



INSIGHTS

## Making sense of the healthcare ecosystem and how technology is enabling people-driven health

TERRENCE RYAN | 10.21.2019

Healthcare used to be much easier. The “ecosystem” consisted of you—the patient—and your doctor, provider. If you needed medical attention or required a hospital stay, your doctor was in charge of coordinating your care. Healthcare works best when all stakeholders are aligned around a proactive patient within an ecosystem that supports success. In an ideal healthcare system interrelated consumer, providers, payers, government agencies, and others work together as a community centered around patient care: care And with total transparency into costs and shared, open access to the health information we need healthcare consumer like us can make informed decisions to get the best care for ourselves and our families. Unfortunately, that’s not the world we’ve been living in. Our current healthcare system has grown increasingly complicated over decades of growth, changes, and regulation. And too often there is a disconnect among those who populate it. The key players often have conflicting goals that make it impossible for them to unite to serve each our unique needs, preferences and values. Often, it’s not that they don’t want to work together to provide the best patient care. Our complex healthcare industry simply isn’t set up to enable coordinated care at a reasonable cost that allows patients to call the shots. Calcium is on a mission to change that by taking on our present dysfunctional healthcare system where those who pay, deliver, and receive healthcare currently operate in siloes that are not aligned with our needs and don’t always put us first.

## A lack of transparency is preventing the healthcare system from working the way it should

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Healthcare used to be much easier. The “ecosystem” consisted of you—the patient—and your doctor, provider.

managed within one practice, whose doctors made decisions based on your complete medical history. You knew the costs up front and paid the doctor directly. For example, back in the 1960s, having a baby cost you back about \$200 for the delivery and 10 cents a tablet for pain medication. You knew this because you would get a hand-written bill presented to you directly by your doctor's desk clerk. Today, the healthcare market is more opaque, to put it mildly. The ecosystem has expanded to include countless other providers: primary and specialty physicians, nurses, and other clinical staff, as well as different hospitals, clinics and health plans that deliver care. Our current healthcare ecosystem also includes healthcare organizations like payers—insurance companies that reimburse providers for covered healthcare services—and pharmacies that dispense and manage the medications prescribed on your behalf. Rounding out the healthcare landscape are healthcare organizations that don't deal directly with patients, but whose contributions indirectly influence patient outcomes. These include...

- Pharmaceutical companies who make and develop our medications
- Biotechnology companies pushing the boundaries of treatment research
- Medical device companies
- Distributors whose products and services are used to prevent, diagnose, treat and even cure disease
- Health information technology providers who manage the all-important patient records and data

All these stakeholders play different individual roles, but they should be working together as a team to achieve the common goal of providing the best patient care. But because our healthcare system lacks transparency into costs, treatment outcomes, data ownership and access to information, these players often operate independently without knowing what the other is doing, often in conflict with one another. Calcium's goal is to get everyone working off the same playbook, by providing patients the ability to capture all the different data points and information and pull it all together for a more holistic picture of his or her healthcare.

## Transparency could help improve accountability across the ecosystem

Transparency about pricing, quality, health and wellness data, appointments, services rendered, results, and more can benefit each participant in the healthcare industry. Ultimately, transparency can help patients make better decisions that will improve healthcare outcomes and lower costs throughout the healthcare system.

- **Smarter decisions.** Upfront pricing and health data transparency will also help patients make informed decisions about whether they want to proceed with a healthcare service, if they would like to get a second opinion, or if they would like to shop around for a lower-cost option. The same goes for clinical services.
- **Quality control.** Information about a facility's quality of care and outcomes can help patients make better choices and give providers actionable information they can use to improve.

## Benefits to healthcare providers

Transparency also offer benefits for providers, as well:

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- **Fewer missed appointments.** Making appointment information will help consumers with their schedule.
- **More informed partner.** Sharing findings, results and records more readily can help educate patients, better health decisions.
- **Better ratings.** The movement for more transparent pricing and consumer reviews and ratings is happening and patients are using it as a yardstick to measure their providers against the competition.

This type of transparency encourages healthcare practitioners to be more accountable and make improvements, leading to better patient outcomes.

