

Building on the Vision: Exploratory Research in Future Skill Areas of the Clinical Data Specialist as Described in Evolving HIM Careers

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Abstract: The Lehigh Valley Health Information Management Association (LVHIMA) in Pennsylvania undertook a small exploratory study to understand the future role of the coding specialist using a self-assessment questionnaire. Some self-assessment questions showed a 0.5 or greater difference between the coders and non-coders. These differences occurred in the following nine areas:

- An understanding of ICD-9-CM and CPT;
- An understanding of elements required for research and outcomes;
- The ability to perform quality audits;
- The ability to identify the problems and issues suggested by audits;
- The ability to communicate electronically both internally and externally;
- The ability to identify clinical data and where it is warehoused;
- The ability to use and interpret data from reimbursement software applications (such as DRG groupers, case-mix programs, APCs, and so forth);
- The ability to understand specific data elements and their values; and
- The ability to clarify essential outcomes within a given context.

The findings about coding knowledge are not surprising; however, some of the other areas that appeared to be different may have far-reaching implications. Beyond the difference of coding skill, other self-assessed skills differentiated coders from non-coders. These skills included the ability to communicate electronically, the ability to identify clinical data and where it is warehoused, and the abilities to understand specific data elements and their values. These skills may provide a competitive advantage to the individuals who possess them and the organizations they work for. The findings also suggest that there are only a few skills that differentiate future coding professionals from non-coding professionals. This implies that individuals who are not currently coders may still have many skills that will be needed in the clinical data specialist role of the future. Further research in the area of the skills associated with the clinical data specialist within the context of a larger number of participants may be fruitful. *Key Words: coders, self-assessment questionnaire, clinical data specialist.*

Introduction

The Lehigh Valley Health Information Management Association (LVHIMA), a local Health Information Management Association in Pennsylvania, undertook a small exploratory study to increase member understanding of the role of the coding specialist of the future. It was agreed that the information developed from the survey would be presented at the LVHIMA annual meeting. A recent publication was made available just prior to the discussion of this research endeavor—*Evolving HIM Careers*, published by the American Health Information Management Association (AHIMA).¹ This text discussed projected skill and knowledge analysis of the future role of clinical data specialist.

In December 1999, in a meeting of the LVHIMA, it was agreed that a survey of the membership would be undertaken to provide information about the use of classifications and nomenclatures within the context of the computer-based patient record (CPR). It was also agreed that the results of this study would be presented at the June 2000 annual meeting.

A survey was devised that requested information about how capable members assessed themselves to be in terms of the projected skill and analysis section presented in *Evolving HIM Careers*.¹

This research endeavor was designed to serve several purposes: to serve as an example of a self-assessment activity, to educate individual members about skill sets that may need to be developed for future coding positions, to gather information to make the annual meeting presentation more participatory, to demonstrate an example of research methodology, and to gather some exploratory empirical data about the projected skill sets.

Literature Review

Many coding-related issues are addressed in the recent health information management (HIM) literature that describes the current coding environment and future skills required for coding. All identify the probability that with the increased use of the CPR, individuals performing the coding function now will need a greater breadth of skill for the future. The future requirements of the clinical data specialist have been identified and expounded upon in *Evolving HIM Careers*.¹ This work specifies that as the CPR becomes more common in healthcare facilities, data will be the basis of practice standards and clinical protocols. Because of this new development, health information management professionals will need to know more about what data is available and how to interpret it. In the future role of the clinical data specialist, today's coding professional will need to develop, among other things, professional skills in reimbursement and basic statistics and must understand automated health record systems.¹

In "Coding Crystal Ball," Johns² identifies the development of the CPR and the cost-driven environment as the impetus for healthcare organizations to depend more heavily upon data. This article suggests that data will be needed for a variety of purposes including: financial purposes, benchmarking best practices, and for compliance monitoring. The demands will require retraining or training of HIM professionals. "Coders must be prepared to develop and assess technology at deeper levels than they currently do, especially in areas of data security, data structures, systems implementation, data integrity, process flow, information modeling, and concept representation."²

In “Expanding Our Vision of Clinical Coding,” Kloss summarizes that the future roles of coding will be about the “creation, maintenance, and oversight of medical vocabularies and mapping from vocabulary to various classifications...”. She also cites the trend to move from a nationally based orientation to a global perspective.³

