Six skills that make medical doctors indispensable for startups

A growing number of startups are tackling complex healthcare challenges. To be successful, they need insiders like medical doctors in their teams. At the same time, more and more physicians are looking for rewarding alternative careers outside the hospital.

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However, as we learned ourselves many times over, finding the right candidates is not easy. That shouldn't be a surprise, really, given that medical education trains for clinical care and scientific research, but not for innovation management and engineering.

What's needed are hybrids — medical doctors who mix clinical experience with digital business acumen. You start to see them increasingly in healthcare start-ups, they're sometimes called "Chief Medical Officer", "Medical Director" or "Medical Expert", but there's no clear, standardised role definition, yet. There's also no established path to attain such a position, either.

What a physician's job in a digital health startup typically looks like

Innovation in digital health means interdisciplinary work and high pace. Sounds familiar to those working in healthcare? There is one significant difference: Physicians working in tech companies will be exposed to

people with very different mindsets and also varying levels of understanding of healthcare systems — and the nature of science. *Digital Doctors* interact with various work streams daily — from data scientists to product managers, UX/UI designers, lawyers, and sometimes even the tech team. And have to find a common language to make themselves understood.

To be useful in these highly diverse tasks, physicians need additional skills compared to what's expected in patient care. You need the skill-set described in this article to unlock your clinical expertise in a way that is actionable for your colleagues involved in the product development.

Just like in clinical medicine, you'll never be done learning. Instead, we have to seek continuous growth actively. Consider the skills listed here as part of your ongoing professional development.

1. Understand the power of your halo

As the medical authority in the team, you must be aware that your word might carry a disproportionately heavyweight in the team. This gives you a responsibility to avoid mixing facts with opinions and ideologies. Medical laypeople tend to expect that there is an 'absolute truth' in medicine because it is based on science.

We've seen doctors trying to impose their personal worldview on the product team. Don't be that person. Just as you get informed consent from patients, make it easy for your team to understand what the proven facts are and what the different opinions are on a specific topic. You can then still share your personal perspective as long as you remember that your job is to empower people to make well-informed decisions, not to throw your biases at them.

Also, be on the watch for misunderstandings. Doctors are used to sharing examples from their personal experience with other physician colleagues.

However, for laypeople, it might be challenging to understand how representative an example is. We've seen enough doctors turn red when they discover that a unique story they shared suddenly ends up on a slide deck as a generalised truth with their name on it.

Remember that you have the curse of knowledge: you know so much about medicine that you've forgotten what it's like not to know everything you learned. Stay humble and remind yourself often that you work with brilliant people whose experiences are just so far away from theirs. It helps to do these things actively:

- Ensure that your new colleagues feel at eye-level with you.
- Actively encourage junior team members to ask loads of questions.
- Pay close attention to how others structure their thinking, what information is essential to them and how comfortable they are with complex medical topics.
- Upskill your team: Enable your colleagues to understand the foundations of evidence-based healthcare and develop a basic medical literacy.
- Tailor your language and way of presenting information to your audience.

2. Understand how digital innovation works

Many of the skills you'll need to collaborate smoothly with innovators are reasonably simple to learn. You should start by learning standard innovation approaches such as Design Thinking, qualitative user research, outcome-driven innovation, and rapid prototyping. There is a wealth of books and online courses, and even YouTube has plenty of free resources to fuel a steep learning curve. Then familiarise yourself with everyday productivity and communication tools such as Slack, Zoom, Jira and Confluence. These shouldn't take long to master as they're relatively intuitive.

What's more difficult are programming basics, Internet of Things, technology assessment, and all those other information and computing technology skills. Maybe take a course in Python to get an idea of how code is written and subscribe to some tech and data science newsletters to get an idea of what's going on. And if you have the chance, maybe get a techie in your team to become your mentor or see if you can find a way of working closely with them to also learn from practice.

You won't be expected to excel at all aspects of computer technology, product management, and data science, but you should aim to be useful in at least some fields so that you can quickly exchange thoughts with them. By and large, you'll be less expected to develop features or start coding yourself, but you'll be precious if you can understand their challenges.

What's needed from you will depend on the scope of the company and the skills of the other members of the team. And the more versatile you are, the wider the opportunities you will be offered. But in a rapidly specialising field, depth is quickly becoming more important than breadth.

3. Bring your tremendous healthcare skills — okay, that one is obvious, but which ones actually matter?

Obviously, as a doctor, you know a great deal about healthcare. But what part of your knowledge is relevant? You'll be surprised to find how little value lies in your ability to conduct a detailed clinical examination, to place an IV-drain smoothly, or how much you know about diseases and treatments.

Instead, you'll be valued much more for your ability to make sense of any kind of medical and not-so-medical challenge thrown at you. You'll work on such a diversity of topics, including non-medical ones, that very few of your bedside skills will genuinely come to action in your new start-up life.

