Medical Billing: It All Adds Up to Quality

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As a senior pulmonary critical care fellow, my first night moonlighting in the intensive care unit (ICU) played out like a greatest hits compilation. A formulaic central line placement, a lengthy discussion on whether to intubate the patient requiring a high-flow nasal cannula, a teaching session on hyponatremia punctuated by telemetry alarms—the anticipation leading up to the shift slowly ebbed as my training kicked in. During a lull just before midnight, I even felt the swelling of pride as I signed my first note with attending status.

But upon signing that note, my evening ground to a halt. Doubt flooded in as I was confronted by an unfamiliar foe: *billing*.

Despite years of training, I felt ill prepared for this sudden financial responsibility. Recalling my own attendings' staccato clicking through charge capture screens, I initially thought, "It's not that big of a deal, right?" That self-assurance vanished, however, as I stared at our complicated electronic medical record interface, jargon-filled online billing guides, and ominous warnings about physician fraud. My first real attending experience ultimately ended with zero charges and several sheepish e-mails to supervisors.

As I prepared to make the jump from trainee to attending, I wanted to understand the basics of an important task that I'll confront every day for every patient. This is what I learned.

First, no margin, no mission: billing is essential to healthcare quality and safety (1). Multiple studies have associated favorable hospital finances with superior readmission rates, length of stay, and even mortality for specific conditions (2–4). These dynamics are particularly pertinent for academic centers and not-for-profit hospitals, which typically function on narrower margins.

Despite the clear benefits of efficient hospital finances, suboptimal billing practices can lead to healthcare waste and legal risk (5). Furthermore, rising costs, substantial variation between institutions, and an inconsistent correlation between price and quality have led to financial

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harm for patients and distrust in the medical system (6).

Medical education is thought to underpin many issues with medical billing. A recent systematic review concluded that a lack of education in billing, particularly for trainees, was a top reason for inaccurate billing (7). With more critically ill patients receiving care from more providers, the coronavirus disease (COVID-19) pandemic poses an opportunity for trainees and attendings alike to review billing practices and address long-standing problems.

In the United States, standards for critical care billing are governed by the Centers for Medicare and Medicaid Services (CMS) in association with the American Medical Association. Billing for critical care is driven by time-based coding and is distinct from other inpatient billing processes, which are based on complexity (8, 9).

Three criteria must be fulfilled to bill for critical care: *1*) a critically ill patient, *2*) the provision of critical care services, and *3*) a specific amount of time spent directly caring for the patient. The American Medical Association's Current Procedural Terminology (CPT) manual defines a critical illness as one that "acutely impairs one or more vital organ systems such that the patient's survival is jeopardized" and carries "a high probability of sudden, clinically significant or threatening deterioration." Critical care services are aimed at assessing and supporting life- and organ-threatening condition(s) through in-depth data interpretation and complex decision making (10).

If the above criteria are met, a provider may capture charges using CPT codes: 99291 for the first 30–74 minutes and 99292 for each subsequent complete 30-minute increment (11). These CPT codes are associated with relative value units and dollar amounts established by the CMS (12). If the ensuing claim is accepted, the institution is reimbursed by the payer according to the relative value units generated.

Although a comprehensive discussion of claim review is beyond the scope of this article, it is important to recognize that successful claims hinge on accurate billing and adequate documentation. Documentation should confirm the total amount of time during which critical care was provided, the medical necessity of the care based on the patient's life-threatening condition(s), and the critical care services directly performed by the provider.

There are several circumstances that affect when and how critical care time can be billed. First, not all care provided to critically ill patients qualifies as critical care. Services that do not meet the threshold for critical care, even if the patient is critically ill, must be billed using distinct evaluation and management codes. An example of services not meeting the threshold for critical care entails a consultant assessing an ICU patient and recommending symptomatic treatment such as antitussives or wound care. Assuming these interventions do not directly address the patient's life-threatening conditions, the consultant must bill using separate CPT codes.

Second, procedures must be billed separately from critical care time, and time spent performing procedures cannot be doubly counted when billing for critical care time (10). Common examples of such procedures include intubation, central venous line insertion, and other vascular access procedures.

Third, critical care is not restricted to specific settings. Although critical care most commonly occurs in an ICU or emergency department, the CPT codes may be applied to any critically ill patient

by any physician delivering critical care services. For example, consider a patient admitted to a general medicine ward who clinically decompensates and receives life-supporting care from a hospitalist for 45 minutes. Even if the hospitalist is not boarded in critical care, they can still bill for critical care for this patient. The inconsistent exposure to critically ill patients and nuances of critical care billing, however, may contribute to missed billing opportunities for providers who do not routinely care for critically ill patients.

Fourth, providers should reassess eligibility for critical care billing as a patient's clinical status improves to avoid inappropriate charge capture. A patient in the emergency department awaiting ICU admission for hypoxemic respiratory failure after an aspiration event, for example, may initially qualify as critically ill based on the CMS definition. If the patient's life-threatening condition resolves in the emergency department, however, then subsequent critical care billing is no longer permissible, even if the patient's disposition to the ICU remains the same. ICU boarders and patients admitted to intermediate care units may be at particular risk for overbilling based on the variable nature of their critical illness.

Despite the many nuances and potential pitfalls, we were unable to find published educational interventions focused on critical care billing. There are, however, numerous projects targeting other types of physician billing for both trainees and attendings. A range of interventions, including didactics, documentation macros, feedback, and payroll simulation have improved outcomes such as billing accuracy, documentation, and reimbursement (13–15). In sum, billing is a teachable skill, but critical care billing comprises a notable gap in the education literature.

Dedicated efforts are warranted to prepare trainees for this ubiquitous task. Specific to critical care billing in graduate medical education, we recommend that critical care fellowships expand educational efforts by drawing on the general billing education literature. Fellowships could implement didactics describing the fundamentals of critical care billing followed by simulation exercises prompting trainees to review a patient encounter and conduct charge capture. Ideally, these simulations would replicate institutional billing processes, including the use of the electronic health record with a simulated patient chart. Providing targeted feedback after the simulation and more general guidance through checklists and documentation macros are additional ways to hone and sustain appropriate billing practices. These efforts should be incorporated into quality and safety curricula to help contextualize physician billing within broader topics such as value-based care.

In retrospect, my humbling first attempt at billing is not surprising, and many other trainees have faced or will face similar challenges. Dedicated programmatic efforts, however, can better prepare future generations of trainees for this important competency at the cross-section of healthcare finances, quality, and education.

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