



Australian Government

HLTOTH001 Apply casts

Release: 1

HLTOTH001 Apply casts

Modification History

No equivalent unit.

Application

This unit of competency describes the performance outcomes, skills and knowledge required to apply 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. 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 apply cast.
 - 1.1. Receive and interpret cast application 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 application procedure to client, provide opportunities to ask questions and discuss areas of concern.
 - 1.8. Obtain client consent to proceed with cast application.
2. Apply cast application 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 casting techniques to fabricate cast according to instructions.
 - 2.7. Fit cast to achieve correct cast moulding and joint position and according to instructions.
 - 2.8. Check and confirm fit and functionality of cast to meet instructions and individual client needs.

3. Undertake post application procedures.
 - 3.1. Check neurovascular status of limb to confirm within normal limits.
 - 3.2. Fit prescribed aid as required for client condition and instruct in use, including adhering to relevant weight bearing restrictions.
 - 3.3. Review client for safe and correct use of the aid.
 - 3.4. Provide written and verbal advice for care of cast and limb according to referral from the healthcare team and discuss client concerns.
 - 3.5. Identify and report client self-management concerns to healthcare team and arrange support within limitations of job role.
 - 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.
 - 4.2. Dispose of waste according to waste management procedures.
 - 4.3. Clean, sanitise and store equipment according to manufacturer specifications.
 - 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:	- ask open and closed questions and actively listen to determine and meet needs of client - communicate with people from diverse backgrounds - manage conflict.
Numeracy skills to:	read, use and discuss spatial and measurement information in referrals, x- rays, CT scans and MRI scans.
Teamwork skills to:	collaborate and cooperate with multidisciplinary teams and healthcare professionals.

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 HLTOTH001 Apply 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:

- perform the activities outlined in the performance criteria of this unit during a period of at least 400 hours of work related to casting or applying orthopaedic devices in a clinical workplace environment. This 400 hours may be applied collectively across all units of competency that include the requirement for workplace hours for the purposes of assessment, including carrying out each of the following on at least one occasion:
 - interpreting referrals, sourcing information, liaising with the healthcare team and following instructions within the healthcare setting
 - applying casts:
 - below elbow including full casts, back slabs, gutter casts, strapping for radial, wrist, metacarpal and finger fractures
 - splints, Plaster of Paris (POP), fibreglass, low temperature, thermoplastics
 - above elbow including full casts, back slabs, cylinder casts, forearm fractures and elbow dislocations
 - humeral hanging casts and U slabs
 - above knee casts
 - lower limb cylinder casts
 - below knee casts for ankle and foot fractures and Achilles tendon repairs
 - patella tendon bearing casts
 - cast braces
 - reviewing, treating, advising and referring clients:
 - paediatrics
 - adults
 - assisting with applying the following casts that may be simulated on real people if required:
 - Developmental Dysplasia Hip (DDH)
 - Ponseti casting
 - serial casting
 - sugar-tong casts and Position of Safe Immobilisation (POSI)
 - positional function
 - 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
 - stockinette's
 - 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 application:
 - client confidentiality and privacy
 - client consent

- duty of care
- infection control
- inventory
- work health and safety
- roles, responsibilities and boundaries of responsibilities relevant to cast application
- anatomy and physiology relevant to cast application
- 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)
 - 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:
 - areas of broken skin
 - conditions that result in a significant functional disability that may limit a person's ability to manage a cast
 - conditions that result in fragile skin
- complication types, characteristics and resolution:
 - pressure sores

- foreign objects in casts and splints
- cast breakdown
- cast migration due to loss of tissue bulk
- compromising related injury
- fracture blisters
- malalignment of bone
- neurovascular complications including poor capillary refill and altered sensation
- pressure areas
- nerve damage
- tissue necrosis
- infection
- reduced and loss of movement and function of joint
- secondary infection
- wound breakdown
- cast types and purpose:
 - fully circumferential
 - hip spica
 - slab including gutter slabs
 - split
 - bivalve
 - Developmental Dysplasia Hip (DDH)
 - Ponseti casting
 - serial casting
 - sugar-tong casts and Position of Safe Immobilisation (POSI)
 - positional function
- cast application techniques:
 - anatomical positioning
 - protective cover for broken skin with aseptic technique
 - below elbow including full casts, back slabs, gutter casts, strapping for radial, wrist, metacarpal and finger fractures
 - above elbow including full casts, back slabs, cylinder casts, forearm fractures and elbow dislocations
 - humeral hanging casts and U slabs
 - above knee casts
 - lower limb cylinder casts
 - below knee casts for ankle and foot fractures and Achilles tendon repairs
 - patella tendon bearing casts
 - total contact casting
- cast material purpose, selection and safe use:
 - abduction bars

- bandages
- cast shoes
- dry dressing
- felts, foams and padding
- hinges
- plaster
- quadrilateral bucket
- stockinette's
- strapping
- synthetic materials including fibreglass
- tapes
- undercast padding
- cast equipment purpose, selection, safe use and maintenance:
 - 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
- moulding of cast requirements:
 - absence of areas of pressure from cast
 - movement of limb is controlled
 - well fitted to limb
- knowledge of Charnley's 3-point moulding
- aid purpose, selection and safe use:
 - ambulation aides
 - gait aides
 - heel
 - overshoes
 - sling
- medications relevant to cast application 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 aides
- clinical record requirements
- waste management procedures to maintain clean working environment
- medical terminology relevant to cast application.

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 application
- clients listed in the Performance Evidence
- healthcare team 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>