Being a Medical Scribe: Good Preparation for Becoming a Doctor

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Introduction

Medical scribes are individuals who specialize in documenting patient health information in real time within an electronic health record (EHR) platform. In emergency departments, inpatient settings, urgent care, and other outpatient clinics, scribes facilitate efficient patient care by allowing clinicians to focus on patients rather than the clerical work associated with practicing medicine. Extensive research has shown scribes have a beneficial impact on revenue, patient satisfaction, length of stay, and workload distribution [1]. Clinicians report that work with a scribe decreases work-related stress and improves their ability to multitask while increasing their workplace satisfaction and overall quality of life [2, 3]. Despite mounting evidence on the benefits of scribes for licensed clinicians, little attention has been given to the impact of the scribe experience for those who work as medical scribes, many of whom aspire to become medical doctors. As current medical students and former scribes who are enrolled in the Penn State College of Medicine in the USA, we recall from our own experiences and from discussions with multiple former scribes the influence that scribing had on preparing us for medical school. In particular, this commentary will describe how the scribe experience has prepared us to work as part of a medical team, introduced us to pattern recognition

as it relates to medical-decision-making, and spurred our personal and professional development. This commentary will also discuss the role of a scribe in the healthcare setting, the potential benefits of scribing for medical school graduates who wish to pursue residency training in a new country, and, from a clinician's point of view, will explore the idea of scribing as an apprenticeship.

A Realistic Picture

For aspiring medical students to acquire a clear understanding of the responsibilities, challenges, and daily proceedings of practicing physicians, firsthand experience with a physician is essential. Usually, this occurs in the form of shadowing, which involves following a physician for one or more days while the physician interviews patients, conducts physical examinations, and performs procedures. Such shadowing experiences provide students with opportunities to ask questions and gain a basic understanding of what it means to practice medicine. Due to increasing regulation and concerns over HIPAA compliance and liability, however, establishing a connection with a physician or health care practice to find meaningful shadowing opportunities can be frustrating and challenging [4]. Moreover, without sufficient background and orientation, merely observing a medical encounter can be a relatively superficial experience that yields little insight into the reality of practicing medicine.

By contrast, working as a scribe requires active involvement in patient encounters. This includes cogently summarizing complex patient presentations, verifying medications, and recording medical information with the electronic health record. Scribes must synthesize and cull the patient's concerns, track the information relevant to the patient's chief complaint, and accurately document the physical examination and assessment and plan as dictated by the clinician. Scribes often assist busy clinicians with the many details and tasks involved in patient care, including retrieving imaging and laboratory

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studies, notifying nursing that a patient is ready for medications, managing various aspects of patient flow, and responding to pages when the clinician cannot take messages. In addition to helping elevate the quality of patient care, these activities give scribes special insight into the feel and flow of clinical practice. Unlike shadowing, which provides only a limited perspective of a physician's work-life, scribes get a realistic sense of what being a physician entails. This includes not only the satisfaction of helping individuals when they are most vulnerable but also the burdens associated with time constraints and strict regulations. Due to this immersion and opportunities to work with multiple clinicians, scribes are also exposed to different styles of interacting with patients, and different models for balancing the demands of medical practice—all of which can help scribes carve their own identity as they advance into the profession.

In addition to learning to function as a member of the healthcare team, scribes who work in academic settings learn how to function in a complex workflow involving medical students, residents, fellows, and consultants. Former scribes also report that this exposure helped them realize that high-quality patient care often relies on good working relationships with social workers, nurses, pharmacists, medical technicians, paramedics, and other allied health professionals.

Learning to Think like a Doctor

Though not directly involved in medical decision-making, scribes become acculturated to the logic of medical decision-making, the pattern recognition, and the countless associations that constitute the practice of medicine. Scribes complete thousands of medical charts, each of which houses patterns and content that teach scribes to integrate symptoms, events, physical findings, and test results. Working within the electronic health record also prepares scribes to adeptly navigate the bulk of information that accumulates in the often-disjointed medical care of patients. Taken together, working as a scribe provides for continuous learning in a way that is simply unavailable to individuals without extensive medical training.

