



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:

Involving patients as educators: adding value to clinical experience

Emergency department ultrasound

Examination of the cardiovascular system

Medical student theatre etiquette course

The OSCE: a marathon, not a sprint!

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Miss Wing Mok

Business Development Manager & Associate Editor
wing.mok@ijocs.org

Ms Hind Al Dhaheri

Associate Editor, United Arab Emirates (UAE)
h.aldhaheri@ijocs.org



International Journal Of Clinical Skills
P O Box 56395
London
SE1 2UZ
United Kingdom

E-mail: info@ijocs.org
Web: www.ijocs.org
Tel: +44 (0) 845 0920 114
Fax: +44 (0) 845 0920 115

Published by SkillsClinic Ltd.

Acknowledgements

I would like to take this opportunity to show appreciation to all those involved with the production of the International Journal of Clinical Skills. Many thanks to all members of the Editorial and Executive Boards. Our sincere gratitude for the continued support of Professor the Lord McColl of Dulwich CBE, Professor Dame Carol Black DBE and Professor Harold Ellis CBE.

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

Chairman of the Academy of Medical Royal Colleges



The searching reappraisal of almost every element of health care that we have seen in recent years has brought challenges and stimuli to all who have a part in this enterprise. Ultimately, the quality and safety of patient care depend upon the professionalism of people of many disciplines who have a responsibility to deliver that care, and therefore upon the quality of their education and their training and the ability to exercise their clinical skills and competences at the highest possible level in practice.

The mission of the International Journal of Clinical Skills is to support and promote that professionalism and I wish it growing success.

A handwritten signature in black ink, which appears to read 'Carol Black'.

Professor Dame Carol Black DBE FRCP FMedSci
United Kingdom

Development of an undergraduate medical student theatre etiquette course

C F Kellett BSc BM BCh FRCS (T&O)

Consultant Orthopaedic Surgeon, NHS Tayside
Consultant and Honorary Senior Lecturer in Medical Education
University of Dundee

K J Stirling BN RGN

Senior Clinical Skills Tutor
Clinical Skills Centre
University of Dundee

R McLeod MSc RGN

Senior Clinical Skills Tutor
Clinical Skills Centre
University of Dundee

J Dent MMed MD FHEA FRCS(Ed)

Reader and Honorary Consultant Orthopaedic Surgeon,
NHS Tayside
University Lecturer in Medical Education
University of Dundee

P Boscainos MD FRCS(Ed)

Consultant Orthopaedic Surgeon, NHS Tayside
Teaching Lead in Surgery
University of Dundee

Correspondence:**Miss C F Kellett**

Consultant Orthopaedic Surgeon, NHS Tayside
Consultant & Honorary Senior Lecturer
Clinical Skills Centre
University of Dundee
Ninewells Hospital and Medical School
Dundee
DD1 9SY
UK

E-mail: catherine.kellett@nhs.net

Tel: +44 (0) 1382 633937

Fax: +44 (0) 1382 633950

Keywords:

Theatre etiquette
Scrubbing
Gowning

Abstract

A recent infection control review in NHS Tayside commented that medical students who have no formal training in theatre etiquette could pose a significant infection risk to patients undergoing total joint arthroplasty. Medical students currently have no formal teaching in scrubbing and gowning for theatre. The students report high levels of stress when they are asked to scrub and gown for theatre.

We have planned to implement a new theatre etiquette course for the medical students in which they learn scrubbing, gowning and gloving for theatre.

The new theatre etiquette course would be added to the end of year 3 student timetable. This would include teaching in small groups to scrub, gown and glove. A video of these skills would be used to provide consistency in teaching.

This paper demonstrates how 160 students can be taught theatre etiquette in one day with minimal resources and staff.

Introduction

Medical students studying at the University of Dundee commence their clinical attachments in surgery in their fourth year. Senior medical students spend a significant proportion of surgical attachments in the operating theatre [1]. However, there is currently little formal teaching in theatre etiquette within the Dundee curriculum.

The operating theatre is a place of profound learning for the medical student. The environment of the operating theatre makes it distinct from all other teaching areas. The operating theatre provides the medical student with the opportunity to directly observe anatomical structures and organs, facilitating an increase in their understanding of the structure and function of the human body [2].

