Physician burnout is a hot topic these days — for good reason. As Steve Strongwater, President and Chief Executive Officer for Atrius Health, notes in his discussion with Tom Lee, 54% of U.S. physicians are experiencing physician burnout. Are electronic medical records worsening the problem? In short, yes. Find out why, and how we can address this to improve not only the quality of care for patients, but also the quality of life for physicians. Read or listen to the interview below.
Tom Lee: This is Tom Lee from NEJM Catalyst, and I’m here with Steve Strongwater, a rheumatologist who is the CEO for Atrius Health in Boston. I first met Steve when he was Chief Transformation Officer at Geisinger Health System, and he came in the summer of 2015 to be the CEO of a very respected integrated delivery system built around physician practices in Boston: Atrius Health.

Now, Steve and his colleagues have been dealing, like so many of us, with clinician burnout, particularly among physicians. We recently had an interesting conversation about physicians and their long love-hate relationship with electronic medical records, which we all know are essential to high-quality care in this day and age, but it does seem like the ratio of love to hate seems to be moving in the wrong direction. In fact, EMRs are being blamed as a cause of physician burnout by many clinicians. So, I wanted to take time with [Strongwater] today to hear from him on his take on these issues and what Atrius is doing about them. So, Steve, what’s your take? Are EMRs a symptom of burnout, or are they the actual cause of the disease?

Steve Strongwater: Tom, that’s a great question, and I really appreciate the opportunity to talk this over with you. First, I would hope that everybody agrees that physician burnout or physician wellness is a real problem in this country. As measured by objective studies, 54% of U.S. physicians are experiencing physician burnout, and there are many reasons for it. It’s not a function that people just are whining and they’re not as tough as physicians used to be.

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About 80% of physician burnout is really due to workflow issues, and as it turns out, the way the electronic medical records have evolved — unlike in other industries where automation has made work easier — the
electronic medical records have added work. Now, that may be a function of many different things: requirements for more data capture for things like quality, or coding for billing purposes, or regulatory requirements. But the electronic medical record has clearly added work to a physician’s day, and people who are so dedicated and committed are working late into the evenings in what we would call “pajama time.”

In general, what seems to happen is that our docs will work during the day — they’ll work a full day, sometimes eight or 10 hours or longer — they’ll go home for a brief period of time, and then they’ll get back on their record in order to finish the work of the day that evening. So, we are adding work, and over time what we’re seeing is that people, by virtue of wanting to meet the needs of their patients, reduce their amount of FTE (full-time equivalent time), so that they can use that time to finish the work during the week to maintain balance in their lives.

So, the short answer is that the electronic medical record has contributed to burnout as one component of burnout, and I think it’s really important for the designers of EMRs to try and work to improve the user interface, the workflow, in a way similar to the way smartphones work or when you start a search on a search engine and it almost anticipates your needs. We’re just behind. We’re almost in generation one of that electronic medical record.

Lee: Before we go to the solutions, let’s go a little bit deeper into the path of physiology. I know that there’s been tremendous medical progress, and there are many more people involved in care today than when I was coming out of my training, but how is it that electronic records might actually be worsening the problem? Is there something more than just putting in front of me all the work that I need to do to take care of my patients?
Strongwater: The short answer is yes. What has happened over time is we have asked our clinicians to become sophisticated coders. They are clicking through screens that are cluttered, that are not designed with human factors in mind. They are filling out forms that at one time would have been triaged to a medical assistant or health assistant. They’re having to respond in their inbox to messages that otherwise historically would not have come to their inbox, that would have been filtered away, and so it literally has added work to a busy day.

It has also negatively impacted what I would consider face-to-face time with patients. If you’re a clinician in a room, you’re often not looking into the eyes of your patients, you’re looking into the screen of the computer, and as a consequence it’s impacted the [patient experience] as well. So, it has definitely negatively impacted the workflow and the patient experience as a function of the way the EMR has been designed.

Lee: The EMR has put work that ought to be done in front of us, but it’s created work and it’s distracted clinicians and others from some of the important interactions that lie at the core of health care. So, what’s the solution?

