

Certified Coding Associate (CCA)

Job Analysis

Conducted on behalf of



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September 2005

Acknowledgments

We would like to thank the many individuals who provided invaluable assistance throughout the conduct of the American Health Information Management Association's (AHIMA) job analysis of Certified Coding Associates (CCA).

Above all, we thank the many dedicated professionals who generously contributed their time and expertise to the job analysis. Over 300 individuals participated in different phases of the job analysis including Task Force Committee members, survey pilot test participants, and survey respondents.

At AHIMA, Ron Hanchar, Director of Certification and Joe Santos, Certification Manager, provided outstanding guidance throughout the project.

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Executive Summary

The American Health Information Management Association (AHIMA), a community of professionals engaged in health information management, providing support to members and strengthening the industry and profession, commissioned the Certified Coding Associate (CCA) Job Analysis from Thomson Prometric.

A job analysis is designed to obtain descriptive information about the tasks performed in a job and the knowledge needed to adequately perform those tasks. The purpose of the CCA job analysis was to:

- develop and validate the listing of the tasks and knowledge related to work performed by CCAs;
- develop test specifications for the CCA Certification Examination;
- obtain useful information that can guide professional development initiatives for CCAs; and,
- ensure that AHIMA has up-to-date information about expected changes in the CCA job role over the next few years.

Conduct of the Job Analysis.

The job analysis consisted of several activities: survey development; survey dissemination; compilation of survey results; and, test specifications development. The successful outcome of the job analysis was dependent on the excellent information provided by CCA professionals throughout the study.

Survey Development.

Survey research is an efficient and effective way to identify the tasks and knowledge that are important to the work performed by large numbers of CCAs. The 31 task and 87 knowledge statements included on the survey covered the following domains:

1. Health Records and Data Content
2. Health Information Requirements and Standards
3. Clinical Classification Systems
4. Reimbursement Methodologies
5. Information and Communication Technologies
6. Privacy, Confidentiality, Legal and Ethical Issues

Certified Coding Associate (CCA) Job Analysis

The development of the survey was based on information from a number of sources:

- AHIMA served as the primary resource for developing a preliminary listing of competency statements.
- A Task Force Committee comprised of CCAs reviewed and revised: 1) the preliminary list of tasks and knowledge and 2) the first draft of the CCA survey.
- CCAs reviewed a pilot version of the survey to ensure that the instrument was clearly written and comprehensive in content.

Survey Content.

The survey consisted of five sections: Section 1, Background and General Information; Section 2, Tasks; Section 3, Knowledge; Section 4, Recommendations for Test Content; and Section 5, Comments.

Dissemination of the CCA Survey.

Thomson Prometric staff produced a Web-based survey that AHIMA disseminated in May 2005 by e-mail to 1,076 CCAs. Participants were offered two continuing education credits (CEU) for submitting a completed survey.

Results.

Survey Response Rate.

A total of 275 CCAs or 25.56% of CCAs who received invitations participated in the survey. The response rate was satisfactory. Based on the analysis of survey responses, a representative group of CCAs completed the survey in sufficient numbers to meet the requirements for statistical analysis of the results. .

Profile of the Survey Respondents.

The majority of respondents are female (93.50%) and have completed an HIM Coding Certificate Program (37.50%) or hold an Associate's Degree (24.00%). The largest number of respondents reported their primary work setting as Hospital (48.70%) and Medical Group Practice/Physician's office (13.10%). All respondents earned the CCA very recently since the program only began in 2002.

Survey Ratings.

Participants were asked to rate each task by answering the following question, "How important is competent performance of the task in your current position?" They were asked to rate each knowledge statement by answering the following question, "How important is the knowledge for competent performance in your current position?" Importance ratings were provided along a five-point continuum ranging from "of no importance" to "very important". The majority of tasks and knowledge statements were rated as "moderately important," "important" or "very important."

Content Coverage.

Evidence was provided in this job analysis on the comprehensiveness of the content coverage within the domains. If the tasks and knowledge within a domain are adequately defined, then it should be judged as being well covered. Respondents indicated that the content was well covered, thus supporting the comprehensiveness of the defined domains.

Write in Comments.

Survey respondents answered two open-ended questions about their professional development needs and expected changes in their work role as a CCA.

Test Specifications Development.

In August 2005, a Test Specifications Committee was convened to review the job analysis findings and create the test content outline that will guide the development of future versions of the CCA Certification Examination.

Summary.

In summary, this study took a multi-method approach to identifying the tasks and knowledge that are important to the competent performance of CCAs. The job analysis process allowed for input from a representative group of CCAs and was conducted within the guidelines of professionally sound practice.

The results of the job analysis can be used by AHIMA to develop new versions of the CCA Certification Examination and guide professional development initiatives.

