

Virtual Rheumatology Practice Resembles Bitcoin Mining: Discuss

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Rheumatology written fellowship examinations with essay questions may be history post-pandemic but, even if they survive, I doubt the title question is likely to appear. If it does, feel free to use the information below.

In the tangible pre-COVID world, medicine was an outlier. While electronic medical records (EMRs) had gained ground, our digital transition lagged. Information transfer was still dominated by the fax machine, interconnection and interoperability of electronic health information was rare, and our work with patients was primarily fee-for-service piecemeal. Of course, the one-on-one interactions with patients, including close physical presence and actual physical examinations, are what we pride ourselves on as rheumatologists, helping patients navigate the course of their chronic diseases longitudinally.

Even then, in our financial dealings with payers, we had moved to the digital world. Governments no longer accept paper claims or even floppy disks; billing information is transmitted electronically and paid in similar fashion directly into our bank accounts monthly.

Now, practicing virtual medicine is the new normal. While that could be on a video platform mimicking real-life interactions, many of my visits are telephone-based. On a daily basis, I am sitting at my computer in my home office, with my EMR open, talking and pecking away at the keyboard patient after patient, sending prescriptions and requisition forms digitally to pharmacies, patients and health care institutions. At the end of the day, my billing for all that work is electronically sent to the Ministry of Health, with payment virtually guaranteed: absent the in-person interactions, I feel like I am creating money out of nowhere. This virtual and digital work somehow lacks the weight and substance of in-office interactions, even though the required decision-making is as challenging, if not more so. Being able to work without getting dressed or dressed up, managing one's appearance, and commuting to a workplace setting influences that perception.

Of course, digital money is nothing new. Cash transactions are steadily declining in popularity, as is the use of cheques. We are in a period of an accelerating transition to preauthorized payments, electronic fund transfers, Interac e-transfers and digital wallets. While governments and their central banks are said to be "printing money" currently, they are not actually running a physical printing

press, as in the Netflix hit 'Money Heist.' The money funding pandemic government programs like the Canada Emergency Wage Subsidy (CEWS), Canada Emergency Business Account (CEBA), Temporary Wage Subsidy (TWS), Canada Emergency Response Benefit (CERB), and many others, is all being created and transferred digitally.

Bitcoin miners also appear to create money out of nowhere, by using computers to solve complex mathematical equations. How is that possible? I learned a lot about bitcoin, and the often-associated concept of blockchain, from articles on www.investopedia.com. Apparently, the chance of a computer solving one of these problems is currently about 1 in 13 trillion. I like my odds of correctly diagnosing an unseen virtual patient from home a lot better. Meanwhile, the "block reward" for solving these complex math problems keeps falling, from 50 Bitcoins in 2009 down to 3.125 Bitcoins as of May 2020. Canadian rheumatologists can relate to that, with fee freezes and rollbacks being common in recent years. In Ontario, the Ministry of Health created new fee codes for virtual billing at the start of the pandemic, but then took the position that most virtual follow-up visits should be paid at 33% less than in-person visits. That dispute lasted months before being resolved in our favour after intense lobbying.

Finally, mining for bitcoin requires massive amounts of energy and sophisticated computing setups. All I require is a phone, internet access, and a computer which can access my EMR in the cloud. So, my virtual work is environmentally friendly to the extreme, obviating commuting to the office by myself, my staff, and my patients. Bitcoin mining using pools of high-end computers requires electricity in large quantities which, if generated from coal or oil, is environmentally negative.

Bill Gates has been quoted as saying "Bitcoin is better than currency in that you don't have to be physically in the same place." With virtual rheumatology, you also don't have to be physically in the same place as your patient. Is it better than the real thing? That question could turn up on a future rheumatology exam, but you'll have to work out the answer on your own.

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