**Education**

G64 CREATING A PROBLEM BASED CURRICULUM FOR PAEDIATRICS

J. E. C. Round. Graduate Entry Programme, St George’s Hospital Medical School, Tooting, London

**Background:** In 2000 SGHMS began teaching graduates in a new 4 year course, alongside its conventional integrated undergraduate 5 year programme. Over the first 2 years students used problem based learning (PBL) to cover aspects of basic science, clinical skills, communication, and fundamentals of clinical medicine. In 2003 the 35 students began a 5 week PBL based clinical paediatrics course. This report describes the programme and some outcome measures.

**Methods:** Rather than paper based problems, the course exposed students to real clinical situations that needed understanding and solving. Such exposure occurred in clinics, A&E, at homes, and on wards. Cases encountered were explored in two semi-formalised sessions a week with a tutor (a process we termed clinical PBL). Furthermore, one intranet based PBL case a week was used, to ensure the whole curriculum was covered. There were no lectures. Outcome was measured by an end of term questionnaire and a summative assessment comparing results with the 5 year course. A questionnaire looked at career choices in the graduate group.

**Results:** Students enjoyed the course, awarding it 4.7 (0.1) out of 5 (arbitrary scale) compared with 4.2 (0.8) for the 5 year course (p 0.05). Students felt similarly competent in history and examination skills in both courses. In the end of form (summative) assessment, students scored 64.1 (1.7) % compared with the traditional course mean of 56.1 (1.4) % (p<0.005). A large number intended to choose paediatrics as a career with 20% expressing paediatrics as their first choice of career and 51% suggesting it as a possible choice.

**Conclusions:** Paediatrics can be taught as a problem based curriculum and appears good at teaching practical paediatrics, skills, and interesting students in the specialty. The tutorial based nature of the teaching has staffing implications.

---

G65 ASSESSING INTER-PROFESSIONAL EDUCATION: “IF YOU WANT US TO TAKE IT SERIOUSLY YOU HAVE TO MAKE IT COUNT”

M. Stewart, S. Morison. Department of Child Health, The Queen’s University of Belfast & Royal Belfast Hospital for Sick Children

Learning from Bristol recommends that medical education and training should pay more attention to non-clinical aspects of care including the development of skills in communicating with patients and colleagues, and teamwork, and these should be formally assessed.

**Aim:** To design, deliver, and assess ward based inter-professional learning, teamwork, and communication skills for undergraduate students in paediatrics and children’s nursing. By involving SHOs as well as specialist medical and nursing educators in delivery, assessment, and feedback, the programme aimed to satisfy not only undergraduate GMC and NHMC learning outcomes but also the relevant training requirements of SHOs.

**Method:** The programme was designed and delivered during the 2002/3 academic year and involved 31 students, six SHOs, and four educators. Assessment included objective measures of skills and knowledge, qualitative evaluation of communication and team working skills, and structured feedback on the educational value of the exercise. The programme was evaluated using a combination of quantitative methods deemed most appropriate for healthcare education research.

**Results:** Most students scored highly (OSCE) in their ability to perform the required clinical skill with no difference between medical and nursing students. Students identified as not participating in teaching provided by nurse specialists scored less well. Clinical knowledge was included in the end of course assessment. Communication and team working skills were marked separately by a minimum of three assessors, using a standardised marking scheme, and the marks amalgamated into a single combined percentage. Scores ranged from 25–82%. Again, medical and nursing student scores were similar.

**Conclusions:** Student evaluation of the project was positive for all learning outcomes and for the assessment process but they asked that marks should count towards certification. SHOs indicated that their involvement had helped them to learn to teach, learn more about teaching methods, work with other healthcare professionals, and communication skills particularly regarding “explaining” to parents.

---

G66 THE YORKSHIRE DALES PROJECT—USING COMPUTER ASSISTED LEARNING TO BRIDGE GAPS IN POSTGRADUATE EDUCATION

S. Frazer1, M. Rudolf2, D. Owens1. United Leeds Teaching Hospitals Trust; 2East Leeds PCT, University of Leeds; 3University of Leeds

**Background:** One of the greatest challenges facing higher specialty training is ensuring adequate structured teaching for SpRs in the light of the new European working time directives.

**Aims:** To design, implement, and evaluate distance access learning materials to support structured teaching for SpRs with only limited resources.

**Methods:** A pilot was undertaken for the 5 day Growth and Nutrition module on the MMedSc in Child Health at Leeds. Each educational session was duplicated either as an interactive web based tutorial or recorded lecture delivered on CD-ROM. Students’ reactions where recorded by interview on the last day of the module and by completion of an evaluation form as well as individual online evaluation forms for each session.