INTRODUCTION

About AHIMA and Certified Coding Associates (CCA)

The American Health Information Management Association (AHIMA) is the dynamic professional association that represents more than 50,000 specially educated health information management professionals who work throughout the healthcare industry. Health information management professionals serve the healthcare industry and the public by managing, analyzing, and utilizing data vital for patient care—and making it accessible to healthcare providers when it is needed most.

To fulfill aspects of its credentialing mission, AHIMA contracted with Thomson Prometric to conduct a job analysis in 2005 to ensure that their Certified Coding Associate (CCA) certification program reflects the most important and current practices in the work performed by CCAs.

About the CCA Job Analysis

The major purpose of the job analysis was to identify the tasks and knowledge that are important for competent performance by CCAs. The development of content-valid CCA Certification Examinations is based on validated tasks and knowledge identified through the job analysis process. Another purpose of the job analysis was to identify important professional development needs and future trends in the profession.

This report describes the job analysis including the:

- rationale for conducting the job analysis;
- methods used to define job-related tasks and knowledge; and,
- types of data analysis conducted and their results.

Job Analysis and Adherence to Professional Standards.

Job analysis refers to procedures designed to obtain descriptive information about the tasks performed on a job and/or the knowledge, skills, or abilities thought necessary to adequately perform those tasks. The specific type of job information collected for a job analysis is determined by the purpose for which the information will be used.

For purposes of developing licensure and certification examinations, a job analysis should identify important activities, knowledge, skills, and/or abilities.

The use of a job analysis (also known as practice analysis, role delineation, role and function study) to define the content domain is a critical component in establishing the content validity of licensure and certification examinations. Content validity refers to the extent to which the content covered by an examination overlaps with the important components of a job (tasks, knowledge, skills, or abilities).

A well-designed job analysis should include the participation of a representative group of subject-matter experts who reflect the diversity within the job. Diversity refers to regional or job context factors and to subject-matter expert factors such as experience, gender, and race/ethnicity. Demonstration of content validity is accomplished through the judgments of subject-matter experts. The process is enhanced by the inclusion of large numbers of subject-matter experts who represent the diversity of the relevant areas of expertise.

*The Standards for Educational and Psychological Testing*¹ (1999) (*The Standards*) is a comprehensive technical guide that provides criteria for the evaluation of tests, testing practices, and the effects of test use. It was developed jointly by the American Psychological Association (APA), the American Educational Research Association

¹ American Educational Research Association, American Psychological Association, National Council on Measurement in Education. (1999). *The standards for educational and psychological testing*. Washington, DC: American Psychological Association.

(AERA), and the National Council on Measurement in Education (NCME). The guidelines presented in *The Standards*, by professional consensus, have come to define the necessary components of quality testing. As a consequence, a testing program that adheres to *The Standards* is more likely to be judged to be valid and defensible than one that does not.

As stated in Standard 14.14,

“The content domain to be covered by a credentialing test should be defined clearly and justified in terms of the importance of the content for credential-worthy performance in an occupation or profession. A rationale should be provided to support a claim that the knowledge or skills being assessed are required for credential-worthy performance in an occupation and are consistent with the purpose for which the licensing or certification program was instituted...Some form of job or job analysis provides the primary basis for defining the content domain... (p.161)

The CCA Job Analysis was designed to follow the guidelines presented in *The Standards* and to adhere to accepted professional practice.

Method

The CCA job analysis involved a multi-method approach that included meetings with subject-matter experts and a survey. This section of the report describes the activities conducted for the CCA Job Analysis.

First, subject-matter experts identified the tasks and knowledge they believe are important to the work performed by CCAs. Then, a Web-based survey was developed and disseminated to CCAs. The purpose of the survey was to obtain verification (or refutation) from a large number of knowledgeable professionals that the tasks and knowledge identified by the subject-matter experts are important to their work.

Survey research functions as a “check and balance” on the judgments of the subject-matter experts and reduces the likelihood that unimportant areas will be considered in the development of the test specifications. The use of a survey is also an efficient and cost-effective method of obtaining input from large numbers of subject-matter experts and makes it possible for ratings to be analyzed separately by appropriate respondent subgroups.

The survey results provide information to guide the development of test specifications and content-valid certification examinations. What matters most is that a certification examination covers important knowledge needed to perform job activities.

The methodology used to conduct the job analysis is described in detail below and included the following steps:

1. Conduct of a planning meeting.
2. Development of the CCA survey.
3. Dissemination of the CCA survey.
4. Analysis of the CCA survey data.
5. Development of the test specifications for the CCA Certification Examination.

1. Conduct of a Planning Meeting.

A project-planning meeting was conducted via Web Conference in February 2005. Meeting participants included the Thomson Prometric project director for the job analysis and AHIMA staff including Ron Hanchar, Director of Certification and Joe Santos, Certification Manager.

During the planning meeting, several issues were discussed including selection of the Task Force Committee members and Test Specifications Committee members; meeting dates; Internet survey delivery, and development of the survey sampling plan.

