



Australian Government

HLTENN059 Apply nursing practice in the hyperbaric environment

Release: 2

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Modification History

Release	Comments
Release 2	Release 2 HLTENN059 Apply nursing practice in the hyperbaric environment supersedes and is equivalent to Release 1 HLTENN059 Apply nursing practice in the hyperbaric environment. Updated: Mapping details and minor corrections.
Release 1	HLTENN059 Apply nursing practice in the hyperbaric environment supersedes and is equivalent to HLTENN027 Apply nursing practice in the hyperbaric environment.

Application

This unit describes the performance outcomes, skills and knowledge required to provide nursing care to a person undergoing hyperbaric treatment in a hospital or specialised facility with a hyperbaric chamber or unit.

Enrolled nurses working in hyperbaric nursing hold and apply specialised in-depth knowledge, integrate theory and practice, and make reliable clinical assessments and judgements.

This unit applies to enrolled nurses, registered with the Nursing and Midwifery Board of Australia (NMBA), seeking specialisation in enrolled nurse work that is carried out in consultation and collaboration with registered nurses, and under direct or indirect supervisory arrangements aligned to the NMBA regulatory authority legislative requirements.

The skills in this unit must be applied in accordance with Commonwealth and State/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

Enrolled Nursing

Unit Sector

Enrolled Nursing

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Work in the hyperbaric environment.

2. Contribute to comprehensive and specific assessment for hyperbaric treatment.

PERFORMANCE CRITERIA

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

- 1.1. Identify roles and responsibilities of members of the multidisciplinary health care team in the hyperbaric environment.
- 1.2. Identify potential and actual hazards in the hyperbaric environment and observe workplace health and safety requirements in own practice.
- 1.3. Identify rationale for pre-hyperbaric treatment safety checklists and participate in pre-hyperbaric treatment safety processes.
- 1.4. Identify potential causes of emergencies associated with the hyperbaric chamber and hyperbaric treatment and use methods to prevent emergencies.
- 1.5. Apply requirements of the hyperbaric chamber and locate main oxygen valve for situations and emergencies where the valve needs to be shut off.
- 1.6. Set up hyperbaric chamber equipment for treatments and solve problems during hyperbaric treatments.
- 1.7. Identify actual and potential contraindications to hyperbaric therapy for the person undergoing hyperbaric treatment and the multidisciplinary health care team.
- 1.8. Undertake annual hyperbaric medical and promote requirement with colleagues.
- 2.1. Perform nursing assessment using resources and tools specific to the hyperbaric unit in line with organisational policies and procedures.
- 2.2. Identify possible physical and psychological complications of hyperbaric treatment including contraindications based on findings of the assessment.
- 2.3. Evaluate physical, psychological and social impacts of hyperbaric treatment with the person, families and carers and ensure their knowledge is sufficient for informed consent.

- 2.4. Identify where acuity of a person exceeds own knowledge, skill or assessed competence and consult with multidisciplinary health care team.
3. Perform nursing interventions in the hyperbaric environment.
 - 3.1. Apply strategies for managing anxiety during hyperbaric therapy.
 - 3.2. Monitor and manage drainage tubes including interventions related to suction in the hyperbaric chamber at depth and at surface.
 - 3.3. Apply principles related to hyperbaric oxygen therapy when setting up and managing breathing system in the hyperbaric chamber.
 - 3.4. Perform wound management and record wound response to hyperbaric therapy and report to the multidisciplinary health care team.
 - 3.5. Respond to hyperbaric emergencies and toxicity in line with organisational policies and procedures.
 - 3.6. Analyse and problem solve to propose and implement nursing interventions to reflect changes in the condition in consultation with registered nurse.
 - 3.7. Evaluate nursing interventions and identified outcomes against evidence-based best practice in hyperbaric nursing care.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

HLTENN059 Apply nursing practice in the hyperbaric environment supersedes and is equivalent to HLTENN027 Apply nursing practice in the hyperbaric environment.

