In a New Yorker article, Atul Gawandeexamined reasons “why doctors hate their computers.” A better question might be, “why do doctors hate their computers?” In this issue of JAMA Internal Medicine, the study by Holmgren et al points to a portion of the answer, presenting data on the differences in physician time costs between US and non-US clients of the same electronic health record (EHR) vendor.

I am of a generation of physicians who anticipated, with no small measure of impatience, the arrival of a technology that would help us do our work better and more efficiently. No more hand-copying a patient’s list of medications on admission to the hospital; no more seeing patients without their record; no more nosmallmeasureofimpatience,thearrivalofatechnologythatwouldehelpusdoourworkbetterandmoreefficiently.Nomore

In other countries better than in the US? Perhaps most striking, only the farthest outliers for time on the EHR in the non-US sample, at the 99th percentile, spent the same amount of time as a US clinician at the median.

The study by Holmgren and colleagues was consistent with the notion that US physicians work through more regulatory, compliance, and billing sludge each day than their non-US colleagues, spending more time composing boilerplate documentation designed for billing justification, compliance attestation, and liability defense and subsequently reading their own and others’ bloated notes; generating more orders (one wonders if much of the excess ordering is for low-risk tasks that do not require an order in non-US settings); responding to more system-generated alerts, and managing more electronic communications.

The data match my own observations. On a 2016 trip to the United Kingdom as part of a task force advising the National Health Service on inpatient EHR implementation, I was able to also shadow 3 general practitioners in their ambulatory clinics (none used the Epic software). Although the patients’ scenarios were familiar, the physicians’ interactions with their EHRs were strikingly different. Their notes were brief: 4 visits fit on a single page, rather than a single visit extending over 3 to 4 pages, as is common in the US even for straightforward, single-problem visits. There was no note bloat, no complex order entry, no documentation by drop-down box. The physicians also seemed to spend less time and mental energy dodging future judgments by lawyers, payers, or quality monitors.

Similarly, at the inaugural Patient, Practitioner, and the Computer conference held at Brown University in 2017, physicians from among the 6 other industrialized nations present (Canada, United Kingdom, Denmark, Portugal, Israel, and Australia) responded with puzzlement to the degree of their American colleagues’ distress about EHRs. The conference report concluded, “The United States experience was contrasted with those of other nations, many of which have prioritized patient-care documentation rather than billing requirements and experienced high user satisfaction.”

Holmgren et al demonstrated the power of analyzing EHR use patterns. By comparing time allocation within the same EHR platform across different countries, Holmgren et al raised the possibility that responsibility for the greater time costs for US physicians may not reside exclusively with the vendors and may, in fact, be associated with the social, regulatory, and payment context into which the EHRs have been implemented.

Investigators who use EHR use measures are contributing to a nascent science that facilitates the study of clinical activity, not by direct observation, survey, or intrusive self-timing but with behind-the-scenes data and at scale. Future evolution of this approach should include the use of standardized metrics that can be applied across vendors and that can be used for cross-organization and cross-specialty comparisons, as well as preworkflow and postworkflow and policy interventions. As this science builds, we should be able to find associations between EHR use metrics and other outcomes of interest, such as professional satisfaction or burnout, intention to decrease clinical effort or leave medicine, teamwork and
task distribution, continuity, access, and patient experience. On the demand side, physicians who are considering their first or next practice may gain an advantage from understanding the after-hours work and teamwork measures of practices under consideration. Electronic health record use data have the potential to pull back the curtain and better characterize the practice environment, contributing to a new understanding of the science of practice.

ARTICLE INFORMATION


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Published Online: December 14, 2020. doi:10.1001/jamainternmed.2020.7068

Conflicts of Interest Disclosures: None reported.

REFERENCES


