, P Baldwin, S Paterson-Brown; Edinburgh, UK

2G/3 Assessment of Practising Doctors’ Clinical Judgement
Anthony LaDuca, Cynthia Leung; Philadelphia, USA

2G/4 Incorporating the HEADSS approach in an adolescent standardized patient – checklist
Devra S Cohen, Jerry A Colliver, Deborah Satzber, Rita Charon, Mark H Swartz; New York, USA

2G/5 The use of video tape assessment of doctors training to be GPs in a UK Region
S J Field, J R Skelton; Birmingham, UK

2G/6 Using digital video in assessment of clinical observation skills
P G M de Jong, M Nijmuis, M J P Vergeer, A R Wintzen; Leiden, The Netherlands

Discussion
International Medical Education

Chairperson: To be announced
Opening Discussant: Dr Antonio Vaz Carneiro, Portugal
Room: 206, Gutman Building

2H/1 Global essential requirements and standards in medical education
Andrzej Wojtczak, M Roy Schwarz; New York, USA

2H/2 The medical window to the world - the Gothenburg experience
Lotta Mellander; Gothenburg, Sweden

2H/3 Comments about Latin American participation in the Association For Medical Education In Europe (AMEE) Conferences
J F C Figueiredo, M L V Rodrigues, C E Piccinato, L E A Troncon; Sao Paulo, Brazil

2H/4 Outcomes of Family Medicine Education Program for Moldova

2H/5 WFME Task Force on Defining International Standards in Basic Medical Education
Jørgen Nyrup; Roskilde, Denmark

2H/6 Ukrainian experience on integration in medical education
Georgy V Dzyak, Tatiana A Pertseva, Peter A Nerush, Marina V Guba; Dnipropetrovsk, Ukraine

21 Multiprofessional Education 1

Chairperson: Dr Penny Hansen, UK
Opening Discussant: Mr Stuart Cable, UK
Room: 207, Gutman Building

21/1 Stress in Junior Doctors and Management Trainees
R Palmer, S Balderson, J Clark; Birmingham, UK

21/2 New ways of working, new ways of learning: Case history discussions as a focus of multi-disciplinary learning in a new community care project
Ed Peile; Oxford, UK

21/3 Multiprofessional continuing medical education - Israeli experience
Margalit Goldfraecht, Riki Van-Raalte, Anat Sifroni, Baruch Itzchak; Haifa, Israel

21/4 Bridging the divide between doctors and managers
S Balderson, R Palmer, J Clark; Birmingham, UK
21/5  A Net Gain: Evaluation of a Web-based Local Multidisciplinary Evidence Centre  
J Howard, A P J Thomson; Crewe, UK  
Discussion

**Assessment 2: Studies of Assessment**

Chairperson: Dr Gerald Whelan, USA  
Opening Discussant: To be announced  
Room: 208, Gutman Building

1300  2J/1 Supporting the introduction of an objective national testing examination in post-communist countries  
M Mrouga, L Artemchuk, N Alexandrovich; Kyiv, Ukraine

1315  2J/2 Predictive validity of Bachelor Grades compared to the Surgical Studies Final Exam of medical students from the University of Chile  
Aracelis Amadori, Jamile Camacho, Patricio Cárdenas, Carlos Carvajal, Marcos Bustamante, Daniel Moretti; Santiago, Chile

1330  2J/3 Analytical evaluation of medicine students during their time in surgery  
Patricio Cárdenas, Jamile Camacho, Aracelis Amadoris, Carlos Carvajal, Marcos Bustamante, Daniel Moretti; Santiago, Chile

1345  2J/4 Comparison of surgical course theoretical performance  
Carlos Carvajal, Marcos Bustamante, Jamile Camacho, Patricio Cárdenas, Aracelis Amadori, Maria Bustamante; Santiago, Chile

1400  2J/5 OSCE in the Semiological Basis in the new curriculum of the School of Medicine  
Teresa Miranda, Solange Hurtado, Ximena González, Leticia Elgueta, Carmen Velasco; Santiago, Chile  
Discussion  
Coffee

**Session 3: Large Group Sessions 1**

**Training for Medical Specialities in the Future**

Chairperson: Dr Jørgen Nystrup  
Room: Auditorium 004, Kreitman Building

1500  3/A1 Intensive Care Medicine  
Professor Graham Ramsay, European Society for Intensive Care Medicine, Maastricht, The Netherlands

1515  3/A2 General Practice  
Dr Paul Worley, Flinders University, Australia
3/A3  **Gastroenterology**  
Professor Shmuel Eidelman, *Division of Gastroenterology, Rambam Medical Center, Haifa, Israel*

1545  
**Discussion**

### 3 B

**Best Evidence Medical Education**

**Chairperson:**  Professor Ian Hart, Canada  
**Room:**  Auditorium 005, Kreitman Building

1500  
**3B/1**  **Progress since 1999, and looking to the future**  
Professor Ian Hart, *Ottawa, Canada*

1510  
**3B/2**  **The Campbell Collaboration**  
Dr Robert F Boruch, *University of Pennsylvania, Philadelphia, USA*

1525  
**3B/3**  **Towards evidence based education and implementation - the Cochrane Effective Practice and Organisation of Care Review Group**  
Professor Jeremy Grimshaw, *University of Aberdeen, UK*

1540  
**3B/4**  **Interprofessional Education: evidence from the past to guide the future**  
*Dr Marilyn Hammick*, Oxford Brookes University, Oxford, UK

1555  
**3B/5**  **Scholarship in teaching and Best Evidence Medical Education: synergy for teaching and learning**  
*Dr Stewart Mennin*, *University of New Mexico, School of Medicine, USA*

1610  
**Discussion**

### 3 C

**Three Visions of Assessment in the Future**

**Chairperson:**  Dr André de Champlain; USA  
**Room:**  Auditorium 006, Kreitman Building

1500  
**3C/1**  **The role of assessment in expanding professional horizons**  
Professor Miriam Friedman Ben-David, *UK and Israel*

1515  
**3C/2**  **Medical error and assessment of professional behaviour**  
Professor Robert Cohen, *Hebrew University Faculty of Medicine, Jerusalem, Israel*

1530  
**3C/3**  **Investing in descriptive evaluation: a vision for the future of assessment**  
*Dr Louis Pangaro*, *Uniformed Services University of the Health Sciences, Bethesda, USA*

1545  
**Discussion**

1645-1700  
**Break**
Session 4: Workshops (1)

Please see the Abstracts section for details of these workshops. Lists of participants who have pre-registered for the workshops, spaces available, and rooms allocated will be posted by the registration desk.

4/1 Assessing the Reliability of Standardized Patient Examinations and OSCEs: A Systematic Multifaceted Approach  
Dr André F. De Champlain and Dr John Boulet, USA  
Adechamplain@mail.nbme.org

4/2 Planning a curriculum - defining the problems and strategies  
Dr Yaakov Henkin, Dr.Netta Notzer and Professor Michael Weingarten, Israel  
yaakovh@bgu.ac.il

4/3 Time is Brain: A Model Skills Training Program for Acute Stroke  
Dr David Lee Gordon and Dr S Barry Issenberg, USA  
DGordon@med.miami.edu

4/4 Training the Trainers  
Dr Gerald P Whelan and Dr William P Burdick, USA  
Wburdick@ecfmg.org

4/5 Randomized Field Experiments  
Dr Robert F Boruch, USA

Dr Rosalie Ber, Dr David Rabinowitz and Dr Gideon Alroy, Israel  
Rosalieb@technion.ac.il

4/7 Second AMEE/AMSE workshop on an European core curriculum  
Prof. dr. L.N. Bouman (representing AMEE), The Netherlands  
Boumanad@wxs.nl

4/8 Formal Evaluation Sessions: a standard for evaluating students, generating feedback, and providing faculty development during clinical rotations  
Dr Paul A. Hemmer and Dr Louis N. Pangaro, USA  
Phemmer@usuhs.mil

4/9 Rewards and incentives in medical education  
Dr Sharon Krakov, USA  
Sharon.krakov@med.nyu.edu

4/10 Diversifying Assessment – A ‘Fit for Purpose’ Approach  
Professor Sally Brown, UK  
Sally.brown@ilt.ac.uk

4/11 How to Conduct Systematic Reviews  
Professor Jeremy Grimshaw, UK  
j.m.grimshaw@abdn.ac.uk

Coaches return to Conference hotels
Sunday evening entertainment

2030-2230 Open air reception in the Udi Garden on the University Campus, with light buffet and entertainment

2000 Coaches depart from Desert Inn

2005 Coaches depart from Beit Yatsiv

2015 Coaches depart from Paradise Hotel

2230 Coaches return to Conference hotels
Monday 28 August

Registration Desk open in Zlotowski Student Center

Coaches leave Desert Inn

Coaches leave Beit Yatsiv

Coaches leave Paradise Hotel

0845-1030

Session 5: Large Group Sessions (2)

5A

Learning in the Future

Chairperson: Professor Margarita Barón-Maldonado, Spain
Room: Auditorium 004, Kreitman Building

5A/1 Community-based training
Professor Carmi Margolis, Ben-Gurion University of the Negev, Beer Sheva, Israel

5A/2 Learning – current knowledge and its future application
Dick Mårtensson, Karolinska Institute, Stockholm, Sweden

5A/3 The PBL Group
Dr Are Holen, Norwegian University of Science and Technology, Trondheim, Norway

0930 Discussion

5B

Simulation and New Learning Technologies: the virtual patient

Chairperson: Professor Ralph Bloch, Switzerland
Room: Auditorium 005, Kreitman Building

5B/1 Simulation and New Learning Technologies: the virtual patient
Dr Barry Issenberg, Dr Michael Gordon and Dr David Lee Gordon, Centre for Research in Medical Education, University of Miami; Dr Robert E Safford, Mayo Clinic, Jacksonville, USA and Professor Ian R Hart, Canada

5B/2 Patient Safety and Simulation-based Medical Education
Dr Amitai Ziv, University of Tel Aviv, Israel

5B/3 The Marvelous Medical Education Machine or How Medical Education Can Be Unstuck in Time
Dr Charles Friedman, University of Pittsburgh, USA

0930 Discussion
Training and Certification of Teachers and Trainers: the Professionalisation of medical education

Chairperson: Professor Ioan Bocsan, Romania
Room: Auditorium 006, Kreitman Building

5C/1 Faculty Development, Teacher Training and Teacher Accreditation in Medical Education: Twenty Years from Now
Professor Dan Benor, Ben-Gurion University of the Negev, Beer Sheva, Israel

5C/2 The Institute for Learning and Teaching and UK approaches to Accrediting Teaching: Looking to the future
Professor Sally Brown, Institute for Learning and Teaching, York, UK

5C/3 Professors professionalize their profession?
Professor Florian Eitel, Ludwig Maximilians Universität, Munich, Germany

Discussion
Coffee

Session 6: Short Communications (2)

Curriculum 2: Curriculum Planning and Change

Chairperson: Professor Rosalie Ber, Israel
Opening Discussant: Ms Brownell Anderson, USA
Room: Auditorium 004, Kreitman Building

6A/1 Amount of work and strategies in implementing a reformed curriculum
W Burger, U Keske, C Froemmel; Berlin, Germany

6A/2 Transformation of a traditional medical curriculum in a developing country
Nadia Hartman; Rondebosch, South Africa

6A/3 Faculty/Student Retreats: A path to curriculum renewal
Gerald Merenstein, Robin A Harvan; Denver, USA

6A/4 The relationship between the Medical School in Beer Sheva and The General Sick Fund - Kupat Holim and its impact on the medical school perceptions on its mission
Shifra Shvarts; Beer-Sheva, Israel

6A/5 Health professions education and child poverty and health
P Niall Byrne, F Scarth; Toronto, Ontario, Canada

6A/6 The dynamic cycle of evaluation-change-evaluation
Carlota Saldanha, Jorge Lima, Joao Martins e Silva; Lisbon, Portugal

Discussion
Postgraduate 2: Training for Specialist Practice

Chairperson: Dr Netta Notzer, Israel
Opening Discussant: Professor Graham Ramsay, Netherlands
Room: Auditorium 005, Kreitman Building

1100 6B/1 The effect of the General Practice vocational training on perceived skills in palliative care in the United Kingdom
S J Field, R Charlton, C Faull, J Skelton, I Campbell; Birmingham, UK

1115 6B/2 Survey of surgical training in Obstetrics and Gynaecology
Nicholas A Myerson, David H O Pugh; Cardiff, UK

1130 6B/3 Formative feedback for family practice trainers
N Donner-Banzhoff, H Merle, A Verbeck, E Baum; Marburg, Germany

1145 6B/4 Evaluation of PASS - a study planner for the MFDS/MFD examination: lessons learned
Lorraine Robertson; Dundee, UK

1200 6B/5 The Poorly Performing Doctor: a strategy for diagnosis and management
Rose Oughton, Alan Connacher; Dundee, UK

1215 6B/6 Management administration and postgraduate education using 'capture-recapture' to estimate specialised medical workforce
Andres Otero, Daniella Heller, Socorro Moreno, Claudia Calderon, Adriana Perez, Diego Rosselli; Bogota, Colombia

1230 Discussion

Teaching and Learning 2: Learning Styles and Approaches to Learning

Chairperson: Dick Mårtenson, Sweden
Opening Discussant: To be announced
Room: Auditorium 006, Kreitman Building

1100 6C/1 Student age and prior academic experience
Stephen Aaron, Ernest Skakun, Deanna Gupta, Charles Baker; Edmonton, Alberta, Canada

1115 6C/2 Changes in students’ approach to learning during five years in a traditional medical school
J F Perez-Gonzalez; El Hatillo, Venezuela

1130 6C/3 Does unprofessional behaviour on a clinical clerkship vary during an academic year?
Paul A Hemmer, Richard E Hawkins, Louis N Pangaro; Bethesda, USA

1145 6C/4 Initial progress of graduate entrants to accelerated UK Medical Course
Stewart Petersen, John Cookson; Leicester, UK
6C/5 Characteristics of the learning environment of a medical school: attitudes of medical students in the clinical phase of training
H Kantz, J Kedar, G Shefler, R Cohen; Jerusalem, Israel

6C/6 Learning style and academic achievements
Kristin Wigen, Oyvind Ellingsen, Are Holen; Trondheim, Norway

6C/7 Content conception as part of macro perspective on the learning process
M G H Nieuwwoof, Th J ten Cate, J A Smal, J D H M Vermunt; Utrecht, The Netherlands

1245 Discussion

6 D

New Learning Technologies 2: Computer-Assisted Learning

Chairperson: Dr Madalena Patricio, Portugal
Opening Discussant: Professor Florian Eitel, Germany
Room: Room 202, Goldberger Building

6D/1 Experiences with implementing computer assisted learning and small group teaching in Urology at the University of Tübingen (Germany)
W Mattauch, K H Bichler; Tübingen, Germany

6D/2 Use of multimedia by teaching assistants to help students’ self-learning process
J C Maass, G Miranda, M Jacard, F Alonso, J Kohn, A Cruzat, M J González; Santiago, Chile

6D/3 Do computer facilities enhance student cooperation?
M J Quak, R H J Otten, Th J ten Cate, O A de Vries, H E Westerveld, R L A W Bleys; Utrecht, The Netherlands

6D/4 IT-literacy and information search habits is closely related to academic activities
C Ringsted, J Pallisgaard, O Gredal, D Oestergaard; Copenhagen, Denmark

6D/5 Diagnostic assessment of practising doctors using computer simulation of patient management skills
Anthony LaDue, Laurel Sample, André de Champlain, Cynthia Leung; Philadelphia, USA

6D/6 Communication training through the Dynamic Patient Simulator
P M Bloemendaal, S Eggertsmont, M C M Ehren; Leiden, The Netherlands

1230 Discussion
Problem-Based Learning 1: Methodology

Chairperson: Dr Jadwiga Mirecka, Poland
Opening Discussant: Dr Stewart Mennin, USA
Room: Room 203, Goldberger Building

1100 6E/1 Recruiting PBL tutors for a PBL-based curriculum
*P Finucane, F Nichols, B Gannon, S Runciman, D Prideaux, T Nicholas; Australia*

1115 6E/2 Teaching research skills: a tutorless PBL program for undergraduate medical students
P Frey; Bern, Switzerland

1130 6E/3 Clinical reasoning and PBL in the ‘new’ undergraduate medical curriculum
*Majbritt E M Allison, Barry Clark, David Lloyd; Glasgow, UK*

1145 6E/4 A changed role for the lecture in a PBL curriculum
J M Nicholls, L C Chan; Pok Fu Lam, Hong Kong

1200 6E/5 Analysis of learning-issues for the development of a method to evaluate papercases in problem-based learning
*Bert Huenges, Walter Burger, Claudia Kiessling; Berlin, Germany*

1215 6E/6 PBL in a community-orientated education using the Hybrid system is appropriate for developing countries and international medical education
*J Fosi-Mbanenkh, S Tango, Eastern Cape Province, South Africa*

1230 Discussion

Staff Development 2

Chairperson: Dr Nancy Gary, USA
Opening Discussant: To be announced
Room: Room 204, Goldberger Building

1100 6F/1 Role conflict in medicine: is it possible to be a good researcher, clinician and teacher at the same time?
*Susanne Pruski, Stefanie Peslotschek, Christian Bauknecht; Berlin, Germany*

1115 6F/2 Do teaching ‘TIPS’ courses work?
D P Gill, J Cartledge; London, UK

1130 6F/3 Triggering your teaching instinct - six page ‘starters’ say it all
E A Hesketh, J M Laidlaw; Dundee, UK

1145 6F/4 The uncertainty of knowing: determining the value of a postgraduate program in Medical Education
*Patrick A Merli, Steffen Achenbach, Michael Baertschi, Erika Bandli, Raphael Bonvin, German Clenin, Peter Frey, Werner Fuchswans, Fritz Grossenbacher, Juliane Hentschel, Bettina Isenschmid, Ursula Janosa, Maria Lammerding, Patrick Landolt, Kerstin Mueller, Eva Rasky, Barbara Stadelmann, Johann Steurer; Vienna, Austria*
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<th>Time</th>
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<td>1200</td>
<td>6F/5</td>
<td>Interactive workshops in further training of medical teachers</td>
<td>M Vreic-Keglevic, Z Jaksic, A Smalcelj; Zagreb, Croatia</td>
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<td>1215</td>
<td>6F/6</td>
<td>Bi-lateral collaboration in medical education: the Cardiff-Lisbon</td>
<td>Lesley Puslesky, Cindy Johnson, Madalena Patricio, Tom Hayes, Joao Gomes</td>
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<td><strong>Assessment 3: The OSCE</strong></td>
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<td>Chairperson: Dr Gerald Whelan, USA</td>
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<td>Opening Discussant: Dr Baruch Weinreb, Israel</td>
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<td>1100</td>
<td>6G/1</td>
<td>OSCE global ratings are sensitive to level of training</td>
<td>Brian Hodges, Jodi Herold, Nancy McNaughton, Glenn Regehr; Toronto,</td>
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<td>1115</td>
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<td>Performance analysis of skilled task OSCE stations</td>
<td>C S A Macmillan, J R Crosby, J A W Wildsmith; Dundee, UK</td>
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<td>1130</td>
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<td>Basic and advanced life support skills (ALS/BLS): Performance analysis</td>
<td>C S A Macmillan, J R Crosby, J A W Wildsmith; Dundee, UK</td>
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<td>6G/4</td>
<td>Ethnicity and cultural issues when patients communicate with doctors.</td>
<td>Val Wass, Celia Roberts, Srikant Sarangi, Roger Jones; London, UK</td>
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<td>How do these impact on the training and assessment of medical students?</td>
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<td>1200</td>
<td>6G/5</td>
<td>Evaluation of communication skills course assessment in Dokuz Eylul</td>
<td>Belgin Aslan, Yucel Demiral, Turkan Gunay, Berna Musal, Gazanfer Aksakogh,</td>
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<td>Medical School</td>
<td>Izmir, Turkey</td>
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<td>1215</td>
<td>6G/6</td>
<td>Pediatric Objective Structured Clinical Examination in evaluation of</td>
<td>A Goldsbart, A Tal, J Levy, Z Weitman, L Hertzog, B Weinreb; Beer Sheva,</td>
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Continuing Medical Education 1

Chairperson: Dr Sharon Krackov, USA
Opening Discussant: Professor Janet Grant, UK
Room: 206, Gutman Building

1100 6H/1  Continuing Medical Education among Swedish hospital physicians
Thomas Zilling; Stockholm, Sweden

1115 6H/2  Clinical governance and continuing education: meeting the needs of the individual and the organisation
James Bird, Stephen Brigley, Tom Hayes; Cardiff, UK

1130 6H/3  A survey of the type, volume and impact of continuing education for general dental practitioners
A D Bullock, C R Belfield, J W Frame; Birmingham, UK

1145 6H/4  The cost-effectiveness of continuing professional development: A review of the literature and 100 RCTs
Clive Belfield, C Brown; Birmingham, UK

1200 6H/5  Get those real learning needs
R Gagnon, D Drouin, D Lefebvre; Quebec, Canada

1215 6H/6  Continuing Medical Education (CME) for the primary care physicians of the Negev Region, Israel
A Y Rotem, A Peleg, S Glick; Beer-Sheva, Israel

1230 6H/7  On-the-job and organizational learning: implications for the organization
M Nolla, E Castell, J Roma, M Solà; Barcelona, Spain

1245 Discussion

Multiprofessional Education 2

Chairperson: Dr Ester Mateluna, Chile
Opening Discussant: Dr Marilyn Hammick, UK
Room: Room 207, Gutman Building

1100 6I/1  Performance factors and gender issues in the negotiated marking of the communications element of year 5 interactive GP examinations
C Wiskin, T Allan, J Skelton; Birmingham, UK

1115 6I/2  A Teamwork Agenda for Multi-Professional Education
Nick Ross (University of Birmingham), Carolyn Miller (University of Brighton), Marnie Freeman; Birmingham, UK

1130 6I/3  Clinical anthropology class for education of ethics and humanity
Shin’ichi Shoji, Katsuko Kamiya; Tsukuba-shi, Japan

1145 6I/4  An integrated interprofessional learning opportunity for undergraduate students - a pilot study
S Benvie, J Ker, K Wilkie; Kirkcaldy, UK
61/5 Situated learning - dimensions of medical and nursing students’ clinical preparation for multiprofessional practice
Stuart Cable; Dundee, UK

61/6 Involving multi-professional, community-based health care teams in the teaching of 2nd year medical students
S Collinson, L Bliss, M Rickets, E Lobo; London, UK

61/7 Student perceptions regarding a campus-wide vision for interprofessional education
Robin Ann Harvan; Denver, USA

1245 Discussion

6J Selection of Medical Students, and Career Choice

Chairperson: Professor J Las Heras, Chile
Opening Discussant: Dr Sam Leinster, UK
Room: 208, Gutman Building

6J/1 Student admission process in eight Colombian medical schools
Maria-Jose Gutierrez, Catalina Cuervo, Andres Otero, Diego Rosselli; Bogota, Colombia

6J/2 Reliability and validity of the assessment of incipient communication skills in medical school selection interviews
P J M Tutton, G S Taylor, C A Browne, M Lewenberg; Victoria, Australia

6J/3 Predicting success in medical and para-medical studies in Israel
Carmel Oren, Ayelet Cohen, Shmuel Bronner; Jerusalem, Israel

6J/4 The relation between grade-point average and professional development
Janke Cohen-Schotanus, Henk J Huisjes; Groningen, The Netherlands

6J/5 The efficacy of the admission interview at the University of Illinois
Ara Tekian, Laura Hruska, Andrew Krainik; Chicago, USA

6J/6 A follow-up of medical graduates from a PBL-programme - differences between students admitted by a local selection procedure vs. students admitted by a national admission system
Wolfram Antepohl, Erica Domeij, Gunilla Borg-Andersson, Per Hultman; Linköping, Sweden

6J/7 Factors associated with medical speciality choice in a sample of UK doctors
Gillian B Clack, John O Head; London, UK

1245 Discussion

1300-1400 Lunch in Zlotowski Student Center

1300-1400 Society for Directors of Research in Medical Education private lunch
Session 7: Poster Sessions

Curriculum Planning/Curriculum Evaluation

Chairperson: Professor Clarke Hazlett, Hong Kong
Opening Discussant: To be announced
Room: Auditorium 004, Kreitman Building

7A/1 Influence of a curricular reform in a Brazilian medical school on the performance of clinical and psychomotor skills
C E Piccinato, J F C Figueiredo, L E A Troncon, A R L Cianflone, M F A Colares, L C Peres, M L V Rodrigues; Ribeirao Preto, Brazil

7A/2 Approaches to introducing outcomes
J R Crosby, G J Mires; Dundee, UK

7A/3 Think Tank Projects
I G Giles; Southampton, UK

7A/4 The Southampton core curriculum
R S Briggs, I G Giles, C M Hill, J Schmedlin, J R Skidmore, C R Stephens, B Wee; Southampton, UK

7A/5 Elaboration of Medical Education Model for Post-Soviet Countries
R Khetsuriani, B Kilasonia, V Kipiani, Z Avaliani, G Simonia; Tbilisi, Georgia

7A/6 The Altered Medical Curriculum: the new vision and approaches
D Tvildiani, L Tvildiani, M Kokichasgvili, S Tabagari; Tbilisi, Georgia

7A/7 Teaching first year medical students in the community: the GPs' experience
M Rickets, S Collinson, L Bliss, E Lobo; London, UK

7A/8 Private universities are the model for medical education in developing countries in Africa: the case for the International University of Bamenda, Cameroon
R Fosi-Mbantenkhu, J Fosi-Mbantenkhu; Bamenda, Cameroon

7A/9 AAMC Medical School Graduation Questionnaire (GQ): A customizable web-based evaluation tool
John H Lockwood, Deborah Danoff; Washington, USA

7A/10 Resource allocation system for the care of communicative disorders in Egypt
Nargis Albert Labib, Mohamed Shafik, Azza A Aziz; Cairo, Egypt

7A/11 Pediatric residents as teachers
Aydogan Orhan, T Demiralp, N Saka, R Disci, H Camlica; Istanbul, Turkey

7A/12 The undergraduate medical curriculum of the University of Medicine and Pharmacy of Craiova from the practitioner's perspective
A Cupsa, C Gheonea, P Badea, S Dinescu, L Patrascu; Craiova, Romania
Postgraduate/CME/Staff Development

Chairperson: Dr Hank Slotnick, USA
Opening Discussant: To be announced
Room: Auditorium 005, Kretman Building

7B/1 Routes into research? SHOs' views in the North/North East of Scotland
Linda Leighton-Beek, Martin Cowie; Aberdeen, UK

7B/2 Has the introduction of clinical governance facilitated the development
of quality in general practice?
G B Taylor; Newcastle upon Tyne, UK

7B/3 What do Pre Registration House Officers think about their training posts?
Rose Oughton; Dundee, UK

7B/4 How reliable is the assessment of GP training practices?
Ed Peile, Neil Johnson; Oxford, UK

7B/5 Postgraduate education for General Practice in Denmark
Jørgen Lindhardt, A V Scheidt; Odense, Denmark

7B/6 Methods for small group teaching - a course in a programme for graduate
students in training to be medical teachers
J F C Figueiredo, M L V Rodrigues, L E A Troncon; Sao Paulo, Brazil

7B/7 Improvements in supporting postgraduate medical training in Hungary:
videoconferencing, internet and on-line programmes
Anna Bukovinszky, Gábor Biró, Tibor Ertl, Árpád Gógl; Pécs, Hungary

7B/8 The structure of the consultation in hospitals and general practices
J D Reed, J R Skelton, S J Field, N M Ross; Birmingham, UK

7B/9 Women in medicine - trends in the Czech medical doctors population
Jana Krejčíková, Josef Vysohlíd; Prague, Czech Republic

7B/10 Women in specialised medicine in Colombia
Daniella Heller, Andres Otero, Claudia Calderon, Socorro Moreno, Adriana
Perez, Diego Rosselli; Bogota, Colombia

7B/11 The participation of women returners to General Practice in a re-entry
course: Another lost tribe?
Chris Stephens; Southampton, UK

7B/12 UAB Casa Convalescência
Cristina Iniesta, Carles Kinder, Joan Turró, Lluis Ferrer; Barcelona, Spain

7B/13 Topics on teaching and learning in clinical and surgical specialities -
A course for graduate students
M L V Rodrigues, N V Souza, J F C Figueiredo; Ribeirao Preto, Brazil
Teaching and Learning/Evaluation

Chairperson: Dr Anthony LaDuca, USA
Opening Discussant: To be announced
Room: Auditorium 006, Kretman Building

7C/1 On the conception of a lecture in General Medicine
U Manthei; Berlin, Germany

7C/2 Auditor criteria for assessing lectures
U Manthei; Berlin, Germany

7C/3 Foundations of general medicine as an advanced compact profession-related course
U Manthei; Berlin, Germany

7C/4 Presentation skills: exploratory factor analysis of candidate scores
N Munro, C McIntosh, C Parker, F March; London, UK

7C/5 A curriculum to enhance comprehensive health care to individuals with disabilities
Anita D Glickien, Tracy Price Johnson, Gerald Merenstein; Denver, USA

7C/6 Choosing web teaching software: what should we look for?
Susan Toohey, Eileen Watson; Sydney, Australia

7C/7 Medical education and the European Credit Transfer System at Jessenius Faculty of Medicine in Slovakia
Dusan Mesko, Andrej Hajtman, Jan Danko, Lukas Plank; Martin, Slovak Republic

7C/8 To rebuild or not to rebuild?
Dusan Mesko, Andrej Hajtman, Jan Danko, Lukas Plank; Martin, Slovak Republic

7C/9 Attitudes of final year medical students towards relevant aspects of medical practice
M F A Colares, L E A Troncon, A R L Cianflone, J F C Figueiredo, M L V Rodrigues, C E Piccinato, L C Peres, J A Dela Coleta; Sao Paulo, Brazil

Important Topics in Medical Education

Chairperson: To be announced
Opening Discussant: To be announced
Room: 202, Goldberger Building

7D/1 Consistency of PBL-associated assessment compares favourably with traditional exams in a Surgery Clerkship
O N Dejesus, E Balda, J F Perez-Gonzalez; El Hatillo, Venezuela

7D/2 Evaluation of cognitive aspects related to Ophthalmology two years after the course, at the Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Brazil
M L V Rodrigues, J F C Figueiredo, C E Piccinato, M F A Colares, A R L Cianflone, L E A Troncon; Ribeirao Preto, Brazil
7D/3 An interactive first aid course for first year medical students
B M Gulluoglu, A Denizbasi, P Unalan, S Ustalar, C Tetik, S Karakurt, T Celikel, B C Yegen, S Oktay; Istanbul, Turkey

7D/4 Teaching airway management
Arcelis Amadori, Leonor Bustamante, Pablo Raby and Ghislaine Echevarria; Santiago, Chile

7D/5 Manual for women with breast cancer
Jamile Camacho, Patricio Cardenas, Roxana Flores, Lorena Javet, Carlos Carvajal, Marcos Bustamante; Santiago de Chile, Chile

7D/6 Integrated teaching of Radiology in the Licenciature in Medicine
B P Villacastin, A G Robledo, J Conteras; Madrid, Spain

7D/7 Comparison of the results of an Embryology student group, ordinary vs extraordinary examination in a Faculty of Medicine
C E de la Garza, N Lopez, M E Morales; Monterrey, Mexico

7D/8 Do medicine students perceive the relationship between biochemistry and physiology?
Nancy Fernández-Garza; Monterrey, Mexico

7D/9 Clinical skills to be acquired by students in the Faculty of Medicine of the University of Barcelona (Catalonia, Spain)
J Palés, M T Estrach, J M Cots, J Delás, C Gomar, R Pujol, J A Bombi; Barcelona, Spain

7D/10 Theory and practice of adult life support (ALS): medical undergraduate curriculum versus generic ‘ALS course’
C S A Macmillan, J R Crosby, J A W Wildsmith; Dundee, UK

7D/11 The concurrent validity of two opinion questionnaires in the Medical School
Teresa Miranda, Solange Hurtado, Carmen Velasco and Enrique Mandiola; Santiago de Chile, Chile

7D/12 Teaching Behaviour Sciences in the Faculty of Medicine at the University of Szeged, Hungary
Katalin Barabás; Szeged, Hungary

Student Recruitment and Participation

Chairperson: To be announced
Opening Discussant: To be announced
Room: 203, Goldberger Building

7E/1 Medical students: partners in prevention at BGU
E Rosenberg, A Peleg, A D Sperber; Beer-Sheva, Israel

7E/2 The use of first and second test results for the early identification of the academically “at risk” first year student
Hettie Till; Durban, South Africa
7E/3 Student attrition: how serious is the problem?
Hettie Till; Durban, South Africa

7E/4 Progress Testing as a student's project: the pros and cons
Ragna Raschke, Katrin Duske, Axel Mertens, Julia Hoffmann, Sebastian Kölbel, Jörg Berger; Berlin, Germany

7E/5 Integration of students into the decision-making processes of a medical faculty – advantages and disadvantages
Sebastian Schubert, Axel Mertens; Berlin, Germany

7E/6 Student involvement in teaching organisation
Jon-Helge Angelsen; Oslo, Norway

7E/7 Evaluation of Anamnesegruppen in Berlin
Jan Schildmann, Andreas Brunklaus, Benedict Trumpf; Berlin, Germany

7E/8 Smoking in Colombian medical schools
Diego Rosselli, Olga Rey, Claudia Calderon, Maria Nelcy Rodriguez; Bogota, Colombia

7E/9 Positive action: The University of Southampton's Widening Access into the Medical Profession Project
Chris Stephens, Carolyn Blundell, Ian Giles, Angela Fenwick, Jenny Skidmore; Southampton, UK

1600-1615 Coffee

1625 Coaches depart for Conference hotels (for AMEE non-members)

1615-1715 AMEE General Assembly

1725 Coaches depart for Conference hotels (for those wishing to attend AGM)

Monday evening entertainment

Bedouin Feast followed by Sound and Light Show at Masada. (Note: this is not included in the cost of the registration fee and should be booked separately via Ortra – see address on page iii)

1900 Coaches depart from Desert Inn

1900 Coaches depart from Beit Yatsiv

1900 Coaches depart from Paradise Hotel

0100 (latest) Coaches return to Conference hotels
Tuesday 29 August

0800-1730
Registration Desk open in Zlotowski Student Center

0800
Coaches leave Desert Inn

0805
Coaches leave Beit Yatsiv

0815
Coaches leave Paradise Hotel

0845-1030

Session 8: Short Communications (3)

8A

Curriculum 3 – Educational Strategies

Chairperson: Professor John Simpson, UK
Opening Discussant: Dr Dan Benor, Israel
Room: Auditorium 004, Kreitman Building

8A/1 From bench to bed and back in women’s health: The interface between basic and clinical science, an elective for medical students
Hana Castel, Ilana Harman-Boehm; Beer-Sheva, Israel

8A/2 Students learning in the community: Whom does the experience benefit?
L Bliss, A Lumb, S Collinson, M Rickets, E Lobo; London, UK

8A/3 Neuroscience block enriched with introduction to clinical concepts and a scenario on the outcomes of the earthquake disaster in Turkey: A model for early vertical integration in community-based humanistic medical curriculum
G O Peker, M Baka, A Certug, Y Ersahin, M Zileli, H Hanci, H Coskunol, Y Kirazli, M Turk, Y Gezgin, I Ozturk, F Gokmen, T Tagci, I Durak, S Pogun; Izmir, Turkey

8A/4 Development of a 6-year, integrated disease prevention curriculum
A Peleg, E Rosenberg, A D Sperber; Beer-Sheva, Israel

8A/5 Two cultures of medical students at one school reporting on harassment: The Sackler School of Medicine in Tel Aviv
Netta Notzer, Ilan Bleiberg, Ruth Abramowitz, Louis Shenkman; Tel-Aviv, Israel

1000
8A/6 Injecting a “seamless” behavioral sciences approach into a traditional curriculum at Sackler faculty of medicine, Tel-Aviv University
Jeffrey Borkan, Michael Weingarten, Judith Fadlon, Henri Abramovitch, Eva Schlank, Shimon Kornitzer, Pinchas Haperin, Netta Notzer; Tel Aviv, Israel

1015
Discussion
Postgraduate 3: Pre-Registration House Officer Training

Chairperson: To be announced
Opening Discussant: Dr Kwee Matheson, UK
Room: Auditorium 005, Kretman Building

0845 8B/1 Teaching patient-centered medicine to residents in family medicine: course concepts and content
Aya Biderman, Ayala Yeheskel, Jeffrey M Borkan, Joseph Herman; Beer Sheva, Israel

0900 8B/2 Shadowing junior doctors: Reflections on process and outcomes
Cindy Johnson; Cardiff, UK

0915 8B/3 The Early Years: The right time for general practice? Results of an interview study
J Illing, G B Taylor, W F Cunningham, T van Zwanenberg; Newcastle upon Tyne, UK

0930 8B/4 The Prevocational Medical Education Program in Queensland, Australia
Jennifer Harlen, Debra Le Bners; Queensland, Australia

0945 8B/5 That's the training post for me
Jennifer Laidlaw; Dundee, UK

Discussion

Teaching and Learning 3: Communication Skills Training

Chairperson: Professor Michael Alkan, Israel
Opening Discussant: To be announced
Room: Auditorium 006, Kretman Building

0845 8C/1 Teaching communication skills to physicians - from private initiative to public commitment
Lisbet Clementsen, Jorn Andersen, Anders Bonde Jensen, Eva Ethelberg, Marianne Lau, Anne Vinkel; Copenhagen, Denmark

0900 8C/2 The effect of a communication training course for physicians
Lisbet Clementsen, Jorn Andersen, Anders Bonde Jensen, Eva Ethelberg, Marianne Lau, Anne Vinkel; Copenhagen, Denmark

0915 8C/3 Sex and drugs and rock n' roll - learning adolescent interviewing using simulated patients
Kim Blake, Karen Mann, David Kaufman, Murray Kappleman; Halifax NS, Canada

0930 8C/4 Evaluation of clinical interviewing skills: The use of behavioural indicators for assessment and learning
Anita D Glicken, Gerald Merenstein; Denver, USA

0945 8C/5 Teaching basic communication skills at the medical and pharmacy faculty: measuring the effectiveness of a selfstudy method
C Aubry, J Beullens, R Jaspaert, L Leemans, G Lackeman; Leuven, Belgium

- 37 -
Important Topics in Medical Education

Chairperson: Miss Gillian Clack, UK
Opening Discussant: To be announced
Room: 202, Goldberger Building

8D/1 Medical students’ attitudes toward introducing Complementary Medicine into the curriculum at the Sackler Faculty of Medicine, Tel Aviv University
N Notzer, M Oberbaum, R Abramovitz; Tel-Aviv, Israel

8D/2 Preparing Tomorrow’s doctors. Teaching how to help: an academic/NGO joint venture in Humanitarian Medicine
M F Patricio, M Oliveira da Silva, J Pereira-Miguel; Lisboa, Portugal