In addition to recognizing that HIM professionals must undertake self-assessment, in “New Coding Requirements: Ongoing Education,”⁴ AHIMA encourages coders to evaluate themselves and to pursue continuing education in areas such as finance, Common Procedural Terminology (CPT), and Ambulatory Payment Classifications (APCs). In “Automated Coding: The Next Step,” by Julie Beinborn,⁵ the future of automated coding is specified to include the assignment of codes based upon the computerized text. In addition, coding software will be able to code records using a variety of classification systems. These include International Classification of Diseases, 9th Edition, Clinical Modification (ICD-9-CM), the Systematized Nomenclature of Human and Veterinary Medicine International (SNOMED), CPT, and the North American Nursing Diagnosis Association (NANDA). In order for software to assign codes, it will be necessary to use the Unified Medical Language System (UMLS). The UMLS then links the text to whatever classification system is required. Within the computerized patient record environment, future coding professionals will primarily “edit” coded information rather than manually assign codes⁵.

In “From Salary to Stress Levels, Inpatient Coders Reveal Themselves,”⁶ the HP3 Research Institute is reported to have undertaken a research study that evaluated demographic information, salary levels, credentials, education, and stress levels of coders. In this study the highest number of respondents performing the coding function were Registered Health Information Technicians (RHITs). The second highest number of respondents was those with the Certified Coding Specialist (CCS) credential. This information is important because it leads to the supposition that most coding professionals are graduates from associate degree programs or may not have any formal higher education in health information. These individuals may not have been exposed to the concepts of research methodology, various nomenclatures and classification systems, and advanced computer applications such as health informatics or database development.

These coding articles and the AHIMA publication speak to the need for coding professionals to undertake further study and self-assessment in order to be prepared for future job functions.

Methods

In response to the need for more information about the future of coding, a one page double-sided survey and separate cover letter was sent to all LVHIMA members (Appendix A). The content of the questionnaire was taken from the Vision 2006 Emerging Roles clinical data specialist section.¹ A total of 129 surveys were sent out to 100 percent of the current 1999–2000 LVHIMA membership. A count of 79 were returned. This represents a 57.3 percent return rate, and only one mailing was undertaken.

The double-sided survey questionnaire was sent to LVHIMA members to gather data for the study. It contained the annual AHIMA membership profile key for demographic data collection on one side and the clinical data specialist content questions on the other.

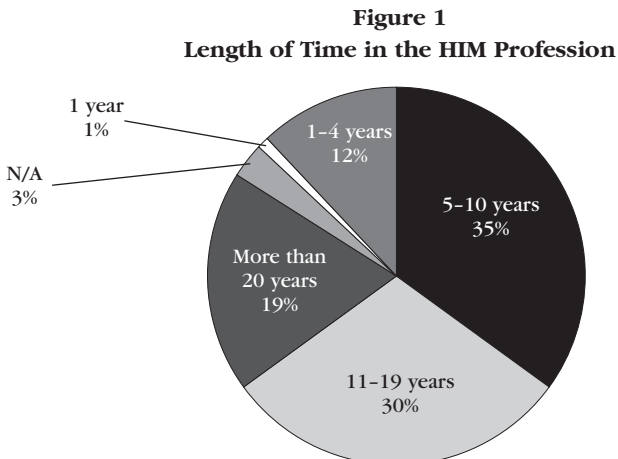
In order to have the best content validity possible, the second side contained (as close to the exact wording as possible) the skill areas as they were presented in the clinical data specialist chapter of *Evolving HIM Roles* (Appendix A).

While the information in the survey was almost identical to the exact wording in *Evolving HIM Roles*, there was a slight difference. Different definitions for the five-point self-assessment scale were used on the LVHIMA survey questionnaire. The LVHIMA survey used the following definition: "On a scale of 1 to 5, 5 being the most capable, please designate how capable you feel in the following areas." Conversely, the AHIMA work used the following competence level definitions: 1 = awareness (introductory recall and recognition); 2 = literacy (knowledge of framework and content); 3 = concept (comprehension, translation, extrapolation, and interpretation of meaning); 4 = detailed understanding (appropriate application of knowledge in a structured and controlled context); 5 = skilled use (application using analysis, synthesis, and evaluation in new situations). The definitions were changed to make the self-assessment process simple. Some of the terms and phrases in the AHIMA definitions were not clearly defined for those who are non-educators. For example, it is not clear how a variety of health information management professionals would interpret "application using analysis, synthesis, and evaluation in new situations." A given group of individuals may interpret this phrase to mean different things.

