

ORIGINAL RESEARCH

The impact of an otolaryngology inpatient consult documentation improvement program

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Abstract

Objective: In an era of limited medical training funds and challenges for teaching centers to maintain their academic mission, the importance of accurate documentation to ensure commensurate coding and billing for services is critical. We sought to develop a practical program that would teach residents documentation skills with the goal of more accurately capturing the work being done in a tertiary care academic medical center.

Methods: A case-control study was performed. Otolaryngology inpatient and Emergency Department consultation notes at a single tertiary medical center were reviewed and knowledge gaps and shortcomings in documentation identified. Three short educational sessions were provided on documentation skills. During the same timeframe, templates in the electronic medical record were standardized to help maintain thoroughness of documentation within the consultation note.

Results: A total of 1476 consultations performed by the Otolaryngology department during a 9-month period in FY17/18 (preintervention) were compared to a total of 1622 consultations performed during the same 9-month period in FY19/20 (postintervention). The percent of billable consultations increased from 42.4% to 50.9% ($p < .001$). Similarly, the percentage of consultations coding at a higher level of complexity rose from 51.6% to 59.5% ($p = .002$). This improvement led to an increase in consultation charges of more than \$130,000.

Conclusion: This study demonstrates that a simple documentation and coding curriculum and workflow interventions can lead to more thorough and improved consult documentation as evidenced by a significant increase in the percentage and complexity of billable Otolaryngology consultations at a tertiary academic center.

Level of Evidence: 4.

KEYWORDS

academic institution, coding and billing, evaluation and management, otolaryngology, residency training, systems-based learning

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1 | INTRODUCTION

Medical education and residency training programs consistently lack formal training in evaluation and management (E&M) coding leading to inaccuracies in the medical record, over/under coding liabilities, and lost revenue for academic departments. As residents graduate from medical training, they are faced with the responsibility to provide proper documentation of clinical care. Correct documentation is not only crucial for good patient care and communication between providers, but it is also how clinicians receive appropriate reimbursement for their services. Although physicians appreciate the importance of good documentation and coding, the details of coding are anything but intuitive. Moreover, research shows that trainees have a high frequency of under coding.¹⁻⁵

Today, we are faced with limited graduate medical training funding and often teaching centers struggle to maintain their academic mission.⁶⁻⁸ Therefore, the importance of accurate documentation to ensure commensurate billing for services is even more critical. Further, one of the six general competencies outlined by the Accreditation Council for Graduate Medical Education (ACGME) for residents includes system-based education.⁹ This necessitates training programs to provide residents with at least a foundational understanding of the healthcare system. E&M coding is a key skill in this arena that is both aligned with ACGME expectations and serves to further optimize resource disbursement in teaching institutions. Although sparse, literature demonstrates evidence for improved billing and coding competency after a single educational workshop for residents.^{10,11} In addition, simple educational workflow interventions can create a more efficient, accurate, and streamlined system leading to more comprehensive consultations and improved documentation as noted in the outpatient setting.^{3,4,11,12} Our goal is to demonstrate this improvement in our own tertiary center residency program by incorporating this program into the residency curriculum and measure its impact on the E&M metrics.

2 | MATERIALS AND METHODS

2.1 | Preintervention: FY 2017–2018

A case-control study was performed. UC Davis IRB Administration exemption was obtained (Supplement). Otolaryngology inpatient and Emergency Department (ED) consultation notes at a single tertiary medical center were reviewed and knowledge gaps and shortcomings in documentation identified. Specifically, the following E&M codes for services rendered by the Department of Otolaryngology – Head and Neck Surgery in the ED and hospital inpatient settings were reviewed by the clinical documentation and coding specialists at UC Davis Health for the 2017/18 Fiscal year: (1) 99,201–5 (outpatient visit for the evaluation and management of a new patient), 99,211–5 (outpatient visit for the evaluation and management of an established patient), 99,221–3 (new or established patient initial hospital inpatient care), 99,241–5 (office consultation for a new or established patient),