8D/3 Systematic reviews in medical education: analyzing the quality of research methodologies
H Thomas, C Belfield, A Bullock, R Eynon; Birmingham, UK

8D/4 “How could a black man fly a plane?” - Nelson Mandela – ‘Long Walk to Freedom’
A Lumb, M Wyldbore, S Collinson, M Cross, M Rickets, L Bliss, Y H Carter; London, UK

8D/5 Knowledge, attitude and practice of diabetics attending Kasr El Eini Diabetes Outpatient Clinic
Nargis Albert Labib, Sherif Hafez; Egypt

Problem-Based Learning 2: Experience and Evaluation

Chairperson: Professor Joseph Fosi-Mbantenkhu, South Africa
Opening Discussant: Dr Stewart Mennin, USA
Room: 203, Goldberger Building

8E/1 A teaching learning approach applied to students with previous failure in biochemistry
Sandra Hilário, Jorge Lima, Joao Martins e Silva; Lisbon, Portugal

8E/2 A short PBL experience changed parameters of students’ approach to learning
J F Perez-Gonzalez, M Lamanna, J A Octavio; El Hatillo, Venezuela
8E/3 The new problem based medical curriculum in Trondheim: from plan to reality
Kjetil A H Karlsen, Torstein Vik, Steinar Westin; Trondheim, Norway

8E/4 The new problem-based medical curriculum in Trondheim: The students' results in clinical examinations
Kjetil Karlsen, Torstein Vik, Steinar Westin; Trondheim, Norway

8E/5 Facilitation and group process
Are Holen, Kristin Wigen, Øyvind Ellingsen; Trondheim, Norway

8E/6 Experience of first semester in a PBL-parallel track at the Charité, Faculty of Medicine, Humboldt University, Berlin
Waltraud K Georg, Claudia S Kieseling, Walter Burger; Berlin, Germany
Dick Martenson; Stockholm, Sweden

1000 Discussion

Assessment 4: Approaches to Assessment
Chairperson: Dr Josep Fornells, Spain
Opening Discussant: Professor Sally Brown, UK
Room: 204, Goldberger Building

8F/1 The Script Concordance Test: a tool to assess the reflective clinician
Bernard Charlin, Louise Ray, Carlos Brailovsky, Francois Goulet; Québec, Canada. Cees van der Vleuten, Maastricht, The Netherlands

8F/2 Measurement of clinical reflective capacity early in training as a predictor of clinical reasoning performance
C Brailovsky, B Charlin, S Beausoleil, S Coté, C van der Vleuten; Québec, Canada

8F/3 The development of an extended matching multiple choice (final) test
J Beullens, B Van Damme, H Jaspaert; Leuven, Belgium

8F/4 Using descriptive evaluation to detect student growth during a clinical clerkship
Paul A Hemmer, Louis Pangaro; Bethesda, USA

8F/5 Do URMS and non-URMS differ in problem solving abilities as measured by examinations?
Ara Tekian, Yi Han, Laura Hruska; Chicago, USA

8F/6 Use of multiple methods of student assessment in a community based teaching programme
Dulitha N Fernando, Rohini de A Seneviratne; Colombo, Sri Lanka

1000 Discussion
Assessment 5: ECFMG Clinical Skills Assessment Unit

Chairperson: Dr Janke Cohen-Sehotanus, Netherlands
Opening Discussant: Professor Robert Cohen, Israel
Room: 205, Goldberger Building

0845 8G/1  The validity of post-encounter scores from a high-stakes standardized patient-assessment
Danette W McKinley, John R Boulet, Gerald P Whelan; Philadelphia, USA

0900 8G/2  Clinical skills proficiencies and physician characteristics: impact on patient satisfaction
Kateri A Chambers, John R Boulet; Philadelphia, USA

0915 8G/3  Evaluating the spoken English proficiency of graduates of foreign medical schools
John R Boulet, Marta van Zanten, Danette McKinley; Philadelphia, USA

0930 8G/4  Factors impacting portrayal and scoring in a standardized patient assessment: results of a comprehensive survey
John R Boulet, Danette W. McKinley, Gerald P Whelan, Tony Erichetti; Philadelphia, USA

0945 8G/5  Assuring the consistency of scoring of post-encounter patient notes in a high volume performance assessment examination
Gerald P Whelan, John R Boulet, William P Burdick; Philadelphia, USA

1000 8G/6  Interpretation of Standardized Patient Quality Assurance Data
William P Burdick, John R Boulet, Steven J Feitzman, Danette McKinley, Alice Clash, Kateri Chambers, Gerald P Whelan; Philadelphia, USA

1015 Discussion

Continuing Medical Education 2

Chairperson: Dr Anna Bukovinszky, Hungary
Opening Discussant: To be announced
Room: 206, Gutman Building

0845 8H/1  Improving the communication skills of poorly performing doctors
J Skelton, P Croft, K Messenger, S Field; Birmingham, UK

0900 8H/2  Distance learning in rheumatology: A core curriculum for general practitioners
H D Bolosiu, A Achimas; Cluj-Napoca, Romania

0915 8H/3  The information needs of doctors and continuing medical education (CME) activities. Results of a pilot of medical practitioners in Portugal
A V Carneiro, M Patricio; Lisbon, Portugal

0930 8H/4  The influence of “Abstract” (a bimonthly abstracts newsletter) on medical information update habits among Israeli physicians
Itzhak Levi, Ami Blai, Ron Ben Chaim, Tsvi Fischel; Ramat Gan, Israel
8H/5 Local opinion leaders and diffusion of medical innovations: implications for continuing medical education
Donald S Nelinson; Secaucus, USA

8H/6 Need of continuing medical education in developing countries
Diwakar Tejaswi; Ethiopia

Discussion

Curriculum 4: Curriculum Planning

Chairperson: Professor Carmi Margolis, Israel
Opening Discussant: Professor Lennart Bouman, Netherlands
Room: 207, Gutman Building

8I/1 Data warehousing techniques applied to the development of a curriculum information system
Neil K McManus; Dundee, UK

8I/2 What do medical students learn in hospital? The use of a Patient Contact Audit to inform curriculum planning
Leah Bloomfield, Peter Harris, Chris Hughes, Susan Toohey, Alexandra Smith, Patricia Youngblood; Sydney, Australia

8I/3 Teaching and assessing clinical reasoning skills in a patient-orientated curriculum
H J M van Rossum, Baucke van Minnen; Groningen, The Netherlands

8I/4 Towards teaching and learning physician’s core competencies in medical school: A new model curriculum with three educational tracks
Alexander Weymann, Burkhard Matzke, Bjoern Steffen, Julia Hermes, Katrin Peters, Wilhelm E Vermaasen; Witten, Germany

8I/5 Towards a more flexible learning environment - Information and communication technology (ICT) integrated in the medical curriculum
B Roald, K Lycke, K Lundby, E Bach-Gansmo, J Lanestedt; Oslo, Norway

8I/6 Learning medicine outside the medical school: evaluation of the teaching-learning process over two years
M F Patricio, J Gomes-Pedro; Lisboa, Portugal

Discussion

Induction of Students to Medical School

Chairperson: Dr Elizabeth Kachur, USA
Opening Discussant: Dr Paul Worley, Australia
Room: 208, Gutman Building

8J/1 Does evaluation improve PBL tutorials? A four-year experience with first year students
Øyvind Ellingsen, Kristin Wigen, Are Holen; Trondheim, Norway
8J/2 Easing the transition to medical education
K V Jones; Clayton, AUSTRALIA

8J/3 Identifying students’ learning skills when entering medical school
Angel M Centeno, Alejandra Blanco, Soledad Campos; Buenos Aires, Argentina

8J/4 A Summer Prematriculation Program for at-risk medical students
D L Wiegman, M S Joshua, M E Byrne; Louisville, USA

8J/5 Teaching activities in an integrated PBL curriculum: Questionnaire evaluations by first year students
Øyvind Ellingsen, Kristin Wigen, Are Hølen; Trondheim, Norway

8J/6 The use of pre-registration characteristics for the identification of the academically “at risk” first year student
Hettie Till; Durban, South Africa

1000 Discussion

1030-1100 Coffee

1100-1300 Session 9: Workshops (2)

Please see the Abstracts section for details of the workshops.

9/1 Case development for Clinical Skills Assessment
Dr Gerald P Whelan, Dr William P Burdick and Dr John Boulet, USA
Wburdick@ecfmg.org

9/2 Standard setting
Dr Miriam Friedman Ben-David, UK
Mfbdavid@aol.com

9/3 ‘The past is a foreign country: they do things differently there.’ (L P Hartley – The Go Between)
Maggie Chaliss, UK
Maggie.chaliss@nottingham.ac.uk

9/4 Best Evidence Medical Education
Professor Ian Hart, on behalf of the BEME Collaboration
Please note that this is a closed workshop for members of the BEME Collaboration.
p.m.litley@dundee.ac.uk

9/5 Directors of Postgraduate Medical Education: Building a good learning environment
Dr Kwee Matheson, on behalf of National Association of Clinical Tutors, UK
k.h.matheson@btinternet.com

9/6 A Guide to Assessment of Resident Professional Behaviours
Dr Arthur Rothman, Dr Pamela Catton, Dr Susan Tallett and Dr Linda Sugar, Canada
arthur.rothman@utoronto.ca
9/7  Innovative Methods for Scoring Clinical Simulations  
Dr Charles P Friedman, *USA*  
Cpf@cbmi.upmc.edu

9/8  Strategies for Sustaining Change in Medical Education  
Dr Stewart P Mennin, *USA*  
S mennin@salud.umn.edu

9/9  The Organization of Knowledge: A Key to Clinical Competence. How Can We Help Students to Develop It?  
Dr Karen V. Mann and Dr Bernard Charlin, *Canada*  
Karen.Mann@dal.ca

9/10  The twelve roles of the teacher  
Jennifer Laidlaw and Anne Hesketh, *UK*  
j.m.laidlaw@dundee.ac.uk

1300-1400  Lunch in Zlotowski Student Center

1300-1400  East European Task Force - private lunch

1400-1700  Session 10: Plenaries (2)

**A Vision of Teaching and Learning in the Future**

Chairperson:  Professor Colin Green, UK  
Room:  Joya Claire Sonnenfeldt Auditorium

1400  10/1  Medical Education 2020: 20/20 vision – hindsight and foresight  
M Brownell Anderson, *AAMC, Washington DC, USA*

1420  Discussion

1425  10/2  The global medical school in the year 2020  
Professor Michael Alkan, *Soroka Medical Center, Beer Sheva, Israel*  
Professor Carmi Margolis, *Ben-Gurion University of the Negev, Beer Sheva, Israel*

1445  Discussion

1450  10/3  Present and future training of medical students at Al-Quds Medical School  
Dr Hani Abdeen, *Al-Quds Medical School, Jerusalem*

1510  Discussion

1515-1545  Coffee

1545  10/4  The medical teacher in the year 2020  
Dr Jadwiga Mirecka, *Jagiellonian University Medical School, Krackow, Poland*

1605  Discussion
10/5  The medical student in the year 2020  
Dr Sarah Rennie, University of Dundee, UK

Discussion

1635  
General discussion

1700  
Close of formal conference sessions

1710  
Coaches return to Conference hotels

Please remember to hand in your Conference Evaluation Form at the Registration Desk. (Spare copies are available if required). We value your feedback, together with your suggestions for future speakers and workshop organisers.

Tuesday evening entertainment

2030-2215  
A reception at the Music Conservatory, sponsored by the Municipality of Beer Sheva

2000  
Coaches depart from Desert Inn

2005  
Coaches depart from Beit Yatsiv

2010  
Short walk from Paradise Hotel – meet in Hotel reception

2215  
Coaches return to Desert Inn and Beit Yatsif
Post-conference Workshops

Cost: £30 for half-day and £60 for full-day; all workshops inclusive of lunch and coffee. Please see Abstracts section for full details.

<table>
<thead>
<tr>
<th>Time</th>
<th>Workshop Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>0930-1530</td>
<td>PCW1 How doctors learn</td>
<td>Dr Hank Slotnick, USA</td>
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<td>0930-1200</td>
<td>PCW2 Undergraduate Education in Family Medicine</td>
<td>Dr Howard Tandeter and Professor Pesach Shwartzman, Israel</td>
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<td>0930-1530</td>
<td>PCW3 Undertaking research in medical education</td>
<td>Professor Janet Grant, UK</td>
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<td>1300-1530</td>
<td>PCW4 Decision-making skills in medicine: integrating theory and practice</td>
<td>Professor Carmi Z Margolis and Oded Susskind, Israel</td>
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<td>1300-1530</td>
<td>PCW5 How to select medical students – evidence-based selection</td>
<td>Professor Rivka Carmi, Dr Gilutz Harel, Professor Ilana Harman-Boehm, Dr Yaakov Henkin and Adina Oron, Israel</td>
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<td>0930-1200</td>
<td>PCW6 Grading and scoring OSCE stations</td>
<td>Dr Baruch Weinreb and Professor Ian Hart, Israel and Canada</td>
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Social and Accompanying Persons Programme

Conference Social Programme

The following social events are included in the registration fee. Please see the appropriate point in the programme for details.

Saturday evening: Welcome Reception at Paradise Hotel
Sunday evening: Reception sponsored by Ben-Gurion University
Tuesday evening: Reception sponsored by the Municipality of Beer Sheva

Please complete and return the attached form to the AMEE Office as soon as possible, making your workshop choices and indicating whether or not you will attend the above functions.

Bedouin Feast and Sound and Light Show

(Not included in the Conference Social Programme). There are still tickets left for the Bedouin Feast and Sound and Light show on Monday evening. Please reserve through Ortra Ltd (see page iii). Cost: US$73 per person.

Accompanying Persons Programme

There are still some places left on these tours. Please reserve through Ortra Ltd.

Sunday 27 August (0900-1600 hrs)

AP1: Negev – old and new history
Cost: US$50 per person

Monday 28 August (0900-1600 hrs)

AP2: Judea – nature and way of life
Cost: US$50 per person

Tuesday 29 August (0900-1300 hrs)

AP3: Bedouin culture and lifestyle
Cost: US$45 per person

Pre- and Post-Conference Tours

On arrival at Ben-Gurion Airport in Tel Aviv, participants who have already booked pre-conference tours through Ortra should go to the "Tour Bus" counter (near the rent-a-car counter), after passing through customs, outside the arrival hall. Full details of the arrangements for those registered on pre-conference and post-conference tours will be provided on arrival at the hotel.

There is still time to arrange one of the pre- or post-conference tours listed below. Please reserve through Ortra.
## Pre-Conference Tours

### Pre-Conference Tour A – Jordan
Tuesday 22 August to Saturday 26 August 2000
- Per person in a double room: US $535
- Per person in a single room: US $695

### Pre-Conference Tour B – Caesarea, Galilee, Jerusalem
Wednesday, 23 August to Saturday 26 August 2000
- Per person in a double room: US $399
- Per person in a single room: US $550

### Pre-Conference Tour C - Galilee, Jerusalem
Thursday 24 August to Saturday 26 August 2000
- Per person in a double room: US $289
- Per person in a single room: US $399

### Pre-Conference Tour D - Jerusalem
Friday 25 August to Saturday 26 August 2000
- Per person in a double room: US $139
- Per person in a single room: US $199

## Post-Conference Tours

### Post-Conference Tour E - Massada, Dead Sea
Wednesday 30 August to Thursday 31 August 2000
- Per person in a double room: US $149
- Per person in a single room: US $209

### Post-Conference Tour F - Massada, Dead Sea, Jerusalem
Wednesday 30 August to Friday 1 September 2000
- Per person in a double room: US $299
- Per person in a single room: US $399

### Post-Conference Tour G - Massada, Dead Sea, Jerusalem, Galilee
Wednesday 30 August to Sunday 3 September 2000
- Per person in a double room: US $549
- Per person in a single room: US $769
Section 3

Abstracts
Abstracts

Contents

Sunday 27 August

Session 1
Plenary 1 – Training for the Health Care Professions in the Future 1

Session 2
Short Communications 1
2A Curriculum 1: Outcome-Based Education 2
  2B Postgraduate 1: Postgraduate and Flexible Training 3
  2C Teaching and Learning 1: On-the-Job Learning 5
  2D New Learning Technologies 1: The Internet 6
  2E Clinical Teaching 7
  2F Staff Development 1 9
  2G Assessment 1: Clinical 10
  2H International Medical Education 12
  2I Multiprofessional Education 1 13
  2J Assessment 2: Studies of Assessment 15

Session 3
Large Group Sessions 1
  3A Training for Medical Specialties in the Future 16
  3B Best Evidence Medical Education 17
  3C Three Visions of Assessment in the Future 18

Session 4
Workshops 1 19

Monday 28 August

Session 5
Large Group Sessions 2
  5A Learning in the Future 23
  5B Simulation and New Learning Technologies: the virtual patient 24
  5C Training and Certification of Teachers and Trainers: the professionalisation of medical education 25

Session 6
Short Communications 2
  6A Curriculum 2: Curriculum Planning and Change 26
  6B Postgraduate 2: Training for Specialist Practice 27
  6C Teaching and Learning 2: Learning Styles and Approaches to Learning 29

  6D New Learning Technologies 2: Computer-Assisted Learning 31
  6E Problem-Based Learning 1: Methodology 32
  6F Staff Development 2 34
  6G Assessment 3: The OSCE 36
  6H Continuing Medical Education 1 37
  6I Multiprofessional Education 2 39
  6J Selection of Medical Students, and Career Choice 40

Session 7
Poster Presentations
  7A Curriculum Planning/Curriculum Evaluation 42
  7B Postgraduate/CME/Staff Development 45
  7C Teaching and Learning/Evaluation 48
  7D Important Topics in Medical Education 50
  7E Student Recruitment and Participation 53

Tuesday 29 August

Session 8
Short Communications 3
  8A Curriculum 3: Educational Strategies 56
  8B Postgraduate 3: Pre-Registration House Officer Training 57
  8C Teaching and Learning 3: Communication Skills Training 59
  8D Important Topics in Medical Education 60
  8E Problem-Based Learning 2: Experience and Evaluation 62
  8F Assessment 4: Approaches to Assessment 63
  8G Assessment 5: ECFCMG Clinical Skills Assessment Unit 65
  8H Continuing Medical Education 2 66
  8I Curriculum 4: Curriculum Planning 68
  8J Induction of Students to Medical School 70

Session 9
Workshops 2 71

Session 10
Plenary 2 – A Vision of Teaching and Learning in the Future 74

Wednesday 30 August
Post-Conference Workshops 76
Session 1  Plenary 1: Training for the Health Care Professions in the Future

1/1  The Beer Sheva Experience

Shimon Moses
Faculty of Health Sciences, Ben-Gurion University of the Negev, P O Box 653, Beer Sheva 84105, ISRAEL

Moshe Prywes, the Founding Dean, defined the main goals of the Medical School as: to produce a humane, well-trained physician; to improve the health of the Negev population; to put emphasis on community medicine; and to use innovative learning and teaching methods. To achieve these goals the following special features were employed: an admissions policy based mainly on a semi-structured personal interview; student participation in most medical school committees; a pre-study orientation period; early clinical exposure with horizontal integration with basic sciences; students take the physicians’ oath on commencement of studies; a natural history of disease; self-learning under tutorial supervision; system-based teaching; emphasis on community-based learning; students in good standing are assisted in their fourth year summer break to attend a medical school abroad; a supervised research program is required during the fourth to sixth year; basic science injection course during clinical years; qualifying exams during clinical years include OSCE and simulated patients.

The result has been: good performance of graduates in national and international exams; excellent feedback about graduates from all hospitals in Israel; marked upgrading of health services in the Negev; development of academic family medicine in Israel; influence on curriculum of other Israeli medical schools; limited success with number of graduates in community medicine.

1/2  Selection for entry to medicine and specialist training

Shimon Glick
Center for Medical Education, Faculty of Health Sciences, Ben-Gurion University of the Negev, PO Box 653, Beer Sheva 84105, ISRAEL

The task of predicting professional performance during several decades of practice on the basis of any process which takes place a decade earlier is a virtual impossibility. Basically most Western medical schools seek some degree of academic excellence as predicted by school grades and pre-admission examinations. The data suggest that one need not be in the top 1-2% academically for success in medicine. One would therefore do better to place greater emphasis on the key personal qualities desirable in physicians in spite of even greater difficulty in assessing these factors. It seems that trained interviewers using a semi-structured interview can improve the selection process at a considerable expenditure of manpower. Selection for specialty training has heretofore not attempted to seek and identify those qualities specific for each specialty. Application of techniques for this purpose may be the desired trend in the coming years.

1/3  Curriculum strategies and content for the basic training of health care professionals

Rob Sanson-Fisher
Faculty of Medicine and Health Sciences, University of Newcastle, Callaghan 2308, AUSTRALIA

It is becoming increasingly clear that we need methods of determining what is incorporated into the undergraduate curriculum of health care providers. Traditionally, this field has been one where conflict exists between the various groups for teaching time and hence potential financial reimbursement. As a consequence, undergraduate courses have often been afflicted with an unnecessarily large component of information in some areas which may not be needed, while not gaining information in newer areas which are essential for competencies. A discussion of some of the ways that this decision-making process can occur will be discussed, together with some of the areas that are likely to emerge as future undergraduate education needs.

1/4  Postgraduate specialist training and continuing professional development

Kenneth Calman
Vice Chancellor and Warden, University of Durham, Old Shire Hall, Durham DH1 3HP, UK

The subjects of specialist training (ST) and continuing professional development (CPD) can only be considered in the light of the continuum of medical education. In particular, the phases of education which precede them, undergraduate education and basic specialty training, set the backdrop for these later developments. As this symposium has as its purpose to look ahead to the 21st century, it will be necessary, before considering the training aspects of ST and CPD, to consider the context in which the specialist of the future might work. While it is always difficult if not impossible to predict the future, several assumptions can be made. There are also assumptions made about the value and role of the specialist, but do we need them, and what is the evidence for their value? They are expensive to train and to fund and we need to be sure that they are worthwhile. These questions need to be asked, and hopefully answered before discussing the main subjects of the paper. This presentation therefore sets out to answer four questions.

☐ What will the context be of the practice of medicine in 2020?
☐ In the light of this, what is the role of the specialist and will we need them?
☐ If so how will they be educated?
☐ How will we maintain the level of competence of specialists?
Session 2A  Curriculum 1: Outcome-based Education

2A/1  The importance of curriculum outcomes

J R Crosby, R M Harden, J S Ker, M E Friedman
University of Dundee, Ninewells Hospital and Medical School, Dundee DD1 9SY, UK

The Dundee undergraduate curriculum has introduced outcome-based education. Twelve broad outcome areas have been identified. These 12 learning outcomes act as a framework for the structure and delivery of a medical undergraduate five-year course. This study aimed to determine staff, students' and the general public's perception of the importance of the outcomes. In addition participants were asked to rank the outcomes based on how much time should be devoted to teaching/learning the respective outcomes. All groups rated all 12 outcomes as being of some importance. The majority of the outcomes were rated as being of significant or great importance. Variations in the rating of importance were found between students in different years and between staff, students and the general public. In addition staff, students and the general public differed in the amount of time they thought should be devoted in the curriculum to each outcome. These results will act as baseline data for future studies and also inform the medical school of outcome priorities.

2A/2  Making medical education responsive to community diversity

Nick Ross (for the Responsiveness to Community Diversity Group)
The Medical School, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK

The University has been funded to explore ways in which undergraduate medical education should respond to community diversity. This has involved a literature review, consultation with minority groups and mapping relevant teaching/learning in the curriculum. In addition to enhancing input on culture, health beliefs and patterns of illness amongst minorities, we identified a need for a co-ordinated approach to the development of appropriate student attitudes regarding diversity. Strategically, this has been managed through adjusting learning outcomes to stress the importance of individualised (non-stereotyped) care. Classroom sessions focusing on cultural and ethnic minority issues have been added and evaluated. Further measures include clinical learning focusing on self-awareness of stereotyping behaviour (and willingness to discuss issues) relating to gender, ethnic or social background, sexual orientation etc. Professional behaviour regarding individualised care is assessed throughout the course. This presentation will outline the research, but will focus on curriculum changes.

2A/3  The Scottish Learning Outcomes Project - a foundation for competent and reflective practitioners

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Undergraduate medical education in the United Kingdom has undergone major change in recent years. This process has highlighted the need to keep pace more closely with changes in medical science and the practice of medicine. An outcomes-based approach to medical education is an effective way of ensuring this without restricting either the type of curriculum or the methods of teaching and learning. The benefits of collaboration, frequently demonstrated in other areas of science and medicine, are no less applicable to medical education and the Scottish Learning Outcomes Project is a good example of this. In this unique joint effort the medical schools of Scotland have reached agreement on learning outcomes that define the abilities of the medical graduate from any of our schools. These outcomes will be used in curriculum planning, the development of shared teaching and learning resources and to enhance communication between undergraduate and postgraduate educators.

2A/4  An associative database to develop learning objectives

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While traditional curricula tend to have extensive and systematic, discipline based lists of learning objectives, PBL curricula often lack sufficiently detailed and clearly defined learning objectives. In part, this may be due to the difficulty in formulating and documenting a coherent interdisciplinary knowledge and skill base that maintains the inherent associations between topics arising from diverse disciplines. To overcome this methodological impediment, we have developed a multi-dimensional, associative database. Topics are classified by organ system, life process and cognitive category. They are associated with any number of disciplines, courses, competence taxonomies and other topics. Data are entered in user-friendly forms or with spreadsheets. Results can be printed out in a practically unlimited number of different reports, grouped and sorted by the various systems, processes, cognitive categories, courses, disciplines, competence levels and dependencies. The database can be adapted to any language with Microsoft Access support.
Health care education in South Africa and outcomes-based education: how far can we go?

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Much has been written on outcomes-based education (OBE) in the medical and related literature. One of the key aspects of OBE is the integration of various subjects or disciplines, especially the basic ones, which contribute in a relevant manner to the outcomes of a particular curriculum. On the other hand, unit standards are designed to facilitate key concepts of the National Qualifications Forum such as accessibility and portability, which are central to the transformation process in South Africa. In order to do so, such unit standards must be designed as relatively straightforward educational entities that may be obtained independently of the programme the learner ultimately wishes to follow. The question addressed by this paper, then, is: "Does the concept of an integrated programme contradict or deny the idea of credits obtained via unit standards?"

Standard-based education in Ukraine: are we going in the right direction?

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Starting in 1998, Ukraine has adopted the strategy of development and introduction of new standards for higher education. The general methodology that allows development of standards for any area of professional education has been suggested and introduced. The major feature that characterises new "standard-based education" unlike the education model that was employed in the Soviet era, is orientation of education on the quality of final product (professional graduate) instead of on the quality of educational and teaching processes per se. New standards in Ukraine are still in process of development. The authors try to analyse how much is in common and different between an outcome-based approach to education in the UK, a competency-based approach to education in the USA and standard-based approach to education in Ukraine. Dental education was taken as an example. Discussion on whether the UK outcome-based model and US competency-based model are applicable in Ukraine today is presented.

Session 2B Postgraduate 1: Postgraduate and Flexible Training

Does GP training meet the needs? A study from Highland Region, Scotland

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In 1998 two questions were asked of the Highland region. One was: do we train for remote and rural practice, and the second was: does the low workload in some of our local practices disadvantage GP Registrars in their later career. I decided to investigate this by going back to our GP Registrars over a 10 year period to see what had happened when they entered into practice. A questionnaire aiming initially for a simple database as to where they were based and the type of practice they were in was appended to an open text questionnaire asking for their comments and opinions on what had caused them problems or concerns on their establishment within practice and what changes to our educational set-up could be made in order to improve the transition. The results of these show a tendency for us to train for rural practice. We are not meeting needs in several areas and multiple topics of the transitional phase are causing considerable distress to GP Registrars.

Towards a flexible workforce: a basis for cultural change

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This is the first phase of a longitudinal study (10-15 years) of career grade doctors and dentists in Scotland to commence in September 2000. Following a robust literature review, a range of key issues has been identified. For the dental profession these are occupational hazards and sources of stress and changes in the workforce and type of work. For the medical profession the main themes are medical workforce planning; government action; potential solutions; gender inequality in the labour market; gender inequality in the medical profession; causes of occupational stress and burnout; and sources of job satisfaction. In addition, less well documented evidence suggests that urban and rural variables will contribute to our understanding of the problems and potential solutions. Considerable research has been conducted on doctors in training but less attention has been paid to dentists, career grade hospital doctors and GP non-principals. This project aims to redress the balance.
Do SHO Educational Supervisors need appraisal skills training?

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Regular appraisal is increasingly recognised as a crucial component of the effective training of doctors. In hospitals it is generally assumed to be part of the role of consultant Educational Supervisors. However, the majority of consultants have not had training in appraisal and such opportunities are limited. In recognition of this, SCPMD have funded this project in a regional teaching hospital to explore the views of a group of consultants on appraisal, to engage them in reflecting on this aspect of their role, and to elicit their perceived learning needs. 97 local SHO Educational Supervisors in all hospital specialties were invited to participate. At the time of submission (6/4/00) 82 have agreed, and 46 semi-structured interviews based on a previously completed questionnaire have been conducted. Initial impressions are that there is a range of attitudes to appraisal and to the possibility of training opportunities. It is expected that data analysis will inform the development of appropriate, acceptable educational interventions for consultants.

Flexible Training in England and Wales

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Over 50% of medical graduates in the United Kingdom are now women. In order to retain women (and increasingly men) within the workforce flexible part-time postgraduate training is available at all grades and in all specialties. The annual national surveys carried out by the Flexible Training Sub-group of COPMed provide a comprehensive source of information on flexible training in hospital medicine in England and Wales 1994-99. The surveys have revealed:

- A continuing rise in the number of flexible trainees.
- A variation in the numbers of flexible trainees between different regions and different specialties.
- The option of job-sharing training posts is only successful in large urban areas (e.g. London)
- A lack of information about the career destination of flexible trainees. A South Western Deanery survey shows that the majority of flexible specialist registrars become part-time consultants.

The survey has stimulated a number of further research projects.

Using interns’ feedback as an aid in the evaluation of hospital units’ suitability as training sites

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Supervisory responsibility of interns from Hong Kong’s two medical schools is assigned to the Chiefs of Services of various hospital units that have been reviewed and found suitable as training sites. Notwithstanding, the quality of the internship training remains the responsibility of the medical schools, and both previously had concerns as to the amount of non-educationally useful work that was assigned to their interns. For the past five years, systematic assessments have been conducted of the hospital units by the interns. Given the quality of this database of over 5,500 assessments, the medical schools are now able to use the data for quality assurance (i.e., reallocation of assigned interns, helping hospital units to improve specific training components). This paper discusses steps undertaken to ensure that the interns’ feedback was valid, and the level and nature of impact that this feedback made in improving Hong Kong internships.

Resident Training in the age of Minimally Invasive Surgery

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We are now experiencing a quiet revolution in the field of General Surgery. Its essence is that procedures once performed by traditional, open approaches are often performed through “keyhole” incisions with the assistance of advanced technology and devices. These advances have profound influences on the training of a new surgeon. Successful application of these techniques requires that the young surgical trainee assimilates a new body of knowledge. For example, the relevant anatomy appears quite different on a television screen than it does during cadaver explorations or open surgery. Similarly, basic maneuvers such as knot-tying and suture cutting are difficult to master, as there is no tactile feedback during laparoscopic procedures. Finally, the nuances of postoperative care – and the range of possible complications – differ greatly from that of patients treated in the conventional manner. Surgical patients in the year 2020 will have fewer surgical scars, and will recuperate at home. Their surgeons will have to be adept at both classical and minimally invasive procedures, and comfortable with outpatient management of possible complications.
**Session 2C**  
Teaching and Learning 1:  
On-the-job Learning

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### 2C/1 On the job learning? Or on the job learning?

Ray Philp  
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In practice-based professional education, the introduction of new technologies (hard or soft) into the practice setting is de facto curriculum innovation. One such recent innovation in the UK has been 'team midwifery'; a government mandated initiative intended to provide women with more control over their childbirth experience. This study compared 'on the job' teaching in a team midwifery setting with 'on the job' teaching in a setting where this organisational change had not yet been introduced. No prior curriculum planning had been undertaken locally to manage the impact of the new system. The study found that the teaching approach used by the midwives in the team setting was related to doing the job or the task in hand. This presentation will include examples of 'job how' and 'job why' teaching approaches from each practice setting and consider the implications for 'on the job' learning.

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### 2C/2 Long term recollection of real patients and study tasks in a patient oriented medical curriculum in The Netherlands

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During the preclinical years of the medical curriculum at the University of Groningen real patients are presented to the students weekly. The students deal with study tasks which are defined on the basis of these real patients. Both the patient and the study tasks provide a realistic context, which should help the student retain the acquired knowledge. Is this claim about the role of real patients and study tasks valid? A pilot study was conducted to find out what impressions from the real patients and the study tasks the students remembered at the time of qualification. Seven interns described all patients they could remember from the preclinical years. They also reviewed all study tasks and gave their opinion on how much they could recollect of these tasks. Students appear to remember a unique, individual collection of patients. Recollection of study tasks increases if the students personally present the task.

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### 2C/3 Doctor-tutors vs. non-doctor-tutors: differences in test performance of students?

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At last year's AMEE conference in Linköping we presented the results of a study concerning differences between doctor-tutors and non-doctor-tutors, e.g. social and biological scientists. Students have reported no differences between doctor-tutors and non-doctor-tutors, except for content issues. The question arose whether the reported differences were confirmed in test performances of students. It might be expected that the performances of students with doctor-tutors were better than those of students with non-doctor-tutors. This year, a new study was conducted involving the same tutors and students as in the study mentioned above (97 tutors, approximately 700 students). Per tutor we computed the mean performance of the students on written tests. The initial results show no major differences in test performance of students with doctor-tutors and students with non-doctor-tutors. This confirms our hypothesis that lack of content knowledge of tutors is not an apparent problem for student performance.

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### 2C/4 Teaching principles of drug therapy with 'cognitive apprenticeship'

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In the Academic Medical Center-University of Amsterdam, medical students learn to use previously acquired pharmacological knowledge during their first internship when they have their first confrontation with patients. During one hour sessions a student presents a case to a small group of students and one teacher, including the diagnosis and drug therapy that has been chosen. Subsequently, the group discusses the decisions made for that particular patient. Evaluation shows that the student presenting the case only interacts meaningfully with the teacher. Furthermore, students digress too much on diagnosing. To overcome these drawbacks we applied the 'Cognitive Apprenticeship educational theory' to remodel the session and also make it a more effective learning experience for all students. This presentation attempts to explain the new format. In addition, our experiences with this new format will be given.
On-the-job learning – the clinical environment

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Medical training in all stages of the educational continuum contains a significant amount of time devoted to on-the-job learning within the clinical environment. Inpatient and outpatient departments, clinics and other medical settings, provide the context for learning. Apart from bedside teaching and learning, the clinical environment presents multiple learning challenges to the trainee. Yet, research studies in medical education focus more on structured learning experiences in the preclinical years, and less on the educational aspects of on-the-job learning. This presentation will discuss Formal, Informal and Incidental learning, with regard to their educational benefits in the clinical environment. Trainees' characteristics, which promote effective learning on the job, will be presented. These characteristics are essential for the development of professional competencies, and for enhancing lifelong learning skills. Program outcomes as well as assessment approaches may provide a framework for developing, monitoring and maintaining the characteristics of on-the-job effective learning.

A learning experience with a difference

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Second year medical students at the University of Natal were given a brief to prepare oral presentations on topics related to disorders of the gastrointestinal tract (GIT) and endocrine system in the form of ‘patient-doctor’ role play; and to submit written documents about their topics which were made available to all students on the local area network following the review by staff. The aim of this exercise was to improve the understanding of the physiological basis of diseases; promote active learning, independent research and group-based learning; encourage social interaction; develop presentation and peer review skills. Students rose to the challenge producing a variety of presentations reflecting a wealth of creativity, humour, sensitivity to local cultural issues, and analytical thinking skills. The quality of supporting computer-generated slides was outstanding. Prizes were awarded, based on combined students’ and staff marks, for the three best presentations. Numerous ‘fun’ prizes for specific individual and group performances were also given. Evaluation of the exercise revealed that students perceived it to be fun (80% of respondents, n = 98), informative (42%) and creative (25%) and importantly, beneficial to their learning (76%).

Session 2D New Learning Technologies: The Internet

Impact of the use of a virtual learning environment on the medical curriculum

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After an 18 month experimental phase, in September 1999 a virtual learning environment on the internet has been introduced in both branches of science of the Leiden medical curriculum. With this environment called VSO, additional organizational information and learning materials are provided to the students such as schedule changes, recently provided educational assignments, interesting links to information on the internet, multimedia materials and formative tests. In many cases this information is provided through the VSO only. The introduction of the VSO has had many influences on the normal working method of students as well as teachers, and has even had some impact on the medical curriculum itself. By use of a questionnaire, all teachers and students involved in the first year of study were asked for their personal experiences. The questionnaire included questions on intensity and efficiency of use, communication between teacher and student and general usefulness.

Support of medical students in the utilization of the most current information in the year 2020

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To obtain updated and methodologically relevant information is essential to the concept of evidence-based medicine and in the context of life long learning. Medical databases like MEDLINE create an opportunity to integrate the latest relevant information into computer or web-based training (CBT/WBT) systems. For example, an integrated CBT module on diabetic foot syndromes can automatically provide the learner with the latest reviews. In this paper, we describe a method to realize this opportunity by providing MeSH-coding support to CBT authors. We have integrated this advanced feature into our case-based system CASUS. With CASUS, students are automatically provided with the latest problem-related reviews and also learn to do an extended literature search. This feature can be integrated into any kind of CBT environment and will enhance critical reading skills of medical students.
Facilitating interaction in web-based teaching

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Several schools involved in the teaching of medical and life science students at UNSW have been using a web-based teaching tool, called WebTeach, with both distance and on-campus students. While most web-based teaching tools focus on the delivery of content, the WebTeach tool focuses on support for structured interaction. It uses several locational metaphors, including a Seminar Room and Coffee Shop, and within these locations provides structured support for common pedagogic interactions such as informal discussion, brainstorming, argument, case studies, and questioning. Each form of interaction is provided with its own linguistic and stylistic markers to enhance the ease and functionality of communication. The use of the tool has resulted in effective and extensive teacher-student and student-student interaction. Some examples of teaching sessions using the tool will be analysed and discussed, and some guidelines will be drawn for those aiming to enhance web-based pedagogic interaction with and among students.

Web-based Patient Management Problems: Development of OCCAM

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Patient management problems (PMPs) effectively develop clinical judgement and decision making encouraging diagnostic parsimony. We describe their construction using web-based templates. Our open branched PMPs cover history, examination and investigation, with around 200-300 branches in all. Navigation is by a nested menu system, with a standard classification system (currently RCPCH modification of ICD-10) used to enter a diagnosis.