**Results:** 17 SpRs participated in the detailed evaluation and interview. 64 evaluation forms were electronically submitted for individual electronic tutorials. Of the 17 SpRs surveyed in detail, all had accessed the DALES material. In addition to 8 who were unable to attend the study day, 6 had done so prior to a study day, 7 after attending the study day to clarify some aspect of the teaching, and 13 after attending the study day to reinforce the learning. Of the 64 online evaluation forms 34 (53%) rated the tutorials as excellent, 16 (25%) very good, and 14 (22%) good. 43 (67%) agreed and 21 (33%) strongly agreed that they had a greater knowledge and understanding of the subject following the online tutorial. Trainees valued the opportunity to access material to reinforce learning as well as the ability to catch up on missed sessions. The strengths of the material were the use of interactive questions with hidden answers.

**Conclusions:** Computer assisted learning can not only support structured education programmed but can also enhance the student learning experience. As technology and expertise improve computer assisted learning is facilitating exciting and innovative ways of delivering postgraduate medical training, and can mitigate the problems anticipated as a result of European working directives.

---

G67 WHAT DO PARENTS AND CHILDREN REALLY THINK ABOUT MEDICAL STUDENT TEACHING?

N. Fowler, A. Isaacs, M. E. Blair. Department of Paediatrics, Imperial College, London, Northwick Park Hospital Campus

**Background:** Many studies have assessed the impact of clinical teaching on adult patients. We found no similar study in children. In the context of increasing numbers of students and teaching governance, children’s views need to be sought on how “bedside” teaching is experienced.

**Aim:** To determine the attitudes of children and their parents to the process of medical student teaching in the clinical setting.

**Method:** A semi-quantitative questionnaire was designed to elicit clients’ attitudes toward teaching as experienced within the acute setting. Administration to parents and children after a teaching session in which the teachers were partially blinded.

**Results:** 51 out of 60 (85%) questionnaires completed. 27 within an ambulatory care setting, 24 within the inpatient unit. Age range: 5 days to 15 years (mean 4.2 years). 31% rated it “excellent”, 58% “good”, and 11% “satisfactory”. 78% of families questioned felt they had gained from the teaching in some way; the most common feelings expressed were those of helping students learn and of learning more about the child’s illness. Despite a unit policy of no white coats, many families described students’ attire (in particular, ties) as a barrier to easy communication. Soft toys and bubbles carried by students were identified as important in helping small children feel more comfortable. The presence of two students was rated by parents and children as optimal. A rating of excellent was inversely correlated to the number of students present in the encounter. Younger patients felt comfortable with fewer students; adolescents felt up to five students were acceptable.

**Conclusion:** Acutely ill children and their accompanying carers generally enjoy the experience and the opportunity to support student learning. Teachers should be sensitive to the needs of younger children in relation to the numbers of students attending. Students
should be encouraged to carry soft and other small toys and dress “casual smart”.

**G68 PAEDIATRIC PRE-REGISTRATION HOUSE OFFICER POSTS: TIME WELL SPENT?**

A. Reece, A. G. Sutcliffe. The Institute of Child Health, 30 Guilford Street, London WC1N 1EH

**Introduction:** Research has been published with pre-registration house officers (PRHO) involving traditional posts of medicine, surgery, and emerging posts in general practice. No study of paediatric posts has been published.

**Aim:** To perform a qualitative evaluation by questionnaire survey of paediatric PRHO posts in the UK.

**Methods:** Doctors employed in paediatric PRHO posts across all UK deaneries enrolled between August 2002 and April 2003. Consent to approach doctors was obtained from postgraduate deans. Multicentre research ethics approval was granted.

**Results:** There were 61 paediatric PRHO posts in 16 of the 18 deaneries; the majority were 4 month posts. 124 questionnaires were distributed and 64 (51.6%) were returned complete. Over 90% of respondents were planning or considering a career in paediatrics. Over 90% of respondents are exposed to core clinical skills (history taking, examining, and prescribing medications for children). A small number reported regularly performing specialist procedures; for example abdominal paracentesis, treating pneumothorax, and tapping pleural effusion. Common paediatric conditions were seen regularly by most respondents. Some doctors are performing inappropriate clinical duties as defined by the GMC. Doctors suggested good points and things they would like to change about the post. Over 90% rated the paediatric post as having a strong or very strong influence on their desire to continue in paediatrics.

