

# On the Health Record Interview with Dr. Justin Saliman, Orthopedic Surgeon and founder of OutcomeMD

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Our latest episode of On the Health Record featured Justin D. Saliman, MD, an orthopedic surgeon and founder of the medical software company, [OutcomeMD](#). He gave us some insight into what drew him to medicine and medical technology, as well as the flaws in American doctors' business models that led him to create OutcomeMD. For the whole story, listen to the episode [here](#).

**I understand that your family has an engineering background. How did that affect you and your approach to medicine?**

I grew up building things with my dad. My grandfather was one of the chief engineers on the Hoover Dam, so I've always thought mechanically about things and searched for innovative ways to solve problems.

**What drew you to medicine instead of engineering?**

I was interested in engineering, but I'm interested in a lot of things. I actually got my degree in economics, but then I ended up going to medical school. I chose medical school because I wanted to be able to look back on my life when I'm 80 and really feel like I made a difference in people's lives. One can certainly do that as a doctor. Then I started to realize that med tech innovation can do that but on a massive scale. I always had the entrepreneurial spirit, so that's why I moved into these startups. I still do surgery one day a week, but right now I'm predominantly running OutcomeMD.

What led you to commit to orthopedic surgery as your specialty? How did that carry over into your decision to deliver software products in addition to that?

When I was young, I used to write computer software programs in BASIC. I was always building things and starting companies. I even owned a painting company when I was in college.

I was drawn to orthopedics because you still get to work with your hands. We use fun toys. Patients are relatively healthy; they're just broken and need to be put back together. It's a great field. In residency and fellowship, I kept a list of

the things that looked ridiculous in what we did, and then I started going after my favorite ones.

I actually started a couple of companies: one around a device for rotator cuff repair and one around a device for meniscus repair. The meniscus repair company had a term sheet with a big company. They had to sign that term sheet in March 2008, but then the stock market crashed, so that opportunity went away. I raised venture capital around it, hired a CEO to run it, and I was the founder, chief medical officer and board member. It was in Menlo Park, so I didn't run the company. It ended up selling to Smith & Nephew in 2019.

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Still, throughout my time at that company, I traveled the world and met with the average orthopedic surgeon and the famous orthopedic surgeon and saw what made them tick. This helped solidify for me that the problems with healthcare are many, which led me to create my software company, OutcomeMD, in 2016. This company solves so many of these problems, and I could really see the vision of it.

### **What is the problem that OutcomeMD is trying to solve?**

We solve two main problems. The first problem is that doctors don't track outcomes, and neither do patients, unless a doctor and a patient are doing a clinical study for research purposes. They do not keep track of what works and what doesn't work which is shocking to a lot of people.

When you walk into a doctor's office, they come up with three or four random questions to assess your symptoms even though the perfect questions are sitting right there in the medical literature. There are objective outcome questions that have been validated against other ways to determine an outcome. They're scored in a certain way that's valid in the medical literature, and they're actually used for FDA studies and clinical trials. We should be using them for clinical care because then we have outcome data. The outcome data is the key to things like disease cure identification, decision support, precision medicine, quality improvement and effective healthcare AI.

I say effective because if you take bad data and put it through AI, you'll get slightly less bad data out of it. If you take medical outcome data obtained in a

rigorous, scientific way and combine that with AI to correlate medical record data and confounding factor data, you can better cure disease.

However, we're not really going to get massive adoption of outcome tracking by just solving that problem because there are unclear incentives for doctors and patients currently. That's why the other major problem we had to solve is that doctors have misaligned business models.

Doctors have very little incentives to get good outcomes. If I fix your shoulder only 70% of the way, but I'm super charming and my office is organized, you might recommend me to your friends even though for the rest of your life, you have to live with that remaining 30% of pain and dysfunction. You might just figure your shoulder was too messed up to completely fix. Meanwhile the surgeon down the street can give you a 100% perfect shoulder, but they're kind of a jerk, and their office is dirty. In the end, fewer people will recommend that doctor. Most patients will figure anyone would've given them a 100% perfect shoulder if it was possible, so since that doctor is kind of a jerk, why work with him?