The use of print and non-print learning resources among medical students: A survey

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The objective of this study was to assess the attitudes of medical students from Bern, Switzerland, have towards using various learning resources (books, videotapes, CD-ROMs, Internet). In 1999, 281 of 429 medical students (65%) in the 1st, 3rd and 5th years responded to a questionnaire. For learning and study purposes, 88% frequently used printed resources (textbooks), 28% used the library, and only 5% frequently used videotapes, computer aided learning (CAL) or the Internet. In our computer lab, only 31% of the CD-ROM-based instructions are used longer than 15 minutes. Among our students, 87% have private access to a PC and 51% even have an Internet modem. But there is a gap between private Internet use (51%) and its application for learning purposes (5%). This demonstrates that the rate of computer literacy among medical students, in itself, is not at all poor, but nonetheless rarely practised for learning and study purposes.

Will current trends in medical education expand the horizons for ward-based teachers? A dichotomy of medical students' responses

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Ward based teachers (WBTs) were first introduced in Leeds Medical School in 1997 to help facilitate learning of 3rd year undergraduate medical students. Following positive evaluation three more were appointed in 1998. They are healthcare professionals and work within two large city hospitals. WBTs are an innovation grafted onto an already existing system of undergraduate medical education. This paper addresses the potential expansion of the WB teaching scheme to incorporate district hospitals (DH) and General Practice within the Leeds area. Following a request from a consultant at a DH, WB teaching was initiated at that hospital and students' opinions were sought to help assess the need for WBTs in the other areas highlighted. A question on the evaluation form asks students "For those students who have placements outside SJUH or LGI, would ward based teaching sessions be useful?"
Comments received showed mixed responses. Results will be available for presentation and discussion at the conference.

2E/2 What patients are our Pediatrics students seeing in outpatient clinics?
Pedro Hershkovic, Alicia Vásquez, Macarena Bonacic, Francisco Bustamante, Pilar Hernández, Jorge Hershkovic, Carmen G Lagos, Carolina Pastene, Francisca Salas
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Undergraduate medical studies have traditionally been inpatient centered, however advantages have been invoked for focusing on outpatients. Our course devotes most of its time to outpatients, but no assessment is made to check if students are exposed to the patients they are supposed to. We wanted to generate information on this issue. The 1999 Pediatrics course was divided into seven groups. Each group attended 50 sessions in outpatient clinics. We expected four daily patient encounters per group. Patients were registered with up to three diagnoses, which later were compared with the 46 pathologies included in our learning objectives. Patient encounters ranged from 43 to 171 per group. Exposure to pathologies ranged from 43.5% to 71.7%, with diagnoses frequently made by some groups omitted by others. Alternative activities to ensure exposure to all 46 pathologies must be designed. Continuous assessment of "what is going on" in the learning process is needed.

2E/3 "Harvey" Grand Rounds
Stuart Pringle, Shihab Khogali, Ray Newton, Don Brown, Joy Crosby, Miriam Friedman, Ronald Harden, Michael Gordon
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We wish to describe the novel use of "Harvey," the cardiology patient simulator, to enhance the value of a teaching hospital's weekly Grand Rounds - postgraduate clinicopathological case conference. The case presenter (SP) and two expert discussants (MG, DB) used "Harvey" and the UMedic multimedia program to "bring to life" a complex case of aortic stenosis. Through video projection and audio headsets the audience was able to appreciate for themselves the bedside clinical findings (pulse wave forms, precordial impulses, additional heart sounds and murmurs) as well as the non-invasive and invasive investigations (ECG, echo/Doppler and cardiac catheterisation). The case presentation, part of a workshop to launch the first use of "Harvey" in a UK medical school, was extremely well received. Objective evaluation of the workshop as a whole confirmed our impression of a positive audience response to this novel method of postgraduate teaching.

2E/4 Assessment of the constructivist approach to cardiology teaching
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Currently medical education favours a constructivist approach. This study assesses students' core cardiology knowledge and skills throughout their undergraduate course.

Without prior warning, students were examined by a standardised questionnaire, on clinical sciences, ECG interpretation, clinical skills and auscultation using HARVEY.

Detailed analyses showed no positive change in ECG interpretation, clinical skills or auscultatory skills, but a significant decline in clinical sciences from years 2-4 (p=0.001). Inter-year variations were observed for specific questions e.g. whilst in year 4, there was a significant decline in knowledge of acute angina treatment (p=0.003), there was an increased recognition of atrial fibrillation on an ECG (p=0.001). The findings did not support the hypothesis, consistent with a constructivist approach, that scores would increase with the years. This suggests that greater reinforcement throughout the course may be required to maintain and improve the knowledge and skills base.

2E/5 A Clinical Clerk Crisis Clinic: innovative education and effective treatment
Jodi Lofchey
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Primary care physicians must be able to respond to patients in crisis, yet little training is provided to allow medical students to develop these skills. To address this, a psychiatric hospital at the University of Toronto created an innovated teaching program. Through the Clerk Crisis Clinic, third year clinical clerks met for 6 individual sessions with patients in crisis who were carefully selected from the Emergency Department. A senior resident or staff psychiatrist provided supervision. Patients and clerks were surveyed at the end of the rotation. All patients reported high satisfaction with the treatment (N=13) while 88% of students (N=16) found the experience useful and relevant. Students demonstrated significant skills in crisis management on the final psychiatry OSCE. It is clear from this preliminary work that medical students are capable of providing crisis therapy to selected patients and that both patients and students benefit from such experiences.
Session 2F  Staff Development 1

2F/1  A teachers' training course in medical education. A follow-up study

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Three years ago a group of faculty members in the Medicine Faculty of the National Autonomous University of Mexico started a 276 hours theory-practical course called “Medicine Learning”. A follow-up study has been undertaken with 191 teachers who took part in the program. The course is guided by three current pedagogical theories (traditional, educational technology and cognitive theory) which have an impact on medical teaching (learning and practice) including teachers and students, learning styles, strategies, assessment and research techniques. The study group mean age was 42 years; 81% of the population was medical practitioners, 60% medical specialists. The range of teaching experience was 5-10 years, 30% in basic areas, 54% in clinical and 17% in social-medicine. The follow-up study was performed through a mail questionnaire that explored the application of the contents and skills learned by the teachers, and the impact on the students’ knowledge, as well as their suggestions for changes in the course. Results of this experience will be widely discussed in the report.

2F/2  Preparing faculties for the next generation: a program on teaching students how to teach

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Students interested in acquiring teaching skills may choose to participate in an elective teaching assistant development program offered as a part of our School’s Faculty Development Programs. In order to be accepted students have to choose a basic science discipline in which they are interested to teach, and must go through an admission process. This includes an interview, evidence of a good educational record, and they may eventually be asked to prepare some educational work for that discipline (mini-lecture, case writing). The program lasts a whole semester and includes active participation (many times as tutors) in required educational activities (group management, lecturing, evaluation, educational planning, learning principles), independent learning and observation of teaching, and actual teaching. Students who successfully complete this program are accepted and given credit as tutors for their junior peers. Evaluation of the efficacy of this program is not completed yet.

2F/3  Faculty development for nurses: a strategy to influence our nursing community

Alejandra Blanco, Gretal Desmery, Angel Centeno
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In our country nursing as a profession is suffering from a shortage of applicants and low social recognition. As a strategy to modify this situation we started a faculty development program oriented towards:
- improving our nurses’ teaching skills,
- enhancing their awareness of their role as professional leaders, so as to act as a multiplying factor for increasing the interest of new potential nursing candidates,
- acting as models for other nurses who have not yet participated in continuing professional activities.

Every faculty at the School of Nursing is invited to participate, as well as other nurses with clinical activities. The program includes teaching, mentoring and research skills, and is conducted monthly throughout a whole year. We intend to assist the nursing community to develop useful and attractive professional educational skills. So far the acceptance of the program has been enthusiastic even though it is early to measure its efficacy.

2F/4  The postgraduate diploma in professional teaching observation and reflective practice

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This new Diploma is designed to meet the needs of medical teachers from the District General Hospitals (DGHs) aligned to Guy’s King’s and Thomas’ Medical School (GKT) in London. It aims to provide educational support for medical staff in the DGHs where our students spend time on placement. The Diploma uses a ‘reflective practitioner’ model of learning and offers practical opportunities for medical teachers to examine and extend their roles and practices within the framework of teaching and education. It has three main elements: teaching observations, the professional development journal and monthly seminars with written assignments. Those completing the Diploma will work as teacher educators within the DGHs delivering the Certificate in Teaching. A pilot programme with six hospitals began in February 2000. This paper will outline the philosophy, rationale and development of the course and report on the first six months of implementation.
**A brief programme to increase interest in and quality of teaching in non-faculty medical staff**

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Karolinska Institute (KI) is one of the largest medical schools in Europe. The number of physicians involved in teaching vastly exceeds the faculty. To reach this group with encouragement for teaching is difficult. We invited non-KI employed physicians, involved in teaching, for a full day programme, where hands-on experience was derived from group activities. Among the topics were: How to make lectures and examinations conform with core curriculum, how to help students integrate with clinical staff, and the power of learning in groups. Participants were treated to lunch and full dinner. On a 1-5 evaluation scale, the day was rated 4.2. It is concluded that modest efforts directed towards non-faculty physicians involved in teaching is most rewarding and provides them with encouragement and inspiration to take an active part in teaching activities, and renders them aware of their importance and impact as teachers and role models.

**Evaluating the SCOTS course?**

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SCPMDE will launch a new course in November 2000, to support the development of clinical teaching. The course, designed by a team of educationalists and clinicians, is the first in a series to address the changing needs of educational supervisors. The systematic evaluation of this initiative will measure short and medium term outcomes. Critical to this is a) the validity of proxies identified to measure cultural shift and b) the initial benchmarking which is completed prior to the commencement of the project. The process of mapping the impact of the course will require data relating to change occurring at each of three levels viz national, NHS Trust, and individual clinician. Quantitative data will include numbers of clinicians who complete the course, their views on the education received, and numbers who become teachers on the course. Qualitative data will include clinicians’ and their trainees’ experience of change, and will require to map the changing structure and conditions of postgraduate training throughout Scotland and within NHS trusts.

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**Session 2G  Assessment 1: Clinical**

**Specialist Training Assessment: France and U.S. - A Cultural Comparison**

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The presentation will compare the role of assessment in specialist medical training in France and the United States. The comparison is of interest because in France medical education is controlled from within a complex university system directed and supported by the state. The oversight mechanism for the educational program is not immediately apparent for the reason that it is internal, operating at many levels, and rooted in the tradition of the public university system. All degrees are of relatively equal value and the rules are already in place as the student moves through the progressive levels. There are elements of homogeneity and trust that are not present in the American system. In the U.S. neither the society nor the educational system is homogeneous. The medical education system relies heavily on external evaluation by objective bodies to assess programmatic excellence and trainee competence. All degrees are not equivalent and there is not the same faith in a continuous recognisable intellectual tradition. The presentation will draw on examples from anaesthesiology training in both countries to provide a real context and will touch on changes already planned in the U.S. and France that will affect the assessment process.

**Construct validity of a newly designed formative assessment tool for use with basic surgical trainees (BST)**

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The aims were to determine the construct validity of a newly designed BST assessment form and to compare its performance with that of the current intercollegiate assessment form. 13 BST trainees were evaluated by the intercollegiate assessment form and the new instrument before and after 1 year of surgical training. The new instrument, completed by multi-disciplinary assessors, measured competence in 70 tasks from 5 domains (I: communication, II: knowledge, III: teamwork, IV: clinical, V: technical). The 16 tasks on the intercollegiate form were divided into 5 groups to correspond to the domains of the new instrument. Scores obtained at the 2 stages of training were compared using Wilcoxon signed ranks test. Using the new instrument significant improvement after training was found for four domains; no improvement was found for any domain of the intercollegiate form.

Below is a table showing the comparison of scores:

<table>
<thead>
<tr>
<th>Domain</th>
<th>New Instrument (medic [QRI])</th>
<th>Current Intercollegiate form [medic [QRI]]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time 0 Time 1 Year</td>
<td>P (Wilcoxon)</td>
<td>Time 0 Time 1 Year</td>
</tr>
<tr>
<td>I</td>
<td>81 (26-100)</td>
<td>100 (100-100)</td>
</tr>
<tr>
<td>II</td>
<td>73 (19-92)</td>
<td>72 (13-94)</td>
</tr>
<tr>
<td>III</td>
<td>81 (51-100)</td>
<td>100 (100-100)</td>
</tr>
<tr>
<td>IV</td>
<td>62 (66-100)</td>
<td>92 (69-100)</td>
</tr>
<tr>
<td>V</td>
<td>27 (13-60)</td>
<td>79 (52-100)</td>
</tr>
</tbody>
</table>

It is concluded that construct validity of the new instrument is superior to that of the intercollegiate form.
**Assessment of Practising Doctors’ Clinical Judgement**

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Doctor’s clinical judgement is being studied using an approach that relies on “policy capturing” methods. Judgement analysis focuses attention on the formal properties of clinical “tasks” in explaining disagreement among clinicians. This paper reports on studies of ten generalist practitioners who have confronted five clinical tasks. These include diagnosis of pneumonia, depression, hypertension, asthma and management of patients with multi-system problems. Tasks vary in expected ambiguity. Analysis begins with collecting each doctor’s judgements on a set of 60 cases within a task. Using linear regression techniques, a judgement “policy” is derived and the doctor’s consistency is calculated. Subsequently, doctors’ policies are compared using correlational analysis. Usually doctors’ consistencies were high. In addition, only moderate levels of within-task agreement among doctors were obtained. Analyses confirm a relationship between these measures and the expected ambiguity of the task. Implications are discussed.

**The use of video tape assessment of doctors training to be GPs in a UK Region**

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Videos are widely used as a resource for teaching and, over the last few years, for assessment. This study reports on attitudes among GP Trainers towards video in 1994 and 2000. In 1994, a questionnaire about video was administered to all GP Trainers in West Midlands region, UK. This questionnaire was readministered in 2000, with the addition of questions about attitudes following the introduction of video assessment. In 1994, 93% of Trainers used video in training. 48% used it to record their own consultations. 61% agreed/agreed strongly that it should be used in the summative assessment of Registrars, but only 41% agreed/agreed strongly it should be used for reaccreditation of established GPs. Full results of the 2000 survey will be available. Changed attitudes towards video may reflect changed attitudes to formal assessment and reaccreditation, and changes in confidence about the reliability of video assessment.

**Incorporating the HEADSS approach in an adolescent standardized patient — checklist**

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Taking a thorough psychosocial history of an adolescent patient is as important as it is challenging, and the HEADSS approach provides a structural method designed to maximize communication. The acronym HEADSS stands for Home, Education/Employment, Activities, Drugs, Sexuality, and Suicide/depression, which identify areas about which the patient is interviewed. We have incorporated the HEADSS approach in the checklist for an adolescent case used in the Fourth-Year Assessment administered at The Morchand Center to students in the member schools of the New York City Consortium. The Checklist completed by the standardized patient (SP) contains 30 items including eight which address the HEADSS concerns. The purpose of this paper is (1) to discuss the use of the HEADSS approach in the SP-testing format, (2) to review psychometric findings based on the results, and (3) to assess the impact of teaching the HEADSS method for examinee performance. Analyses were performed on data for approximately 1,000 graduating students (1999 and 2000). Preliminary results show moderate correlation (.44 and .49 for the two classes) between eight HEADDS items and the other 22 checklist items.

**Using digital video in assessment of clinical observation skills**

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Clinical observation skills are of great importance in many areas of medicine in order to obtain the right diagnosis. Therefore, practical training sessions on communication and observation skills should be part of any medical curriculum. At the Leiden University Medical Center a computer-based test has been developed to assess the clinical observation skills of students in the 4th year of medical school. In this test, short fragments of digital video are presented to the trainee followed by one or more questions. The questions relate to the video and not to any theoretical knowledge about the case presented. The digital video clips are registrations of real patient examinations at the Department of Neurology at the Leiden University Hospital. In an experimental setting the test has been evaluated. Using a questionnaire the trainees were asked for their experiences with this new type of assessment in the Leiden curriculum.
Session 2H  International Medical Education

2H/1 Global essential requirements & standards in medical education

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Increasing globalization of medicine and worldwide migration of physicians call for defining some global standards and requirements to guide medical education curricula, which presently vary from one school to another. Established in 1999 by the China Medical Board, the Institute for International Medical Education (IIME) has undertaken the task of providing leadership in a three phase project. In Phase I, a Core Committee consisting of international medical education experts will define “global minimum essential requirements” comprising sciences basic to medicine, clinical knowledge and skills, professional values, behavior and ethics of universal significance. These will represent only a portion of the medical curriculum since each country and medical school has to address their unique health and social needs. Once a consensus is reached, these “essentials” will be tested in several selected medical schools (Phase II). After evaluation, the lessons learned and processes used in the first two phases will be modified (Phase III) and offered to the academic community.

2H/2 The medical window to the world - the Gothenburg experience

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The student’s interest in medical problems also outside Sweden is substantial and often a reason for choosing medicine as a career. How can we give students an increased knowledge and understanding of medical problems in poverty-stricken countries where the infant mortality rate equals that in Sweden in the 18th century? In co-operation with Universities in Africa and Asia we are teaching undergraduate students with part of the course in Sweden and part at a foreign university. Much of the teaching at home has been to increase the understanding of determinants for health using teachers from all faculties of the university. In Africa health systems, health financing and medical problems have been in focus. Undergraduate research in collaboration with African universities is another possibility for our students. The complexities of global change are a challenge to teaching and research in medicine. Internationalisation of education is our responsibility.

2H/3 Comments about Latin American participation in the Association For Medical Education In Europe (AMEE) Conferences

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The number of communications presented at AMEE Conferences by delegates from Latin American countries increased from 12, in 1997, and 13, in 1998, to 22 in 1999. The main subjects approached were curriculum planning/evaluation and assessment. Why are AMEE Meetings so attractive for the teachers of Latin American Medical Schools? The authors comment about the possible reasons: insufficient number of Latin American regional meetings, AMEE programmes with diversity of topics and the organisers’ receptivity.

2H/4 Outcomes of Family Medicine Education Program for Moldova

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Carelift International and Moldova State Medical and Pharmaceutical University designed an educational program to create a family medicine specialty. Introductory concepts were incorporated into a workshop co-sponsored by World Health Organization and Carelift. Faculty teams participated in Carelift’s eight-week US program, comprising a range of topics in family medicine: immersion, educational development, healthcare organization, insurance, financing, and technology. Training included one week in Finland, a fellowship in Lithuania an in-country workshop on rural health and a subsequent five-week US immersion program. The newly established Department of Family Medicine’s residency has already been strengthened, with an introduction, and rural center rotations. Carelift shipped equipment and a departmental library. A new model family practice center will serve concurrent purposes of teaching, demonstration, and healthcare. The Association of Family Physicians of Moldova was founded. The new discipline is beginning to reform healthcare delivery. Follow-up and evaluation continue as critical components of the program.
WFME Task Force on Defining International Standards in Basic Medical Education

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The WFME project on “International Standards in Medical Education”, recommended by the World Health Organisation and the World Medical Association, has three main intentions:

- to stimulate medical schools to formulate their own plans for change and for quality improvement in accord with international recommendations.
- to establish a system of national and/or international assessment and accreditation of medical schools to assure minimum quality standards for medical school programmes.
- to safeguard practice in medicine and medical manpower utilisation, and its increasing internationalisation, by well-defined international standards of medical education.

Only a minority out of the more than 1500 medical schools worldwide are subject to external assessment and accreditation procedures. Such omission causes concern when the need for reform is well documented. The increase in number of new medical schools in the last decades, many established on inadequate grounds (e.g. some private “for profit” schools), adds to the disquiet.

A central part of the new WFME strategy is to give priority to guidelines for medical education for both institutions and their educational programmes. Adoption of such standards will constitute a framework for medical schools to measure themselves.

A Working Party under WFME defined the concept of international standards as a core of standards that will take account of the variations among countries in medical education, due to differences in teaching tradition, culture, socio-economic potential, the health and disease spectrum, and different forms of health care delivery systems. Differences can also occur within individual countries. However the scientific basis of medicine is universal since the task of medical education everywhere is the provision of health care.

Notwithstanding variations, the primary purpose of medical education in any society is to prepare students for the practice of medicine. Regarding this there is a high degree of equivalence in structure, processes and product of medical schools worldwide.

Ukrainian experience on integration in medical education

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The integration of basic and clinical sciences demonstrates its development in the introduction and application of the clinically oriented cases, problem oriented approach in the introduction of the new courses into the medical education curriculum starting from the first years of medical training. This gives the opportunity to orient the students from the very onset of their medical career through means of studying basic courses to start thinking in the forms of the practical application of the acquired knowledge. The experience was gained as a part of the Partnership Program between University of Rochester School of Medicine and Ukrainian medical institutions, and resulted in the introduction in Dnipropetrovsk State Medical Academy of the integrated course of Introduction into Health and Human Illnesses, and the system of standardized assessment of medical knowledge.

Session 21 Multiprofessional Education 1

Stress in Junior Doctors and Management Trainees

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Stress management was included in a workshop for 9 Junior Doctors and 9 management trainees that focused on joint training. A standard questionnaire completed by both groups considered sources of pressure at work. From 30 questions there were 6 that scored significantly higher (indicating more stress) by managers than doctors (p < 0.03). In contrast there were no factors that scored higher by doctors than managers. Of note for managers was stress from lack of co-operation from colleagues, management style, conflict with own values, job security, work constraints and conflicting demands. In general managers perceived more stress than doctors in areas relating to “my job” (p = 0.02).

For both groups combined there was a significant correlation between “my job” and “my relationships” (p = 0.02) and “my job” and “my situation” (p = 0.03). Possible explanations for these observations on two groups of professionals in the NHS will be discussed.

New ways of working, new ways of learning: Case history discussions as a focus of multi-disciplinary learning in a new community care project

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Weston Project was an initiative of four neighbouring general practices and a community health care trust to
care for older people in their own homes over a period of short term crisis. An action research project completed two cycles of developing facilitated case history discussions as a means of learning. Team learning contributed to organisational learning, at an important time in the new organisation’s development, and to the success of a project which eventually rolled out to provide intermediate care for a community. The project shed light on some of the problems of multidisciplinary learning in primary care, including that of catering for learners with different educational needs in the same group.

**Multiprofessional continuing medical education - Israeli experience**

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Multiprofessional continuing medical education (MCME) is described as the way forward for health professions. During the years 1996-1998, an interdisciplinary improvement program in diabetes care was conducted through MCME sessions for primary care physicians and nurses. We investigated the attitude of nurses and physicians in the northern part of the country toward these sessions. 175 physicians and 252 nurses have completed the questionnaire. 20% of the physicians were not content at all from the MCME (1 on the scale 1-4) versus 3% of the nurses. 23% of the physicians did not feel comfortable in the presence of the other profession versus 7% of the nurses. 20% of the physicians were not interested in sharing the continuous education sessions in future with the nursing profession. Contrary to the widespread belief, a significant minority of the practising physicians preferred to continue the education sessions without the presence of other professions.

**Bridging the divide between doctors and managers**

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Historically little time has been spent by doctors and managers in joint development activities until the former have reached specialist registrar or consultant level. Both Pre-Registration House Officers (PRHOs) and NHS Management Training Scheme (MTS) trainees are required to demonstrate competence in a variety of standards as part of their respective training programmes. Some are unique to respective professional development but both have to demonstrate competence in for example communication skills, team working and time management. This paper reviews the outcome of a pilot workshop run for PRHOs and management trainees. It draws upon an analysis of questionnaire findings on attitudes and values before and after the workshop. The pilot activity suggests that the trend towards competence-based approaches provides new opportunities to develop joint development programmes at all levels of the doctor and manager hierarchies and to influence relationships at an early stage.

**A Net Gain: Evaluation of a Web-based Local Multidisciplinary Evidence Centre**

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A web-based Local Multidisciplinary Evidence Centre (LMEC) was developed in a semi-rural area to serve primary and community care. The project was based at a multi-professional library and funded for 2 years (£80,000). Content was based on an initial information needs survey of staff, supplemented by interim data collection. The aim of the study was to evaluate use of the LMEC. A questionnaire was administered to 760 staff. Usage of library and LMEC was recorded. The response rate was 53% (402/760). Community nurses were the largest user group (33.3% of 134 nurse respondents). Ignorance of the service, lack of training and difficulty accessing hardware were the main reasons cited for failure to use the LMEC. Of 122 respondents who had received training, 61% said the LMEC improved patient care: 104 (85%) said they would continue using the LMEC. The implications are that web-based resource centres are costly to set up and take time to reach their full potential.
Session 2J  Assessment 2: Studies of Assessment

2J/1  Supporting the introduction of an objective national testing examination in post-communist countries

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Can the slogan “testing drives curriculum” work in the countries where testing was barely used, like post-communist countries? Yes, it can! Ukrainian medical education is an illustration. The presentation deals with the situation that is observed in Ukrainian medical schools in connection with the introduction of licensing examinations for medical doctors, dentists and other health care professionals. It also discusses major features of the licensing examination program, its goals, achievements and obstacles, its strengths and weaknesses and directions of further development, international input and local aspects of the testing program. Ways of utilizing the licensing examination results are discussed.

2J/2  Predictive validity of Bachelor Grades compared to the Surgical Studies Final Exam of medical students from the University of Chile

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University of Chile, care of Alcantara 176, Apartment 21 - Las Condes, Santiago, CHILE

After seven years of Medical School, students graduate with a final grade proportionally weighted as 60% Bachelor Degree; 30% Internships and 10% for four Final Exams (Surgery-Medicine-Pediatrics-Obstetrics). The aim of the study was to determine if the Bachelor final grade that we find reliable as it shows the students' performance during the first five years of medical school, foretells the Surgery final exam grade, which is taken as an oral examination by two randomly selected independent examiners. Each student Bachelor grade and Surgery Studies Final Exam scores have been depicted graphically (population of 138). Both grades were correlated through a linear regression analysis. Dispersion and frequency distribution graphs, in terms of grades, were elaborated. The Bachelor grade does not predict the Surgery final exam score. Low correlation coefficients: 0.0251. We suggest the necessity to modify the methodology of this exam, in order to obtain a more representative and objective assessment of student performance.

2J/3  Analytical evaluation of medicine students during their time in surgery

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Medicine Interns go through four month of Surgery. They are evaluated for Surgery Grade on: Habits (20%), Abilities (50%) Knowledge (30%). The grade Surgery Studies Final Exam is independent and two experts award it. There is the impression that Habit and Ability grades would not discriminate and that exams of Surgery Studies would have severity/generosity errors. A knowledge test would be more objective. 139 interns, who passed through Surgery in 1996, 97, 98 with their Passed Grade, Written Tests, and Surgery Studies Final Exam, were studied. Average Bachelors' grade was used as reliable norm. The grade awarded by 18 professors of Surgery Studies was analysed. Surgery Studies results show a narrow range with severity and generosity errors. Knowledge results compare to Surgery Studies Final Exam grades show association (R2= 0.345). The Intern Final and Bachelors grades depict no correlation (R2= 0.1938). By comparing Knowledge and Surgery Studies Final Exam scores, a great dispersion is found (R2= 0.0353). Intern and Surgery Studies Final Exam grades would not be objective, reliable or discriminatory.

2J/4  Comparison of surgical course theoretical performance

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The objective was to establish a comparison between the performance of a theoretical test with OSCE results. Primarily, it is focused on fourth year students following their time in Surgical Service at Salvador Hospital. 39 students that constitute the fourth year generation were examined with three multiple-choice tests. In these tests, the goal was to measure cognitive knowledge of 51 theoretical classes of Surgery curriculum. The grades were as follows (in a scale from 1 to 7): first test; average: 5.30 median: 5.32, second test; average: 5.33 median: 5.46, third test; average: 5.25 median: 5.4. In comparison, an OSCE with 20 stations and 168 items was applied to those same students. The objective was to verify the magnitude of their abilities and skills achievement during the course. The stations lasted five minutes and covered the following areas: anamnesis, physical exam, interpretation of pre-operative exams, radiological inquiry, communication within health teams, patient-doctor relationship attitude, emergency
management skills, skills in surgical infirmary techniques, and publication analysis. The course's average grade (on a scale from 1 to 7) was 5.95; the median was 5.99. Statistical correlation between both methods of evaluation was not found. The correlation index was -0.0584. The absence of correlation is: a) Expected, because even though a good mastery of cognitive skills is necessary in both methods of evaluation, these do not measure the same contents. b) It shows the need to complement both types of exams in surgical teaching.

2J/5

OSCE in the Semiological Basis Course in the new curriculum of the School of Medicine

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An OSCE was used to evaluate the learning outcomes of three units of the course "Semiological Basis of Medicine" which represents an example of the spirit of the new integrated curriculum of the Medical School. The OSCE model was applied simultaneously to 242 students distributed in three groups. The results are analysed from the point of view of the "mastery learning". In addition, several aspects of the predictive validity of each of the three units explored was demonstrated by OSCE. In relation to the students' performance, a professor's opinions about OSCE was requested, and a questionnaire was applied to a sample of 33% of each group. The analysis of the results shows a positive correlation between the students' and the professor's opinion in relation to the validity, objectivity and reliability. In addition, important suggestions were obtained to improve the application of OSCE in the clinical teaching of a high number of students.

LargeGroup Sessions 1

Session 3A Training for Medical Specialties in the Future

3A/1 Intensive Care Medicine

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A recent survey has shown that there is a wide variety in intensive care training in the different countries of Europe. Intensive care in most countries is open to specialists from different backgrounds. In some countries however, it is seen as a subspeciality of one discipline making it impossible for specialists from other areas to enter intensive care training. Within the union of European medical specialists (UEMS) a multidisciplinary joint committee has been set up representing all interested specialties with the aim of structuring and harmonizing intensive care training in Europe. The European Society of Intensive Care Medicine (ESICM) has three delegates who work on this multidisciplinary committee. One of the initiatives taken by ESICM is the establishment of a multimedia training programme entitled: PACT (Patient Centered Acute Care Training). PACT is a distance learning programme which also has as its primary aim the improvement and harmonization of the quality of intensive care training. The educational strategy and design for PACT was developed by the Centre for Medical Education in Dundee. PACT is produced as paper modules and also electronically in both CD and Internet versions. The first module entitled: "Traumatic Brain Injury", will be presented in its electronic format.

3A/2 Scanning the Horizon of Training for General Practice

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How do we, at the turn of the century, approach the changes anticipated in general practice education over the next twenty years, characterised, as we will show, by choice, computerisation, community accountability, co-operation and critical appraisal of, and contribution to, an exponentially increasing scientific evidence base? To answer this question, we will provide an understanding of the intellectual and societal norms in which this will occur, as well as the micro-context for GP Training in 2020 - our health system, medical education, and indeed what we will mean by the term 'General Practice' twenty years from now. The next twenty years offer extraordinary opportunities for general practice education. Our success, however, will not be judged by our standing on the inter-disciplinary pecking order, by our average financial remuneration, by the psychometric reliability of our curricular and assessment procedures, by mortality rates outside of our control, nor by the gigabites utilised to provide training or care. It will be judged, rather, by our capacity as a discipline, and as individual general practitioners, to deliver to our patients and our communities the ageless qualities of dependable trust, authoritative hope and compassionate love.
The education and training of gastroenterologists for the 21st century. A paradigm for the education of medical specialists in technology-intensive fields: an international and Israeli perspective

Shmuel Eidelman
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Gastroenterology belongs to a unique group of medical specialties that are characterized by an intense association with sophisticated technology. A study of the evolution of its specialization process during the second half of the 20th century can serve as a paradigm for the entire group of technology-intensive subspecialties in internal medicine that includes, pulmonology, nephrology and of course the largest and wealthiest of all - cardiology. This presentation will examine recent trends, raise some questions and suggest some answers relating to professional and ethical issues that may face this speciality during the next few decades.

Session 3B  Best Evidence Medical Education

3B/1  Best Evidence Medical Education: Progress since 1999 and looking to the future

Professor Ian Hart
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The Best Evidence Medical Education (BEME) concept arose out of discussions in the aftermath of the 1998 AMEE Meeting in Prague. At the 1999 AMEE Meeting in Linkoping a Think Tank and an open Workshop on the topic led to a proposal for action which was presented at the final plenary session.

Since then, a number of meetings have taken place involving an international group of medical educators interested in gathering and judging the evidence available for educational interventions in medical education and training. Already several groups in several countries have volunteered to undertake systematic reviews on a number of specific medical education topics. Several publications on the topic of Best Evidence Medical Education have appeared and the topic has been addressed in the editorial columns of the major journals in the medical education field.

Discussions are currently underway to establish a BEME Collaboration which will promote Best Evidence Medical Education through the creation of such a culture in medical schools and medical education organizations and institutions; the production of systematic reviews in the field; and the dissemination of the results of such reviews throughout the medical education community.

3B/2  The Campbell Collaboration

Robert Boruch
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This presentation describes the recent development of the Campbell Collaboration, an international effort to produce and maintain systematic reviews of studies of the effects of interventions. Inaugurated in February 2000, the Collaboration will focus on Crime and Justice, Education, and Social Work and Social Welfare.

Its primary targets are randomized experiments; the second focus is on nonrandomized trials. The working template for the Campbell Collaboration is the Cochrane Collaboration in health care. Joint Methods Groups are being developed to advance the common interests of these Collaborations.

3B/3  Towards evidence based education and implementation - the Cochrane Effective Practice and Organisation of Care Review Group

Jeremy Grimshaw
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Recognition of the failure of the traditional passive models for disseminating research findings has led to increased policy and research interest into different dissemination and implementation strategies.

Rigorous evaluations (mainly randomised controlled trials) will provide best evidence of effectiveness of different interventions. Systematic reviews of such rigorous evaluations should be used to inform decisions about continuing professional education and quality assurance activities. The Cochrane Effective Practice and Organisation of Care (EPOC) review group is an international collaboration which aims to undertake and maintain high quality systematic reviews of professional, organisational, financial and regulatory interventions to promote quality of care. Currently over 100 researchers from 10 countries are collaborating with the group and have produced 15 systematic reviews and 22 protocols published in the Cochrane Library (1). In addition a specialist register including over 1400 primary studies has been established. The presentation will briefly summarise the results of these efforts. Interventions that are largely ineffective include passive dissemination of educational materials (for example, publication in peer reviewed journals or mailing educational materials to targeted clinicians) and didactic educational conferences. Interventions that showed mixed effectiveness include audit and feedback and the
use of local opinion leaders. Interventions that are generally effective include reminders and educational outreach (for prescribing). These systematic reviews suggest the potential of a variety of possible dissemination and implementation strategies that are effective under certain conditions. However they also identify the limitations of the currently available evidence and provide methodological and substantive guidance for future research. These reviews (in combination with other types of evidence) should provide better information to inform policy makers.


3B/4 Interprofessional Education: evidence from the past to guide the future

Marilyn Hammick
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By reflecting on current systematic reviews of the evaluation of interprofessional education (IPE), this paper will consider the potential shape of IPE, for health and social care practitioners, in 2020. The reviews to be presented relate to evaluations of undergraduate, postgraduate, and continuing education programmes. The patterns emerging from the data will be extrapolated into a vision of the developmental pathways that IPE might take. This will be done, within the context of, first, policy and practice for professional higher education and, second, strategies to enhance services to patients through closer collaboration.

3B/5 Scholarship in Teaching and Best Evidence Medical Education: Synergy for Teaching and Learning

Stewart Mennin
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Medical education has lagged behind research and clinical care in developing a value system and social construct that promotes and stimulates the open discussion of the state of the art in teaching among teachers. The recent development of Best Evidence Medical Education (BEME) in Europe and the renewed attention to the concept of scholarship in North America provide a conceptual and strategic approach for enhancing the educational enterprise in the health professions. The similarities and differences between BEME and an approach to Scholarship in Teaching developed by a subcommittee of the Group on Educational Affairs of the Association of American Medical Colleges is examined. Combining these two approaches to medical teaching can maximize the potential for advancing the science and art of medical education.

Session 3C Three Visions of Assessment in the Future

3C/1 The Role of Assessment in Expanding Professional Horizons

Miriam Friedman Ben-David
Centre for Medical Education, University of Dundee, Tay Park House, 484 Perth Road, Dundee DD2 1LR, UK

This paper explores assessment innovations which have a system-wide effect on medical education and the medical profession. Important assessment approaches such as the Objective Structured Clinical Examination (OSCE), the portfolio, and hi-tech simulations are examples of reform-driven developments. A detailed account is provided on assessment areas which require further developments. The identified areas reflect current thinking in the Centre for Medical Education, University of Dundee Medical School. The assessment innovations are being developed alongside the implementation of the outcome-based curriculum. Areas which require extensive work are: assessment of progression towards defined outcomes, assessment of integrated abilities, assessment of different forms of medical knowledge, assessment of on-the-job learning, learning through assessment, assessment of error management and assessment of portfolio evidence. The identified areas for further assessment development are discussed and where appropriate a theoretical framework is provided.

3C/2 Medical Error and Assessment of Professional Behaviour

Robert Cohen
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Over the past three decades the field of assessment in medical education has been subject to major changes. The inclusion of new technologies such as simulated patients and computers have provided medical educators with an “assessment tool box” that is radically different from what was available in the first 50 years of the past century. The use of simulated patients in performance-based tests such as the Objective Structured Clinical Examination (OSCE) has provided what some have called the “state of the art” assessment of clinical competence. The replacement of essay examinations in favour of Multiple Choice Question formats has provided medical educators with the potential to assess knowledge and problem solving
skills with a high degree of precision. Developments in the field of computer-based testing and computer adaptive testing are becoming more accessible to medical schools and large testing institutions. The impact of the computer-based testing is still to be determined, though it will not be without many challenges to medical educators. The next generation of medical educators will have available to them technologies of simulation that a generation ago were more commonly associated with the writers of science fiction. The concept of the virtual patient and its potential for assessment is only starting to be felt. In recent years a number of dramatic reports have been published documenting an alarming extent of medical error despite the phenomenal strides in the area of assessment referred to above. This raises the question, as to whether these assessment methodologies are being validated by experience. An area of assessment that has lagged far behind during this time relates to the assessment of the professional behaviour required by medical graduates for the provision of quality care. One is hard pressed not to link this to the issue of medical error, although at this time the connection is still unclear. This presentation will examine these two areas with the view to determining the degree to which they are related.

Investing in Descriptive Evaluation: A Vision for the Future of Assessment

Louis N Pangaro
Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda MD 20814-4799, USA

Over the next decades, assessment will emphasize authentic methods that focus on the actual way trainees and physicians conduct themselves in the real, not simulated, care of patients. This evolution is desirable, but not inevitable, and it will require resources and interest comparable to that given in the last decades to standardized patient methods. There will be increasing trust of assessment methods which recognize the primacy of evaluations by teachers and supervisors, an increasing reliance on a descriptive vocabulary for clinical competence, and, hopefully, an escape from the tyranny of numbers over words. While the exciting work done in quantified performance assessment—such as that using standardized patients to evaluate interviewing, counseling or physical examination skills, and that using interactive computer programs to evaluate decision making skills—will continue, these methods will be recognized as impractical for daily formative evaluation and feedback, and they will be seen as supplements to summative faculty judgments, necessary but certainly not sufficient to pronounce a student or postgraduate trainee as competent for the next level of responsibility. I see a search for more authentic assessment of competence of trainees in real time, in which we can meet our responsibility to all three of our constituencies—the public, the student and the teacher. In this presentation I will describe and justify desirable goals in the field of assessment for the next decades, barriers to achieving them, and an overall strategy for giving descriptive evaluation the rigor that has been achieved elsewhere. To repeat, this is the direction in which we can go in the next decade, where we should go, and not necessarily where we will go. I will use the term "descriptive" evaluation to apply to that using, primarily, words to summarize a student's level of competence, in other words to describe it. This is contrasted with assessment techniques that, as their summarily encapsulation of achievement yield a score, typically a number; these we can call "quantitative".

