



ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

# MEDIA RELEASE

## Simulator proves effective tool in teaching laparoscopic appendectomy

Friday 24 September, 2010

Surgeons at the University of Auckland have trialled a new software application for use by trainees learning laparoscopic appendectomy and have concluded it is an effective training tool, according to the latest issue of the *ANZ Journal of Surgery*.

Professor John Windsor from the Advanced Clinical Skills Centre at the University of Auckland reported that the Integrated Cognitive Simulator (ICS), developed in New Zealand by SIMTICS, had high user acceptance, but was only effective for training first year surgical trainees. This was because the second year trainees had already learnt how to do the procedure. He said that this highlights the importance of timing for this type of training.

“As in many learning situations, basic skills must be achieved before proficiency can be assured with more complex procedures. The public expects high standards of care and reduced error rates. And patients are not keen for novice doctors to practice on them. The traditional apprenticeship model of surgical training is no longer sufficient. It appears that the ICS adds value to such training,” he said.

The ICS is a unique interactive multimedia platform for learning how to perform clinical procedures. Integrating text, 3D anatomy, video demonstration and simulation (in learning and testing modes), the ICS is delivered over the internet and offers training in more than 50 clinical procedures.

The aim of the reported randomised controlled trial, funded by the Royal Australasian College of Surgeons, was to determine the usability and effectiveness of the ICS in learning how to do a laparoscopic appendectomy, which is one of the most common operations performed in hospitals.

Junior surgical trainees were randomized into control and intervention groups. The latter had access to the ICS in addition to normal training opportunities. Participants had three different assessments: a pre-study questionnaire to determine demographics, multiple choice questions to assess knowledge of the procedure (after 2 weeks), and a questionnaire to assess user acceptance (after 4 months).

Fifty-eight trainees from the first and second year of surgical training were randomized. The median scores for interface, functionality, usefulness, and likelihood of utilisation (usability) were all 5 or more out of 7. The ICS resulted in significantly higher training effectiveness for the first year, but not the second year, surgical trainees.

“Laparoscopic operations are an integral part of surgical practice today, and learning the cognitive and psychomotor skills required for proficiency in these procedures demands considerable training and repetition,” Professor Windsor said. “It is a cost-effective way to ensure that trainees come to the operating theatre well prepared, not just technically, but cognitively as well.”

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.

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