



Developing the Exam

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Each Certification Board of Nuclear Cardiology (CBNC) examination is developed in accordance with professional certification and testing industry standards. The process includes numerous quality control checks and the intensive involvement of volunteers and testing experts, totaling several hundred hours per examination. The examination development process includes several key phases.

Phase 1: Question-writing drive

The CBNC conducts an annual "drive" to obtain questions for the CBNC examination question pool. These drives are conducted by mail, including email. Participation in the question-writing drives is open to all CBNC (and CCNC) diplomates, as well as designated experts in the field. Each year experts from across the globe contribute questions that go into the question pool and are used in the exams.

Phase 2: Psychometric review of questions

Questions obtained during the drive undergo a psychometric review conducted by testing experts. These experts review each question to assess whether it appears to be an effective means of measuring examinees' knowledge.

Phase 3: Content expert review of questions

Once the psychometric review has been completed, CBNC's Examination Committee holds a day-long meeting to conduct a content expert review of the new questions. Since 2004, the European Council of Nuclear Cardiology (ECNC) has had official representation on this Committee.

This phase of the question-review process has four primary objectives:

- to evaluate the job-relatedness of the questions and their appropriateness for professionals with basic competence;
- to verify that the questions reflect core knowledge that is expected of all physicians performing nuclear cardiology procedures;
- to ensure that the incorrect options are plausible, but clearly wrong; and
- to accept or reject each question for the question pool.

Phase 4: Construction of draft examination

During Phase 4 of the examination development process, a draft examination is constructed in accordance with the domain weightings specified in the CBNC Examination Content Outline. The content outline is based on the results of a formal practice analysis study, which identified the professional responsibilities and knowledge required for the competent practice of nuclear cardiology.

Phase 5: Finalization of examination

Following the completion of Phase 4, the Examination Committee holds a second day-long meeting to review the draft examination. During this review, they consider the following questions:

- Are there any remaining ambiguities or inconsistencies in the questions and if so, how can these be resolved?
- Is the marked key the correct answer?
- Are all of the incorrect options plausible, but clearly wrong?
- Is there any clueing? (A question shows clueing when it contains information that would help examinees answer another question on the examination.)
- Are there any redundant questions (i.e., questions which test the same concept)?

See Also: **What Makes a Good Question** - a look at what goes into development, selection, modification and finalization of the questions.