Workshop

Session 4 Workshop 1

Assessing the Reliability of Standardized Patient Examinations and OSCEs: A Systematic Multifaceted Approach

André F De Champlain
Standardized Patient Program, National Board of Medical Examiners, 3750 Market Street, Philadelphia PA 19104, USA

John R Boulet
Educational Commission for Foreign Medical Graduates, 3624 Market Street, Philadelphia PA 19104-2665, USA

The need for more authentic measures of physicians' clinical skills has been emphasized repeatedly in the medical education literature over the past few decades, as is evidenced by the considerable amount of research dedicated to Standardized Patients (SPs) and OSCEs. In particular, a large body of research has been devoted to assessing the reliability of clinical skills examinations. However, the concept of measurement error is not monolithic in nature and can arise from multiple sources. Few investigations have systematically examined the multiple sources of variability that can impact upon the reliability of SP examinations. The purpose of this presentation is to illustrate, via data collected from a large-scale examination, the importance of estimating the reliability of SP scores from a multifaceted perspective and to clearly identify the sources of measurement error that need to be incorporated and assessed in a research design. In addition, procedures aimed at minimizing the impact of these sources of measurement error will be presented.


Planning a curriculum - defining the problems and strategies

Yaakov Henkin
MD Program in International Health and Medicine, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer Sheva, ISRAEL

Netta Notzer
Unit of Medical Education, Sackler Faculty of Medicine, Tel-Aviv University, ISRAEL

Michael Weingarten
Department of Behavioral Sciences, Sackler Faculty of Medicine, Tel-Aviv University, ISRAEL

Changing trends in medical practice impose a demand for continuous re-planning and implementing changes in medical school curricula. The process begins by defining the need for a revision, identifying the obstacles that confront potential changes in the existing curriculum and planning strategies to implement the revised curriculum. Finally, evaluation of the outcomes is a vital and often neglected component of program development. The workshop will be divided into two parts. In the first part, examples of curriculum revisions and their outcomes will be presented briefly. In the second part of the workshop, the participants will be divided into small groups. Each group will be presented with a common problem and will be required to propose appropriate strategies to deal with curricular changes to address the specific problem. The group work will be followed by a discussion.

Time is Brain: A Model Skills Training Program for Acute Stroke

David Lee Gordon, S Barry Issenberg
Center for Research in Medical Education, University of Miami School of Medicine, P O Box 016660 (D-41), Miami FL 33101, USA

A neurologist will demonstrate how to use syndrome-based pattern recognition to train paramedics and other health care professionals to diagnose brain lesions rapidly and accurately. The increasing use of agents such as thrombolitics in acute ischemic stroke and myocardial infarction has important implications for multiprofessional training: time is critical in the emergency setting. The workshop will include a review of curriculum development, interactive demonstrations of 5 major stroke syndromes using standardized patients, and a presentation of outcomes data.

Training the Trainers

Gerald P Whelan, William P Burdick
Clinical Skills Assessment, Educational Commission for Foreign Medical Graduates, 3524 Market Street, Philadelphia PA 19104-2685, USA

The workshop will address the following issues:

1. Recruitment and selection of standardized patients
   1.1 Use of a screening physical examination
   1.2 Common sources of standardized patients

2. Nomination of SPs for case roles

3. Initial training of SPs
   3.1 Concepts in adult education
   3.2 Security issues
   3.3 Group training

4. History portrayal and checklist training issues

5. Training for the physical portrayal

6. Physical examination checklist training issues

7. Pilot examinations for assessment of portrayal and checklist proficiency

8. Use of standardized patients in case development

The workshop will take the form of short plenaries alternating with small group sessions.

Randomized Field Experiments

Dr Robert F. Boruch
Graduate School of Education, University of Pennsylvania, Philadelphia, PA 19104, USA

This workshop will consider advances in the conduct of randomized experiments to plan and evaluate interventions in education, crime, social welfare, and other areas. The first focus is on individuals as the units of random allocation and analysis; the second is on using organizations such as hospitals and schools as the units. The themes to be covered include the importance and design of experiments relative to standards of policy, ethics, and research conventions.


Rosalie Ber, David Rabinowitz, Gideon Alroy
Medical Education Unit, B. Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, ISRAEL

Excellent medical knowledge and skill is necessary but not sufficient for the practice of good medicine. To this end, developed interpersonal skills and effort, (i.e., the patient-doctor relationship), completes the picture. Two decades ago we began utilizing trigger films (TFs) for undergraduate teaching at our medical school. TFs are short situational videos, depicting a variety of aspects of the clinical experience, which are very difficult to teach at the bedside. The production of TFs is based on a simple case history, formulated into a written script, designed to present one or two main points as a stimulus for discussion. These TFs highlight the intricacies of interpersonal relationships, the diverse legitimate
behavior patterns within patient-doctor interaction, and the ability and sensitivity to detect meta-communication, and sensitize the student by transforming the implicit into the explicit. They also serve to demonstrate diagnostic thinking. The "actor" physicians and patients are selected according to personal characteristics, matching the character or behavior pattern they portray, thus minimizing necessity for acting. TFs trigger many more issues than initially anticipated. A variety on the same theme is the production of "culture trigger films" (CTFs): staging an encounter between a doctor and an actor/actress-patient, in which the patient's culture and background beliefs demand an adaptive response from the doctor before a stable patient-doctor relationship can emerge. This video teaching format appears to have significant and possibly unique didactic value and appears to us to justify further development. In this workshop, after discussing the What? Why? Where? and When? we will demonstrate the HOW to make TFs and CTFs.


Second AMEE/AMSE workshop on an European core curriculum

L N Bouman (representing AMEE)
In de Korenbloem 17, 1115 GN Duivendrecht, The NETHERLANDS

Last year the initiative was taken by the boards of AMSE and AMEE to join forces in a study questioning whether a European core curriculum would be desirable and workable. From the discussion in the workshop it was concluded that such a core curriculum as a standard for a certain part of the curriculum of all medical schools was desirable indeed, but it was felt as well that the composition of such a curriculum would be a very difficult task. In this second workshop we will go more deeply into that question, using the list of problems from the Dutch "Blueprint 1994" for the training of doctors as a starting point for the discussion. This list contains more than 300 signs and symptoms of disease that together are considered by the Dutch medical faculties as the minimum requirement for the primary training of a doctor. In the workshop we will try to answer the following questions:

1. Is this list of problems a well-balanced abstract of the main issues of the medical study?
2. Would this hold for any country in Europe?
3. If the answer on one of these questions is negative, which changes would have to be made?

The workshop is open to every attendant of the AMEE conference to a maximum of 30 participants. Attendance of the workshop last year is not a prerequisite but when the number of subscribers is too high, the colleagues who have attended last year's workshop will be given priority. The outcome of this workshop will be presented to the AMSE conference in Portugal.

Formal Evaluation Sessions: a standard for evaluating students, generating feedback, and providing faculty development during clinical rotations

Paul A Hemmer, Louis N Pangaro
Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda MD 20814-4799, USA

Many teachers and students have been taught to think of evaluations by teachers supervising patient care on clinical rotations as "subjective", and somehow inferior to the quantification available in some examinations. Innovative work has been presented at prior AMEE meetings and published in educational journals that establish a high standard for the reliability and predictive validity of "formal evaluation sessions" in the assessment of student clerks on clinical rotations. Through the workshop, we expect that participants will become familiar with important aspects of formal evaluation sessions during clinical rotations, including (a) the procedure for asking each clinical teacher to comment on a student's progress (b) the timing for formative and summative evaluation; (c) the organization and time requirements for the "evaluation sessions"; (d) the use of the "RIME" vocabulary (reporter-interpreter-manager/educator) to describe student progress; (e) the research data that establishes reliability and validity for this assessment method; and (f) the "real-time", "case-based" faculty development aspect of the evaluation sessions. We hope that participants will be sufficiently comfortable with the method to try it in their own clinical rotations. In addition to the formal presentation of material, we will use videotape and role-play to develop skills. Formal evaluation sessions have an established level of reliability and predictive validity and yield a three-fold return on the time investment: evaluating students; generating formative and summative feedback; and providing a longitudinal forum of faculty development. This is a new "state-of-the-art" for descriptive evaluations, that requires no extra technology and can be achieved with resources available to most clerkship and clinical course directors.

Faculty Rewards and Incentives in Medical Education. The Challenges and the Promise

Sharon Krackov
Education Program Development, New York University School of Medicine, Deans' Office, 550 First Ave, New York NY 10016, USA

This workshop focuses on recognizing and rewarding faculty's educational role. The current reward systems and pressures on medical school faculty are having an impact on our ability to recruit and sustain faculty to leadership and teaching roles in the educational program. At many institutions, medical educators are focusing attention on these issues and creating initiatives to address them. The workshop will begin with an interactive large group discussion to develop an overview of the current trends, the essential considerations for recognition of faculty's educational role, and the types of activities currently taking place.
Next, participants will work on illustrative cases that identify common root problems and provide opportunities to explore practical strategies that will enhance the recognition and reward of the faculty's educational role. During the concluding portion of the workshop, participants will reflect on the lessons learned from the cases. In addition, they will consider unexpected outcomes of activities to recognize faculty's educational role, e.g., the influence of the institutional culture, the preparedness of faculty to take on new educational roles.

4/10 Diversifying Assessment – A ‘Fit for Purpose’ Approach

Sally Brown
Institute for Learning and Teaching in Higher Education, Genesis 3, Innovation Way, York Science Park, Heslington, York YO10 5QJ, UK

This session will aim to explore the diverse range of assessment approaches and methods, and will invite participants to develop strategies to assess students based on the following key questions:

- Why are we assessing students?
- What methods and approaches are available?
- What is it we are actually assessing?
- Who is best placed to assess?
- When is the best time to assess?

The workshop, which will be interactive and participative, will encourage delegates in discussion of how to tailor assessment to best fit local contexts.

4/11 How to conduct Systematic Reviews

Jeremy Grimshaw
Professor of Health Services Research, Health Services Research Unit, Medical School, University of Aberdeen, Foresterhill, Aberdeen AB25 9ZD, UK

Traditional reviews of health care interventions have been criticised for their lack of scientific rigour leading to the criticism that such reviews are often 'haphazard, biased and subject to the idiosyncratic impressions of the individual reviewer' (Mulrow 1994). Systematic reviews (also known as overviews) are 'the application of scientific strategies that limit bias to the systematic assembly, critical appraisal and synthesis of all relevant studies on a specific topic' (Cook 1995). This involves the use of:

- explicit search strategies to identify studies for review
- explicit inclusion criteria for selecting studies for review
- explicit quality assessment criteria of selected studies
- rigorous methods of data abstraction and synthesis.

In some circumstances, it is also possible to conduct meta-analyses - 'statistical methods to combine and summarise the results of several studies' (Cook 1995). Systematic reviews were used initially to summarise data about relatively simple health care interventions (for example, drug interventions), however they are now increasingly being used to summarise data about more complex strategies including educational strategies.

The workshop will outline the rationale and methods of systematic reviews relevant to reviews of educational strategies.
Large Group Sessions 2

Session 5A Learning in the Future

5A/1 Community-based Medical Education

Carmi Z Margolis
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Community-based education refers to teaching health care personnel in the community or in primary care hospital settings. In the early twentieth century, Osler (1958) inventor of the clinical clerkship as we know it, had students at Johns Hopkins rotate first through general hospital clinics and only afterwards work on the wards. However, by the middle of the century most of the medical student’s clinical experience took place during hospital ward rotations. It was felt that learning the complete hospital admission history and physical examination and managing ward patients with their rapidly changing, complex illnesses was the basic first step in quality clinical training. Only with the coming of academic primary care pediatrics, primary care internal medicine and family medicine in the late 1960s and early 1970s did some schools begin to rethink the advantages of general ambulatory or community-based training and the disadvantages of exclusively hospital-based training (Schmidt et al 1989). These same community-oriented schools in Canada, the Netherlands, the United States and Israel emphasized not only a primary care but also a community approach to a patient’s problems. Some of these schools went so far as to emphasize improving the health of the population in their immediate geographical area. Over the last quarter of the twentieth century, this shift in emphasis on the importance of the community has gradually increased. In the last five years, emphasis on managed care as a main source of health care in the US has intensified the community orientation of almost all medical schools. In response to the re-examination of the academic health center and health professional school mission (Seifer 2000) by the Council on Graduate Medical Education and the Pew Foundation in the US, by the General Medical Council in Great Britain and by the World Federation for Medical Education and by Boelen (1992) from a global perspective, there has been considerable investment in curricular reform and in using ambulatory and community-based settings for teaching. This paper aims to define the goals, methods and the approach to evaluation of community-based education from a quality improvement perspective.

5A/2 Learning – current knowledge and its future application

Dick Mårtenson
Dept of Humanities, Informatics and Social Sciences, Karolinska Institute, S177 Stockholm, SWEDEN

A short summary on current knowledge of learning will be introduced followed by comments on its validity for the future. The basic conclusions are that most of that knowledge will still be valid and that some is dependent on various cultural factors that need to be further explored. A large part of that knowledge could have been applied in many of the medical undergraduate programmes round the world. The challenge is, as ever, to stimulate teachers, administrators, and politicians just to implement what is known. Two research areas that ought to be encouraged for the future will be presented. One deals with the cognitive development of students, and the other one addresses cognitive processing and professional development of physicians. Examples of how students retain their wrong understanding of concepts despite training and good assessment results will be presented, as well as findings by Schön, Mann, and Slotnick.

5A/3 The PBL Group – self-reflections and feedback for improved learning and growth

Are Holen
Behavioural Medicine, Faculty of Medicine, Norwegian University of Science and Technology and Stanford University School of Medicine, Behavioural Medicine (ISMUT), MTFS, 7489 Trondheim, NORWAY

In the presentation the aims of the PBL group are briefly stated: the facilitation of learning, the fostering of self- directed and life-long learners, and the developments of social skills that may enhance professional relations. These goals may only be reached by systematic and proficient work with the group processes in PBL; and, this work has relevance in all the phases of the life of a group: in the initial formation and in the later renegotiations of interactive patterns. In working with the dynamics of a group, the importance of self- evaluation, reflection and feedback between students is emphasized. Inventories are suggested as a means to improve the feedback between students, and also, changes in group interactions. The paper calls for a renewed interest in group dynamics in PBL.
Session 5B  Simulation and New Learning Technologies: the virtual patient

5B/1  Simulation and New Learning Technologies: The Virtual Patient
S Barry Lesenberg, Michael S Gordon, David Lee Gordon
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of Miami, P O Box 01690 (D-41), Miami, FL 33101,
USA
Robert E Safford
Mayo Clinic, Jacksonville, FL, USA and Ian R Hart,
University of Ottawa, Canada

Changes in medical practice that limit patient availability and instructors' time have resulted in poor physical diagnosis skills by learners at all levels. Advanced simulation technology, including the use of sophisticated multimedia computer systems, help to address this problem. For many years 'Harvey', the Cardiology Patient Simulator, and the UMedic Multimedia Computer system have proven to be effective tools to teach and assess bedside cardiovascular skills when they are integrated into the required curriculum of medical school and postgraduate training. In the future, virtual reality technology, based initially upon data from the Visible Human Project data set, will provide the majority of simulation-based training. Models that provide a high level of visual fidelity and use sophisticated haptic devices that simulate the 'touch' and 'feel' of a procedure or examination are now being used in selected medical centers. The presence of these tools is not enough. Evidence-based outcomes must show these systems to be effective instruments for teaching and assessment, and medical educators must be willing to effect change in medical education to ensure the appropriate use of these systems in the next millennium.

5B/2  Patient Safety and Simulation-based Medical Education
AmiZiv
Chair Sheba Medical Center, Tel-Aviv, ISRAEL

The primary goal of health professionals should be the provision of the best possible quality care to patients. Medical education provides a critical means for achieving this goal by helping practitioners develop an appropriate range of skills, knowledge, and attitudes. Although patient safety has been increasingly recognized as a key dimension of quality care, systematic safety education for health care professionals is lacking. Recent high-level policy directives have called for the creation of patient safety curricula to fill this gap. Medical simulation tools and techniques have much to offer in this regard, especially in the areas of error management, training for risky procedures, and assessing competencies. The objective of this paper is to discuss how innovations in simulation can aid educators in improving training on patient safety issues.

5B/3  The Marvelous Medical Education Machine or How
Medical Education Can Be Unstuck in Time*
Charles P Friedman
Centre for Biomedical Informatics, 200 Lothrop Street,
8004 Forbes Tower, Pittsburgh PA 15213, USA

In this presentation I will argue that medical education has become "stuck" not only in time, but also in space and content. It has become stuck in time because events considered to be educational largely occur through interactions that require the learners and the faculty to be simultaneously participating in these interactions. It has become stuck in space because its mechanisms of delivery are largely bound to a specific physical location, the academic medical center with its classrooms and associated health care delivery venues. It has become stuck in content because the topics that are the focus of educational interactions are insufficiently under the control of the students, and the teachers. Increasingly, there is no reason for any of these requirements to be imposed on the educational process. Moreover, medical education remains stuck in an era when much of the rest of human enterprise is becoming unstuck, the result of a sweeping set of cultural changes made possible by information technology and primarily by the phenomenal proliferation of the global Internet [Drucker 1999]. I will further argue in this presentation that medical education can gradually be "unstuck" in space, time, and content through appropriate use of emerging technology, with emphasis on simulation methods that have become widespread in the use of training pilots and professionals in other disciplines. The "marvelous medical education machine", as the concept will be developed in this paper, is the complete simulator for medical education, analogous to the best of contemporary flight simulators. It does not exist, although bits and pieces of it do, and these suggest what might be possible in the not-too-distant future. I will describe the need for the Marvelous Machine in greater detail, discuss what it can potentially do when built, expose the internal anatomy of the complete machine, review some of the pieces that exist now and how we might build it from here, and finally discuss some of the key educational research questions that will have to be illuminated along the way. This presentation will argue that building the Marvelous Machine should be a top priority for medical education nationally and internationally.

* This paper is based on a presentation at the Research in Medical Education Conference during the meeting of the Association of American Medical Colleges, Washington DC, 27 October 1999.
Session 5C  Training and Certification of Teachers and Trainers: the professionalism of medical education

5C/1  Faculty Development, Teacher Training and Teacher Accreditation in Medical Education: Twenty Years from Now

Dan E. Benor
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Life is changing rapidly. Education in general, and medical education in particular, are changing within this large-scale transition into the 21st century. It may be safely predicted that this process of change will not only continue into the coming decades, but will be accelerated. Therefore, in order to address the issues of faculty development and teacher-training in the future, one must first review the processes which affect medical education, and try to envisage what medical education will look like 20 years from now. Then one has to look into the teacher-training and faculty development procedures which have been proven successful in the past, and to identify the new needs which cannot be addressed by the existing practices. Then, and only then, one may start planning teacher training for the future. However, the rate and the magnitude of changes which occur in our lives almost by the hour, make this analysis as difficult as solving a multivariable equation without even knowing how many unknowns are there. Nevertheless, some processes are so obvious, that prediction becomes a matter of projection rather than prophecy. This presentation will consider some of these predictions.

5C/2  The Institute for Learning and Teaching and UK approaches to Accrediting Teaching: Looking to the future

Sally Brown
Institute for Learning and Teaching, Genesis 3, Innovation Way, Science Park, York YO10 5DQ, UK

Good teaching in higher education is too important to be left to chance. The characteristics of excellent teachers include being good at putting ideas across to groups of students, motivating them to learn, fostering student engagement, communicating well in all kinds of learning contexts, recognising the diversity of students and helping them to become independent learners who are able to engage in a lifelong approach to learning and self-development. (National Teaching Fellowship Scheme 2000). Some successful teachers may have a natural affinity for the role, but all are likely to benefit from support and training in approaches to curriculum design, delivery, assessment and evaluation. Until recently, the expertise and experience of those who teach and support learning in higher education have rarely been formally recognised. Only in the last twenty years or so have significant numbers of universities sought professional accreditation for this aspect of the academic's role, although professional training courses for university teachers have been running in some for many years. This paper looks at some of the reasons why those who teach and support learning in higher education are moving closer towards a belief that their profession requires accreditation, and outlines the role of the Institute for Learning and Teaching (ILT) in promoting a recognition of the professionalism of the role.

5C/3  Professors professionalize their profession?

Florian Eitel
Chirurgische Klinik und Poliklinik, Klinikum Innenstadt, Theoretische Chirurgie, Ludwig Maximilians Universität München, Nussbaumstrasse 20, 80336 Munich, GERMANY

Economic constraints, profound changes in the health care system and insufficient educational expertise have gripped medical education. The objective of the study was to review professionalisation of medical education and to contribute to an elaboration of a conceptual framework for understanding reforms. We developed a concept map based on information retrieved by searching the Medline/Knowledge Finder and the Cochrane Library databases. The descriptors used for the searches were certification, credentialing, education, faculty medical, quality assurance health care, research, staff development, teaching. The endpoints for the study were: frequency, quality of studies and propositional content with respect to professionalisation for developing a concept map. Thirty-one relevant studies were found in Medline. The Cochrane Library search returned no relevant studies. The evidence of the few studies was weak. The literature-derived concept map shows that faculty development is a prerequisite for certification leading to professionalisation. Other related variables were resource allocation, intrinsic motivation to learn, educational research, study time, financial policy, organizational and staff development, and new specialized roles such as clinician-educator. It is concluded that professionalisation of medical education is needed. This deficit underscores the need for conceptually sound research approaches. The concept of intrinsic motivation explains how to comply with scientifically based standards thus fostering professionalism. Approaches facilitating compliance, such as Evidence-Based Learning, potentially professionalize the practice of medical education. Novel approaches such as Quality Management and Best Evidence Medical Education could professionalize Medical Education.
Session 6A  Curriculum 2: Curriculum Planning and Change

6A/1  Amount of work and strategies in implementing a reformed curriculum

W Burger, U Keske, C Froemmel
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In autumn 1999 the Charité in Berlin started a problem-based curriculum as parallel track. Planning and implementing required substantial additional faculty engagement. The curriculum is structured in blocks, planned on the basis of learning issues, which have to be updated in an ongoing discussion within the faculty. Each block is planned by an interdisciplinary committee consisting of approximately twenty faculty members. Presently, the blocks “locomotion”, “heart, circulation and fluid balance”, “emergency care”, “respiration”, “nutrition, digestion and metabolism” have been completed. Each person involved in a block spent about 20 hours per block-week planning. This amount of time can be significantly reduced with increasing experience. It appears appropriate to involve professionals in block committees to facilitate the implementation of new curricula. We will report on the process of implementation and discuss factors promoting faculty development.

6A/2  Transformation of a traditional medical curriculum in a developing country

Nadia Hartman
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The Faculty of Medicine, University of Cape Town, changed to a Faculty of Health Sciences. The significance for its premier programme, the MBCHB for General Practice, will be presented as context for discussion of transformation of the MBCHB currently underway, from a predominantly Bio-Medical Model at Tertiary Care Level to a Primary Health Care Philosophy and Practice. The changes in knowledge, skills, attitudes, values, educational philosophy and methodology will be described, and explained in terms of the a) democratic revolution in South Africa, and the National Primary Health Care Policy, b) imperative to prepare General Practitioners competent to work in community-based settings, as members of a multi-professional team, where the emphasis is on community participation for empowerment as a key outcome of health promotion and prevention.

6A/3  Faculty/Student Retreats: A path to curriculum renewal

Gerald Merenstein, Robin A Harvan
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The governance and management structure of the University of Colorado School of Medicine has undergone significant changes since 1990. Prior to 1988, Department Chairs and basic and clinical science committees provided curriculum oversight. Since 1990, there have been several faculty/student retreats that have led to significant changes in designating a longitudinal three-year primary care/generalist curriculum on the “foundations of doctoring”. At a faculty/student retreat sponsored by the Dean in 1997, the Dean and the faculty agreed on the establishment of a position for a Senior Associate Dean, Education (Dean of Education) responsible for the oversight of student related areas including admissions, student advocacy, affairs and advisement, and curriculum. Since 1997, the SOM has sponsored several student retreats which aided in collecting data regarding curriculum strengths and limitations. Supported by the UCHSC Office of Education, the Dean of Education is sponsoring a curriculum committee retreat open to all faculty and students in April, 2000. This retreat is to define the goals and objectives of our educational program for the MD degree and to develop an agenda for the curriculum committee for ongoing improvement of the education for medical students.

6A/4  The relationship between the Medical School in Beer Sheva and The General Sick Fund - Kupat Holim and its impact on the medical school perceptions on its mission

Shifra Shvarts
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Unlike most medical schools, the medical school in Beer Sheva maintains an ongoing organization and fiscal partnership with the dominant HMO in Israel, the General Sick Fund- Kupat Holim. Collaboration with this HMO impacts first and foremost on the curriculum of the medical school, manifested in curricula content tied to teaching in the community setting and the role of the General Sick Fund personnel as members of faculty together with medical work in the community. This study seeks to describe the cooperative relationship between the medical school and an operating HMO and its impact on the curriculum and on the medical school’s perception of its mission -
Health professions education and child poverty and health

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A survey and analysis is presented to show how effectively Health Professions Faculties and Departments in Ontario arc responding by their curricular offerings to the child poverty and its health consequences. Three portraits of child poverty and health are described: (a) showing the growth, breadth and depth of this problem in society, (b) summarizing the main features of the scholarly literature and (c) providing the analysis of the quantity and quality of academic programs. The quality of programmes is judged using a modified list of principles derived from Chickering's work. The gaps between the academic response and the research literature and societal data will form the basis of recommendations for curricular changes.

The dynamic cycle of evaluation-change-evaluation

Carolina Saldanha, Jorge Lima, Joao Martins e Silva
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A change in the process of teaching and learning was introduced in the discipline of Cellular Biochemistry (CB) in order to improve the delivery process of the assessment methods. The aim of this work was to compare the results of the course programme evaluation performed in the discipline of CB in two consecutive years. The first year students in 1999 (n=199) and in 2000 (n=189) of the Faculty of Medicine of Lisbon were required to answer a questionnaire anonymously with 20 closed questions assembled in 3 topics: the programme itself, the teaching process and the assessment methods. Phi and Cramer's V statistical analysis were used. The teaching process was considered helpful for learning subject matter in an integrated way and to stimulate group working; comparing the opinions between 1999 and 2000's groups there was a significant increase in the 2000 year students' group. Regarding the other 18 closed questions the answers profile were similar in both students' group. It is concluded that the improvement in the teaching learning process in the discipline of CB might be a consequence of the methodological modifications induced upon the 1999 evaluation.

Session 6B Postgraduate 2: Training for Specialist Practice

The effect of the General Practice vocational training on perceived skills in palliative care in the United Kingdom

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The general practitioner has a pivotal role in caring for the dying. Surveys over the last two decades indicate that newly qualified doctors and GP registrars perceive their training in this area to have been inadequate. This paper describes the results of a questionnaire survey of GP registrars in the West Midlands region at two points in their 12 month GP registrar year. The questions focussed on five clinical scenarios: a child dying with leukaemia, an adult patient dying with AIDS, an adult patient dying with lung cancer, an elderly patient dying from carcinoma of the prostate gland and an elderly patient dying with COPD. Perceived ratings of skills were lowest with a child dying with leukaemia and an adult patient dying with AIDS. Although skills were seen to increase significantly during the 12-month period, anxiety in caring for the dying did not significantly decrease. In addition, other important variables that had a statistically significant influence were gender and age. The previous number of hospital training posts or previous formal training in palliative care had no statistically significant impact. The GP training year has an important impact on the development of skills in palliative care but there are significant areas where additional educational support could help the GP registrars reduce their perceived anxiety in caring for the dying and provide better care for their terminally ill patients.

Survey of surgical training in Obstetrics and Gynaecology

Nicholas A Myerson, David H O Pugh
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Junior doctors in the UK now work less hours and spend fewer years in specialist training than previously. There are concerns that trainees in surgical specialties may now get insufficient practical experience. In Obstetrics and Gynaecology progress in training is recorded in a personal development file that records achievements and competencies but this is based on the opinions of the trainee and their current trainer. There are no national or individual data showing how much surgery trainees actually do, of what sort and with what supervision. Without accurate knowledge of the surgical training juniors receive, delivery of a comprehensive surgical training programme is uncertain. All Obstetrics and Gynaecology trainees in
Wales were sent questionnaires requesting details of surgical workload, training and their opinions regarding training. The results will be presented. Training is highly variable across the region and there are wide variations in trainee satisfaction.

**6B/3** Formative feedback for family practice trainers

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Department of Primary Care, Rehabilitation and Preventive Medicine, University of Marburg D-35033, GERMANY

To improve the quality of residency training in Family Practice, we are developing a standardised questionnaire for residents to provide formative feedback for their trainers. By extensive questioning of experts, focus groups of trainees and analysis of the international literature we assembled 140 items that were suggested as relevant. To reduce their number we used the Importance-Severity-Method in analogy to disease-specific quality-of-life assessment. Test-retest reliability and criterion validity are also being examined. The areas of communication, role modelling, practice orientation, teaching process, fair financial arrangements and tasks assigned seem to be especially important. At the congress we will be able to present the final version of the instrument, which will help trainers to improve their effectiveness as teachers. To succeed at establishing a learning culture, it has to be part of a comprehensive strategy.

**6B/4** Evaluation of PASS - a study planner for the MFDS/MFD examination: lessons learned

Lorraine Robertson
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Resources designed to assist postgraduate trainees with their preparation for professional examinations have the potential for significant impact, providing guidance and structure to help the busy trainee make the most effective use of their limited study time. An evaluation of one such resource – PASS: a study planner for the MFDS/MFD, developed for dental postgraduate trainees, revealed:

- The value of providing a structure around which to plan and organise study.
- The importance of the content accurately reflecting the depth and scope of knowledge expected in the examination.
- The significance of self-assessment exercises, and how these might be improved.
- Potential barriers to the use of the Internet for study, such as the time taken to find sites of educational value and lack of confidence in searching the Internet.

This paper will elaborate on these key findings, illustrating how PASS successfully achieved them, and describe how they will be used to inform future development of PASS.

**6B/5** The Poorly Performing Doctor: a strategy for diagnosis and management

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Clinical inexperience combined with lack of knowledge and insight, inappropriate attitude, reluctance to work within a team, lack of integrity, absence of professionalism; any of these elements can result in the poorly performing doctor. We suggest a clear diagnostic pathway, a management strategy, informed by educational theory and clinical expertise, illustrated in two algorithms. We identify poor performance within the domains of knowledge, skills, attitude, relationships and health, then facilitate the poorly performing clinician to reflect on practice. The 'Next Step' is a tool to address the issues within the five domains. A re-training package is formulated focusing on the process of Best Evidence Medical Education. The learning experience is evaluated through summative assessment. Courses are currently available instructing on medical teaching; few examine the issues of managing poor performance. This is a critical module informed through reflective practice and theory. The issues raised are fundamental to the development of tomorrow’s medical teacher.


**6B/6** Management administration and postgraduate education using ‘capture-recapture’ to estimate specialised medical workforce

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Workforce studies in developed countries need only concentrate on estimating demand. Colombia has no central register for health professionals and lacks information on physician supply. We used capture-recapture, a technique commonly used to estimate wild animal population, to calculate the number of physicians in 12 medical specialities. Lists of physicians affiliated to professional societies, physicians working with the largest nationwide health organisations and records from national and foreign postgraduate programmes were used as "captures". Capture® software was used for statistical analysis. For the first time we have approximate figures for specialists in Colombia (with 95% CI): anaesthesiologists 1753 (1727-1789), cardiologists 607 (598-624), dermatologists 517 (514-525), gynaecologists 2338 (2290-2400), pulmonologists 304 (297-320), neurologists 321 (296-369), neurosurgeons 324 (319-334), ophthalmologists 1049 (1042-1061), orthopaedic surgeons 1217 (1212-1227), otolaryngologists 634 (628-645), psychiatrists 855 (838-879), urologists 452 (452-458). Our estimates will allow medical schools to assign residency slots with objective criteria.
Session 6C Teaching and Learning 2: Learning Styles and Approaches to Learning

6C/1 Student age and prior academic experience

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As part of an on-going project on medical students’ learning styles as our curriculum changed to a more integrated one, we administered the Approaches and Study Skills Inventory for Students to the graduating class (2002) at the start of each academic year, that is, 1998 and 1999. A repeated ANOVA design was used to determine whether learning styles changed from one year to the next and whether student age and the number of years of pre-med education had an effect. Overall, students’ deep learning scores were similar (46.8; 45.9) from one year to the next, however, scores on strategic (45.5; 42.4) and instrumental (35.1; 31.7) learning decreased significantly (p<0.05). Student age and prior academic experience had no effect on learning styles. We conclude that curricular factors may have a significant influence on students’ learning approaches.

6C/2 Changes in students’ approach to learning during five years in a traditional medical school

J F Perez-Gonzalez
Escuela de Medicina “Luis Razetti”, Facultad de Medicina, Universidad Central de Venezuela, Apartado de Correos No 90.350, El Hatillo 1083A, VENEZUELA

To evaluate the possible changes in students’ approach to learning as they progress in Medical School, the Cognitive Behaviour Survey (CBS) was completed by samples of first year (n=53), third year (n=90) and fifth year (n=34) students and the mean scores for the memorisation (M), conceptualisation (C), reflection (R) and positive learning experience (PLE) scales were compared by means of ANOVA. Scores (Mean ± SD) for M were 53.15 ± 11.25, 47.13 ± 12.45 and 47.85 ± 9.26 for first, third and fifth year students, respectively (p=0.0052). C scores were 49.31 ± 6.31, 50.43 ± 6.99 and 51.38 ± 6.41 (p=0.62). R scores were 29.20 ± 5.16, 26.29 ± 5.61 and 30.85 ± 5.32 and PLE scores were 47.73 ± 7.65, 44.28 ± 8.10 and 47.18 ± 7.41. Thus, five years in a traditional medical school caused a reduction in M from first to third, no changes in C and mixed changes in R and PLE.

6C/3 Does unprofessional behaviour on a clinical clerkship vary during an academic year?

Paul A Hammer, Richard E Hawkins, Louis N Pangaro
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The aim was to determine if medical students’ unprofessional behaviour varies during an academic year. From 1993-99, 57 (6%) third year students on the medicine clerkship at the Uniformed Services University had unprofessional behaviour. We determined 1) the demonstrated behaviour, 2) when the behaviour occurred and, 3) its severity. 42 (74%) of the students received non-passing clerkship grades. Unprofessional behaviour was more common in the first two academic quarters (p = .04, np trend test).

<table>
<thead>
<tr>
<th>Academic Quarter</th>
<th>No (%) of students reviewed by Education Committee</th>
<th>No (%) of students with serious deficiency*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21 (37%)</td>
<td>12/21 (48%)</td>
</tr>
<tr>
<td>2</td>
<td>15 (26%)</td>
<td>7/15 (47%)</td>
</tr>
<tr>
<td>3</td>
<td>14 (25%)</td>
<td>4/14 (29%)</td>
</tr>
<tr>
<td>4</td>
<td>7 (12%)</td>
<td>2/7 (29%)</td>
</tr>
</tbody>
</table>

* Receipt of an unsatisfactory [D or Fail] clerkship grade.

Poor reliability and commitment, inadequate response to feedback, poor working relationships, or poor patient interactions were common behaviours. Students with serious deficiencies typically had several competency deficiencies, never improved with feedback, or committed a grave offence. In our clerkship, unprofessional behaviour more commonly occurs early in an academic year. Emphasis at orientations and formal evaluation sessions during the clerkship may need to be complemented by stressing professionalism during pre-clinical courses.

6C/4 Initial progress of graduate entrants to accelerated UK Medical Course

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Division of Medical Education, Faculty of Medicine, University of Leicester, P O Box 138, Leicester LE1 9HN, UK

Leicester Warwick Medical School runs a parallel five-year course for school leavers, and four-year course for Biology graduates. Phase 2 (last 2½ years) is identical. Phase 1 is 2½ years for school leavers, 1½ years for graduates. All assessments are the same. We have compared the initial progress of accelerated students with school leavers. Graduate entrants like and achieve well in ‘Social and Behavioural’ modules. They accept their relevance to practice. Surprisingly, they cope less well with the heavily clinical ‘systems’ modules. Re-focussing the biological mind onto clinical application is a challenge for many. Graduates learn
well independently, which maybe helps novel learning more than clinical application of existing knowledge. We are studying why this is so, and how it relates to anecdotal suggestions that graduate entrants to five year curricula tend to achieve in the middle or lower part of the performance range rather than the top.

**6C/5**

**Characteristics of the learning environment of a medical school: attitudes of medical students in the clinical phase of training**

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Characteristics of the learning environment of clinical studies at the Hebrew University-Hadassah Medical School were studied by means of a questionnaire, adapted from Harth and Rotem (1994). Students in fourth vs. fifth year experienced higher levels of conflicting messages and self-appreciation, as well as lower levels of role clarity. In fourth year clerkship of internal medicine vs. pediatrics, students experienced more supervision, opportunities for learning, role clarity, self-appreciation and stress. In fifth year clerkship of gynaecology vs. surgery, students experienced more supervision, opportunities for learning and support. The most positive experiences among fourth year students stemmed from their encounters with positive role models, while for fifth year students, they stemmed out of a sense of professional competence. The most negative experiences of fourth year students stemmed out of their encounters with patients’ suffering and dying, while for fifth year students they stemmed out of their encounters with negative role models.

**6C/7**

**Learning style and academic achievements**

Kristin Wigen, Oyvind Ellingsen, Are Holen

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In the fall of 1999, new medical students at the Norwegian University of Science and Technology were asked to complete these questionnaires: (1) Entwistle’s Learning Style Inventory (30 items), (2) Braithwaite’s shortened neuroticism scale (15 items), and (3) a 17-item version of the Locus of Control instrument. Additionally, variables covering the admission scores and gender of the students are included. The aim of the study is to explore possible relations between these variables and the academic achievements of the students at their first exams by the end of the first year in June 2000. Preliminary findings from the study will be presented and briefly discussed.

**6C/7**

**Content conception as part of macro perspective on the learning process**

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Descriptions of learning processes usually distinguish cognitive, affective and metacognitive processes, respectively pertaining to ‘processing of content information’, ‘feelings and motives toward learning’ and ‘regulation of learning activities’. While these constitute a micro level of learning, on a macro level Vermunt (1992) added two constructs to generate a learning style model:

- Learning orientation: the domain of personal goals, motives and expectations, influencing the affective micro process;
- Mental model of learning: the personal view on learning, the macro counterpart of the metacognitive regulation process.

