

CI.F.2019 Produce images using fluoroscopy

OVERVIEW

This standard is concerned with the examination of anatomical structures using fluoroscopy. This will be undertaken as part of a diagnostic and/or treatment process. The outcomes will be of sufficient quality to assist diagnosis and or treatment. This standard should be undertaken within the scope of your own role. Key people are those involved in the individual's care and others involved in provision of services. Users of this standard will need to ensure that practice reflects up to date information and policies. Version No 2

KNOWLEDGE AND UNDERSTANDING

You will need to know and understand:

1. legal, organisational and policy requirements relevant to your role, the role of others in your organisation and the activities being carried out
2. the relevant national and local standards, guidelines, policies and procedures that are available and how and when they should be accessed
3. the importance of respecting individuals' culture, privacy, dignity, wishes, beliefs and decisions
4. the limitations of your own knowledge and experience and the importance of operating within your scope of practice
5. the roles and responsibilities of other team members
6. the importance of obtaining valid consent in line with national and local guidelines
7. clinical appropriateness of the examination request and the action to take when the request is not appropriate
8. gross anatomy of the area being examined
9. physiological and pathological processes relevant to the area being examined
10. the medical terminology relevant to the examination including abbreviations
11. when standard and additional views are required to aid diagnosis and to enhance the examination
12. the range and safe use of contrast media and medicines in fluoroscopic examinations
13. the behaviour of contrast media and medicines and how this may affect images obtained and their interpretation
14. the clinical conditions appropriate for fluoroscopic examination
15. the clinical implications of any allergies relevant to the examination
16. the recognition of the variations of normal anatomy demonstrable by fluoroscopy and contrast media within your scope of practice
17. the recognition of abnormal anatomy demonstrable by fluoroscopy and x-ray contrast media and the significance of such abnormality within your scope of practice

- 18.manifestations of individuals' physical and emotional status
- 19.production, interactions and properties of x-rays
- 20.the harmful effects of radiation to the human body and use of radiation protection equipment
- 21.ways in which images can be captured, processed and permanently stored
- 22.how to adapt communication styles, ask questions, and listen carefully in ways which are appropriate for the needs of the individual
- 23.methods of communicating difficult and complex information to individuals and key people
- 24.the importance of providing individuals and key people with opportunities to ask questions and increase their understanding
- 25.the information that should be given to individuals before, during and on completion of the examination
- 26.the inter-relationship between Kilo Volt Peak (kVp) and Milliampereage (mA) and Time (seconds)
- 27.variables affecting exposure factors and how to manipulate exposure factors for the examination and the individual as appropriate
- 28.the technical and diagnostic quality requirements of the image
- 29.recognition of artefacts and their impact
- 30.factors which influence the decision to repeat images
- 31.equipment capabilities, limitations and routine maintenance including the quality control processes required by the operator
- 32.image manipulation and post processing
- 33.the importance of timely equipment fault recognition and local procedures for reporting these
- 34.contra-indicators to the procedure
- 35.the preparation of the individual, equipment and environment for fluoroscopic examinations
- 36.orientation and appropriate use of anatomical legends and electronic annotation
- 37.the range of techniques that may be used to optimise image quality and dose for the individual, including selection and provision of suitable projections, appropriate use of collimation and strategies to reduce dose to individuals and staff
- 38.the role of other imaging modalities and diagnostic investigations
- 39.relevant emergency procedures and the types and use of emergency equipment available
- 40.procedures relating to recording, collating and preparing appropriate information, documentation and images for transfer or storage according to local protocols
- 41.how to keep full, accurate and clear records in line with organisational procedures

PERFORMANCE CRITERIA

You must be able to do the following:

- 1.apply standard precautions for infection control and other appropriate health and safety measures
- 2.ensure all necessary preparations have been made by the individual and staff before starting the procedure
- 3.check and prepare the equipment required for the examination

- 4.ensure the environment is conducive to maintaining the privacy and dignity of the individual
- 5.check the identification details before commencing the procedure in accordance with local policies and procedures
- 6.communicate with the individual / key people to facilitate their understanding of and co-operation with the examination
- 7.establish the individual's capacity to understand the procedure with the help of key people if necessary
- 8.obtain valid consent for the procedure in accordance with national and local guidelines
- 9.respect the individual's privacy, dignity, beliefs and decisions
- 10.clearly explain the procedure and possible outcomes, including risk, benefits and limitations
- 11.check individuals of child-bearing potential for pregnancy or possible pregnancy, if appropriate to the examination, and take action in accordance with local protocols
- 12.confirm the status of key people before the examination and, where their presence is required, adhering to local guidelines
- 13.examine previous relevant images and clinical information, where available, to ensure that the correct procedure and techniques are employed
- 14.assess the individual's clinical and physical condition prior to the start of the examination with a view to proceeding
- 15.give the individual clear information on the possible after effects of the use of contrast media and medicines
- 16.position the individual and adjust their clothing according to the protocols for the examination to be performed in a manner which allows an optimal outcome to be achieved while:
 - 1.recognising the individual's need to retain their dignity and self respect
 - 2.ensuring his/her comfort as far as possible
 - 3.preventing the appearance of artefacts
- 17.position the imaging equipment appropriate to the examination technique with anatomical legends or electronic annotation correctly placed
- 18.apply, check and adjust appropriate exposure factors, collimation and radiation protection devices to minimise exposure to the individual whilst optimising diagnostic image quality
- 19.ensure the details of the individual are accurately recorded in the fluoroscopic equipment or if previously entered, check for accuracy
- 20.check the room prior to making the exposure to ensure that only essential, protected persons remain with the individual and that all local protocols have been adhered to
- 21.administer appropriate contrast media and medicines in accordance with the local protocols for the examination
- 22.seek confirmation that the individual is ready before the exposure is made and maintain communication with the individual/key people to facilitate their understanding and ensure their co-operation throughout the examination
- 23.observe the individual's condition and well-being at all times and take appropriate action
- 24.ensure that all dose reduction/protection processes have been employed
- 25.adjust the equipment to optimise the images for the purpose of the examination
- 26.monitor and accurately record the individual's exposure to ionising radiation throughout the procedure according to local protocols and local rules
- 27.capture permanent images where required and according to local guidelines for the examination
- 28.recognise where equipment malfunctions during the procedure and take appropriate action

- 29.check the identification of the images against associated documents
- 30.examine the images to ensure that the anatomical coverage is consistent with the examination request, the clinical information provided and local protocols
- 31.ensure the images are:
 - 1.correctly labelled with the individual's orientation and identification details
 - 2.are processed and inspected for satisfactory technical and diagnostic quality according to local guidelines and criteria
- 32.make a decision with the regard to the need to repeat any images or to take additional images to enhance the examination
- 33.following the preliminary imaging examination, inform to the appropriate person if an abnormality is observed on the image which is likely to require further investigation or treatment, following departmental protocols
- 34.provide the individual with information relating to the procedure and aftercare where necessary
- 35.explain the process for obtaining results
- 36.record, collate and prepare appropriate information, documentation and images for transfer or storage according to local protocols
- 37.verify that the images have arrived/been stored according to local protocols
- 38.recognise where help or advice is required and obtain this from appropriate sources

ADDITIONAL INFORMATION

This National Occupational Standard was developed by Skills for Health. This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):Dimension: HWB6 Assessment and treatment planning