## Benefits to healthcare payers

For healthcare payers and insurers, availability of patient data will help identify patterns and trends in healthcare quality and enable them to implement value-based payment models. This could further improve quality and lower costs across the entire healthcare industry. In addition, payers who provide consumer clear information about what's covered, who pays for what, how patients can access care and which providers and facilities are in their networks will gain an advantage in cost management. When patients understand upfront how much they will owe out of pocket they are more likely to pay in a timely manner thus reducing the amount of uncompensated care and administrative cost that the system must absorb. Additionally, the patient/consumer can leverage their own health data as they shop for plans or discounts, taking advantage of health incentives offered by certain plans and being able to share health and medical data with their payers, the consumer might be able to take advantage of certain discounts and health incentives to lower their overall costs.

## Benefits to federal, state and local governments

Price transparency would allow private payers and policymakers to better understand how Medicare/Medicaid's purchasing power impacts market pricing. This can open the market up to competition that lowers costs and improves quality of care for the millions on government health plans. As the country's largest health insurer, the government, can standardize and provide system-wide access to healthcare that could help drive transparency on many other fronts, to increase competition, lower costs and improve the quality of care for everyone in the healthcare sector.

## Benefits to pharmaceutical companies

Getting a better understanding of the costs associated with each stage of their own manufacturing process would help them secure competitive pricing from their suppliers, and in turn lower costs for consumers.

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options. Improved affordability means people are less likely to skip doses, or split pills to save money, leading to improved health. And imagine if there were better ways of informing consumers about medications, either through alerts announcing updates and improvements or notifying them that they should see their physician or pharmacist about a timely refill or a possible drug interaction. The benefits seem endless.

## Focus on the patient

At the center of all of these is the healthcare consumer. Transparency about costs, quality, and safety for everyone throughout the healthcare sector would help them be better, more empowered consumers. With the information to be accountable, people can make value-driven healthcare decisions that will result in lower costs, more choices, and better outcomes for everyone.

## Why isn't it working today?

Consumers, who should be quarterbacking their own healthcare decisions, have no choice but to look from the sidelines. What's holding them back? The answer points to what our current system is missing:

- A lack of understanding about how our complex healthcare system works
- A lack of awareness about their rights as far as ownership and access to their health data
- A lack of true data portability so that they can access and share their data within their healthcare ecosystem.

Without transparency into these critical components of healthcare, consumers aren't empowered to be accountable for their own care or make the best decisions for themselves and their families.

## Information about pricing and costs are hard to come by

Take costs for example. In the current healthcare market, payers use patient's health data and provider guidelines to set pricing. But the average patient has very little insight into who is using their data, how prices are determined and how much services really cost! Even though we (and our employers) are footing most of the bill for insurance premiums, co-payments, and deductibles, there's little insight into what healthcare actually costs. That's because when providers submit claims to payers, who then reimburse them for the billable services they performed, there's no single standard for how much services should cost. The fees can range widely based on which payer is responsible for providing reimbursement for a specific component of treatment, how much they've agreed to pay, and on the individual provider used. This fee-for-service (FFS) financial model makes it tough for people to comparison shop for the best services at the lowest prices. It also makes it tough for providers to give standardized pricing that's easy to understand. Since third parties are typically paying, there's little incentive for health plans and patients to pay attention to or even try to be accountable for managing the costs of services they use.

Another big challenge is data transparency. Providers contribute to and use electronic health records (EHRs) to manage patient data. Patients also contribute significant amounts of information by voluntarily sharing details about their diet, physical activity, and lifestyle choices like alcohol, tobacco and seat belt use, and others. But this information is not always added to the primary record to give a more robust picture of patient health.

## The opportunity is clear

Electronic health record systems, along with a variety of other consumer- and patient-centered technologies, have the potential to put everyone in the ecosystem on the same page, by combining patient health data from labs, radiology, medical imaging, and pharmacy, and patients' personal devices, enabling electronic access and communication among providers for facilitating care delivery. EHR data can also be combined to inform billing, quality management, outcomes reporting, resource planning, and public health disease surveillance and reporting. Instead, all this patient data is trapped in silos across the health care ecosystem where it is difficult for everyone to access and share.

