



Australian Government

Department of Education, Employment and Workplace Relations

HLTTEC302C Use X-Ray support equipment

Release: 1

HLTTEC302C Use X-Ray support equipment

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit describes the competencies required to use and maintain support equipment necessary for performing diagnostic radiography

Application of the Unit

Application

Work will usually be performed within a prescribed range of functions involving known routines and procedures

Note:

- This unit of competency applies in Queensland only to health sector employees who do not have formal qualifications in diagnostic radiography and who are seeking, or have obtained, a licence under the Radiation Safety Act as approved by the Chief Executive, Queensland Health
- The licence applies to rural and remote areas as determined by the Chief Executive, Queensland Health, and is limited to the use of radiation apparatus for plain film radiography of the chest and extremities

This unit of competency does not apply to dental radiography

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

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. Use <i>X-ray support equipment</i> | 1.1 Use support equipment safely and correctly in accordance with organisation requirements, OHS and radiation safety guidelines
1.2 Position support equipment correctly
1.3 Clean support equipment regularly, and sterilise if required, in accordance with organisation requirements including infection control guidelines
1.4 Store support equipment in accordance with organisation requirements |
| 2. Use film identification devices | 2.1 Ensure all radiographs (X-ray films) are marked and identified in accordance with legislative requirements |

ELEMENT**PERFORMANCE CRITERIA**

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| 3. Use client positioning and protection devices correctly | 3.1 Use client positioning and protection devices in accordance with best practice principles as identified in the X-ray operator training course
3.2 Clean and disinfect client positioning and protection devices regularly |
| 4. Use grids and buckys | 4.1 Use grids and buckys in accordance with the organisation requirements, OHS and radiation safety guidelines
4.2 Store grids and buckys in accordance with organisation requirements and <i>manufacturer specifications</i> |

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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:

- A basic understanding of 'Recommendations for limiting exposure to ionising radiation (1995)'
- National standard for limiting occupational exposure to ionising radiation
- NHMRC and NOHSC publication
- Positioning techniques
- Radiographic radiation safety
- Working knowledge of an X-ray bucky (construction, components, function)
- Working knowledge of an X-ray cassettes and screens (construction, components, function, positioning)

REQUIRED SKILLS AND KNOWLEDGE

- Working knowledge of an X-ray grid (construction, components, function)
- Working knowledge of the cassette stand (construction, components, function,)
- Working knowledge of the various characteristics of X-ray support equipment for producing accurate diagnostic radiographs and minimising radiation dose ie client positioning, client restraints, radiation protection of clients/assistants/operators, film labelling/identification
- Working knowledge of the X-ray table (construction, components, function)
- Working knowledge of X-ray film (construction, function, appropriateness for test)

Essential skills:

It is critical that the candidate demonstrate the ability 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 the ability to:

- Apply problem solving skills to use available resources, prioritise workload and to communicate effectively in the range of client contact situations
- Apply the safe use of radiation in accordance with legislative requirements
- Correctly clean and store X-ray support equipment in accordance with legislative and organisation requirements
- Correctly use X-ray support equipment in accordance with legislative and organisation requirements
- Manual skills to correctly use X-ray support equipment
- Position the client appropriately and use the correct operational parameters
- Take into account opportunities to address waste minimisation, environmental responsibility and sustainable practice issues, including appropriate practices to ensure efficient use of resources
- Use numeracy skills ranging from the ability to complete basic arithmetic calculations such as addition, subtraction, multiplication, division to recording data
- Use oral communication skills as required to fulfil job roles in a safe manner and as specified by the organisation, including skills in:
 - asking questions
 - providing clear information
 - listening to and understanding workplace instructions
 - clarifying workplace instructions when necessary
 - literacy in English or a community language, depending on client group and organisation requirements
- Use reading and writing skills as required to fulfil job roles in a safe manner and as specified by organisation at a level of skill that may range from the ability to understand symbols used in OHS signs, to reading workplace safety pamphlets and procedure manuals, keeping maintenance records and following manufacturer specifications for

REQUIRED SKILLS AND KNOWLEDGE

equipment use and maintenance

- Use literacy support available in the workplace that may range from having access to support or assistance from radiographer, to having no communication supports available

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:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- This unit is most appropriately assessed in the workplace or in a simulated workplace setting under the normal range of workplace conditions
- Assessment may be conducted on one occasion but should include a range of clients, reflecting the diverse nature of those for whom service is provided in the workplace context
- A diversity of assessment tasks is also essential for holistic assessment

Context of and specific resources for assessment:

- Assessment should replicate workplace conditions as far as possible
- Resources essential for assessment include:
 - Radiation Safety Act 1999
 - Radiation safety and protection plan
 - X-ray machine operating manuals
 - Occupational health and safety guidelines
 - Procedures manuals
- Access to relevant workplace or appropriately simulated environment where assessment can take place

EVIDENCE GUIDE

Method of assessment may include:

- Written examination to assess theoretical and applied knowledge
- On-the-job or role play assessment of prescribed radiographic skills, in particular correct and appropriate use of the X-ray machine
- Observation of work activities
- Authenticated transcripts of relevant education / training courses

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 can be assessed independently
- However holistic assessment practice with other X-ray operation units of competency is encouraged

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.

X-ray support equipment may include:

- X-ray table
- Cassette stand
- X-ray cassettes and X-ray film
- Upright and horizontal buckys
- Stationary grids
- Film labeller
- Side markers
- Immobilisation devices (foam pads/wedges, sandbags)
- Radiation protection devices (lead rubber gowns, aprons, thyroid protectors, gloves and shields)

Manufacturers' specifications, organisation requirements and radiation safety guidelines may include:

- X-ray processor operators manual
- X-ray operator's license (for use of irradiating apparatus for diagnosis)
- Radiation Safety Act 1999
- Possession by the licensee of a radiation safety and protection plan.
- OHS guidelines
- Procedures manuals

Unit Sector(s)

Not Applicable