Australian Government

Department of Education, Employment and Workplace Relations

SIBBHRS705A Apply intense pulsed light and laser safety protocols

Revision Number: 2

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Modification History

Not applicable.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply safe practice protocols when using intense pulsed light (IPL) and laser apparatus in conjunction with dermal treatments.

This unit is described in the context of IPL and laser applications for hair reduction and reflects broad safety standards for a range of clinical dermal applications using IPL and laser technologies. The unit also reflects the guidelines expressed in the Australian and New Zealand safety standard AS/NZS4173:2004, expanded to include the safe use of IPL.

Application of the Unit

This unit describes the application of IPL and laser safety in a beauty industry clinical treatment environment. Experienced beauty therapists may apply IPL or laser equipment for a range of dermal treatments.

IPL and laser hair reduction are performed by experienced beauty therapists with significant knowledge of skin and hair biology, light physics, and laser safety; and a broad experience in providing a range of skin therapies and hair reduction treatments. They exercise judgement in planning and implementing an appropriate treatment program to safely achieve desired hair reduction outcomes for each client.

Licensing/Regulatory Information

The use of non-ionising radiation for cosmetic treatments is currently subject to licensing under the Queensland Radiation Safety Act 1999, and accreditation of equipment, premises and operator under the Tasmanian Radiation Protection Act 2005. The Western Australian Radiation Safety Act 1975 imposes limitations restricting the use of Class 4 lasers for cosmetic treatments, including hair removal, to medical practitioners.

With regard to other states and territories, no licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe th achievement of the element. W information is detailed in the re range statement. Assessment of evidence guide.
1 Identify operational characteristics of lasers and intense pulsed light equipment.	1.1 Describe basic biophysics o
	1.2 Identify ***types of equipment*** pigmented hair and on skin.
	1.3 Identify ***risks*** relevant to ea
	1.4 Evaluate benefits of laser ar
	1.5 Identify ***safety measures re*** laser hair reduction.
	1.6 Identify ***safety measures re*** staff during treatments.
2 Set up equipment to ensure client safety.	2.1 Review and follow relevant legislation, regulations or st laser equipment.
	2.2 Set up and take down equip data sheets and ***workplace l***
	2.3 Check for biomedical engin
	2.4 Organise regular ***preventive*** according to workplace pro
	2.5 Operate ***control panel*** on eq instructions.
	2.6 Clean and store laser equipr and workplace procedures.

3 Provide and document safe client preparation and care procedures.	3.1 Complete clinical ***procedur*** federal, state or territory, an workplace policies and proc
	3.2 Provide and document pre-t client understanding.
	3.3 Document types and details
	3.4 Document types of equipme
4 Provide safe care to clients and staff during treatments.	4.1 Identify ***potential hazards*** v
	4.2 Ensure equipment is operati instructions.
	4.3 Monitor window coverings and local legislation and wo
	4.4 Remove potentially flamma
	4.5 Check fire extinguisher to e
	4.6 Prepare treatment area cons
	4.7 Provide protective eyewear area.
	4.8 Comply with environmenta masks, and smoke evacuatio and workplace procedures.
	4.9 Ensure ***safe ventilation*** for

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

The following skills must be assessed as part of this unit:

- communication skills to:
  - convey pre-treatment advice to clients
  - use language and concepts appropriate to cultural differences
  - introduce clients to light therapy hair reduction treatments
  - liaise and negotiate with colleagues
- literacy skills to:
  - read relevant standards, regulations, guidelines, workplace safety documents and manufacturer instructions on equipment use and maintenance
  - ensure work practices comply with required standards
- numeracy skills to comprehend the units of measurement related to laser and IPL apparatus
- initiative and enterprise skills to implement safety procedures in treatment areas.

Required knowledge

The following knowledge must be assessed as part of this unit:

- physics of light, including:
  - energy forms
  - electromagnetic spectrum
  - optical region of the electromagnetic spectrum
  - wavelengths
  - characteristics of a wave
- operational characteristics of lasers, including:
  - generation of laser beam and propagation of light
  - characteristics of laser beams
  - properties of different types of lasers
  - optical pathways
  - delivery systems and applicators used for hair reduction
- how light energy interacts with skin and hair
- laser controls, such as:
  - power settings
  - pulse settings
  - time settings
  - emergency control
  - delivery systems

    - ionising and non-ionising radiation
- operational characteristics of IPL apparatus, including:
    - programmable systems
    - basic set up (manual choice)
    - powerful systems
    - significantly lower power systems
    - common differences in systems imported from China, Europe, US and Israel
    - chilled sapphire or similar optical substance head
    - non-chilled sapphire head
    - non-laser light source
    - characteristics of flashlamp
    - capacitors - free discharge or partial discharge
    - different filters
    - properties of IPL equipment
- parameters that effect the delivery of light, including:
    - spectrum of delivered wavelengths as determined by cut-off filters
    - number of delivered pulses, including single and multiple pulsed shots
    - pulse duration in milliseconds
    - delay between pulses in milliseconds
    - delivered fluence
    - laser hazards
    - particular hazards of delivery systems, including:
        - ocular and skin hazards
        - client-specific hazards
        - reflected beam hazards
        - fire, explosion, electrical and environmental hazards
- current standards, regulations and guidelines relating to:
    - laser classification and hazard analysis
    - audit of laser facilities
    - examples of safe practice and programs
    - equipment inspection (quality assurance) protocols
    - investigation and management of laser accidents or incidents
    - eye protection and protective eyewear
    - potential for fire and explosion and protection against flammability hazards
    - management of airborne contaminants (laser plume)
    - electrical safety laser controlled treatment areas, including designation, warning signs, entry controls, and control of access to the laser
    - general rules in a laser treatment area
    - safety of laser products
    - equipment classification

