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



C.O.M.E.T. – A novel educational method in clinical skills

From simulation to reality

Shibboleths of incompetence

Development of a clinical skills bus: making simulation mobile

"See one, do one, teach one!" – the uphill struggle for clinical skills acquisition

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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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Mission Statement

The clinical skills arena is an ever expanding field with an increasing wealth of knowledge; however there is no central resource for the sharing of evidence based research and information. The International Journal of Clinical Skills (IJOCS) is a peer reviewed International Journal, which will promote the sharing of information and evidence based research, as well as bringing together the clinical skills community.

The Journal aims to develop and maintain standards in research and practice, lay a platform for discussion and debate, and provide opportunity to present evidence based medicine and critical appraisal of research. Provision of this much needed resource for both students, teachers and healthcare professionals, will ultimately enhance patient care.

The IJOCS will be a regular publication, three times a year in the first instance, both online and in print. The implementation of the IJOCS website will provide a continual resource for daily use. Also, in conjunction with the 'Clinical Skills Lab', the IJOCS will allow access to an online database on over 200 clinical skills – launching in 2008.

A diverse range of reviewers support the Editorial Board, all of whom are leaders in their respective fields and the IJOCS prides itself on the quality of content. Contribution of original ideas, research, audit, policy, reviews, case reports and 'Letters to the Editor' are welcome from all those involved in this multidisciplinary field. Submissions are not limited to these specific publication types and your novel suggestions will be considered.

I wish to thank all those involved in the development of this unique venture – a Journal whose remit is highly significant to today's needs.

Dr Humayun Ayub

Editor-in-Chief

International Journal of Clinical Skills

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Foreword

International Journal of Clinical Skills – An exciting forum for clinical skills

There has been an explosion in the volume of medical information related to clinical skills, which are essential in our efforts to maintain optimal patient care. The International Journal of Clinical Skills (IJOCS) aims to disseminate this knowledge in an easily accessible form. This will not only enhance our attempts to provide a quality health service, possibly with some standardisation, but also provide a vehicle for teaching and learning, hence the Journal's motto – 'docendo ac discendo' (by teaching and by learning).

The IJOCS will not only serve as an avenue for publication of research papers, but will also act as a means of communication between clinical skills professionals at an international level. Consequently, those involved in the clinical skills field, can keep those in other countries informed of their activities, as well as offering best practice guidance.

Alongside this valuable publication, a continually evolving online database ('Clinical Skills Lab') will become available for students and teachers to access – this will hold extensive information on over 200 clinical skills. The Clinical Skills Lab will be regularly updated by all those involved in this field and provide a platform for discussion and debate.

The IJOCS also aims to present comment on items of specialist interest. For example, the current issue contains a paper by Professor Harold Ellis CBE, on 'Medico-legal consequences in surgery due to inadequate training in anatomy', and explores the potential niche for anatomical clinical skills training within the newly developed medical Foundation Years (F1 & F2). It is hoped readers will make use of the Journal to comment on matters such as this – and on others relating to the subject of clinical skills – by means of 'Letters to the Editor', research based evidence and shared practice.

In order for IJOCS to become an exciting forum for clinical skills, the Journal welcomes submission of innovative research, papers, reviews and case reports. Of course, submissions are not only limited to these specific publication types and your innovative ideas would be greatly welcome by the Editor.

I am confident that IJOCS will be appreciated by a variety of health care professionals, at an international level. It promises to be representative of an ever expanding field, and with the support of all those able to contribute, it will, without doubt become increasingly influential.

I wish those responsible for the production of the International Journal of Clinical Skills, the success which their initiative deserves.



Professor The Lord McColl of Dulwich CBE
September 2007

The use of medium fidelity simulation to develop technical and non-technical acute care skills early in the undergraduate curriculum

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KEYWORDS:

Medium fidelity simulation
Acute care skills
Non technical skills
SimMan

Introduction

This programme explored the benefit of using medium fidelity simulation to develop technical and non-technical acute care skills early in the undergraduate curriculum. Acute care skills are an essential part of medical education and are specifically noted in The General Medical Council's Tomorrow's Doctors¹. Following concern about trainee doctors levels of knowledge about the assessment and treatment of acutely ill ward patients there has been a shift towards anticipatory care and developing appropriate skills for this which involves both technical and non technical elements². Acute care skills are frequently developed in a simulated environment where the focus is on the learner's needs and skills can be repeated until the learner has developed competence in the skills. Medium fidelity simulation has been described for teaching basic sciences to junior students³ but published research into medium fidelity's education use for acute care skills has focussed on senior students^{4,5}.

The role of medium fidelity simulation in developing acute care skills at an early stage in a curriculum has not been explored. A systems based programme in the second and third year, with specific timetabled sessions in a clinical skills centre enabled the individual advanced acute care skills involved in the ABCDE system to be developed from a very junior level through the use of SimMan. This paper describes the programme.

