ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

MEDIA RELEASE

Simulation now an integral part of surgical training – but room for improvement

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The role of simulation in surgical training will continue to grow in importance as the demand for minimally invasive surgery grows, but this should involve a process of standardisation, researchers have written in the latest issue of the *ANZ Journal of Surgery*.

In 2008 the Simulated Surgical Skills Program (SSSP), a project managed by the Royal Australasian College of Surgeons, conducted a review of the range and content of laparoscopic training courses available in Australia.

Researchers initially looked for a national or state level register of laparoscopic training courses, however none could be located. Consequently, universities, regional branches of the College, private training organisations, and medical industry companies were contacted over a period of six months and information on laparoscopic training courses was gathered.

The review found that the greatest concentrations of courses are in those states where designated surgical skills centres have been established. Centres such as Clinical Training and Evaluation Centre (CTEC), Queensland Health Clinical Skills Development Centre, and the College of Surgeons' Skills and Education Centres in Western Australia, Queensland and Victoria respectively are the main surgical training providers in each state – not surprising given the considerable amount of infrastructure required to hold laparoscopic courses. The use of these centres by educators, industry groups, and private organisations is an important factor in the increased number of courses seen in each of these states.

The researchers also found that the content of courses differed markedly. Advanced courses focussed on specific procedures and taught the related processes or techniques. Because of procedure related specificity there are few identifiable commonalities between course content in advanced courses. Introductory courses most commonly included areas such as knot tying, instrument handling, equipment assembly, and suturing. The decision to teach learning areas separately or in a combined course is determined by the course coordinator and does not follow any national or surgical training requirement.

One of the review's authors, Professor Guy Maddern, Director of the Australian Safety and Efficacy Register of New Interventional Procedures – Surgical (ASERNIP-S), said one of the main findings of this review was the vast array of teaching aids used.

"Simulators, foam models, live animals, cadaveric animals are all used in laparoscopic surgical training and there appears to be no preference per state for the use of one teaching aid above another. The choice regarding the use of teaching aid appeared to be made on the basis of course skill level with live and cadaveric animal models only used in more advanced courses," Professor Maddern said.

The findings mirror those in other countries. In Canada there is a centralisation of courses at skills centres; in the US the range and delivery of courses differed; and in the UK and Ireland simulation is becoming an essential part of skills training. The SSSP has reviewed the approaches taken by each of these regions and is assessing their efficacy in the Australian setting. For example, a mobile simulation training unit based on an Irish model will soon be trialled in NSW.

While simulation is now an integral part of medical education, the reviewers concluded that its importance will continue to grow and there will need to be a process of standardisation. "As the popularity of minimally invasive surgery increases, so to will the effectiveness of training need to improve," Professor Maddern said.

"The number of courses identified by the SSSP review illustrates the range of skills training on offer. Similarly, the review also identified the important role skills centres have in the delivery of these courses. However, based on these findings, the need for a national approach to course requirements in skills training becomes apparent. These steps are already being taken overseas, and the Australian medical community will need to follow suit if we are to continue with improving surgical training locally.

"Our review of courses here, and our knowledge of courses offered overseas, raises a key question: If there is no registry or control over the provision of laparoscopic training courses, then how can we, as a profession, be sure of the competency of graduates? Clearly an approach to education and training needs to fit the environment in which it is to be provided. Through the advent of the SSSP and its current research we are now gaining valuable information on how to standardise training locally," Professor Maddern said.

The *ANZ Journal of Surgery*, established more than 70 years and published by Wiley-Blackwell, is the pre-eminent surgical journal published in Australia, New Zealand and the South-East Asian region. The Journal is dedicated to the promotion of outstanding surgical practice, and research of contemporary and international interest.

Media inquiries: **Michael Barrett, Manager Media & Public Relations**
(03) 9249 1263 or 0429 028 933

Visit: www.anzjsurg.com