



Evaluating Coding Accuracy in General Surgery Residents' Accreditation Council for Graduate Medical Education Procedural Case Logs

Fadi Balla, MD, Tabitha Garwe, PhD, Prasenjeet Motghare, MS, Tessa Stamile, MD, Jennifer Kim, MD, Heidi Mahnken, MSIV, and Jason Lees, MD

Department of Surgery, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma

INTRODUCTION: The Accreditation Council for Graduate Medical Education (ACGME) case log captures resident operative experience based on Current Procedural Terminology (CPT) codes and is used to track operative experience during residency. With increasing emphasis on resident operative experiences, coding is more important than ever. It has been shown in other surgical specialties at similar institutions that the residents' ACGME case log may not accurately reflect their operative experience. What barriers may influence this remains unclear. As the only objective measure of resident operative experience, an accurate case log is paramount in representing one's operative experience. This study aims to determine the accuracy of procedural coding by general surgical residents at a single institution.

METHODS: Data were collected from 2 consecutive graduating classes of surgical residents' ACGME case logs from 2008 to 2014. A total of 5799 entries from 7 residents were collected. The CPT codes entered by residents were compared to departmental billing records submitted by the attending surgeon for each procedure. Assigned CPT codes by institutional American Academy of Professional Coders certified abstract coders were considered the "gold standard." A total of 4356 (75.12%) of 5799 entries were identified in billing records. Excel 2010 and SAS 9.3 were used for analysis. In the event of multiple codes for the same patient, any match between resident codes and billing record codes was considered a "correct" entry. A 4-question survey was distributed to all current general surgical residents at our institution for feedback on coding habits, limitations to

accurate coding, and opinions on ACGME case log representation of their operative experience.

RESULTS: All 7 residents had a low percentage of correctly entered CPT codes. The overall accuracy proportion for all residents was 52.82% (range: 43.32%-60.07%). Only 1 resident showed significant improvement in accuracy during his/her training ($p = 0.0043$). The survey response rate was 100%. Survey results indicated that inability to find the precise code within the ACGME search interface and unfamiliarity with available CPT codes were by far the most common perceived barriers to accuracy. Survey results also indicated that most residents (74%) believe that they code accurately most of the time and agree that their case log would accurately represent their operative experience (66.6%).

CONCLUSION: This is the first study to evaluate correctness of residents' ACGME case logs in general surgery. The degree of inaccuracy found here necessitates further investigation into the etiology of these discrepancies. Instruction on coding practices should also benefit the residents after graduation. Optimizing communication among attendings and residents, improving ACGME coding search interface, and implementing consistent coding practices could improve accuracy giving a more realistic view of residents' operative experience. (*J Surg Ed* 73:e59-e63. Published by Elsevier Inc on behalf of the Association of Program Directors in Surgery)

KEY WORDS: coding, coding accuracy, ACGME, ACGME case log, general surgery residency, graduate medical education, operative experience, CPT coding

COMPETENCIES: Professionalism, Interpersonal and Communication Skills, Practice-Based Learning and Improvement, Systems-Based Practice

Correspondence: Inquiries to Fadi Balla, MD, Department of Surgery, University of Oklahoma Health Sciences Center, 941 S.L. Young Blvd, Oklahoma City, OK 73104; e-mail: fadiballa@gmail.com

TABLE 1. Number of Procedures and Proportion Correctly Coded (in Parentheses) by Resident and Postgraduate Year

Resident ID	Number of matched procedures (N = 4356)	PGY1	PGY2	PGY3	PGY4	PGY5	p Value [†]	Total
1	669	40 (63)	107 (57)	264 (58)	92 (51)	166 (60)	0.6806	385 (58)
2	561	60 (45)	67 (42)	243 (45)	58 (28)	133 (47)	0.1306	243 (43.32)
3	765	43 (44)	94 (49)	264 (58)	163 (50)	201 (56)	0.2204	411 (53.73)
4	604	1 (100)	52 (58)	167 (50)	167 (47)	217 (56)	0.2825	313 (51.82)
5	622	40 (30)	78 (32)	135 (50)	194 (51)	175 (52)	0.0043*	295 (47.43)
6	584	0 (0)	29 (76)	199 (58)	195 (53)	161 (53)	0.1057	326 (55.82)
7	551	0 (0)	38 (63)	191 (58)	178 (61)	144 (62)	0.8379	331 (60.07)

(), proportion correctly coded.

