Digital Minimalism — An Rx for Clinician Burnout

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What if there were a better way for technology to help patients without burning out clinicians?

Digital tools play a big part in making the experience of being a clinician overwhelming. The inexorable expansion of time spent with electronic health records (EHRs) has correlated with dramatic declines in clinicians' time at the bedside, increased computer-based work-after-work, and growing rates of burnout.[1]

Digital minimalism may offer a remedy. Rather than either categorically rejecting digital technology or endorsing the current maximalist approach to it, health systems taking a digital minimalist approach would carefully consider whether and how each digital technology should be used. The philosophy has three tenets: "clutter is costly, optimization is vital, and intentionality is satisfying."[2]

Cal Newport, the author and professor of computer science who coined the term "digital minimalism," believes the idea can be important not only in reducing the anxiety-inducing background hum of personal technologies such as Twitter, Facebook, and Instagram, but also in professional settings. For example, he describes a company whose employees switched from being constantly available on Slack to communicating only during scheduled times, leaving more uninterrupted time for completion of high-value work. If digital minimalism is applied to medicine, its tenets may provide insight into the drivers of burnout and potential solutions.

It's easy to see how digital minimalism's first tenet, "clutter is costly," applies: the average patient's EHR has 56% as many words as Shakespeare's longest play, *Hamlet*.[3] Moreover, half these words are simply duplicated from previous documentation.[3] Beyond chart review, electronic interruptions such as clinical decision support alerts and secure chat messages from other staff members contribute to clinicians' cognitive load, potentially exacerbating fatigue, increasing errors in patient care, and causing burnout.[4]

Clinicians' digital work has drastically increased in the context of Covid-19. For example, the number of messages from patients grew by 57% at the outset of the pandemic and has remained at that level.[5] In addition, increased use of telemedicine has been linked to an increase in work-after-work in the EHR — a worrisome effect.

Applying digital minimalism's second tenet, "optimization is vital," could be transformative in enabling clinicians to find joy in their practice. At the individual level, physicians can rethink their workflows and set boundaries. Historically, physicians were available by pager or telephone for urgent concerns. Now, communications about any matter can be sent through those channels and, increasingly, also through secure chat programs, which results in a constant influx of undifferentiated messages, with no clear signal of which are urgent and which are not. The possibility of missing an urgent message leads some physicians to frantically check each mode of communication multiple times per hour, ensuring frequent interruptions by nonurgent messages. Many of the nonurgent messages would previously have been managed by office staff, deferred until a dedicated time for review . . . or deemed not important enough to send to a physician at all. The growth in available channels for clinician messaging and the increased volume of messages have forced clinicians to work in a state of frequent cognitive interruption that contributes to an unsafe care environment. Developing clear boundaries for the use of each mode of communication could result in more periods of uninterrupted work and higher-quality patient care.

At the organizational level, redesigning workflows to optimize use of digital technology is vital. For example, allocating electronic work to other team members can allow physicians to focus more on diagnosis, treatment, and building relationships with their patients. Organizations can use automated digital tracking, such as EHR audit-log data, to analyze and improve workflows and task delegation. The Penn Medicine EHR wellness team, for example, iteratively evaluates and improves alerts; its initial campaign reduced interruptive alerts by 45%. At NYU Langone Health, all clinical decision support adheres to a "style guide" that — leveraging tools such as user stories, visuals, and A/B trials for optimization — provides clear guidance for developing less "noisy" alerts.

At the vendor level, organizations such as RAND, Deloitte, and the American Medical Informatics Association have consistently found that EHRs have poor usability. We need software that is designed to reduce its users'

cognitive load. Wiki-style EHRs permitting editing as well as retention of version history might reduce the number of disconnected individual notes that are logged, which is currently enormous. Artificial intelligence algorithms may make review of multiple disconnected and largely duplicated records more efficient, while ensuring that critical details are not missed. Speech-recognition technologies may reduce documentation burden by generating note drafts while the clinician and patient are speaking.

At the national level, policy is an important mediator of medicine's relationship with digital technology. It seems clear that better reimbursement is needed for the substantial amount of digital work that clinicians do. Interoperability is also critical to the implementation of better-designed software. Furthermore, reducing documentation burden can greatly improve clinical workflows. EHR research done by Downing and colleagues showed that U.S. visit notes are, on average, nearly four times as long as notes in other countries. Adopting a digital minimalism framework could inspire critical examination of the necessity of the compliance and reimbursement documentation that drives this difference.

Recent health system initiatives provide evidence of digital minimalism's third tenet, "intentionality is satisfying." For example, Hawaii Pacific Health originally started its "Getting Rid of Stupid Stuff" program because it recognized that many of its EHR documentation requirements were unnecessary and burdensome. Within the first year, leaders received more than 180 suggestions of "stupid stuff" from physicians and nurses and found that 86% of the items identified could be changed.

In addition to getting rid of stupid stuff, using remaining technology with more explicit and strategic intention is key to digital minimalism. An informatics team at UCHealth in Colorado conducted 2-week work "sprints" for various clinical units, working on site to optimize the EHR and workflow and align the technology with the needs of each unit. This effort improved the quality of care as perceived by clinicians, reduced the time they spent charting, and boosted their satisfaction with their EHR and their work. Programs such as the American Medical Association's Joy in Medicine Health System Recognition Program can help provide metrics and recognition that lead to the prioritization of minimalist approaches to digital technology.

Digital minimalism is more than the sum of its three tenets. We believe it can have the greatest effect when it is used as a framework to guide our health system's relationship with technology. The current approach often focuses on saying "yes" to each additional form of technology, without considering the cumulative impact, and then retroactively making small changes such as removing individual alerts. Minor tweaks alone will never lead to a sustainable relationship with digital technology if our underlying philosophy of technology use remains maximalist.

Adopting digital minimalism, by contrast, can help health systems move from retroactively fixing existing problems to proactively making better choices about technology use. For example, it can lead them to implement new messaging technologies that keep nonurgent messages and an "always-on" approach from distracting physicians from the patient in front of them. The framework can help technology vendors understand the work life of busy clinicians and that more is not always better. And it can lead policymakers to consider the cumulative effect on users of layers of policy requirements.

Medicine's haphazard adoption of more and more technology without deep consideration of the implications has been costly. We hope that digital minimalism will inspire better design, implementation, and regulation of clinician-facing technology.

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