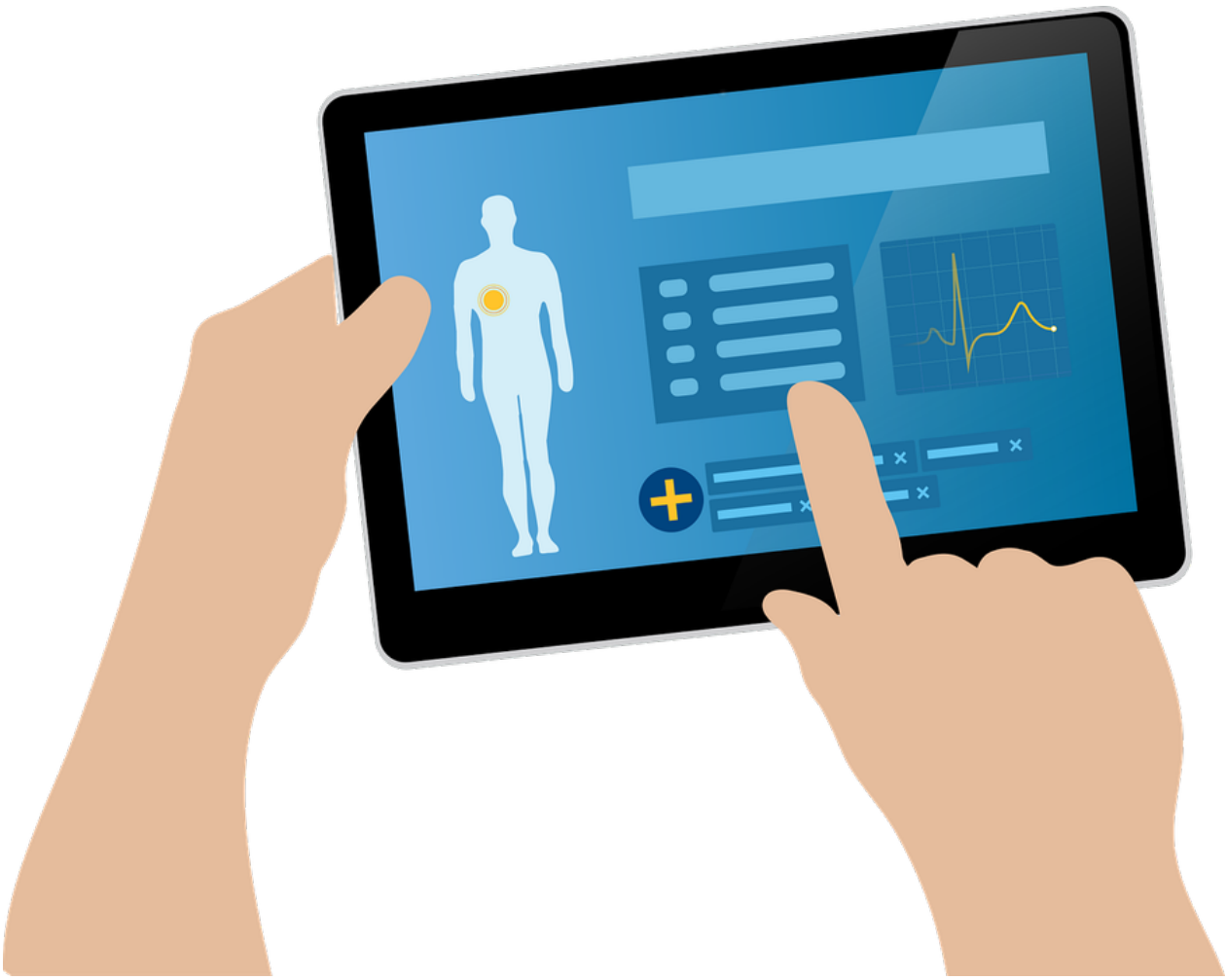
Alberta Doctors' Digest

Why does technology contribute to physician burnout?

I recently came upon the article *How tech can turn doctors into clerical workers* by Dr. Abraham Verghese in the *New York Times*. Dr. Verghese is a well-known physician, teacher and author who emphasizes empathy and healing in patient care. He is a strong believer in the value and ritual of the physical exam, communication and the power of informed observation. He spearheaded an educational video-based series called *Stanford medicine 25* that promotes the culture of bedside medicine. He has also given several informative, motivational TED talks, at least two of which – *A doctor's touch* and *A linguistic prescription for ailing communication* – provide significant food for thought.

The *New York Times* article highlights the plight of a young physician experiencing symptoms of burnout in what should have been the honeymoon of a career. Dr. Verghese explains, "My young colleague slumping in the chair in my office survived the student years, then three years of internship and residency and is now a full-time practitioner and teacher. The despair I hear comes from being the highest-paid clerical worker in the hospital: for every one hour we spend cumulatively with patients, studies have shown, we spend nearly two hours on our primitive electronic health records, or EHRs, and another hour or two during sacred personal time. But we are to blame. We let this happen to our trainees, to ourselves."

