Otolaryngology Resident Education of Documentation and Coding: A Systems-Based Practice Intervention
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BACKGROUND
Documentation and coding of physician services has not been a priority in resident education, which focuses on training in clinical medicine and science and not on business and finance. However, the expectation that physicians must be increasingly more cost-conscious requires them to be well versed in both the science and business of medicine. Financial pressures are also mounting as reimbursement is decreasing while the cost of providing care is increasing.

HYPOTHESIS
• Our primary hypothesis is that otolaryngology residents at the University of Iowa Carver College of Medicine have limited understanding of the billing process.
• Our secondary hypothesis is that can improve knowledge in billing and coding with a needs-based educational intervention which will be mutually beneficial to the resident and the department in the form of a more accurate billing.

OBJECTIVES
• To develop resident coding and billing education based on a needs-based assessment of this topic;
• To expand systems-based practice competency through billing/coding education;
• To empower residents with broader skill set;
• To minimize risk exposure via adequate documentation;
• To compare resident billing knowledge, pre- and post-intervention, stratified by level of training;
• To examine billing practices among residents through both staff and resident-run clinic and to estimate frequency of billing errors and the financial implications within our department.

METHODS

1. Participants
   • Faculty
   • Residents
   • Patients
2. Needs assessment
   • Resident and Staff Questionnaire
   • Resident knowledge Pre-test
   • Video documentation Pre-test
   • Shadow Billing
3. Competency-based educational intervention
4. Coding instruments
5. Resident note selection
6. Statistical analysis

KNOWLEDGE PRE-TEST
• Of the 38 respondents, 13 (34.2%) were residents. The remaining 25 (65.8%) were staff or medical students. Of the 26 items, more than half of the respondents answered 9 questions incorrectly (with 3 of these items—2, 4, and 10—being incorrectly answered by 75% or more).
• When the accuracy of responses was broken down by type of respondent, residents were more likely to provide correct responses (average 18 correct out of 26).

STAFF QUESTIONNAIRE
• 16 staff physician surveys were distributed via email of which 13 staff responded.

Additional comments were as follows: "Informal lectures are not effective", "Repetition is effective" and "I don’t think residents should be taught billing and coding".

RESIDENT QUESTIONNAIRE
• 48% (14/29) residents responded.
• While 23.1% of the residents currently code procedures, most (69.3%) currently perform no billing but assume that they will be in the future (92.3%).
• All the residents believed that billing training was useful, although 2 did not think it should be taught during residency.

Benchmarking of Resident Coding

ESTIMATED LOSSES FROM BILLING ERRORS
• Of the 60 encounters, 17% were accurately coded.
• Of the 50 inappropriately coded encounters, 3 were attributed to incorrect new versus established patient designation.
• Of the 9 residents, 68% of total encounters resulted in underbilling by an average of $22 per encounter and 15% of total encounters resulted in overbilling by an average of $35 per encounter.
• There were 14 encounters in which deficiencies of history or physical examination documentation led to a drop in E/M code. Lost charges were estimated to be $710 from these 14 notes alone, an average of $50.00 per note.
• Total lost charges across all encounters were estimated at $909.00 due to inappropriate billing and $710.00 due to lost charges due to insufficient documentation.

CONCLUSIONS
• Residents are not currently educated regarding documentation and coding for physician services.
• Residents have a limited understanding of documentation and coding for physician services as evidenced by inaccurate shadow billing.
• All residents acknowledge that this topic is important to their career with a majority of them interested in learning this information while in residency training.

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