



The map is not the territory: medical records and 21st century practice

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Documentation of care is at risk of overtaking the delivery of care in terms of time, clinician focus, and perceived importance. The medical record as currently used for documentation contributes to increased cognitive workload, strained clinician–patient relationships, and burnout. We posit that a near verbatim transcript of the clinical encounter is neither feasible nor desirable, and that attempts to produce this exact recording are harmful to patients, clinicians, and the health system. In this Viewpoint, we focus on the alternative constructions of the medical record to bring them back to their primary purpose—to aid cognition, communicate, create a succinct account of care, and support longitudinal comprehensive care—thereby to support the building of relationships and medical decision making while decreasing workload.

“If it isn’t documented, it isn’t done”, fresh ears hear in medical school. Despite this admonition, students quickly learn that it is not possible to document every clinical thought and act. It is not possible—or even desirable—to create a verbatim transcript of care while simultaneously providing that care. Nonetheless, the contemporary expectation in the USA is that a medical record should nearly scale at 1:1 with the care provided. Lewis Carroll and Jorge Luis Borges both wrote of the absurdity of a map scaled at a mile to a mile; Borges observed that such an “Unconscionable...vast Map was Useless, and not without some Pitilessness was it.”^{1,2}

Few health-care traditions are as universal as the medical record. While our vantage point is American, documentation guidelines are part of a global tapestry of what has been termed technogovernance, a bureaucratic model in which professionals’ behaviour is shaped and manipulated by tight regulatory policies.³ We offer a cautionary tale to our international colleagues of the damage that can ensue from such regulation. We would also like to share a sense of moment and hope: with anticipated new US payment⁴ and delivery⁵ models, we are given a welcome, unique opportunity to reassess the structure, function, and role of the medical record, if policy makers and organisations take heed.

In 1931, the scientist Alfred Korzybski introduced the phrase “the map is not the territory”, to suggest that the representation of reality is not reality itself.⁶ In health care, creating the map (ie, the clinical record) can take on more importance and consume more resources than providing care itself. Indeed, more time may be spent documenting care than delivering care. In addition, fee-for-service payment arrangements pay for the map (the medical note), not the territory (the actual care). Readers of contemporary electronic notes, composed generously of auto-text output, copy forward text, and boiler plate statements for compliance, billing, and performance measurement understand all too well the gap between the map and the territory, and more profoundly, between what is done to patients in service of creating the map and what patients actually need.

Contemporary medical records are used for purposes that extend beyond supporting patient and caregiver. Records are used in quality evaluations, practitioner monitoring, practice certifications, billing justification, audit defence, disability determinations, health insurance risk assessments, legal actions, and research. The primary purpose, ie, the support of cognition and thoughtful, concise communication, has been crowded out.⁷

Meaningful Use,⁸ the Physician Quality Reporting System,⁹ requirements of The Joint Commission,¹⁰ and other well-intended US monitoring programmes exert pressure on clinicians to attempt to document every element of the clinical encounter, including learning style; pain scale; faculty presence; time outs; consent obtained; duration, timing, context, and modifying factors of a presenting complaint; handouts given; and lifestyle advice provided—everything except that which might matter most to the patient.¹¹ In a variation on the Hawthorne effect, this attempt to create a verbatim record of care substantially changes the care, as anyone can attest who has been a patient recently and watched their physician attend more to the check boxes in the computer than to the nuances of their history.

Multiple audit and accountability programmes distract clinician focus away from the activities that matter most to the patient (listening, relationship tending, and sound medical decision making). The medical record will always be an imperfect account of a shared experience; it cannot be a complete record of every bit of information exchanged between patient and medical staff. Our attempts at doing so have distracted clinicians from their primary mission and have created bulky records in which it is difficult to find key information, including details of the patient’s unique story and of the physician’s medical thought.

How did the US medical record become co-opted for non-clinical purposes?

In 1995, the US Federal Governments’ Health Care Financing Administration, now the Center for Medicare Services, released documentation guidelines for Evaluation and Management services.¹² This attempt to create an

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“externally verifiable measure of cognitive services” overwhelmed other influences on clinical documentation.¹³ Other insurers quickly adopted the guidelines. At the time of release, the regulations were described as “stupefyingly complicated, irrelevant to actual patient care, and adversarial in intent...”.¹⁴ They remain largely unchanged and have acquired a sense of permanence and authority. But they are a creation, a construct, and deserving of deliberate improvement.