2. Development of the CCA Survey.

Development of Draft Listing of Competency

Thomson Prometric staff and an AHIMA certification manager reviewed the CCA competencies that are published on the AHIMA Web site. Based on this information, a preliminary listing of tasks and knowledge statements was developed.

Conduct of the Job Analysis Task Force Meeting.

A Task Force meeting was conducted on March 29 and 30, 2005, at AHIMA headquarters in Chicago, Illinois. The purpose of the meeting was to develop the survey content. Thomson Prometric staff facilitated the meeting. See Appendix A for the listing of the nine Task Force Committee members who attended the meeting.

Thomson Prometric staff sent a pre-meeting document to the Task Force that included an agenda, procedures for reviewing and revising the competency statements, a preliminary listing of task and knowledge statements and a list of Task Force participants.

Activities conducted during the meeting included reviewing and revising the major domains and tasks and developing knowledge statements that are necessary for competent performance by CCAs. Survey rating scales also were approved.

3. Survey Construction and Review Activities.

Survey Construction.

After the Task Force Meeting, Thomson Prometric staff constructed the draft online survey.

The following task and knowledge domains were covered on the survey:

1. Health Records and Data Content
2. Health Information Requirements and Standards
3. Clinical Classification Systems
4. Reimbursement Methodologies
5. Information and Communication Technologies
6. Privacy, Confidentiality, Legal and Ethical Issues

Survey Review by Task Force Committee.

Each Task Force member received a review copy of the draft survey. The purpose of the review was to provide the Committee with an opportunity to view their work in online survey format and recommend any revisions.

Comments were compiled by Thomson Prometric staff and reviewed with the AHIMA staff, Ron Hanchar and Joe Santos, and a subset of the Task Force members. Recommended refinements were incorporated, as appropriate, into the survey in preparation for the conduct of a pilot test.

Survey Pilot Test. The purpose of the small-scale pilot test was to have CCAs, who had no previous involvement in the development of the survey, review it online and offer suggestions for its improvement.

Eight CCAs were nominated by the Task Force Committee and AHIMA to participate in the survey pilot test (Appendix A). Pilot participants were asked to review the survey for clarity of wording, ease of use, and comprehensiveness of content coverage. Comments were compiled by Thomson Prometric and reviewed by Web conference with AHIMA staff, Ron Hanchar and Joe Santos, and two Task Force members. The survey was revised and finalized based on the review of the pilot test comments.

Final Version of the CCA Survey.

The final version of the online survey consisted of five sections: Section 1: Background and General Information; Section 2: Tasks; Section 3: Knowledge; Section 4: Recommendations for Test Content; and Section 5: Comments.

In Section 1: Background and General Information, survey participants were asked to provide demographic and background information about themselves and their professional activities.

In Section 2: Tasks, survey participants were asked to rate the statements using the Importance scale shown below:

Importance: How important is competent performance of the task in your current position?

Response choices: 4=Very important, 3=Important, 2=Of moderate importance, 1=Of little importance, 0=Of no importance

In Section 3: Knowledge, survey participants were asked to rate the statements using the Importance scale shown below:

Importance: How important is the knowledge for competent performance in your current position?

Response choices: 4=Very important, 3=Important, 2=Of moderate importance, 1=Of little importance, 0=Of no importance

Survey participants were asked to indicate how well the statements covered the tasks and knowledge within each domain. Respondents made their judgments using a five-point rating scale (5=Very Well, 4=Well, 3=Adequately, 2=Poorly, 1=Very Poorly). A write-in area was provided for respondents to note any areas that were not covered within a specific domain.

In Section 4: Recommendation for Test Content, survey participants were asked to indicate the weight (emphasis) that each of the task areas should receive on the examination: 1. Health Records and Data Content; 2. Health Information Requirements and Standards; 3. Clinical Classification Systems; 4. Reimbursement Methodologies; 5. Information and Communication

Technologies; and 6. Privacy, Confidentiality, Legal and Ethical Issues.

This was accomplished by distributing 100 percentage points across the six domains. These distributions represented the allocation of examination items survey participants believed should be devoted to each task area.

In Section 5: Comments, survey participants were provided the opportunity to comments on the following:

- What additional professional development could you use to improve your performance in your current work role?
- How do you expect your role as a Certified Coding Associate to change over the next few years? What types of activities will be performed to meet changing job demands?

3. Dissemination of the CCA Survey.

Thomson Prometric staff produced an online survey that AHIMA disseminated by e-mail in May 2005, to approximately 1,076 CCAs. Participants were offered two continuing education credits (CEU) for submitting a completed survey.

The invitation, a second notice, and the survey are provided in Appendix B. Response rates were calculated and communicated to AHIMA on an ongoing basis.

4. Analysis of the CCA Survey Data.

As previously noted, the purpose of the survey was to validate the tasks and knowledge that relatively large numbers of CCAs judged to be relevant (verified as important) to their work.

