Robot doctors

Teleneurology pros and cons

Elaine C. Jones, MD

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Correspondence

Dr. Jones
lainejri@gmail.com

As the landscape of health care changes, it is important for neurologists to explore and embrace new practice models and technologies for meeting the needs of patients and referring providers. In the issue of *Neurology: Clinical Practice*, Young et al.¹ assessed a way to improve immediate access to a consulting neurologist and explored how this affected care, costs, and patient/provider satisfaction. This is a great first step at looking at these issues, and benefits were indeed suggested by their results.

Doing more with less is the underlying theme in health care these days. But we must embrace the idea of working smarter, not harder. There is no question technology can help if it is designed and used appropriately. Merriam-Webster defines telemedicine as “the practice of medicine when the doctor and patient are widely separated using two-way voice and visual communication.”² This can be as simple as recording devices worn by patients to gather information and then later reviewed by a provider or as complicated as live consults in the emergency department to determine stroke care in real time. Neurology is ideally suited to teleconsultation in many areas and the development of time-sensitive treatments and a shortage of neurology providers has driven some of the growth in our field. It will never replace in-person visits for less emergent situations, as there are limitations to the examination (detailed sensory, motor and reflex testing, for example), but as an adjunct to in-person care, it can be quite useful.³

Most models of care for teleconsultation have focused on traditional office visits just done remotely—seeing the patient at an appointed time and writing a note back to the referring provider. Young et al.¹ used the technology to be available to the provider in real time while they were seeing patients in their offices and to answer questions on diagnosis, testing, and treatment. This is another innovative way to improve care and limit unneeded services, as their results suggest.

There have been concerns as to how patients would respond to seeing their doctor by video rather than live, and data remain thin. However, in this study, although the numbers are small, 66% felt that the consult was the same or better than a live visit. Of interest, the other 33% answered “not sure.” No one felt that it was worse than a live consult.¹ Others have shown this as well that patients appreciate the rapid access to our expertise and do not mind the format to get that access.^{4,5}

Early studies showed no difference in outcomes with using telehealth vs live care in patients with stroke in emergency settings, but data are limited in other settings, and this should be explored further.³

The financial impact of using technology is still unknown as well. Reimbursement for these services is just being rolled out, and few have much experience with this yet. Some state legislation uses parity laws making payment similar to traditional coding situations. Others simply require payment for telehealth services. It will be important to monitor these reimbursement levels going forward to assure that they cover the expense of providing the service

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SOC Telemed, LLC, Reston, VA.

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and access to the expertise and skill of the physician while providing convenience to the patient. It may be possible to provide more focused access with time saving, high volume care while maintaining quality care. This also will need to be monitored and studied in the future.

Practices of the future may have networks of providers that are not constrained by bricks and mortar, or even by state boundaries. Currently regulatory, credentialing, and legal processes constrain some of these advances and will need to be addressed to allow for the right care, by the right provider, at the right time, no matter where the patient or the provider is located.

Other aspects of health care will also have to change. Providers will need to learn how to provide a good bedside manner when what is at the bedside is a computer screen. How do you perform examinations when you cannot physically touch the person? What diagnoses can and cannot be managed in this way? What do you do when the technology fails? Many of these remain unanswered at this time.

Despite the remaining unknown aspects, this is an exciting time in medicine and specifically in neurology. We have the opportunity to develop the practice of the future without limitations of location. It is an opportunity to truly go where no one has gone before.

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E.C. Jones is employed by SOC Telemed and provides tele-neurology services. Full disclosure form information provided by the authors is available with the full text of this article at [Neurology.org/cp](https://www.neurology.org/cp).

References

1. Young NP, Burkholder DB, Philpot LM, McKie PM, Ebbert JO. Synchronous neurology-primary care collaboration in a medical home. *Neurology: Clin Pract* 2019;10:388–395.
2. Available at: [merriam-webster.com](https://www.merriam-webster.com). Accessed September 19, 2019.
3. Wechsler LR. Advantages and limitations of teleneurology. *JAMA Neurol* 2015;72:349–354.
4. Craig J, Russell C, Patterson V, Wootton R. User satisfaction with real-time tele-neurology. *J Telemed Telecare* 1999;4:237–241.
5. Rubin MN, Wellik KE, Channer DD, Demaerschalk BM. Systematic review of tele-neurology. *Neurohospitalist Neurol* 2013;3:120–124.