Prior to matriculating as medical students, we learned from scribing what specific questions needed to be asked when a patient presented with a certain chief complaint, what to seek on physical exam, and how to interpret laboratory values and imaging to rule out various conditions on the differential diagnosis list. As scribes, we became well versed not only in medical terminology, but in specific medical findings and indications, such as: the meaning of a positive McBurney's sign, the possible causes and work-up of an irregular heart rhythm; the concerns and caution that must be taken with a teenager with altered mental status, or a newborn who is not feeding well. Though expert pattern recognition takes years to develop

[5], our own experience, supported by those of our fellow medical students who were scribes, is that we are far better prepared than our classmates who were not scribes in conducting patient interviews, performing physical examinations, constructing a differential diagnosis, and identifying next steps in management.

The sheer quantity of information presented in medical school can be overwhelming and is often described as “drinking from a fire hose.” As such, background knowledge and experience from scribing not only eases this burden, but it also can also provide an opportunity for students to more fully process the humanistic aspects of their medical education. There are also significant advantages to learning about a medical condition from contact with real patients as opposed to from a textbook. For example, reading about the mechanisms and presentation of urinary incontinence provides a basic understanding of the pathophysiology of the disease. But, seeing the impact of urinary incontinence on a patient's life and psyche contextualizes the information, and ingrains a more meaningful and realistic understanding of the condition and its significance for the patient.

Personal and Professional Development

In our experience, working as scribes stimulated our personal and professional development. This includes growth of organizational skills for managing the demands of medical education, development of effective approaches for mitigating hectic situations, and expansion of our observational skills. Scribes must deal with stressors such as laptop malfunction during an intense patient encounter, multiple time-sensitive demands that can only be met with careful prioritization, and patient overflow when there are innumerable notes to update or finalize. Conditions resembling these force scribes to cultivate equipoise in uncomfortable and uncertain situations, for example, having to write notes from memory because a laptop malfunctioned during an intense, emotionally wrenching encounter with a patient and their family. This ability to fully engage while also tracking key facts and observations becomes part of the skillset that scribes carry with them during subsequent patient interactions in medical school. Completing hundreds of shifts also engenders a mindset of attention to detail, which ultimately prevents medical errors by detecting inconsistencies, oversights, and, on occasion, an order mistakenly entered on the wrong patient.

Scribes' ability to function as part of the medical team is made possible by the strong working and personal relationships they develop with clinicians. In our experience, these relationships often created opportunities for mentorship. The longitudinal nature of these relationships, combined with scribes' demonstrated value to the medical team, allowed for natural conversations with clinicians. When time allows, and a

strong enough relationship has been cultivated, these discussions allow scribes to ask questions and receive candid answers about the joys and resentments of practicing medicine. To be clear, many scribe shifts have no time for such discussions, and as we were taught to prioritize the professional needs of clinicians, there was no expectation of such advice. That said, in our experience, it was common for clinicians to initiate such mentoring relationships. These clinicians seemed to appreciate the opportunity to mentor us, from teaching us how to read electrocardiograms and X-rays, to offering advice about medical school and the profession in general. As these working relationships deepened, it was not uncommon for particular clinicians to write a letter of recommendation attesting scribe's work ethic, passion for medicine, and their ability to process complex information.

For those of us who have pursued medical school, our scribe experience has provided a strong foundation not only of medical knowledge, but also interpersonal communication. As scribes, we have observed many ways to effectively and respectfully communicate with patients. We have also learned by counter-example how *not* to engage with patients and their families. Such a foundation is invaluable for helping us construct our own clinical style. These are the kinds of humanistic qualities that are crucial to being a conscientious physician, but that sometimes degrades over the course of medical training [6, 7]. Former scribes enter medical school with a broad and deep portfolio to draw upon, including examples of how to compassionately inform a patient that their cancer has recurred, or how to (non-coercively) encourage a patient to accept needed treatment. The scribing experience can help future physicians carve their own identity in the medical community, and stimulate not only their medical education, but also their professional development. Through reflection, scribes may also clarify for themselves how they feel about working with patients and other healthcare providers and decide if and why they want to pursue a career in healthcare [8].

