An electronic medical record just for neurologists

A daunting proposition

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In this issue of *Neurology® Clinical Practice*, McCarthy et al.¹ provide an overview of the electronic medical record (EMR) features that they distinguish as being vital to the practice of neurology in the electronic era. This is a necessary topic as more than 80% of neurologists are now using an EMR in their practice.² We are being asked to provide higher quality, more cost-effective, and more efficient care, and to accomplish this using EMRs that have not been designed with the needs of our specialty in mind.¹ This article is an important step forward in educating neurologists so that we are better able to communicate our needs to EMR vendors and those who implement these systems. However, a topic of this complexity is challenging to tackle in a brief review and there are some limitations.

The authors highlight several EMR features that have the potential to be exceedingly useful to neurologists, but the possible downsides to these tools must also be considered. Dr. Bernat's³ article published in *Neurology* last year on the potential pitfalls of EMRs (cited by McCarthy et al.) provides an outstanding overview. Some of the EMR features that McCarthy et al. strongly recommend are the same ones that Dr. Bernat³ cautions against. The authors provide extensive justification for the use of templated neurologic examinations and histories. These tools ensure that critical information is not missed. Discretely captured data, such as the number of recent seizures or headache days, and the grade of biceps strength, can be effortlessly trended over time. This supports better clinical care and makes clinical research based on chart reviews considerably easier. However, there is considerable risk for the creation of "pseudoexaminations" and "pseudohistories."³ These terms, coined by Dr. Bernat,³ express that the information gathered by the use of checkboxes and dropdown lists may appear complete, without fully capturing the patients' stories or the subtleties of their examinations. These tools can also lead to fraudulent documentation, in which boxes remain checked, despite those history questions not being asked and those examination elements not being performed.

Epic and Allscripts are the vendors that have been most used by neurologists to attest to the federal government's EMR incentive program (Meaningful Use).⁴ Patient intake forms, patient portal questionnaires, and documentation and clinical decision support tools are identified as required tools for neurologists¹ and are standard features of these and most of the other widely used EMRs. However, there is often very little content usable for neurologists "out of the box," requiring extensive customization and effort from a skilled implementation team that has to be willing and available to provide this service. The discrepancy between what is possible and what many of us actually end up with leads to the perception that the major EMR vendors are not fit for neurology. This misconception becomes even more entrenched by the tendency to only communicate with each other our dissatisfaction, rather

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Funding information and disclosures are provided at the end of the article. Full disclosure form information provided by the authors is available with the **full text of this article at Neurology.org/cp.**

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than our success stories. We gripe about the limitations of our EMRs rather than brag about the powerful clinical decision support tools or the robust documentation templates that we have created.

In addition to obtaining a history and performing the neurologic examination, neurologists have additional complex therapeutic workflows, such as the administration of botulinum toxin or natalizumab. These clinically challenging workflows also have considerable financial, regulatory, and medico-legal requirements that must be met. These can be implemented electronically and when done correctly, the EMR can facilitate these procedures. Vendors need to incorporate these solutions into their base systems so that future customers can easily adopt them.

Despite the many features that are currently available, limitations of EMRs exist. The ability to incorporate the complete data of our diagnostic studies, such as EMG/NCS and EEGs, into the EMR is critical for our specialty. Very few vendors and practices, if any, are doing it well. McCarthy et al.¹ eloquently speak to the need for multimedia data integration, and all who read their article should be moved to reach out to their EMR vendor and demand an inexpensive and easily implemented solution.

EMRs are powerful tools with considerable potential for safer, more efficient, and more effective patient care. The use of an EMR should enable neurologists to easily provide and document the thoughtful, meticulous care that is a hallmark of our specialty. However, we must be mindful and deliberate in our use of the EMR, so that we are realizing its full potential while avoiding the potential downsides. If we are not careful, the misuse of the EMR features and tools discussed above could result in generic documentation that does not reflect the care we provide.

The American Academy of Neurology is working closely with several EMR vendors to ensure that current systems meet the unique needs of neurologists. They seek to make certain that future versions will be able to accommodate our increasingly complex neurology-specific workflows, as well as the increasing regulatory and quality requirements that are being placed upon us. We must also advocate for ourselves by becoming more educated consumers of EMRs, serving as physician champions for our practices during the implementation and optimization process, communicating our needs to the vendors, and sharing our EMR best practices with each other.

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STUDY FUNDING

No targeted funding reported.

DISCLOSURES

A.L. Weathers has received funding for travel or speaker honoraria from the American Academy of Neurology, North Carolina Neurologic Society, and Los Angeles Neurologic Society. Full disclosure form information provided by the authors is available with the **full text of this article at [Neurology.org/cp](http://www.neurology.org/cp)**.