Strongwater: Well, we talked a little bit about some of the solutions. I would refer to this generally as intuitive design, that the designers, who have the ability to watch and monitor physician workflow, begin to understand the dynamics in an outpatient setting of what an office visit is like: what could be done before the visit, what needs to happen during the visit to present information to the clinicians in advance of the clinician having to go through a series of clicks and screens to make that interaction easier, to move more toward an intuitive user interface like your iPad or your smartphone, and to begin to use artificial intelligence and machine learning to anticipate the needs of clinicians, and then to automate as much as possible during that workflow.

One of the things I didn’t talk about are these best practice alerts, which [are] alerts in Epic that you need to do something. Often,
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there are so many of these best practice alerts that the clinicians just bypass them. Again, I think that has to be looked at from the perspective of better human-factors engineering. I think we’re in version 1.0. I think we also need to add in much better analytics to anticipate who’s sick and who has care gaps and to make that as easy as possible.

And when I talk about machine learning we’ve added so many clicks on the conversion from ICD-9 to ICD-10 coding, there just has to be a better way to do that work. I think about the way Quicken was originally designed, where it sort of learns as you go along. If you’ve seen a thousand patients and you’ve never used a particular ICD-10 code, why should it be on your screen? And you need to maintain updated problem lists as it relates to being sure that you can close all the care gaps and you know what interventions need to be done. It’s a bit of a long-winded answer, but the short version I think is that the user interface and artificial learning would go a great deal toward improving the workflow and reducing burnout.

Lee: Part of the problem is almost surely the electronic records, the software as it were, but part of it is likely to be humanware: how we’re organized, the extent to which we’re organizing teams that can actually trust each other. Can you comment on some of the human-factor design that actually has to go on with humans?

Strongwater: Yeah, it’s a great observation, Tom. I do think we have definitely moved into team-based care. If you could filter away work, triage it to the top-of-license person — whether that’s a nurse or a medical assistant or a pharmacist or a social worker — that would reduce the workload for the clinician. I think it has to be done in such a way
that there’s confidence in the team that that work will be done, because what tends to happen, at least with our primary care docs, is they’re insecure that we have higher liability, that is that things happen 100% of the time, and so they want to check on it.

So, if I as an example say, “Look, I can take all your normal labs out of your inbox, would that work?” They’ll say, “No, I want to take a look at them.” In and of itself, checking those normal labs doesn’t take that much time — until you add 150 patients, and then it adds work in that results review. So, if we could get the team to work at a high level of reliability and people had trust and confidence, I think you could do a great deal to reduce the demand time on the clinicians. I think that is absolutely the case.

**Lee:** One other thing that runs through my mind is customization of electronic medical records. I wonder whether we sometimes shoot ourselves in the foot. I recently visited an organization who said they can’t upgrade to the new version of their electronic medical record because they’ve done so much customization of their current edition that it would be too complicated. Could we be making life more complicated than it needs to be, and that it would be better for us all to get used to vanilla, for example?

**Strongwater:** It’s a great question, and I would want to reframe the question and somewhat the answer. When we started out with electronic medical records, every organization wanted to customize it to their own needs. In part, that’s because there wasn’t a good enough product out there. I would argue that we need to allow the best product available to evolve and then make that more broadly available.

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In the case of Epic, when you have one instance of Epic, you have one instance of Epic. You get sort of a vanilla shell, and then you customize it and there are no two instances that are exactly the same. But I would argue that if you had a mechanism
like a library of apps that you could choose from and then import into your baseline system, that you would still be able to upgrade much as you upgrade your iPhone and have best of breed available in the practice. It hasn’t happened that way.

When I refer to more artificial intelligence, nothing would be better than to have a wrapper that would provide pretty current upgrades of content — medical content, workflow content — that marries up to a basic EMR program. A lot of this has to do with whether the electronic medical record is going to be able to do all these things all at once for everyone.

I have a feeling that over time, we’re going to see the IBM Watsons of the world providing supplemental content and workflow information that complement the available tools inside an embedded electronic medical record like Epic. And when that happens, it’ll be possible to go with vanilla because you could pick from an outside library of enhancements that you could pull in seamlessly into your ecosystem, which would be wonderful.

