



**Australian Government**

# **HLTOTH002 Modify casts**

**Release: 1**

# HLTOTH002 Modify casts

## Modification History

No equivalent unit.

## Application

This unit of competency describes the performance outcomes, skills and knowledge required to modify casts.

The unit applies to orthopaedic technologists who work in healthcare settings, including operating theatres, emergency department, wards and out of care client departments.

Work is performed at the request of, and in consultation with, medical staff. Simple modifications, which do not alter the intent of the cast or splint, may be performed at the technician's discretion. Some discretion and judgement are required, and individuals take responsibility for the quality of their outputs.

All activities are carried out in accordance with organisational policies, procedures and infection control guidelines.

The skills in this unit must be applied in accordance with Commonwealth and State or Territory legislation, Australian standards and industry codes of practice.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Competency Field

Orthopaedic Technology

## Unit Sector

Health

## Elements and Performance Criteria

### ELEMENTS

*Elements describe the essential outcomes*

### PERFORMANCE CRITERIA

*Performance criteria describe the performance needed to demonstrate achievement of the element.*

1. Prepare to modify cast.
  - 1.1. Receive and interpret cast modification instructions in referral documentation and seek clarification if required.
  - 1.2. Identify safety hazards and risks, assess risks and implement risk control strategies to minimise risks to client and self.
  - 1.3. Perform hand hygiene and use personal protective equipment (PPE) according to work health and safety and infection control procedures.
  - 1.4. Source information through delegated subjective and clinical assessments to determine client condition, individual needs, to identify precautions and potential complications.
  - 1.5. Provide relevant and timely feedback including liaising with medical practitioner for conditions requiring immediate review.
  - 1.6. Liaise with healthcare team to discuss subjective and objective findings and confirm instructions.
  - 1.7. Explain cast modification procedure to client, provide opportunities to ask questions and discuss areas of concern.
  - 1.8. Obtain client consent to proceed with cast modification.
2. Apply cast modification techniques.
  - 2.1. Assemble equipment and materials and inspect to confirm it is clean and in working order in accordance with manufacturer specifications.
  - 2.2. Communicate with clients in a caring and respectful manner.
  - 2.3. Monitor client to identify and manage client anxiety.
  - 2.4. Position client for correct anatomical positioning of limb and confirm client comfort and safety.
  - 2.5. Refresh and maintain clean skin.
  - 2.6. Select and use equipment, materials and cast modification techniques to maintain and correct soft tissue and fracture position according to instructions.
  - 2.7. Check and confirm cast modification to meet instructions and individual client needs.

- |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. Undertake post modification procedures. | 3.1. Check neurovascular status of limb to confirm within normal limits.<br>3.2. Fit prescribed aid as required for client condition and instruct in use, including adhering to relevant weight bearing restrictions.<br>3.3. Review client for safe and correct use of the aid.<br>3.4. Provide written and verbal advice for care of cast and limb according to referral from the healthcare team and discuss client concerns.<br>3.5. Identify and report client self-management concerns to healthcare team and arrange support within limitations of job role.<br>3.6. Complete clinical records according to documentation procedures. |
| 4. Clean working environment.              | 4.1. Remove PPE and perform hand hygiene according to work health and safety and infection control procedures.<br>4.2. Dispose of waste according to waste management procedures.<br>4.3. Clean, sanitise and store equipment according to manufacturer specifications.<br>4.4. Clean work surfaces according to infection control procedures.                                                                                                                                                                                                                                                                                               |

## Foundation Skills

*Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.*

| SKILLS                        | DESCRIPTION                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oral communication skills to: | <ul style="list-style-type: none"> <li>ask open and closed questions and actively listen to determine and meet needs of client</li> <li>communicate with people from diverse backgrounds</li> <li>manage conflict.</li> </ul> |
| Numeracy skills to:           | <ul style="list-style-type: none"> <li>read, use and discuss spatial and measurement information in referrals, x-rays, CT scans and MRI scans.</li> </ul>                                                                     |
| Teamwork skills to:           | <ul style="list-style-type: none"> <li>collaborate and cooperate with multidisciplinary teams and healthcare professionals.</li> </ul>                                                                                        |

Technology skills to:

- access and record clinical records and referrals.

## Unit Mapping Information

No equivalent unit.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

## Assessment Requirements for HLTOTH002 Modify casts

### Modification History

No equivalent unit.

### Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- modify one of each of the following casts:
  - split cast
  - bi-valve cast
  - cut windows
  - trim casts
  - re-pad casts
  - reinforce casts
  - heel wedges
  - wedging a cast
  - converting including completion and addition.