In applying to medical school, our scribe experience featured prominently. For those of us who were chief scribes—which involved constructing monthly shift schedules for our co-workers, covering emergency shifts, and providing both classroom and hands-on floor training for new scribes—our leadership experiences were often noted during medical school interviews. But for almost all former scribes we know who have applied to medical school, our passion for medicine surfaced in personal statements and on interviews through the narratives we shared of our experiences and relationships with patients and providers.

Scribing and International Medical Graduates

For physicians who completed third medical training, but now wish to do their residency training in a new country, working

as a scribe may have additional value. Scribing will familiarize those physicians with norms of that country's healthcare system (including the electronic health record) [9]. It will also provide opportunities to demonstrate their abilities and build relationships with clinicians, which in turn may provide opportunities to attain strong recommendation letters for applying to residency programs. So, too being acquainted with the abilities of such scribes can help residency programs identify more well-qualified applicants.

From a Clinician's Point of View

While we, as former scribes and current medical students, have identified the many benefits of scribing on subsequent medical education, these advantages have also been recognized by clinicians. Busy clinicians regard scribes as providing reprieve from the burden of electronic health record documentation as well as its interference with the doctor-patient relationship [10]. But clinicians affiliated with medical education (including our co-authors) also may recognize that the scribing experience provides incoming students with the benefits of apprenticeship, which was diminished after the Flexner report issued in a more scientific approach to medical education [11]. Scribing has the potential to restore some portion of these benefits, including early exposure to a humanistic, cultural, and contextual understanding of patient care, which is foundational for becoming a good and caring physician. Additionally, recent changes may soon allow medical student documentation to be utilized as physician notes. Medical students with scribe experience will be well prepared for such documentation since their paid employment as scribes was premised on the delivery of high-quality documentation [12]. Scribes may provide even further value to academic physicians by allowing them more time and greater focus to teach medical students and/or residents [13].

Early exposure to the realities of clinical practice also helps better inform prospective medical students about their decision to pursue medicine. A little over 4% of those who enroll in US medical schools leave prior to graduation—mostly due to non-academic reasons [14]. But it is also not uncommon for individuals to fully achieve their goal of becoming a physician, only to discover that the reality of practicing medicine does not parallel their initial expectations of what practicing medicine would involve. Further research is clearly needed to better understand the impact of the scribe experience on subsequent outcomes in both medical school (e.g., performance, satisfaction, personal development) and clinical practice (including clinician, patient, and employer goals). That said, the significant advantages of having been a medical scribe suggest that medical schools may wish to take this into consideration when evaluating applicants.

Conclusion

For individuals aspiring to become a doctor, there are very few opportunities to be immersed in the practice of medicine. As such, scribing provides a unique opportunity to perceive what the profession of medicine entails, garner medical knowledge, and begin to acquire the critical thinking, listening, and observational skills needed to become a good doctor. Beyond providing a practical understanding of how medicine is practiced, scribing can help aspiring physicians with their own professional development, provide invaluable opportunities for mentorship, and help them establish a strong foundation for advancement.

We hope this commentary on ourselves and our colleagues' experiences with scribing will spur more systematic research into the value of scribing as preparation for medical school. This might include investigating what kind of impact scribing has on medical school admission rates, performance in medical school (particularly regarding Objective Structured Clinical Examination clinical performance), choice of post-graduate training, as well as post-training outcomes. We also hope that our observations will encourage more pre-medical students to consider the opportunities of being a medical scribe prior to applying to medical school.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflicts of interest.

Ethical Approval Not applicable.

