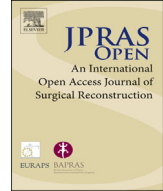




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## Preparing medical students for foundation placements in plastic surgery: A one day intensive course

### ABSTRACT

#### Keywords

Education  
Course  
Undergraduate  
Practical skills  
Plastic surgery

The decline in undergraduate teaching in plastic surgery may affect student's decisions to pursue a career in the speciality and junior doctors may be insufficiently prepared for plastic surgery rotations during foundation or core surgical training. To address this issue, we have developed a one-day *Basic Surgical Skills and Principles in Plastic Surgery Course* designed to provide medical students with the relevant skills and knowledge required for placements in plastic surgery as junior doctors. A pre- and post-course questionnaire was used to record self-assessment of confidence in various domains. Our results show that students were significantly less confident in starting foundation training rotations in plastic surgery (mean 3.59, SD 1.56) compared with general surgery (mean 5.75, SD 1.95) ( $p < 0.0001$ ), and 'any specialty' (mean 5.88, SD 1.54) ( $p < 0.0001$ ). However, a one-day course can significantly address this imbalance: 100% increase in confidence in starting rotations in plastic surgery (pre-course mean 3.59 (SD 1.56), post-course mean 7.20 (SD 1.60),  $p < 0.0001$ ). We conclude that medical students should have greater exposure to teaching in plastic surgery and that this could be achieved in-part through courses in basic surgical skills and principles in plastic surgery.

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Dear Sir,

Over recent years there has been a decline in undergraduate teaching of plastic surgery and a survey of UK medical students in 2006 revealed that 85% were unable to name five conditions treated by plastic surgeons.<sup>1</sup> A lack of exposure to plastic surgery whilst at medical school may significantly affect students' decisions to pursue a career in the speciality.<sup>2</sup> Furthermore, junior doctors may be insufficiently prepared for plastic surgery rotations during foundation or core surgical training which could lead to suboptimal patient care and adverse clinical outcomes.

To address this issue we have developed a one-day *Basic Surgical Skills and Principles in Plastic Surgery Course* designed to provide medical students with the relevant skills and knowledge required for rotations in plastic surgery as junior doctors.

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## Method

The course took place on the 27th September 2016 at the John Radcliffe Hospital, Oxford, and was attended by 34 clinical medical students. Course tutors included a senior consultant and specialist registrars. No fee was charged for attendance.

The course consisted of short lectures and practical skills stations. To ensure that course content was relevant, we asked local consultants ( $n = 7$ ), registrars ( $n = 3$ ) and FY2s (who had recently completed attachments in plastic surgery) ( $n = 3$ ) to complete a questionnaire assessing the importance of different practical skills and knowledge for junior doctors starting plastic surgery rotations. We also consulted Tomorrow's Doctors, and the Royal College of Surgeons of England Undergraduate Curriculum and Basic Surgical Skills Course itinerary.

Lectures included: Principles of plastic surgery, Assessment and management of wounds, Suturing materials, General handling of surgical instruments, Local anaesthetic administration, Excision of skin lesions, and Basic concepts of flaps. Practical skills stations utilised pig trotter models and included: Knot tying and suturing, Local anaesthetic dosing and administration, Excision of skin lesions, and Construction of local flaps.

A pre- and post-course questionnaire was used to record self-assessment of confidence in starting foundation training rotations in plastic surgery, general surgery and 'any speciality' using a modified Likert scale (range 1–10; 1 = low, 10 = high). Confidence scores were also recorded in eight knowledge and practical skills domains related to the course content. A percentage change of mean values was calculated and paired  $t$  tests were used for comparative analysis. Statistical significance was set as  $p < 0.05$ .

## Results

32/34 students completed the questionnaire. Students were significantly less confident in starting foundation training rotations in plastic surgery (mean 3.59, SD 1.56) compared with general surgery (mean 5.75, SD 1.95) ( $p < 0.0001$ ), and 'any speciality' (mean 5.88, SD 1.54) ( $p < 0.0001$ ).

There was a significant improvement in confidence scores with regards to starting foundation training rotations in plastic surgery after the course (100% increase: pre-course mean 3.59 (SD 1.56), post-course mean 7.20 (SD 1.60),  $p < 0.0001$ ).

All knowledge and skills domains demonstrated significant improvement in self-assessment confidence scores after the course. Greatest change was in excision of skin lesions (190% increase: pre-course mean 2.50 (SD 1.50), post-course mean 7.25 (SD 1.50),  $p < 0.0001$ ). Least change was in handling of surgical instruments (53% increase: pre-course mean 5.28 (SD 1.89), post-course mean 8.09 (SD 1.40),  $p < 0.0001$ ).

Mean course satisfaction was 9.45 (SD 0.86) and qualitative feedback was extremely positive.

## Discussion

The benefit of one-day plastic surgical skills courses for undergraduates has previously been demonstrated with regards to knowledge, awareness of the work of plastic surgeons, ability to perform basic plastic surgery skills and career interest in plastic surgery.<sup>3–5</sup> Our results further emphasise the benefit of such courses and indicate that a one-day *Basic Surgical Skills and Principles in Plastic Surgery Course* can significantly improve medical students' confidence with regards to starting foundation training rotations in plastic surgery.

Concerningly, students were significantly less confident in starting foundation training rotations in plastic surgery compared with general surgery, and any specialty. Moreover, this study is likely to have been affected by a significant selection bias; one could assume that the students who attended, and therefore displayed a greater interest in the speciality than their colleagues, were likely to have a greater pre-course understanding of skills and knowledge required for rotations in plastic surgery as junior doctors, and therefore, the true difference in confidence is likely to be greater.

One limitation of this study is that results were based purely on self-assessment as opposed to objective measures of knowledge and skills.

It is vital that undergraduates receive adequate exposure and training in plastic surgery whilst at medical school. We have demonstrated that a one-day plastic surgery skills course can significantly improve medical students' confidence with regards to starting foundation training rotations in plastic surgery. The course received excellent feedback and will continue to run on an annual basis. Students were less confident in starting foundation training placements in plastic surgery than other specialities and we would therefore like to recommend that more courses of this nature are developed in order to address this issue.

### Conflicts of interest

None.

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### Acknowledgements

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