Australian Government

Department of Education, Employment and Workplace Relations

HLTAMBAS604B Conduct advanced clinical assessment

Release: 1

HLTAMBAS604B Conduct advanced clinical assessment

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the specialised knowledge of pathophysiology and pharmacology required to use advanced techniques to clinically assess a client in the ambulance setting.

Application of the Unit

Application

The knowledge and skills specified in this unit are typically required by a person involved directly in the provision of advanced clinical care at the level of an intensive care paramedic in a state or territory ambulance service.

The unit involves application of specialised knowledge of pathophysiology and pharmacology for advanced clinical assessment and client care.

The application of knowledge and skills described in this competency unit relate to functioning independently to plan and practise advanced client assessment within relevant state/territory clinical practice and application of skills guidelines.

Successful assessment of the essential knowledge described in this competency unit (and its co-requisite) is required before undertaking independent client assessment and delivery of care at the level of skill described.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Pre-requisite units

This unit must be assessed after successful achievement of pre-requisites:

- HLTAMBAS501B Conduct clinical assessment
- HLTAMBCR401B Deliver basic clinical care
- HLTAMBCR502B Deliver standard clinical care

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Apply *pathophysiological concepts* to assess client's body system function	1.1 Apply a specialised knowledge of *fluid and electrolyte imbalance* to the client's health status 1.2 Demonstrate a specialised knowledge of *acid base imbalance* to the client's health status

ELEMENT	PERFORMANCE CRITERIA
2. Identify any variations from *homeostasis* when assessing a client's physical health status	2.1 Utilise a *specialised knowledge of homeostasis* to the assessment of normal function of body systems 2.2 Demonstrate a specialised knowledge to identify a range of signs and symptoms of variations from homeostasis using *standard methods and protocols* 2.3 Apply a specialised knowledge of variations to cellular metabolism when assessing client for *poor states of perfusion*
3. Conduct assessment of clients with *specific conditions, disorders and injuries* utilising *advanced techniques*	3.1 Integrate a wide-ranging knowledge of *pathophysiological concepts* with assessment data and principles of management for specific conditions, disorders and injuries 3.2 Evaluate the need for and potential impact of *advanced treatment*(*s*) on client's health status 3.3 Establish the need for *drug and/or fluid therapies* and their potential impact on client's health status 3.4 Exercise *critical analysis* to scene findings to facilitate treatment strategies 3.5 Employ *diagnostic reasoning* to determine the potential for injury or illness

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- Specialised anatomical, physiological and pharmacological terminology
- Advanced concepts underpinning human anatomy and physiology, including:
  - human life processes
  - homeostasis and the relationship between cellular imbalance and pathology
- Advanced concepts underpinning pharmacology, pharmacokinetics and pharmacodynamics
- Comprehensive understanding of pathology to the structure, physiology and normal functioning of all body systems, in relation to potential impact of client assessment procedures practised including:
  - chemical composition
  - cells, tissues and organs
  - integumentary system
  - musculo-skeletal system
  - nervous system
  - the special and somatic senses
  - endocrine system
  - cardiovascular system
  - lymphatic system
  - immune system
  - respiratory system
  - digestive system
  - urinary system
  - reproductive system, pregnancy and human development
- Specialised knowledge of fluid, electrolyte and acid base balance
- Specialised knowledge of pharmacological processes and drug actions, indications and

REQUIRED SKILLS AND KNOWLEDGE

contraindications

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Conduct a comprehensive advanced clinical assessment
- Describe in detail and articulate using appropriate and accurate terminology, the inter-relationships and associated pathophysiology of body systems, in relation to specific advanced client assessment procedures practised
- Explain the key factors necessary to re-establish healthy functioning body systems
- Identify variations from normal functioning and potential interactions between body systems and other internal and external factors
- Seek assistance from an appropriate medical authority in relation to variations from normal functioning

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

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

- Assessment must establish acquisition of Essential Knowledge across the Range Statement outlined in this unit prior to assessment of skills application
- Skills involving advanced client care are to be assessed initially in a simulated clinical setting (practical session, laboratory)
- As a minimum, initial assessment must include appropriate written/oral/practical examinations to address Essential Knowledge and Skills as outlined in this unit
- After successful completion of initial assessment, further assessment is to be conducted during workplace application under direct supervision
- The application of skills and knowledge described in this competency unit should be assessed in conjunction with competency unit(s) related to specific ambulance care services, including

