

Evaluation And Management Documentation And Coding: Results From An Exploratory Study

May 2007

Susan Hrachovy Fenton, PhD, Director of Research
AHIMA's Foundation of Research and Education
Chicago, IL

Larry D. Gamm, PhD, Professor
Department of Health Policy and Management
School of Rural Public Health
Texas A&M University Health Science Center

Note: this article is an extracted chapter with appendices from Susan H. Fenton, "Physician Care Evaluation and Management Documentation and Coding: an Exploratory Study of Policy Inertia and Technology Adoption" (PhD Dissertation, Texas A&M, May 2007).

Abstract

Objective: To categorize physician practices employing health information management professionals according to the documentation and coding methods and technologies utilized.

Design and Measurements: A web-based survey was developed using a combination of telephone interviews and site observations. Two focus groups of HIM professionals employed in physician practices were utilized to test the survey for face validity and understandability.

Results: More physician practices (50.8) use the traditional documentation methods of handwriting and dictation either singly or in combination than any other type of documentation method. Technology either in the form of an encoder or CAC, EHR software suggesting the codes, is used for E/M coding in less than 20% of total practices.

Conclusion: Less than one-half of the practices which reported using an EHR also reported using EHR software to suggest E/M codes. The low levels of technology adoption, especially for coding which requires little additional physician effort, indicate that forces other than technology are involved.

Introduction

Evaluation and management (E/M) documentation and codes are primarily assigned by physicians for office services, i.e., non-procedural office visits. E/M coding was implemented in the United States in 1992.¹ The Centers for Medicare and Medicaid Services (CMS, formerly the Health Care Financing Administration), introduced E/M documentation guidelines in 1995 and then again, in 1997.^{2,3} E/M documentation and

coding has been and continues to be a source of concern for physicians, especially the Department of Health and Human Services Office of the Inspector General which continues to review E/M code assignment as a part of the Correct Coding Initiative.⁴

Although previous research has studied E/M code assignment inter-rater agreement⁵⁻⁹, only one, limited study of the use or impact of documentation and coding methods was found.¹⁰ That is, important subjects such as the prevalence of different methods of documenting physician office services along with the prevalence of the E/M coding methods have scarcely been addressed in research to date. The primary care physician practice management and trade journals regularly publish articles on the subjects of E/M code assignment accuracy and comparing code assignment profiles to national benchmarks, however, these articles are often based on anecdotes, not research.¹¹⁻¹⁴

The diffusion of computer-assisted coding (CAC), software which suggests codes, has begun. In late 2004 an American Health Information Management Association sponsored workgroup suggested that clinical coding would soon reach the tipping point with widespread CAC.¹⁵ The Foundation of Research and Education, under contract to the Office of the National Coordinator for Health Information Technology, studied the role of automated software in enhancing anti-fraud activities in 2005.¹⁶ Trade journals report that the use of EHRs, especially those which suggest codes, often result in higher levels of code assignment.^{17, 18} All of this might lead a person to believe that the EHR and CAC are commonplace, especially given the purported resulting increases in physician reimbursement, as well as the health information technology initiatives from the highest levels of the federal government. Other studies has documented the adoption of EHRs, but none have reported the adoption of CAC.¹⁹⁻²¹ This doctoral research was undertaken in an effort to begin quantifying the adoption of CAC in physician practices.

Other parts of the study (and future publications) will explore possible associations of these documentation and coding methods with physician practice and HIM professional characteristics and, eventually, E/M code assignment. However, the goal of this initial survey was simply to determine the E/M documentation and coding methods used by the physician practices employing health information management professionals.

Methods

Survey Creation

The web-based survey of the physician practices employing health information management (HIM) professionals was created using a combination of interviews and observations. Eighty-two HIM professionals employed in physician practices responded to the recruitment email requesting a telephone interview. Ultimately, twelve telephone interviews were conducted with practices ranging in size from 3 physicians to over 400 physicians representing a wide variety of documentation and coding methods used. Three onsite observations were conducted to validate the information reported.

Two focus groups were convened at the 2006 American Health Information Management Association (AHIMA) National Convention in order to have experts test the face validity and understandability of a survey. Approximately three weeks before the National Convention a list of AHIMA members with a work setting of physician practice who had registered for the convention was received. Three separate recruitment emails were sent out to portions of the list. This method was used to ensure adequate space for all who volunteered for the focus groups.

Altogether, the two focus groups provided seventeen identifiable suggestions for the improvement of the survey which is found in Appendix A.