‘Content conception’ was recently added as a third macro level construct, related to the cognitive process. In medical education this can be described as the image a student has of medicine and the medical profession. The macro constructs together presumably direct the micro-learning process. Measurement operationalisations of ‘content conception’ and the results of a preliminary study into the content conceptions of first year medical students will be presented.
Session 6D New Learning Technologies 2: Computer-assisted Learning

6D/1 Experiences with implementing computer assisted learning and small group teaching in Urology at the University of Tübingen (Germany)

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Our urology course is performed in small groups (3 students). To prepare for it, students work with a computer program series produced in our department. Both acceptance of small group clinical teaching and computer assisted learning (CAL) was ascertained by questionnaire. Prior to the course, data on the performance with the computer programmes were collected by means of a written test. From the students' point of view, advantages of small group clinical teaching were: individual tutoring, optimum course organisation, saving of time, intensive participation in the study groups, orientation according to individual knowledge and interest. Efficiency was rated as considerably higher than in traditional instruction. 80% of students regarded CAL as an alternative to lectures. 77% of the open questions asked in the test were answered correctly. We recommend combined CAL and small group clinical teaching as an alternative especially for the 'small' clinical specialties.

6D/2 Use of multimedia by teaching assistants to help students' self-learning process

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In order to increase the comprehension of biological processes and to develop self-learning habits in medical students, a computer program in Cellular and Molecular Biology has been running since 1995. This activity is based on three elements: the G. Williams's multimedia Hypercell software (edited by Garland Publishing), a group of teaching assistants, and study guides created by them. The main characteristics of this activity are that: a) it is developed by and for students, b) it is multimedia, entertaining and easy to use, c) it emphasizes the guides' aesthetic aspects, d) it invites students to ask questions and to discuss the different topics according to their individual learning pace, e) it demands constant development, evaluation and updating, and f) it is highly motivating for both medical students and teaching assistants. This activity has also created a favorable university environment in which the student can interact, humanizing the new trends in education, developing the student's sense of institutional belonging, in accordance with the medical doctors' profile which we strive to achieve.

6D/3 Do computer facilities enhance student cooperation?

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The new Utrecht medical curriculum includes weekly small group sessions that require cooperative preparation of presentations, short papers and other tasks. Students are served with a new facility for self-directed learning: a study-landscape with computers, relevant books, copy- and print facilities. It can be used to meet other students, work together, use computers as a web- or CD-information source, consult handbooks, prepare presentations etc. To investigate its use we asked 48 first year students to report during one week on all self-directed learning activities, specified in location of studying (in the study landscape or elsewhere), use of computers and cooperation with other students. Two study tasks had been scheduled in this week and a short test of both topics was delivered at the end of the week. We were interested to see whether the use of computers related to student cooperation and whether both related to learning outcome.

6D/4 IT-literacy and information search habits is closely related to academic activities

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In order to assess the need for training in medical informatics we performed a survey among anaesthetists. A questionnaire about IT literacy and information search habits was answered by 222 anaesthetists (86%) at six hospitals in Copenhagen. Medical informatics was primarily used for research activities and teaching/learning. A shift towards more women in medicine and less emphasis on research activities put forward the need for integrating medical informatics and information search habits in resident programmes.

<table>
<thead>
<tr>
<th></th>
<th>Training</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>(n=47)</td>
<td>(n=21)</td>
<td>(n=80)</td>
</tr>
<tr>
<td>Scientific publications, median (range)</td>
<td>1 (0-12)</td>
<td>2 (0-32)</td>
</tr>
<tr>
<td>Information search several times a week</td>
<td>41%</td>
<td>50%</td>
</tr>
<tr>
<td>Research as incentive</td>
<td>43%</td>
<td>70%</td>
</tr>
<tr>
<td>Teaching/learning as incentive</td>
<td>64%</td>
<td>73%</td>
</tr>
<tr>
<td>Need training in medical informatics</td>
<td>72%</td>
<td>65%</td>
</tr>
</tbody>
</table>

* = difference between gender
§ = difference between trainees and specialists
Diagnostic assessment of practising doctors using computer simulation of patient management skills

Anthony LaDuca, Laurel Sample, André de Champlain, Cynthia Leung
Assessment Centre Project, National Board of Medical Examiners, 3750 Market Street, Philadelphia PA 19104, USA

During 1997-1999, Assessment Center Program staff explored the utility of computer-based simulation of patient management skills (CBX) for diagnostic assessment of doctors who have been referred because of concerns about their clinical performance. This paper extends work reported on previously. Our main research question is: What diagnostic value is obtained by comparing CBX performance of referred doctors (n=52) with a baseline group (n = 24)? The majority (67%) of referred doctors were referred by a state licensing board because of quality-of-care issues. Baseline doctors were volunteers, all of whom were certified by an ABMS specialty board. Referred doctors take more time to complete cases and achieve lower scores. But as a group, referred physicians are not distinguishable from baseline doctors. However, it is possible to make useful conclusions about the relative strengths and weaknesses of an individual referred doctor. Examples will be discussed during the presentation.

Communication training through the Dynamic Patient Simulator

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Communication plays an important role in the treatment of patients and should therefore be one of the aspects of medical education. As actual communication takes place by means of Hospital Information Systems, electronic patient records and email, it seems logical to use these technologies in training of medical students as well. This kind of training can be realised by using the Dynamic Patient Simulator (DPS). DPS is a Computer Based Training (CBT) program, which simulates a patient on the computer. The aim is to train students in treating patients, handing over care and consulting fellow students from other medical fields through email. The DPS enables students to take a doctor’s role and simulates working in shifts. In the presentation some experiences and examples will be given.

Session 6E Problem-based Learning 1: Methodology

Recruiting PBL tutors for a PBL-based curriculum

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Department of Rehabilitation and Aged Care, Repatriation General Hospital, Daw Park, SA 5041, AUSTRALIA

The availability of sufficient tutors is a major concern when introducing PBL. Since 1996, Flinders University in South Australia has offered a four-year graduate-entry medical program of which the first two years are PBL-based. We report our experience in recruiting PBL tutors to date. From 1996 to 1999, 136 (25.9%) of the school’s 525 staff had trained as PBL tutors and 98 (18.7%) had tutored. Individuals and departments differed greatly in the amount of time devoted to tutoring. Compared with staff in clinical departments, those in non-clinical departments (who constitute 12% of the total) made a greater relative contribution though a smaller collective contribution to tutoring. Staff who tutored once tended to tutor again in subsequent years. These findings prompted us to introduce a formula to distribute the PBL tutoring load more evenly across departments. Strategies which encourage more staff to tutor are being identified.

Teaching research skills: a tutorless PBL program for undergraduate medical students

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To date, medical students from Bern, Switzerland have not been systematically instructed in clinical research methods. Using a new teaching method, the goal was that third year medical students should become familiar with the processes and problems of clinical research. This includes literature searches and evaluation (PubMed), study design, Evidence Based Medicine, criteria for measuring research success, financing and research ethics. The method used was tutorless small group work. Starting with clearly formulated tasks, each group composes a written solution that is sent to the instructor, who then presents the various group projects to the whole class, thereby explaining difficulties and misunderstandings. Each study group meets twice with a research team, six months apart, and prepares a report covering their work, progress and difficulties.
Clinical reasoning and PBL in the 'new' undergraduate medical curriculum

Marjorie F M Allison, Barry Clark, David Lloyd
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In 1996 a new MBChB curriculum based on PBL methodology was introduced in Glasgow. We have been at pains to ensure a progression so that the PBL system itself develops and presents more challenges to complement the students' growing experience and newfound confidence in their own abilities. We used a 'closed' methodology based on a sequence of steps in Years 1 and 2. This led students to identify learning goals that had been determined by the course planners. By year 2 this procedure had become routine for the students and we sought to extend the challenge. We did this by removing much of the specific patient information from the scenario and invited students to reason from first principles. We shall describe these 'open' scenarios, and the CD-ROM system that is used to allow students to explore patient data. Feedback from both students and their clinical facilitators is very positive.

A changed role for the lecture in a PBL curriculum

J M Nichols, L C Chan
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In 1997 when a new PBL-curriculum was introduced, the number of didactic lectures was reduced by 30%. Some teachers responded by increasing the content of the lecture within a shorter time, and this raised concern amongst the students who valued lectures as a learning format. To address these concerns we modified the lecture format. A revised lecture handout was placed on the Department server 1-week prior to the lecture. Students were expected to download the handout and answer key questions concerning the content of the handout. During the first 15 minutes of the lecture students were selected to give answers to the questions. The second 15-minute period was a slide presentation by the lecturer that clarified the content of the topic. During the final 15 minutes students worked in small groups designing a concept-map and selected groups were invited to share this map with the rest of the class.

Analysis of learning-issues for the development of a method to evaluate papercases in problem-based learning

Bert Huenges, Walter Burger, Claudia Kiessling (Reformstudiengang Medizin, Charité, Humboldt University of Berlin), Dick Martenson (Karolinska Institute) c/o Plamper, Lychener Str. 33, 10437 Berlin, GERMANY

To develop an evaluation method for papercases in PBL we analysed 242 learning issues (generated in nine PBL-groups working with six papercases) after different stylistic and content criteria. Results were compared with students' ratings, who were asked to indicate the papercases they considered best and worst and to give reasons for their decision. Reasons for negative ratings were cases' high complexity and missing congruence with complementary courses or faculty objectives of the respective semester. These learning issues tended to be more diffuse, open and non-specific and to have a higher relation to faculty objectives than to the case history. Positively rated papercases led to learning issues that tended to be more related to the cases' patient history and to contain more clinical issues. We will present and discuss our method to analyse student-generated learning issues for evaluating the influence of papercases in the PBL-process.

PBL in a community-orientated education using the Hybrid system is appropriate for developing countries and international medical education

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Faculty of Health Sciences, Department of Haematopathology, UNITRA, Private Bag Xi, Umtata, 5117 Eastern Cape Province, SOUTH AFRICA

Learning medicine in the context of the community using the problem-based learning approach and the hybrid method has proven effective for medical education in developing countries. A review of this strategy for medical education has led to the recommendations of PBL, community-based education and the hybrid system using a systematic approach to problem solving in tutorial groups. Monitoring of this strategy can facilitate distance education and promote international medical education.
**Session 6F  Staff Development 2**

**6F/1  Role conflict in medicine: is it possible to be a good researcher, clinician and teacher at the same time?**

Susanne Pruski, Stefanie Pesoditschek, Christian Bauknecht
c/o München, Prenzlauer Allee 176, 10405 Berlin, GERMANY

After five years as medical students, we have come to the conclusion that our teachers’ priorities lie in research rather than in helping students to become effective doctors. The burden of responsibility for acute care, research and education reduces job satisfaction, and has an adverse effect on their performance as educators. Further an overloaded curriculum, new demands on health care and public expectations necessitate changes in the structure of medical education. In a series of discussions, including exchanges with the dean of research, we pursued the question of how medical education could be made both more effective and of greater benefit to students, teachers, patients and the health care system itself. In a first step, we compared evaluation results with research outcomes. Preliminary answers suggest that it is nearly impossible to give all three roles equal attention.

**6F/2  Do teaching ‘TIPS’ courses work?**

D P Gill, J Cartledge
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The recent GMC publication ‘The Doctor as Teacher’ has focused interest within medical schools in the training of teachers to teach. Our medical school has set up a ‘teaching the teachers’ programme in response to such interest. This consists mainly of short courses based on the Teaching Improvement Project (TIPS) model. American research has shown this model to be effective in changing teachers’ behaviours and we wanted to check that this model is an effective one for a UK audience. In this study we asked all participants to analyse their own teaching abilities and behaviours before attending a two day course, and immediately after. A subsample of this group was videoed during a ‘microteaching’ session before attending the course and again at the completion of the course. The videos were reviewed by an independent observer noting use of effective teaching behaviours according to a proforma. The results of this study will be presented and discussed.

**6F/3  Triggering your teaching instinct - six page ‘starters’ say it all**

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All doctors are teachers to a lesser or greater extent. This has been reinforced in recent General Medical Council documents in the UK which state that doctors in training should be ‘further developing their ability to teach’. At AMEE last year we identified 12 teaching roles for doctors and the training needs of different grades of doctors to fulfil such roles. The challenge, however, is how to interest and support those involved in teaching, but for whom the subject area may not be a priority. To meet this challenge we are producing a series of concise six page ‘starter’ units on a range of topics relating to teaching. The units have been designed to attract the interest of the reader by giving practical examples and tips to help demystify the topic, and to provide links to further learning. This format has stimulated much interest and could be used for teaching other generic skills that are often given little priority.

**6F/4  The uncertainty of knowing: determining the value of a postgraduate program in Medical Education**

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The establishment of Medical Education as a scientific discipline has prompted different institutions to offer specific training programs for medical educators and educationalists. This paper reflects on the experience of the first group of participants in the postgraduate program “Master of Medical Education” at the University of Bern, Switzerland. It is the most recent of its kind. Content and administration of the program are briefly described. Possible scenarios for professional application of such an education in the German AustrianSwiss area are given. We list strengths and weaknesses of the program in its current state. In conclusion recommendations for further validating studies on medical education training programs are provided.
Interactive workshops in further training of medical teachers

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The Croatian Association for Medical Education uses two types of organized activities aimed at further training of medical teachers: formal courses covering the basics and interactive workshops devoted to experienced teachers. In the workshops the origin of the initiatives is internal, the audience is mixed, the topics are specific and deeply analyzed, the duration is short, learning is based on experience and the most frequently used teaching method is small group work. The workshops are structured as follows:

1. Introductory lectures (short dilemmas, questions);
2. Longer breaks ("Let us speak and gossip freely.");
3. Small group work;
4. Additional activities (films, demonstrations, exhibitions, "festivals");
5. General discussion (plenary in presence of a wider circle of teachers, co-chaired by vice dean for education);
6. Evaluation and optional assessment (MCQ or MEQ);
7. Written report and recommendations (presented at Faculty Council).

More than fifteen topics have already been discussed. Formal evaluation was positive; Personal involvement and appropriateness to teaching practice were stressed. Major critical points were that theoretical uncertainties remained and that gradual development of a narrow group of active participants resulted without the expected impact on the whole group.

Bi-lateral collaboration in medical education: the Cardiff-Lisbon experience

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Between 1995 – 1997, the Academic Department of the School of Postgraduate Medical and Dental Education at UWC, in conjunction with the Faculty of Medicine in Lisbon, was responsible for delivering a Postgraduate Diploma programme in Medical Education in Portugal. This unique initiative was aimed specifically at those members of staff who are key players in the development and teaching of the medical education curriculum in Portugal. In total, twenty students completed the taught course, eight of whom have since submitted their MSc dissertation. Currently, the initiative is being evaluated with the aid of a Research Grant from the British Council. The project has adopted a predominantly qualitative framework and this paper seeks to explore some of the themes which have emerged from initial focus group interviews. In keeping with the forward-looking theme of the conference, it serves to highlight possible strategies which might be adopted in future global collaborations for teaching Medical Education.

Who defines a good teacher?

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This paper explores the congruence of various views of what makes a good teacher:

- General Practitioner (GP) Tutors formulated a set of guidelines, applied to their teaching of undergraduate medical students in their practices. These guidelines were developed into a teaching agreement between GP Tutors and the Department of General Practice.
- Students' evaluation of their fourth-year undergraduate GP attachment revealed characteristics of the Tutors that were valued.
- Theoretical models of the roles of a good medical teacher have been developed in Dundee (conference presentation).

The students concentrated only on the interaction between the tutor and student, but the tutors and the theoretical model also valued aspects of teaching administration such as curriculum design and implementation. Only the tutors themselves included their own professional growth and support system as an integral part of their role. We will discuss the implications for recruitment, training and quality assurance.
Session 6G Assessment 3: The OSCE

OSCE global ratings are sensitive to level of training

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There are several reasons to use global ratings in addition to OSCE checklists. However, little attention has been paid to their validity. This study assessed a global rating with 4 sub-scales: empathy, coherence, verbal and non-verbal communication. Nineteen 3rd-year and 38 4th-year clinical clerks were scored on content checklists and a global rating during a 10-station OSCE. The mean global rating was significantly higher for senior clerks (75.5% vs 71.3%, t1,55=2.12, p<0.05) and there were significant differences by level of training for coherence (t1,55=3.33, p<0.01) and verbal communication (t1,55=2.33, p<0.05) sub-scales. Inter-station reliability for the global rating was 0.70, and for sub-scales ranged from 0.58 to 0.65. Checklist reliability was 0.54. In this study, global ratings demonstrated construct validity and had substantially higher reliability than checklists.

Performance analysis of skilled task OSCE stations

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The OSCE for 4th year medical students included four skilled task stations: CPR, chest examination, abdominal examination and fundoscopy. We examined scores attained at these stations. The OSCE contents were secret except for a mandatory CPR station where students knew a good pass (80%) was required to avoid re-testing. 150 students took part. The best marks were obtained in CPR median 95% (range 55-100), followed by chest examination 80% (40-100), abdominal examination 70% (10-100) and fundoscopy 70% (0-100). Students performed significantly better in CPR than the other three stations (Kruskal-Wallis, p<0.001). The reasons for the disparity in marks may be multifactorial. The CPR question is very transparent, the students know they will be tested, know the standard expected, know that there will be no cross-compensation by marks at other stations and will undergo remediation if the standard is not attained. A more open approach to assessment may yield improved performance.

Basic and advanced life support skills (ALS/BLS): Performance analysis of medical students

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Students receive staged resuscitation training annually. This is complete by the end of fourth year (except advanced airway skills not required for immediate resuscitation). We report on performance during an end of 4th year OSCE of witnessed in-hospital collapse (VF), and identify manoeuvres that could be improved. 150 students were assessed over 4.5 minutes by scoring 20 essential tasks (0= task forgotten, ineffective or dangerous, 0.5= done poorly, 1= effective). The median score was 18.5/20 (range 10.5-20). BLS and 'code' activation was effective in >85%, excluding precordial thump (27% completed). During ALS 12% ran out of time, but 63% completed 3 defibrillations, rhythm and output checks faultlessly. The most poorly performed tasks (by those who had time) were pad position (86% effective), and pulse check (79%) after sinus rhythm was restored. Students undertaking progressive temporal instruction achieve high standards. Task analysis could be used to focus and improve teaching.

Ethnicity and cultural issues when patients communicate with doctors. How do these impact on the training and assessment of medical students?

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The increasing multi-ethnicity of students and patients in UK medical schools raises important intercultural issues when training and assessing communication skills. This study used intercultural discourse analysis to assess interactions between simulated patients and students in a final year Objective Structured Oral Examination. Four case scenarios highlighted difficult communication problems in specific areas (difficult news, sexual history taking, negotiation with a methadone user and alcoholism) using role players of different ethnicity. 214 students, 50% non-white ethnicity, were recorded on video in a total of 640 interactions. Videos were scanned by trained discourse analysts (CR/SS). Detailed qualitative analysis of selected tapes was done. Evidence to date suggests that stylistic and, rarely, linguistic differences account for weaker performance in a small number of ethnic minority candidates. Interesting observations on the assessment of empathy and implications for devising role play scenes and selection and training of role-players will be illustrated.
Evaluation of communication skills course assessment in Dokuz Eylul Medical School

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The assessment method used for the communication skills course in Dokuz Eylul University Medical School is under continuous evaluation. The course was given to 144 and 166 first year students in 1998-99 and 1999-2000 respectively. Communication skills were assessed using standardised simulators and a scenario. In 1998-99 a 10 item checklist was used which was reduced to 6 items in 1999-2000. Reliability was analysed using Cronbach's Alpha. In the assessments, students' introduction, asking open ended questions, body language and active listening skill scores were higher than the empathy items. The internal reliabilities of the 10 item checklist and 6 item checklist were moderate with alpha coefficient 0.67 and 0.68 respectively. Both the 10 item and 6 item checklists showed comparable reliabilities.

Pediatric Objective Structured Clinical Examination in evaluation of student performance

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The objective structured clinical examination (OSCE) based on a circuit of stations which tests range of skills, is well established and considered as a valid method to assess clinical performance. A well built OSCE provides reliable information about students' competence and reflects the quality of teaching. The Ben Gurion University School of Medicine uses OSCE to assess students during their rotating clerkships in internal medicine, psychiatry and family medicine. OSCE was administered during pediatric clerkships as of 1998. This presentation will describe our experience in creating, organising and evaluating the pediatric OSCE method. This experience is considered to be of importance for introducing the pediatric OSCE to other medical schools. Specified data on reliability analysis, students' achievements and their feedback on the test will be presented. We are able to show that the OSCE method provides standardized criteria in assessment of clinical competence at a pediatric clerkship in a feasible way.

Session 6H Continuing Medical Education 1

Continuing Medical Education among Swedish hospital physicians

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A questionnaire concerning participation in CME/CPD activities in 1997 and 1998 was sent out to 10% of the members of the Swedish Association of Senior Hospital Physicians. Qualified specialists on average attended 2.5 external CME/CPD activities a year, corresponding to a mean of 8 days. Only 3% did not participate in any external CME/CPD during 1997/98. The employer covered the costs for CME/CPD to 60% and the pharmaceutical industry to 16%. The doctors paid 12% and 10% of the costs were paid from various foundations. 77% of doctors were on fully paid leave for their external CME/CPD in 1997 and 73% in 1998. 70% of the specialists in hospitals had internal CME/CPD for 1-2 hours a week. 60% have had development discussions with their medical director, but only 36% had touched upon CME/CPD. Swedish hospital physicians (consultants, assistant consultants/ senior registrars) take a great responsibility for their own professional development and the majority reaches the level set by the Swedish Medical Association.

Clinical governance and continuing education: meeting the needs of the individual and the organisation

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Fourteen medical and clinical directors from a range of hospital trusts and specialties in Wales (UK) were given in depth interviews to explore their perceptions of CME (now CPD in the UK). They were questioned on patterns of CME activity, motivations, influences, educational value, resources and management related issues. The interviews also focused on the changing policy and organisational context, specifically clinical governance and revalidation. Interviewees reported a new impetus to adopt structured and needs based approaches to continuing education. They also found it difficult to separate the concept of individual needs from current policy and management changes, the latter impacting strongly on their perceptions of education. This raises the issue of how the changing policy context can be integrated with the aims and ambitions of individual consultants into an acceptable and inclusive CME framework. This work is the initial phase of a two year study to investigate and develop a CME strategy across Wales.
A survey of the type, volume and impact of continuing education for general dental practitioners

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With the publication of A First Class Service (NHS, 1998) it is expected that a "continuing process of updating and maintaining expertise will support the delivery of high quality, modern, effective healthcare in a fast changing world" (para 3.42). This paper will report the findings of a survey distributed earlier this year to all general dental practitioners in three deaneries in the UK. The survey forms part of a study commissioned by the Department of Health which is being conducted at the University of Birmingham, England. Data provided by the respondents will be reported (a) on the type and amount of continuing education, both formal (e.g. course attendance) and informal (e.g. journal reading) undertaken in the year ending 31 March 2000; (b) on motives for engaging in continuing education; and, (c) impact on practice (including reasons for change, relative impact of different forms of continuing education, constraints to change).

The cost-effectiveness of continuing professional development: A review of the literature and 100 RCTs

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This paper uses basic economic concepts to investigate the cost-effectiveness of Continuing Professional Development in the medical profession. The extant literature is reviewed and several critical methodological issues arise. The authors then reviewed 100 RCTs, to examine whether or not CPD is cost-effective and what is necessary to achieve cost-effective CPD.

Get those real learning needs

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Small group CME activities should be in the control of the learner. It begins while preparing the activities. We must be accurate in assessing those needs before trying to link them to educational interventions and learning strategies. But it is not always possible for a CME provider to observe the real practice or to review the charts to evaluate properly what the real needs are. Perceived needs as assessed by traditional questionnaires based on themes and topics appraisal are often insufficient. Looking at the difficulties encountered by future participants, their level of comfort, the opinion of the consultants to whom participants refer and the published consensus and guidelines help to add perspective and accuracy.

Concluding Medical Education (CME) for the primary care physicians of the Negev Region, Israel

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We studied the habits and preferences of the primary care physicians of the Negev (the southern region of Israel) regarding CME, their methods of learning and their participation in CME courses. We questioned 220 physicians: family practitioners, pediatricians, internists and GPs, by a 7-part questionnaire. 75% attended a CME course during the past year. In dealing with daily clinical issues, their main sources of information were books (48%) and journals (25%); only 21% used computerized information (MEDLINE) and 10% the advice of hospital consultants. They updated themselves about new medications by reading journals (80%) and interacting with drug detail personnel (75%). Only 21% used the medical library frequently; only 10% had Internet access in their clinics. CME courses were their preferred way of learning (91%). They believe that the courses should be financed by their employers (81%), and should be held during working hours (60%). Community physicians in the Negev are willing to take part in CME courses and regard them as their principal way for professional advancement. They prefer traditional sources. Major changes are required to introduce more modern methods of CME with specific relevance to community health problems.

On-the-job and organizational learning: implications for the organization

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The evidence in medical education shows that CME is more efficient if it is based on the professionals’ practice (Davis et al, 1995). Since professionals work inside organizations, the organizational dimension of learning has also to be taken into account (Argyris, 1993). The aim of the project was to start a process of self-learning on clinical topics for FHC center professionals. We proposed the self-audit methodology to start with among other possible formative assessment methodologies. The process consisted in one complete cycle of self-audit learning such as criteria to ask for HB A1C, the need to include social data in the clinical records, and so on. From this experience we have learnt that management involvement is essential to implement on-the-job learning strategies since learning from one’s own practice and organizational learning need an organizational involvement in terms of time, territory and commitment to the learning task.
Session 61 Multiprofessional Education 2

61/1 Performance factors and gender issues in the negotiated marking of the communications element of year 5 interactive GP examinations

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This paper explores whether performance factors and gender differences between trained role players and clinical examiners have any significant effect on year 5 medical students’ exam results. The VOICEs examination is a rotation of six fifteen-minute stations—one open viva, three closed vivas and two role played consultations. ‘Patient’ roles are taken by members of our integrated role play team. Clinical components are assessed by a GP, while communication is negotiated between the examiner and the role player. Independently perceived marks of the 2 scoring groups and their agreed final (awarded) marks were recorded across (to date) 624 consultations, along with other variables, e.g. gender, time and experience. This paper continues work started in 1997. Preliminary results from the early part of the study, and ongoing indications, suggest no significant differences. Data collection ends June 00. Full results will be presented thereafter.

61/2 A Teamwork Agenda for Multi-Professional Education

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Our recent ENB funded research examined teamwork in a range of clinical environments. It identified benefits of democratic teamwork for both patients and professionals and the pivotal but very different roles played by doctors and nurses in determining whether the approach is successful. The research identified an agenda for shared learning focused on developing role understanding, communication and a joint approach to clinical problem solving. This teamwork agenda is compared with the ‘common learning need’ agenda typical of initiatives identified in a survey of multi-professional learning in higher education. The research led to proposals regarding both broad curricular strategies and specific teaching and learning tactics to meet the teamwork education agenda. The paper will outline the research and proposals for multi-professional education. It will also raise questions about models of mono-professional teamwork in medicine and the effect those models have on medical approaches to multi-professional working.

61/3 Clinical anthropology class for education of ethics and humanity

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Clinical anthropology is a new educational method characterized by: 1) small group study, 2) considering humans through concrete cases requiring decisions relating to birth, ageing, illness and death, 3) starting to consider one’s own case, and 4) also searching for the meaning of human life. The subjects of the clinical anthropology class were medical students, nursing students, general university students, graduate students, nurses, specialists of terminal care and average citizens. The clinical anthropology class was highly evaluated from learners through questionnaires. For example, from the 5-stage grade-point questionnaires of medical students (1999), “notice the difference of opinions between individuals” were shown to be up 4.8 on average, and to “have the chance to consider humans” was 4.6. The clinical anthropology class for general university students and citizens also had the characteristics of a multidisciplinary mixture of learners. This class was elected “the best lecture (multidisciplinary subject) of the University of Tsukuba 1999” by students.

61/4 An integrated interprofessional learning opportunity for undergraduate students - a pilot study

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The study was set up to examine perceptions of medical and nursing students towards their own and the other’s profession and to identify whether these perceptions altered during an interprofessional learning experience in gastroenterology. Students participated in small groups of either nursing OR medical students or medical AND nursing students. The student evaluation of the study used a pre-validated questionnaire, including Likert and open questions, to identify the presence of professional stereotypes (Carpenter 1995). Results indicate changes in the knowledge of each others’ roles in relation to patient care and a change in medical students’ perceptions of nurses. Perceived benefits of interprofessional learning were also identified. The findings suggest that more effort should be focused on enabling the two groups to explore each other’s roles in a safe environment by creating more time and less structure within the shared experience.
Situated learning - dimensions of medical and nursing students' clinical preparation for multiprofessional practice

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Educational preparation for multiprofessional working currently lacks conceptual clarity (Campbell and Johnson 1999), however most of the literature reports on learning experiences outside the clinical domain. Lave and Wenger (1991) propose that learning is fundamentally social in character involving a process of participation in 'communities of practice'. As such engagement with and meaning in learning are configured through the process of becoming full participants in sociocultural practices and knowledge-based learning is subsumed beneath the social processes. This paper presents an analysis of the clinical experience of medical and nursing students in one Faculty as a case study of preparation for multiprofessional practice. The data highlight differences in learning climates and degrees of engagement which might facilitate or inhibit collaborative attitudes, values and ultimately practices. Key dimensions in the process are identified as organisational structures, clinical role modelling, the role of the student and the learning relationships.

Involving multi-professional, community-based health care teams in the teaching of 2nd year medical students

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As part of a new two-year undergraduate course, second year medical students will spend 13 days throughout the year in a community-based health care team. Their experiences will be diverse, as they will be placed in one team chosen from a range of specialties including mental health, child health, health care in old age, sickle cell services and drug dependency units. The global aims of the course focus on three domains: the patient, the role of the clinician; and practical professional skills. Every member of the team will be encouraged to become involved in teaching, giving students the experience of working in a multi-professional team at an early stage of their medical education. The course has been piloted, and the results of the multi-professional teachers' experiences will be the subject of this presentation.

Student perceptions regarding a campus-wide vision for interprofessional education

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In June 1999, the Deans of the health professions schools at the University of Colorado Health Sciences Center (UCHSC), charged the campus-wide Office of Education with conducting a student survey regarding the health sciences center 2020 Education Vision Statement. The education vision was a product of an intensive master planning effort regarding the transition and relocation of the campus from its present location on 35 acres in Denver to 217 acres of the former Fitzsimons army base in Aurora. At the foundation of the vision is the creation of a new health sciences center built upon the values of integration and interdisciplinary education, research and practice. The intent of the student survey was to provide the student community with the opportunity to advise the campus on what would be important for continued programmatic planning of interprofessional health care team education. A questionnaire was developed for data collection regarding: (a) importance of the 2020 Education Vision Statement to the education of health care professionals, and program progress in preparing students with respect to these issues; (2) selection of potential content and skill areas for interprofessional learning opportunities; (3) selection of appropriate learning environments for interprofessional learning experiences; and (4) degree of agreement with general statements regarding preparedness for interprofessional health care practice. The response indicated overwhelming student support for the education vision and need for continued progress with campus efforts in interprofessional education.

Session 6J Selection of Medical Students and Career Choice

Student admission process in eight Colombian medical schools

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Each Colombian medical school is free to determine its own student selection criteria. We analysed the process in eight medical schools in Bogota. We visited each medical school and interviewed the dean and senior staff, and searched through internal documents, establishing the process by which selection criteria were devised or modified. No two universities use the same combination of selection criteria. One has a written examination as the only selection criteria. Another bases its decision on an interview and standardised psychological tests. All others perform an interview, assigning variable credit to it. The national high school exit examination is considered by five medical schools.
Five assign a percentage to school grades and five perform a separate exam (three of them in addition to the national exam). None of the medical schools in our sample has tested which of their admission criteria best predict performance. Tradition is rarely questioned.

Reliability and validity of the assessment of incipient communication skills in medical school selection interviews

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Selection into the medical course at Monash University is partly based on a semi-structured interview and one aim of this interview is to identify those applicants with incipient communication skills upon which the faculty's training can develop consulting skills for medical practice. Three components of the interview relate to communication skills: "de-technicalizing", "active listening" and "feedback". Applicants "de-technicalize" a scientific issue - i.e. explain it cogently in non-technical terms. In the "active listening" component, a saga involving people in contemporary social situations with themes more implicit than explicit is presented by an interviewer and the applicant is expected to demonstrate their understanding of the saga by answering questions. In the "feedback" component, applicants explain how they would explore whether a person had understood something they had tried to explain to that person. The interview has proven to be a reliable, valid and acceptable component of our selection process.

Predicting success in medical and para-medical studies in Israel

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This study examines the predictive validity of the scholastic components of the selection process, used by the Israeli schools of Medicine, Dentistry, Pharmacy, Nursing and Physiotherapy. The tools examined are the High School Matriculation; the Psychometric Entrance Test and its three sub-tests; and the equal-weights Composite-Score. The validating criteria are: Freshman Grade-Point-Average for ten cohorts, across all universities, and scores based on achievements in the fourth and the sixth (clinical) years, supplied by one of the medical schools, for three of its cohorts. In Medicine, the validity of the Composite Score in predicting FGPA is one of the highest reported in the literature (around 0.65). It is higher than the validity of each of the Composite Score's two components alone. As for the predictability of the clinical-years achievements: the predictive power of all selection components, although quite impressive in magnitude (up to 0.61), declines when moving from objective, multiple-choice factual tests to subjective, oral-examination and ward-staff evaluation, and with the passage of time lapse from the predictors' administration.

The relation between grade-point average and professional development

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In the Netherlands the national admission procedure for medical education has been changed. Students with a high grade-point average will be admitted directly. The question is whether these students will perform differently from the students with a lower grade-point average. We focused on differences after graduation. To answer our questions we used the data of a cohort study from the Groningen Medical Faculty. Beginning in 1993, every summer approximately 330 graduates are interviewed by phone. The graduates give information about their present jobs, their experiences of being a doctor, their academic performances and social situation. Our results showed that graduates with a high grade-point average found a position for further specialist training earlier. They also read and published more (English) articles. There were no differences found concerning job (dis)satisfaction.

The efficacy of the admission interview at the University of Illinois

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The admission interview is a widespread method in 99% of United States medical schools to evaluate and aid in the limited selection from a surplus of qualified candidates. This paper analyzes the coherence and the relationship of the interviewer comments regarding the interviewee using NUD*IST, in eight qualitative areas considered important to success in medical school, to the overall interview score. Individual positive and negative comment percentages are calculated from each of the eight constructs listed as follows: adaptability, communication skills, consistency, humanistic attributes, knowledge of health care fields, maturity, motivation and professionalism. Finally all comments are mapped in qualitative structural trees that suggest the function certain qualitative attributes contribute to the candidacy of the medical school applicant. NUD*IST also facilitates the recognition of new and competing characteristics by retaining all the interviewer comments and therefore becomes beneficial in maintaining or refining the interview process.
A follow-up of medical graduates from a PBL-programme - differences between students admitted by a local selection procedure vs. students admitted by a national admission system

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The Swedish system for admission to medical education is complex. Secondary school grades and results in a general admission test for higher education are the main criteria. Since 1991, the Faculty of Health Sciences at Linköping University has had the possibility to select half of its students in a stepwise local selection procedure in which the final step is a personal interview. In a study in 1999 we investigated the further career of all graduates from the problem-based curriculum at Linköping University (Antepohl et al. 1999, Domeij et al. 1999). One focus was on potential differences among graduates originally admitted via the traditional system vs. graduates admitted via the local selection procedure. All 460 medical students who had graduated from the new programme were asked to fill in a questionnaire about their activities during their studies and their career after graduation. They were also asked to evaluate the quality of their undergraduate education retrospectively. There were no significant differences concerning the further career of the two groups nor were there differences concerning retrospective evaluation of the programme. There were statistically significant differences concerning two factors: graduates originally admitted via the local selection procedure had to a larger degree been engaged in student representation (50% vs. 33.6%, p<0.01) and were more likely to have undertaken part of their undergraduate studies abroad (48.3% vs. 31.8%, p<0.01).

Factors associated with medical specialty choice in a sample of UK doctors

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Much has been written about factors associated with medical specialty choice ranging from the influence of personality; attitudes and values; socio-economic factors; the effect of medical education, including role models; the influence of debt and expected earnings and anticipated working conditions. Many papers have focussed on what influences medical students to seek a career in primary care in view of the difficulties experienced in attracting doctors into General Practice/Family Medicine both in the UK and North America. This paper will report the results of a survey of King’s graduates who qualified during the 1980s. Of the 464 doctors circulated, 323 (70%) responded giving details of their initial specialty choice at qualification, whether they had since changed that specialty, and the reasons for their choices, both positive and negative, at these various points in their careers. Both quantitative and qualitative data will be presented and gender differences will be highlighted where relevant.

Poster Presentations

Session 7A Curriculum Planning/Curriculum Evaluation

7A/1 Influence of a curricular reform in a Brazilian medical school on the performance of clinical and psychomotor skills

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The influence of the modification of the curricular structure of the Faculty of Medicine of Ribeirão Preto (FMRP), Brazil, on the performance in skills related to the clinical and psychomotor areas, was evaluated on the basis of the scores obtained by the students at the time of final evaluation (OSCE). The analysis was carried out by comparing the performance of the students from two different curricular structures (113 students from the previous curricular structure and 76 from the current one). Data were analyzed by the Chi-square test (Yates corrected), with a significance level of 5%. The results showed the following differences: Clinical performance (18 skills evaluated) - c² = 2.0; p = 0.99; and Psychomotor performance (16 skills evaluated) - c² = 6.22; p = 0.01. We concluded that the current curricular structure of FMRP did not influence clinical performance of the students, but had a positive influence on psychomotor skills.

7A/2 Approaches to introducing outcomes

J R Crosby, G J Mires
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The Dundee undergraduate medical curriculum has introduced twelve broad outcome areas that relate to what a doctor should be able to do, how they approach practice and the doctor as a professional. These outcomes act as a framework for the structure and delivery of the five-year course and define the Dundee
graduate. The outcomes, by the nature of the curriculum, have a different emphasis at the various stages of the course. At the start of the medical course a problem-based learning (PBL) programme was designed to introduce students to the philosophy of the outcomes. A variety of different student learning opportunities was made available to complement the PBL. The majority of the students found that the lectures (64%), problem-based sessions (62%), and the clinical skills sessions (60%) gave them an appreciation of the outcomes. Students valued most highly the clinical skills session (92%). Six weeks after the course students were aware of the philosophy of outcomes and were able to identify correctly many of the broad outcome areas. In conclusion outcomes can be successfully introduced to year one medical students in an interactive way by using a variety of different teaching methods.