## Siloed data is underutilized data

In many cases patient medical records are controlled by a single healthcare organization or healthcare system. Each system has its own set of inconvenient controls that make it difficult for patients and families to access and transfer records across multiple providers. Also, each EHR system stores data differently, making it difficult to tell who recorded which data, or where and when. The problem is that pieces of patient health data get scattered across disconnected clinical, research, administrative, and financial software systems. As a result, information that originates outside of the established system, like lab tests, medications and other procedures, aren't always incorporated into the primary record, preventing everyone on the healthcare team, including the patient, from having the benefit of the big picture. These data silos make it difficult to identify and address important health trends with patients or support any form of personalized care. The result is often passive, frustrated, uninformed patients who don't have the tools they need to be proactive, so they wait until they get sick before taking any action.

## We need to seize the opportunity

Calcium advocates for patients to have more control over their health data along with the ability to give everyone in their healthcare ecosystem equal access to it, so they could be better prepared to identify and manage conditions before they become an issue. The provider and patient-provided data could be made available to everyone in the healthcare sector to get a complete picture of patient health so they could work together to deliver personalized treatments that will optimize outcomes for each patient. Unfortunately, recently, we haven't had the tools to do so.

Technology brings with it an array of capabilities for collecting, measuring and managing data, as well as automating processes, to empower everyone in the ecosystem to make more insightful decisions. [Sign In](#) With this new level of transparency, consumers, providers and all the of the health ecosystem players can access the information they need to better manage the patient's personal health journey, find out if a condition needs medical intervention, determine treatment options, pay for treatments, and determine if the quality of care received and payment paid provided the best value.

## Technology enables data ownership and liquidity

Data is central to empowering individual patients to be accountable for the management of their own health. New consumer-centric, cloud-based data solutions are moving the entire healthcare system towards a more informed, proactive approach to health. Digital disruptors like blockchain are helping players beef up their ability to collect, consolidate, and share all forms of patient data as the one source of truth across the healthcare sector in a secure and private way. At the same time powerful analytics programs are quickly becoming table stakes for providers who want to stay competitive. With new capabilities to effectively analyze data across systems and care settings providers are able to better predict their patients' future treatment needs and monitor the effectiveness of their medical care. And with advances in data security, a source of information is more easily accessible by everyone in the healthcare ecosystem. Data liquidity across all medical record sources breaks down siloes and enables patients to be accountable. The result will be an engaged patient who is incentivized, informed, supported, and empowered with the tools needed to take a proactive approach to their own health.

## Changing the healthcare landscape for the better

With increasing transparency comes control that enables consumers to take treatment into their own hands. The security to allow physicians, clinical staff, family, friends, and caregivers specific access to their data enables people to build their own patient-centered community for ongoing support. The trend toward consolidated information also brings collective benefits for everyone in the healthcare industry beyond individual patients. Digital data networks have the power to connect fragmented system data across geography to generate faster, better results and identify potential treatments that can be shared for the benefit of large communities of similar patients. For instance, patients undergoing treatment for the same chronic conditions can be identified and grouped together to share test results and best practice clinical outcomes. The trend toward consumer ownership and healthcare accountability is a work in progress, with Calcium's support, we're heading in the right direction. Better access to their data, plus the ability to share their records within their healthcare ecosystem and on their own terms will provide the needed transparency to drive improved costs, quality of care, and better health. The healthcare industry is finally beginning to realize the benefits of incorporating technology that enables disconnected consumers and healthcare organizations to see and share individual patient data with each other with the patient's

the healthcare ecosystem will need to become more closely aligned on driving positive outcomes for patient health.



About Terrence Ryan

Terrence (Terry) M. Ryan, CEO and founding partner at Calcium, is a seasoned entrepreneur who has built, funded a numerous technology / data-centric businesses in both the software and services space.

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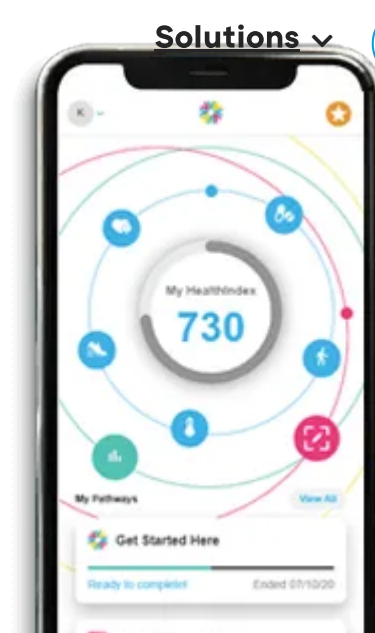
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