**Lee:** I know that better days do lie ahead. I just don’t know how far ahead, and I also know that you and your team at Atrius are doing some innovative things to hold your own feet to the fire to hasten the arrival of those better days. Could you comment on that?

**Strongwater:** Well, we have an initiative modeled after the ABIM [American Board of Internal Medicine] called Returning Joy to the Practice of Medicine. In order to make that real, our C-suite and senior administrators’ incentive plans are in alignment with that, really tracking the time spent on Epic — particularly that pajama time — and we expect that we should be able to reduce that time out of work, meaning out of the office, materially. And that is built into our C-suite incentive plan.
We hope that the administrators and the physicians come into alignment. Certainly the docs would love that. We need to have our administrators understand that workflow matters, quality of life matters, returning joy to the practice of medicine — not only for the physicians but for the rest of the practice — is really important. And we hope that joy returns really quickly.

Lee: Well, I know that your physicians are rooting for you to hit those incentive targets, and I hope we can check back in a year and see how it went.

Strongwater: We look forward to it. I hope we’ll have great news to report.

This interview originally appeared in NEJM Catalyst on October 14, 2016.

Thomas H. Lee, MD, MSc
Press Ganey Associates

As Chief Medical Officer for Press Ganey Associates, Inc., Dr. Lee is responsible for developing clinical and operational strategies to improve the patient experience for health care providers across the nation. Learn more about Thomas H. Lee...

Steven Strongwater, MD
President and CEO, Atrius Health
This reality is coming to light in a variety of ways. Buyer-based web-based planning is completely installed in many administration organizations and has begun to grab hold in medicinal services, particularly for mobile administrations. Rising's knowledge has demonstrated that, even with just unobtrusive advertising, purchasers rapidly find and utilize web-based booking for doctors, pressing consideration, radiology, and even crisis division administrations.

January 16, 2017 at 2:34 am

Douglas G Mann, MD

The article is very accurate. My wife is a physician, and could not figure out why I had to spend my nights finishing my day. Now she has an EMR and it's the same thing for her. We serve this beast. It does not serve us. I can recall going to a lecture about EMR in 1984, and listening to all of the predictions of decision support. I was so excited. This has still not happened. The gatherers of information and payors wish to get in to the examination room with these devices, and learn what we are doing, but it will not work. Patients do not present with structured data. We need to return to the medical narrative and have the machines figure it out to catch up with us. Meanwhile we should be caring for patients in a rational manner, talking face to face, maintaining the bonds with our patients, writing our own real narratives in the EMR, to supplement all the other gobbledygook that is required and "meaningful."

October 28, 2016 at 9:46 pm

William E. Franklin, DO

I presume most of us didn't sign up for computer work when we decided to go to medical school. It used to be patient first, now it's computer first, patient second. Yes, I'm sure that leads to burnout. Bait and switch generally is not something most human beings are willing to accept.

October 20, 2016 at 1:08 pm

Cynthia Bush MD
Depending upon when one started practicing Medicine often determines the level of dissatisfaction with EMRs, but I anecdotally do not know of any Physician who believes their use improves patient care or efficiency for the doctor. We have accepted a technological Monster!

October 20, 2016 at 6:46 am

Leslie Radentz, MD

Thank you Dr. Bush. The statement, "...electronic medical records, which we all know are essential to high-quality care in this day and age...", is an unfounded fabrication. Health care has sustained proven catastrophic harm by premature release and mandated participation within flawed EHR systems. It is estimated that one out of three patients' medical records has been hacked since the advent of EHR. Patients are experiencing identity theft and exploitation of their confidential medical records of epic proportion thanks to mandatory EHR. The regulators living within corporate back pockets fine us if we fail to purchase faulty corporate EHR wares, even while it is common knowledge that the security to protect electronic medical records DOES NOT EXIST. Nevertheless, electronic software corporations face no HIPAA fines while the practices and professional reputations of physicians are nurses are dragged through HIPAA mud for each possible electronic medical record breach. About 80% of physician burnout is NOT really due to workflow issues; but rather it is due to exploitation and abuse by corporate profiteers who have been granted regulatory instrumentality over our medical practices. Physicians are retaliated upon with weapon-ized gag clauses, sham peer review and SLAPP lawsuits after opposing corporate abuse of their colleagues and patients. Burn out is NOT a work flow issue. Burn out is a "cyber-slavery" issue created by corporate physician traffickers and their political pimps.