As was discussed before, the results of the survey were summarized and presented at the annual meeting of LVHIMA in June 2000. The literature review presented in this paper was used to provide a background to the study. It also served as a means to discuss the future influence of the CPR and the potential breadth of classifications and nomenclatures that will be used in the future coding function.

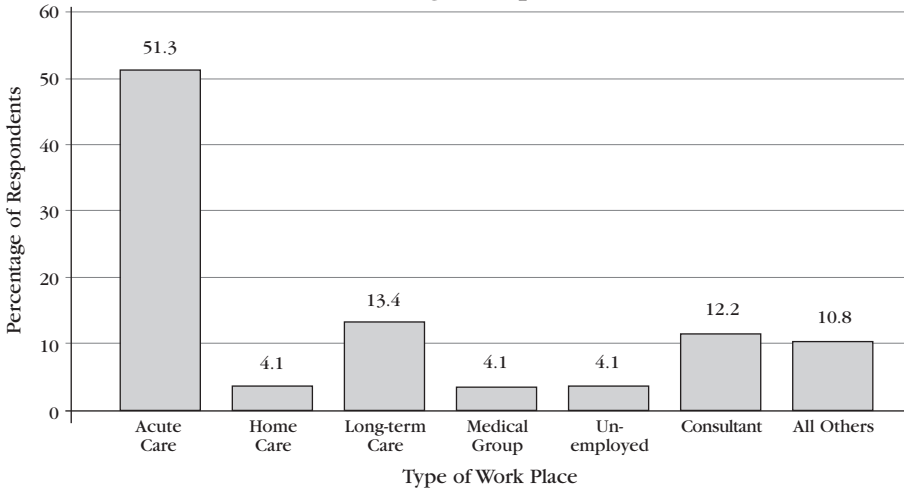
Results

Following the survey process itself, the respondent's answers were tabulated. The following areas were summarized and will be presented in the results section below: length of time in the HIM profession, work setting, types of credentials, level of education, primary job functions, and mean scores of self-assessment on each question.



As Figure 1 reveals, most of the respondents had experience in the HIM field. The majority of LVHIMA members who responded (84 percent) have been in the HIM profession for five years or longer. Furthermore, 49 percent have been in the profession for 11 years or longer.

Figure 2
Work Setting of Respondents



Work Setting of Respondents

While there was variation in the work settings of the respondents, as is evident from the figure above (Figure 2), the majority of the respondents work in the acute care setting. The second highest category of respondents is from long-term care and the third from consultants or vendors.

Table 1
Credentials Held

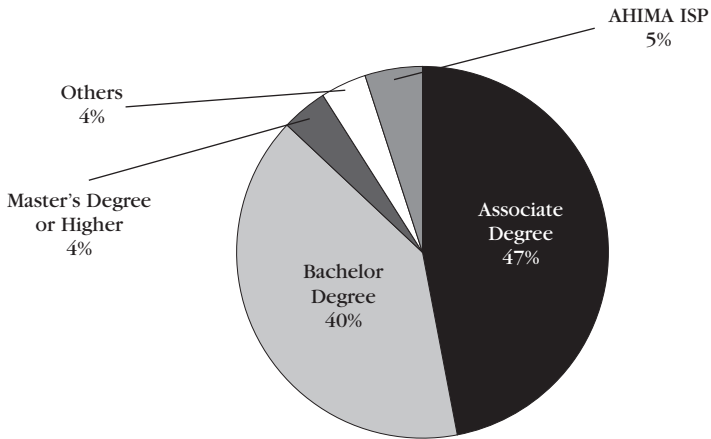
Credentials	Number	Percentage*
CCS	13	17.6
CCS-P	1	1.4
CPC	3	4.1
CTR	1	1.4
LPN	2	2.7
RHIA	23	31.1
RHIT	47	63.5
RN	4	5.4
Other	1	1.4
None	2	2.7

* Please note: this column will not add to 100 percent, as there may be individuals with more than one credential.

Type of Credentials of Respondents

As Table 1 demonstrates, the highest category of respondents was the Registered Health Information Technician (RHIT) at 63.5 percent, followed by the Registered Health Information Administrator (RHIA) at 31.1 percent, and the Certified Coding Specialist (CCS) at 17.6 percent. It is important to note that respondents could have had more than one credential.