7A/3 Think Tank Projects

I G Giles
University of Southampton, School of Medicine, Office of the School of Medicine, Biomedical Sciences Building, Bassett Crescent East, Southampton SO16 7PX, UK

All curricula, including medical education, have a need to address key skills in addition to knowledge of the cognitive area and subject-specific skills. In Southampton a number of key skills areas have been identified: IT; professional awareness; communication; group and team working; independent learning; problem solving and personal organisation. We have been using the Think Tank for a number of years. This activity requires students, in groups of eight, to research a topic area. The groups have to manage their own learning, keep records of their meetings and ultimately produce a poster presentation. Details of the assessment, which focuses on group working and related skills such as negotiation and includes peer assessment, will be described in the poster. We have found this a valuable way of raising the profile of key skills in a realistic scenario and of getting students to reflect on their attitudes and those of their peers.

7A/4 The Southampton core curriculum

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In their publication Tomorrow's Doctors the General Medical Council required all British Medical Schools to define their own core curriculum rather than stipulate a national UK core curriculum. In Southampton it was decided that "the core curriculum embodies which a graduate doctor requires to practice effectively as a pre-Registration House Officer and forms the basis for Continuing Professional Development". This definition is based on the requirements to enter practice safely and benefit from CPD. It is a statement of the final outcome of this phase of medical education; it does not consider the way learning is facilitated or ordered. This poster will describe the stages by which the core curriculum was agreed by the various stakeholders. It will continue by considering how, in combination with agreed initial assumptions for the various stages of the course, the core curriculum can be used as an effective curriculum management tool.

7A/5 Elaboration of Medical Education Model for Post-Soviet Countries

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One of the main problems in the process of medical education reform in Post-Soviet countries is the difficulty in choosing a proper model of medical education. Detailed assessment of aforementioned educational models showed that outcome based-education (OBE) appears to be the most applicable model for Post-Soviet countries. To elaborate the most suitable model of outcome-based medical education for Post-Soviet countries on the Tbilisi State Medical University (Georgia) pattern the following activities are planned: 1) Gaining maximum complete information related to OBE; 2) Comparative evaluation of general (Dundee) model of outcome-based education and medical education systems in Post-Soviet countries; 3) Elaboration of OBE model for Post-Soviet countries; 4) Designing a prototype curriculum for Tbilisi State Medical University; 5) Dissemination of elaborated OBE model in Post-Soviet countries. Elaboration of OBE model for Post-Soviet countries is considered to be an important contribution to the educational sphere.

7A/6 The Altered Medical Curriculum: the new vision and approaches

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AIETI, Highest Medical School, 29 Vazha- Pshavela Ave, PO Box 36, 380060 Tbilisi, GEORGIA

Certain events taking place early in the 1990's created the prerequisites for the rise of numerous medical, private in most cases, schools in our country. Such educational processes and organizations, however, greatly resemble one another in that they mainly adhere to outdated traditional teaching and banal educational programs. The "AIETI" Medical School was the first to make an attempt in designing new study programs, radically different from those employed here until now. The present medical curriculum is strictly organized and integrated, both horizontally and vertically. Study components: are Basic Medical Science, Clinical Medical Science, and Clinical Clerkship (total 6 academic years). The program has been developed on the basis of the latest progress in medical education technology. Each component of the medical curriculum comprises a cycle of integrated blocks of certain subjects. The estimation of learning in every component is performed by a grade point system, assigned for each block and corresponding cycle. On the grounds of a summarized score achieved in a cycle a tutorial group is formed. In this presentation, the new medical curriculum is described.
Teaching first year medical students in the community: the GPs' experience

M Rickets, S Collinson, L Bliss, E Lobo
St. Bartholomew's and The Royal London School of Medicine and Dentistry, Department of General Practice and Primary Care, Basic Medical Sciences, Queen Mary and Westfield College, Mile End Road, London E1 4NS, UK

In 1999, St Bartholomew's and the Royal London introduced a longitudinal, community-based course in the first year of a new, evolved curriculum. The course, called Medicine in Society, is based in General Practice, and involves all first year students spending 11 whole days throughout the year in a general practice. Their tutors are GPs and other primary care health professionals, and non-clinical staff (typically people working for local voluntary sector organisations with a health care role). Each community-based day is designed to reflect and provide a context for the students' theoretical learning. Forty practices throughout East London have been involved in the first year of the course, in areas ranging from boroughs— with high levels of deprivation and ethnic diversity, to those with relatively affluent, suburban catchment areas. An evaluation of the GP tutors' experience has been carried out, and the results will be the subject of this presentation.

Private universities are the model for medical education in developing countries in Africa: the case for the International University of Bamenda, Cameroon

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The present detrimental factors of brain-drain, economic recession, mismanagement and resistance to change characteristic of government—owned and directed universities can be avoided by the creation of strictly private universities. The International University of Bamenda in the English-speaking region of the bilingual (French/English) country of Cameroon has successfully been carrying out medical education by Problem-Based Learning, community-oriented, integrating traditional medical practice in its curriculum design and development. Without the interference of the government, implementation of its innovative curriculum has been smooth and within two years of existence of the Faculty of Medicine and Health Sciences, 105 students have been attracted by its program of Medical Education taught in both French and English.

AAMC Medical School Graduation Questionnaire (GQ): A customizable web-based evaluation tool

John H Lockwood, Deborah Danoff
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There is increasing awareness of Web-based evaluation tools and the power that they possess to improve the programs that they evaluate. This poster presents information about the AAMC's Medical School Graduation Questionnaire (GQ), a Web-based data collection tool that aids US medical school administrators in evaluating their medical school programs. The Web-based feature of the GQ allows a great deal of flexibility. First, it can be customized for use by other organizations, such as European medical schools. Second, students can access it from anywhere there is a connection to the World Wide Web. Third, the GQ provides a dynamic reporting system for medical schools. In short, the GQ provides a powerful way for medical schools to evaluate their programs and the proposed poster session will provide details about how the system operates.

Resource allocation system for the care of communicable disorders in Egypt

Nargis Albert Labib, Mohamed Shafik, Azza A Aziz
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The unit costs in the University Hospital, identified by using the standard method of analysis, can be used to calculate the cost of each service for any disease. The decision to establish changes may depend partly on this data and on the administrator's judgement. The health services should identify their own unit cost to be able to plan for effective budgeting. The aim of the work is to highlight the type, cost, and distribution of health expenditure for communicative disorders in Egypt, in order to plan an improvement in the health care allocation covering services in the phoniatric department, Cairo University. Phase1 included a retrospective descriptive analysis of the record to assess the macroallocation system of health services in Egypt and the misallocation system for the care of communicative disorders in Egypt. Phase2 included a prospective cross sectional descriptive study including children and adults attending at the out patient phoniatric clinic, Kasr El Aini (97-98), to assess the microallocation care system. Phase3 included a Statistical analysis. Total cases included in the study were 477, 51% were of preschool age, 16% were school children and 33% were adults. Communicative disorders were mostly language disorders (40.3%), delayed language (37.3%), Disphasia (29.4%) and others. 39.2% of the cases sought medical care at once 35.6% waited for spontaneous improvement. Nearly half of the cases show a time lag of one year between the start of symptoms and treatment. It is concluded that patient awareness for the phoniatric problem is deficient; we are in need of a proper health information system to guide the family and the patient in the proper
way of seeking medical care; we need to organise a referral system for prevention and treatment of this problem.

**7A/11 Pediatric residents as teachers**

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A survey study, which covers attitudes of pediatric residents towards teaching was not carried out before although residents have a major role in teaching third year students. We aimed to find out residents' attitudes towards the education system, medical students and themselves. The questionnaire was applied to 40 residents, the relationship of the residents with students, problems in teaching and attitudes towards teaching. SPSS 7.5 was used for statistical evaluation. The residents think the education program is sufficient (73.7%) but they define the education materials not enough (68.4%) and the student group crowded (82.5%). They believe teaching students is not their responsibility (71.8%) although they think they need courses on educational skills (80.0%). 22.8% of first year residents want to be evaluated by the students. Senior residents have more self-confidence in teaching, leading them to support evaluation by students and it is encouraging that residents welcome courses on education skills.

**Session 7B Postgraduate/CME/Staff Development**

**7B/1 Routes into research? SHOs' views in the North/North East of Scotland**

Linda Leighton-Beck, Martin Cowie
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Understanding research methods is an important component in the training of all healthcare professionals, as it underpins their capacity to evaluate their own clinical practice, clinical guidelines and research papers. The British Medical Journal (4 March 2000) has highlighted a national crisis in research training in the medical profession. In 1999, in the North East of Scotland, we had already started to examine different approaches to address this issue. Following a positively evaluated regional seminar, we formed a 'Routes into Research' Group, comprising NHS clinicians and university staff. We mailed each SHO with a confidential questionnaire. With an 82% response rate, we will report our findings including: the extent to which research-related information is available through existing structures and processes within postgraduate education such as induction and educational appraisal; and, the extent to which SHOs have received any formal training in research methods. We will also discuss initiatives to improve matters.

**7B/2 Has the introduction of clinical governance facilitated the development of quality in general practice?**

G B Taylor
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Clinical governance was introduced into the UK National Health Service in April 1999. It encompasses the development of quality assurance, personal and team development. This presentation reports on a qualitative study carried out in a cohort of general practices in the North East of England. Through site visits and interviews, this study attempts to identify how different practices are approaching the introduction of clinical governance. Whilst leadership and change management skills were well developed in practices that were succeeding, the professionalism and overall ethos of the practice appeared to be a vital prerequisite. It is proposed that these characteristics facilitate the development of clinical governance. These initial results will be discussed in relation to professionals and their role in modern society, learning and learning organisations and the overall developments of quality.
What do Pre Registration House Officers think about their training posts?

Rose Oughton
Ninewells Hospital and Medical School, Postgraduate Office, Level 7, Dundee DD1 9SY, UK

Analysis of questionnaires by 80 PRHOs, from August 1998 to August 1999 in the East of Scotland, identified key elements of deficiency; the need for multi-professional teaching and the teaching of basic management skills. The attendance at protected teaching sessions was unacceptably low, the reason for this being intensity of work and excessive service need. The correct balance between service delivery and quality educational provision is a delicate one which is seldom achieved effectively. PRHOs have themselves expressed feelings of insufficiency in a range of practical procedures. To enhance the quality of education and training and address these issues, the analysis was discussed by clinicians with educational responsibility to the PRHOs. A framework to progress is being formulated. Clinical skills taught within a multi-professional environment, enhancing team development and professional integration along with communication skills and problem management through reflective practice have been identified as key areas of development.


How reliable is the assessment of GP training practices?

Ed Peile, Neil Johnson
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General Practitioner training in the United Kingdom includes a year in an accredited training practice. Like many Deaneries, Oxford PGMDE accredits and re-accredits Training Practices on the basis of a report prepared by a visiting team of peers. The Team Leader’s report is debated in committee, and if the required standard is deemed to be met, trainer and practice are approved to train for a limited period. Each report, which is criterion-referenced, summarises the findings of the visiting team and forms the evidence on which approval is decided. All Appointment Committee members see this report, and all have to weigh it up. How do different assessors view the same report? Is it a reliable tool to gauge the quality of training practices? Over one year, we asked assessors to evaluate reports independently, before Committee meetings, and we demonstrate the inter-observer variation for 46 different reports.

Postgraduate education for General Practice in Denmark

Jørgen Lindhardt, A V Scheldt
Sygehus Fyn, Borsten Bindervej 12A, 5240 Odense M, DENMARK

With regard to postgraduate education for young doctors who want to apply for a clinical education as a general practitioner, for the past 8 years we have in Denmark used a combination of clinical education in different hospital departments and in general practice. To supervise this 5-year education we use a practice-co-ordinator who plans the education in the hospital departments as well as in general practice. Our poster will relate to the education of doctors in the specialty of general practice.

Methods for small group teaching - a course in a programme for graduate students in training to be medical teachers

J F C Figueiredo, M L V Rodrigues, L E A Troncon
Faculty of Medicine of Ribeirão Preto, University Sao Paulo, Hospital das Clinicas, Clinica Medica, Campus USP, 14048-900 Ribeirão Preto, Sao Paulo, BRAZIL

One of the trends in medical education is small group teaching. The principal advantages of the method are: student centered learning; to allow the implementation of problem-based learning (opportunity for work in a team and development of relationships with other students); development of critical reasoning; and opportunity for development of self-directed lifelong learning. Small groups must be conducted by tutors, and graduate students who intend to be medical teachers need training to be tutors. The objective of this communication is to describe a course provided for students of a formal Postgraduation Course, at the Faculty of Medicine of Ribeirão Preto, University of São Paulo, Brazil.

Improvements in supporting postgraduate medical training in Hungary: videoconferencing, internet and on-line programmes

Anna Bukovinszky, Gábor Biró, Tibor Erti, Arpád Gögl
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Recently governmental decisions have been made to facilitate postgraduate medical and health sciences education catching up with European norms in Hungary. Postgraduate education centres were established in university medical schools with the tasks of organising the residency programme for medical specialisation. At governmental level the Council of Medical Postgraduate Education is responsible for supervising the appropriate ratio for the specialists in different regions and it determines the number of positions available annually. In the region of Pécs 125 residents were admitted in 1999, with the support of 26 mentors and 135 tutors on teaching sites. Consultations and sharing experiences between
universities take place regularly through videoconferencing, moreover, the possibility will be extended to more than 50 teaching sites sponsored by the Ministry of Health. On-line programmes are already elaborated and being tested for easy-access and more convenient self-studies.

7B/8 The structure of the consultation in hospitals and general practices

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Much has been written about the structure of general practice consultations. This has translated into assessment schedules for formal assessments, including (in UK) Summative Assessment for GP Registrars, and MRCGP. Little is known, however, about the structure of hospital consultations, although there is increasing pressure on hospital doctors to teach and assess the consultation. Consultant physicians at an NHS Trust were selected randomly and interviewed about new-patient consultations. Interviews were structured by reference to the consultation structure units of the MRCGP video exam. Interviews were transcribed and analysed using NUDIST. One consultant declined, 15 were interviewed. Four structural process themes were identified: information-gather, information-transfer, follow-up, constraint-management. Three thematic measures of success were identified: patient satisfaction, cost-efficiency and goal achievement. All themes contained subdivisions. Consultations across specialties have apparent similarities, and differ from GP consultations. This study represents a starting-point for teaching and testing hospital consultations successfully.

7B/9 Women in medicine - trends in the Czech medical doctors population

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The objective of this paper is to describe the main results of a longitudinal analysis of the development of the demographic structure of medical doctors in the Czech Republic. We will concentrate on following aspects of the female population, their age, speciality, postgraduate education and numbers in leading posts. The increasing trend towards greater numbers of female medical doctors can be found over the last few decades. The enrolment of female students at medical school is more than 56%. The number of female medical doctors in growing too.

7B/10 Women in specialised medicine in Colombia

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In the forties women earned their first medical degrees in Colombia. In the seventies women had fixed quotas of 10 – 20% in most medical schools. In the nineties, however, they became a majority in undergraduate medical education. Their participation in postgraduate education had not been quantified. We analysed the records of 26 institutions with postgraduate medical programmes in 12 selected medical and surgical specialties, starting in 1955. Different methods were used to establish their practice locations. 19.2% of the 8125 graduates are women, increasing gradually from the fifties (0% of 46) to the late nineties (25.7%, of 1753). Women’s participation is highest in dermatology (50.0%), psychiatry (25.2%) and ophthalmology (24.5%), and lowest in urology (2.1%), orthopaedic surgery (2.3%) and neurosurgery (2.5%). Even more so than men, women concentrate in the larger cities. Women’s participation is changing medical practice in many ways; the process needs to be followed.

7B/11 The participation of women returners to General Practice in a re-entry course: Another lost tribe?

Chris Stephens
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This is a qualitative study which identifies and explores the barriers and incentives to participation in a course for vocationally trained doctors to help them return to an expanded role in practice after they have had a career break. The issues that are important to their participation in this course are similar to those experienced by other non-medical returners. Despite their initial successful experience in education women GP returners have anxieties and concerns about participating in a course and expanding their work role. A course where they set their own learning objectives and meet as a group reduces these concerns.

7B/12 UAB Casa Convalescència

Cristina Iniesta, Carles Kindler, Joan Turró, Lluís Ferrer Sant Antoni Maria Claret, 171, (UAB Casa Convalescència), 08041 Barcelona, SPAIN

Doctor Robert Foundation is a training and advanced-services centre for the Health Sciences and Life Sciences promoted by the Universitat Autònoma de Barcelona and is based on cooperation between the University, Health Centres, the Administration, Scientific Societies and Enterprises in the healthcare field. It is a neutral, integrating, exchange centre whose mission is to promote knowledge and make scientific
progress known. Doctor Robert Foundation helps to create, intercede and manage knowledge, teaching and academic projects in response to present and emergent social demands. Portfolio Services offer the promotion of academic and economic projects, management and assessment, as well as advisory services for the Public and Private Health Sector. Doctor Robert Foundation also offers teaching projects for health enterprises and academic projects in order to promote international cooperation. Modular Planning Programmes develop educational lines, assemble different educational groups, create synergies and design educational research lines in order to give answers to the social emergent demands. Further information will be given.

**7B/13**

**Topics on teaching and learning in clinical and surgical specialities - A course for graduate students**

M. L. V. Rodrigues, N. V. Souza, J. F. C. Figueiredo

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In the Faculty of Medicine in Ribeirão Preto, University of São Paulo, Brazil is offered a programme for graduate students, who intend to be medical teachers. In the Ophthalmology area there is a 48 hour course — Topics on Teaching and Learning in Clinical and Surgical Specialities, with the main objective to provide information about pedagogy and didactics. The course, described in the present communication, has been delivered over the last ten years, and is receiving very good evaluation (from the students).

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**Session 7C  Teaching and Learning/Evaluation**

**7C/1**

**On the conception of a lecture in General Medicine**

U. Mantei

**Freie Universität Berlin, Fachbereich Humanmedizin, Universitätsklinikum Benjamin Franklin, Klinik für Allgemeinmedizin, Psychiatrische Psychosomatik und Psychotherapie, Abteilung für Allgemeinmedizin, Hindenburgdamm 30, 12200 Berlin, GERMANY**

Lectures must always be planned. Didactic aspects require factual and procedural orientation. By selecting and arranging, the instructor must develop a methodological strategy structure consisting of manual and intellectual activities. In the presentation of a complex disease, it is necessary to inform the students about the way in which findings are obtained and confirmed and to acquaint them with the standard procedures of medicine. Knowledge, contents and facts should be presented giving due consideration to the limits of validity. The individual facts must initially be formulated from the purely signical aspect, which can be achieved in detail from a specifically syntactic aspect by verbal, pictorial, graphic and computer-aided means. From the semantic aspect, this must then be followed by a conceptual definition, determination, interpretation, and theoretical integration of the facts into the already existing system. The lectures should cover only contents and methods. Applied aspects must be transferred to the work in the courses.

**7C/2**

**Auditor criteria for assessing lectures**

U. Mantei

**Freie Universität Berlin, Fachbereich Humanmedizin, Universitätsklinikum Benjamin Franklin, Klinik für Allgemeinmedizin, Psychiatrische Psychosomatik und Psychotherapie, Abteilung für Allgemeinmedizin, Hindenburgdamm 30, 12200 Berlin, GERMANY**

The evaluation of a lecture has to include an assessment of the facts with regard to accuracy, completeness, necessity and clarity, as well as presentation of the lecture and response of the audience. Notes are taken in the form of extensive protocols or outlines according to a given pattern or catalogue of questions; audiovisual recordings are performed. It must be determined whether the aim and purpose of each lecture are clearly formulated and worked out accordingly, the lecture is firmly embedded in the total concept of the lecture series, the lecture components are correctly portioned in terms of time and contents and put into a comprehensible context, the set aims are reached, adequately substantiated and systematically summarized, the lecture contains the required highlights, breaks and reinforcement phases, clarifying visual aids are purposefully applied, and whether the lecturer had an interesting or boring presentation style.

**7C/3**

**Foundations of general medicine as an advanced compact profession-related course**

U. Mantei

**Freie Universität Berlin, Fachbereich Humanmedizin, Universitätsklinikum Benjamin Franklin, Klinik für Allgemeinmedizin, Psychiatrische Psychosomatik und Psychotherapie, Abteilung für Allgemeinmedizin, Hindenburgdamm 30, 12200 Berlin, GERMANY**

The weekly seminars aimed at a practice-related and problem-oriented presentation of general medicine as a link between all other medical specialties. The courses were intended to expand the knowledge and skills acquired in the daily routine. Professional experience was confirmed, critically evaluated and reconsidered in discussions. Successful completion of the three-year course was followed by an evaluation. The expectations and requirements were fulfilled in all areas. The practical application for future tasks as a family physician completely fulfilled their expectations and requirements. It was learned that this holistically determined medical specialty provides a new way for
making an individual's total personality. Courses as a preparation for working as a general practitioner provide not only the necessary knowledge but also additional skills in general medicine. The course participants stated they have learned that the patient's objective societal influence and general human dimension have to be considered as well as the purely subjective individual situations.

**7C/4 Presentation skills: exploratory factor analysis of candidate scores**

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A ten item test instrument, consisting of specific descriptors derived from a two stage Delphi and designed to test presentation skills, was generated during the development phase of a multidisciplinary MSc in diabetes. The instrument was applied to the second trimester cohort of candidates (n=17). Validity was investigated by exploratory factor analysis. A three factor solution was defined by a scree plot. Factor 1 (Clarity) included 'being clear and audible' (0.85) and making 'appropriate use of audiovisual aids' (0.78). Factor 2 (Educational tailoring) included 'establishing the educational needs of the audience' (0.92) and 'structuring the talk appropriate to those needs' (0.58). Factor 3 (Interaction) included 'checking for understanding' (0.9) and 'knowing how to elicit participation from the audience' (0.54). The place of two items that did not appear in the solution will be examined in further analyses.

**7C/5 A curriculum to enhance comprehensive health care to individuals with disabilities**

Anita D Glickin, Tracy Price Johnson, Gerald Merenstein
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A model curriculum was designed to enhance the skills and knowledge base of primary care practitioners in the provision of comprehensive health care to disabled patients or those with special needs. This curriculum draws on a variety of educational strategies and is based on an interdisciplinary training model that promotes institutional and community partnerships. Training is enhanced through use of "patient-provider" panels, modeling and emphasizing the vital role of patients as sources of knowledge and information. Three additional experiential learning components include: observations of a practitioner working with patients with special needs, a school IEP staffing, and a home visit to a family of a child with disabilities. Formative evaluation suggests this combination of institutional and community-based learning strongly impacts the knowledge, skills and attitudes of primary care students, increasing feelings of comfort and competence as well as their desire to work with patients with special needs.

**7C/6 Choosing web teaching software: what should we look for?**

Susan Toohey, Elisean Watson
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Experimentation with the new technology of web-based teaching has meant that many medical schools are using more than one software system for delivery. In the medical faculty at the University of New South Wales three different software packages were in use for delivery of web-based teaching. This diversity allowed for some interesting experiments, ranging from the delivery of a full masters program via the web to supplementing formal teaching with web-based case discussions. Nevertheless budgetary pressures made it desirable to standardize on one software package in order to limit the provision of IT training and support. The faculty's Curriculum Unit was asked to investigate and recommend. Medical education has distinctive features which make particular demands on web-teaching software. This presentation looks at the questions one should ask in evaluating the many packages currently on the market.

**7C/7 Medical education and the European Credit Transfer System at Jessenius Faculty of Medicine in Slovakia**

Dusan Mesko, Andrej Hajtman, Jan Danko, Lukas Plank
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All over the world, undergraduate study of general medicine has a relatively stable structure leading to graduation. Important considerations are: 1. preparation of a universally educated graduate, who is able to continue in postgraduate specialization study; 2. it is not so easy to implement ECTS to medical study system, because of medical orientation of disciplines from the first year of study; 3. disciplines should be connected vertically/horizontally; 4. a large portion of education is organized in the hospital environment. Activity schedule: 1. our faculty will implement ECTS (60 credits per year) from the academic year 2000/2001; 2. faculty will implement a higher volume of continuous knowledge control systems during the term and "two way" education assessment; 3. faculty will introduce curriculum renewal together with application of multimedia learning/teaching; 5. faculty will implement professionalization of teaching, 6. faculty will restructure a "graduate profile".

**7C/8 To rebuild or not to rebuild?**

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Jessenius Faculty of Medicine in Martin, Slovakia was founded in 1962 and has trained more than 4,100 graduates. Faculty provides University Medical and Nursing courses. Restructuring courses is mainly a
matter of minds and ideas, not of regulations and orders. Teaching can be viewed as facilitating learning. Activities implemented by faculty to improve courses are: a. new graduating doctor profile (including physical examination, nursing skills, laboratory skills, minor surgery and life-saving skills); b. basic subjects - teachers involvement into state examination commissions; c. complete six years practical and lectures Study Guides (syllabuses) including WEB page presentation – Infopackage; d. optional and compulsory subjects to increase study flexibility; e. interdisciplinary lectures; f. European Credit Transfer System implementation starting in September 2000; eg. WEB page learning sources prepared by teachers. In the evaluation of education a multiple choice questionnaire was used. All parts of the medical study were evaluated.

**7C/9**

Attitudes of final year medical students towards relevant aspects of medical practice

M F A Colares, L E A Troncon, A R L Cianflone, J F C Figueiredo, M L V Rodrigues, C E Piccinnato, L C Peres, J A Dela Coleta  
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**Session 7D Important topics in Medical Education**

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**7D/1**

Consistency of PBL-associated assessment compares favourably with traditional exams in a Surgery Clerkship

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Adequate assessment should be consistent. Best students should obtain higher marks with different approaches. This was evaluated in 55 students attending a Surgery clerkship accessed by traditional content exams (E) and in 40 students attending a PBL-oriented course assessed by self-evaluation (S), coevaluation (C) and by teachers (T) based on predefined numerical scales of 0-20 (traditional) and 0-5 (PBL). Analysis of mean marks of three quizzes (Q) vs a final exam (F) in 55 students resulted in R = 0.015, r² = 0.0002 (p = 0.91) with F = -0.027 Q + 13.23. Analysis of F vs an appreciative mark (A) by 4 teachers resulted in R = 0.056, r² = 0.003 (p = 0.68) with A = 0.072 F + 13.56. With PBL, students (S) vs (T) resulted in R = 0.38, r² = 0.14 (p = 0.0005) and repeated (C) showed R = 0.65, r² = 0.42 (p = 5.4 x 10⁻⁶), with Cₚ = 0.2 C + 0.92. When competence-based (T) was repeated, T_correlated with Tₛ with R = 0.78, r² = 0.62 (p = 2.3 x 10⁻⁶) and Tₛ = 0.84 Tₛ + 0.06. Thus, PBL-associated assessment was more consistent than traditional exams.

**7D/2**

Evaluation of cognitive aspects related to Ophthalmology two years after the course, at the Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Brazil

M L V Rodrigues, J F C Figueiredo, C E Piccinnato, M F A Colares, A R L Cianflone, L E A Troncon  
Hospital das Clínicas, Oftalmologia, 12 andar, Campus USP, 14048-900-Ribeirao Preto - SP, BRAZIL

To evaluate the retention of cognitive aspects related to Ophthalmology a questionnaire, containing 15 items related to the concepts taught during the course, was applied in the Final Evaluation Program (two years after the ministration of the formal course of Ophthalmology). The results analyzed for the total of students and also according to specialty choices are: 1 - total of students: n=93, mean = 9.98, variance = 6.6, percentile 25=8, percentile 75=12, percentile 95=13; 2 - Clinical specialties: mean = 10.31; 3 - Surgical specialties (except Ophthalmology): mean = 9.13; 4 - Ophthalmology: mean = 12.8. The Student’s T test indicates that there were significant statistical differences between clinical and surgical specialties, as well as between Ophthalmology and others specialties. Despite the reduced time destined to the teaching of Ophthalmology the performance of the students in the cognitive aspects evaluated may be considered adequate.

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Monday 28 August
7D/3 An interactive first aid course for first year medical students

B M Gullucoglu, A Denizbasi, P Unalan, S Ustalar, C Tettik, S Karakurt, T Celikel, B C Yegen, S Oktay Marmara Universitesi Tip Fakultesi, Farmakoloji Anabilim Dalı, Haydarpasa, Uskudar, Istanbul, TURKEY

As a part of the new project to implement modern educational methods into the medical curriculum at Marmara University School of Medicine, an interactive first aid course was planned for the first year students in the academic year of 1999-2000. Students in small groups were required to do the first aid tasks after demonstration by the tutor. The course was designed as five modules: transportation of the patient, resuscitation, first aid for bleeding and burns, soft tissue injuries, seizures and poisoning. Forty seven students completed the course. The assessment was done by written pre- and posttests, and postcourse OSCE. None of the students were under the acceptable level of performance. The median posttest score was 84 (65-100). Pre- and postcourse surveys revealed that all students were pleased to take the course. Eighty% of the students thought that the learning objectives were completely achieved. Most of the students (96%) were satisfied about the enthusiasm of the tutors and 57% of them graded the course as very good, 39% as good and 4% as excellent. The “resuscitation” module was considered to be the most necessary part by 59% of the students. Most of the students (96%) were confident that they would be able to apply these skills when necessary. In conclusion, we believe that the early presentation of this subject in small classes is a promising and motivating start in the overloaded medical curriculum.

7D/4 Teaching airway management

Aracelis Amadori, Leonor Bustamante, Pablo Raby and Ghislaine Echевaria
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Due to the importance and need of introducing learning techniques of medical sciences through the computer and to formulate the necessary bases for the application and management of them, a computer simulation is presented. Animated through Power Point with linked slides, the aim is to teach “Airway Management” to Surgery Interns. Through a clinical case - a patient with a gastric ulcer entering the operating room for a Hemigastrectomy - the endotracheal intubation theme is addressed. This material teaches how to perform a preoperative assessment of the upper airway, the laryngoscope technique and how to prove the intubation is tracheal and not esophageal. Along with a difficult intubation, other airway management alternatives are presented and we explicitly emphasize that in this situation, calling for help is a sign of wisdom and not of weakness.

7D/5 Manual for women with breast cancer

Jamile Carnacho, Patricio Cardenas, Roxana Flores, Lorena Javet, Carlos Carvajal, Marcos Bustamante Universidad de Chile Medicine Faculty, Las Nieves 3567, Departamento 302, Comuna de Vitacura, Santiago de Chile, CHILE

This material is directed to women with breast cancer. Its principal objective is to respond to the many questions they ask themselves about their disease, their treatment and living with cancer. Some chapters explain what breast cancer is and its possible treatment using surgery, radiotherapy, chemotherapy and hormone treatment. It also deals with breast cancer’s secondary effects and how they can be approached. Instructions to aid nutrition, the use of contraceptive and substitution hormones, and future pregnancies are included, as are themes such as driving, practising sports, work reintegration, relationships, use of swim suits, use of wigs and scarves, and mammary prostheses. All of the above has been produced in a simple and colourful format with drawings and some positive thoughts. We believe it should be given out free of charge to every patient that has been diagnosed with this disease.

7D/6 Integrated teaching of Radiology in the Licenciature in Medicine

B P Villacastin, A G Robledo, J Conteras
Servicio De Radiologia, Fundacion Jimenez Diaz, U A M AVD, De Los Reyes Catolicos s/n, Madrid, SPAIN

When a core subject (Radiology and Therapeutical Physics) is transformed into a “New Product” (Radiology) it is necessary to adapt it for the teaching curriculum, as well as to search for new ways and teaching methods to deliver it. Methods used were: a) Distribution of the remaining parts of the old subject. b) Implantation of the 3 blocks that make up the New Subject: Radiologic Anatomy, General Radiology (Technical Aspects and Semiology) and Clinical Radiology (Seminaries and Practices). c) A new Teaching Program. d) New teaching methods based on imaging. e) Evaluation methods relating to the blocks and integrated in other subjects, since it is multidisciplinary as well as a core subject. The poster will outline the development of this new course, designed to meet the needs of the 21st Century.

7D/7 Comparison of the results of an Embryology student group, ordinary vs extraordinary examination in a Faculty of Medicine

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We compared the results of a group of students of Embryology (n=239). Our test has three types of questions: Multiple Choice (MCh), Fact-Reason (F-R), and False-True-Don’t know (F-T-D), which make up the 80%, 30% and 10% of the grade respectively. The F-T-D section is the bonus part of the test. We analyzed:
the grades; the number of correct answers in the test's sections, and the wrong answers in the false-true-don't know section. A "z" test at a level of confidence of 95% was done. A survey was done to find out which type of questions were considered by the students as the best section of the test for their training as future physicians. We also asked the reasons for their preferences. We found a significant difference in the grades; F-R, FTD+, FTD-, and grade improvement results.

7D/8

Do medicine students perceive the relationship between biochemistry and physiology?

Nancy Fernández-Garza
Nuno de Guzman 308, Col. Cumbres, 3er Sector, c.p. 64610 Monterrey, N.L., MEXICO

Biochemistry knowledge is essential to understand physiology. In our university, the biochemistry course is taken in the first year and physiology in the second. In an attempt to know what aspect of biochemistry the students considered important, as well as to know if they perceive the link between biochemistry and physiology, the physiology students were asked, on the first day of the physiology course, to write down what they considered the two most important items learned in the biochemistry course. From 517 surveys, there were 120 mentions for disease, particularly for vitamin deficiency; the second mention (106) was for metabolism; just three students mentioned the relationship between biochemistry and physiology, seven mentioned regulation and one selected homeostasis. This result suggests that the emphasis in the biochemistry course is on metabolism and its relationship with diseases with a very low emphasis on its relationship with physiology.

7D/9

Clinical skills to be acquired by students in the Faculty of Medicine of the University of Barcelona (Catalonia, Spain)

J Palés, M T Estrach, J M Cots, J Delás, C Gomar, R Pujol, J A Bombi
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In our new curriculum (1994), clinical training time has increased significantly. However, the skills to acquire have not been defined specifically and the assessment is difficult. To establish a reference for teachers and students in the teaching and evaluation process, the Faculty has decided to define the essential competences for medical students. As a first step, an internal faculty committee has fixed the essential clinical skills concerning the basic clinical method and the basic clinical procedures. This definition is based on the competences that doctors should demonstrate prior to graduation and which have been defined by the Catalan Council of Specialities in Health Sciences. 80 skills and 40 basic clinical procedures have been established. The acquisition of these skills should begin in the 3rd year, but the acquisition of some of them could start in the 2nd year. In all cases, prior to graduation, the student must demonstrate his or her proficiency.

7D/10

Theory and practice of adult life support (ALS): medical undergraduate curriculum versus generic 'ALS course'

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Dundee medical students receive annual staged resuscitation teaching. Two-day generic ALS courses are available to medical staff for £250. We compared these course by scrutiny of the ‘ALS Instructors Manual’ and the medical curriculum study guides. Undergraduate teaching includes nine hours of practical BLS/ALS with additional HARVEY simulator sessions. Over 50 hours of lectures cover pharmacology, physiology, pathology and investigation of the CVS, and management of cardiac arrest, ethics and bereavement. Examination is by OSCE at the end of each year and EMI/CRQ on resuscitation theory. The ALS manual takes approximately 8 hours to read, but does not have the detail of the undergraduate course. Teaching lasts 14 hours (lectures and small group work) with 45 minutes of MCQs and 40 minutes of skills assessment. The medical curriculum is deeper and devotes more time to practical teaching. Students acquire practical skills at least equal to those of ALS courses.

7D/11

The concurrent validity of two opinion questionnaires in the Medical School

Teresa Miranda, Solange Hurtado, Carmen Velasco and Enrique Mandiola
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This research compared the concurrent validity of two opinion questionnaires about the course "Introduction to the Child Clinic". They were applied to 242 students in second year of the Medical School, in order to explore the main aspects of the teaching and learning process. One of the questionnaires is a standardised short instrument to be applied in all the courses. It contains 94% multiple choice questions and the rest are open questions. The other contains 76% multiple choice questions. Analyzing the results, the concurrent validity was verified for only 50% of the questions. The standardised questionnaire provides important but general information for the administration of the curriculum, but due to lower specificity in the aspects explored, it does not provide useful information for decision making about the different courses. The authors propose the instruments should either be integrated or both should be applied.
Teaching Behaviour Sciences in the Faculty of Medicine at the University of Szeged, Hungary

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In Hungarian medical schools teaching is mainly based on the biomedical approach. Therefore it has been an important development that in the 1990s departments of behaviour sciences were founded and humanities were integrated into the medical curriculum. The Szeged Section of Behaviour Sciences and Medical Psychology was formed in 1998 and it has been involved in teaching the following subjects: Introduction to Medicine, Medical Anthropology, Ethics in Medicine, Bioethics and Medical Psychology. Our approach aimed to confront the students with the complexity of the interaction between humans and their environment both in the natural and social sense. Students are helped to acquire skills which enable them to take part in developing an holistic approach to health care and health promotion, to identify risk factors and to organise complex preventive measures. We also emphasise the aim and role ‘Introduction to Medicine’, a subject taught in the first year of university studies initiated by our section. It has a special function in developing the right attitudes and in preparing students for their future profession.

Session 7E Student Recruitment and Participation

Medical students: partners in prevention at BGU

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Our unit is committed to developing a cadre of prevention practitioners for the southern region of Israel. Training of medical students is critical to this goal, so medical students were actively recruited. Several students joined the unit staff, participating in strategic planning sessions and contributing ideas that reflected student viewpoints. They and others played central roles in unit activities including: 1) survey of HP/DP activities in southern Israel. The students conducted interviews and helped prepare the final report; 2) development of the unit’s website; 3) presentation of original research and preparation of peer-reviewed papers; 4) moderating HP/DP coursework to local high school pupils; 5) conduct of a faculty workshop on prevention in the medical school curriculum; and 6) MD theses on prevention issues. Their participation has served a dual purpose: 1) to advance the unit’s work; and 2) to orient future physicians to health promotion and disease prevention.

The use of first and second test results for the early identification of the academically “at risk” first year student

Hettie Till
39 Deane Road, Glenmore, Durban 4001, SOUTH AFRICA

Selection policies based on specific student characteristics that will ensure empathetic and caring practitioners, whilst also attempting to redress imbalances of the past, must be accompanied by a policy of support to academically “at risk” students. The early identification of freshmen in need of support is therefore imperative. According to theories of attrition, the characteristics that a student brings to the tertiary institution will interact with institutional characteristics and together they determine a student’s academic integration and commitment to graduation. Academic integration can only be measured once a student has been assessed at a tertiary institution and for a freshman, the various assessments of the first year will thus be the first reasonably objective measure of academic integration. This paper reports on the use of first and second test results in the development of logistic regression models for the early identification of the student at risk of failing the first year.

Student attrition: how serious is the problem?