Survey Administration

Over five thousand (5,123) American Health Information Management Association members were identified in the AHIMA member database as working in a physician practice, ambulatory care facility or rural health center, willing to receive marketing communications. Email notifications of the survey availability on the web (including a hyperlink to the survey) were distributed on October 30, November 12 and November 26, 2006. Of the 5,123 persons sent the email, 365, or 7.12%, responded that they were ineligible for the survey due to incorrect information recorded or a change in their work status. Another 239 email messages, or 4.67%, were returned as undeliverable. This resulted in a total of 604 persons deleted from the population database, leaving 4,519 possible respondents. Four hundred and forty-two (442), or 9.78%, persons responded to the survey. This level of response, for a one-tailed test with an alpha level of .05 and a power of 80, enables the detection of an effect size of .12.

The population surveyed was compared with the respondents who were able to be identified with corresponding data in the AHIMA member database. Ninety-four, 21.3%, of the 442 respondents to the survey were not able to be matched to their demographics because they did not provide either an email address for receipt of the report or a zip code of the primary practice location. Frequency proportions for the 94 survey respondents with no demographics were matched with frequency proportions for all 442 of the survey respondents on the following variables:

- Physician practice type (multi or single specialty)
- Number of MDs in the Practice (1 to 10, 11 to 100, 101+)
- Organization Type (Private MD Group, Mgd Care/Military/VA, IHDS, Other)
- Percentage of Medicare Patients
- Type of Documentation Used
- Method of E/M Code Assignment
- Role in the Practice

A two-sample test of proportions using the chi-square test of independence was run for the range of responses to each variable. None of the proportion differences were significant between the 442 respondents and the 94 respondents with no demographics. Given these similarities there is reason to believe that these additional cases would not have significantly altered the results of the comparison between the surveyed population

and the respondent sample. For most demographic characteristics, there are not significant differences between the respondents and the larger population of coding professionals as reflected in the AHIMA member data base. Detailed comparisons between respondents are presented in Appendix B. A brief summary of characteristics of the respondents is described here.

One third of the respondents identify themselves as coding professionals, and another 30 percent are identified as managers or directors. Ninety-five percent are female and 84 percent are Caucasian. Educationally, 38 percent report holding an associate degree, 28 percent a baccalaureate degree, 9 percent a master degree; smaller percentages report being high school graduate, HIM certificate holders, or AHIMA independent study program graduates. Nearly one-half of the respondents have held their position for 1-to-4 years, and more than one-quarter have held the positions for 5-to-10 years.

With respect to work settings, 55.4 percent of those responding were identified in the AHIMA member database as working in an Ambulatory Care setting, 35.7 percent in a Physician Office and 17.2 percent in an HIM Specialty Setting (which includes rural health care centers, home health and other alternative settings). AHIMA members maintain their own data in the database and are able to select more than one work setting. Thus, these results are different than the organization type/work setting responses from the survey.

Results

Respondents were asked a number of questions about their setting characteristics from 2005. They were asked about practices from the past since the most current data available from the Centers for Medicare and Medicaid Services (CMS) is from Calendar Year 2005. As Evaluation and Management codes were originally developed for and are still primarily utilized by physicians to charge for non-technical office services, the respondents were asked to classify the type of physician practice. The results showing the majority are in multi-specialty practices are seen in Figure 1.

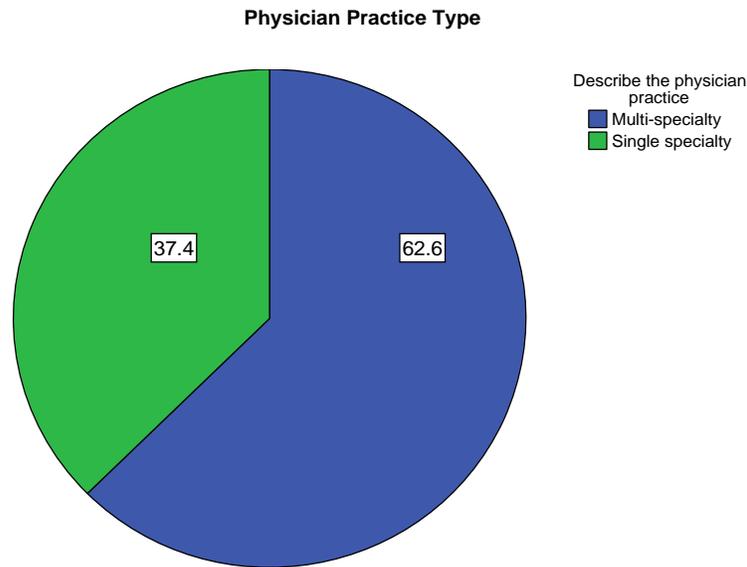


Figure 1. Physician Practice Type

The respondents were asked about the size of the practice based on the number of physicians in the practice. The raw results are seen in Table 1. Because the results were heavily weighted on either end, the responses were recoded for a more even distribution. The largest group consisted of practices with 10 or fewer physicians. This was somewhat surprising since the surveyed population consisted only of practices or organizations employing HIM professionals and it was not previously known that many HIM professionals were employed in small physician practices.