TABLE 1 Difference in number of consultations billed between fiscal year 2017–2018 and fiscal year 2019–2020

Percent of total consultations billed			
ED consults			
	Fiscal year		
	17–18	19–20	
Billable ED consults	158	214	
Percent of ED consults billable	35.1%	52.3%	<i>p</i> < .001
Inpatient consults			
	Fiscal year		
	17–18	19–20	
Billable inpatient consults	468	611	
Percent of inpatient consults billable	45.6%	50.4%	<i>p</i> = .02
Total consults			
	Fiscal year		
	17–18	19–20	
Billable total consults	626	825	
Percent of total consults billable	42.4%	50.9%	<i>p</i> < .001

99,251–5 (new or established patient initial inpatient consultation), and 99,281–5 (ED visit for the evaluation and management of a patient consult). Of note, a 9-month period was utilized to appropriately serve as a control for the same 9-month period analyzed in the postintervention year (July 1–March 1).

2.2 | Intervention: FY 2018–2019

Three 60-minute documentation and coding workshops were then provided by the clinical documentation and coding specialists during fiscal year 2018–2019 to the Department of Otolaryngology–Head and Neck Surgery. The education sessions covered the basics of E&M coding, including a breakdown of the documentation requirements for components of an accurate and comprehensive consult. In addition, residents, fellows, and faculty received feedback on several of their own consultation notes, with an explanation for the selected level of service as supported by the documentation provided. During the same timeframe, standardized templates were created within the electronic medical record, to help maintain thoroughness of documentation for the residents, fellows, and faculty.

2.3 | Postintervention 2019–2020

Postintervention review was completed for the fiscal year 2019–2020 in similar fashion to the initial documentation review. The 2019–2020 FY was a 9-month period from July 1, 2019 – March 1, 2020. This range was used to avoid confounding from changes in

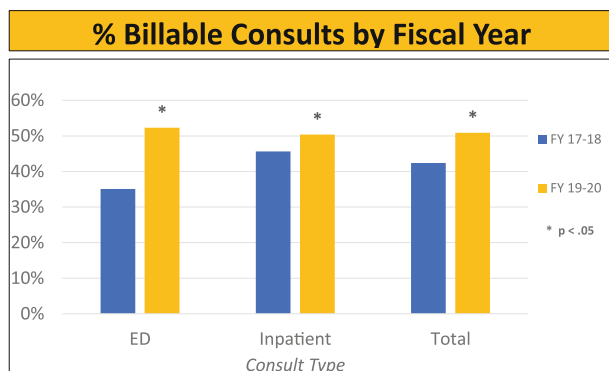


FIGURE 1 Comparison between fiscal year 2017–2018 (preintervention) and fiscal year 2019–2020 (postintervention) examining change in the percent of consults seen within the Department of Otolaryngology–Head and Neck Surgery that were billable.

hospital throughput during the early phases of the Covid-19 pandemic. The data for both the pre and postintervention years was extrapolated to provide annualized billing estimates.

Primary outcome measures included percent of consultations captured as billable and level of complexity in coding for these consultations. The level of complexity was divided into simple (levels I–II) and complex (III–V) categories. Chi-square test with Yates correction was utilized to determine statistical significance ($p < .05$). Secondary outcome measure was the financial impact the changes had as measured in US dollars for one fiscal year.

3 | RESULTS

A total of 1476 consultations were performed by the Department of Otolaryngology–Head and Neck Surgery at the main university hospital during the first 9 months of FY17/18 (preintervention). (Table 1) Of these, 450 were ED consultations and 1026 were inpatient consultations. These were compared to a total of 1622 (409 ED, 1213 inpatient) consultations performed during the first 9 months of FY19/20 (postintervention). (Table 1).

The percent of billable consultations increased from 42.4% in FY17/18 to 50.9% in FY 19/20 ($p < .001$). Specifically, percent of billable consultations in the ED increased from 35.1% to 52.3% ($p < .001$), whereas percent of billable inpatient consultations increased from 45.6% to 50.4% ($p = .02$). (Figure 1, Table 2).