**Conclusions:** Paediatric PRHO posts offer good experience of paediatrics to newly qualified doctors, and the opportunity to develop core skills. The GMC might wish to update advice in paediatrics to newly qualified doctors, and the opportunity to develop teaching, were uninteresting and not clinically relevant enough. Many respondents. Some doctors are performing inappropriate clinical duties as defined by the GMC. Doctors suggested good points and things they would like to change about the post. Over 90% rated the paediatric post as having a strong or very strong influence on their desire to continue in paediatrics.

**G69 LEARNING EXPERIENCES OF NEONATAL SENIOR HOUSE OFFICERS (SHOs) IN NORTH EAST THAMES**

R. J. Tozer1, S. C. W. Rowland2. 1Institute of Child Health, University College London/Barking, Havering and Redbridge NHS Trust; 2Department of Education and Professional Development, University College London

**Aims:** Current changes in working practices will affect learning opportunities for junior doctors. We explored SHOs' opinions about teaching, supervision and feedback, facilitating independence, goals and standards, learning facilities, and workload on their units to enable us to make suggestions to optimise learning.

**Methods:** A questionnaire was sent to 90 SHOs on 15 neonatal units in north east and north central London, Essex, and Hertfordshire between November 2002 and February 2003. 46 replies were received, a response rate of 51%.

**Results:** Educational facilities such as internet linked computers and textbooks are generally available. 51% of SHOs say that their units provide <2 h per week of protected teaching. Due to shift work and service commitments 42% of SHOs attend less than half of formal teaching sessions provided, failing to satisfy Royal College of Paediatrics and Child Health guidelines. 44% of SHOs stated that excessive workload affects their learning and 27% had difficulty obtaining study leave. SHOs found teaching ward rounds and small group sessions helpful in promoting a deeper understanding of neonatal medicine.

**Conclusions:** Replacing lecture style teaching with more patient orientated sessions will make better use of available working hours and improve SHOs satisfaction with their training. Investment in medical education training is needed to equip doctors with the confidence and ability to support the learning of junior colleagues, develop skills which enable lifelong learning, and meet the needs of patients.

**G70 SENIOR HOUSE OFFICER (SHO) ATTENDANCE AT TEACHING SESSIONS IS LIMITED BY SHIFT ROTAS**

A. Freeburn, R. Tubman, S. Craig. Regional Neonatal Unit, Royal Jubilee Maternity Service, Belfast BT12 6BB

**Background:** Implementation of the European Working Time Directive is leading to decreased number of hours worked by junior medical staff, by the increased use of full or partial shift rotas. There are concerns that this will have a detrimental impact on training particularly, at the SHO grade. The Royal College of Paediatrics and Child Health has recently revised the educational attendance standard from 75% to 70%, aiming for 2 h per week, but emphasising the priority of quality of teaching. The aim of this study was to quantify attendance at the twice weekly formal teaching sessions by SHOs working on an eight person full shift rota.

**Method:** The setting was a tertiary neonatal unit. An attendance register was completed at each hour long teaching session after SHOs changed from an on call to a full shift rota.

**Results:** The median (range) attendance was 53.0 (35.6–71.4)%.

**Conclusion:** These results suggest that 70% attendance is unattainable for SHOs on a full shift rota. It may be possible to improve attendance by better planning of clinical duties. Adoption of a more holistic approach to education may be necessary to improve quality of SHO training since attendance at formal teaching sessions is limited by shift working patterns.


**G71 AN AUDIT OF PAEDIATRIC AUDITS: IS THE AUDIT CYCLE BEING COMPLETED?**

M. G. Gnanaalingham, C. M. John, D. E. Mathew, N. V. Subhedar. Alder Hey Children’s Hospital, Eaton Road, Liverpool L12 2AP

**Introduction:** Clinical audit has a pivotal role in health education, as we seek to continuously improve the quality of patient care. Completion of the audit cycle establishes the effectiveness of the audit in improving patient healthcare.

**Objective:** To ascertain how many audits fulfilled the full audit criteria and how many closed the loop by re-auditing. The standard set was 100% of audits should fulfil the full audit criteria and have been re-audited.

**Methods:** 134 registered audits undertaken between 1994 and 2000 at a children’s teaching hospital were examined retrospectively. The audit cycle was categorised into 6 stages and the different levels of audit defined as full, partial, potential, and planning.