Figure 3
Educational Level of Respondents



The majority of the respondents (87 percent) had either a bachelor's or an associate's degree. From Figure 3 it is apparent that 47 percent of respondents had an associate's degree, 40 percent graduated from a bachelor's degree program, 5 percent completed the Independent Study Program (ISP), and 4.0 percent had education beyond the baccalaureate level. The "other" category in the graph is comprised of those with education in an HIM certificate program, a high school graduate, or those who designated "other" on the survey tool.

Table 2
Job Functions of Respondents

Primary Job Function	Number	Percentage
Admitting/patient intake	3	4.0
Accounts receivable	2	2.7
Business office/patient accounts	0	
Case-mix management	2	2.7
Coding—inpatient	29	39.0
Coding—outpatient	29	39.0
Coding—physician office	5	6.8
Special registries	10	13.5
Health information/medical records	27	36.5
Information systems/computer systems	6	8.2
Library information services	1	1.4
Marketing	1	1.4
Medical staff services	1	1.4
Quality assessment/improvement	17	23.0
Risk management	1	1.4
Transcription	3	4.0
Utilization review/management	2	2.7
Education/training	13	17.6
Business/product development	0	
Compliance—corp. and/or dept.	13	17.6
Database management	10	13.5
Data collection or analysis	25	33.8
Information security	2	2.7
Patient advocate	1	1.4
Release and disclosure of info.	10	13.5
Other	10	13.5

Job Functions of Respondents

Table 2 above denotes the primary job functions of the respondents. While it is important to note that respondents could designate more than one job function on the survey, coding was clearly a major job function of many of those who completed the self-assessment. Summary statistics show that at least 39 percent of respondents performed a coding function as one of their primary job functions; this represented the highest percentage of any job function. The second highest category was health information/medical records with 36.5 percent, and data collection or analysis was the third highest at 33.8 percent job function category.

Table 3
Summary of the Mean Self-Assessment Scores

Question Number	All Respondents	Coders	Non-Coders
1a	3.6	4.4	2.7
1b	2.5	2.9	2.2
1c	1.4	1.5	1.5
1d	1.3	1.3	1.4
1e	1.5	1.4	1.7
1f	1.4	1.4	1.4
2	4.0	4.2	3.9
3	3.3	3.7	3.0
4	3.3	3.2	3.2
5	3.9	4.1	3.8
6	3.2	3.4	3.1
7	3.0	3.2	2.9
8	3.5	3.7	3.4
9	3.3	3.5	3.2
10	4.1	4.0	4.5
11	3.8	4.1	3.5
12	3.6	3.8	3.4
13	3.4	3.6	3.4
14	3.5	3.8	3.4
15	3.3	3.4	3.2
16	3.2	3.3	3.2
17	3.2	3.4	3.2
18	3.1	3.3	2.9
19	3.5	3.8	3.2
20	3.3	3.5	3.2
21	3.1	3.5	2.9
22	2.8	3.0	2.8
23	2.5	2.7	2.4
24	2.7	3.3	2.3
25	2.7	2.8	2.6
26	2.8	3.0	2.6
27	3.0	3.2	3.0
28	3.1	3.3	3.0
29	2.9	3.0	2.9
30	2.6	2.7	2.5
31	2.8	2.9	2.8
32	2.6	2.7	2.6
33	3.1	3.3	2.9
34	3.0	3.2	2.8
35	2.3	2.4	2.2
36	2.9	3.2	2.7
37	3.4	3.5	3.2
38	3.5	3.7	3.3
39	3.6	3.6	3.4
40	3.7	3.5	3.3
41	3.6	3.8	3.5
42	3.3	3.4	3.3
43	3.5	3.7	3.3
44	3.7	4.3	3.1
45	3.5	3.7	3.5
46	3.7	3.9	3.6
47	3.6	3.7	3.5
48	3.8	3.9	3.7
49	3.5	3.7	3.4

Summary of Self-Assessment of Skills

The respondent's answers to the survey are tabulated above in Table 3. The mean answers of the entire group are listed with two additional columns showing the responses of coders and non-coders. The coder group is comprised of all those respondents who performed any coding function (job function categories 5 through 7 from Table 2 and the job function categories in the questionnaire). The non-coders are all those who did not perform these functions. The lines in bold reflect any difference between the two means that is 0.5 or greater.

