

## ISCD Technologist Job Analysis Report

### Summary

In 2005 the ISCD Board of Directors, responding to a recommendation of the Certification Council, made the decision that the association's certification exams needed to be reviewed and revised to meet current standards that have been established by national credentialing organizations. The ISCD certification program is being reviewed and revised, as needed, to conform to these recognized standards and best practices. Revisions will make ISCD's current certification programs legally defensible. A Job Analysis Assessment, the CDT survey, clearly documented the process to meet the standards of validity and reliability that are the foundation upon which standardized measurement is based. The survey was forwarded in 2006 to CDT certificants and non-certificants and 607 individuals completed the survey. The results of the survey can be used as reference documents in the following areas:

- Development of a Content Outline for the CDT examination
- Development of the CDT examination blueprint or test specification document
- Development of the type and length of the CDT examination
- Development of an examination administration methodology
- Development of a Minimally Qualified Candidate (MQC) profile
- Development of revised CDT examination qualifications

### Methodology

Standards within the credentialing industry (ANSI, NCCA) established the importance of conducting a Job Analysis Survey (JAS) every three to five years to verify the knowledge, skills and abilities required to earn a credential.

The CDT Task Analysis Task Force under the leadership of Pam Johnson, RTR(BD), CDT, developed a survey based on the input of 11 subject matter experts (SMEs). The survey was reviewed and beta tested by the task force. An email was forwarded to all CDTs and non-CDTs in the ISCD database outlining the rationale for the Job Analysis Survey and its expected posting date. The CDT Job Analysis Survey was posted on the ISCD website from 27 June 2006 to 11 July 2006. Results were downloaded and an analysis performed. The Draft Report was forwarded to the CDT Task Force for review and comment. The responses of the five members who reviewed and commented on the report were included in the final report, if applicable. Pam Johnson, RTR(BD), CDT Job Analysis Study chair, has approved the report and its final recommendations.

### Results

Detailed demographic information was collected in the ISCD format.

1. Demographics 607 respondents completed the survey.  
92 partial response were not included

*Analysis and Comment:* Survey respondents are distributed across the field as detailed in the following responses. Therefore, the information gained from the survey is representative of the field and technologist knowledge and practice at this time.

- 86% of the respondents were ISCD certified CDTs.
- 43% have been certified for 1 – 3 years; 30% have been certified 5 or more years.

- 78% are current ISCD members.
- 20% have been working in densitometry less than 2 years, 32% 3-5 years, 25% 6-8 years and 24% more than 9 or more years.
- 37% work in a physician's office, 29% in hospitals and 21% in a freestanding clinic or imaging center.

## 2. Job Analysis Ratings

Respondents were asked to rate all items using the following statement and scale:

Regardless of the amount of time you spend on the topics, how important is the knowledge of each topic to a competent technologist?

- 1 = no importance
- 2 = some importance
- 3 = important
- 4 = essential

All responses are reported as percentages (%).

### *Analysis and Comments:*

All competency areas with the exception of Domain 5, 'Billing' received a 66% or higher positive response of either 3 (important) or 4 (essential).

The overall response indicated the survey reflected current practice and demonstrated a high level of importance to the individual competency areas within the five domains. The comments were reviewed and there were no additions to the survey.

It is important to note that all items on the Survey had significant value to the majority of responders and all items on the survey will be included in the CDT Content Outline. References that will be identified to document the content outline must address all items identified in the survey but the number of examination items per competency area and domain will vary.

### Domain 1: Basic Concepts (Questions 7 – 11)

85% or more of the respondents rated all the following competency areas as important (3) or essential (4):

- Knowledge of Key Terms
- Knowledge of Bone Science
- Knowledge of Osteoporosis
- Knowledge of BMT Testing Methods

### Domain 2: Technology and Equipment (Questions 12 – 17)

79% or more of the respondents rated all the following competency areas as important (3) or essential (4):

- Knowledge of X-Ray Science
- Knowledge of Measurement Types
- Knowledge of how DXA Works
- Knowledge of Computer System Management
- Knowledge of Machine Care and Maintenance

### Domain 3: Radiation Safety (Questions 18 – 21)

80% or more of the respondents rated all the following competency areas as important (3) or essential (4):

- Knowledge of ALARA

- Knowledge of the Biological Effects in Radiation Safety
- Knowledge of Basic Methods of Protection and Radiation Safety

Domain 4: Total Scan Process (Questions 22 – 29)

85% or more of the respondents rated all the following competency areas as important (3) or essential (4):

- Knowledge of Patient Biographical Data
- Knowledge of Scan Mode
- Knowledge of Patient Preparation
- Knowledge of Skeletal Selection Scan Sites
- Knowledge of Scans
- Knowledge of Scan Review, Interpretation and Validation
- Knowledge of Types of Analysis

Domain 5: Role of the Technologist (Questions 30-34)

64% or more of the respondents rated all the following competency areas as important (3) or essential (4):

- Knowledge of How to Establish Protocols
- Knowledge of Patient Communication
- Knowledge of Patient Education
- Knowledge of Basic Reports/Analysis

Question 33 responses decreased the overall response rate for Domain 5. Knowledge of Basic Reports/Analysis questions had much higher ratings of 1 and 2 than any other category.

- Coding – 29% responded it was of no or some importance.
- Billing – 36% responded it was of no or some importance.
- BMMA – 30% responded it was of no or some importance.

### 3. CDT Content Outline

Based on the Job Analysis Study a CDT examination content outline was developed. This document will serve as the basis for the development of references to support the examination. Questions on the CDT will be documented to the reference list.