Learning opportunities within the operating theatre have been largely overlooked due to unfamiliarity with the learning environment. Also the operating theatre can be described as a "confronting, unpredictable and disorientating place for a medical student to learn within" [3].

Many senior medical students do not feel properly prepared for practicing within the operating theatre. Lyon (2004) reports that medical students report high levels of anxiety and stress when asked to attend the operating theatre. Lyon conducted a questionnaire to appraise medical students' perceptions of practicing within the operating theatre. More than 70% of medical students agreed with the statement 'it's easy to be made to look like a fool in theatre'. Medical students cited breaching infection control measures, wearing theatre attire incorrectly and a lack of familiarity with surgical procedures and equipment as the main causes of making them look foolish in the operating theatre [4].

When the medical student attends the operating theatre they are often given the opportunity to scrub and join the surgery. The medical student normally has little or no formal instruction in this skill, so this often leads to last minute instruction by a busy member of the theatre team. This can make learning more stressful.

Fernando (2007) recommends that “pre-teaching preparation for theatre is likely to improve the student learning experience” [5]. A medical student with minimal operating theatre experience requires a high degree of support and instruction from the theatre team to achieve an acceptable standard of safe practice. The medical student's lack of experience does not always make the best first impression and exacerbates their feelings of being made to look like a fool. The conduct of the medical student within the operating theatre may have a bearing on the surgeon's behaviour as a teacher. The relationship between the medical student and the surgeon is built on the principles of trust, legitimacy and participation [4]. It is important for the surgeon to be able to trust the medical student to act competently and professionally [4]. If the medical student has minimal operating theatre experience, they can unwittingly create a negative learning cycle leading the surgeon to believe that the student is under performing and is uninterested in the operating list. Medical students with previous operating theatre experience are often more confident and create a better impression. They are more likely to engage with the surgeon and create a more positive learning cycle.

A recent infection control review in NHS Tayside commented that medical students who have no formal training in theatre etiquette could pose a significant infection risk to patients undergoing total joint arthroplasty. In the interests of patient safety, it was therefore recommended that all medical students should be educated in the principles of theatre etiquette. This was a distinct challenge as a total of 163 medical students needed to be trained in theatre etiquette, in one day, during the third year Transition Block. The remit of the undergraduate medical student theatre etiquette course was to promote the operating theatre as an environment for profound learning opportunities and professional development by providing the students with the basic skills required to feel comfortable in the theatre environment.

Methods

The structure of the undergraduate medical student theatre etiquette course was divided into two sections. Firstly, the medical student received instruction in the principles of theatre etiquette. Secondly, the medical student undertook a practical session learning the principles of scrubbing, gowning and closed gloving technique. The practical session utilised peer assessment which was overseen by clinical experts from NHS Tayside and the University of Dundee Clinical Skills Centre.

One full working day was provided during the final block of teaching in Year 3 for 163 students to train in theatre etiquette. Appropriate scrub sinks were utilised and scrubbing supplies were acquired. Members of staff from the orthopaedic department and scrub nursing department were recruited. The medical students were divided into 4 groups: 1 group of 40,

and 3 groups of 41. Each group attended for a one and a half hour session. There were seven teaching staff involved in total throughout the day, which included senior scrub nurses and a mixture of consultants and registrars in orthopaedics. Two venues, one with 8 sinks and one with 4 sinks, were located.

The teaching sessions were divided into 3 half hour sections with one half hour video in scrubbing and theatre etiquette, half an hour of scrubbing practice and half an hour of gowning and gloving practice. Students attended the initial half hour briefing and video. Then the students went to the scrub sink areas and half of each group at each venue spent thirty minutes scrubbing and then thirty minutes gowning and vice versa.

Teaching staff were trained by coming to watch the video with the students, so that a consistent approach to the training was used. One or two staff then supervised the scrubbing and another one to two staff supervised the gowning and gloving at each venue. Students also helped to train each other by using a check-sheet for peer assessment of their student partner.

Results

A total of seven staff helped with the teaching throughout the day, most participating in two or more of the sessions. The staff consisted of three consultant orthopaedic surgeons, two orthopaedic registrars and two senior clinical skills tutors with a background in theatre scrub nursing. All staff enjoyed the day and expressed eagerness to participate in subsequent years.