Hettie Till
39 Deane Road, Glenmore, Durban 4001, SOUTH AFRICA

The academic success and retention of students are of primary importance to academic managers, especially so in an era of declining resources. Due to the increased pressure on institutions to be accountable and financially efficient, the need to quantify, understand and minimize the phenomenon of attrition becomes more urgent every day. A vast body of research covers the topic of student attrition and indicates a severe and widespread problem, particularly so during the early years of study. However, actual numbers or percentages from different published studies were difficult to compare, as researchers used different categorizations for students who discontinued their studies. They also sometimes lumped together, under the categorization of drop-out, forms of leaving behaviour that are in actual fact very different in character. In this paper a plea is made for a common definition of critical groups and a simple categorization is suggested for quantifying attrition per year of study.
Progress Testing as a students' project: the pros and cons

Ragna Raschke, Katrin Duske, Axel Mertens, Julia Hoffmann, Sebastian Köbel, Jörg Berger

GERMANY

The second Progress Test in May 2000 showed an increasing number of voluntary participants as well as a wide acceptance of this testing mode. We now want to present the main problems of this student's project. Even though our aim is to give all students the possibility to take part in the test, this positive development will lead to organisational difficulties as well as financial problems. Another objective is the improvement of item quality control and additional training of the review committee members. We also have to face the fact that student-initiated projects can last only a specific amount of time without professional support. In the following years our most important task will be the incorporation of this formative test into our non-reformed curriculum. Therefore we have to gain more support by our faculty, recruit a group of recently graduated physicians and discuss the pros and cons of a compulsory Progress Test. Although we have to cope with faculty resistance and various minor problems we hope to show that an alternative test form can contribute to assessment development of a regular curriculum.

Integration of students into the decision-making processes of a medical faculty – advantages and disadvantages

Sebastian Schubert, Axel Mertens

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The Charité – Medical faculty of the Humboldt-University of Berlin – is one of the biggest faculties in Germany and is still dominated by a traditional curriculum. Over the past five years there has been a steady increase of student participation in both faculty politics (e.g. student members on the faculty council) and curriculum-related projects (e.g. phl-groups, history-taking groups, European Students Conference). This is certainly above average compared to other German faculties and is marked by the reliable cooperation with the Dean, the vice-Deans and the whole faculty. Our intent is to show the whole range of voluntary student activities and the influence on our faculty. On one of our posters we will present a rough overview of the one dozen running projects, the other one will show the decision-making processes of our faculty and how students are able to influence them.

Student involvement in teaching organisation

Jon-Helge Angelsen

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In the autumn semester 1996, The Faculty of Medicine at the University of Oslo started implementation of a new, partly Problem-based Curriculum. The Faculty strategy has been to enhance student engagement in the planning, implementation and continuous work with the curriculum and teaching organisation. In this work, I have always had the feeling of being heard and respected. My views have often been followed. It has been time-consuming, but also a very rewarding process. The importance of an active, clear and visible communication channel between the students and the Faculty of Medicine, with teachers and administrative personnel, is stressed. In a poster, the experience as: 1) selected student spokesman from the “pioneer” class for two years and 2) student representative in Semester Committees in the implementing or final planning semester of semesters 3, 4, 5 and 6 will be discussed, from a student perspective.

Evaluation of Anamnesegruppen in Berlin

Jan Schildmang, Andreas Brunklaus, Benedict Trumpf

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Anamnesegruppen are groups organised by students for students as a possibility to improve the necessary communication skills for the future work in a hospital or practice. The concept is based on peer group learning and the students learn by taking a history once a week with a patient, which is observed by other students. Since communication skills are not regularly taught at our faculty during the curriculum, Anamnesegruppen play an important role in this field of medical education. In this paper we present an evaluation of the course and discuss the special concept of peer group based learning.

Smoking in Colombian medical schools

Diego Rosselli, Olga Rey, Claudia Calderon, Maria Nelcy Rodriguez

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The objective was to evaluate smoking prevalence in medical students and attitudes towards smoking. First and fifth year students from 11 medical schools in seven Colombian cities answered anonymous, self-administered, 18-item questionnaires. Additionally, smokers answered the Fagerström Test for Nicotine Dependence (FTND). 2096 students (males 50.6%) completed the survey; average response rate was 89.9%; 26.1% were current smokers (males 28.1%, females 24.2%); 11.2% were daily smokers. Private universities had higher prevalence rates (p < 0.001). Male gender was associated with a higher chance of having given up smoking (p<0.05); 91.5% of current smokers admitted a desire to stop; 68.1% of all smokers and 45.5% of daily smokers scored 0 in the FTND. Fifth year students are more complacent with smoking in health centres and show a lesser desire to stop. Our students smoke more than their peers. Nicotine addiction does not seem to be the main perpetuating factor.
Positive action: The University of Southampton's Widening Access into the Medical Profession Project

Chris Stephens, Carolyn Blundell, Ian Giles, Angela Fenwick, Jenny Skidmore
The Department of Medical Education, Office of School of Medicine, University of Southampton, MP 801 Level C, South Academic Block, Southampton General Hospital, Southampton SO16 6YD, UK

The poster will address aspects of the design and implementation of this project whose aims are: To increase the participation in Medicine by under-represented groups so as to better reflect the patterns of population they serve and to implement our commitment to widening access and facilitate inclusion in our undergraduate programme. The objectives were to identify and target currently under-represented groups applying to medicine, in particular socio-economic groups III, IV and V; to collaborate with local and other FE Colleges in providing an accessible pathway; to ensure the pathway provides outcomes to enable successful participation and progression to the appropriate programme; to provide a range of exit routes from the pathway; to raise aspirations particularly of those still at school who might otherwise be excluded due to background or lack of educational opportunity from entry into the medical profession.
**8A/1** From bench to bed and back in women's health: The interface between basic and clinical science, an elective for medical students

Hana Castel, Ilana Harman-Boehm  
Ben-Gurion University of the Negev, Faculty of Health Sciences, Department of Internal Medicine C, Soroka University Medical Center, Beer-Sheva 84101, ISRAEL

The topic of women's health has not traditionally been covered in the formal medical school curriculum in the Faculty of Health Sciences of the Ben-Gurion University of the Negev. To address the growing needs of our graduates in this field as well as to bridge the widening gap between advances in basic biology and their relevance to clinical application, we built an elective course for sixth year students which spans major issues in the field in an integrative manner, covering the basic science evidence as well as the corresponding clinical correlates. The one week course incorporates overview lectures on each subject followed by individual project preparation, based on updated literature, tutored by a clinician and basic scientist. The final day is dedicated to project presentation and group summary. The topics covered are osteoporosis, cardiovascular disease and mental health issues in women. The course content, development and format will be presented.

**8A/2** Students learning in the community: Whom does the experience benefit?

L Bliss, A Lumb, S Collinson, M Rickets, E Lobo  
Department of General Practice, Room 232, Medical Sciences Building, Queen Mary and Westfield College, Mile End, London E1 4NS, UK

Students at St. Bartholomew's and The Royal London School of Medicine and Dentistry follow a new, community-based course during the first two years of the undergraduate curriculum. The course provides them with early contact with GP's and the primary care team, multiprofessional community health care teams, the voluntary sector, and patients. These placements give students the opportunity to gain knowledge of many elements of the local community that they would normally not be able to access. But what do the students give back? Ultimately, the wider community should benefit from the impact of a new generation of socially aware, community minded doctors, but it will be some time before we can assess whether this goal has been achieved. However, the immediate impact upon students' attitudes towards the community has been assessed using their input to the course evaluation.

**8A/3** Neuroscience block enriched with introduction to clinical concepts and a scenario on the outcomes of the earthquake disaster in Turkey: A model for early vertical integration in community-based humanistic medical curriculum

G.O Peker, M Baka, A Cetug, Y Ershahin, M Zileli, H Hanci, H Coskunoi, Y Kirazli, M Turk, Y Gezgin, L Ozturk, F Gokmen, T Tagci, I Durak, S Pogun  
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We adapted our horizontally integrated nervous system block to foster collective problem solving in the second year class of 420 students. The innovations included providing students with comprehensive syllabus and hand-outs, and dramatic presentation of an earthquake collapse victim with an incomplete spinal injury. A holistic, bio-psycho-social approach with recall, use and reinforcement of the knowledge and skills acquired in the whole first year and preceding second year curricula was pursued. Crisis management, teamwork, rescue, CPR, transfer, triage, clinical approaches, and early and late physical and psychological rehabilitation issues were addressed. Basic science disciplines focused macro and micro approaches to homeostasis, haemostasis, infection, immunisation, innervation, signalling, early and late neuro-degeneration, regeneration, and plasticity in the "physiological and clinical significance" context. Critical reasoning, communication skills, attitudes, ethics, public health issues, quality concepts, and an early orientation to clinical neuroscience were also introduced. The outcomes were higher interest, attendance and scholastic achievement with encouraging favourable student and faculty feedback.

**8A/4** Development of a 6-year, integrated disease prevention curriculum

A Peleg, E Rosenberg, A D Sperber  
Unit for Health Promotion and Disease Prevention, Division of Community Health, Faculty of the Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva 84101, ISRAEL

Disease prevention is a neglected component of medical school curricula. We have endeavoured to develop a 6-year curriculum with student and faculty involvement in the planning and implementation phases. We organized a workshop with 46 prominent faculty staff and students. Breakout groups explored: 1) whether to
teach prevention separately or integrated into existing courses; 2) when to teach prevention (pre-clinical, clinical, or both); 3) competencies expected of medical students; and 4) evaluation methods. A survey was conducted to identify courses with prevention content. Medical students interviewed coordinators of all preclinical courses, using a structured format. Courses were graded by prevention content and their potential for additional content. Coordinators suggested ways to incorporate prevention in their courses. The survey is being extended to clinical years. Recommendations for curricular change, based on these surveys and international experience, will be presented to the faculty for approval, and the implementation phase will be initiated.

Two cultures of medical students at one school reporting on harassment - The Sackler School of Medicine in Tel Aviv

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The effects of students' cultural background on their perception of harassment and their report on actual occurrence were studied at TAU where two medical school programs exist, one for Americans and one for Israelis. The same faculty teaches both groups at the same sites. Forty percent of students encountered a few episodes of harassment, and there was no significant difference between the two groups. Most episodes occurred in the clinical years by clinical faculty, and the most common form of harassment was humiliation by faculty. Less common forms of harassment included sexist and racist comments and jokes. Differences between the two groups were observed in their perception of harassment. Israeli students perceive extra-academic or professional demands on students as harassment, while American students perceive them as part of the required curriculum. The differences can be attributed to the two culturally diverse backgrounds of the students.

Injecting a "seamless" behavioral sciences approach into a traditional curriculum at Sackler Faculty of Medicine, Tel Aviv University

Jeffrey Borkan, Michael Weingarten, Judith Fadlon, Henri Abramovitch, Eva Schlank, Shimon Kornitzer, Pinchas Haperin, Netta Notzer
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This report describes a new behavioral science program (BSP), introduced in the last two years at our undergraduate medical school. Entitled Medicine, Person, and Society, it occupies 20% of total curriculum time. The major concept is to create "seamlessness," incorporation of behavioral science knowledge, attitudes and skills into the pre-clinical and clinical phases of the curriculum. The course's primary goal is to create and enhance humanistic medical proficiency ("Doctoring"). The BSP attempts to provide experiences at the relevant time, both in terms of the overall curriculum and in the students' professional development. Gradually the "independent" program will "disappear" becoming integrated with the bioclinical subjects. The BSP is taught through selected early clinical exposures, longitudinal small group mentoring, a family experience, and a program of lectures and activities. In the clinical phase of training (years 4-6), the BSP program continues by integrating ethics and communication with patient care. Extensive evaluation of the new program has occurred in parallel with its inauguration - from participant-supervision to questionnaires.

Session 8B  Postgraduate 3: Pre-registration House Officer Training

Teaching patient-centered medicine to residents in family medicine: course concepts and content

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The Department of Family Medicine in Beer Sheva, Israel developed a course that helps residents to acquire the attitudes and skills required for patient-centered medicine. In this approach, the physician relates to patients according to their needs, rather than the doctor's own agenda, moving from professional control to patient empowerment. Though there are many elements to this method, certain basic orientations and skills must be taught, modeled, inculcated, and reinforced. To accomplish these aims, a three-year course was developed, largely based on directed readings, open discussion, case presentations and role-play. It is composed of four levels which must be individually mastered before moving to the next: 1. Doctor-patient communication, 2. Family systems orientation-concepts, 3. Family systems orientation – practice and 4. The multi-dimensional simulated patient. In this presentation we will describe the course's concepts and content, and some indicators as to its influence on graduates of the past 13 years.
6B/2  Shadowing junior doctors: Reflections on process and outcomes
Cindy Johnson
University of Wales College of Medicine, School of Postgraduate Medical and Dental Education, Heath Park, Cardiff CF4 4XN, UK
This paper describes an exploration of learning in the Pre-Registration House Officer Year, through a process of non-participant observation. This research aims to gather data, through observation of PRHOs in the hospital setting, on these junior doctors’ experiences of learning and on the factors which influence this. The research method employed will be described and its usefulness as an approach to investigating health care education in this context will be considered. Specifically the opportunities, practical difficulties, methodological limitations and lessons learned through the application of this research process will be reviewed. The results of the analysis of the observational data will be contrasted with those of focus group interviews with PRHOs carried out at an earlier stage. The combined insights yielded by these two pilot research interventions will be considered in relation to relevant literature and to the current policy environment.

6B/4  The Prevocational Medical Education Program in Queensland, Australia
Jennifer Harlen, Debra Le Bhers
Queensland Medical Education Centre, Mayne Medical School, Herston Road, Herston, Queensland 4006, AUSTRALIA
The Prevocational Medical Education Program in Queensland, Australia, provides an integrated approach to medical education during the first two postgraduate years. Directors of Clinical Training (DCT) - usually clinicians at the hospital, and Medical Education Officers (MEO) - skilled educators seconded from the university, facilitate the program. The curriculum for junior doctors (http://imedec.qmed.uq.edu.au) provides clear education guidelines and criteria and articulates with the requirements for vocational training programs. Seamless integration from medical school to the prevocational years occurs through our involvement in the new Graduate Medical Course (GMC) during the Trainee Internship in the final year of the GMC. The Trainees will be required to complete a Clinical Training Portfolio (CTP). The CTP is a reflective learning tool that will be first used during the Trainee Internship and then in the prevocational years. Through the linkages with the GMC and College programs, we are ensuring that training programs for junior doctors are part of a systematically integrated process in medical education that provides a model for both Australia and other countries.

6B/3  The Early Years: The right time for general practice? Results of an interview study
J Ilting, G B Taylor, W F Cunningham, T van Zwanenberg
General Practice, PIMD, 10-12 Framlington Place, Newcastle upon Tyne NE1 2AB, UK
The aim of the study was to compare and contrast experiences of house officers gaining exposure to general practice either in their pre-registration year or as part of an SHO medical rotation involving general practice. Semi-structured interviews were conducted with 8 involved SHOs undertaking a four-month attachment as part of their general medical rotation. The data obtained were contrasted with similar data collected from pre-registration house officers in an earlier study. The views of their educational trainers were obtained in both studies. Both groups recognised improved consultation skills, increased range of patient experience, social and psychological factors in illness and one to one supervision as positive benefits from general practice. This study highlights potential gains from experience in general practice. Whilst both groups of young doctors developed generic consulting skills and insights into general practices professionalism, the SHOs felt that their greater medical experience led them to gain more.

6B/5  That’s the training post for me
Jennifer Laidlaw
Education Development Unit, Tay Park House, 484 Perth Road, Dundee DD2 1LR, UK
The production and evaluation of support material for the Scottish Pre-registration House Officer Scheme (SPA) provided the opportunity to gain insight into PRHO training and in particular final year students’ methods of selecting their house officer posts. It was concluded that:
1) Final year students take the selection of their posts very seriously.
2) Students are against the used of standardised curriculum vitae.
3) The way information about posts is presented does matter.
4) Students show little interest in the computer’s matching algorithm.
5) Post profiles presented in printed text format rather than electronic format is their first choice.
6) Consultants view post profiles as a “marketing opportunity”.
7) The process of interviewing interested applicants must be consistent.
Session 8C  Teaching and Learning 3: Communication Skills Training

8C/1  Teaching communication skills to physicians - from private initiative to public commitment

Lisbet Clementsen, Jørn Andersen, Anders Bonde Jensen, Eva Ethelberg, Marianne Lau, Anne Vinkel Uddannelsesseksretariat, The Danish Medical Association, Esplanaden 8 C, DK-1263 Copenhagen K, DENMARK

Communication between doctor and patient is known to be essential in treatment of patients. Few hospital doctors have formal training in communicating with patients. Therefore a training course using role plays in small groups was organised by the Danish Medical Association (DMA). The aim was to:

- Improve communication skills
- Develop a training concept
- Spread the concept to local hospitals
- Integrate training of communication skills in Danish specialist training.

A model for communication courses was developed in collaboration with Dr. Peter Maguire, UK. In 1997 23 physicians were trained to be teachers. In 1998-99 the DMA ran 21 training courses for 134 physicians financed by private and public funds. In 1998-99 10 courses were requested and financed by local hospitals and 4 by a university. In March 2000 a further 16 courses have been arranged. The ongoing pressure on the Danish health authorities have now resulted in integrating training of communication skills into postgraduate medical education.

8C/2  The effect of a communication training course for physicians

Lisbet Clementsen, Jørn Andersen, Anders Bonde Jensen, Eva Ethelberg, Marianne Lau, Anne Vinkel Uddannelsesseksretariat, The Danish Medical Association, Esplanaden 8 C, DK-1263 Copenhagen K, DENMARK

Communication between doctor and patient is known to be an essential element in treatment of patients. Few hospital doctors have formal training in communicating with patients. Therefore a training course was organised by the Danish Medical Association using role plays in small groups. The aim was to improve the communication skills of the participants. The effect was evaluated by using questionnaires filled in by the participants before the course, immediately after and six month later. At the first 21 courses there were 134 participants. 120 doctors (89.6%), 61 men and 59 women, completed the course.

The preliminary results show that the participants:

- Rated the importance of the emotional content in the dialog higher after the course
- Developed their ability to recognise and discuss the emotions expressed by the patients.

The preliminary results indicate that an intensive training course can improve the communication skills among physicians.

8C/3  Sex and drugs and rock 'n' roll - learning adolescent interviewing using simulated patients

Kim Blake, Karen Mann, David Kaufman, Murray Kappelman Dalhousie University/IMK Grace Health Centre, 5850/5980 University Avenue, POB 3070, Halifax NS, CANADA

The aim of the study, was to determine whether medical students' psychosocial interviewing improves after receiving feedback from a simulated mother and adolescent patient. A prospective randomised study was carried out involving final year students at a tertiary center and an off-site control arm. Tertiary center students undertook a pre-test videotape interview with a simulated adolescent and mother. Students were randomly assigned to feedback (F*) or no feedback (F†) from the simulators. Four weeks later they completed a post-test interview all receiving feedback. A blinded psychologist created a total of eight global scores for each videotape using a modified Calgary Cambridge Observation Guide. All students performed a year end OSCE. One station assessed adolescent interviewing. The results are summarised below:

<table>
<thead>
<tr>
<th>Student</th>
<th>Global Scores Mean (sd) Pre-test</th>
<th>Post-test</th>
<th>OSCE Mean (sd) General knowledge Psychosocial</th>
</tr>
</thead>
<tbody>
<tr>
<td>F* (en feedback)</td>
<td>21 72.7 (8.08) 76.34 (9.43)</td>
<td>70.71 (16.88) 68.06 (24.07)</td>
<td>p &lt; 0.02</td>
</tr>
<tr>
<td>F† (feedback)</td>
<td>31 72.93 (9.43) 82.81 (9.79)</td>
<td>67.53 (16.69) 55.71 (23.16)</td>
<td></td>
</tr>
<tr>
<td>F* (control arm)</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regression analysis used student global scores as the dependent variable. Receiving feedback was the only significant predictor of students' performance on the post-test (p=0.021)*. Receiving feedback from a mother and adolescent simulated patient can significantly improve medical student adolescent psychosocial interviewing skills.
Evaluation of clinical interviewing skills: The use of behavioural indicators for assessment and learning

Anita D Glicksen, Gerald Merenstein
University of Colorado, Health Sciences Center, Department of Pediatrics, Box C219, 4200 E 9th Avenue, Denver CO 80262, USA

Over the past two decades, simulated videotaped interviews were developed to enhance instruction and evaluation of health professionals in general interviewing and history-taking skills. For the past 20 years our medical education program has utilized an interviewing skills training module which is integrated into the psychosocial and clinical curricula. Specific interviewing skills, defined in behavioural terms, are targeted objectives in both didactic instruction and quarterly standardized videotaped assessments. These behavioural indicators enable the evaluator and student to focus on elements of the interviewing process that are subject to improvement. Fifteen years of data suggest these indicators serve as a reliable and effective method for student feedback and assessment, enabling students and educators to track improvement and progress over a continuum of skills. These proven target skills and indicators have strong implications for enhancing Standardized Patient Assessments that seek to evaluate student mastery of history-taking and physical examination skills.

Teaching basic communication skills at the medical and pharmacy faculty: measuring the effectiveness of a self-study method

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The faculty of medicine faces the challenge to prepare students for their first patient contact in a flexible way, since students choose the moment of this clerkship. Therefore a self-study package was developed. The goals of the self-study are to focus the attention of students on the importance of good communication, to give them a theoretical introduction and to provide exercises. In order to measure the learning effect we used the test we presented last year in Linköping. The research has an experimental design with a pre-and post assessment. Two hundred medical and 54 pharmaceutical students were assigned at random to respectively 3 and 2 groups for the following interventions: one group got a traditional training, another group received the self-study package and the last one formed the control group. We assume that the training and self-study groups will score significantly higher than the control group. The results will be presented during the congress.

Exploring the patient’s frame of reference

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One of the generally accepted characteristics of appropriate history taking is an active patient participation. For this purpose students are taught to use open questions at the beginning of the interview. This is supposed to encourage the patient to tell what is important in his or her opinion. However, if the patient subsequently provides information which does not fit the frame of reference of the student, the latter feels embarrassed and often falls back on closed questions. An alternative way to start history taking is a systematic exploration of the frame of reference of the patient as far as his complaints are concerned. In this type of training students learn to interview patients with respect to five major dimensions of the complaints. In this way the frame of reference of the patient, mentioned before, is largely covered: i.e. the somatic, cognitive, emotional, behavioural and social dimension. As a result it is possible to have a systematic and structured interview and at the same time obtain a substantial contribution from the patient in the consultation. An outline of the training and evaluation scores will be presented.

Session 8D Important Topics in Medical Education

Medical students’ attitudes toward introducing Complementary Medicine into the curriculum at the Sackler Faculty of Medicine, Tel Aviv University

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Sackler Faculty of Medicine, Unit of Medical Education, Tel Aviv University, pub 39040, Ramat-Aviv, Tel-Aviv 69978, ISRAEL

Over the last decade, the medical institutions in Israel have been introducing complementary medicine practices among their services. In order to reply to patients’ needs, the medical schools are considering exposing future physicians to these practices. These are the initial results of a survey conducted during the recent academic year among students of the two senior classes. They were questioned with regard to their attitudes toward and interest in studying complementary medicine. 80% of the students (n=117) replied. Data indicate that students believe (53 % agreement) in the beneficial effects of complementary medicine. They are interested to study it, especially those practices that are now acceptable to mainstream medicine (acupuncture, meditation or hypnosis). Year of study and gender had no effect on their attitudes.
Among the 10% who had personal experience with alternative medicine, all agreed that it is beneficial and the vast majority (80%) were interested in studying it.

### 8D/2

**Preparing Tomorrow’s Doctors. Teaching how to help: an academic/NGO joint venture in Humanitarian Medicine**

M F Patricio, M Oliveira da Silva, J Pereira-Miguel
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The challenges that tomorrow’s doctors face urge Medical Schools to revise their post-graduate curricula. Contents and methodologies should consider student preparation in terms of knowledge, skills and attitudes; to know, to know how to do and to know how to be. These aims may be better achieved if other partners in society are involved with the academic institution. An opportunity to test this hypothesis emerged at the Institute of Preventive Medicine, Faculty of Medicine, University of Lisbon, when a new and innovative post-graduate course on Humanitarian Medicine was launched. The organizers established an alliance with Doctors of the World for planning and delivering the course. This paper presents the results of this experience. The objective of the study was to evaluate the first Post-graduate Course in Humanitarian Medicine (eight modules, two seminars, and a practical period at an NGO, from November 1999 to March 2000). The course was attended by 23 participants. After each module and at the end of the course students were asked to complete a semi-structured questionnaire in order to evaluate the educational experience. Two methods – qualitative and quantitative – were used. The former allowed the AA to know the students’ opinion regarding some pre-established factors (pertinence of the contents, practical usefulness, teachers’ performance, group dynamics and methodology) while the latter (using analysis content technique) enabled all the possible richness to be extracted from the material. Results (strengths, weaknesses and suggestions) were analyzed. The main changes to be introduced in the future identical courses will be identified and implications for post-graduate teaching-learning models will be discussed.

### 8D/3

**Systematic reviews in medical education: analyzing the quality of research methodologies**

H Thomas, C Belfield, A Bullock, R Eynon
School of Education, University of Birmingham, Edgbaston, Birmingham B15 2TJ, UK

The Cochrane collaboration produce systematic reviews on a variety of areas in the field of medicine. The process involves assessing the available literature against a 4 level hierarchy of evidence ranging from randomized control trials to expert opinion. Studies that fall outside the first category are rarely used. However, there is concern that the application of this approach to medical education research results in a great number of studies being disregarded. This paper is based on a study which has worked on developing a methodology which will allow: 1) approaches to classifying and assessing the quality of the literature (building on the existing work in this area, such as the QUESTS criteria (Harden et al., 1999); and 2) the process of how systematic reviews can be conducted in this field, in ways which utilize all appropriate research methodologies. This approach is illustrated utilizing literature on information technology in medical education.

### 8D/4

**“How could a black man fly a plane?” - Nelson Mandela – ‘Long Walk to Freedom’**

A Lumb, M Wyldbore, S Collinson, M Cross, M Rickets, L Bliss, Y H Carter
92 B Landor Road, Clandon, London SW9 9PE, UK

A questionnaire was designed to measure students’ attitudes towards particular patient groups for the purpose of course evaluation. Using a 5 point Likert scale, students were asked to make an immediate instinctive judgement about where a patient would best be represented on a scale between contrasting pairs of adjectives. Around 30 adjectives were presented for each of the patient groups considered (elderly people, toddlers, adolescents, adults with depression, adults with schizophrenia). After piloting, the questionnaire was presented to two full year cohorts of 240 students. However, a full analysis of results and evidence from student reports suggest that students felt considerable resistance towards completing the questionnaire. Further student opinion about the questionnaire was elicited through focus groups. This suggested that students were uncomfortable about being asked to express gut feelings which could be seen as negative, and demonstrated that student attitudes can only be measured reliably when students feel comfortable with the methodological tool.

### 8D/5

**Knowledge, attitude and practice of diabetics attending Kasr El Eini Diabetes Outpatient Clinic**

Nargis Albert Labib, Sherif Hafez
7 St. Mohamed Riad Abdel Kader, Nasr City, Cairo, EGYPT

The successful management of diabetes depends on a cooperative, responsible and well-informed patient who is able to make adjustments. The objective of the work is a databased study of diabetes to reveal: knowledge of the importance of following a dietary regime, compliance to it and alarm awareness signals, attitude towards a modified life style and practice of required disease management. The study was a cross sectional descriptive one using a questionnaire and a scoring system to assess knowledge, attitude and practice of 230 adult diabetics who were attending the clinic whether for the first time or for follow up. The mean age of the diabetics studied was 51.23±/10.4 years.
Session 8E  Problem-based Learning 2: Experience and Evaluation

8E/1 A teaching learning approach applied to students with previous failure in biochemistry

Sandra Hilario, Jorge Lima, Joao Martins e Silva
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Ninety-one medical students with previous academic failure in Physiological Biochemistry (PB), a second year discipline of the undergraduate curricular core, were invited to participate during 1998/1999 in a structured problem-based learning experience. Forty-eight of the students (19 male and 29 female) decided to participate (E), whereas the remainder (NE) 43 students (25 male and 18 female) opted for the traditional learning processes they had before and was followed by all other students who began studying the discipline for the first time. As the NE students repeating the discipline were free to attend teaching sessions, most of them did study by themselves for the yearly examination. In contrast, the E students were assigned to groups of 4 or 5, who met regularly 2 hours weekly during 20 weeks with the same tutor. In order to integrate the structured teaching, a plausible clinical problem was constructed and successive information was added weekly to the case, in accordance with the PB content of the full programme. Knowledge acquisition methodology was based on three main steps: problem characterization and explanatory hypotheses; self-directed learning individually and/or in group; group discussion for problem resolution. Learning was organised in pairs of the successive related thematic modules in separate weeks, being the problem introduced in the first of each pair of modules and the final discussion centred on the second one. At the final examination, only 12% of the NE students were approved, in contrast with 54% of the E group, thus suggesting that this methodology contributes positively to the cognitive process of students with previous academic failure in the discipline.

8E/2 A short PBL experience changed parameters of students' approach to learning

J. F. Perez-Gonzalez, M Lamanna, J A Octavio
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PBL may improve conceptualisation and reflection. To evaluate this, we compared non specific tutorials (NST) with PBL during a three month period inserted into a lecture-based course. Ninety students from the third year Pathophysiology course were divided into 6 groups. Three groups (CONT, n= 15, 15 and 16) were given twelve 2-3 h weekly NST and three (n= 15, 15 and 14) were given 12 sessions of PBL by the same teachers, covering the same topics. PBL cases were discussed in 2-3 sessions. Both groups completed the Cognitive Behaviour Survey (CBS), to assess the role of memorisation (M), conceptualisation (C) and reflection (R) in learning, before and after the intervention. CONT, mean scores before were 47.64 ± 12.90 for the M scale, 51.87 ± 5.84 for C, 26.93 ± 5.92 for R and 46.19 ± 8.09 for positive learning experience (PLE). Post tutoring values were M=46.31 ± 10.47 (NS); C= 47.90 ± 7.17 (P=0.01); R=28.36 ± 7.29 (NS) and PLE=47.92 ± 12.84 (NS). For the PBL group, means were M=47.20 ± 12.12; C=48.88 ± 7.83: R=25.61 ± 5.92; PLE=42.37 ± 7.73 before PBL and M=44.47 ±11.87 (NS), C=51.75 ± 5.79 (NS), R=31.65 ± 5.39 (p<0.001); PLE=54.03 ± 6.41 (p<0.001) after. Thus, 3 months of PBL caused a significant increase in R and PLE.

8E/3 The new problem based medical curriculum in Trondheim: from plan to reality

Kjetil A H Karlson, Torstein Vik, Steinar Westin
Norwegian University of Science and Technology (NTNU), N7489 Trondheim, NORWAY.

The objective of this study was to examine how the planned reduction in scheduled activities, the emphasis on student centred learning, and the integration of disciplines have been implemented in the PBL-curriculum in Trondheim. The schedules in the old and new programmes were the main sources of data. The number of hours spent on scheduled activities was much higher in the new programme (n=4009) than in the intended (n=2974), and even higher than in the old curriculum (n=3785). In contrast to what was planned there was less student centred learning and basic and behavioral sciences were mainly taught in the two first years, thus the new curriculum in Trondheim has not become as radical and unique as intended, and hardly a pure PBL-curriculum. Traditional resistance to change in social systems may have caused less radical changes. This is not necessarily negative. It is possible that the new model has become a pragmatic synthesis between new and traditional medical education.

8E/4 The new problem-based medical curriculum in Trondheim: The students' results in clinical examinations

Kjetil Karlson, Torstein Vik, Steinar Westin
Norwegian University of Science and Technology (NTNU), N 7489 Trondheim, NORWAY.

The purpose of this study was to compare students' achievement at the final examinations in the LBL and PBL-curriculum. External examiners graded written final examinations of the last class in the lecture-based programme (n=18) and the first class of the PBL-progamme (n=51). Results from oral clinical examinations from the first PBL-class (6th years students, n=51) were compared to results from oral
clinical examinations for the last ten classes (1992-97) in the old curriculum (n=204). There were no differences between the LBL and PBL students in oral examinations in surgery and minor clinical disciplines. In internal medicine, the PBL-students scored 0.9 grade points lower on oral examinations (p<0.05) and 1.3 grade points lower on the written examination (p<0.001). Thus, this study shows equal performances by PBL-students in clinical examinations, despite the lack of intensive preparations in a single discipline. We cannot explain why PBL-students achieved lower scores in internal medicine.

Facilitation and group process
Are Holen, Kristin Wigen, Øyvind Ellingsen
Department of Community Medicine and General Practice, Medisinsk teknisk forskningssenter, Norwegian University of Science and Technology, N-7489 Trondheim, NORWAY

In 1998 and 1999, the medical students at the Norwegian University of Science and Technology completed a questionnaire to assess the quality of the contributions of their facilitators in the PBL-group. Additionally, they regularly assessed the quality of the processes of their PBL-group. The first author has developed the tools employed for these assessments. The study explores aspects of the facilitator-group interactions as experienced by the medical students. Findings from these analyses will be presented, and, the implications will be briefly discussed.

Experience of first semester in a PBL-parallel track at the Charite, Faculty of Medicine, Humboldt University, Berlin
Waltraud K Georges, Claudia S Kiessling, Walter Burger
Reformstudieeng Medizin Universitaetsklinikum Charité, Humboldt-Universitat zu Berlin, Augustenburger Platz 1, 13353 Berlin, GERMANY
Dick Mårtenson
Karolinska Institute, Stockholm, SWEDEN

In autumn of 1999 a problem-based learning medical curriculum started as a parallel track. Students and faculty evaluated each block with questionnaires. At the end of the first semester the students had a 9 station OSCE and MCQ-test. They were also compared with students from the traditional track on a progress-test. The responses to the questionnaires show among other things that the students to a high degree found the program relevant, it gave them a strong feeling of having an impact, was enjoyable, and facilitated their search for a structure in organizing knowledge and skills. Analyses of these first results clearly illuminate vital aspects of learning and professional training. The experiences gained also show the difficulties of implementing the underlying concepts in the context of a German medical faculty, i.e. using MCQ-tests in the program, not having all faculty understanding these concepts. This will be presented at the conference.

Session 8F  Assessment 4: Approaches to Assessment

The Script Concordance Test: a tool to assess the reflective clinician
Bernard Charlin, Louise Ray, Carlos Brailovsky, Francois Goulet
URDESS, Faculté de Médecine, Université de Montréal, C.P 6128, Succursale centre-ville, Montréal, Québec, H3C 3J7, CANADA

Cees van der Vleuten
University of Maastricht, The NETHERLANDS

The script concordance test (SC test) is a new assessment tool. It is designed to probe if knowledge of examinees is efficiently organised for clinical actions. It measures the degree of concordance that exists between examinees' scripts and scripts of a panel of experts. The principles of construction of a SC test are presented. A series of studies have shown that the SC test has interesting psychometric properties, in terms of reliability, face validity, and construct validity. Results from these studies are succinctly presented and commented on. The SC test is a simple and direct approach to testing organisation and use of knowledge. It has the strong advantage for a testing method of being relatively easy to construct and use and to be machine-scorable. It can be either paper or computer-based and can be used in undergraduate, postgraduate, or continuing medical education.

Measurement of clinical reflective capacity early in training as a predictor of clinical reasoning performance
C Brailovsky, B Charlin, S Beausoleil, S Coté, C van der Vleuten
URDESS, Faculté de Médecine, Université de Montréal, C.P 6128, Succursale Centre-Ville, Montréal, Québec H3C 3J7, CANADA

The Script Concordance test (SC test) has been conceived to measure the organisation of knowledge. The objective of the study was to verify whether scores obtained by students at the end of clerkship predict well their clinical reasoning performance at the end of residency. A cohort of 24 students from a medical school in Quebec was followed up to the end of their residency in family medicine completed in several schools across Quebec. The observed Pearson correlation coefficients of the SC test were statistically significant (0.451, p = 0.013 / 0.447, p = 0.015) when compared with tools measuring clinical reasoning, and were not statistically significant (0.340, p = 0.052) when compared with OSCE scores. The SC test predicts well the scores obtained two years later on tests of reasoning. This is evidence in favour of the construct validity of the SC test.

- 63 -
The development of an extended matching multiple choice (final) test

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At the Faculty of Medicine of the Catholic University of Leuven a final test has been developed, which consists of extended matching multiple choice questions. These are questions starting from a case, with the correct answer in a list of 7 with 27 answer possibilities. The same list can be used for several questions (cases). Staff members of ten medical specialties have developed about 900 questions. In order to test these questions, they were submitted in series of 100 questions to 251 last year students who were prepared neither for content, nor for question format. During the conference reliability, validity and feasibility will be reported. Concerning validity, face validity, content validity and criterion validity will be mentioned. In the discussion of feasibility attention will be paid to test duration and to the possible influence of fatigue and growing familiarity with the question format on the scores.

Using descriptive evaluation to detect student growth during a clinical clerkship

Paul A Hemmer, Louis Pangaro
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The objective was to determine whether a descriptive evaluation system could detect student growth. For the 1993-96 classes at the Uniformed Services University, 343 third year medical students did 12 weeks of inpatient medicine. Evaluation was standardized using formal evaluation sessions and the performance descriptors, “Reporter-Interpreter-Manager-Educator”. We compared the mean final ratings given in the second six weeks to the first six weeks (t-test). Differences in preclinical GPA, USMLE step one, and clerkship pretest scores were tested by ANOVA. The result was that there was no difference in students’ academic characteristics. Instructors gave a higher percentage of available points in the second six weeks compared to the first six weeks. Overall growth rates did not differ by academic quarter.

<table>
<thead>
<tr>
<th>First 6 weeks</th>
<th>Second 6 weeks</th>
<th>△</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern</td>
<td>.52</td>
<td>.56</td>
<td>7.7%</td>
</tr>
<tr>
<td>Resident</td>
<td>.47</td>
<td>.52</td>
<td>11%</td>
</tr>
<tr>
<td>Attending</td>
<td>.43</td>
<td>.48</td>
<td>12%</td>
</tr>
<tr>
<td>Preceptor</td>
<td>.50</td>
<td>.58</td>
<td>16%</td>
</tr>
</tbody>
</table>

In conclusion, accepting that students do improve, these findings validate our criterion-based evaluation in which higher achievement represents progress beyond “reporting”. For grading, weighing student performance in the second six weeks more heavily than the first appears justified.

Do URMS and non-URMS differ in problem solving abilities as measured by examinations?

Ara Tekian, Yi Han, Laura Hruska
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This study uses a novel approach to investigate the difference in performance between underrepresented minority (URM) and non-URM students by analyzing the difference between exam taxonomy levels, an adaptation from the original cognitive taxonomy. Mean correct responses to taxonomy levels 1, 2, and 3 for both URM and non-URM students stratified by MCAT and GPA are investigated using an ANOVA and General Linear Model procedure (GLM). URM students do not have any statistically significant differences between the MCAT and GPA stratification or between taxonomy level 1, 2, and 3 questions. Non-URM students have statistically significant differences between the GPA and MCAT stratification and between taxonomy level questions. URM and non-URM students perform differently on exam questions.