The self-assessment questions that showed a difference in mean self-assessment scores were as follows:

Question	Description
1.	Understanding of current clinical coding systems relevant to the organization, a. ICD-9-CM b. CPT
3.	Understanding of elements required for research and outcomes
10.	Ability to perform quality audits
11.	Ability to identify the problems and issues suggested by audits
19.	Ability to communicate electronically both internally and externally
21.	Ability to identify clinical data and where it is warehoused
24.	Ability to use and interpret data from reimbursement software applications such as DRG groupers, case-mix programs, APGs, and so forth
36.	Ability to understand specific data elements and their values
44.	Ability to clarify essential outcomes within a given context

Discussion

This study served as a method of participatory self-assessment that also provided an opportunity to generate information about the future of coding and a forum for discussion of the results. This study demonstrated one of the new areas of skill projected for the clinical data specialist (research methodology) to HIM professionals in a continuing education format. The study also explored the question of who will be technically able to assume the future role of clinical data specialist.

It is intuitively appealing that there was a difference between the coders and non-coders in areas that one would expect to find differences. For example, there were differences between the coders and non-coders regarding self-assessed capability to understand ICD-9-CM and CPT-4, and the ability to use and interpret data from reimbursement software applications. This finding is consistent with our collective understanding of the current coding function versus other job categories. However, other skills that appeared to be different are very interesting and may point to the capabilities that have strategic implications.

Other areas that coders had higher self-assessment scores in were: understanding research and outcomes elements, ability to communicate electronically, ability to understand data elements and their values, and ability to clarify essential outcomes within a given context. Many of these abilities may provide competitive advantage for the individuals who possess the skill in comparison to those who do not. For example, the

ability to communicate electronically or to understand data elements is a future skill that will be required in many areas in HIM, not just coding.

The findings also showed that non-coders had higher self-assessment scores on audits and their interpretation. Findings further suggest that there are only a few skills that differentiate future coding professionals from non-coding professionals. This implies that individuals who are not current coders may still have many skills that will be needed in the clinical data specialist role of the future. Further research in these areas with a larger number of participants and with statistical analysis may be fruitful.

The LVHIMA study also suggests that very few HIM professionals, including coders, are prepared to work with International Classification of Diseases—10th Edition and SNOMED. If future projections are correct, this may present a significant problem. ICD-10 is scheduled to be implemented in the near future and SNOMED has been deemed the classification system of choice for the CPR. The data appears to suggest that while coding professionals have become specialized by necessity, the broad range of technical coding skill required for the future may not be under development within the HIM workforce. It also suggests that while training materials have been available for several years regarding ICD-10, few coding professionals or HIM departments have initiated training to develop skills in this new coding system. This implies that coders may need to consciously broaden their knowledge base and develop internal motivation to develop new skills to be prepared for the future job requirements of the clinical data specialist.

There are several research methodology issues that inhibit generalization of these research findings. The research study was undertaken with a small number of non-randomly selected HIM professionals in a small geographic area of the state of Pennsylvania. The survey questionnaire was not tested in any standard manner for reliability or validity. The respondents were asked to subjectively assess themselves in terms of capability—there were no objective measures undertaken to evaluate objective capability—and the differences between means were not tested for significance with statistical tests.

However, having stated these important research methodology issues the study process and the results may be important and were very interesting to those who participated in the study. It is hoped that this exploratory study will prompt future research in both current coding practice and the futuristic role of clinical data specialist. An attempt was made to involve the local health information management association in the development of the research methodology and the evaluation of the data resulting from the study. In this way, the entire process was designed to blend a limited amount of traditional higher educational course content with the forum of a continuing education workshop. While the Association members were active participants in the research study, it is unclear whether or not the participants in fact understand research methodology any better than they did before the study and its presentation.

This study raises many questions.

- Does performing the coding function assist in the development of electronic communication, research, and data elements or do coding professionals bring these skills to this function?
- Why do other HIM professionals score themselves differently in these same areas?
- What implications does this research have in terms of higher education and the provision of continuing education?

- What is the best way to reach current coding professionals to assist them in the development of needed skills for the future?

It is hoped that this research study, while limited in scope, will assist in the development of more research in the vitally important HIM function of coding. It appears from the HIM literature that the skills currently needed by coding professionals, while important now, may change dramatically in the future. Educators and HIM researchers can continue the efforts of the visionary HIM leaders, who created *Evolving HIM Careers* by undertaking empirical research to further understand the proposed future skill sets of HIM professionals.