Table 1 Number of Physicians in the Practice N=441

Practice Size	Percent	Recoded Percent
1 to 10	36.5	36.5
11 to 25	13.8	
26 to 50	13.6	
51 to 100	10.0	
11 to 100		37.4
More than 100	26.1	26.1
Total	100.0	100.0

The respondents were asked about the healthcare organization type in which they worked. The raw results are found in Table 2. They were recoded to group several types together for a more even distribution. HMO, Managed Care, Military and VA were grouped together since financially they are similar in that third party reimbursement is not their main source of income. The Integrated Health Delivery Systems were grouped together since the numbers were small. Finally, Academic Medical Center was grouped

with Other since many respondents indicated Other was a faculty practice. Faculty practices are often part of an Academic Medical Center.

Table 2 Physician Practice Organization Types N=442

Organization Type	Percent	Recoded Percent
Private MD Group	41.0	41.0
HMO/Mgd Care	5.0	
Military/VA	8.8	
Mgd Care/Military/VA		13.8
For profit IHDS	4.1	
Not for profit IHDS	15.3	
All IHDS		19.4
Other	16.1	
Academic Med Center	9.7	
Other Acad Med Ctr		25.8
Total	100.0	100.0

Percentage of Medicare Patients in 2005 was collected as an indicator of the financial composition of the practice. The results are seen in Table 3. The largest category was the 26% to 50% category. Less than 5% of respondents reported more than 75% Medicare patients with only 6.5% reporting no Medicare patients. This variable was recoded into four categories due to the small percentages found in the categories of None and More than 75%. Since the documentation guidelines for E/M coding are promulgated by Medicare this variable may impact other analyses.

Table 3 Percentage of Medicare Patients N=429

Patients with Medicare	Percent	Recoded Percent
None	6.5	
1 to 10%	11.4	
10% or less		17.9
11 to 25%	18.4	
26 to 50%	37.8	
51 to 75%	21.0	
More than 75%	4.9	
51% or more		25.9
Total	100.0	100.0

Respondents were asked to indicate which set of CMS Documentation Guidelines their organization used in 1995. More respondents use both set of guidelines than use either the 1997 or 1995 guidelines. The results are seen in Table 4.

Table 4 Medicare Documentation Guidelines Used N=412

Guidelines Used	Percent
1995	26.2
1997	32.3
Both	41.5
Total	100.0

Respondents were asked to indicate the documentation method(s) used by greater than 75% of their physicians in 2005. A quick glance at the numbers in Table 5 reveals that many respondents selected more than one documentation method for their practice. Only 41.2% of the respondents report using 1 documentation method, the remainder using 2 or more, with almost 10% using 4 or more methods, see Table 6.

Table 5 Documentation Methods Used N=441

Documentation Method	Number	Percent
Handwriting	246	55.7
Dictation	301	68.1
Hard Copy Template	83	18.8
Computerized Template	122	27.6
Free-form EHR	73	16.5
Other	26	5.9
Total	851	192.6

(Respondents were able to select more than one documentation method.)

Table 6 Number of Documentation Methods Used N=441

Number of Documentation Methods	Number	Percent
1 – One	184	41.7
2 – Two	140	31.7
3 – Three	74	16.8
4 – Four	33	7.5
5 – Five	10	2.3

Since slightly more than 58% of the respondents reported using more than one documentation method the variable was recoded. The documentation methods were regrouped so that each respondent was assigned to only one documentation method. The goal of the recoding was to group like documentation methods. Recoding so that all possible combinations were represented resulted in 25 different categories some with extremely small numbers. The chosen recoding leaves Handwrite Only, Dictation Only, and Free-form EHR Only due to the frequency of the responses. Though Free-form EHR is a somewhat small percentage, it is difficult to combine it with another method. Handwrite and dictation together was assigned into one category because of the frequency with which these two methods were used together. The use of hard copy and

computerized templates only was combined due to the small number of responses. Respondents using a template documentation method more often used another type of documentation with the template so this was assigned its own category. Finally, of the respondents using an EHR; more used it in combination with other documentation methods than did not. These were coded to the category EHR with other. The recoded variable results are in Table 7.

