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INTERNATIONAL JOURNAL OF CLINICAL SKILLS



A Peer Reviewed International Journal for the Advancement of Clinical Skills
- 'docendo ac discendo' - 'by teaching and learning'



In this issue:

Should surgical training start with the medical student?

Lend me your watch and I'll tell you the time...
Effectiveness of online clinical skills education
Transferring hand hygiene skills to clinical practice
Examination of the gastrointestinal system

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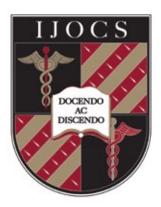
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The International Journal of Clinical Skills looks forward to contributing positively towards the training of all members of the healthcare profession.

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Foreword

Surviving the Global Economic Crisis in the World of Clinical Skills

After a tremendously successful beginning, the International Journal of Clinical Skills (IJOCS) has had the pleasure of bringing together the international clinical skills community. Throughout 2008 the extremely positive response from both students and teachers has demonstrated the need for this quality peer reviewed Journal, whose remit is not only to publish research, but also to provide a centre point in the world of clinical skills.

The variety of papers published in IJOCS to date is in itself unique, many of which have been changing the way all healthcare professionals practice within the clinical arena. Only time will tell whether such change does ultimately lead to improved patient outcomes and quality healthcare; however, the remarkable feedback received from the many doctors, nurses and other professionals who read the IJOCS, encourages us to continue developing this exceptional resource.

As 2009 begins, countries all over the globe face what may be the worst economic outlook since the 1950's, hence it is prudent not only to be conscious of our spending habits, but also to consider how this may impact the teaching and learning of clinical skills — a vital part of healthcare. Many healthcare institutions have had to significantly reduce their educational budgets, which no doubt has a detrimental impact on the training of all professionals. Moreover, it is important not to lose sight of the fact that quality healthcare delivery is required to maintain healthy nations, which, in turn, can reduce financial burden.

Following the global financial crisis, the in-house publishing company for the IJOCS (SkillsClinic Ltd) has decided to launch the website www.clinitube.com in 2009. This will be a free website where professionals will not only be able to download clinical skills guidelines (the aim of the originally proposed Clinical Skills Lab - CSL), but also upload their own information and files onto clinitube.com so that other professionals can share these materials for free. At a time when resources are limited, clinitube.com will build an online community for the sharing of much needed resources.

In addition to our colleagues at clinitube.com, the IJOCS will continue to publish many articles which present novel research and offer readers comprehensive guidance on a variety of clinical skills subject areas, including effective teaching methodology. We hope our readers take advantage of this knowledge by disseminating the information, putting it into practice and benefiting from the numerous incentives.

We reflect with much enthusiasm, for what the IJOCS has achieved so far and look forward to what has begun.

100

Dr Alison Anderson Executive Editor International Journal of Clinical Skills

Plastic surgery skills course for medical undergraduates

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Abstract

Plastic Surgery is a popular and competitive speciality. However, many health care professionals are unaware of its true remit. Plastic surgery is not currently included in the formal undergraduate curriculum at the University of East Anglia (UEA). The UEA Surgical Society (established by undergraduate medical students), in conjunction with the Department of Plastic Surgery at the Norfolk & Norwich University Hospital NHS Trust, offers regular extra-curricular courses to its members to rectify this.

Students are lectured on various Plastic Surgery topics and taught important surgical skills including handling surgical instruments, closure of a variety of wounds/incisions, how to do hand-tie knots and the repair of tendons on pig trotters. Sessions allow one-to-one teaching from Plastic Surgeons and have proven to be a great success. The course has been established and run for two years, and by popular demand, will continue to offer skills & knowledge to students, whom wouldn't have otherwise had the opportunity. The principles by which this course is run might be adaptable to other specialities and to postgraduate training.

Introduction

Plastic Surgery is a popular and competitive specialty. However, many health care professionals have little knowledge of its remit, and there are still many myths about the true abilities and goals of Plastic Surgeons, thanks to TV shows such as Nip/Tuck [1]. At the University of East Anglia (UEA), Plastic Surgery is absent from the medical undergraduate curriculum, hence graduates are often unaware of the speciality's scope, and this deficiency could potentially affect the care of future patients.

With Modernising Medical Careers (MMC) training, doctors will declare a career choice within two years of qualifying [2]. However, foundation posts in Plastic Surgery are uncommon and therefore, potential Plastic Surgeons may lack experience and knowledge of the speciality. Naïve applicants may thus be unsuitable for the job or foster unrealistic expectations. Conversely, potential Plastic Surgeons may never find their niche.

It is well known that positive influences and practical experience during a trainee Doctor's career can strongly influence their choice of surgical speciality, and how strongly they will pursue it [3, 4, 5].

Basic surgical skills courses are invaluable in beginning a career in surgery. However, these skills are difficult and often expensive to acquire as a postgraduate, so every opportunity should be taken during training. Learning these skills prior to clinical practice should be a top priority, for any budding surgeons [6].