These objectives are accomplished through an analysis of the mean importance ratings for tasks and knowledge. The derivation of test specifications from those statements verified as important by the surveyed professionals provides a substantial evidential basis for the content validity (content relevance) of credentialing examinations.

Based on information obtained from the survey, data analyses by respondent subgroups (e.g., job title, primary work setting) are possible when sample size permits. A subgroup category is required to have at least 30 respondents to be included in the mean analyses. This is a necessary

condition to ensure that the mean value based upon the sample of respondents is an accurate estimate of the corresponding population mean value.

The following quantitative data analyses were produced:

- Means, standard deviations, frequency distributions for tasks and knowledge importance ratings with a subgroup analysis on work setting (hospital or medical group practice).
- Means and standard deviations for test content recommendations.

Write-in comments were summarized regarding respondents' professional development needs and their expectations about how their work role will change over the next few years..

Criterion for Interpretation of Mean Importance Ratings

Since a major purpose of the survey is to ensure that only validated tasks and knowledge statements are included in the development of test specifications, a criterion (cut point) for inclusion needs to be established.

A criterion that has been used in similar studies is a mean importance rating that represents the midpoint between moderately important and important. For the importance rating scale used across many studies, the value of this criterion is 2.50.

It is believed that this criterion is consistent with the intent of content validity, which is to measure only important knowledge in the credentialing examination. Therefore, for the CCA Job Analysis, Thomson Prometric recommended the value of this criterion should be set at 2.50.

The task and knowledge statements were placed into one of three categories—Pass, Borderline, or Fail—based on their mean importance ratings:

| Definition of Pass, Borderline and Fail Categories for Task and Knowledge Mean Ratings | |
|---|------------------|
| | <u>Means</u> |
| Pass: | At or above 2.50 |
| Borderline: | 2.40 to 2.49 |
| Fail: | Less than 2.40 |

- The Pass Category contains those statements whose mean ratings are at or above 2.50, and are considered eligible for inclusion in the development of test specifications.
- The Borderline Category contains those statements whose mean ratings are between 2.40 and 2.49. The Borderline Category is included to provide a point of discussion for the Test Specifications Committee to determine if the statement(s) warrant(s) inclusion in the test specifications.
- The Fail Category contains those statements whose mean ratings are less than 2.40. It is recommended that statements in the Fail Category be excluded from consideration in the test specifications.

If the Test Specifications Committee believes that a statement rated below 2.50 should be included in the specifications and can provide compelling written rationales, those statements may be considered for inclusion. For example, although a task or knowledge may have a mean rating of less than 2.50, more than 50.00% of the respondents may have rated the statement as important or very important. In this instance, the Test Specifications Committee might recommend the inclusion of the statement on the test specifications. The written rationale would note that a majority of the survey respondents rated the statement as important.

5. Development of Test Specifications for the CCA Certification Examination.

A meeting was facilitated by Thomson Prometric staff to develop the CCA test plan based on the job analysis results. The meeting was conducted by Web conference on August 2 and 3, 2005.

The meetings focused on:

- identifying the tasks and knowledge statements that are important for inclusion on the CCA Certification Examination;

- establishing the percentage test weights for each task domain on the CCA Certification Examination. These percentage test weights are used to guide examination development activities; and,
- linking task and knowledge statements to verify that knowledge tested on the CCA Certification Examination is related to the performance of important tasks; thereby further establishing the defensibility of CCA Certification Examination content. Linking also provides items writers with useful information they can use to develop questions that test knowledge relevant to the performance of tasks.

RESULTS

Survey Response Rate.

A total of 275 (25.56%) invited participants submitted completed surveys. Based on the analysis of survey responses, a representative group of CCAs completed the survey in sufficient numbers to meet the requirements for statistical analysis of the results.

Table 1. Response Rates for the CCA Job Analysis Survey

| No. of Surveys Disseminated | Number of Surveys Submitted | Percent of Surveys Submitted |
|-----------------------------|-----------------------------|------------------------------|
| 1,076 | 275 | 25.56% |

Demographic Characteristics of Survey Respondents.

Information provided by respondents to the background information section of the surveys is summarized below (See Appendix C for details).

AHIMA Credentials: The CCA credential was established in 2002. The majority of respondents reported that they earned the CCA in 2004. Only a small percentage hold other AHIMA credentials; however, all respondents plan to take other credentialing examinations.

Primary Work Setting: The top three work settings reported by respondents include: hospital (48.70%); medical group practice/physician's office (13.10%) and other (8.70%).

Geographic Region: All regions of the United States were represented among the survey respondents.

Job Title: The top five job titles reported by respondents include: coder (44.40%); other (17.80%); medical biller (7.60%); clerk (4.00%) and clinical coder/compliance auditor/vocabulary specialist (3.60%).

