Title

Billing Decoded: A Targeted Educational Intervention to Improve Fellow Competency and Value-Based Care Through Enhanced Coding Accuracy

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Background:

While accurate billing and coding are critical to healthcare system efficiency, reimbursement, and the delivery of high-value care, formal education in billing practices during fellowship training is often limited[1]. Gaps in knowledge leave trainees feeling under-prepared for real-world clinical practice. Additionally, trainees often undervalue services provided, which carry financial implications for the academic institution [2-3]. Brief educational interventions have been effective in improving trainee comfort and accuracy in billing[4]. We hypothesized that a structured 1-hour educational intervention would improve understanding and comfort with billing/coding, reimbursement, and relative value unit (RVU) generation among hematology and oncology fellows. We conducted a quality improvement and educational intervention at the UC San Diego Hematology/Oncology fellowship program. Our primary aim was to improve comfort with billing, coding, and reimbursement.

Methods:

Participants attended a 1-hour didactic session focused on billing and coding fundamentals. The session defined current procedural terminology (CPT) codes, reviewed international classification of diseases (ICD) codes, and broke down the RVU and its components, outlining how these elements translate into reimbursement, and emphasizing the importance of documentation to justify diagnoses and procedures. Pre- and post-intervention surveys were conducted to assess changes in fellows' self-reported comfort and understanding of these domains. Responses were collected through a Likert-scale questionnaire. Descriptive statistics with paired comparisons were used to assess changes following the intervention.

Results:

Fifteen pre-surveys and 8 post-surveys were completed. Comparative analysis was done by change in median Likert score (scaled 1 to 5 from very uncomfortable to very comfortable). Results of the pre- and post-intervention survey demonstrate an improvement in fellows' self-reported comfort across all assessed domains: selecting ICD-10 codes (median Likert pre 2, post 4), selecting CPT codes (median Likert pre 2,

post 4), knowledge of RVUs (median Likert pre 1, post 4), differences between time-based and complexity-based billing (median Likert pre 1, post 4), and overall comfort with accurate billing (median Likert pre 2, post 4).

Conclusions:

Our targeted educational intervention improved fellows' perceived competency in billing and coding. This intervention addresses a key gap in graduate medical education. Additionally, improving the accuracy of trainee billing has the potential to optimize financial reimbursement. Our work highlights the importance of incorporating a structured billing education into fellowship training, both to create a comprehensive curriculum, but also to improve healthcare efficiency and value-based care delivery. Future directions aim to quantify changes in RVU generation per fellow to determine whether these subjective improvements translate to a financial and operational impact.

Citations

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