Table 7 Recode of Documentation Methods
N=441

Documentation Method	Percent
Handwrite Only	13.4
Dictation Only	19.5
Handwrite & dictation together	17.9
Hard copy & comp template	5.9
Hard & Comp Temp with other	24.3
Free-form EHR Only	3.4
EHR with other	15.6
Total	100.0

Respondents were next asked to indicate how E/M codes were assigned in their practices in 2005. Again, many respondents indicated the use of multiple code assignment methods, see Table 8. The Other category consisted of a number of respondents indicating that more than one coding method was used or in several cases that, although the physicians handwrote or dictated their notes, handheld software was used to assist in assigning the E/M code. The E/M code assignment variables were recoded into one code assignment method variable, choosing the most technologically advanced method for each practice as seen in Table 8.

Table 8 Evaluation And Management Coding Method Used N = 442

Code Assignment Method	Number	Percent	Recoded Number	Recoded Percent
Clinician Assigns	292	66.1	211	48.5
Coder Assigns Manually	163	36.9	138	31.7
Coder Assigns w/Encoder	47	10.6	43	9.9
EHR Suggests Codes	39	8.8	43	9.9
Other	52	11.8	0	0
Total		134.2		100.0

(Respondents were able to select more than one documentation method.)

E/M coding is primarily used by physicians to indicate non-procedural services for reimbursement. Thus, it impacts the financial bottom line, certainly of the organization and sometimes of the physician. Therefore, respondents were asked to indicate if their organization offered financial incentives based on E/M coding. The results are seen in Table 9. It is noted that the largest category was Other, though most of the related text responses reported that there were no incentives. Respondents were able to select more than one response. The recoded variable was dichotomous, simply

indicating whether or not the organization offered E/M coding financial incentives, see Table 9. The majority of organizations do not tie financial incentives to E/M coding.

Table 9 Evaluation & Management Coding Financial Incentives
N=442

E/M Financial Incentive Program Used	Number	Percent
Partnership	22	5
Pay-for-Performance	49	11.1
Bonus for Revenue Levels	66	14.9
Other	123	27.8
Total	260	58.8
Yes	152	34.4
No	290	65.6
Total	442	100.0

It is important for organizations to check the accuracy of the assignment of evaluation and management codes to minimize their risk of fraud and abuse charges. There are multiple methods for validating E/M coding as reflected in Table 10. More than half of the respondents internally check E/M coding manually. It was quite surprising to find that 16.3% of organizations did not validate their E/M coding. Some practices use more than one method, hence the recoding of the multiple responses into one variable. Similar to the recoding of E/M code assignment, this recoding assigned a respondent to the highest technology level coding validation. Those reporting they did not perform code validation remained in their original category. The respondents who reported a contract company only remained in that category. If a respondent reported using a contract company and internal validation, they were recoded to either coder/manager manually or coder/manager with software. If both manual validation and software validation was reported it was assigned to coder/manager with software since that is a higher level of technology.

Table 10 Validation of Evaluation & Management Coding N=431

Coding Validation Performed	Number	Percent	Recoded Number	Recoded Percent
Contract Company	52	11.8	32	7.4
Coder/Manager Manually	227	51.4	247	57.3
Coder/Manager w/Encoder	79	17.9	82	19.0
Code Validation Not Done	70	16.2	70	16.3
Other	69	15.6		
Total	497	112.9	431	100.0

Respondents were asked to provide the number of coders working in their organization. The answers ranged from zero to two hundred. The mean was 8.56, the median was 3, the mode was 1 and ninety percent of the organizations had less than 20 coders. Table 11 is the result of grouping the number of coders into ranges for ease of interpretation.

Table 11 Number of Coders Employed N=418

Number of Coders	Percent
None	4.1
.5 - 1.5	25.8
2 – 4	31.3
5 – 10	18.9
11 – 24	12.2
25+	7.7
Total	100.0

Credentialing and certification for coders was developed in the 1990s as correct coding for all healthcare settings became essential. Of the 418 valid responses, only 14.1% of the organizations reported no credentialed or certified coders, 42.1% some credentialed or certified coders and 43.8% said all of their coders were credentialed or certified. A majority, 60.2%, of the organizations had no formal, in-house education for their coders, with the remaining 39.8% reporting an educational program. Finally, 45.5% of the organizations reported that they required credentialing or certification for their coders, contract or employee, in 2005. The credentials or certifications found or acceptable in the organizations are found in Table 12.

Table 12 Credentials/Certifications Found Or Acceptable In The Organizations N=418

Credential/Certification	Number	Percent
Registered Health Info Admn and/or Reg. Health Info Tech	258	58.4
Certified Coding Specialist	162	36.7
Cert. Coding Specialist-Physician	247	55.9
Certified Coding Associate	54	12.2
Certified Professional Coder	226	51.1
Certified Medical Coder	34	7.7
Other	43	9.7

The respondents were asked to indicate if they had significantly changed their documentation practices in 2005. This was defined as projects such as implementing an EHR system or special physician education, etc., that is efforts beyond normal code validation or regular documentation improvement. Twenty-seven point two percent (27.2%) of the organizations had significantly changed their documentation practices in 2005. Of the 121 indicating they had changed their documentation practices, 28.9% said it was due to EHR implementations.