The modification of each of the above must include:

- interpreting referrals, sourcing information, liaising with the healthcare team and following instructions within the healthcare setting
- reviewing, treating, advising and referring clients:
  - paediatrics
  - adults
- selecting, using and maintaining equipment:
  - arm, knee and buttock block
  - benders and cast breakers
  - cast bracing equipment
  - eye protection equipment
  - goniometer
  - hearing protection
  - plaster trap
  - saw with vacuum
  - scissors
  - shears
  - spreaders
  - tape measure

- vice
- selecting and using materials:
  - abduction bars
  - bandages
  - cast shoes
  - dry dressing
  - felts, foams and padding
  - hinges
  - plaster
  - quadrilateral bucket
  - stockinettes
  - strapping
  - synthetic materials including fibreglass
  - tapes
  - undercast padding
- selecting and using aids:
  - ambulation aides
  - gait aides
  - heel
  - overshoes
  - sling
- documenting clinical records.

## Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- procedures relevant to cast modification:
  - client confidentiality and privacy
  - client consent
  - duty of care
  - infection control
  - inventory
  - work health and safety
- role and responsibilities and boundaries of responsibilities relevant to cast modification
- anatomy and physiology relevant to cast modification
- methods for interpreting radiological findings and features of x-rays, CT scans and MRI scans relating to casts and the presenting condition
- conditions for referral of clients for immediate review by a medical practitioner:
  - evidence of infection

- Deep Vein Thrombosis (DVT)
- Complex Regional Pain Syndrome (CRPS)
- intense localised pain
- neurovascular status outside normal limits
- wound breakdown and deterioration
- individual client needs:
  - developmental stage including paediatrics and adults
  - in clients and out clients
  - functional requirements and restrictions
  - mobilisation difficulties and restrictions
  - level of anxiety
  - physical anomalies
  - religious and cultural beliefs
  - environment and climate
- pathology and assessment of client conditions:
  - allergies
  - mechanism of injury
  - interference
  - non-union fracture
  - oedematous extremity
  - wires, pins, external fixatures and surgical wounds
  - medical history and co-morbidities
  - skin condition including oedema, blisters, pressure areas, broken skin, fragile skin and wound breakdown
- precaution types, characteristics and resolution:
  - loss of fracture position
  - loss of soft tissue position
  - pressure area prevention due to modification
- complication types, characteristics and resolution:
  - pressure areas including tissue necrosis
  - foreign objects in casts
  - splints
  - cast breakdown
  - cast migration due to loss of tissue bulk
  - compromising related injury
  - fracture blisters
  - loss of movement and function
  - malalignment of bone
  - neurovascular complications including poor capillary refill and altered sensation
  - nerve damage

- infection
- reduced range of movement and function of joint
- secondary infection
- wound breakdown
- purpose of cast modification
- cast modification techniques:
  - anatomical positioning
  - protective cover for broken skin with aseptic technique
  - split cast
  - bi-valve cast
  - cut windows
  - trim casts
  - re-pad casts
  - reinforce casts
  - heel wedges
  - converting including completion and addition
- cast material purpose, selection and safe use:
  - abduction bars
  - bandages
  - cast shoes
  - dry dressing
  - felts, foams and padding
  - hinges
  - plaster
  - quadrilateral bucket
  - stockinettes
  - strapping
  - synthetic materials including fibreglass
  - tapes
  - undercast padding
- cast modification equipment purpose, selection, safe use and maintenance:
  - arm, knee and buttock block
  - benders and cast breakers
  - eye protection equipment
  - goniometer
  - hearing protection
  - plaster trap
  - saw with vacuum
  - scissors
  - shears

- spreaders
- tape measure
- vice
- aid purpose, selection and safe use:
  - ambulation aides
  - gait aides
  - heel
  - overshoes
  - sling
- medications relevant to cast modification and future care
- types of client advice:
  - cast care and warnings
  - limb care and neurovascular warnings
  - mobilisation exercises and routines
  - oedema control
  - fitness to drive
  - weight bearing status
  - safe use of gait aides
- clinical record requirements
- medical terminology relevant to cast modification.

## Assessment Conditions

Skills must be demonstrated in a real workplace with real patients in a clinical environment with the addition of simulations and scenarios with real people where the full range of contexts and situations cannot be provided in the workplace.

Where simulation is used, it must reflect real working conditions in a clinical environment by modelling industry operating conditions and contingencies, as well as using suitable facilities, equipment and resources.

Assessment must ensure use of:

- procedures relevant to cast modification
- clients listed in the Performance Evidence
- equipment listed in the Performance Evidence
- materials listed in the Performance Evidence
- aids listed in the Performance Evidence
- personal protective equipment (PPE)
- manufacturer's instructions for all equipment and materials.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors; and have current clinical experience working as an Orthopaedic Technologist or Technician providing services to the general public.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>