CHEST

Medical Student and Trainee Notes in the Electronic Health Record Era

Lindsay A. Stevens, MD
Natalie M. Pageler, MD
Palo Alto, CA
Christopher A. Longhurst, MD
San Diego, CA

KEY WORDS: Centers for Medicare and Medicaid Services; electronic health record; provider; student; trainee

Clinical note writing is an essential skill that all medical providers must develop to support the highest quality patient care. Clinical notes are the primary mode of documentation for a patient encounter and form the backbone of a medical record. These documents serve as asynchronous communication between clinicians to support continuity of care and to ensure coordination among multiple providers. Additionally, with the passage of the 21st Century Cures Act, these notes are also now required to be shared with patients and families to support communication and transparency.[1]

Despite the important value of clinical notes, there has been increasing recognition of the growing documentation burden on providers, especially as we have transitioned into the era of the electronic health record (EHR). It is clear that clinical documentation in the United States has evolved to serve many other functions outside of clinical care, including legal, regulatory, compliance, and billing needs. These requirements have resulted in extraordinary documentation burden with notes that are significantly longer than that in many other countries.[2] In response to increasing recognition of this substantial documentation burden, the Centers for Medicare and Medicaid Services (CMS) enacted a major regulatory change in 2018 to decrease duplicate documentation by teaching physicians. These changes allowed medical student notes to be part of the billable record, provided that the attending physicians verify the student's findings and perform their own medical decision-making.[3]

Although the regulatory changes were primarily a response to documentation burden, there are important impacts on trainee education. Given the critical role of high-quality clinical notes, physicians and providers in all specialties are expected to learn to document effectively during their training (Table 1). Until the recent regulatory changes, medical student notes had been largely excluded as a meaningful part of the medical record, which diminished their value as a meaningful learning opportunity. Students had been relegated to writing notes separate from the legal medical record as an educational exercise, often ignored by the patient care team.[4] After the 2018 CMS regulatory changes, many institutions successfully have implemented changes in the EHR to allow students to write billable notes in both ambulatory and inpatient settings.[4,5] Although some had concerns that these changes might impact the learners' experiences negatively and effectively turn them into scribes,[6] many of those who have implemented the changes have found the opposite to be true. Students at both Stanford University and Duke University reported getting appropriate (or improved) feedback after the change and appreciated having their notes be more impactful on care delivery.[4,5] We also saw a significant increase in students writing notes after the change.[4]

Another major concern with student and trainee documentation related to apprehension about potential reimbursement issues. We have found that, with appropriate attestation statements and communication with our hospitals' compliance leaders, there have been no significant issues with either student or trainee notes,

ABBREVIATIONS: CMS = Centers for Medicare and Medicaid Services; HER = electronic health record

AFFILIATIONS: From the Department of Pediatrics (L. A. S. and N. M. P.), Stanford University School of Medicine, and the Department of Information Services (L. A. S. and N. M. P.), Stanford Children's Health; the University of California San Diego School of Medicine (C. A. L.); and the Office of the CEO (C. A. L.), UC San Diego Health.

CORRESPONDENCE TO: Lindsay A. Stevens, MD; email: lindsay.stevens@stanford.edu

Copyright © 2022 American College of Chest Physicians. Published by Elsevier Inc. All rights reserved.

DOI: https://doi.org/10.1016/j.chest.2022.08.2208

TABLE 1] Core Competencies and Entrustable Professional Activity by Student/Trainee Type