Aims

The UEA Surgical Society, established by undergraduates, aims to further the education and surgical experience of students

interested in surgery. In conjunction with the Department of Plastic Surgery at the Norfolk & Norwich University Hospital (NNUH) NHS trust, lectures on various topics in Plastic Surgery, followed by practical "hands on" sessions covering surgical instrument handling, wound closure, hand-knot tying and tendon repair are offered regularly and free of charge. We aimed to further students' knowledge of Plastic Surgery, introduce them to basic surgical skills in a comfortable, encouraging environment and inspire further experience in those interested in the speciality.

Method

Events were advertised to members of the UEA Surgical Society, via their University e-mail addresses and places allocated on a first come, first served basis. A maximum of 32 students could be accommodated at each afternoon event.

The course began with a 45 minute lecture from an experienced Plastic Surgery Specialist Registrar (SpR), on various topics, for example, "A history of and introduction to Plastic Surgery" or "Face Transplantation". This lecture was followed by a fifteen minute seminar on suture materials and techniques.

The group of 32 students were then split into two groups to rotate between two sessions, after one hour:

- Practical session I: Suturing; students are taught in the 'Wet Lab' of the Postgraduate Education Centre, NNUH, for one hour on skin suturing [Figure I]. The session begins with a short video clip on wound closure and a live demonstration from a tutor. Students are then allowed to begin practice suturing on pig trotters [Figure 2], purchased from a medical meats abattoir. All instruments and sutures were provided for the students. The small number of students allowed one-to-one teaching [Figure 3].
- Practical session 2: Hand knot tying and assisting; students are taught on a one-to-one basis for one hour, by experienced medical students and senior house officers (SHOs), on how to do hand-tie knots and the theory of assisting surgeons [Figure 4]. Ethicon provided knot tying boards and ropes. The session was carried out in one of the teaching areas of the NNUH Clinical Skills and Resource Area.

Figure 1:



Figure 2:



Figure 3:



Figure 4:



The participants, students, were asked to complete an optional anonymous feedback form and complete consent forms. Outcome measures were Yes/No/Don't know or a Visual Analogue Scale (VAS) [7] of I-I0 (I being worst/disagree strongly, and I0 being best/agree most strongly). Table I shows the questionnaire and possible answers:

Table 1: Questionnaire provided to participants

Have you sutured before?	Yes / No
Do you think suturing is a necessary skill for being a Doctor?	Yes / No / Don't know
Do you want to be a surgeon?	Yes / No / Don't know
Do you want to be a Plastic surgeon?	Yes / No / Don't know
Has this session helped you to better understand the remit of a Plastic Surgeon?	Yes / No / Don't know
How useful was the lecture on Plastic Surgery & why?	Visual Analogue Scale (1-10)
How was the practical session on suturing & why?	Visual Analogue Scale (1-10)
How useful do you think this teaching will be for your medical career & why?	Visual Analogue Scale (1-10)
Please grade the suturing equipment, sutures & flesh & why?	Visual Analogue Scale (1-10)
What was the quality of the teaching during the practical session & why?	Visual Analogue Scale (1-10)
Would you like formal teaching at the UEA on Plastic Surgery & why?	Visual Analogue Scale (1-10)
Would you like formal attachments in Plastic Surgery during your undergraduate course & why?	Visual Analogue Scale (1-10)
Do you think that not having formal teaching on Plastic Surgery will make you less competent as a Doctor & why?	Visual Analogue Scale (1-10)

Feedback from Plastic Surgery teaching was received anonymously from participants immediately after the course. Prospective written, informed consent was gained from all participants to use their feedback data for statistical analysis, presentation or publication. Written, informed consent was gained retrospectively for any photographs taken, for presentation or publication. Participants were given the opportunity to ask the authors any questions, and deny their consent if so wished. Ethical approval was not required: Research & Development department NNUH February 2008. All research has been executed in concordance with the Declaration of Helsinki (2000) of the World Medical Association.

Results

Over half of the participants on the courses (52%) had never sutured before, yet 100% thought that suturing was a skill necessary for practising as a Doctor. Answers to the questions in Table I, showed that 56% of students wanted to be surgeons (distributed evenly throughout all years), 12% did not and 32% were unsure. These figures show that students feel suturing is a necessary skill, for both the budding physician and the budding surgeon. Furthermore, 100% of students felt that our sessions had helped them to have a better understanding as to the remit of a Plastic Surgeon (Table 2).