**Results:** Out of 134 audits, 8 (6%) were excluded, as they were research projects. Of the remaining 126 audits, 35 (28%) were full, 53 (42%) were partial, 30 (24%) were potential, and 7 (6%) were planning. Of the various specialties, paediatric (34, 27%) and community (20, 16%) medicine undertook the most, and the allied disciplines of audiology, nutrition, physiotherapy, and nursing undertook the least 8 (6%) audits. Re-audits were undertaken in 25 (20%) audits. Recommendations were made in 77 (61%) audits.

**Conclusions:** Most audits undertaken do not fulfill the full audit criteria and have not been re-audited. There is marked variation in audit practice within the various paediatric specialties.

**Recommendations:** Newcomers to audit are given training on audit methodology. A definite time frame for re-auditing should be decided when an audit is first undertaken. All audit departments should undertake an audit of their audits on an annual basis. These measures should promote awareness and lead to better quality audits.

Unmet education and training needs in adolescent health and transitional care of rheumatology health professionals

J. E. McDonagh, T. R. Southwood, K. L. Shaw, the British Paediatric Rheumatology Group. Institute of Child Health, Division of Reproductive and Child Health, University of Birmingham, Birmingham B15 2TT, UK

Background: Transitional care has been highlighted as a main subject area in future curricula in adolescent health by the RCPCH (2003) and is an important aspect of management of adolescents with chronic illnesses like juvenile idiopathic arthritis (JIA). The aim of this study was to determine the perceived education and training needs of health professionals currently involved in the care of adolescents with JIA prior to the implementation of a national transitional care programme.

Methods: Two distinct questionnaires to identify adolescent health and transitional care issues in JIA were distributed to key health professionals involved in the care of adolescents with JIA (n = 908) and to clinical research personnel appointed to coordinate the implementation of a transitional care programme at a local level in 10 UK centres (n = 22).

Results: 263 professionals completed the first survey (29%). Education and training needs were reported by 114 (43%) health professionals. Transcription issues (23% completion) and informational resources (21%) were the most frequently reported areas of need. 22 clinical research personnel completed the second survey (100% completion), who rated lack of training, lack of teaching materials geared towards adolescents, and limited clinic time as the main barriers to providing developmentally appropriate care to adolescents. Specific adolescent conditions/concerns were all perceived as of moderate to high importance to address in the rheumatology clinic by the majority of respondents. Over half of clinical research personnel reported low/very low perceived skills/confident levels in addressing sexual health issues (54%). Over a third of research personnel reported a lack of confidence in addressing fertility issues (59%), facilitating peer support (36%), dealing with benefits (36%), and available community agencies and services for adolescents (32%).

Conclusion: Unmet education and training needs of healthcare professionals exist in key areas of transitional care and provide a useful guide for the development of future multidisciplinary training programmes.
1. **EXPLAINING UNLICENSED MEDICATIONS TO CHILDREN: HOW EFFECTIVE IS THE RCPCH LEAFLET?**

C. Y. Vandevelde, C. P. J. Charlton. Department of Paediatric Gastroenterology, Queens Medical Centre, Nottingham

**Introduction:** Manufacturers are required to include a drug information insert with their medicines. The leaflet will include the indications for use and the patients’ age range, approved by the Medicines Control Agency when the company applied for a licence. A recent study showed that 36% of children during their inpatient admission received a medicine that was either unlicensed or off-label. The Royal College Committee on Medicines sent a letter to the chief executives, distributing information leaflets for parents and older children. This was to explain licensing and reassure parents and children that their unlicensed drugs are safe and appropriate despite the drug information insert.

**Method:** Two head teachers of Nottingham and Liverpool comprehensive schools agreed to present the leaflet as a class activity, to two classes of mixed ability. The children were given adequate time to answer a questionnaire, with the leaflet still at hand. They were judged to have understood the leaflet if they indicated: 1) not all medicines have licences; and 2) unlicensed drugs are safe to take if prescribed by your doctor. 50 children took part, the response rate was 100%. The authors evaluated the anonymous questionnaires.

**Results:** Six out of 50 children understood the leaflet. Sample comments included: “what is it trying to say?” “be careful with unlicensed medicines”, and “are they (unlicensed medicines) dangerous?”.

**Conclusion:** The children failed to understand the key message, that unlicensed medicines are safe to take if prescribed by your doctor. This could lead to problems with compliance. The RCPCH needs to review policy on patient leaflets and ask children and young people to read them before production.