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Appendix A

Cover Letter and Survey Tool

Dear Colleague,

At the December 1999 meeting of the Lehigh Valley Health Information Management Association (LVHIMA) meeting, I volunteered to survey our association members regarding the current knowledge of projected coding skills requirements contained in the American Health Information Management Association's Vision 2006. In order to determine future educational needs it is important to determine areas where new knowledge and learning are most important.

We would sincerely appreciate it if you took a few minutes to respond to the attached questionnaire by April 17, 2000. We also invite you to attend the annual LVHIMA meeting in June where the findings from our survey will be presented. Thank you for your time and effort and I look forward to seeing you at future LVHIMA meetings.

Sincerely,

Jennifer Hornung, MBA, RHIA, CPHQ, CCS

Past President LVHIMA

On a scale of 1 to 5, 5 being the most capable, please designate how capable you feel in the following areas:

- | | |
|--|-----------|
| 1. Understanding of current clinical coding systems relevant to the organization: | |
| A. ICD-9-CM, | 5 4 3 2 1 |
| B. CPT, | 5 4 3 2 1 |
| C. DSM-IV, | 5 4 3 2 1 |
| D. SNOMED, | 5 4 3 2 1 |
| E. ICD-O | 5 4 3 2 1 |
| F. ICD-10 | 5 4 3 2 1 |
| 2. Ability to gather clinical data from primary data sources | 5 4 3 2 1 |
| 3. Understanding of the elements required for research and outcomes | 5 4 3 2 1 |
| 4. Ability to participate in the design of studies | 5 4 3 2 1 |
| 5. Ability to collect, analyze, and interpret medical information for quality and accuracy | 5 4 3 2 1 |
| 6. Ability to establish goals and parameter outcomes to be analyzed | 5 4 3 2 1 |
| 7. Ability to design specifications for study around outcomes | 5 4 3 2 1 |
| 8. Ability to review data and identify patterns, trends, and so on | 5 4 3 2 1 |
| 9. Ability to design audit tools | 5 4 3 2 1 |
| 10. Ability to perform quality audits | 5 4 3 2 1 |
| 11. Ability to identify the problems and issues suggested by audits | 5 4 3 2 1 |
| 12. Ability to implement strategies to resolve issues | 5 4 3 2 1 |
| 13. Ability to create useful forms for managing data | 5 4 3 2 1 |
| 14. Understanding of the flow of the data to be captured on the form | 5 4 3 2 1 |
| 15. Ability to create attractive, high-quality documents | 5 4 3 2 1 |
| 16. Ability to integrate information from other sources into documents | 5 4 3 2 1 |

17. Ability to transmit documents electronically	5	4	3	2	1
18. Proficiency in word processing and spreadsheet applications	5	4	3	2	1
19. Ability to communicate electronically both internally and externally	5	4	3	2	1
20. Ability to obtain data from the Internet and other remote sites	5	4	3	2	1
21. Ability to identify clinical data and where it is warehoused	5	4	3	2	1
22. Ability to select statistical applications appropriate to the data to be captured	5	4	3	2	1
23. Discussing the statistical software used in an organization	5	4	3	2	1
24. Ability to use and interpret data from reimbursement software applications such as DRG groupers, case-mix programs, APGs and so forth	5	4	3	2	1
25. Ability to choose the appropriate software package and to create high-quality presentation materials using appropriate software for training, education, and presentation of clinical data and statistical information	5	4	3	2	1
26. Ability to analyze an audience to determine the appropriate presentation style and data to be presented	5	4	3	2	1
27. Ability to identify projects participants	5	4	3	2	1
28. Ability to identify steps and sequence of steps with the project	5	4	3	2	1
29. Ability to construct the project timeline	5	4	3	2	1
30. Ability to identify and manage project costs	5	4	3	2	1
31. Ability to manage task and timeline revisions	5	4	3	2	1
32. Understanding of budget categories and cost structures	5	4	3	2	1
33. Ability to identify the data to be collected in a computer application	5	4	3	2	1
34. Ability to communicate needs to computer programmers	5	4	3	2	1
35. Ability to develop technical specifications for programming	5	4	3	2	1
36. Ability to understand specific data elements and their values	5	4	3	2	1
37. Ability to create and revise clear policies and procedures	5	4	3	2	1
38. Ability to determine and identify areas in which policies and procedures are needed	5	4	3	2	1
39. Ability to present main issues for decision making	5	4	3	2	1
40. Ability to identify where skills fit within the organization	5	4	3	2	1
41. Ability to demonstrate skills and knowledge base	5	4	3	2	1
42. Ability to recognize cultural barriers within the current organization	5	4	3	2	1
43. Ability to identify the concerns of the participants of a group	5	4	3	2	1
44. Ability to clarify essential outcomes within a given context	5	4	3	2	1
45. Ability to demonstrate flexibility in approach	5	4	3	2	1
46. Ability to identify peers who could assist in projects	5	4	3	2	1
47. Ability to communicate to others at all levels of the organization	5	4	3	2	1
48. Ability to produce clear and appropriate written and verbal communications	5	4	3	2	1
49. Ability to act as a liaison between parties within the organization or on the organization's behalf	5	4	3	2	1