Respondents selected their most desired method for improving their current documentation and coding methods if they could. Table 13 shows the results. The most desired improvement is making E/M documentation and coding training mandatory for physicians, with implementing an EHR second.

Table 13 Most Desired Method For Improving Current Documentation And Coding Methods N=433

Improvement	Percent
Make training mandatory for MDs	31.9
Implement EHR	23.8
Implement documentation improvement program	15.5
Implement CAC with human validation	9.2
Implement template-driven documentation	8.8
Other	6.7
Implement dictation	2.3
Implement speech recognition	1.8
Total	100

The improvements were recoded into 5 groups as follows: 1) those focused on physician education and behavior, 2) those focused on non-EHR documentation methods, 3) implementing an EHR, 4) implementing computer-assisted coding and 5) Other (which ranged from a combination of the improvements to more training and certification required for coders), see Table 14. More respondents want to educate the clinician and change their behavior with a documentation improvement program in order to improve their documentation and coding than want to implement an EHR. This suggests that technology will not be adequate to address the problems found in the current system.

Table 14 Focus of Documentation and Coding Improvements N=433

Improvement Focus	Number	Percent
MD education & behavior	205	47.3
Non-EHR documentation	56	12.9
Implement EHR	40	9.3
Computer-assisted coding	103	23.8
Other	29	6.7
Total	433	100.0

The last question for respondents about E/M documentation and coding was if they had any other comments they would like to share about their E/M documentation and coding methods. Over 70% chose not to comment. Of those who did, the responses ranged from “No other comments” to “We have implemented... in 2006” to “The E/M system is arbitrary and takes away from the physician time spent with the patient.”

Table 15 HIM Practitioner Role in the Physician Practice
N = 439

Role	Percent
Code/code compliance only	35.5
HIM and code/code compliance	19.8
HIM & Bus Ofc, incl code/code compliance	25.5
Other	19.1
Total	100.0

Respondents were asked about their role in the physician practice and the zip code of the primary practice location for demographics. The distribution for the role in the physician practice is shown in Table 15.

Conclusion

This exploratory study of Evaluation and Management documentation and coding methods in physician practices employing HIM professionals reveals some interesting findings. More physician practices (50.8) use the traditional documentation methods of handwriting and dictation either singly or in combination than any other type of documentation method. The actual percentage using these traditional technologies is probably even higher since a practice using dictation in combination with an EHR would be assigned to the EHR category. Additionally, technology either in the form of an encoder or CAC, EHR software suggesting the codes, is used for E/M coding in less than 20% of total practices. This is less than one-half of the practices which reported using an EHR. The reason(s) for this surprising finding cannot be deduced from this survey. Additional research is necessary.

Over half (53%) of the top 110 Medicare Part B procedure codes (ranked by charges) were E/M codes in Calendar Year 2005. The charges attributed to these codes were over \$28 billion, more than one-quarter of total Medicare Part B charges.²² The effective implementation of technology has been found to improve most processes. There is evidence to suggest that technology will benefit providers by ensuring proper reimbursement.¹⁷⁻¹⁹ At the same time, the report from the AHIMA Foundation indicated that CAC technology properly designed and deployed has the potential to reduce healthcare fraud.¹⁶ The low levels of technology adoption, especially for coding, indicate that forces other than technology are involved.

APPENDIX A

EVALUATION AND MANAGEMENT CODING: A FOUNDATIONAL STUDY

If you are an HIM professional working in a physician practice, you are invited to participate in Susan Fenton's doctoral research examining whether different documentation and coding methods result in significant variation in E/M code assignment for professional services only. The purpose of this survey is to categorize physician practices according to their documentation and coding practices.

Please answer these questions for your office's E/M documentation and coding methods for Calendar Year 2005. It is understood that 100% of the physicians in your practice may not follow precisely the same methods. If greater than 75% in the practice use the same documentation and coding methods please answer according to their methods. If less than 75%, please select multiple methods. Answers are required for all questions, however, you can exit the survey at any time without penalty.