Informed Consent Not applicable.

References

1. Heaton, HA, Castenada-Guarderas, A, Trotter, ER. et al. (2016). Effect of scribes on patient throughput, revenue, and patient and provider satisfaction: a systematic review and meta-analysis. *Am J Emerg Med* 2016;34(10):2018–2028. DOI: <https://doi.org/10.1016/j.ajem.2016.07.056>.
2. Cowan, TL, Dunlop, WA, Ben-Meir, M. et al. Emergency consultants value medical scribes and most prefer to work with them, a few would rather not: a qualitative Australian study. *Emerg Med J* 2018;35(1):12–17. DOI: <https://doi.org/10.1136/emmermed-2017-206637>.
3. Allen B, Banapoor B, Weeks E, et al. An assessment of emergency department throughput and provider satisfaction after the implementation of a scribe program. *Advances in Emergency Medicine*. 2014:1–7. <https://doi.org/10.1155/2014/517319>.
4. Association of American Medical Colleges. Guidelines for Clinical Shadowing. <https://www.aamc.org/system/files/c/2/356316-shadowingguidelines2013.pdf>. Accessed September 2019.
5. Williams R, Klamon D, Hoffman R. Medical student acquisition of clinical working knowledge. *Teaching and Learning in Medicine*. 2008;20(1):5–10. <https://doi.org/10.1080/10401330701542552>.
6. Newton BW, Barber L, Clardy J, Cleveland E, O'Sullivan P. Is there hardening of the heart during medical school? *Acad Med*. 2008;83(3):244–9. <https://doi.org/10.1097/ACM.0b013e3181637837>.
7. Hojat M, Mangione S, Nasca TJ, Rattner S, Erdmann JB, Gonnella JS, et al. An empirical study of decline in empathy in medical school. *Med Educ*. 2004;38(9):934–41. <https://doi.org/10.1111/j.1365-2929.2004.01911.x>.
8. Robert, J, Piemonte, N, Truten, J. The reflective scribe: encouraging critical self-reflection and professional development in pre-health education. *Journal of Medical Humanities*. 2018;39:4(447–454). DOI: <https://doi.org/10.1007/s10912-018-9541-1>.
9. Rao A, Freed CR, Trimm RF. International and American medical graduates in a U.S. pediatric residency program: a qualitative study about challenges during post-graduate year 1. *Medical Teacher*. 2013;35:815–9. <https://doi.org/10.3109/0142159X.2013.802297>.
10. Beasley JW, Wetterneck TB, Temte J, Lapin JA, Smith P, Rivera-Rodriguez AJ, et al. Information chaos in primary care: implications for physician performance and patient safety. *J Am Board Fam Med*. 2011;24(6):745–51. <https://doi.org/10.3122/jabfm.2011.06.100255>.
11. Cox M, M.D., Irby DM, PhD., Cooke M, M.D., Sullivan W, PhD., Ludmerer KM, M.D. American medical education 100 years after the Flexner report. *N Engl J Med* 2006;355(13):1339–1344. DOI <https://doi.org/10.1056/NEJMr055445>.
12. Dewitt DH, LE. The potential impact of scribes on medical school applicants and medical students with the new clinical documentation guidelines. *J Intern Med*. 2018;33(11):2002–4. <https://doi.org/10.1007/s11606-018-4582-8>.
13. Hafer, J, Wu, X, Lin S. Impact of scribes on medical student education: a mixed-methods pilot study. *Family Medicine*. 2018;50(4):283–286. DOI: <https://doi.org/10.22454/FamMed.2018.933777>.
14. Association of American Medical Colleges. FACTS: Applicants, Matriculants, Enrollment, Graduates MD-PhD, and Residency Applicants Data. Graduation Rates and Attrition Rates of U.S. Medical Schools. <https://www.aamc.org/download/492842/data/graduationratesandattritionratesofu.s.medicalstudents.pdf>. Accessed December 2018.

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