An American College of Physicians position paper¹³ observes that “[T]he gold standard of a good note comes not from clinical professors and mentors but from professional coders and corporate compliance training. An imbalance of values has been created, with compliance, coding, and security trumping patient care, clinical well-being, and efficiency. A harshly negative ‘gotcha’ mentality that saps the professionalism out of physicians has also appeared.”

Other examples of technogovernance include portions of the US Health Insurance Portability and Accountability Act (HIPAA) and pay-for-performance payment models. Instead of eliciting care improvements and professional pride, these requirements tend to foster professional passivity, learned helplessness, cynicism, and an entire industry of compliance, coding, and the electronic means of same. This status quo is powerful but it is not indomitable.

Consequences of current documentation practices

Imposing a regulation has no significant cost to the regulator other than that of enforcement. In the case of documentation requirements, clinicians and patients bear the financial and opportunity costs. These costs begin with time. Physicians now spend much, perhaps most, of their time away from direct patient care.^{15,16} Although some of this time is used in key areas of care coordination, most of it is consumed by useless and clutter-causing documentation. In a nation with a shortage of primary care, clinicians make real choices in how many patients they can see, as each patient visit adds the encumbrance of the production of notes and other tasks such as Computer Physician Order Entry. The too-frequent outcome of this increased workload is decreased access for patients and increased burnout for clinicians.^{17,18} Moreover, burned-out physicians make more mistakes, show less empathy, and refer more readily.

A second cost is the loss of the potential benefits of technology. For decades, the hope had been that electronic health records (EHRs) would have the dual benefit of improved quality and efficiency. Created primarily as billing software with attendant charting requirements, they have resulted in neither benefit.

A third cost is clarity. The medical record has been primarily constructed to satisfy auditors, not care for patients. EHRs, by allowing the ready provision of data, but neglecting meaning, have led to bloated and confusing notes that will pass an audit but fail to

communicate.¹⁹ Buried somewhere within, one hopes, is the key information that is needed for patient care.²⁰ Recent investigation has found no association between the quality of a note and the quality of care.²¹ The loss of clarity is made even worse for clinicians by the distractions of Computer Physician Order Entry causing break-in-task and other distractions.

A fourth cost is the isolation of health-care professionals who rely on easily overlooked asynchronous electronic communication instead of rich, effective face-to-face communication between team members. The high-profile evaluation of a patient with Ebola in Dallas found that the most salient features of his presentation (fever and recent travel to west Africa) were buried in the chaff of other data. In addition, an EHR-mediated workflow, partitioning nursing and physician care, de-emphasised the responsibility for face-to-face communication of such important information.²² Other studies have shown less satisfactory care when more electronic communication is used.

A fifth cost is the degradation of the quality of the patient–clinician interaction. Clinicians will recognise that the following history was obtained on a billing template, composed by clicking through a series of drop-down boxes to create this pseudo text:

The patient presents with palpitations. The onset was just prior to arrival. The course/duration of symptoms is resolved. Character of symptoms skipping beats. The degree at present is none. The exacerbating factors is none. Risk factors consist of none. Prior episodes: none. Therapy today: none. Associated symptoms: near syncope.

Six pages of text follow, but little meaning (a more detailed example is in the appendix). The reader is left wondering what was the patient’s story, what was the doctor’s thinking, what care was provided? The end result is compromise of clinical quality and relationship. The patient’s story matters. The patient is more than the sum of a series of drop-down boxes. When clinicians record the history in this generic way it increases the risk of likewise seeing patients as generic. EHR use can, for example, impede clinicians’ ability to recognise depression in complex patients.²³

The worldwide experience of clinicians with EHRs tells a story of common frustrations. A recent review of the international literature found that EHR use “increases the time spent on documentation, results in work disruptions, adds additional tasks such as workarounds to bypass the system and involves various other technology-related issues”.²⁴ Successful EHR implementation in low-resource settings depends, in large part, on similar factors as in countries of high and middle income.²⁵ Though there are clear international differences in health-care systems, the worldwide experience is generally moving toward care for chronic conditions by teams of caretakers.²⁶ Our observations and suggestions to improve the medical record are rooted in these

See Online for appendix

Panel: Ways to improve the medical record

Visit notes

Less is more

It is time to strip away the extraneous from the essential, to elevate the primary purpose of the record—the support of cognition and communication—and separate the secondary purposes of accountability, billing, and research. Disconnecting the visit documentation from payment determinations and quality metrics will be key to medical records of less clutter and more value.