Highest Academic Educational Attainment: The majority of respondents reported that they have completed an HIM Coding Certificate Program (37.50%) or an Associate Degree Program (24.00%). A Bachelor's degree is held by 17.10% of the respondents.

Gender: The majority of respondents indicated that they are female (93.50%).

Task and Knowledge Ratings by Overall Group of Respondents.

The following provides a summary of survey respondents' ratings of the tasks and knowledge statements.

Tasks

Means, standard deviations and frequency distributions for the tasks included on the survey are provided in Appendix D for the overall group of respondents and by respondents' primary work setting. Table 2 provides a summary of the tasks that were placed in Pass, Borderline, and Fail categories by domain.

Twenty-four of the 31 tasks (77.42%) achieved high means (at or above 2.50, the Pass Category). In Domain 4, Reimbursement Methodologies, one task: "Verify the National and Local Coverage Determinations (NCD/LCD) for medical necessity" has a mean of 2.42 (Borderline Category). A total of 6 tasks (19.35%) achieved means of less than 2.40 (Fail Category). The majority of these tasks in the Fail Category were in Domain 4, Reimbursement Methodologies (see Appendix D).

Table 2. Task Statements by the Pass, Borderline and Fail Categories

| Domain | Total Number of Tasks | CCA | | |
|---|-----------------------|---------------|----------------------------|---------------|
| | | Pass ≥2.50 | Borderline 2.40 to 2.49 | Fail <2.40 |
| 1. Health Records and Data Content | 4 | 4 | 0 | 0 |
| 2. Health Information Requirements and Standards | 4 | 3 | 0 | 1 |
| 3. Clinical Classification Systems | 8 | 8 | 0 | 0 |
| 4. Reimbursement Methodologies | 7 | 1 | 1 | 5 |
| 5. Information and Communication Technologies | 3 | 3 | 0 | 0 |
| 6. Privacy, Confidentiality, Legal and Ethical Issues | 5 | 5 | 0 | 0 |
| Total | 31 | 24 | 1 | 6 |
| Percentage | -- | 77.42% | 3.23% | 19.35% |

Knowledge

Table 3 provides a summary of the knowledge statements that were placed in Pass, Borderline, and Fail categories by domain for the overall group of respondents. Means and standard deviations for the knowledge statements included on the survey are presented in Appendix E by overall respondents and by respondents' primary work setting.

Sixty-nine of the knowledge statements (79.31%) achieved high means (at or above 2.50, the Pass Category). There were no knowledge statements that had means between 2.40 and 2.49 (Borderline Category). A total of 18 knowledge statements (20.69%) achieved means of less than 2.40 (Fail Category).

The majority of the knowledge statements in the Fail Category were in the Reimbursement Methodologies domain (N=10) and Health Records and Data Content domain (N=6).

Table 3 Knowledge Statements by the Pass, Borderline, and Fail Categories

| Domain | Total Number of Knowledges | CCA | | |
|---|----------------------------|---------------|----------------------------|---------------|
| | | Pass ≥2.50 | Borderline 2.40 to 2.49 | Fail <2.40 |
| 1. Health Records and Data Content | 26 | 20 | 0 | 6 |
| 2. Health Information Requirements and Standards | 4 | 3 | 0 | 1 |
| 3. Clinical Classification Systems | 24 | 23 | 0 | 1 |
| 4. Reimbursement Methodologies | 17 | 7 | 0 | 10 |
| 5. Information and Communication Technologies | 6 | 6 | 0 | 0 |
| 6. Privacy, Confidentiality, Legal and Ethical Issues | 10 | 10 | 0 | 0 |
| Total | 87 | 69 | 0 | 18 |
| Percentage | -- | 79.31% | 0% | 20.69% |

Subgroup Analysis of Tasks and Knowledge Ratings.

Index of Agreement

The index of agreement is a measure of the extent to which subgroups of respondents (e.g., years holding the CCA credential; primary work setting; highest educational attainment;) agree on which tasks and knowledge are important.²

² The index of agreement provides a method of computing the similarity in judgments between groups that is more tailored to the purpose of a job analysis than the correlation coefficient. Although the correlation coefficient measures the tendency toward agreement along the full range of possible ratings, the agreement index focuses on whether two groups agree that the content should (or should not) be included in an examination. As one of the major purposes of this job analysis is to identify appropriate test content, the agreement index provides a statistical method to address this question at the subgroup level. Furthermore, the agreement index requires only 30 respondents per subgroup for computation, whereas the correlation coefficient requires at least 100 respondents per subgroup to provide a reliable measure of agreement. An illustrative example for two groups shows how the index is computed. If two groups passed the same 120 knowledge areas and failed the same 2 knowledge areas (out of the 124 total knowledge areas in the survey), the consistency index would be computed as: $Agreement = (120 + 2)/124 = 0.98$

Using the mean importance ratings for task and knowledge statements, indices of agreement were computed:

- ◆ If the subgroup means are above the critical importance value (mean ratings at or above 2.50), then they are in agreement that the content is important.
- ◆ If the subgroup means are below the critical importance value (mean ratings less than 2.50), then the subgroups are in agreement that the content is considered less important.
- ◆ By contrast, if one subgroup's (for example, female) mean ratings are above the critical importance value and another subgroup's (for example, male) means are below the critical importance value then the subgroups are in disagreement as to whether the content is important.

