

## Position Summary

Safe use of lasers in a dental practice must be achieved by following a program of laser safety activities and procedures which are monitored, reviewed and audited to achieve best practice.

## 1. Background

- 1.1. Dental practitioners have always been committed to providing a safe working environment for their staff, patients and other persons who visit their premises, so far as reasonably practicable. This includes the use of lasers and intense light sources which pose a risk from inadvertent exposure.
- 1.2. The ADA assists its members with advice on how to establish appropriate working protocols. This advice aligned with formal jurisdictional requirements as they exist in Queensland, Tasmania, and Western Australia, and in other jurisdictions, in order to reinforce the importance of the current (March 2018) version of *AS/NZS 4173 Safe use of lasers and intense light sources in health care*. This national standard is aligned with International Electrotechnical Commission (IEC) standards.
- 1.3. Lasers are classified according to their potential associated with their emissions, to cause injury to human eyes and skin, as defined in *AS/NZS IEC 60825.1:2014 Safety of Laser Products Part 1: Equipment classification and requirements*, and *AS/NZS IEC 60825.14:2011 Safety of Laser Products Part 14: A User's guide*.
  - Class 1 lasers are fully enclosed and their design prevents accidental exposure.
  - Class 2 lasers emit visible light, and are less than 1 milliwatt (mW) in power. Eye protection is provided by normal aversion responses such as the human blink reflex.
  - Class 3R lasers have powers less than 5 mW.
  - Class 3B lasers have powers from 5 to 500 mW, and produce visible or invisible light that is hazardous under direct viewing conditions. They are powerful enough to cause eye damage, and may also cause skin burns.
  - Class 4 lasers have a power above 500 mW and are capable of causing both eye damage and burns to the skin.
- 1.1. Australian Standard/New Zealand Standard (AS/NZ): Standards Australia and Standards New Zealand are commonly responsible for developing joint standards, which are documents that set out specifications, procedures and guidelines that aim to ensure products, services and systems are safe, consistent and reliable.
- 1.2. The International Electrotechnical Commission (IEC) is an international standards organisation that prepares and publishes international standards for all electrical, electronic and related technologies, collectively known as "electrotechnology".
- 1.3. Therapeutic Goods Administration (TGA): Is the part of the Australian Department of Health concerned with the safeguarding and enhancement of the health of the Australian community through effective and timely regulation of therapeutic goods.
- 1.4. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government Department primary authority on radiation protection and nuclear safety.

*This Policy Statement is linked to other Policy Statements: 5.17 Dental Records, 6.1 Infection Control, 6.6 Work Health and Safety & 6.14 Radiation Safety.*

## Definitions

- 1.4. LASER is Light Amplification by Stimulated Emission of Radiation, which is the means by which lasers generate visible, ultraviolet or infrared emissions.
- 1.5. DENTAL PRACTITIONER is a person registered by the Dental Board of Australia to provide dental care.

## 2. Position

- 2.1. The development of codes and guidelines specific for the use of lasers in the dental workplace must include expert dental opinion.
- 2.2. Safe use of lasers must be achieved by following a program of laser safety, activities and procedures which are monitored, reviewed and audited to achieve best practice.
- 2.3. Dental practitioners who are using lasers should:
  - (1) follow the requirements of AS/NZS 4173 in ensuring laser safety in the clinical workplace;
  - (2) undertake training in the requirements for laser safety;
  - (3) complete the manufacturer's required device-specific training;
  - (4) ensure it is listed on the Australian Register of Therapeutic Goods;
  - (5) formally assess the risks for using lasers in their own clinical environment and apply relevant protective measures (including area controls, window blinds, etc) as needed;
  - (6) install compliant warning signs for rooms where Class 3B or Class 4 lasers will be used;
  - (7) ensure that there is sufficient laser protective eyewear for staff, patients and any other persons within the laser hazard zone;
  - (8) use suction during laser surgical procedures to minimise the risks from inhaling plumes created by the laser;
  - (9) use appropriate personal protective equipment such as high filtration masks for procedures that generate large amounts of plume;
  - (10) ensure that reprocessing of laser handpieces is undertaken in accordance with infection control requirements and the manufacturer's instructions;
  - (11) choose laser parameters (wavelengths, doses and irradiance) that are appropriate for the treatment of the individual patient and the clinical condition;
  - (12) use their clinical skills to deliver safe and effective care, choosing the appropriate method (with a laser or other device) when this offers benefits over existing treatments for the patient;
  - (13) familiarise themselves with the current clinical applications and protocols for laser use;
  - (14) undertake continuing education or further training in laser applications in dentistry;
  - (15) ensure that dental assistants are educated regarding laser safety issues;
  - (16) only undertake procedures that are within their scope of clinical practice;

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- (17) comply with any jurisdictional guidelines regarding laser safety plans, facility approvals, device registration, laser use licences, fire extinguishers and the like;
  - (18) document in the treatment records the laser parameters used in patient treatment;
  - (19) ensure that laser accidents are reported to the national regulator, being the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA);
  - (20) ensure that the laser equipment is calibrated and serviced periodically, in line with the manufacturer's specifications; and
  - (21) ensure that electrical testing and tagging is done for laser equipment.

### **Policy Statement 6.29**

Adopted by ADA Federal Council, November 22, 2019