EVIDENCE GUIDE

HLTAMB603A Deliver advanced clinical care

- Candidates must demonstrate their ability to apply essential knowledge and skills identified for this competency unit before undertaking independent workplace application
- Candidates must provide evidence of their ability to apply all clinical competencies consistently (over a minimum period of 4 months) as part of supervised clinical practice

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Related units: This unit should be assessed in conjunction with:

- HLTAMBCR603B Deliver intensive clinical care

Range Statement

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. Add any 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.

Pathophysiological concepts include:

- Cellular injury and change:
  - physical, chemical, and infectious agents
  - inflammatory process
  - hypertrophy, hyperplasia, atrophy, necrosis, and gangrene
  - tumour, neoplasm, benign, malignant, metastasis, and anaplasia
- Immunology:
  - immune response and immunoglobulins, including:
    - hypersensitivity
    - anaphylaxis
    - tissue rejection
    - blood mismatch
    - Acquired Immune Deficiency Syndrome
    - Hepatitis B
    - oncogenes
  - auto-immunity
  - malignant disease

RANGE STATEMENT

Fluid and electrolyte imbalance includes:

- 'Electrolyte', 'non electrolyte', 'solvent' and 'solute'
- Role of electrolytes
- Potential problems of electrolyte imbalance:
  - sodium, potassium, calcium, phosphate, magnesium and chloride
- Mechanisms of fluid movement through the body:
  - Tonicity
  - diffusion, active transport, osmosis, hydrostatic pressure, facilitated diffusion, and filtration
- Maintenance of normal fluid volume:
  - antidiuretic hormone, sodium, negative feedback, sex hormones and thirst
- Oedema
- States of fluid imbalance:
  - normovolaemia', 'hypovolaemia' and 'hypervolaemia'
  - burns, sweating, 3rd space shift, diarrhoea and vomiting

Acid base imbalance includes:

- pH, acidosis, alkalosis, physiological acidosis
- Physiological effects of acidosis and alkalosis
- Buffer systems and compensation
- pH imbalances:
  - Respiratory acidosis
  - respiratory alkalosis
  - metabolic acidosis
  - metabolic alkalosis

Advanced assessment includes: Capture, interpret and record comprehensive information regarding a client's health status to support advanced clinical care.

RANGE STATEMENT

Standard methods and protocols may include:

- Clinical practice guidelines
- Organisation protocols
- Skills manuals
- State/territory ambulance authority regulations and/or operational procedures
- Internationally recognised scales, charts, guidelines and surveys (e.g. Glasgow coma scale, dermatome charts, blood pressure reading scales, National Asthma Guidelines)

Pharmacodynamics includes but is not limited to:

- Drug interactions
- Pharmacological response of drugs associated with the state/territory ambulance service protocols/ guidelines
- Duration and magnitude of response associated with the state/territory ambulance service protocols/ guidelines

Critical questioning refers to:

- Purposeful, informed open questioning in the clinical setting to make sense of the information presented at the scene of injury or illness

Diagnostic reasoning refers to:

- Using critical questioning and interpretation in the clinical setting which requires careful identification of key problems, issues, and the risks involved in responding to client needs

Poor states of perfusion involves:

- Shock:
  - pathophysiology of shock
  - aerobic to anaerobic metabolism
  - classifications of shock
  - stages of shock

RANGE STATEMENT

Specific client conditions, disorders and injuries to be assessed must include but are not limited to:

