
TASK INVENTORY FOR BONE DENSITOMETRY EQUIPMENT OPERATORS



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The Bone Densitometry Equipment Operator examination is based on the results of a comprehensive survey conducted by ARRT staff and the Bone Densitometry Practice Analysis Advisory Committee. In 2010 the ARRT surveyed a large, national sample of bone densitometry equipment operators to identify their job responsibilities. This document reflects the results of that job survey. The attached task inventory is the foundation for the content specifications.

Basis of Task Inventory

The practice analysis survey was used to identify the responsibilities typically required of bone densitometry equipment operators. When evaluating survey results, the Advisory Committee applied a 40% guideline. That is, to be included on the task inventory, an activity must have been the responsibility of at least 40% of operators surveyed. The committee could include an activity that did not meet the 40% criterion if there was a compelling rationale to do so (e.g., a task that falls below the 40% guideline but is expected to rise above the 40% guideline in the near future).

Application to Content Specifications

The purpose of the Bone Densitometry Equipment Operator Examination, which is made available to state licensing agencies, is to assess the knowledge and cognitive skills underlying the intelligent performance of the tasks typically required of operators of bone densitometry equipment. The content specifications identify knowledge areas underlying performance of the tasks on the task inventory. Every content category can be linked to one or more activities on the task inventory. Note that each activity on the task inventory is followed by a content category that identifies the section of the content specifications corresponding to that activity. The content specifications are available from ARRT's website (www.arrt.org) and appear in the *Bone Densitometry Equipment Operator Examination Handbook*.

Activity	Content Categories
1. Perform routine QC tests according to manufacturer guidelines.	B.4.
2. Inspect and interpret results of routine QC tests and determine need for corrective action.	B.4., B.6.
3. Arrange for corrective action or repairs based on the results of the QC tests.	B.4.
4. Perform in vivo precision.	B.4.
5. Troubleshoot mechanical problems of scanning equipment.	B.4.
6. Inspect equipment to make sure it is safe and operable (e.g., cables, cords, table pads).	B.4.
7. Perform software updates according to the manufacturer's instructions.	B.1.
8. Maintain the exam area for cleanliness and safety as set forth by OSHA.	B.4.
9. Answer basic questions put forth by the patient or family members (or refer them to the appropriate resources) concerning bone health, prevention, and nutrition.	A.
10. Explain procedure of the DXA exam including required positioning, duration, number of exams, and notification policy for results.	D.2., E.2., F.2.
11. Record patient history relevant to bone densitometry.	D.2., E.2., F.2.
12. Question female patients of childbearing age about possibility of pregnancy.	C.4.
13. Measure and record patient's current height and weight.	B.6.
14. Record patient's peak height.	B.6.
15. Ensure that artifact producing objects (e.g., zippers, buttons, jewelry) within scan area have been removed from the patient.	D.2., E.2., F.2.
16. Assist the patient on and off the table.	D.2., E.2., F.2.
17. Verify which site(s) to evaluate; position and immobilize using positioning aids.	D.1.-2., E.1.-2., F.1.-2.
18. Review scans and if necessary make changes to patient position or scan settings before re-scanning.	D.3.-5., E.3.-5., F.3.-5.
19. Review prior scans and reproduce patient positioning during follow up scan appointments and compare measurements to assess changes over time.	B.6., D.5., E.5., F.5.
20. Review scan results to identify bone density measurements that may be inaccurate due to artifacts, pathology, positioning, or technical problems and determine the need for corrective action.	D.4., E.4., F.4.
21. Utilize FRAX [®] tool to assess 10 year fracture risk.	B.5.
22. Maintain patient records to include the archiving, copying, deleting, and retrieving functions.	B.1.
23. Prevent all unnecessary persons from remaining in the area during x-ray exposure.	C.4.
24. Take appropriate precautions to minimize occupational x-ray exposure.	C.4.
25. Take appropriate precautions to minimize x-ray exposure to patient.	C.

Activity	Content Categories
26. Select appropriate exam modes and perform necessary scans.	B.2., C.
27. Perform bone densitometry scans using a pencil beam system.	B.3.
28. Perform bone densitometry scans using a fan beam system.	B.3.
29. Perform and analyze bone densitometry scans of the forearm.	D.
30. Perform and analyze bone densitometry scans of the lumbar spine PA utilizing DXA equipment.	E.
31. Perform bone densitometry scans of the spine – VFA (vertebral fracture assessment).	B.5.
32. Perform and analyze bone densitometry scans of the proximal femur utilizing DXA equipment.	F.