1. Describe the physician practice. (Circle the answer that applies)
 - a. Multi-specialty
 - b. Single specialty: _____ (specify specialty)

2. Number of physicians in the practice: Please answer only with the number of physicians (Circle your answer)
 - a. Less than 10
 - b. 10-25
 - c. 25-50
 - d. 50-100
 - e. 100+

3. What type of organization is your practice?
 - a. Private physician group
 - b. HMO/managed care
 - c. Military/VA
 - d. Academic medical center
 - e. Part of for-profit integrated health delivery system (IHDS)
 - f. Not-for-profit IHDS
 - g. Other – please specify _____

4. What percentage of your patient population in 2005 were covered by Medicare (not Medicaid)?
 - a. Less than 10%
 - b. 11-25%
 - c. 26-50%
 - d. 51-75%
 - e. 76%+

5. Please indicate which E/M documentation guidelines were utilized in 2005.

- a. 1995, please give reason
- b. 1997, please give reason
- c. Both, How do you decide when to use which version?

Reason: _____

6. How did the physicians in your practice document their regular office visits in 2005? (Please circle all that apply)

- a. Handwrite in record
- b. Dictate for transcription
- c. Use hard-copy documentation template
- d. Computerized documentation template
- e. Free-form Electronic Health Record
- f. Other _____(specify)

7. How were E/M codes assigned in your practice in 2005? (Please circle all that apply)

- a. Clinician assigns from memory or using a “cheat sheet” or encounter form
- b. Coder assigns manually
- c. Coder assigns using an encoder
- d. Codes are suggested by EHR software
- e. Other, Explain:_____

8. Do you have any incentive programs for your physicians for coding?

- a. Partnerships,
- b. Pay-for-performance,
- c. Bonuses for achieving revenue levels
- d. Other:_____

9. How was code validation performed in your practice in 2005? (Check all that apply)

- a. Contract company
- b. Coder/Manager in practice – manually
- c. Coder/Manager in practice with encoder
- d. Other: _____
- e. Did not perform code validation

10. How many coders does your practice employ? _____

11. How many coders in your practice are credentialed or certified?

- a. All
- b. Some, please give number:_____
- c. None

12. Do you have a formal, in-house educational process for your coders?

- a. Yes

- b. No
- 13. In 2005 was credentialing or certification an employment requirement for your coders, whether contract or employed?
 - a. Yes
 - b. No
- 14. Which credentials were acceptable or found in your practice? (Please circle all that apply)
 - a. RHIA and/or RHIT
 - b. CCS
 - c. CCS-P
 - d. CCA
 - e. CPC
 - f. CMC – Certified Medical Coder
 - g. Other:_____
- 15. Have you changed your documentation and coding practices substantially, i.e., implementing an EHR or beginning a special physician documentation training program, during Calendar Year 2005?
 - a. Yes (please explain)
 - b. No

If yes, please give the reason, such as CMS audit, and give the approximate date of the change:_____

- 16. How would you improve your current documentation and coding method if you could?
 - a. Template driven
 - b. Documentation improvement program
 - c. Implement computer assigned E/M codes with human validation
 - d. Implement an EHR
 - e. Begin using dictation
 - f. Implement speech recognition
 - g. Make the documentation and coding training mandatory for the physicians
 - h. Other:_____
- 17. Is there anything else you would like to tell me about the evaluation and management documentation and coding practices utilized in your physician practice?
- 18. What was your role in the physician practice in 2005?
 - a. Coding and/or coding compliance only
 - b. HIM, including coding and coding compliance
 - c. HIM and Business Office, including coding and coding compliance

d. Other: _____

19. Please provide the zip code of your main practice location in 2005. This will enable an analysis to determine if characteristics such as urban/rural status, age of population, etc. have an impact upon documentation and coding method.

Zip Code of Primary Practice Location: _____

If you want to receive the summarized results or be notified of where they will be published, please provide your email address: _____ (optional)

Thank you for your time. Please feel free to contact Susan Fenton at susan.fenton@ahima.org with any questions.

APPENDIX B

Under Job Title, only Coding Professional showed a significant difference ($p=.0211$). Respondents were more likely than the larger population surveyed to be Coding Professionals. The results in the categories of Other and All Other Titles seem to indicate that fewer of the persons with non-HIM titles responded to the survey. Given the focus of this survey on documentation and coding practices the larger number of respondents with a coding title and a lower number of respondents with Other titles is not surprising. The persons with the Other titles were not eliminated from the surveyed population since the AHIMA member data is self-reported and the reliability and validity of the data has not been established. In Ethnic Background there were significantly more ($p=.0131$) Biracial/Multiracial respondents than in the population; but for both, this group accounted for less than 2 percent.

