EDITORIAL

Data for Good[1]: Evaluating the EMR

By Philip A. Baer, MDCM, FRCPC, FACR

The Great Debate at the Canadian Rheumatology Association (CRA) Annual Scientific Meeting (ASM) 2024 centred on the proposition: "Be it Resolved That Electronic Medical Records (EMRs) Save Time for Healthcare Providers & Improve Quality of Care." As you read in the writeup of this session in the *Canadian Rheumatology Association Journal's* summer 2024 issue, the "For" side dominated the voting and were crowned the winners for 2024.

Of course, the "Against" side in the debate made many valid points. The benefits versus downsides of EMRs and electronic health records (EHRs) are by no means a settled issue. Let's explore a few recent articles on the subject.

One has been sitting on my desktop since 2019, with the file name "EHR versus true work done." The actual title is "Concordance Between Electronic Clinical Documentation and Physicians' Observed Behavior," published in the *Journal of the American Medical Association (JAMA) Network Open*.[2] The key question of the study was: "How closely does documentation in electronic health records match the review of systems and physical examination performed by emergency physicians?" This study was conducted in the United States (US) where, for the last 30 years, policies have been introduced tying physician reimbursement to documentation. The study focused on emergency medicine residents. They were initially told that this was a time-motion study aiming to understand how they performed histories and physical examinations. However, the real purpose was to assess the accuracy of documentation of the review of systems and the physical examination in EHRs, based on direct physical observation, review of audio recordings, and an analysis of the EHR records for emergency room visits. Twelve physicians participated, but three later withdrew when the true purpose of the study was revealed. Overall, 180 physician-patient encounters were reviewed, with the median encounter lasting 6.6 minutes. Major inconsistencies were observed between the number of systems documented and the number of systems observed, both for the review of systems and the physical examinations. The tendency skewed towards documenting more than what had been directly observed. Of 14 possible systems that could be reviewed and examined, the median observed number of systems reviewed was five and the median examined was eight. Only 38.5% of the review of systems groups and 53.2% of the physical examination systems documented in the electronic health record were corroborated by direct audiovisual or reviewed audio observation. The conclusion of the study was that EHR documentation may not accurately represent physician actions, and that payers should consider removing financial incentives to generate lengthy documentation. In other words, "you get what you pay for," and if you're paying for excessive documentation, it will be generated.

The second article is also from *JAMA Network Open* and was published earlier this year. This is another American study, entitled "Vacation Days Taken, Work During Vacation, and Burnout Among US Physicians."[3] The key question was "Are vacation days taken and working while on vacation associated with physician burnout?" This cross-sectional study evaluated vacation patterns, magnitude of work while on vacation, and levels of burnout and personal fulfillment among over 3,000 US physicians. Sixty percent of respondents took 15 or fewer vacation days per year, and 20% took five or fewer. Seventy percent performed patient-care-related tasks during their vacation, and 33% worked at least 30 minutes on a typical vacation day. Only 49% had full EHR inbox coverage while on vacation. Reported barriers to taking vacation included finding someone to cover clinical responsibilities, the financial impact on clinical compensation, and the volume of EHR inbox work faced upon return. Physicians who took more vacation days, had full EHR inbox coverage, and worked less during vacation reported significantly reduced emotional exhaustion, depersonalization, and overall burnout. These individuals also reported better professional fulfillment. Study conclusion: the reported vacation behaviours reflect chronic work overload, which heightens the risk of future physician burnout. The inability of physicians to disengage from patient care is a health system failure in terms of teamwork, clinical staffing, and cross-coverage options. Complete EHR inbox coverage is desirable and would allow predictable patient care to continue while physicians take much-needed vacation time.

Previously, I frequently accessed my EMR and work-related emails while on vacation. This was based in part on a 2011 article in the *Journal of the Ontario Medical Association*, authored by Dr. Perry Celzus,[4] promoting the benefits of logging in while on vacation: "I can now take time

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off while still keeping in touch with critical issues. With Internet access virtually worldwide, I am able to read and respond to my e-mails and log into my EMR to retrieve lab reports, etc., while away from the office…" I'm not applying for any continuing medical education (CME) credits for reading the *JAMA* article cited above, but I plan to consign Dr. Celzus' advice to the digital garbage can going forward.

The final article was published in *JAMA Internal Medicine* also earlier this year. The title is "The Day the Electronic Medical Records System Went Down.[5] In the article, Dr. Sofia Mettler, a Harvard internal medicine resident, describes her medical centre's experience when the Epic EHR system experienced a fatal error one night. Initially, there was uncertainty and panic, as scheduled blood tests would not be drawn, and test results could not be entered into the EHR system and reviewed by the residents. Quickly, the team recognized that they could evaluate patients directly, and consult with nursing and other staff to assess patients properly. Tests were ordered using legacy systems, and results still became available in a timely manner. Unnecessary investigations and documentation were avoided, rounds were completed earlier than usual, and care plans did not change once the Epic system had been restored later that day. What might have been a terrible day ended up being a professionally fulfilling, collaborative and patient-centred day, and patient care was not jeopardized.

While all of these studies were conducted in the US, efforts are underway in Canada at both the national and provincial levels to improve the EMR/EHR experience. The CRA board has identified practice and EMR inefficiencies as a top priority for the CRA to address, based on a series of member consultations in 2022. The CRA is working with experts in digital health and clinical informatics to identify the features of a next generation pan-Canadian rheumatology informatics platform, codenamed Project Athena. In Ontario, the Ontario Rheumatology Association has launched RheumView,[6] an intuitive interface added to existing EMRs, where information is better organized, more accessible and customized to rheumatologists' practice, supporting more efficient delivery of care. RheumView is a workflow solution for inflammatory arthritis with a focus on better patient outcomes. It is designed to save clinician time, make life easier, and improve the clinician experience. Let's hope that the promise of Project Athena and of RheumView can be realized to the benefit of all Canadian rheumatologists and their patients. Then we will truly be using our EMR/EHR data for good.

References:
1. Data for Good. Available at *https://dataforgood.ca*. Accessed August 11, 2024. (Data For Good is a collective of do gooders, who want to use their powers for good, and not evil, to help make our communities better through data. We are a national not for profit organization, with chapters across the country, that help other not for profit, and non-governmental, organizations harness the power of their data to make more informed and better decisions in their quest to make their communities flourish.)
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Philip A. Baer, MDCM, FRCPC, FACR
Editor-in-chief, CRAJ
Scarborough, Ontario