



HEALTH CARE TRENDS

## Know Your ABCDs of the New Era in Health Care

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The future is now. In an ever-changing world, health care has never been more poised for disruption. While evidence-based health care (EBH) has been the hot topic over the past decade, I would encourage you and the rest of the profession to consider that we are moving rapidly into an era of intelligence-based health care (IBH). Let's review the ABCDs of IBH!

### A - Algorithms & Artificial Intelligence

Think about the most successful and disruptive companies in the world. Google, Uber, Facebook ... algorithms are their DNA. What about the chiropractic profession? We have algorithms, too!

For example, review the Clinical Compass' [low back pain guideline](#) published in 2016. Here, science informs us on how best to manage patient care through a course of treatment. These algorithms can be used in your reports of findings to let patients know why you are making recommendations (and that they are evidence based).

They also can be used to fight insurance denials, and help referring physicians and others in the medical community understand the supported course of care you are recommending. Last, but not least, they can inform policymakers and help move the needle on hot-topic issues such as the opioid crisis.



The next evolution of algorithms needs to be (and will be) embedded in electronic health records in order to help providers make clinical decisions. Imagine if your ROF were automated for patients after documenting their condition and comorbidities! Then imagine that machine learning takes over, aggregates all of your patient data, and helps to identify treatments that will get patients the best outcome.

Artificial intelligence / machine learning has been used to improve [brain tumor identification](#) in a fraction of the time humans can perform this function.<sup>1</sup> Artificial intelligence has also been used to estimate the impact of human papillomavirus types in influencing the risk of [cervical dysplasia recurrence](#).<sup>2</sup> We are at the early stages of algorithms and AI in health care. So, what about its use in chiropractic? The opportunities are exponential.

## B - Blockchain

When people hear *blockchain*, the first thing that comes to mind is Bitcoin, which was built on the blockchain. Yes, it's a cryptocurrency. It's the tech behind it that has made it such a story ... and a disrupter. But blockchain is a lot more than that. If you want the long version, check out the Wikipedia definition. But for a more understandable definition, here's what blockchain expert Jeremy Epstein has to say:<sup>3</sup>

"What blockchain basically is, is a globally distributed database. Everyone has a copy of the database. So, imagine we all have a Google Sheet or a Microsoft Excel spreadsheet and we're all looking at the exact same copy of it. Instead of having a copy stored in one central location, we have a copy of that ledger of all that information stored at every computer, or all the participating computers around the world. And the security of that is guaranteed by some pretty cool type of cryptography and some other ways of making sure that the data is sort of tamper-resistant."

"The primary implication of blockchain as I see it is that, for the first time ever we are able to transact items of value directly between two people with lower cost, less risk, and increased speed, without the need for any centralized intermediaries. That's the game changer here. So, if you're a business owner, what you need to understand is, the third-party institutions that basically are brokering trust right now between other parties, they're in the cross hairs of this disruption."

Hmmm ... third-party institutions. Are insurance companies third-party institutions? Could they be disrupted? What about health care records? Why don't patients own their own records so they can be stored, accessed and modified only by trusted parties? Do you know health care data is up to 20 times more valuable to hackers than credit card data?

What about transactions? Can we completely eliminate third-party administrators with the use of cryptocurrencies? The possibilities are endless, and only with our collective understanding and action will we be able to leverage blockchain for the chiropractic profession, and the patients and communities we serve.

#### C - Cloud Computing (and the Internet of Things ... IOT)

Cloud computing continues to impact our world dramatically, and we are increasingly busting silos to become interconnected. Think about all the devices connected to and through the Internet. Can you say Fitbit? There are hundreds of new connected products being developed every day, so the opportunities to use these connected devices to improve health and wellness are endless.

Another great example is cloud-based EHR. Because it's "in the cloud," it can interconnect a variety of other platforms in order to improve efficiency and profitability of our businesses. If your EHR is not in the cloud, you are behind - period. It's a good thing for our profession that most EHRs are moving to the cloud because one of the most important elements of cloud computing is...

#### D - Data

Data is the glue that binds algorithms / artificial intelligence, Blockchain and cloud computing together. As a profession, we are so fortunate that what we do works incredibly well to help patients heal.

In the early decades, we relied on patient testimonials and anecdotal evidence. In the past two decades, there has been a virtual explosion of peer-reviewed, scientific evidence that demonstrates our value to the health care system. And moving forward because of A, B and C, we will be able to leverage *big data* to demonstrate our outcomes to what I call the four P's - patients, providers (MDs), payers and policymakers.

With large aggregate data leveraged from EHRs or clearinghouses, there can be no disputing our impact to our communities and no disputing appropriate clinical pathways that yield the best outcomes for patients. Leveraging that data will drive better policies, better decisions and more transparency in health care. Whether it's Spine IQ, the first [spine care registry](#) for chiropractic and beyond, or emerging practice-based research networks (PBRNs), data is the driver of change.

#### Leverage the Disruption

I've never been more excited to be a doctor of chiropractic. The coming years will see technology disrupt third-party institutions, and provide support for better decision-making and better outcomes for patients. In 1895, chiropractic was a disrupter. In 2018, we as a profession need to leverage disrupting technologies to assert our importance in the new era of health care.

Author's Note: To learn more about these emerging technologies and to be part of the discussion, join our [Facebook group](#).

### *References*

1. Dubrow A. "Scientists Enlist Supercomputers, Machine Learning to Automatically Identify Brain Tumors." Texas Advanced Computing Center, Oct. 5, 2017.
2. Bogani G, Ditto A, Martinelli F, et al. Artificial intelligence estimates the impact of human papillomavirus types in influencing the risk of cervical dysplasia recurrence: progress toward a more personalized approach. *Eur J Cancer Prev*, 2018 Jan. 22 (e-pub ahead of print).
3. Leary B. "Jeremy Epstein of Never Stop Marketing: Blockchain Will Disrupt Marketing, Customer Experience and Trust." Smallbiztrends.com, July 28, 2017.

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