October 26, 2016 at 8:24 pm

Paul R. Mazur, MD, MPH

EMRs & ICD codes will destroy the Chekhovs slumbering in us, reduced henceforth to widgets, to fill in the blanks which "populate" and mechanize our clinical notes, and render them mainly useless. Oliver Sachs is no more. Cruel irony that the worst of the lot calls itself "Epic." So, yes, I'm dispirited.

October 19, 2016 at 1:47 pm

Reply

Great piece. I continue to feel that the disconnect occurs as a result of EMR design and setting of priorities by those who do not understand the nature of a clinical interaction and often set priorities which are at odds with our most basic function and obligations to the patient in front of us. It is demoralizing to feel that we are evaluated and assessed by our ability to document and collect clinically meaningless data (i.e., 2-generation family history of 85-year-olds, which quadrant of the breast was involved by malignancy, formal pain and depression scales on every patient, etc.) in the zero-sum environment that we practice. Every time I am told to "just complete this form, it will only take a moment...." ignores the reality that we are already overburdened by the requirement that we collect data ceaselessly which is very unlikely to improve the health of my patient but rather is used up in the C-suite for marketing and business strategies.

October 19, 2016 at 1:05 pm

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Andrew L

Everyone using Microsoft Word go find your 1989 version of WordStar and start using it now. You'll get the point. Our EMR is primitive. It is built on a platform 20-25 years out of date - you may as well be in the pre-laptop, smartphone, iPAD, voice recognition age. You can't scroll thru a chart and even basic computer tasks like find and search are in a pre2000 mode. Want to know the EF on an Echo, you first have to find and read the echo, and scanning for EF is impossible. Ever actually read an EMR from beginning to end - as an ICU MD I will tell you the EMR grows at a rate of 500 pages per week, mostly copied, pasted, templated gibberish. A real recipe for disaster, and burnout is the least of it

October 19, 2016 at 1:00 pm

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E.C. Henley

Interesting that one solution for docs is to send the work to other members of the health care team. I know a few top-performing nurses who have left the field because administrative/computer work exceeded actual nursing. Much of the data is collected for crunching later, not for the benefit of the patient in front of the clinician.

October 19, 2016 at 10:27 am

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To ascribe burnout to EMR is naive. No doubt it is a part. ICD-10 is a part. Insurance companies dictating testing and care is a part. Infinite credentialing of licensed practitioners is a part, hospital employment is a part, the push towards ever increasing productivity is a part, doctors' failure to cooperate with each other is a part, failure to have meaningful patient interactions is also a part. Unless all these issues are appropriately addressed, burnout will continue. We have a system devoted to profitability and not to patient care. Unless that changes burnout will continue to increase and the system will fall apart.

October 19, 2016 at 10:11 am

Jerry McShane MD

Agree 100%
Here is my logic of burnout

Chaotic workflow and user experience
Create a sense of ineffectiveness
This is amplified by needing to be empathetic with patients. Empathy is worn down because of the conflict between time, attention to patient, and
Needing to survive. The lack of empathy worsens ones sense of effectiveness
One then retreats from an empathetic to
The depersonalize approach to patient
You do this enough the exhaustion becomes apparent / The last dimension to appear and the last dimension to disappear

There are clearly other factors but those are my beliefs

October 19, 2016 at 9:30 am

anonymous

Completely agree with above article. I had 3 of our 4 kids before paper charts disappeared. My days off were my days off. I was able to take the kids to the beach on a random Tuesday instead of logging in hours finishing my notes. Our last child I had to nurse in between finishing my notes at 1, 3 or 5 am on the computer and I was WAY too tired to have many beach Tuesdays with this last one because I was always finishing my notes from my 12 hr shift the day before. What a drag, I will always have a fond memory of my years as a doctor with paper notes before this nonsense that we call EHR.
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