- Burns:
  - burn classification
  - assessing burn area
  - potential systemic complications
  - assessment of time criticality
  - burns of different aetiology
- Head injuries:
  - types and causes of head injuries
  - primary and secondary injury
  - aetiology of head injuries including Monroe-Kellie doctrine
  - cerebral perfusion and blood flow
  - assessment of a client with a head injury
- Maxillofacial trauma:
  - levels of mortality and morbidity
  - specialised knowledge of associated structures
- Thoracic, abdominal and pelvic trauma:
  - detailed knowledge of internal and external thoracic, abdominal and pelvic structures
  - detailed assessment of blunt vs penetrating trauma
- Environmental:
  - cold and heat disorders
  - pressure disorders e.g. barotrauma
  - drowning and near drowning
  - lightning injuries
- Acute coronary syndrome:
  - progression of coronary artery disease
  - ischaemic disorders:
    - angina
    - unstable angina
    - Prinzmetal angina
  - myocardial infarction
  - heart failure
  - valvular disease
  - hypertensive emergencies
  - other cardiovascular emergencies, e.g. peripheral vascular disease, pericarditis and endocarditis
- ECG recognition:

RANGE STATEMENT

- specialised knowledge of cardiac conduction
- comprehensive ECG rhythm analysis
- 12 lead ECG capture and assessment:
  - axis determination
  - bundle branch and fascicular blocks
  - STEMI/non-STEMI
  - Infarct imposters

continued ...

RANGE STATEMENT

Specific client conditions, disorders and injuries to be assessed must include but are not limited to:
(*contd*)

- Visceral disorders:
  - specialised knowledge of the thoracic, pelvic, gastrointestinal and associated organs and related disorders
  - detailed knowledge of urogenital and reproductive disorders
- Special circumstances:
  - medico-legal and ethical considerations
- Neurological:-
  - diseases: e.g. dementia, ms, motor neurone, cerebral palsy,
  - behavioural emergencies
  - pathogenesis:
    - common pharmacolog
    - Infections e.g. meningitis, encephalitis, tetanus
  - Conditions: e.g. seizures and epilepsy, CVA, tumours, brain abscess
- Spinal injury:
  - Specialised knowledge of sensory and motor functions
  - Reflex arc e.g. autonomic dysreflexia
  - Cardio-vascular changes
  - Respiratory impairment
- Respiratory:
  - detailed knowledge of the respiratory system and its function e.g. mechanics of ventilation, inspiration and expiration, respiratory control and impact of gas laws
  - Ventilation perfusion (V/Q)
  - conditions and diseases e.g. asthma, chronic airways Limitation, pneumonia, PE, hyperventilation.
  - respiratory assessment
- Pain:
  - pain pathways and perception
  - physiological and psychological effects associated with pain
  - therapeutic effect of drugs e.g. narcotics, steroidals and non-steroidals, anxiolytics, anti-emetics, over the counter medications
  - pain assessment and documentation according to

RANGE STATEMENT

standard methods and protocols

- chronic pain management

RANGE STATEMENT

Specific categories of clients to be assessed must include but are not limited to:

- Adult client (male and female)
- Obstetric client:
  - specialised knowledge of foetal development:
    - foetal distress
    - neonatal physiology
    - congenital abnormalities
  - abnormal pregnancy:
    - pregnancy induced hypertension, gestational diabetes, eclampsia, ectopic pregnancy, hyperemesis gravidarum
    - threatened abortion, spontaneous abortion, supine hypotensive syndrome, ante-partum bleeding
    - pre-existing congestive cardiac failure, pre-existing hypertension, pre-existing diabetes
  - stages of labour
  - normal presentation:
    - pre/post haemorrhage
    - normal at-term infantt/premature infant
  - abnormal presentation:
    - multiple/breech/still birth
    - limb presentation
    - prolapsed cord
  - assessment of the newborn:
    - APGAR
    - post delivery treatment and evaluation
  - other obstetric problems and gynaecology:
    - post partum bleeding, dysmenorrhoea, menorrhagia, pelvic infections, displacement of pelvic organs, urinary problems, endometriosis
- paediatric client:
  - detailed knowledge of differences in paediatric and adult anatomy and physiology as related to assessment of the paediatric client
  - developmental stages of childhood e.g. psychosocial issues
  - issues surrounding paediatric assessment
  - specific paediatric conditions e.g. croup,

RANGE STATEMENT

epiglottitis, febrile convulsions

- geriatric client:
  - detailed knowledge of the normal anatomical and physiological changes associated with ageing as related to assessment of the geriatric client
  - pre-existing medical problems and pharmacology are considered

Unit Sector(s)

Not Applicable