Table 2: Questionnaire on suturing & career pathways from medical students (percentages of the total)

Question	Yes (%)	No (%)	Don't know (%)
Have you sutured before?	52	48	0
Do you think suturing is a necessary skill for being a Doctor?	100	0	0
Do you want to be a surgeon?	56	12	32
Do you want to be a Plastic Surgeon?	16	20	64
Has this session helped you to understand the remit of a Plastic Surgeon?	100	0	0

Although this was a Plastic Surgery skills event, only 16% of participants felt they would like to pursue a career in Plastic Surgery, 20% did not plan to become Plastic Surgeons and 64% were unsure. Table 3 shows that 52% and 84% of participants rated the lecture and practical sessions at the highest value (VAS=10; excellent) respectively. The majority (60%) of students felt the practical teaching sessions to be of excellent worth to their medical careers, irrespective of whether they wished to follow a surgical or medical path in the future. These figures demonstrate that surgical speciality specific events are useful, even to students who do not aspire to work in that particular field. Also, it shows that the basic surgical skills learnt, can be applied to other areas outside the speciality.

Table 3:Visual Analogue Scale results displayed as percentages (%) of the total (10=excellent, I=worthless)

Question	1	2	3	4	5	6	7	8	9	10
How useful was the lecture on plastic surgery?	0	0	0	0	0	0	8	24	16	52
How useful was the practical session on suturing?	0	0	0	0	0	0	0	8	8	84
How useful do you think this teaching will be for your medical career?	0	0	0	0	4	0	4	20	12	60
Please grade the suturing equipment, sutures & flesh	0	0	0	0	4	0	4	28	16	48
Quality of the teaching during the practical session	0	0	0	4	0	4	4	12	12	64
Formal teaching, in the UEA, on Plastic Surgery is required?	0	0	0	4	8	4	8	12	16	48
Formal attachments in Plastic Surgery, during undergraduate education, are required?	0	0	0	8	4	0	4	8	20	56
Not having formal teaching on Plastic Surgery, will make you less competent as a Doctor?	8	4	8	0	20	8	16	16	4	16

Table 3 also shows that 88% of students would like formal attachments in Plastic Surgery, but only 60% of students felt that not having formal attachments in Plastic Surgery would make them less competent as a Doctor (20% were unsure and 20% felt it made no difference).

Comments from participants included:

Ist year student: "...things like this should be taught in all medical schools!"

2nd year student: "I had a fun time and felt that I learnt something that will be useful for my medical career."

3rd year student: "Plastics isn't a speciality I would have considered at all before, but it is looking fascinating now!"

4th year student: "...provided some key knowledge that is not included in the Medical school curriculum. A very enjoyable and informative day, cheers!"

Discussion

As well as providing an introduction to the history, practise and techniques of Plastic and Reconstructive Surgery, students are taught basic instrument handling and suturing skills, local flaps, skin grafts and tendon repair techniques. All students partaking in this free event felt that suturing and basic surgical skills were necessary in all fields of medicine and surgery, whether or not they had a predilection for either.

The students were able to practice their suturing skills on fresh porcine flesh, with which 96% of the students were very happy with. The porcine model mimics human tissue, and allows the student to learn how best to handle tissues. This is preferable to synthetic skin (which is frequently used for teaching medical students suturing skills) as it better prepares the student for suturing human tissue.

The UEA Surgical Society membership is based upon a small annual fee (£2.50); we are therefore unable to exclude selection bias, and cannot accurately generalise these results to all UEA students. There is no formal Plastic Surgery teaching in the UEA medical undergraduate curriculum, hence students have no basis for comparing the teaching received at our events, to a given standard. However, 96% felt the theoretical teaching to be of excellent worth and 100% felt the practical session to be of excellent worth for their future medical careers Subsequent to the session, 88% of students wanted formal attachments in Plastic Surgery. Comparison of our method of teaching with that used at other medical schools would be interesting.

Conclusion

With surgical skills teaching becoming scarcer in medical undergraduate curricula, and Plastic Surgery teaching currently absent from the UEA medical undergraduate curriculum, demand for this type of extracurricular teaching may continue to rise. Although our teaching model is designed for undergraduates, it could easily be adapted for junior doctors considering a career in Plastic Surgery or other surgical subspecialties.

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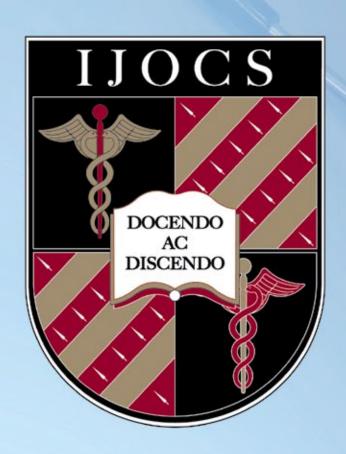
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- → History taking skills
- → Communication skills
- → Clinical examination/interpretation skills
- → Practical skills

Not only will this valuable resource provide material to students as a learning tool and revision aid, for example, OSCEs, it will also offer educational materials for teachers from all disciplines, allowing some standardisation of practice. The Clinical Skills community will also be encouraged to contribute, making this database interactive.

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