The demographic Highest Educational Degree showed a significant difference ($p=.0245$) with more persons in the population having a Baccalaureate Degree than respondents. It is notable that the Associate Degree, High School Graduate and AHIMA ISP Program percentages were higher for the respondents than those sent the survey. Given the level of significance attained only for Baccalaureate Degree, this is not considered to have an effect on the results. This result is consistent with the results for the Job Title where there were more Coding Professional respondents. Coding professional certifications do not require a baccalaureate degree. Professionals with baccalaureate or higher degrees often have management or duties other than coding. Years in Position had two significant categories: Less than One Year ($p=.0053$) and One to Four Years ($p=.0303$). The percentage differences between the categories are almost exactly reversed. This may indicate that persons with slightly more experience were more comfortable responding to the survey.

The State Category comparison between the population and those surveyed is limited to those states representing greater than 5% of the population or the respondents. Significant differences in the percentage of respondents when compared to the population were found for Minnesota and New York. This is probably due to two factors – first, Minnesota is home to the Mayo Clinic Health System in many different communities. Mayo is a premier research organization and those HIM professionals are likely to be more sensitized to the need to cooperate with research requests. Second, the request to complete the survey indicated that claims data from three states, one of them Minnesota, would be used to compare code assignment by documentation method. This might have encouraged Minnesota professionals to respond. The difference in the percentage of respondents and population from New York was nearly significant. The reasons are unknown. The only significant difference in Member Type was Student ($p=.0302$). There were more students in the population than the respondents. The demographics of Gender, Years in HIM Profession, Ambulatory Care, Physician Practice, and HIM Specialty Setting did not show any significant differences between the surveyed population and the respondents. The descriptive results of the survey will not be adjusted or weighted.

Test of Proportions Between Population and Sample

Variable	Population Surveyed, not including missing	Respondent, not including missing	p-value for difference in test of proportions
Job Title	n=4363	n=340	
Coding Professional	27.1	32.9	0.0211
Director	14.7	12.6	0.2902
Manager	13.9	17.6	0.0595
Other	10	7.4	0.1206
Consultant	6.2	5.9	0.8249
Supervisor	5.4	5.3	0.9373
All other titles	22.7	18.3	0.0608
Gender	n=4302	n=339	
Female	91.7	94.1	0.1194
Male	8.3	5.9	0.1194
Ethnic Background	n=3980	n=317	
Caucasian	83.7	84.9	0.5769
African American	7.9	6.3	0.3061
Hispanic	3.3	2.5	0.4389
Asian/Pacific Islander	3	2.8	0.8404
Native American	1.6	1.9	0.6841
Biracial/Multiracial	0.5	1.6	0.0131
Years in HIM Profession	n=4278	n=333	
Less than 1	2.7	1.2	0.097
1 to 4	12.3	11.7	0.7478
5 to 10	24	28.8	0.0493
11 to 19	28.9	28.2	0.786
20 to 29	23.6	21.6	0.4067
30 or more	7.4	8.1	0.6394
NA	1.2	0.3	0.1353
Highest Educational Degree	n=4370	n=339	
Associate Degree	34.5	37.2	0.3144
Baccalaureate Degree	34.3	28.3	0.0245
Masters Degree	9.5	8.6	0.585
HIM Certificate Program	8.1	8.3	0.8966
High School Graduate	4.9	5.6	0.5671
AHIMA ISP Program	4.3	5.9	0.1671
Years in Position	n=4325	n=340	
Less than one year	16	10.3	0.0053
One to four years	40.5	46.5	0.0303
Five to ten years	26.4	28.2	0.4692
Eleven to nineteen years	11.9	11.2	0.7006
Twenty or more years	5.2	3.8	0.2585

Variable	Population Surveyed, not including missing	Respondent, not including missing	p-value for difference in test of proportions
State of Practice	n=4505	n=438	
CA	6.1	5.9	0.8672
TX	6.3	5	0.2809
FL	5.2	4.6	0.5874
IL	4.8	5	0.852
MN	4.6	7.8	0.003
WI	4.1	4.3	0.8406
OH	4.1	3.4	0.4774
NY	4.2	6.2	0.0508
Member Type	n=4519	n=348	
ACT	84.2	87.6	0.0918
ASSOC	8.5	7.8	0.651
GRAD	2.9	2.6	0.7471
HON	0	0	1
SEN	0.8	0.6	0.6839
STU	3.6	1.4	0.0301
Ambulatory Care	n=3188	n=245	
Ambulatory Surgery Center	42.8	42	0.8073
Freestanding Ambulatory Care Facility	12.1	11.8	0.8896
Other	39.8	41.6	0.5793
Other (please specify)	5.3	4.5	0.5882
Specialty Practice	0	0	1
Physician Practice	n=2156	n=158	
Group Practice	44.5	48.7	0.3055
Individual (General) Practice	6.8	7	0.9233
Managed Care/HMO/PPO Office	6.8	7.6	0.7009
Other	14.6	10.1	0.1188
Other (please specify)	2	3.2	0.3079
Specialty Practice	25.2	23.4	0.6144
HIM Specialty Setting	n=849	n=76	
Home Healthcare Agency	5.8	6.6	0.7761
Hospice	1.6	2.6	0.5161
Integrated System Corporate Office	25.9	28.9	0.5685
Other	37.7	35.5	0.7043
Other (please specify)	3.3	2.6	0.7413
Rehabilitation Facility	12.7	14.5	0.6532
Rural Health Clinic	10.7	6.6	0.2612
Student Health Center	1.6	1.3	0.8405
Veterinary Clinic/Hospital	0.6	1.3	0.4694