Tasks and Knowledge Ratings by Subgroup

The index of agreement coefficients for tasks and knowledge are provided in Appendix F. Among the

task statements, the level of agreement among respondents regarding the importance of the tasks ranged from 0.84 to 0.97 indicating a high level of agreement. For the knowledge statements, the level of agreement ranged from 0.74 to 0.99.

The greatest variance of responses is referenced in the index of agreement for knowledge – primary work setting. The indices show the knowledge base used to perform tasks is somewhat different depending on work setting.

Content Coverage Ratings.

The survey participants were asked to indicate how well the statements within each of the task and knowledge domains covered important aspects of that area. These responses provide an indication of the adequacy (comprehensiveness) of the survey content.

The five-point rating scale included 5=Very Well, 4=Well, 3=Adequately 2=Poorly and 1=Very Poorly.

The frequency distribution of ratings for task and knowledge ratings are provided in Tables 4 and 5. For the task domains, the means ranged from 4.13 to 4.42. The mean across the knowledge areas ranged from 4.09 to 4.34. These means provide supportive evidence that the tasks and knowledge were comprehensive and well-covered on the survey.

Table 4. Mean Ratings and Standard Deviations of Task Content Coverage

| Tasks | Mean | SD |
|---|------|------|
| Domain 1: Health Records and Data Content | 4.34 | 0.73 |
| Domain 2: Health Information Requirements and Standards for Documentation | 4.16 | 0.77 |
| Domain 3: Clinical Classification Systems | 4.42 | 0.72 |
| Domain 4: Reimbursement Methodologies | 4.13 | 0.79 |
| Domain 5: Information and Communication Technologies | 4.29 | 0.78 |
| Domain 6: Privacy, Confidentiality, Legal and Ethical Issues | 4.41 | 0.71 |

Table 5. Mean Ratings and Standard Deviations of Knowledge Content Coverage

| Knowledge | Mean | SD |
|---|------|------|
| Domain 1: Health Records and Content | 4.16 | 0.76 |
| Domain 2: Healthcare Information Requirements and Standards for Documentation | 4.09 | 0.76 |
| Domain 3: Clinical Classification Systems | 4.34 | 0.75 |
| Domain 4: Reimbursement Methodologies | 4.19 | 0.77 |
| Domain 5: Information and Communication Technologies | 4.27 | 0.77 |
| Domain 6: Privacy, Confidentiality, Legal and Ethical Issues | 4.30 | 0.77 |

CCA Certification Examination Content.

In survey Section 4: Recommendations for Test Content, participants were asked the following question: “If a new examination contains 100 questions, how many questions should be indicated in each topic area?” This information was used by the Test Specifications Committee as an aid in making decisions about how much emphasis the task domains should receive in the test content outline.

The mean weights across all survey respondents are presented in Table 6. On average, survey respondents gave the highest content weightings to Clinical Classification Systems (20.55%) whereas the Information and Communication Technologies (10.87%) received the lowest content weighting.

Table 6. Survey Respondents' Test Content Recommendations by Mean Percentages and Standard Deviations

| Domain | Mean % | SD |
|---|--------|------|
| 1. Health Records and Data Content | 20.32 | 7.79 |
| 2. Health Care Information Requirements and Standards for Documentation | 18.79 | 5.03 |
| 3. Clinical Classification Systems | 20.55 | 9.00 |
| 4. Reimbursement Methodologies | 16.37 | 6.7 |
| 5. Information and Communication Technologies | 10.87 | 4.21 |
| 6. Privacy, Confidentiality, Legal and Ethical Issues | 13.08 | 4.97 |

Write-In Comments.

Many survey respondents provided responses to the open-ended questions about their professional development needs and/or expected changes in their role as a practitioner over the next few years. The comments are presented in Appendix G.

DEVELOPMENT OF TEST SPECIFICATIONS FOR THE CCA CERTIFICATION EXAMINATION

As previously noted, the CCA Test Specifications were developed in August 2005, using the survey results. Decisions made by the Test Specifications Committee regarding the task statements to be included in (or excluded) from the test specifications were based on a careful review of the survey results. (See Appendix H.)

Development of Test Content Weights for the CCA Certification Examination.

The Test Specifications Committee participated in an exercise that required each member to individually assign a percentage weight to each of the task domains. Weights were then entered into an Excel spreadsheet and shown on the screen for all to view. The Committee members were able to compare the test content weights derived from the survey responses to their own estimates. This resulted in a productive discussion among the Committee members regarding the optimal percentages for the 90-item multiple-choice CCA Certification Examination.