What is your primary work setting (check only one)?

- 1. Hospital
- 2. Multihospital/diversified system
- 3. Home healthcare agency
- 4. Long-term care facility
- 5. Mental health facility
- 6. Rehabilitation facility
- 7. Medical group practice/physician's office
- 8. Freestanding ambulatory surgery center
- 9. Other ambulatory care facility
- 10. Hospice
- 11. Managed care/HMO/PPS office
- 12. Transcription company
- 13. Correspondence company
- 14. Insurance company
- 15. Jail/corrections facility
- 16. Government/public health agency
- 17. Law firm
- 18. Educational institution
- 19. Consultant/vendor HIM services
- 20. Vendor HIM products
- 21. Professional or trade association
- 22. Retired
- 23. Currently unemployed
- 99. Other (please specify) _____

What are the primary job functions for which you are responsible for or for which you provide consulting services (limit a maximum of five)?

- 1. Admitting/patient intake
- 2. Accounts receivable
- 3. Business office/patient accounts
- 4. Case-mix management
- 5. Coding-inpatient
- 6. Coding-outpatient
- 7. Coding-physician office
- 8. Special registries
- 9. Health information/medical records
- 10. Information systems/computer services
- 11. Library information services
- 12. Marketing
- 13. Medical staff services
- 14. Quality assessment/improvement
- 15. Risk management
- 16. Transcription
- 17. Utilization review/management
- 18. Education or training
- 19. Business/product development
- 20. Compliance-corporate or departmental
- 21. Database management
- 22. Data collection or analysis
- 23. Information security
- 24. Patient advocate
- 25. Release and disclosure of information
- 26. Not applicable
- Other (please specify) _____

Which phrase best describes your job title (check only one)?

- 1. Administrator/CEO/COO
- 2. Assistant Administrator/VP/AVP
- 3. Director
- 4. Assistant director
- 5. Manager
- 6. Supervisor
- 7. Team leader
- 8. Lead worker

- 9. Coder
- 10. Technician
- 11. Coordinator
- 12. Clerk
- 13. Consultant
- 14. HIM faculty
- 15. Student
- 16. Retired
- 17. Chief financial officer
- 18. Chief Information officer
- 19. Analyst
- 20. Transcriptionist
- 21. Compliance officer
- 22. Information security officer
- 23. Registrar
- 24. Currently unemployed
- 99. Other (please specify) _____

How long have you worked in the health information management profession (check one)?

- 1. Less than one year
- 2. One to four years
- 3. Five to ten years
- 4. Eleven to nineteen years
- 5. More than twenty years
- 6. Not applicable (student)

Please state the highest level of education you have completed to date (check only one) and specify the year in which you graduated:

- 1. High school graduate
- 2. HIM certificate program
- 3. AHIMA ISP program
- 4. Associate's degree
- 5. Baccalaureate degree
- 6. Master's degree
- 7. Doctor of Philosophy (Ph.D.)
- 8. Doctor of Law (JD)
- 99. Other (please specify) _____
- Check here if you are currently pursuing another degree.

Please specify degree in progress: _____

If you are no longer taking college courses please state your graduation year: _____

What are the credentials you currently hold?

- 1. CCS
- 2. CCS-P
- 3. CPC
- 4. CPC-H
- 5. CPHQ
- 6. CTR
- 7. LPN
- 8. RHIA
- 9. RHIT
- 10. RN
- 11. Other

What is your ethnic background (check one)?

- A. Asian/Pacific Islander
- B. Black
- H. Hispanic
- N. Native American
- W. White