How the CTR Exams are Developed

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The mission of the Council on Certification is to create and maintain credentialing processes whereby the public can be assured that individuals certified by NCRA have met a level of competence required to provide accurate information for cancer surveillance and research activities. The council, therefore, evaluates the qualifications of those individuals requesting CTR certification and any other certifications or credentials as approved by the council, and establishes, oversees, and administers the evaluation mechanisms.

The council has determined that the certification exam should measure a candidate's ability to work in many settings. Hospital or facility-based procedures and those that apply to both hospital and central Cancer Registry settings continue to dominate the exam because these represent the major employers of CTRs. Approximately 800 questions are maintained in an examination item bank. Each test item is reviewed and modified to conform to psychometric standards with checks for consistency, accuracy, grammatical correctness, and conciseness of presentation. (The term "psychometric" refers to the psychological theory or technique of mental measurement.) Items are structured to ensure that the questions allow candidates to demonstrate content knowledge and application. The Council on Certification's Item Development and Item Review Committee reviews all items for clarity, appropriateness, accuracy, correctness of the right answer and incorrectness of the other answers, and confirms reference resources.

The examination contains 250 multiple-choice, objective questions arranged in two-parts: part I is a closed-book examination with no reference materials permitted; part II requires the use of specified reference materials. A multiple-choice question format was chosen because this type of item can be used to measure any of the knowledge, skills, and abilities that can be measured with paper-and-pencil or computerized tests. Most educational objectives, including understanding and problem-solving, can be assessed by carefully developed multiple-choice items.

This objective examination can be scored with a predetermined scoring key. Especially when a large group of candidates is to be tested, as in a credentialing program, a machine-scored objective examination has numerous advantages, including efficient and convenient administration, because all candidates receive the same questions, answer choices, answer sheet, and directions. This eliminates the influence of extraneous variables (such as handwriting, spelling, and grammar) that could interfere with the evaluation of the knowledge the questions were designed to assess; scoring and reporting of results are rapid and reliable; and the collection of statistical data is facilitated.

The Council's Item Development and Item Review Committee develop test questions for the CTR exam and reviews questions submitted by others. It also provides guidelines and a procedure for reviewing questions solicited from the Cancer Registry community. One continuing education credit hour per cycle is offered to CTRs who submit at least five complete questions and answers with references to the certification item bank. When new standards or subject matter is introduced, the council may solicit questions from identified subject-matter experts such as the Collaborative Stage Task Force for Collaborative-Staging questions and the North American Association of Central Cancer Registries' Education Committee for questions on central Cancer Registry operations.

The task of the item writer is the most difficult and the most critical in the entire process of test development. The item writer must be familiar with the content covered by the examination, choose subject areas meeting their expertise, present each question and its correct answer clearly and succinctly, and devise plausible but incorrect options to serve as distracters. The item writer also needs to be familiar with the examination content outline, which defines what material the examination covers, and the emphasis of each part of the outline. The item writer must consider what's expected of the candidate who will take the exam in order to determine the appropriate level of difficulty for the items and minimal expected competence. NCRA provides the *Item Developers Guide* to assist individuals in writing test items. CTRs interested in submitting items for the exam should visit **http://www. ctrexam.org/exam/exam_dev.html** to download the Item Developers Guide and for additional information.

The Item Development and Review Committee is chaired by a council member, and members are selected based on their Cancer Registry experience and subject expertise. Members are frequently CTRs with either hospital or central Cancer Registry experience or may represent various standard-setting organizations such as the Commission on Cancer (COC). Committee members must be CTRs in good standing but are not required to be NCRA members. This committee also includes a representative from the testing company. Committee members must review and sometimes rewrite submitted questions. When standards are changed, all items in the data bank related to those standards must be reviewed and updated. This may

occur when COC updates its standards or when changes are made in the Cancer Staging Manual. Each question is referenced to the exam content outline and then submitted to the testing company for inclusion in the exam database.

Another standing committee is the CTR Examination Construction Committee, chaired by a council member, with its committee members drawn from experienced Cancer Registry professionals. At least one additional council member is appointed to the committee. Members serve for two years and may be appointed for more than one term. Like the members of the Item Development and Item Review committee, members must be CTRs in good standing but are not required to be NCRA members. This committee also includes a representative from the testing company.

Each year, the committee reviews a draft of both examinations for the next year compiled by the testing agency to ensure that items

- correspond to competencies on the current examination content outlines
- comply with item format and content principles
- performed well in differentiating candidates on past examinations (if data are available)
- are not redundant with other items and
- represent current Cancer Registry concepts and principles.

The testing company assigns a "degree of difficulty" rating to each question in the data bank that has been used previously; this rating is based on how often it was answered correctly. The testing company also ensures that each test has an overall rating of difficulty equal to previous examinations. This committee serves as a subsequent review of all questions. They will revise or replace items on the exam as necessary, plus will anticipate and offer implementation plans of new test subject matter. Subject matter is considered testable one year after it is introduced..

The NCRA Council on Certification is committed to providing certification examinations that will promote excellence in the Cancer Registry field by recognizing formally those colleagues who meet all the requirements for certification established by NCRA's Council on Certification through the usage of "CTR," indicating a Certified Tumor Registrar; establishing the level of theory required for certification in Cancer Registry administration; measuring the requisite knowledge of Cancer Registrars for certification; encouraging professional growth and individual study by the Cancer Registrar; and providing a standard of knowledge required for Certification, thereby assisting the employer, public, and members of the allied health professions in the assessment of Cancer Registrars. ●

NCRA's Council on Certification
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