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However, as a patient, you don't go to a doctor for a friend. You go to a doctor for a cure. Therefore if you could be certain that the less pleasant doctor is the only one who can give you a 100% cured shoulder, you would choose that doctor despite his attitude. Right now, it doesn't necessarily matter if I get a good outcome as long as I come across as a cool, intelligent guy. Doctor's reputations are driven by subjective satisfaction, and it's tearing apart the American healthcare system. Yelp is great for restaurants, but it's toxic for he al thc are.

The other problem is that doctors have very little ability to market themselves. Pretty much the only way to do it is Google AdWords and optimizing our website. All of this adds up to the doctors having to focus on patient catering, not patient care. Every doctor-patient interaction has an undercurrent of blackmail. That's one reason why narcotic abuse is constantly on the rise in this country. It directly parallels Yelp adoption in this country. If you want an MRI, I'll give you an MRI. Even if I know you sprained your knee, and you're going to be fine in two weeks, I need to satisfy you. My business model is dependent on making you satisfied.

Our altruism shifts when we're in medical school. We care about the patient, and we want to do right by them. That's where our altruism sits. Then later in life, we still care about our patients, but the truth of the matter is the world becomes different. Now all of a sudden you have elderly parents that you want to provide care for, and you have kids that you want to send to private school. Then some of your altruism shifts to your nucleus, and the way you're altruistic for your nucleus is by making enough money to be able to support them in the ways that you want to. As sad as that sounds, that's a reality of every business.

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OutcomeMD, therefore, is trying to solve these problems of a severe lack of quality outcome data as well as the misalignment of doctors' business models. We want to create a cycle of ever improving outcomes by leveraging that outcome data as a tool for better care and better marketing that's not dependent on subjective reviews.

### **What is your perspective on subjective online reviews as a doctor?**

There was an article published in JAMA, The Journal of the American Medical Association. It's called "The Cost of Satisfaction." They found that if you use subjective review sites to find your doctor, and you choose a five-star doctor, you're more likely to die. There's an inverse relationship between outcomes and subjective reviews. That's because patients don't review doctors based on outcomes. They'll often base their reviews on if the doctor was nice and gave them what they wanted.

Meanwhile, the doctors can just hire hackers to remove bad reviews, so these ratings have very little to do with the doctor's ability to deliver a good outcome and more to do with how successfully that doctor sold themselves to the patient.

That's why our slogan is "Outcomes, not opinions." Doctors should be using outcomes to guide their treatments, not their opinions or the subjective opinions of their patients. It's only an art of medicine because we don't have enough science. We should know the right thing to do every time.

**What has been your experience using an EHR as a doctor? EHR's are notoriously confusing and difficult to use. What makes using EHRs a**

## challenge, or what makes them particularly useful to your practice?

One of the beauties of an EHR is that it gathers all the information you need right in one spot. The EHR is the repository for patients' procedures, diagnoses, medications, patient demographics, and phenotype information. When I take all that data and correlate it with outcome data, my outcome data becomes much more meaningful. EHR data without outcome data is just a repository of information, but EHR data with outcome data creates opportunities to do some magical things.

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We've been using electronic medical records for a while now, and it's time that we leverage all that data to improve care in a dramatic way. DrChrono is cloud-based and has a really nice user interface that's friendly for doctors, especially doctors on the go who are more on the forefront of technology. Because of the way DrChrono was built, we can offer things on there that we can't offer on any other electronic medical record system. We can do things like push the patient board outcome questions and answers, color coded for severity, into the DrChrono medical note with HTML formatting. All of the information is pushed into the correct sections, and all of a sudden, the doctor's note is written without the doctor even having to write a single thing.

EHRs are really great. Think about what happens when the doctor is sitting at their keyboard typing the whole time, never looking at the patient. Patients feel very disconnected from a doctor, and doctors hate it. They feel like they have to document really quickly because if they don't, they're going to get audited. Then they have to pay all this money back because they didn't document adequately to defend that level of service. Some of that can be done by the patient ahead of time by taking their patient portal outcome questions. It's a huge help that DrChrono can auto document most of the note before the doctor even walks in the room.

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