



North Dakota Medical Imaging and Radiation Therapy Board

PO Box 398 Bismarck, ND 58502 Phone: 701-425-0861

www.ndmirtboard.com Email: info@ndmirtboard.com

North Dakota State Bone Densitometry Equipment Operator (BDEO) Information

Note: This information is for NON-Imaging Individuals only (i.e.: nursing or research professionals) wishing to perform Bone Densitometry Imaging. If you currently hold a ND License in any of the (6) six Primary Modalities there is NO additional fee for you. The office only tracks this information. However, you do need to obtain 5 hours of CE during your ND licensure cycle pertinent to Bone Densitometry.

- Applicant must have arrangements in place to perform the clinical competency requirements ahead of time and inform the Board of what/where the facility will be utilized.
- The Board strongly encourages not to have more than one individual completing clinicals at a time, as this could cause too much competition in completing examinations in small low-volume department.

Competence in clinical practice for the Bone Densitometry Equipment Operator encompasses attributes of knowledge, problem solving, technical skills, comprehension, attitudes, and ethics. Conditional BDEO must demonstrate that their experience and education have resulted in a sufficient understanding of the knowledge, skills, and abilities required to provide safe and competent evidence-based densitometry services.

Upon satisfactory completion of the structured academic program and receiving the conditional license, the applicant should begin their practical Clinical Competency requirements in a timely manner. **Applicant must have arrangements in place to perform the clinical competency requirements ahead of time and inform the Board of what/where the facility will be utilized.**

Clinical Competency requirements MUST be completed within nine (9) months. *If there is valid evidence of a hardship completing the clinical requirements within 9 months the Conditional BDEO must contact the board office immediately with written explanations.*

*The Board strongly encourages NOT to have more than one individual completing clinicals at a time within a smaller facility, as this could cause too much competition in completing examinations in small, low-volume imaging department.

The Conditional BDEO may perform procedures/examinations only while under personal supervision by a ND licensed ARRT Registered Radiographer *or* a ND licensed currently practicing BDEO with three (3) years of experience.

- **The Conditional BDEO may ONLY perform Daily QC/scans (femur, lumbar spine, forearm, etc.) independently (not under personal supervision) after successfully completing the required number of scans of that particular scan region.**

The Conditional BDEO may obtain their clinical competencies at more than one facility if they choose, simply document each on the form provided.

With nine months to complete all clinical competency requirements, it is encouraged to make arrangements at a larger facility with a higher volume of procedures/examinations if you are employed at a smaller facility with a low volume of procedures/examinations. This is not a requirement from the Board, only encouragement to assist with your success of completion and compliance of the clinical competency requirements. The Board may conduct random audits of the submitted scans and Daily Quality Control logs.



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Specific Procedural Requirements:

**Mandatory and elective procedures cannot be counted on the same patient on the same day.*

Maximum of 10 mandatory and elective procedures may be logged for each day.

A. Mandatory Procedures

1) Daily Quality Control Procedures (20 documented)

Candidates must perform and interpret results of the required daily QC tests on DXA scanning equipment, according to manufacturer guidelines, at least 20 times.

2) Patient Scanning Utilizing Dual Energy X-Ray Absorptiometry (DXA) Equipment

- Spine (30 scans documented)
- Femur (30 scans documented)

Candidates must perform 30 scans of both the lumbar spine and femur. *If a patient is scanned at two or more anatomical sites, each scan can be counted as a separate occurrence. Dual proximal femur scans are considered one site. However, scanning the same site two or more times on a single patient the same day counts only as one scan. Scans must be performed on humans; scans of phantoms and other types of simulated tissue cannot be counted as scans.*

B. Elective Procedures

Candidates must complete **at least three of the following activities the number of times specified.** *Mandatory and elective procedures cannot be counted on the same patient on the same day.*

- | | |
|--|---------------|
| • Perform and analyze a DXA scan of the forearm | 4 Documented |
| • Perform and analyze scans for in vivo precision study | 1 Documented |
| • Perform and analyze a DXA scan on pediatric patients (age 5-19 years) | 1 Documented |
| • Perform a FRAX [®] assessment using an online FRAX [®] calculation tool | 10 Documented |
| • Perform follow-up scan and compare bone density measurements from two occasions (for same patient) to assess changes over time | 10 Documented |
| • Answer basic questions from patients or family members about lifestyle choices related to bone health, fall prevention, and drug therapies | 10 Documented |

Reminders for Clinical Competencies:

Clinical competency assessment/evaluation of the Conditional Bone Densitometry Equipment Operator by a ND licensed ARRT Registered Radiographer or a ND licensed currently practicing BDEO with three (3) years of experience should include the following:

- 1) Radiation protection
- 2) Proper explanation of the procedure
 - a. Obtain relevant patient history (including screening for possible pregnancy)
 - b. Assurance all artifact-producing objects removed
 - c. Verify the patient has not been subjected to procedures or medications that may invalidate the scan results (e.g., received contrast, prosthetic devices)
- 3) Proper Acquisition and Analysis:
 - a. Enter patient data required to utilize reference data & Record unusual positioning details
 - b. Select positioning aids and position patient
- 4) Evaluation of Results:
 - a. Verify regions of interest
 - b. Evaluate quality of measurements for problems due to artifacts, pathology, etc.
 - c. Recommend additional scans as necessary & Archive results
 - d. Flag values that require physician's attention (low T-score; unreliable results, etc.)