*p < 0.05.

[†]Based on the Cochran Armitage Trend test.

INTRODUCTION

The surgical resident's procedural case log serves as the only procedural-based objective interresidency comparative metric. With the American Board of Surgery's increasing emphasis on standardized outcomes for graduating residents, accurate coding is more important than ever. Furthermore, an inaccurate case log may misrepresent a resident's exposure to given necessary technical skills required to obtain proficiency.

It has been shown in other surgical specialties at similar institutions that the residents' ACGME case log may not accurately reflect their true operative experience.¹ Additionally, reports from the Council of Orthopaedic Residency Directors found discrepancies between resident and faculty coding for cases.¹ Inconsistent coding practices have been implicated in large variability between minimum, mean, and maximum resident case numbers in otorhinolaryngology residents.² These studies may suggest that the overall body of surgical residents' case log entries may be inaccurate to a certain degree. Throughout residency, this system is used to electronically log cases a resident performs, assists, or teaches a given procedure. These cases are logged using Current Procedural Terminology (CPT) codes which are the most widely used medical terminology between physicians and other parties. Although the ACGME case log cannot show competence for a procedure, it does represent operative experience, and this has been shown to correlate with confidence in practice after training³ and comfort level with a given procedure.⁴

Previous studies have investigated the role of interventions aimed at improving resident record keeping in the Accreditation Council for Graduate Medical Education (ACGME) case log and found that these improve accuracy of ACGME case log reports, especially among junior residents.⁵ This shows an excellent opportunity for resident education in coding. However, the degree to which residents are inaccurate is uncertain. Senior residents have been shown to be more accurate than junior residents but further investigation is needed.⁵ The purpose of our study was to investigate the accuracy of procedural coding by general surgery residents at a single institution using the

ACGME case log system as well as describe the factors associated with challenges in coding to preserve the integrity of the ACGME resident case log system and residents' surgical experience.

METHODS

This was a retrospective descriptive study using data collected from 2 consecutive graduating classes totaling 7 surgical residents' ACGME case logs from 2008 to 2014 at a single institution. The CPT codes entered by residents into the ACGME resident case log system were compared to departmental billing records submitted by the attending surgeon for each procedure by matching codes based on the medical record number and date of procedure. The matching was done using Microsoft Excel 2010's "v-lookup" function. The case logs records were saved by our institution from ACGME case log entry website queries after the residents had graduated and were the finalized logs of their resident operative experience. Assigned CPT codes by institutional American Academy of Professional Coders certified abstract coders were considered the "gold standard." In the event that there were multiple codes eligible for billing in the same procedure, any match between resident codes and billing record codes was considered a "correct" entry. Analysis of accuracy proportion for each resident between postgraduate year (PGY) 1 to 5 years was performed and is represented by the p value in Table 1. A 4-question survey was distributed to all current general surgical residents (PGY 1-5) at our institution for feedback on coding habits, limitations to accurate coding, and opinions on ACGME case log representation of their operative experience (Table 2). Of 27 current general surgical residents at the time of distribution, all of them completed the questionnaire. The survey was not administered to the graduated residents, and that the survey results should not be used to explain the coding results directly but rather by inference.

Proportions were used to summarize the data. Trends were evaluated using the Cochran-Armitage Trend Test. All analyses were performed using SAS (SAS 9.3, SAS Institute, Cary, NC).

Download English Version:

<https://daneshyari.com/en/article/8835077>

Download Persian Version:

<https://daneshyari.com/article/8835077>

[Daneshyari.com](https://daneshyari.com)