REFERENCES

1. Levinson SR. *Practical E/M: Documentation and Coding Solutions for Quality Patient Care*. Chicago, IL: American Medical Association; 2006.
2. Centers for Medicare and Medicaid Services. 1995 Documentation Guidelines for Evaluation and Management Services. In: Services DoHaH, ed; 1995:1-15.
3. Centers for Medicare and Medicaid Services. 1997 Documentation Guidelines for Evaluation and Management Services. In: Services DoHaH, ed; 1997:1-51.
4. Centers for Medicare and Medicaid Services. Overview - Correct Coding Initiative. website] <http://www.cms.hhs.gov/NationalCorrectCodInitEd/>. Accessed February 26, 2006.
5. King MS, Lipsky MS, Sharp L. Expert Agreement in Current Procedural Terminology Evaluation and Management Coding. *Arch Intern Med* %R 10.1001/archinte.162.3.316. February 11, 2002 2002;162(3):316-320.
6. King MS, Sharp L, Lipsky MS. Accuracy of CPT evaluation and management coding by family physicians. *J Am Board Fam Pract*. May 1, 2001 2001;14(3):184-192.
7. Kuo PC, Douglas AR, Oleski D, Jacobs DO, Schroeder RA. Determining benchmarks for evaluation and management coding in an academic division of general surgery. *Journal of the American College of Surgeons*. Jul 2004;199(1):124.
8. Shoemaker P, Ford L. *Variations and Trends in the Coding of Evaluation and Management (E&M) Services by Hospital Emergency Departments*: American Hospital Directory, Inc.; May 30, 2006 2006.
9. Zuber TJ, Rhody CE, Muday TA, et al. Variability in Code Selection Using the 1995 and 1998 HCFA Documentation Guidelines for Office Services. *The Journal of Family Practice*. July 2000;49(7):642-645.
10. Kikano GE, Goodwin MA, Stange KC. Evaluation and Management Services: A Comparison of Medical Record Documentation With Actual Billing in Community Family Practice. *Arch Fam Med* %R 10.1001/archfami.9.1.68. January 1, 2000 2000;9(1):68-71.
11. Hughes C, Stone T. Are You Prepared to Defend Your Coding? *Family Practice Management*. June 2005;12(6):17-20.
12. Nicoletti B. Are You Coding Accurately? *Family Practice Management*. June 2004;11(6):20-21.
13. Peter KR. Coding Consultation E/M Services Correctly. *Journal of AHIMA*. November-December 2006;77(10):70-72.
14. Stanfill MH. Dangerous E/M Coding Practices: Identifying and Remediating Common Sources of Error. *Journal of AHIMA*. March 2006;77(3):68-71.
15. AHIMA Computer-Assisted Coding e-HIM Work Group. Delving into computer-assisted coding. *J AHIMA*. Nov-Dec 2004;75(10):48A-48H.
16. Foundation on Research and Education. *Automated Coding Software: Development and Use to Enhance Anti-Fraud Activities* Chicago, IL: AHIMA; July 11 2005.

17. Terry K. Blending: The new downcoding. *Medical Economics*; 2006:1-4.
18. Terry K. The Catch-22 in EHRs. *Medical Economics*; 2006:37.
19. Bates DW. Physicians and Ambulatory Electronic Health Records. *Health Affairs*. September/October 2005;24(5):1180-1189.
20. Brailer DJ, Terasawa EL. *Use and Adoption of Computer-based Patient Records*. Oakland, CA: California HealthCare Foundation; October 2003.
21. Gans D, Kralewski J, Hammons T, Dowd B. Medical Groups' Adoption of Electronic Health Records and Information Systems. *Health Affairs*. September/October 2005;24(5):1323 - 1343.
22. Centers for Medicare and Medicaid Services. Medicare Leading Part B CPT Procedure Codes Based on Allowed Charges. http://www.cms.hhs.gov/MedicareFeeforSvcPartsAB/04_MedicareUtilizationforPartB.asp. Accessed July 25, 2006.