Similarly, the percentage of consultations coding at a higher level of complexity (III–V versus I–II) for all-comers rose from 51.6% in FY 17/18 to 59.5% in FY 19/20 ($p = .002$). For ED consultations, this increased from 70.3% to 84.1% ($p = 0.002$), whereas the complexity coded increased from 45.3% to 50.9% ($p = .078$) for inpatient consultations. (Figure 2).

Regarding the financial impact, the improvements observed led to an annualized increase in all consultation charges of \$133,978.67 between the two fiscal years. An annualized increase of \$42,029.33 was observed in ED consultations, and an annualized increase of \$91,949.33 was observed in inpatient consultations.

TABLE 2 Changes in level of complexity billed between fiscal year 2017–2018 and fiscal year 2019–2020

Consultations billed as simple versus complex				
Emergency room	Level billed			
	FY 17–18		FY 19–20	
	I–II	III–V	I–II	III–V
# of Billed ED consults	47	111	34	180
% of ED consults billed	29.75%	70.25%	15.89%	84.11%
Inpatient	Level billed			
	FY 17–18		FY 19–20	
	I–II	III–V	I–II	III–V
# of billed inpatient consults	256	212	300	311
% of inpatient consults billed	54.70%	45.30%	49.10%	50.90%
Total	Level billed			
	FY 17–18		FY 19–20	
	I–II	III–V	I–II	III–V
# of billed total consults	303	323	334	491
% of total consults billed	48.40%	51.60%	40.48%	59.52%

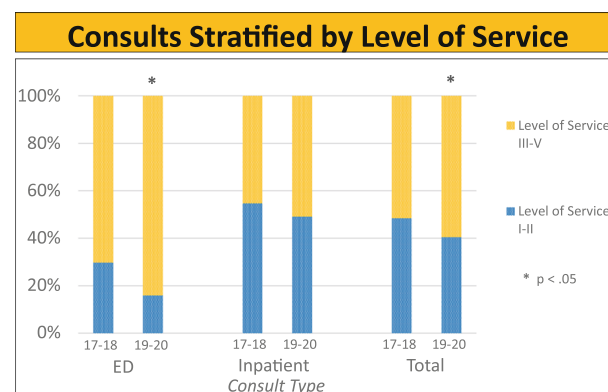


FIGURE 2 Comparison between fiscal year 2017–2018 (preintervention) and fiscal year 2019–2020 (postintervention) examining the change in the proportion of consults billed within the Department of Otolaryngology–Head and Neck Surgery that were coded with a higher level of service.

4 | DISCUSSION

The past two decades have witnessed an evolution in medical education and residency training programs.^{1,7,9} With rising costs and decreasing reimbursements colliding with physician shortages and expanding scope of training, academic centers with residency/fellowship programs are facing challenges in maintaining their missions and ACGME expectations.^{6–8} In addition, proper documentation is critical for good patient care and communication especially in the context of the 21st century CURES Act, dramatically increasing transparency between

patient and provider.¹³ This also is the mechanism by which physicians ensure appropriate reimbursement for their services, providing support to their academic institutions. Optimization of this process is crucial and a potentially high yield, low barrier.

Our study demonstrates that three short E&M educational sessions and template standardization can meaningfully improve the accuracy of documentation to increase commensurate coding and billing. Although we did not differentiate between the effects of educational sessions and the standardization of templates, in aggregate, they provided a significant increase in both billable consultations and increased level of complexity coded for the consultations seen by our department in a stable patient population.