Methodology

The emergency care skills were introduced using scenario based teaching. All second year students participated in three SimMan emergency care sessions. The SimMan sessions were scheduled in their first semester of clinical experience. The sessions were timetabled at the end of each system block when students had learnt the clinical skills relevant to that system. In each scenario the students were required to use the ABCDE system to assess and manage a scenario. In each scenario there were positive findings in the primary survey and SimMan improved when management of either oxygen or fluids was initiated. The students completed each scenario as a group. Each group consisted of 8-12 students.

In their introductory block the students were given an overview of the skills involved in ABCDE and were shown how to initiate fluid and oxygen therapy. In the respiratory system block, the scenario used was a hypoxic and tachypnoeic patient who responded to oxygen therapy. In the cardiovascular system block, the scenario was a hypoxic, tachycardic and hypotensive patient who responded to oxygen and fluids. Following the sessions, students completed the evaluation as a group. They were asked to describe what had occurred in the session and what they had learnt

Results

165 students participated in the programme. Sixteen groups completed the evaluation after each session. Following the first session students defined the terms ABCDE. Following the second session students identified individual emergency care skills required in the management of A and B. Following the third session students identified the individual skills involved in A, B and C and additionally identified the importance of communication and teamwork. Leadership and teamwork had not been identified as a learning outcome for the sessions.

Abstract

This paper describes the use of medium fidelity simulation to introduce technical and non technical acute care skills to medical students early in the curriculum. 165 second year students took part in the programme in groups of 8-12. The paper describes the programme and the students' evaluation which demonstrates the value of medium fidelity simulation in this setting, in developing non technical skills.

Fig 1 - Progression of learning from evaluation

System ABCDE skills covered	1. Respiratory AB skills	2. Cardiovascular ABC skills	3. Gastrointestinal ABCDE skills
Students' evaluation	Students defined AB terms	Students defined individual skills involved in ABC	Students defined skills in ABCDE Identified leadership and teamwork

Discussion

The evaluation has demonstrated how students are able to understand ABCDE skills from an early stage in the curriculum and understand the need for technical and non-technical skills to deliver safe patient care. The emergence of non technical skills from the evaluation was an interesting finding. In postgraduate research non technical skills have been identified as an important area of expertise in acute care specialties⁶. In undergraduate education, simulation has been shown to facilitate fourth year students' understanding of the importance of leadership and teamwork⁷. In this programme medium fidelity simulation required a flexible response from the student groups and they received instant feedback from SimMan enabling them to understand the impact of different skills. As such the learning was not linear and required the students to use different knowledge pathways. As a group they developed an understanding of the role of communication and teamwork in facilitating this and the need for leadership to best use the group's combined knowledge and skills.

Medium fidelity simulation appeared to facilitate the groups' understanding of the importance of non technical skills. By witnessing a deterioration in SimMan after non technical and technical skills not used

appropriately, and the positive response when the group used the skills appropriately, the importance of non technical skills emerged as a learning outcome.

In conclusion this short programme for medical students demonstrates that medium fidelity simulation can bring together technical and non technical skills for students from a very early stage in an undergraduate medical curriculum. ■

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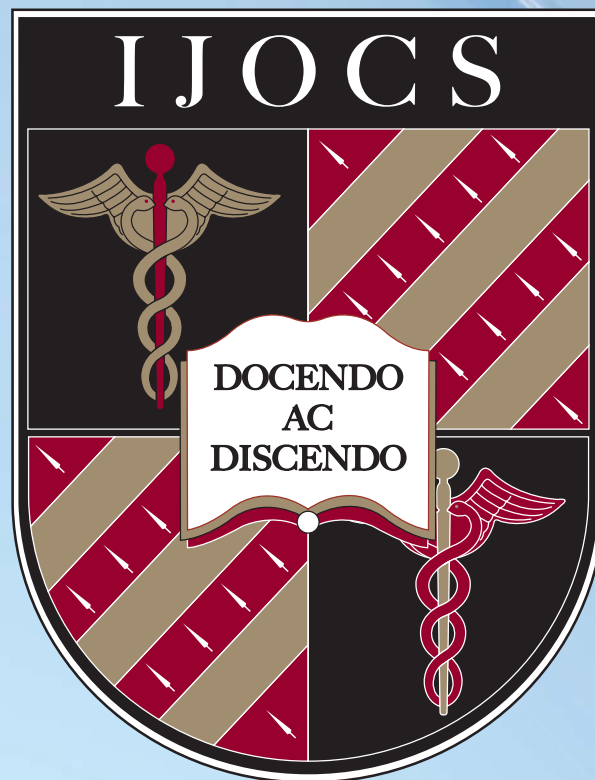
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Clinical Skills Lab (CSL)



The Clinical Skills Lab database will comprise information on over 200 clinical skills, broadly separated into:

- 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.

CSL is Launching in April 2008 – view sample material at **www.ijocs.org** and take advantage of a 50% discounted rate if booked prior to **1st March 2008** (enter promotional code **CSL63R** at registration)