- safe use of laser equipment
- laser hazards, including beam hazards and non-beam hazards
- risk and hazard management
- risk assessment
- hierarchy of hazard control:
  - engineering controls
  - administration controls
  - personal protective equipment
  - quality assurance testing and preventive maintenance
  - safe work practices.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- identifying hazards, analysing the clinical environment and participating in the development, implementation and maintenance of safe practices and risk control for selected hazard types in a laser or IPL clinical treatment area
- applying knowledge of relevant standards, guidelines, workplace policies and procedures relating to safe use of IPL and laser apparatus for hair reduction
- implementing safe practice protocols in relation to:
  - setting up equipment
  - maintaining equipment
  - client preparation and care
- completing and storing required documentation relating to clinical procedures checklists and records.

Context of and specific resources for assessment

Assessment must ensure:

- that competency is consistently demonstrated over a period of time and observed by the assessor or a technical expert working in partnership with the assessor as described in the Assessment Guidelines
- that competency is demonstrated in a fully equipped simulated laser or IPL hair reduction clinical workplace in a range of real work situations which may include interruptions and involvement in other related activities normally expected in the workplace.

Assessment must ensure access to:

- a laser clinical treatment area, which includes as a minimum:
  - radiation warning signs stating 'warning laser in operation do not enter when light above door is illuminated'
  - non-flammable screens fitted inside any windows to protect a person outside window from non-ionising radiation levels greater than maximum permissible exposure from radiation

- ventilation designed to ensure that infective agents are not passed downstream in air handling or exhaust system
- fire extinguishing equipment, such as fire extinguishers, fire blankets and wet cloth drapes

- IPL and laser equipment which, when energised, is capable of emitting an amount of non-ionising radiation higher than accessible limit for a Class 3B laser for relevant period stated in, and measured in accordance with, laser standards AS2211 (i.e. a Class 4 laser or equivalent in the case of IPL)
- cosmetic laser equipment that may include one or more of the following:
  - normal mode alexandrite
  - ruby
  - diode
  - Nd:Yag
- IPL equipment that must have one or more of the following characteristics:
  - programmable
  - manual
  - multiple pulsed shots
  - single pulsed shots
  - chilled sapphire head
  - one or minimal choice of filters
  - multiple filters
- a treatment area, which includes:
  - a magnifying lamp
  - eye protection equipment for clients and operators
  - disposable operator masks
  - cooling after-treatment products
  - manufacturer instructions and safety data sheets
  - laser safety protection plan
- a range of clients with different Fitzpatrick skin types seeking hair reduction on a variety of areas on the face and body
- current safety and environmental standards, guidelines workplace policies, procedures documentation regarding IPL and laser safety.

For further guidance on the use of an appropriate simulated environment, refer to the Assessment

Guidelines in this Training Package.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct observation of learners performing a range of tasks over sufficient time to demonstrate handling of a range of contingencies, including:
  - setting up and taking down equipment
  - organising preventive maintenance
  - completing clinical procedures checklists
  - providing and documenting safe client care procedures
  - identifying potential hazards
  - complying with treatment environment safety procedures
- written and oral questioning appropriate to the language and literacy level of the learner, to assess the required skills and knowledge of this unit
- third-party reports from technical experts.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SIBBHRS707A Provide intense pulsed light and laser hair reduction treatments.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Types of equipment may include:

- laser systems, such as:
  - normal mode alexandrite
  - ruby
  - diode
  - Nd:Yag
- IPL systems with some of the following characteristics:
  - programmable
  - manual
  - multiple pulsed shots
  - single pulsed shots
  - chilled sapphire head
  - one or minimal choice of filters
  - multiple filters.

Risks may include:

- incomplete hair removal or regrowth
- darkening of the skin (hyperpigmentation)
- lightening of the skin (hypopigmentation)
- blistering and scarring
- changes in the skin texture
- crusting or scabbing
- hair changes.

Safety measures required to protect clients may include:

- pre-treatment patch testing
- adequate eye protection
- filtering and exhausting airborne contaminants
- adequate ventilation.

Safety measures required to protect operators may include:

- adequate eye protection
- wearing masks
- adequate ventilation
- appropriate draping of areas surrounding treatment site.

Workplace laser safety procedures may include:

- laser safety protection plan addressing:
  - access to laser treatment areas
  - flammability hazard and fire safety

	• handling of fibre optic delivery systems • laser-generated airborne contaminants • ocular safety.

Preventive maintenance must include:	• documentation, including:
	  • relevant equipment safety standards
	  • equipment service history
	  • schedule for recommended testing and maintenance
	• regular testing.

Control panel may include:	• power settings • pulse settings • time settings • emergency control • delivery systems.
Procedures checklists and records may include:	• pre-treatment • intra-treatment • post-treatment • monthly • six-monthly.
Potential hazards may include:	• particular hazards of delivery systems • ocular and skin hazards • client-specific hazards • reflected beam hazards • fire, explosion, electrical and environmental hazards.
Safe ventilation may include:	• exhaust systems • filters • masks.

Unit Sector(s)

Beauty

Competency Field

Hair Reduction Services