



Today's data. Tomorrow's healthcare.



Several years ago, as recounted by Charles Duhigg in The New York Times Magazine, an irate father stormed into his local Target demanding to know why the retailer was sending his teenage daughter coupons for maternity clothes and cribs.

"Are you trying to encourage her to get pregnant?" he demanded.

The store manager called the father to apologize for the mix-up. But when he did, the father admitted that Target hadn't been wrong, after all: His daughter had confessed that she was, indeed, quite pregnant.

It turns out Target had devised an algorithm, based on purchase data of 25 products, that predicted, with more than 80 percent accuracy, whether a shopper was pregnant — and even which month she would be due.

Target isn't the only company that knows a lot about us. Uber knows that we're more likely to pay surge pricing when our phone batteries are almost dead. Netflix knows we're more likely to click on a film if the promo image features fewer than three people. Amazon knows what we want to buy before we know we want it.

And then there's healthcare, where we know so little it's killing us.

Our industry is bloated with data, yet starving for useful insight. An Epocrates survey my company conducted last year found that 95 percent of physicians experienced problems delivering medical care because they couldn't access the patient data they needed. Considering that medical errors account for more than 100,000 deaths each year, this lack of access to critical, timely information can have deadly consequences.

Ashish K. Jha, M.D., director of Harvard's Global Health Institute, wrote recently about a patient he'd cared for who was admitted for pneumonia, put on standard antibiotics, but died 72 hours later. Jha learned days later — after contacting the patient's daughter — that a different hospital had run labs on this patient two months earlier, and found that his pneumonia was caused by a rare strain of bacterium susceptible to just a few antibiotics, none of which had been used by Jha's team.

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Of course, the previous hospital was on a different electronic health records system. So the admitting physician didn't know the patient had been treated for pneumonia before. Didn't have the lab results. Didn't have a view of the patient beyond his institution's four walls. He was flying blind.

While patient care falls victim to this lack of knowledge flow, so do the clinical and financial operations of our health systems. Most health system leaders, for example, have no clue that, on average, half of their referrals and consults are going out-of-network. (But we know, based on athenahealth data).

We also know from our data that every month, the average doctor has to chase down 35 missing lab results, 18 missing imaging results, and 12 missing specialty referrals. Aside from the cost, wasted time and frustration for doctors (who already spend 40 percent of their time on non-patient-facing work), think of the cumulative impact on patients as their care drops through crack after crack.

But after decades of disconnectedness and lack of knowing, things are beginning to change. At athenahealth, we're able to now pull data out of what were once closed systems so doctors can follow patients across EMRs. We're finally beginning to see the synchronization of basic information like medicine allergies, immunizations and encounters.

Retail clinics are moving the market toward change. So are new patient aggregators formed as an alternative to hospital monopolies, and technology advances such as the replacement of outdated HL7 interfaces with APIs.

I truly believe we've popped a hole in the medical information dam, and the kind of insight we've been starved for is beginning to flow through. The emergence of integrated healthcare information will allow for massive change in the performance of medicine as we know it – and new companies and technologies will enter to speed up the process.

Uber has changed how we get around. Netflix has changed how we watch TV. The difference, with healthcare, is that this necessary change can also save lives.

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A daily news hub reporting from the heart of the health care internet, with access to a comprehensive data set of health care transactions from athenahealth's nationwide network. We equip leaders with actionable insight and inspiration for making health care work as it should.

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