Regarding coding, key elements of documentation of patient encounters were reviewed with department members during the educational workshop. This included reviewing the details of the minimum requirements for the history, exam, and medical decision making to capture each level of service. The concept of medical necessity with the E&M code reflecting the complexity of the problem was also reviewed. Simple changes in the templates used for these encounters were shared during these educational sessions to prompt residents to document all the distinct components of the encounter being performed when indicated. An example of this was a reminder to perform a review of systems when medically necessary, such as when the patient presents as an initial new patient. These high-yield, low effort changes were easily incorporated into the routines of the resident cohort that was primarily providing the consultation services and completing the documentation. The educational sessions also highlighted the importance of the faculty including an attestation statement specifically detailing their level of supervision. Attestation requirements are necessary for government insurance such as Medicare, Medicare advantage plans and Medicaid but do not apply to private insurance companies for purposes of payment. For many tertiary centers, this represents a large percentage of the payor mix. Understanding the reimbursement incentives to directly supervise consultations and attest to it, motivated some changes in attending and resident workflows to capture this work. Even though this was not measured directly by our study, the results of increased billable consultations necessitated that more consults were being seen by the Otolaryngology attendings and/or more accurately documenting as such. Increasing attending presence in the hospital consult setting augments the patient experience, and supplements resident education with direct feedback and teaching related to the patient complaint.^{14,15} This conveniently also promotes one of the major pillars/missions of most academic institutions: education.⁸

There clearly remain areas for improvement. Although we noted a significant increase in billable consultations resulting in an approximately 13% increase in reimbursement dollars per consultation, our total percent of consultations that were billed continues to hover around 50%. This indicates that many consultations may be inadequately documented for or not directly supervised. Reasons for this continued gap include logistical barriers with direct supervision for consultations. While the faculty hospital coverage is synchronized with the on-call schedule, the faculty are also seeing outpatients and

performing elective surgeries in a geographically diverse fashion throughout the day. We do not have a faculty member solely responsible for covering inpatient, emergency room and acute care consultations, such as a faculty member serving as a hospitalist. Consequently, consultations that take place in the hospital or emergency room at certain times of day end up not always being captured if attending supervision was indirect. In addition, there is limited incentive for residents, especially junior residents who are the primary physicians seeing these consultations, to focus on the details required for comprehensive documentation. Resident attention during the busy days and nights, where backlogs on patient responsibilities frequently develop, is appropriately focused on acute care and management of patients and documentation can often become a secondary consideration.

The study design also has limitations. As mentioned previously, this study does not ascertain the impact of each component of our intervention: education sessions versus template standardization. However, in aggregate, these interventions together all have low barriers to provide to a residency program with potential for high-yield improvements. In addition, the E&M educational sessions provided were for the whole department even though it was primarily the PGY-2 and PGY-3 residents, a total of six physicians, completing most of the documentation for majority of these consultation encounters. For our department, we have found that buy-in from the attendings and residents required intermittent reminders of the new expectations and workflow changes. A resident survey on the educational benefit of the coding sessions would have been beneficial to both assess the success of this part of the program and identify opportunities to further improve our curriculum. Anecdotal positive impressions have led to incorporating these educational sessions annually into the resident curriculum. In addition, interested residents are invited to participate in the departmental finance committee where there is an opportunity to gain further education and experience in practice management.

With regards to reproducibility of this study, it is important to note that the lengthy and often confusing requirements for office and outpatient E/M coding were revised by Medicare and the American Medical Association in 2021 to simplify documentation and reduce physician burden.¹⁶ While these new requirements emphasize medical decision making and time, changes focus on a limited number of codes largely related to the outpatient settings. Therefore, understanding the original E/M documentation guidelines is still essential for many types of encounters including ED services and inpatient E/M services as reported in our study. Even so, future consultation improvement programs should include training on the 2021 E/M guidelines.

5 | CONCLUSION

This study demonstrates that an otolaryngology consult documentation improvement program, providing documentation and coding curriculum to both faculty members and trainees, can lead to more thorough and improved otolaryngology inpatient consult documentation as evidenced by a significant increase in the percentage and

complexity of billable Otolaryngology inpatient and ED consultations at a tertiary academic center.

CONFLICT OF INTEREST

The authors declare there is no potential conflicts of interest.

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