A review from authors at the Mayo Clinic and Stanford, *Physician burnout: contributors, consequences and solutions* published in March 2018 defines burnout as "a work-related syndrome involving emotional exhaustion, depersonalization and a sense of reduced personal accomplishment. Amongst physicians, emotional exhaustion includes feeling used up at the end of a workday, having nothing left to offer patients from an emotional standpoint. Depersonalization includes feelings of treating patients as objects rather than human beings and becoming more callous toward patients. A sense of reduced personal accomplishment encompasses feelings of ineffectiveness in helping patients with their problems and a lack of value of the results of work-related activities such as patient care or professional achievements." Rates of burnout symptoms associated with adverse effects exceed 50% in both physicians in training and practicing physicians and was rising from 2011 to 2014 according to a national study in the USA, conducted by researchers from the Mayo Clinic.



Technological advances have shifted some of the administrative burden to the physician as it is “only a couple more clicks” leading to workflow and staffing changes (photo credit: mcmurryjulie, Pixabay).

I chose medicine as a career, expecting to have meaningful relationships with patients and the satisfaction that I was able to help them in some way. From my very first days of training, I enjoyed the daily intellectual stimulation that came from the study of medicine and its real-life application. I am convinced that I am not alone in my motivation in choosing this career as I speak with many of my colleagues. Other benefits of this choice are the respect of the community, a fraternity with my colleagues, as well as significant monetary compensation. As any of these benefits become less tangible, the chances of experiencing burnout increase considerably.

Many of us did not consider the longer work hours or the problems associated with the effective integration of personal and professional lives. We are also faced with technical and intellectually demanding work with complex, high-stakes decision making, while dealing with substantial uncertainty. Decreased professional autonomy, changes in administration of our health care system, long wait lists and increasing medical complexity in our patients all tend to increase the burnout risk for physicians.

Technological advances in the form of EMRs, EHRs, clinical decision support, mobile applications and so on have the potential for enhancing patient care as well as improving our lifestyle as they simplify many of the tasks associated with the practice of medicine (billing, booking, lab review, etc.) and allow access to our patients’ medical chart virtually anytime and anywhere. Unfortunately, it seems that the same simplicity

offered by these advances has shifted some of the administrative burden to the physician as it is “only a couple more clicks” leading to workflow and staffing changes.

Dr. Verghese notes that in a typical ER shift, this workflow change may entail more than 4,000 clicks per day. The fact that we can utilize big data through data collection “at the coalface” has mushroomed into longer and more complex templates that need to be completed, resulting in more and more time spent facing the computer and less and less time facing the patient – the very reason most of us decided on this career – and therefore threatening our job satisfaction and leading to burnout.

While EMRs and EHRs are *not* the sole cause of physician burnout, they are, as Dr. Verghese pointed out, the symbol of burnout. Luckily, we do have the option to improve our use of these tools to reduce their contribution to burnout and potentially reverse some of the stressors that lead to this state.

I would suggest the following areas to consider in our use of EMRs in particular and technology in general.

Workflow

Carefully consider each click as EMR workflows within clinics are developed. Seek to optimize the workflow so that the right person is doing the right thing at the right time. Avoid at all costs making the physician the highest paid clerical worker in your group.

EMR efficiency

Learn how to use your EMR efficiently, paying particular attention to repetitive tasks. Is there some feature (such as macros or med templates) that you can use more efficiently? Are the clinical decision support (CDS) triggers useful or annoying? Usability of the EMR needs to receive more attention in EMR design. A little time spent up front will pay huge dividends over time. Remember that the physician-patient relationship takes priority over any technology and that this human interface can never be replaced by machine learning.

Expectations

Expectations of both administrators and clinicians themselves need to be reasonable and managed to achieve a balance in professional duties and therefore satisfaction. Simply because a system *can* do something, does not mean that it *should* do it. An understanding of the costs and benefits of any change should be considered carefully.

Data collection

When considering the questions to be answered, clinicians and administrators need to give careful attention to the impact on frontline workers and the risk-benefit ratio mentioned above. Customized templates should be designed to answer the identified need and to improve the usability of the EMR with the workflow that uses the most appropriate team member for data entry. Existing data elements should be used as much as possible to avoid increased clerical work.

Technology, when used properly, has the potential to improve the care we give to our patients and to reduce the burden experienced currently by physicians. Machine learning algorithms, done properly, have changed for the better other industries and have that same potential in ours. Our profession is already seeing some of these

benefits. Each individual provider needs to consider how these tools should be used to build their relationships with their patients. We would all do well to take the advice in the Serenity Prayer:

“God grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference.”

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