A total of 123 students attended this non compulsory session on the last day of term. All of these students successfully completed the scrubbing and gowning and gloving skills according to the peer-assessment check-sheets, under the supervision of a member of staff.

All sessions ran to time and allowed sufficient time for students to practice each skill twice if required.

Discussion

Successfully introducing any change into a complex medical teaching curriculum has implications for all members of the multi-disciplinary team. This is certainly true in the challenging and sometimes stressful perioperative environment which always appears to be under scrutiny from a cost-conscious NHS. Introducing an evidence-based initiative such as a theatre etiquette module would benefit patients and staff by minimising adverse outcomes, fulfilling clinical governance requirements, improving quality of care through clinical effectiveness and providing skills and knowledge. There has also been increasing emphasis on the important role that Interprofessional Education (IPE) must play in educating and developing present and future healthcare professionals and the authors would aim to extend this programme to include nursing students at the university.

Medical students have a surgical rotation that includes basic principles of surgical technology and sterile technique to ensure the safety and welfare of patients. The surgical scrub, the use of surgical attire and personnel protective equipment (PPE)

may seem insignificant when eclipsed by the impressive theatre technology. However, all this would fail if theatre etiquette was compromised. Transmission of infection is an ever present problem and infection control concerns are paramount. If we are to improve the safety culture of the NHS service, formal training and induction of all new personnel, both medical and perioperative, should be undertaken to ensure compliance.

The outcome of a patient's experience is influenced by the competence, knowledge and skill of the application of theatre etiquette. It has been suggested that students who report a lack of confidence also admit to being stressed when exposed to working in a confronting, unpredictable and technological area. Clinical practice for trainees is a vital component in the education of perioperative staff. Both students and teachers, within many specialities that encompass theatre-based activities, need access to a module which is modern, comprehensive and fit for purpose. Therefore, the development of an introductory perioperative module for undergraduate medical students would improve student preparation in terms of familiarity within the theatre thereby setting bolstering competence and confidence. This programme would enable students to reflect on the roles of perioperative practitioners and their contribution to patient care and clinical practice.

This study would propose a theatre etiquette module which could be an effective educational addition to the medical student curriculum, designed to promote a safer environment to surgical patients. It would also provide clear objectives and realistic expectations of theatre-based activities. The implementation of a structured module supported appropriately by clinicians and teaching staff will encourage standardisation of the student learning experience.

On examination, interpretation and evaluation of the results of such a development, the medical curriculum could accommodate such a course and student responses could be explored. Further research would be required before strong implications can be reported. It is also imperative that perioperative staff engage collaboratively in research that examines their own practice and ascertains those perioperative activities that are of benefit to the surgical patient. Implementing such a module would also provide some indication of the relative merits of simulated practice and clinical placement shared learning.

Conclusion

It is possible to train approximately 160 medical students in theatre etiquette in one day with minimal facilities and cost. Feedback was positive and considered essential teaching by all students. Further studies are required to ascertain actual benefit gained.

Acknowledgements

Thank you to Gail Morrison for administrating the course, Gordon Clark, Wattie Wallace, Craig Forbes and Richard Barnes for help with setting up and acquiring consumables. Thanks to all the staff in Surgical Skills Centre, University of Dundee, and staff at the Medical School Office, University of Dundee.

Author Information

C F Kellett, Consultant Orthopaedic Surgeon, NHS Tayside, Consultant and Honorary Senior Lecturer in Medical Education, University of Dundee

K J Stirling, Senior Clinical Skills Tutor, Clinical Skills Centre, University of Dundee

R McLeod, Senior Clinical Skills Tutor, Clinical Skills Centre, University of Dundee

J Dent, Reader and Honorary Consultant Orthopaedic Surgeon, NHS Tayside, University Lecturer in Medical Education, University of Dundee

P Boscainos, Consultant Orthopaedic Surgeon, NHS Tayside, Teaching Lead in Surgery, University of Dundee

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2-6 May 2009

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www.mededconference.ca

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14-15 May 2009

BEME Conference (Best Evidence Medical Education), Warwick, UK
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17-22 May 2009

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20-22 May 2009

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http://www.meti.com/uk_simulation_conference.htm

29 June to 3 July 2009

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Scottish Clinical Skills Network 9th Annual Meeting, University of Glasgow, Scotland, UK
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