

CI.A.2019 Produce conventional radiographic images for diagnostic purposes

OVERVIEW

This standard is concerned with the use of x-rays to produce conventional radiographic images for diagnostic purposes. Production of radiographic images 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. the gross anatomy of the area to be examined
9. physiological and pathological processes relevant to the area being examined
10. anatomical landmarks on the body that are relevant to radiographic imaging
11. the area to be imaged, its position and relationship, and normal appearances as seen on conventional radiographic images
12. common pathologies and normal variants of the area being examined
13. medical terminology relevant to the examination including abbreviations
14. positioning terminology including abbreviations
15. manifestations of individuals' physical and emotional status
16. production, interactions and properties of x-rays
17. the process involved in the formation of radiographic images
18. the harmful effects of radiation to the human body and use of radiation protection equipment

19. ways in which images can be captured, processed and permanently stored
20. how to adapt communication styles, ask questions, and listen carefully in ways which are appropriate for the needs of the individual
21. methods of communicating difficult and complex information to individuals and key people
22. the importance of providing individuals and key people with opportunities to ask questions and increase their understanding
23. the information that should be given to individuals before, during and on completion of the examination
24. methods of assessing and recording radiation dose
25. the inter-relationship between Kilo Volt Peak (kVp) and Milliampere (mA) and Time (seconds)
26. variables affecting exposure factors and how to manipulate exposure factors for the examination and the individual as appropriate
27. automatic exposure controls and which chambers to select for the examination
28. the technical and diagnostic quality requirements of the image
29. techniques and equipment required to optimise image quality for the area under examination
30. the recognition of artefacts and their impact
31. factors which influence the decision to repeat images or take additional views to aid diagnosis and to enhance the examination
32. the importance of timely equipment fault recognition and local procedures for reporting these
33. equipment capabilities, limitations and routine maintenance including the quality control processes required by the operator
34. types of x-ray equipment, images, image receptor systems that are suitable for imaging the different parts of the body
35. the positioning of the individual relevant to the examination
36. orientation and appropriate use of anatomical legends
37. procedures relating to recording, collating and preparing appropriate documentation, radiation doses and images for transfer or storage according to local protocols
38. 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. introduce yourself and other members of staff present during the examination
7. communicate with the individual / key people to facilitate their understanding of and co-

- operation with the examination
- 8.establish the individual's capacity to understand the procedure with the help of key people if necessary
 - 9.obtain valid consent for the procedure in accordance with national and local guidelines
 - 10.respect the individual's privacy, dignity, beliefs and decisions
 - 11.clearly explain the procedure and possible outcomes, including risk, benefits and limitations
 - 12.check individuals of child-bearing potential for pregnancy or possible pregnancy, if appropriate to the examination, and take action in accordance with local protocols
 - 13.confirm the status of key people before the examination and, where their presence is required, adhering to local guidelines
 - 14.position the individual and adjust their clothing according to the protocols for the examination which allows an optimal outcome to be achieved while:
 - 1.recognising the individual's need to retain their dignity and self respect
 - 2.ensuring their comfort as far as possible
 - 3.preventing the appearance of artefacts
 - 15.align the correct x-ray source/equipment and image receptor according to the appropriate examination technique, with anatomical legends correctly placed
 - 16.apply, check and adjust appropriate exposure factors, collimation and radiation protection devices to minimise exposure to the individual whilst optimising diagnostic image quality
 - 17.check the room prior to making the exposure to ensure that only essential, protected persons remain with the individual and that all local rules have been adhered to and take appropriate action if this does not occur
 - 18.seek confirmation that the individual is ready before the exposure is made
 - 19.maintain communication with the individual / key people to facilitate their understanding and co-operation throughout the examination
 - 20.observe the individual's condition and well-being at all times and take appropriate action should any adverse events occur
 - 21.process the image, ensure it is correctly labelled, including side marker and demographics
 - 22.inspect the image for satisfactory technical and diagnostic quality according to local guidelines and criteria
 - 23.make a decision with regard to the need to repeat any images, take additional images or undertake image post-processing to enhance the examination
 - 24.following the preliminary imaging examination, inform the appropriate person if an abnormality is observed on the image which is likely to require further investigation or treatment
 - 25.ensure safe and appropriate care for the individual on completion of the imaging episode
 - 26.provide the individual with information relating to the procedure and aftercare where necessary
 - 27.explain the process for obtaining results
 - 28.record, collate and prepare appropriate information, documentation, radiation doses and images for transfer or storage according to local protocols
 - 29.verify that the images have arrived/been stored according to local protocols
 - 30.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