Role	Governing Body	Core Competency/Entrustable Professional Activity	Impact of the 2018 Centers for Medicare and Medicaid Services Changes
Medical Student	American Association of Medical Colleges (AAMC)	Entrustable Professional Activity 5: Document a clinical encounter in the patient record: "Entering residents should be able to provide accurate, focused, and context-specific documentation of a clinical encounter in either written or electronic formats…" (aamc.org)	Notes in most clinical settings used as primary documentation for the medical team, allowing for more consistent feedback from the teaching physician
NP Student	National Organization of Nurse Practitioner Faculties (NONPF)	NP 2.3p: Document comprehensive history, screening, and assessment	Not applicable
		NP 8.4: Use information and communication technology to support documentation of care and communication among providers, patients, and all system levels. (nonpf.org)	Not applicable
PA Student	Physician Assistant Education Association (PAEA)	Interpersonal and Communication Skills 2.4: Accurately and adequately document medical information for clinical, legal, quality, and financial purposes. (paeaonline.org)	Not applicable
Medical Resident	American Council for Graduate Medical Education (ACGME)	Interpersonal and Communication Skills 3: Communication within Health Care Systems: "Documents clinical encounter clearly, concisely, timely, and in an organized form, including anticipatory guidance…" (acgme.org)	Increased opportunity to learn through review of student notes and to practice providing guidance and feedback
Medical Fellow	American Council for Graduate Medical Education (ACGME)	Interpersonal and Communication Skills 3: Communication within Health Care Systems: "Documents clinical reasoning concisely in an organized form, including next steps in care. Role models effective written and verbal communication…" (acgme.org)	Increased opportunity to learn through review of student notes and to practice providing guidance and feedback

NP = nurse practioner; PA = physician assistant.

nor with reimbursement from either public or private payors. Attending physicians may attest to a student note so long as they are present with the student, or independently verify their findings and complete the appropriate medical decision-making. The CMS guidelines do not specifically require the attending physician to be present with the student while completing the history and physical examination, only that they verify the accuracy of the medical student's work and perform an examination.[3] The medical student may work independently with the attending or with a resident or fellow trainee as an intermediate reviewer, which allows the other trainees an opportunity to develop skills in reviewing and editing more junior trainees' notes. EHR macros can be configured to check whether a student contributed to the note so that the appropriate attestation statement is suggested to the attending to ensure compliance with guidelines. There are a few caveats to the use of student notes in specific situations. The CMS rules apply only to evaluation and management (E&M) codes and thus cannot be used for certain psychiatric evaluations and psychotherapy. The

Stanford Healthcare Compliance Department opted not to allow student notes in billing for critical care services because of the more complex time-based billing, though this is not explicitly prohibited by the CMS rules.

We know that the EHR is here to stay and that continued education on how to use it effectively should be an essential part of undergraduate and graduate medical education.[7] Writing clinical notes helps students to engage more directly with patient care, to learn to communicate with the team, and to receive feedback about documentation from their supervisors. Given our experience and that of many other academic institutions across the United States, we urge all teaching facilities to implement these CMS guidelines and allow medical students to document in the legal medical record. With the early realized benefits of the CMS guideline changes, we would recommend that CMS extend these rules to advanced practice provider students who are also expected to gain these competencies throughout their training.

Acknowledgments

Financial/nonfinancial disclosures: None declared.

References

1. About ONC's Cures Act Final Rule. Accessed July 29, 2022. https://www.healthit.gov/curesrule/overview/about-oncs-cures-act-final-rule
2. Downing NL, Bates DW, Longhurst CA. Physician burnout in the electronic health record era: are we ignoring the real cause? *Ann Intern Med*. 2018;169(1):50.
3. Medicare Learning Network. E/M Service Documentation Provided By Students (Manual Update). Published June 1, 2018. Accessed July 15, 2022. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/Downloads/MM10412.pdf
4. Stevens LA, Pageler NM, Hahn JS. Improved medical student engagement with EHR documentation following the 2018 Centers for Medicare and Medicaid Billing Changes. *Appl Clin Inform*. 2021;12(3):582-588.
5. Gagliardi JP, Bonanno B, McPeek Hinz ER, et al. Implementation of Changes to Medical Student Documentation at Duke University Health System: balancing education with service. *Acad Med J Assoc Am Med Coll*. 2021;96(6):900-905.
6. Cassese T, Sharkey MS, Pincavage AT, Schwanz K, Farnan J M. Avoiding pitfalls while implementing new guidelines on student documentation. *Ann Intern Med*. 2019;170(3):193-194.
7. Pageler NM, Friedman CP, Longhurst CA. Refocusing medical education in the EMR era. *JAMA*. 2013;310(21):2249-2250.