



Radiation Health and Safety Advisory Council ('Council')

Meeting Minutes

- Date:** 9 December 2020
- Time:** 9.10 am – 11.00 pm (AEST)
- Location:** via Microsoft Teams
- Chair:** Dr Roger Allison
- Members:** Dr Carl-Magnus Larsson, Mr Keith Baldry, Prof Pam Sykes, Ms Melissa Holzberger, Prof Adele Green, Dr Peter Karamoskos, A/Prof Melanie Taylor, Dr Jane Canestra, Dr Trevor Wheatley, Mr Jim Hondros, Dr Stephen Newbery.
- Apologies:** Dr Hugh Heggie.
- Secretariat:** Mr James Wheaton, Mr Ben Paritsky.
- Observers:** Mr Jim Scott, A/Prof Ivan Williams, Ms Tone Doyle, Mr Ryan Hemsley, Mr Nathan Wahl, Dr John Javorniczky, Mr David Urban (all ARPANSA), Mr Thomas Ashby (Department of Health).

1. Meeting Open

The Chair welcomed the Council at 9.10 a.m. and thanked contributors to the paper provided.

2. Laser safety in Australia

Council heard an expert overview of the potential issues that currently exist with regard to laser safety in Australia. The main issues discussed were:

- the proliferation of lasers in Australia in their commercial availability, with little independent oversight of their health impacts
- reactive regulation with little done to encourage manufacturer compliance to safety standards
- relatively mature laser safety standards, however no consumer product standard to guide regulation. The European Union is in the process of developing a consumer product standard.

The Council discussed a number of particular laser technologies that may present a concern, when considering potential unintended applications and potential for health impacts.

Types of laser technologies mentioned included consumer lasers (such as laser cutters or etchers, rust removers, laser vector projectors, Christmas lights, toys, home use healthcare or cosmetic and high-power laser pointers), high power portable lasers for outdoor use (such as cleaning lasers), laser light show displays which increasingly rely on software controls for exposure areas, cosmetic lasers which raise issues of certification of users, low cost or low quality equipment and ultra-short pulses, and emerging technology such as moving platforms (for example self-driving cars, virtual enclosures, intentional exposure to eyes or face, laser pumped lamps and luminaires).

Council discussed an apparent general lack of regulatory enforcement of existing safety standards for lasers in Australia, although noting at a Commonwealth level that particular laser spectrums fall within the remit of the Australian Communications and Media Authority (ACMA) and that limited importation checking occurs through border and customs measures.

ARPANSA staff provided an overview of ARPANSA's regulation of Commonwealth entities and measurement capabilities with the recent purchase of equipment for measuring/validating laser power output. ARPANSA staff also summarised the experiences of ARPANSA's Talk to a Scientist program regarding enquiries about compliance with laser safety regulations.

Also noted was international work on the revision of standards, given the rapid development of the technology. ARPANSA noted recent World Health Organization (WHO) efforts to develop a safety standard for consumer and industrial lasers (ARPANSA is a WHO collaborating centre). The International Electrotechnical Commission (IEC) is looking at lasers that consumers have access to for intended viewing (safety laser product standard).

The Council further discussed the regulation of lasers at state level, noting it occupied a significant portion of regulatory work in one jurisdiction. Other jurisdictional regulators such as Work Safe were also discussed, noting that issues such as public exposure still present a regulatory gap, with multiple anecdotal cases of laser light show injuries in Australia. A further issue to be aware of for laser users is the use of the correct personal protective equipment (PPE). During inspections of sophisticated laser users, there have been instances of laser goggles being used incorrectly or having the incorrect optical density for the laser wavelength being used.

The Council resolved to explore issues around laser technology in Australia through working groups before discussing the findings further. The initial intent of the working groups will be to explore further data sources that are currently available, to inform discussion, and further establish the breadth of current and future applications of laser technologies in Australia.

Potential sources of further data and information on the topic were identified as the Victorian Eye and Ear Hospital and the Monash University accident research centre.

Actions: The Council resolved to establish two subsets of a laser technology working group on (1) clinical and patient safety, and (2) public exposure including non-clinical or personal or other occupational uses.

3. Meeting Close

The meeting was closed at 11 a.m.