

International Laser Safety Conference, Orlando, Florida, March 18th – 20th, 2013

Written by [Margot Shearer RN](#), Laser Safety Officer, *St. Vincent's Private Hospital, NSW*

The International Laser Safety Conference (ILSC) 2013 was held in Orlando, Florida, USA where 190 participants came together from 13 countries to discuss issues of safety when working with lasers. Laser safety experts from many disciplines met over 4 days to discuss cutting-edge scientific research relevant to their practice, network with colleagues and update on the latest changes to regulations and recommendations in Laser Safety Standards.

The Medical Practical Applications Seminar ran over 2 days, and was designed to address Medical Laser Safety Officers working in Operating Rooms, Surgical Centres, Clinics and Medical spas. I was fortunate to attend the 4 day conference thanks to sponsorship from the OTA, which was held at the Doubletree by Hilton at the Entrance to Universal Studios, a truly impressive name and location in Florida.

The conference opened with an outline of the science and research being undertaken at the Food and Drug Administration's Centre for Devices and Radiological Health, which regulates radiological devices in the USA. A growing number of medical devices include lasers that require special consideration to be approved for use.

The Medical Practical Applications Seminar ran concurrently with the Scientific Sessions. It opened with Leslie Pollard from Southwest Innovative Solutions delivering an enthralling session on current and future use of lasers in medicine and healthcare. Nanotubes, laser-based virus detection systems, 'laser needle' and 'laser tweezers' were all fascinating. Laser-based Cancer Detection of the future included devices that could possibly be attached to the surgical scalpel, for instant detection of cancer cells on the sterile field. Cardiovascular innovations included Laser balloons for ablation and laser based pacemakers to name a few that are currently being researched and developed. Leslie posed the questions 'How will these advances change surgery?' and 'How will our roles change?'

Surgical plume education was high on the agenda during this conference. Ben Edwards, Radiation Safety Officer at Vanderbilt University, delivered an update on Surgical Plume Management and reviewed findings from the 2010 AORN members' survey on their perception of compliance with surgical smoke control measures. He outlined obstacles and how to overcome them, recent developments and AORN's efforts to raise awareness of surgical plume. Canadian and IFPN efforts were also covered, and I felt Australian perioperative nurses efforts to eliminate surgical smoke from our work environment are equally worthy on the global scale of implementing changes in surgical smoke evacuation.

Evaluating Risk in Laser Safety was well covered. Everything from risk of Airway Fire in Surgery to Laser Safety Audits conducted in your department was covered. Gus Anibarro, Education Director at LIA, gave us a tour through the Auditing system, what to look for and how to present your findings to the Laser Safety Committee, discuss results and implement changes and improvements to practice.

Tuesday's Medical sessions wrapped up with a thought-provoking session from June Curley from Tampa General Hospital in Florida, who outlined the Challenges of a Laser Safety Officer. Tampa is a 959 bed acute care Level 1 trauma centre which has 43 Operating Rooms. June focused on practical approaches of her own program and highlighted the need for a sound and supportive Laser Safety Committee to implement a successful Laser Safety Program in an Operating Room. Her extensive 'Laser Time Out' covers an introduction of the laser nurse, identifying the laser in use, where the closest fire extinguisher is located, where oxygen shutoff valves are located and finally where a jug of water and a 50 cc syringe is placed in the theatre. June also told us of a health care facility in the state of Texas that was not only fined \$10,000 for leaving a key in the laser, but the Laser Safety Officer was also fined \$10,000. Who wants to be a LSO in Texas?

Laser pointers were an interesting inclusion in this conference, with some leading research from Australia presented by Trevor Wheatley from UNSW Canberra. Since 2008, Australia introduced laws restricting possession and importation of some laser pointers. Now Australia is used as a test case to see if this move has improved safety.

Dinner and awards presentation was a formal occasion, and recognised pioneers in the laser safety industry. It was also an opportunity to meet attendees not associated with perioperative healthcare, from industry, military, government and research facilities around the globe.

On Wednesday afternoon, we listened to a historical review of laser safety accidents: Common Themes and Lessons Learned. It summarised not only laser accidents and outcomes, but also the effectiveness of

improvements made in safety. Rockwell Laser Industries maintains a database of over 3,300 laser incidents from 36 countries, including Australia. It can be found at www.rli.com/resources/accident.aspx

Most accidents could have been avoided, and not wearing appropriate eyewear is a major contributing factor. Patients, Technicians and Physicians are the subjects who sustain the highest number of incidents. There are very few incidents reported involving nurses – our group is considered overall compliant.

We also had the opportunity to listen to a real live account from a man who had sustained a retinal injury while working with lasers. He continues to work in this field, and he not only described the experience, but also what it is like to live with a retinal injury.

The Sponsor Reception and trade display had some practical demonstrations to alert us to the dangers of laser pointers, easily obtained overseas or via the internet. A demonstration of the real power output from 3 different coloured laser pointers, purchased on the internet for US\$25.00, showed us that signage on laser pointers is not always correct, and that some laser pointers have the potential to cause ocular injury.

Laser safety eyewear suppliers showed off the latest cutting edge filters and styles available, and it was a great opportunity to try some on for fit and comfort.

Many Australian perioperative nurses would expect Penny Smalley to be presenting at ILSC, but I was sorry to hear Penny had recently had a fire at her home, and was unable to attend. Her family were all safe, but I wish her well in rebuilding her home and look forward to her next Australian visit.

This International Conference was both exciting and informative, and has given me the opportunity to network with colleagues in many peri-operative settings. I once again, thank the OTA for this wonderful opportunity. The next ILSC 2015 is to be held in Albuquerque, New Mexico.



Patti Owens with Margot Shearer



Patti Owens and Vangie Dennis, Medical Conference Chair



Margot Shearer with June Curley, who spent time in Australia working at RPA



Australia on the Universal Studios globe