<table>
<thead>
<tr>
<th>SpR year SpR (N)</th>
<th>Adolescents seen per week. Median (min, max)</th>
<th>Prior training N(%)</th>
<th>Teaching in RCPCH recommended subjects median% (min, max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core (1–2) 17</td>
<td>10 (3–20)</td>
<td>17 (100)</td>
<td>25 (0, 54)</td>
</tr>
<tr>
<td>Final (3–5) 8</td>
<td>7 (1–20)</td>
<td>4 (50)</td>
<td>48 (8, 67)</td>
</tr>
</tbody>
</table>

2. **EXPERIENCE OF TRAINEE PAEDIATRICIANS AT ENTRY TO SPECIALIST REGISTRAR TRAINING—HAS CALMAN CHANGED ANYTHING?**

I. J. Ramage, T. J. Beatie. Yorkhill NHS Trust, Glasgow, G3 8SJ; West of Scotland Deanery

The study aim was to determine the qualifications and experience of trainee paediatricians at entry to specialist registrar (SpR) training. All 35 trainees appointed to the West of Scotland Deanery between 1996 and 2003 were contacted and requested to reply to a structured questionnaire. Information requested included university and year of graduation, undergraduate awards, sex, age at appointment, date of MRCPCH, and additional postgraduate qualifications. Previous employment data were obtained, including intra-deanery experience, junior (JHO) and senior house officer (SHO) experience in paediatrics and neonatology in both district general and teaching hospital posts in addition to non-paediatric experience and overseas work. Prior applications were noted in addition to publications and presentations. Of the 34 responses, 25 (75%) were female, with a median age of 29 years (min 27, max 39 years). Undergraduate education was in Scotland in 29/34 (85%). Eight (23%) had been awarded a BSc. Paediatric surgery experience related by 13/14. The median time between graduation and SpR appointment was 7 years (4, 16) and 2 years (0, 9) between MRCPCH and appointment. Median time as an SHO was 15.5 months (6, 30) in general paediatrics and 6 months (3, 13) in neonatology before progression to a supervisory SHO role for a median of 22 months (6, 54) in general paediatrics and 12 months (0, 41) in neonatology. Overseas training was undertaken by 21/34 (62%). A research period was undertaken by 5/34 (15%) with non-paediatric experience seen in 14/34 (41%). Intra-deanery experience was present in 29/34 (85%) and 7/34 (21%) had been interviewed for this deanery previously, with a further 10/34 (29%) having failed elsewhere. The median number of publications at appointment was 0 (0, 16), with few presentations, median 1 (0, 2). No difference was observed in any variable between those appointed in 1996 and 2003. In summary this study fails to demonstrate a decline in duration of training prior to SpR appointment. It also demonstrates a paucity of interest in obtaining publications prior to interview. With national competition for subspecialty appointments now in place concerns exist that SpRs from this deanery may not be competitive on a national basis.

3. **RESEARCH ACTIVITY AND ATTITUDES IN PAEDIATRIC REGISTRARS**

H. M. Sammons, J. McIntyre, I. Choonara. Academic Division of Child Health, University of Nottingham, Derbyshire Children’s Hospital

**Introduction:** Paediatric specialist registrars (SpRs) are the consultants of the future and it will be their responsibility to take forward research in children, initiating their own research, and supervising that of juniors under their training.

**Aims:** To assess the current research activity of paediatric SpRs, their attitudes and motivations in this field, and training in research methods given.

**Method:** A questionnaire based study carried out in the training regions of Mid Trent, North Trent, South Trent, Northern, and the West Midlands.

**Results:** A total of 280 questionnaires were sent out and 100 returned (36% response rate). The results will be quoted as a percentage of the 100 respondents. The year of graduation was 1986–2000 (mean 1995) with 70% female. 38% of the whole group published papers (53% of years 1 or greater SpRs), the number of papers rising with SpR year ($x^2 = 13.5, df=1, p < 0.001$). Only 43% of the group had carried out research in an SpR post with only 15% feeling that they had protected time for research. 15% had held a research post (duration 5–42 months) and 17% held or were studying for a higher degree (MD 10%, 3.5% PhD, and 3.5% MSc). Less than half the group felt they had the skills to secure funding, write a protocol, submit to ethics, or statistically analyse data or present it. 53% of trainees had not received any time designated to research skills within SpR training days. The format of teaching was how to read papers (45%), evidence-based medicine (31%), and statistics (22%). Only 17% felt that there was enough training in research and a third felt there should be a mandatory period within training. Motivation was high, 49% looking forward to
research, 18% describing it as a necessary evil. Their most important motivators were CV (37%), answering questions (35%), and interest in the subject (28%). 68% expressed an interest to undertake future research.

**Conclusion:** Paediatric SpRs have a strong motivation to do research but many may not have the skills, training, or opportunity to do this within their Calman training post. We need to promote research and its training within the SpR grade.