Use of multiple methods of student assessment in a community based teaching programme

Dulitha N Fernando, Rohini de A Seneviratne
Department of Community Medicine, Faculty of Medicine, Colombo 8, SRI LANKA

This presentation describes the experiences gained in student assessment of a community based training programme in the undergraduate medical curriculum, Faculty of Medicine, University of Colombo, Sri Lanka. This programme is implemented for a period of 18 months in the 3rd and 4th years in a five year course. It includes a community attachment and a family attachment. Multiple methods were utilized in the assessment of this programme. These included an assessment of individual students by a written examination in theoretical aspects combined with a viva voce; group assessment based on a group report and a group viva. In addition assessments based in the community were carried out by tutors and by the community. In developing these assessments, objectives of the programme derived from the overall objectives of the undergraduate medical curriculum were utilized. Marks obtained in the different components were studied in depth.
Session 8G Assessment 5: ECFMG Clinical Skills Assessment Unit

8G/1 The validity of post-encounter scores from a high-stakes standardized patient-assessment

Danette W. McKinley, John R. Boulet, Gerald P. Whelan
Educational Commission for Foreign Medical Graduates, 3624 Market Street, Philadelphia, PA 19104, USA

Use of post-encounter exercises to assess clinical skills is common in standardized patient examinations. The relation between scores on these exercises and other measures of clinical competence provide evidence for concurrent validity. In this study examinee performance on the ECFMG Clinical Skills Assessment (CSA) patient note (PN) exercise was compared to holistic ratings of various clinical skills. The post-encounter PN exercise was designed to assess an examinee’s ability to communicate in writing the medical history and physical examination findings, differential diagnoses, and diagnostic management plans. Physician raters reviewed videotaped clinical encounters and provided holistic ratings of the examinees’ medical interviewing skills, physical examination skills, humanistic qualities/professionalism, clinical judgement, counselling, organization and efficiency, and overall clinical competence. Patient note scores correlated most highly with ratings of physical examination skills (r=0.74), organization and efficiency (r=0.75), and overall clinical competence (r=0.71), providing additional evidence that the CSA post-encounter exercise yields valid scores.

8G/2 Clinical skills proficiencies and physician characteristics: impact on patient satisfaction

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ECFMG Clinical Skills Assessment (CSA) is designed to provide reliable and valid scores in the areas of data gathering and verbal and written communication in a clinical setting. Standardized patients (SPs) document data gathering abilities and provide Likert scale ratings of interpersonal skills and spoken English proficiency. The SPs also provide a satisfaction rating that is based on their proclivity to see the physician again. This rating is not included in any score used for CSA pass/fail decisions. The purpose of this investigation was to explore the relationship between patient satisfaction and clinical skills proficiencies of graduates of foreign medical schools (FMGs). Results indicate that patient satisfaction is related to medical ability of the physician. In addition, after controlling for potentially confounding factors such as clinical science proficiency and adeptness in spoken/written English, physician characteristics (e.g., age) do not impact satisfaction ratings. These results provide additional evidence that SPs employed in CSA provide fair and impartial rating of candidate skills.

8G/3 Evaluating the spoken English proficiency of graduates of foreign medical schools

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The ECFMG Clinical Skills (CSA) is used in conjunction with other tests to evaluate the readiness of graduates of foreign medical schools to enter accredited post graduate medical education programs in the United States. An important component of the CSA is Doctor – Patient Communication, which included measures of spoken English proficiency (ENG) and interpersonal skills (IPS). A reliable spoken English proficiency score can be obtained from 10 standardized patient (SP) ratings (p=0.95). Associations between CSA ENG score and other measures of language ability and medical knowledge were explored. The correlation between the CSA ENG score and the Test of English as a Foreign Language (TOEFL) total score was r=0.70. The correlations between CSA ENG scores and the United States Medical Licensing Examination (USMLE) Step 1 (basic science) and Step 2 (clinical science) scores were r=0.32 and r=0.28, respectively. These relationships, combined with other associations, provided additional evidence for the validity of the CSA ENG ratings.

8G/4 Factors impacting portrayal and scoring in a standardized patient assessment: results of a comprehensive survey

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The ECFMG Clinical Skills Assessment (CSA) was incorporated in July 1998 and, to date, approximately 10,000 candidates have been evaluated. The assessment uses standardized patients (SPs), lay people who are trained to portray people with common clinical problems. A large pool of SPs and cases is required for daily CSA administration. To better address SP concerns, and investigate potential factors that may impact case portrayal and scoring, a detailed survey was sent to all SPs. The SPs were asked to provide information on their health/medical experience, health beliefs, the importance of various physician competencies, and the impact of various factors on their ability to portray the patient and provide accurate scores. Based on SP opinion, ability to identify medical problems was the most important physician skill. Initial results also indicated that while some candidate and environmental factors influenced portrayal and accuracy more than others, most had minimal or no
impact. The survey will be administered at a later date to investigate longitudinal patterns in SP attitudes and beliefs.

**Assuring the consistency of scoring of post-encounter patient notes in a high volume performance assessment examination**

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As part of its Clinical Skills Assessment (CSA®), the Educational Commission for Foreign Medical Graduates (ECFMG) uses a Patient Note (PN) to evaluate candidates’ abilities to communicate, in writing, with health care professionals. The design of this PN is very similar to a standard SOAP note and includes medical history, physical examination, differential diagnosis and a diagnostic workup plan. Physicians are trained to use a holistic scoring rubric to score the PNs. To maintain the accuracy and consistency of these assessments, a quality assurance (QA) program has been established. Experienced physician raters review detailed discrepancy data for selected individuals. Based on multiple inter- and intra-rater data combinations, scoring anomalies can be identified and scrutinized. Raters can then be recalibrated to ensure that scores, over time, are valid. The impact of this QA program in terms of minimizing potential sources of rater error will be discussed.

**Session 8H Continuing Medical Education 2**

**Improving the communication skills of poorly performing doctors**

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The medical profession is under pressure to monitor doctors’ performance. Doctors in West Midlands, UK with communication problems are referred to Birmingham Department of Primary Care and General Practice, for assessment and training. This paper offers an evaluation of this programme. Doctors are interviewed, and training plans (typically including role-play) negotiated with interested parties. A detailed report is written. 19 doctors have been referred, by GP/ hospital trainers or the GMC. Only 3 have been Caucasian, native English speakers. Training is positively viewed. Referred doctors often arrive with a sense of grievance: “poor communication” is often inappropriate attitude: there is uncertainty about whether our role is assessment or support. Training of this kind can succeed. The issue of non-native-speak doctors needs to be addressed.

**Distance learning in rheumatology: A core curriculum for general practitioners**

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General Practitioners (GPs) in Romania became independent and are payed by the National Insurance Company (NIC). Recently, NIC provided all GPs from Cluj county with a PC, allowing the possibility to send them upgrading courses in electronic format by request. An enquiry has been made asking GPs to identify their own learning needs. The answers were consistent with the idea that GPs correctly identified the spectrum of diseases more frequently encountered in their daily practice, such as: osteoarthritis, rheumatoid arthropathies, non-articular rheumatic diseases etc. A core curriculum, aimed at fulfilling their needs of learning rheumatology, has been developed and the first four study guides based upon it have already been sent to them. The study guides were constructed according to the principle that students should be encouraged to acquire information as well as skills and attitudes.
The information needs of doctors and continuing medical education (CME) activities. Results of a pilot of medical practitioners in Portugal

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Daily clinical assistance results in a high number of clinical questions that have to be answered, if good quality care is to be maintained. Doctors are faced with several source of information, each one presenting different degrees of complexity: for example, the medical literature presents a formidable challenge to the practising clinician, because of its dimension and variable quality. We present the self-reported information needs of a group of doctors, as well as the solutions they believe can provide their needs in terms of continuing medical education actions. We questioned 80 students on CME courses (addressing Evidence-Based Medicine-EBM-methodology) on their demographic and professional characteristics, and the modes, frequency and duration of access to the scientific evidence, as well as their reading habits, computer skills and literature searching abilities. From 80 participants we were able to get 63 (79%) responses; 48% were female, 55% were aged between 40-59 years and represented fourteen different medical specialities; a little more than half had previous research experience, as well as epidemiological and statistical specific knowledge; information sources used included industry representatives, medical journals, textbooks, questioning other doctors and bibliographic databases; 73% stated they searched medical databases once or more per week; 67% read for 90 or more minutes per week (about 3-15 medical articles); review articles, randomized controlled trials and textbooks were the most common sources for answering clinical questions regarding therapy; preferred CME activities included formal courses, practice guidelines and, rarely, reading journals; most (75%) of the respondents had access to a medical library to search for articles 2-5 times a year; 60% had good computer skills and regularly browsed the Internet. In conclusion in a population of doctors with different specialities, there is a wide variation of information needs as well as individual solutions to solve them. Classical CME activities are seen as efficacious in solving knowledge gaps, but no formal evaluation was done. We conclude that there is the need to select, evaluate and present information in a selective and validated way, using EBM methodology.

Local opinion leaders and diffusion of medical innovations: implications for continuing medical education

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The rapid and cost-effective dissemination of innovations in medical practice is a major challenge to medical educators, healthcare and academic institutions, and the pharmaceutical industry. Local opinion leaders (OL) play a key role in spreading new ideas among the medical practitioners. This presentation will include rationale, review of the research, recent empirical findings, and guidelines for integrating information into the clinical decision making process.

The influence of “Abstract” (a bimonthly abstracts newsletter) on medical information update habits among Israeli physicians

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Acquiring and managing clinically relevant information constitutes a major problem for postgraduate physicians. "ABSTRACT" is a bimonthly medical newsletter sent by fax and electronic mail to over 5,000 physicians in Israel, providing 5 abstracts from main medical journals. In this study we examined the influence of “ABSTRACT” on the way that physicians update themselves with medical information. A structured questionnaire examining anonymously the ways Israeli physicians update themselves with medical information and the influence of “ABSTRACT” on “update” habits was sent to all abstract subscribers. 858 physicians responded to the questionnaire. Most physicians were moderately satisfied with the rate at which they succeed in updating themselves. The main information sources were medical journals (45%), conferences and workshops (25%), Internet (20%) and peer consultation (15%). 38% of the physicians claimed that reading "ABSTRACT" stimulates them to read more, especially in areas not directly regarding their medical speciality. The number of years after graduation from medical school and being a general physician (opposed to a specialist) significantly influenced "update" habits and the influence of “ABSTRACT” on "update" habits. It is concluded that most Israeli physicians rely on medical journals, the Internet and conferences for obtaining medical information. Newsletters such as "ABSTRACT" stimulate and encourage them to get information, especially on general medical issues.

Need of continuing medical education in developing countries

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Continuing Medical Education (CME) is an important method to improve doctors' performance and
Session 81  Curriculum 4: Curriculum Planning

81/1  Data warehousing techniques applied to the development of a curriculum information system

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Data warehousing provides an excellent approach for transforming vast amounts of information that exist in multiple sources into useful information which can then be used to answer users’ questions. By adapting methods used in industry for the collation and analysis of business information, we can produce data warehouses containing information on all aspects of educational courses and activities. Once the substantial tasks of identifying the sources of information and the creation of automatic data migration mechanisms have been completed, this information can then be fused into one data repository which can be 'mined' to identify interesting aspects of curricula which may not have been clear before. When collated into one central database, the information can also form the basis of an access point for students or trainees to obtain day-to-day information on their activities in a variety of formats. The Education Development Unit of the Scottish Council for Postgraduate Medical and Dental Education is developing such a system, and a prototype will be demonstrated.

81/2  What do medical students learn in hospital? The use of a Patient Contact Audit to inform curriculum planning

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A survey of medical students’ interactions with patients in the first clinical year was conducted at The University of New South Wales, Australia. The purpose was to discover the nature, extent and patterns of students’ contact with patients in the teaching hospitals of the Faculty of Medicine. A log book was distributed to 190 Year 4 students in UNSW metropolitan and rural teaching hospitals. Students recorded all patient interactions for seven consecutive days. The response rate was 83%. The results depict the type, frequency, place and duration of patient contacts and extent of student involvement and provide comparative data on the range of clinical experiences available to students in the demographically diverse patient populations in UNSW teaching hospitals. The results facilitate evidence-based planning of the new UNSW medical curriculum as well as providing insights into the current clinical teaching program.

81/3  Teaching and assessing clinical reasoning skills in a patient-orientated curriculum

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Since 1993 the Groningen curriculum has been transformed into a patient-oriented curriculum. Real patients are the central element in all weeks. The number of program hours has been reduced to 16 hours in a week maximum. Students come together in tutor groups twice a week under the guidance of a tutor. Teachers complained that their expertise was not used effectively in this type of curriculum. This complaint was one of the reasons to insert two clinical reasoning sessions weekly in the program of year 3 and 4. Two experts present at least two new patient problems to the students which fit the subjects of the week. The reasoning in the sessions follow a strict protocol: from clinical data to diagnosis to therapy. The experts provide feedback to the students’ reasoning step by step. At the end of each term all 240 students are assessed in a structured oral examination.
Towards teaching and learning physician's core competencies in medical school: A new model curriculum with three educational tracks

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As of April 2000, the Faculty of Medicine at Witten/Herdecke University, Germany, has implemented a Model Curriculum, not interrupted by Federal MC-examinations for five years. It specifically stresses certain core competencies fundamental to a physician's work, yet often blatantly neglected in traditional curricula:

- Basic understanding of human nature and existence in its manyfold dimensions;
- Epistemological and methodological knowledge as a precondition for understanding and practising scientifically grounded medicine;
- Communication skills as the essential requirement for all doctor-patient interactions.

These are to be conveyed in three "Educational Tracks" pursued over the 6-year course:

1. "Anthropology, ethics in medicine, medical law, history of medicine"
2. "Scholarly methods, methodology, research"
3. "Communication, reflection, responsibility"

In the form of seminars, lectures, practical exercises and papers, all partly integrated into the clinical training itself, these tracks form an integral and continuous part of medical education at Witten/Herdecke University.

Towards a more flexible learning environment - Information and communication technology (ICT) integrated in the medical curriculum

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In addition to traditional teaching and learning modalities, the Faculty of Medicine has included student activating Problem Based Learning (PBL) in the new Curriculum. With a total of approximately 1300 medical students, the complexity of organising clinical small group teaching is enormous. In addition to clinical, patient-near teaching at five University Clinics in the Oslo area, county hospitals in South Eastern Norway and numerous community- and family-clinics are used. The PBL in groups defined for a fixed period with one teacher is a stabilising element for the students. The groups need to be able to communicate despite geographical distances. In a multi-focused research-program, computer-aided problem based learning is evaluated from medical, pedagogical, sociological and technical perspectives. The research related to distant PBL (DPBL) is partly done in divided groups in communicating electronic classrooms, partly in a chat-based internet/web solution. A pilot study has been launched, and the results will be discussed.

Learning medicine outside the medical school: evaluation of the teaching-learning process over two years

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Human Behaviour and Development is one of the big challenges of the discipline Introduction to Medicine, at the Faculty of Medicine, University of Lisbon. The objective is to sensitize students in the first year of their medical education to "consider man as a whole, with his vulnerabilities and resilience" and to the "role of the physician as a progress agent in society". This year, the educational process has been slightly changed. Maintaining the same rationale, we replaced the first seminar - where selected speakers tried to motivate students on the aspects they should be attentive to during the visits outside the Medical School to nurseries, prisons, institutions for disabled persons, old age homes, etc. - with a video session (a film focusing on the patient-doctor relationship) followed by a discussion moderated also by a selected speaker. The objective was to analyse students' perceptions in order to identify the impact of the educational visits on their medical education and the changes occurring over a two year evaluation period. At the end of the teaching-learning process students were asked to critically reflect on the experience they had had. Students' individual reports (237 in 98/99 and 214 in 99/00) were analysed through a qualitative content analysis technique. Last year's results showed among others, the emergence of the following non-exclusive categories: Humanization of Medicine (n=58%); Discovery of the unknown reality (n=39%); Personal and professional gains (n=27%); Modification of initial expectations (n=19%); Motivation for action (n=15%); Better understanding of what Medicine is (n=4%). These results will be completed with this year's evaluation (data available in July/00). Discussion will be made in terms of reformulating the teaching-learning process.
Session 8J  Induction of Students to Medical School

8J/1  Does evaluation improve PBL tutorials? A four-year experience with first year students

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After a major revision in 1997, all PBL-tutorials have been evaluated by a questionnaire developed by the third author. Twenty items covering the quality of the written case, group process, students' individual work between meetings, and students' learning issues were rated on a 1-5-9 scale. A summary of the results was given to the case authors at the end of term, with recommendations for revision if cases scored below a defined limit. In response, some of the cases were successfully revised, some were removed, and some were left practically unchanged over a four-year period. Experiences with forty PBL-cases presented to students in the second semester of the first year will be discussed.

8J/2  Easing the transition to medical education

K V Jones
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High-school entry medical courses report low levels of problems with the transition to tertiary studies relative to other faculties, and are regarded as examples of good transition practice. At the same time, stress is recognised as a significant problem for students - especially those from certain at-risk groups. The reasons given for the "transition success" of medical education - small numbers of students, orientation towards the profession rather than the subject matter; and a tradition of retaining students once they have been selected - do not appear to many staff and students to represent an adequate response to transition difficulties. This presentation examines ways of easing transition from two perspectives: systemic - arising from selection and curriculum considerations and amenable to institutional change; and personal - arising from the "goodness-of-fit" between the individual student's resources and the demands of the educational setting and requiring intervention at the individual level.

8J/3  Identifying students' learning skills when entering medical school

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In many developing countries, students who enter medical school after high school are frequently ill-prepared for their learning. This is more evident during the first two years of their career. At the same time first and second year faculties are usually insufficiently trained to handle this situation and reluctant to do so. A faculty development program was organized towards:

1) identifying students' learning strengths and weaknesses early in their career;
2) recognizing what faculties expect from our students in terms of educational skills; and
3) organizing activities that may narrow the gap between the two. The program included group work, individual learning, expert advice, and analysis of objective data on students' learning aptitudes. After the program faculties were able to identify students' learning characteristics, became aware of their responsibility to helping students become proficient learners and accepted this role, and designed teaching activities to help students with learning deficits.

8J/4  A Summer Prematriculation Program for at-risk medical students

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In 1989, we initiated a Summer Prematriculation Program for students judged to be at-risk. These included minority, rural, non-traditional (older), and economically disadvantaged. The goal has been to increase the likelihood of success in medical school. The program is five weeks in length and starts six weeks before the beginning of school. Students move into housing that they will then continue to live in during the academic year. They are provided with a stipend of $100 per week. Sessions are held Monday through Thursday of each week. Each day, five hours are devoted to subject matter preparation for the major first year medical courses (physiology, anatomy and biochemistry). The concluding two hours each day are devoted to overall orientation to medical school, study and test-taking skills, stress management, computing, financial management, practice opportunities, etc. Each Friday, the students participate in clinical activities. Over the eleven-year history of the program 116 students have participated in the program. They have had a retention rate of 96% which is far in excess of what their academic credentials would have predicted. Strengths of the program have included the academic preparation, but in addition, the development of peer groups, establishment of support systems, familiarity with the city and school, and an early establishment of day-to-day routine.
Teaching activities in an integrated PBL curriculum: Questionnaire evaluations by first year students

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An important aspect of problem based learning is to create a constructive culture of evaluation, including students, teachers and all components of the curriculum. Not only are students to be subject to frequent assessment and feedback; it is also important to establish sound evaluation routines covering all teaching activities for constant improvement of medical education. Based on positive experiences with evaluations of the PBL-tutorials, we developed a questionnaire to assess the quality of standard learning activities such as clinics, lectures, seminars, and practical courses. The students rated all presentations on five items, including structure and illustrations, oral presentation, student dialog, relevance according to stage of study and future profession, and inspiration for further studying, using a 1-5-9 scale. Experiences with first year students’ evaluations will be discussed.

The use of pre-registration characteristics for the identification of the academically “at risk” first year student

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Relevant, fair and efficient selection of a cohort of students from a large number of applicants is a very real problem. Whilst attrition rates have to be kept down, institutions cannot only select students that are likely to be successful, but must also search for non-cognitive qualities that will ensure graduation of “good” doctors. They also have a social responsibility to include previously disadvantaged students. The ability to identify, before registration, which (and how many) students would require institutional support in order to be successful would thus be of great importance to academic managers. Not only could the support then be provided early enough to be effective in reducing attrition rates, but it would also indicate cost implications of selection policies. This paper reports on the use of pre-registration data in the development of a logistic regression model for the identification of the student at risk of failing the first year.

Workshops

Session 9  Workshops 2

Case development for Clinical Skills Assessment

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Clinical Skills Assessment, Educational Commission for Foreign Medical Graduates, 3624 Market Street, Philadelphia PA 19104-2685, USA

1. Workshop objectives:
   1.1. Review essential elements of assessment:
        types, validity and reliability, relation to objectives
   1.2. Relate general concepts to CS assessment
   1.3. Examine key elements of CS case development
   1.4. Discuss use of standardized patients in development of cases
   1.5. Develop two new cases

2. Logistics
   2.1. 1100-1145 Overview
   2.2. 1145-1230 Develop cases
        - 2-3 groups
        - develop one case per group
        - use case drafts supplied by participants or us
   2.3. 1230-1300 Discussion

3. Assessment:
   3.1. Formative
   3.2. Summative

4. Validity and Reliability

5. Reliability
   5.1. Uncontrollable factors
   5.2. “Controllable” factors
   5.3. Quantification

6. Validity
   6.1. Validity is a matter of degree

7. Relating assessment to objectives
   7.1. Assessment – Education - Objectives

8. Levels of cognitive function
   8.1. Assessment

9. Creating the test
   9.1. Test blueprint

10. Creating cases: general sequence

11. Creating cases: Standardized patient involvement

12. Checklist development

13. Post-encounter exercise
   13.1. Post-encounter note
Standard setting

Miriam Friedman Ben-David
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Licensure, credentialing and academic institutions are seeking new innovative approaches to the assessment of professional competence. Central to these recent initiatives is the need to determine standards of performance, which separate the competent from the non-competent candidate. Ideally, candidates should demonstrate competence by achieving the maximum scoring points. However, due to the complexity of the task and measurement error, test developers need to determine how many score points are enough. Setting standards for written and performance examinations in the medical profession is an evolving paradigm in which alternative approaches are available. The goal of the workshop is to familiarise the participants with the theoretical framework of standard setting simulated exercise followed by a discussion of the use of appropriate approaches relative to the participants’ needs.

‘The past is a foreign country: they do things differently there.’
(LP Hartley – The Go Between)

Maggie Challis
Centre for Postgraduate and Continuing Medical Education, University of Nottingham Medical School, Queen’s Medical Centre, Nottingham NG7 2UH, UK

The current educational terrain looks very different from that in which previous generations of doctors were educated. The landscape has been shaken by a series of policy earthquakes, and it is possible to identify a range of different resident and colonising tribes moving among the ruins of past structures and building new ones. Each of these groups – trailblazers, pioneers, settlers, nomads – has particular characteristics and development needs. This workshop will explore the role of the staff developer – the go-between – in finding strategies which will help members of all the above groups to move forward on the basis of their own strengths, whilst at the same time meeting the needs of the system in the new land in which they will be working.

Best Evidence Medical Education

Ian Hart, on behalf of the BEME Group
Centre for Medical Education, Tay Park House, 484 Perth Road, Dundee DD2 1LR, UK

Please note: this is a closed meeting for members of the BEME Group

Directors of Postgraduate Medical Education: Building a good learning environment

Kwee Matheson
National Association of Clinical Tutors, 1 Wimpole Street, London W1M 8AE, UK

A good “learning environment” is essential for effective medical education. To develop this requires skilful educational management which involves managing complex organisational and cultural changes. This is a challenge for Directors of Postgraduate Medical Education who should be educational leaders in their institutions. The workshop will explore this fundamental task of educational leaders. This workshop is open to all, and is not restricted to Directors of Postgraduate Medical Education.

A Guide to Assessment of Resident Professional Behaviours

Arthur Rothman
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Pamela Catton
Department of Radiation Oncology, University of Toronto, Princess Margaret Hospital, 610 University Avenue, Toronto, Ontario M5G 2M9, CANADA

Susan Tallett
Medical Education, Department of Pediatrics, University of Toronto, Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1Z8 CANADA

Linda Sugar
Department of Pathology, University of Toronto, St. Michael’s Hospital, 30 Bond Street, Toronto, Ontario M5B 1W6, CANADA

Effective evaluation of professional behaviours is a difficult undertaking for program directors and residency committees. This workshop will focus on the development of a process of evaluating resident attitudes related to professional behaviours for the benefit of both the individual resident and residency program. The format of the workshop will be case based and interactive discussion. At the end of the workshop, participants will be able to 1. Define the essential components of professional behaviours, 2. Establish a valid system to assess professional behaviours, 3. Establish an effective method of documentation of the quality of these behaviours.

Innovative Methods for Scoring Clinical Simulations

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This workshop will introduce methods for using Bayesian influence diagrams and other formal decision analytic and information theoretic methods for assigning a score to a student’s performance on a clinical simulation. These methods use as a scoring
metric the expected value of diagnostic information added by each data request made by a student as he/she works through a case. These methods remove direct "subjective" judgement from the scoring process, but do require a complete probabilistic model of the disease domain addressed by the case. In addition to describing this technique, the presenter will describe validation studies of it that are underway. The presentation will not require prior experience with or knowledge of Bayesian methods.

9/8 Strategies for Sustaining Change in Medical Education

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Change is a constant. Effective and successful strategies for planning, implementing and/or sustaining change are essential. Participants in this interactive workshop will analyze barriers and define practical strategies for specific stages of change as applied to their own programs and to medical education in general. Questions that will be addressed in the workshop include: What are the specific components of the change process and how do I manage each of them? How can strategic interventions be best matched to the needs of the staff and faculty? How can I improve the selection and training of leadership for education programs? How do I sustain and continue to improve educational programs for many years? What are the core skills necessary for managing change and how can they be developed and improved?

9/9 The Organization of Knowledge: A Key to Clinical Competence. How Can We Help Students to Develop It?

Karen V Mann
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Bernard Charlin
URDEESS, Faculty of Medicine, University of Montreal, C.P 6128, Succursale Centre-Ville, Montréal, Québec H3C 3J7, CANADA

The purpose of the workshop is that students will 1) consider the concept of elaborated clinical knowledge and its relationship to clinical competence; 2) consider the knowledge structure necessary to underlie clinical decisions; and, 3) consider teaching and learning strategies that will facilitate the acquisition of organized clinical knowledge. The workshop will begin with a brief presentation of the concepts of knowledge organization, and its relationship to clinical concepts. "Clinical scripts" will also be described. Participants will discuss, in small groups, how their schools address the development of organized clinical knowledge. They will identify educational principles, teaching strategies that would assist students to develop an elaborated knowledge base, and approaches to assessing the organization of students' clinical knowledge. The work of the small groups will be shared, and general principles derived.

9/10 Twelve roles of the teacher

J M Laidlaw, E A Hesketh
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All doctors are teachers – a role that is constantly expanding, changing and is challenging. This interactive workshop invites you to explore 12 identified teaching roles and their related tasks. Would this alone make you a good teacher? Judge for yourself once you have been introduced to the 'effective teacher' framework which goes beyond these courses for medical teachers.

In reality not all doctors can spare the time to attend face-to-face courses. 'Developing the teaching instinct' – 'tasters' on some of the topics covered – can fill this gap. Sample from this series, shortly to be launched, will be on display.
Session 10  Plenary 2: A Vision of Teaching and Learning in the Future

10/1  Medical Education 2020: 20/20 vision – hindsight and foresight

Browneil Anderson
Association of American Medical Colleges, 2450 N Street, N.W., Washington D.C. 20037, USA

Near the end of the twentieth century, North American medical education was the subject of a number of comprehensive reviews and targeted Foundation programs, most of them consistently critical of medical student education. The aim of the criticism was to improve and change our academic institutions, their educational programs, and the physicians they graduate. There was a consensus that the education we, in North America, were providing medical students was dated, sometimes arcane, and not in tune with societal needs or the type of practice the graduates would be engaged in. There was a growing consensus among medical educators that the content and methods of medical studies required fundamental change. These observations and criticisms continued well into the 1990s and included the belief that graduates:

- Had a poor knowledge of information systems
- Had poor communication skills
- Had an inadequate understanding of public health
- Were ill prepared to meet society’s expectations

The changes that occurred in the education of physicians in the United States and Canada at the end of the twentieth and beginning of the twenty-first century will be presented. The forces at work on the health care system, and consequently on the medical education system in 2020 will be numerous. They will include economics, demographics of society, and information technology. There will be increasing expectations among consumers who are better educated and expect greater accountability of physicians and health care providers. The federal focus on medical errors that began in 2000 will have increased and significant steps will have been taken to correct these errors. We will be living in a “connected age” with interactive web sites and telecommunications. The focus will be shifting from transactions between the physician and the patient to a relationship between physician and patient. The skills critical to practising medicine in 2020 will be the ability to communicate with patients and their families and an understanding and mastery of information technology. The changes in medical student education will continue to evolve. This presentation will explore the educational response to the trends and forces on health care and the skills necessary for practice in 2020.

10/2  The Global Medical School, 2020

Michael L Alkan
Infectious Diseases Institute, Soroka Medical Center and Ben Gurion University Center for Health Sciences, P O Box 115, Beer Sheva 84101, ISRAEL

With fast developing technologies and communication, the future of the medical school is not clear. The definition of the graduate is shifting from what was forged in the past to a new doctor. The trends are towards more specialization, mastering of modern technologies and scientific achievements, versus community awareness and a return to family doctors. An innovative approach was taken with the development of a program in International Health and Medicine at Ben Gurion University, supplementing the regular curriculum of the Medical School. Such programs might bridge the gap between the doctor in industrial countries and the physician in third world countries, by creating a physician who will be able to function in cultural environments other than his own.

10/3  Present and future training of medical students at Al-Quds Medical School

Hani Abdeen
Al-Quds Medical School, P O Box 19178, Jerusalem 91191, Israel

Al-Quds Medical School started only 6 years ago and is encountering a multitude of problems: curriculum development, faculty recruitment, physical space, lack of enough resources - physical and human – as well as the perennial problem of having a secure and planned financial resource. The Medical School is approaching the final clinical year of its first intake. The clinical experience our students gain is from the hospital rotations and community centers. Due to the limited number of beds available and the number of qualified Faculty members, a new plan has been proposed. Instead of sending students to hospital clerkships, it is envisioned to utilise the outpatient family clinics in the community, for students to learn from. Here, in our environment, the GP is not the gatekeeper to hospital treatment. Specialists see patients in their private offices, refer the patient to the hospital and follow his inpatient management. By placing students with these clinicians, the student will be the shadow of his clinical teacher and follow him in the management of the problem. The methodology of instruction will be described in more detail and compared with the traditional way of teaching students in the hospital setup. Methods of evaluation will be discussed, and the presentation will end with some thoughts about the future of medical training at Al-Quds.
The medical teacher in the year 2020

Jadwiga Mirecka
Jagiellonian University Medical School, Department of Histology, Kopernika Str 7, 31-034 Krakow, POLAND

The changes in the entire system of undergraduate medical education that we have been witnessing over the last two decades justify an assumption that the status and functioning of teachers in medical schools in the year 2020 will differ from now. The factors which will drive changes are: changing demands for medical services; evolution of pedagogical concepts; development of technical aids; increasing competition among schools stimulated by demographic depression and facilitated students/staff exchange; a general call for quality reflected by TQM (Total Quality Management) and the growing role of accreditation systems. A discussion of these issues will form the basis of the presentation.

The medical student in the year 2020

Sarah Rennie
Curriculum Office, Ninewells Hospital and Medical School, Dundee DD1 9SY, UK

In this presentation I will give my vision of the medical student in the year 2020, based on my experience both as a medical student who has completed a 5-year medical course and as an individual of slightly longer standing. My experience may be small and confined to Britain but hopefully will offer a perspective that may act to stimulate participants’ thoughts about the future medical student. Why is it important to look at the medical student in the year 2020 and beyond? Quite simply without medical students there would be no undergraduate medical education. The medical students of the future will be shaped by their medical education experience and will in turn shape the process of medical education. It is important for us as medical educators to have a vision of our future medical students so we can be proactive rather than reactive in responding to their learning needs and styles.


Post-conference Workshops

PCW1 How doctors learn
Hank Slotnick
University of North Dakota, Grand Forks, ND 58202, USA

This post-session workshop will cover five topics in ways designed to ensure that participants are conversant with each by day's end. The topics are:

1. How doctors’ learning varies over the medical-school-through-practice continuum.
2. How doctors learn (HDL) in clinical practice.
3. Implications from HDL for teaching medical students and house officers.
4. Implications from HDL for teaching practising clinicians.
5. Implications from HDL for industry (e.g., pharmaceutical companies).

Instruction in the workshop will be consistent with physicians’ learning practices so that participants will experience instruction appropriate to medical students, house officers, and practising clinicians. Finally, the workshop will be evaluated in ways that are (1) consistent with the theory of physician learning presented in the workshop, and (2) productive of documentable learning outcomes. Instructional materials will include reprints of journal articles covering the five topics.

PCW2 Undergraduate Education in Family Medicine
Howard Tandeter, Pesach Shwartzman
Department of Family Medicine, Ben-Gurion University of the Negev, P O Box 653, Beer Sheva 84105, ISRAEL

Models from Medical School influence career choices (specialties). If we expect students to include Family Medicine as an attractive career choice, we must include Family Medicine in their undergraduate curriculum. Programs should include theoretical and practical rotations in primary care similar to rotations in tertiary care specialties. The present workshop is planned to be a meeting place between primary care medical educators from different countries. Working in two groups, participants will be asked to discuss, and elaborate recommendations in two areas of primary care undergraduate education:

1. What are the unique messages Family Medicine should transmit to the students? (contents discussion).
2. What should be the dynamics of the rotation in a primary care clinic? How much time for each rotation, and when to have primary care rotations (structure discussion).

Both small groups will be asked to discuss the two subjects. The workshop will end with a general discussion and distribution of the written material generated by small group discussions.

PCW3 Undertaking research in medical education
Janet Grant
Open University Centre for Education in Medicine, The Open University, Walton Hall, MILTON KEYNES MK5 6JE, UK

This workshop will address a wide range of practical and theoretical issues concerning research in medical education. Participants will have the opportunity to identify reasons for undertaking such research and to define the difficult practical problems they face or fear in starting research in medical education. Some solutions to those problems will be suggested.

The workshop will cover the following topics:

☐ The purposes of educational research
☐ Research methods: The basics
☐ Sampling methods
☐ Establishing reliability and validity of quantitative data
☐ Strengths and weaknesses of quantitative research methods
☐ Developing a Likert Scale
☐ Qualitative research methods
☐ Reliability and validity of qualitative data
☐ Qualitative data analysis methods
☐ The method of content analysis of qualitative data
☐ Activity: Reviewing a research paper

The workshop will give participants ample opportunity to discuss topics with others as well as providing information and comprehensive background notes.

PCW4 Decision-making skills in medicine: integrating theory and practice
Carmi Z Margolis, Oded Susskind
Center for Medical Decision Making, Faculty of Health Sciences, Ben Gurion University, P O Box 653, Beer Sheva 84105, ISRAEL

Goal of the workshop: to learn the bi-cycle model for successful clinical practice guideline (CPG) implementation.
Objectives:
- to learn basic concepts of CPG design, development and implementation, with emphasis on defining the clinician’s and administrator’s jobs;
- to participate in a tested simulation of a Transient Ischemic Attack (TIA) guideline implementation;
- to learn and practise essential guideline design and development skills, including CPG logic mapping and translation and applying a CPG to specific clinical cases.

Workshop outcomes:
Participants will solve real implementation problems in the TIA guideline implementation simulation, will write their own guideline algorithm and will translate a real chest pain CPG from prose to algorithm format. The workshop will be evaluated by participant satisfaction, by self-test on implementation concepts and by success of participants in completing their tasks.

How to select medical students – evidence-based selection

Professor Rivka Carmi, Dr Gilutz Harel, Professor Illana Harman-Boehm, Dr Yaakov Henkin, M.Sw. Adina Oron
Ben-Gurion University of the Negev, P O Box 653, Beer Sheva 84105, Israel

Workshop structure:
Introduction:
- Short review of existing selection methods
- Highlights of the ever problematic issues
- Introduction of the main topics to be discussed:
  - Determining “ends”, selection of means
  - Evaluation of selection process
  - Evaluation of outcome.

Small group discussions:
1. Determining ends – selecting means
   - End product from institutional/national perspectives (not just a “good doctor”)
   - End product of selection process as derived from the above
   - Specific traits to be sought – cognitive and non-cognitive
   - Means to meet ends: evaluating cognitive criteria, personal attributes and attitudes, rejection vs. inclusion tools.
   - Thresholds vs. baskets

2. Selection process evaluation, improvement and modification
   - Means for evaluation of cognitive – grades, entrance exams (type)
   - Personality tests
   - Interview process
   - Structured vs. semi/non structured interview
   - Choosing and training interviewers
   - Identification of process pitfalls (e.g., interview – biases, personal styles, inter reviewers differences, grading methods)
   - Costs / benefits – innovative alternatives to interviews?

3. Evaluation of outcome
   - When to evaluate – milestones during medical studies and later on.
   - What to evaluate – items for evaluation at various stages
   - How to evaluate – evaluation tools
   - Deciphering selection impact from curricular molding
   - Is evaluation mission impossible? So should we evaluate?

4. Group presentations and discussion
5. Concluding remarks

Grading and Scoring OSCE Stations

Baruch Weinreb
Curriculum Unit, Beer-Sheva Medical School, P O Box 653, Beer-Sheva 84105, ISRAEL

Ian Hart
44 Kenilworth Street, Ottawa, Ontario K1Y 3Y1, CANADA

This hands-on workshop has as its objective familiarization with the various components of OSCE’s grading and scoring systems. Activities include:
1. Introduction and presentation of aims
2. Components of final score
3. Who is qualified to be the graders?
4. Methods of standard setting
5. Setting standards and score components for a given station - theoretical exercise
6. Setting standards and score components for a given station – practical exercise
7. Preparing data for processing and analysis
8. Making the psychometric data work for you
We are pleased to announce that the 2001 Conference will be held in Berlin, hosted by Charité, Humboldt University. Topics for presentation at the conference will include:

- Best Evidence Medical Education;
- Teaching and learning evidence-based medicine;
- Critical appraisal;
- Standardisation of curricula;
- The core curriculum;
- Community-based education;
- Instructional design;
- Multimedia in healthcare professions education;
- Web-based learning;
- Curriculum and concept mapping as an instructional tool;
- Assessment – effectiveness and efficacy;
- Reform of undergraduate medical education;
- Revalidation and continuing medical education.

Pre-conference workshops will take place on Sunday 2 September and the conference will run from Monday 3 to Wednesday 5 September. There will be a wide range of pre-and post-conference tours, and an accompanying persons programme.

The preliminary programme will be available in December. Participants in the 2000 Conference will automatically receive a copy. Further copies can be requested from:

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