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 HLTENN059 Apply nursing practice in the hyperbaric environment

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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 nursing interventions for three different people undergoing a session of hyperbaric therapy in the workplace

The tasks must be undertaken in accordance with the Nursing and Midwifery Board of Australia (NMBA) professional practice standards, codes and guidelines.

Knowledge Evidence

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

- Australian Standards applicable for work in compressed air and hyperbaric oxygen facilities
- basic structure and internal layout of a hyperbaric chamber
- common dive tables for hyperbaric treatment and their indications
- common treatment profiles for hyperbaric therapy and their indications
- conditions indicated and contraindicated for hyperbaric therapy treatment and the mechanisms of therapeutic benefit
- educational resources and professional organisations associated with hyperbaric therapy
- emergencies associated with the hyperbaric chamber and treatment:
 - fire inside the chamber

- fire outside the chamber
- emergency decompression
- explosive decompression
- uncontrolled compression
- power failure
- communication failure
- chamber atmospheric contamination
- isolation emergency including actual and potential violence
- hyperbaric chamber treatment:
 - the chamber and sequence of events that occur during treatment
 - air equalisation observation techniques
 - strategies for managing an anxious patient during hyperbaric treatment
 - prohibited items in the chamber
 - clothing for treatments
 - complications
 - location of main oxygen valve and how to shut off
 - maintaining hyperbaric chamber cleanliness
 - fire and medical emergency procedures
- symptoms of hyperbaric central nervous systems (CNS) toxicity and actions in response to the symptoms.
- indications for hyperbaric therapy:
 - decompression sickness
 - carbon monoxide poisoning
 - smoke inhalation
 - osteoradionecrosis
 - selected wound healing
 - mixed non-aerobic and aerobic infections
 - air and gas embolism
 - osteomyelitis and refractory
 - gas gangrene and clostridial myonecrosis
 - soft tissue radio-necrosis
 - crush injuries and compartment syndrome
 - compromised skin grafts and flaps
 - thermal burns
 - blood loss
 - spider bites
- legislative requirements for practice
- complications of hyperbaric therapy:
 - cardiac arrest and airway management
 - hypoglycaemia

- oxygen toxicity including CNS and pulmonary
- isolation emergency including actual and potential violence
- pneumothorax
- claustrophobia
- sinus and dental barotrauma
- lung barotrauma
- physiological effects of increased atmospheric pressure on the human body and of breathing 100 per cent oxygen, hyper oxygenation, helium and mixed gases under hyperbaric conditions
- rationale for annual staff hyperbaric medicals
- contraindications for hyperbaric therapy:
 - pulmonary function tests
 - tissue perfusion tests
 - excessive alcohol intake
 - dehydration
 - asthma
 - anxiety states or claustrophobia
 - dental work in the previous 24 hours
 - strenuous exercise before and after therapy
 - flying within 24 hours of treatment
- anatomy, physiology and pathophysiology related to hyperbaric issues sufficiently in-depth and specialised to make judgements and to make professional contributions to hyperbaric nursing care
- screening procedures to identify suitability for hyperbaric treatment
- considerations for paediatric persons
- theories of physics as they relate to hyperbaric treatments including:
 - Boyle's law
 - Charles's law
 - Henry's law
 - Dalton's law.

Assessment Conditions

To be eligible to apply for registration as an enrolled nurse and to practice in Australia, each applicant must complete a Diploma of Nursing program accredited by the Australian Nursing and Midwifery Accreditation Council (ANMAC) and approved as 'an approved program of study' by the Nursing and Midwifery Board of Australia (NMBA) in accordance with the Enrolled Nurse Accreditation Standards.

For more detail visit <https://www.ahpra.gov.au>.

Skills must be demonstrated in the workplace or in a simulated environment as specified in the performance evidence that model industry operating conditions including access to real people for simulations and scenarios in enrolled nursing work.

Assessors must satisfy the Standards for Registered Training Organisations' requirements for assessors.

Assessors must also hold current registration as a registered nurse with the Nursing and Midwifery Board of Australia (NMBA).

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