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Conditional Bone Densitometry Equipment Operator Practical Clinical Competency Documentation

These forms MUST be retained by the Conditional BDEO for five (5) years. (Form may be duplicated)

Full Name: _____ Date: _____
Last First M.I.

Address: _____
Street Address Apartment/Unit #

City State ZIP Code

Phone: _____ DOB: _____ Email: _____
(The Board staff will communicate with you at this email address, please check regularly.)

Mandatory Procedures:

Candidates must perform and interpret results of the required daily QC tests on DXA scanning equipment, according to manufacturer guidelines, at least 20 times. (Maximum of 10 mandatory and elective procedures may be logged for each day.)

Daily Quality Control Procedures (20 documented)

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer <i>or</i> ND licensed BDEO with 3 years' experience
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Patient Scanning Utilizing Dual Energy X-Ray Absorptiometry (DXA) Equipment

Candidates must perform 30 scans of both the lumbar spine and femur. *If a patient is scanned at two or more anatomical sites, each scan can be counted as a separate occurrence. Dual proximal femur scans are considered one site. However, scanning the same site two or more times on a single patient the same day counts only as one scan. Scans must be performed on humans; scans of phantoms and other types of simulated tissue cannot be counted as scans.* (Maximum of 10 mandatory and elective procedures may be logged for each day.)

Lumbar Spine (30 scans documented)

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer or ND licensed BDEO with 3 years' experience
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Femur (30 scans documented)

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer <i>or</i> ND licensed BDEO with 3 years' experience
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Elective Procedures

Candidates must complete **at least three of the following activities the number of times specified.**

Mandatory and elective procedures cannot be counted on the same patient on the same day.

- Perform and analyze a DXA scan of the forearm 4 Documented
- Perform and analyze scans for in vivo precision study 1 Documented
- Perform and analyze a DXA scan on pediatric patients (age 5-19 years) 1 Documented
- Perform a FRAX® assessment using an online FRAX® calculation tool 10 Documented
- Perform follow-up scan and compare bone density measurements from two occasions (for same patient) to assess changes over time 10 Documented
- Answer basic questions from patients or family members about lifestyle choices related to bone health, fall prevention, and drug therapies 10 Documented

(Maximum of 10 mandatory and elective procedures may be logged for each day.)

Elective Procedure, please list your chosen activity

Chose 1 of 3:

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer or ND licensed BDEO with 3 years' experience
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(Maximum of 10 mandatory and elective procedures may be logged for each day.)

Elective Procedure, please list your chosen activity

Chose 2 of 3:

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer or ND licensed BDEO with 3 years' experience
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(Maximum of 10 mandatory and elective procedures may be logged for each day.)

Elective Procedure, please list your chosen activity

Chose 3 of 3:

	DATE mm/dd/yr	Verified by: ND Licensed ARRT Registered Radiographer or ND licensed BDEO with 3 years' experience
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Please list ALL facilities and locations, if more than one, where the conditional BDEO performed their Clinical Competencies:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

REQUIRED: If more than one, signature of EACH verifying the competency of the Conditional BDEO, please included your ARRT credentials as applicable, ie: RT, CT, M or if a ND BDEO.

***Please PRINT name after signature, Board office must verify ND licensure.**

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

The Board may conduct random audits of the submitted Approved examinations to ensure compliance and competency.

This form must be retained by the Conditional BDEO and a COPY submitted to the Board Office after completion.

Disclaimer and Signature by Conditional BDEO:

All applicants please read and sign/date the statement below. All applications will be null and void unless properly signed and dated. I hereby submit this application and supporting documents and attest to the authenticity and accuracy of the application and all information contained herein. I further understand that if any information contained in this application or supporting documents submitted on my behalf, is determined to be false or misleading, this may be cause for denial, revocation or suspension of any license pursuant to this application and criminal prosecution and punishment.

Signature: _____ Date: _____



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Completion Agreement

This form must be completed, signed and submitted to the Board upon completion of the Clinical Competency requirements.

This agreement certifies that the Conditional BDEO has successfully completed the Clinical Competency requirements as established by the North Dakota Medical Imaging and Radiation Therapy Board.

This Certifies that

(Enter Name of Conditional BDEO)

In signing this Agreement, the Conditional Bone Densitometry Equipment Operator and their immediate supervising manager attest that all the practical clinical competency requirements have been fulfilled.

The Conditional BDEO is to retain their evaluation documentation for a period of five (5) years.

(Conditional BDEO signature)

(Immediate Supervising Manager signature)

Date