Data parsimony

Laboratory results, medication lists, radiology reports, and allergies are recorded in other portions of the record and should not be repeated in full in the visit note. Instead, the note should address the active thought and decisions based on these data. Data obtained at the visit itself, such as vital signs, should only be obtained deliberately with a clinical indication, not to fulfil a billing requirement. Physical exam elements should be performed only when they add utility (and avoided when they are more likely to cause harm).²⁷

Reconceptualise chronic illness documentation

Longitudinal chronic illness care has little need for many of the structures of an acute care visit, such as the chief complaint (which is most often not a complaint, but follow-up), the history of present illness (does not transpose to chronic care), and the review of systems (for those without novel symptoms). Much of modern care is the assessment and management of chronic conditions where the diagnosis is not in question.

Sharing data entry

Across multiple specialties, new models of team-based care, including sharing responsibility for data entry and record keeping with support staff, have improved access to care, accuracy of documentation, and patient and clinician satisfaction. In the legal profession, the judge and attorneys are not also tasked with being court reporters; they are not responsible for simultaneously providing legal care and recording that care. We must find better ways to share responsibility for documentation.

Care beyond visits

Visit-based charting might largely be replaced with problem-based charting or some other wiki type of updating of the longitudinal portion of the record, with only a few lines to capture the essence of the individual visit, rather than attempt to recapitulate the entire record in each visit note.

Other record elements

Problem list

Use the problem list to succinctly annotate the problem and save future plans relative to that problem (eg, AAA 4.1 cm 1/2014, 4.2 cm 1/2015, plan next f/u in 1/2016). Using information design, the patient and clinician could also deliberately connect problems that are related in the record (eg, “patient finds that his anxiety increases his smoking and affects his known coronary artery disease and hypertension”).

Social history

The social history is currently marginalised and hyper-structured in ways that belie its importance, and data entry has trumped the dialogue that leads to real understanding. Knowing who is this person, what matters to them, and who and where are their sources of support is essential to guiding care. Efforts by the Institute of Medicine and others to deliberately expand the social history will require a concomitant change in practice and may include allowing the patient to provide key information directly into the record.^{28,29}

Family history

We suggest that family histories of illness generally be limited to first-degree relatives, as there is no clear evidence of benefit beyond this.³⁰ For elderly patients, more unstructured information about where their children and grandchildren live and the nature of their relationships to the patient should be included.

Virtual care

The medical record should automatically aggregate e-mail and texted conversations to preclude the need for re-work.

Images

When pictures are especially relevant, as with most dermatological cases, images should be facilitated and expected.

Patient access and contribution

Patients are the authority on their social and family histories, medication reconciliation, as well as explanatory models—their thoughts on causes of illness. OpenNotes is an approach for sharing clinicians' notes directly with patients.³¹ OurNotes, a variation on OpenNotes, actively brings the patient voice into the note construction. Research is needed to establish best practices to avoid information overload.

Shared decision making and adherence

Current levels of patient adherence are low—with only half taking medications as prescribed.³² A parallel issue is a lack of shared decision making.³³ The medical record should bring both these phenomena into better relief.

experiences and apply regardless of a health-care system's specifics (panel).

Conclusion

The medical record has grown unwieldy as it tries to serve many masters. EHRs have accelerated and magnified the flaws of this very human construct. The

expectation that the medical record will be scaled at 1:1 and that the entire human encounter will be converted to digital data have been destructive to the heart and soul of medicine, not to mention the quality of patient care. We believe it is time to reassess many of the assumptions of documentation, including what should be documented and who should do the data entry while emphasising

support for reduced cognitive workload and improved efficiency, choosing data parsimony and brevity and bringing the patient more centrally into the process.

Contributors

SAM conceived of the idea for the paper and developed an initial draft. SAM and CAS contributed equally to the manuscript's development after this point.

Declaration of interests

We declare no competing interests.

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