Table 7 shows the: recommended percentage weights by domain; number of task areas included in each domain and the number of items in each domain that should be tested at one of three cognitive levels (recall, application, and analysis).

Table 7. CCA Test Content Weights Recommended by the CCA Test Specifications Committee

| Domains | Domain % | No. of Items | Recall | Appli- cation | Analy- sis |
|--|-----------------|---------------------|---------------|--------------------------|-----------------------|
| Domain 1: Health Records and Data Content | 0.20 | 18.00 | 5 | 11 | 2 |
| Domain 2: Health Information Requirements and Standards | 0.15 | 13.00 | 5 | 7 | 1 |
| Domain 3: Clinical Classification Systems | 0.35 | 32.00 | 5 | 24 | 3 |
| Domain 4: Reimbursement Methodologies | 0.10 | 9.00 | 7 | 2 | 0 |
| Domain 5: Information and Communication Technologies | 0.05 | 5.00 | 4 | 1 | 0 |
| Domain 6: Privacy, Confidentiality, Legal and Ethical Issues | 0.15 | 13.00 | 3 | 7 | 3 |
| Total | 100% | 90 | 29 | 52 | 9 |
| | | | 32% | 58% | 10% |

Following is a listing of the tasks and knowledge that the Test Specifications Committee recommended for inclusion in the CCA test specifications.

TASKS RECOMMENDED FOR INCLUSION ON THE CCA TEST SPECIFICATIONS

Domain 1: Health Records and Data Content

1. Collect and maintain health data
2. Analyze health records to assure that documentation supports the patient's diagnosis and procedures, reflects progress, clinical findings and discharge status
3. Request patient-specific documentation from other sources (e.g., ancillary departments; physicians office; etc.)
4. Apply clinical vocabularies and terminologies used in the organization's health information systems

Domain 2: Health Information Requirements and Standards

5. Evaluate the accuracy and completeness of the patient record as defined by organizational policy and external regulations and standards
6. Monitor compliance with organization-wide health record documentation guidelines
7. Report compliance findings according to organizational policy.
8. Assist in preparing the organization for accreditation, licensing and/or certification surveys

Domain 3: Clinical Classification Systems

9. Utilize electronic applications to support clinical classification and coding (e.g., encoders)
10. Assign secondary diagnosis procedure codes using ICD-9-CM official coding guidelines
- 10a. Assign principal diagnosis (Inpatient) or first listed diagnosis (Outpatient)
- 10b. Assign secondary diagnosis(es), including complications and comorbidities (CC)
- 10c. Assign principal and secondary procedure(s)
11. Assign procedure codes using CPT coding guidelines
12. Assign appropriate HCPCS codes
13. Identify discrepancies between coded data and supporting documentation
14. Consult reference materials to facilitate code assignment

Domain 4: Reimbursement Methodologies

15. Validate the data collected for appropriate reimbursement
- 15a. Validate Diagnosis Related Groups (DRGs)
- 15b. Validate Ambulatory Payment Classifications (APCs)
17. Comply with the National Correct Coding Initiative
18. Verify the National and Local Coverage Determinations (NCD/LCD) for medical necessity

Domain 5: Information and Communication Technologies

19. Use personal computer to ensure data collection, storage, analysis and reporting of information
20. Use common software applications (e.g., word processing; spreadsheets; email; etc.) in the execution of work processes
21. Use specialized software in the completion of HIM processes

Domain 6: Privacy, Confidentiality, Legal and Ethical Issues

22. Apply policies and procedures for access and disclosure of personal health information
23. Release patient-specific data to authorized individuals
24. Apply ethical standards of practice
25. Recognize and report privacy issues/problems

TASKS RECOMMENDED FOR INCLUSION ON THE CCA TEST SPECIFICATIONS

26. Protect data integrity and validity using software or hardware technology

KNOWLEDGE RECOMMENDED FOR INCLUSION ON THE CCA TEST SPECIFICATIONS

Domain 1: Health Records and Content

1. Components of a record
2. Contents of a record
3. Clinical Concepts
 - 3a. Medical terminology and abbreviations
 - 3b. Anatomy and Physiology
 - 3c. Pharmacology
 - 3d. Clinical findings
 - 3e. Signs and symptoms of disease
 - 3f. Pathophysiology
4. Data sets (e.g., demographics; identifiers; etc.)
5. Location of documents
6. Health care providers
7. Health care specialties
9. Patient Type/place of service
 - 9a. Inpatient
 - 9b. Outpatient
 - 9b.1. Observation
 - 9b.2. Recurring
 - 9b.3. Emergency services
 - 9b.4. Same day surgery
 - 9b.5. Clinic
 - 9b.6. Ancillary
 - 9h. Physician's Office

Domain 2: Healthcare Information Requirements and Standards for Documentation

10. Accrediting Bodies
 - 10a. JCAHO
11. Governmental agencies
 - 11a. CMS
 - 11b. OIG

Domain 3: Clinical Classification Systems

12. Coding references
 - 12a. AHA Coding clinic
 - 12b. CPT assistant
 - 12c. Medical dictionary
 - 12d. Abbreviations
 - 12e. Pharmacology
 - 12f. Lab values
13. Official coding and UHDDS guidelines for diagnoses and procedures
 - 13a. Sequencing
 - 13b. Coding and reporting requirements for inpatient services

KNOWLEDGE RECOMMENDED FOR INCLUSION ON THE CCA TEST SPECIFICATIONS

- 13c. Coding and reporting requirements for outpatient services
- 13d. Coding conventions
 - 13d.1. formats
 - 13d.2. instructional notations
 - 13d.3. tables
 - 13d.4. Definitions based on UHDDS (e.g., principal diagnosis; significant procedure; abbreviations)
 - 13d.5. symbols
- 13e. Signs, symptoms, or manifestations requiring separate code assignments
- 13f. Coding specificity (third, fourth or fifth digit)
- 13g. V-Codes
- 13h. E-Codes
- 13i. Modifiers
- 13j. CPT versus HCPCS II
- 13k. Medical necessity (e.g., linking diagnosis to procedure/service)
- 13l. Evaluation and management code assignment

Domain 4: Reimbursement Methodologies

- 14. Payment methodologies
 - 14a. APC
 - 14b. DRG
- 15. Guidelines for bundling and unbundling
- 16. Claims denial process
- 17. Coding compliance
- 18. Coverage policies
 - 18a. CMS 72 hour rule
 - 18b. ABN
- 19. NCCI edits
- 20. Payer types
- 21. Payer documentation
 - 21a. EOB
 - 21b. Remittance
- 22. Claims forms
 - 22a. Linking diagnoses to procedures (medical necessity)
 - 22b. UB 92
 - 22c. CMS 1500

Domain 5: Information and Communication Technologies

- 23. Computer Concepts (e.g., hardware; software; mouse; firewall; encryption)
- 24. Software applications
- 25. Word processing
- 26. Internet technology
- 27. Encoder/grouper
- 28. Electronic medical records

Domain 6: Privacy, Confidentiality, Legal and Ethical Issues

KNOWLEDGE RECOMMENDED FOR INCLUSION ON THE CCA TEST SPECIFICATIONS

- 29. Data security
 - 29a. Password protection
 - 29b. Encryption
- 30. Data integrity
- 31. Code of ethics
- 32. HIPAA
 - 32a. Release of information
 - 32b. Confidentiality
- 33. Compliance
 - 33a. requirements
 - 33b. plan
 - 33c. Elements of fraud/abuse
 - 33c.1. Corporate Integrity Agreement (CIA)

Linkage of Task and Knowledge Statements.

Task and knowledge linking verifies that each knowledge area included on an examination is related to the competent performance of important tasks. As such, linking documents the content validity of the tasks included in the test specifications. (See Appendix I.)

Linking does not require the production of an exhaustive listing; rather, task-knowledge links are developed to ensure that each knowledge is identified as being related to the performance of at least one, or in most cases several, important tasks.

Linking also provides guidance for item-writing activities. When item writers develop questions for specific task domains, they have a listing of knowledge statements that relate to the tasks. This provides context for developing examination questions, and assists the item writers in question design.

SUMMARY AND CONCLUSIONS

The CCA Job Analysis was conducted to:

- ◆ identify and validate tasks and knowledge important in the work performed by Certified Coding Associates;
- ◆ create test specifications that may be used to develop new versions of the CCA Certification Examination;
- ◆ identify important professional development needs; and, 4) identify anticipated changes in the CCA's work role.

The tasks and knowledge statements were developed through an iterative process involving the combined efforts of AHIMA, subject-matter experts, and Thomson Prometric staff. The inventory was then put into survey format and subjected to verification/refutation through the dissemination of a survey to CCAs.

The survey participants were asked to rate the importance of performing specific tasks in their respective current positions and the importance of specific knowledge to perform their job tasks.

The results of the job analysis support the following:

- The tasks and knowledge verified as important through the survey provided the foundation of empirically derived information from which to develop test specifications for the CCA Certification Examination.
- Evidence was provided in this job analysis that the comprehensiveness of the content within the task and knowledge domains was well covered.
- A variety of professional development needs was identified as well as expected changes in job activities over the next few years. AHIMA can use this information as it reviews and revises its continuing education initiatives.

In summary, the CCA Job Analysis took a multi-method approach to identifying the tasks and knowledge important to the work performed by CCAs. The results of the study can be used to develop: 1) new versions of the CCA Certification Examination and 2) professional development initiatives.