And besides, given that you'll not be able to keep your speciality knowledge up to date quite as quickly as when you were doing your clinical job full time, the currency of your knowledge will decay fast (as a talk at Harvard Medical School suggests). It's not a problem; if you need a true subject matter expert, just hire them on an hourly basis.

The medical skills that make you particularly valuable are your ability to appraise complex issues critically, understand epidemiology, drive patient safety, and know-how prevention works (and doesn't). Your ability to conduct systematic reviews, apply medical statistics, and all the other scientific tools you've acquired alongside your medical journey are critical assets.

But there's another, less tangible asset that you can only acquire having spent a couple of years at the coal face of medicine: having a deep understanding of the dynamics of the clinical reality as well as the insiders' vocabulary and their culture. You'll be an ambassador between the world of agile digital product development and your former clinical colleagues. They'll respect you much more if you share the experience of a night shift in the ER, arguing with an intensivist over a patient in the ICU, or having frustrating conversations with overwhelmed relatives.

But again, humility is key, and once you leave the bedside, your clinical knowledge begins to atrophy. And *"having experienced a lot"* doesn't automatically equate to *"having a lot of experience"*. Keep questioning yourself and aim to learn from both the doctors and the startupers around you, every single day.

4. Be a systems navigator

Now on to a skill set that many doctors lack because it is not taught in medical school. Doctors typically have a great understanding of what's going on at the coal face of medicine but know surprisingly little about the

health economics and organisational set-up that define how decisions are made in the healthcare system.

Being a systems navigator means that you have a feeling for the needs and motivations of different stakeholders — including your colleagues, hospital managers, regulators, and everyone else involved in maintaining and shaping the delivery of care in your country. For that, you need to understand how typical market-failures, such as information asymmetries, supply-induced demand, and others create sub-ideal healthcare systems. They will help you understand the purpose of some potentially counterintuitive policies which, more often than not, end up creating new problems while attempting to solve another problem. To that end, you will also need to deeply understand the key organisations including self-governance bodies and existing companies that have a say within the system — and ideally command a certain degree of respect in their eyes.

On top, if you're working on the creation of new apps that have an actual medical use, you will often be asked for your opinion on regulatory requirements, frameworks, and guidelines, such as those published by the US Food and Drug Administration in the U.S., Germany's Digital Care Act, or Europe's new Medical Device Regulation. Of course, you're not a lawyer, but it is with your expertise that you can bring the right context to everyone trying to make sense of what these regulations mean for them.

5. Understand and prioritise emerging trends

Truly innovative businesses are able to see what's coming next and are actively working towards the creation of that new reality. But it can be tremendously difficult for outsiders to make sense of all the technological, scientific, epidemiological, demographic and cultural changes that are happening and how they influence the delivery of care.

So how good are you at making sense of what's happening in (and

outside of) the world of medicine globally? How quickly can you look at what competitors, investors, insurance companies, researchers, and governments are doing and evaluate — as free as possible from any status-quo bias — whether or not it is sensible for your company to start riding this specific wave?

And equally important: how much time are you spending on topics unrelated to healthcare? Chances are that the better you become able to bring very different worlds together to solve a specific healthcare problem, you might discover truly transformative solutions much faster.

6. Become a good manager

Often, Digital Doctors are considered for leadership positions. That means you have to know a little about process and project management — and frankly, few doctors are experienced in that, especially when it comes to agile methodologies and scrum. This is even more challenging now as suddenly you need to work closely with data scientists, software developers, qualitative researchers, and sometimes lawyers, and other professions. In the beginning, you'll rarely have clarity on what input they need and what output you should expect from them.

Similarly, you will now need, much more than before, to hone your strategic thinking. Most doctors are good responding to a wealth of unexpected ad-hoc day-to-day problems in patient care. But how good are you at foresight and crafting strategies to fundamentally change the way you do what you do, even if everything seems to, by and large, be working the way it is now.

Health warning

If you are planning on transitioning from the role of a clinical doctor to that of a Digital Doctor, your first instinct might be trying to figure out the

things you need to learn. There's something else you should consider: it's just as vital that you figure out what you need to unlearn.

You've acquired a lot of essential and massively impressive talents. Being able to care for a variety of patients with diverse problems under time pressure is only one of them. But some of the things that made you a rockstar clinician will make you a dysfunctional Digital Doctor, from whom your future colleagues will expect a lot of creativity and the ability to work without having detailed data (such as laboratory values, for example) without clear guidelines.

Also, suddenly, all the facts that you memorised in your long nights at the library and beyond don't matter quite so much any more. They can be researched now, as there's rarely an emergency need for knowledge on strokes or heart attacks when teams are designing features for a digital health app, for example. You will all have the time to research and deliberate on relevant facts — or hire someone by the hour to do it. What's much more important is your ability to make sense of complex medical issues and to adapt them to entirely new contexts at the bleeding edge of innovation.

Plus, you will have to work with colleagues who have wildly different backgrounds, culturally and professionally. The clinical environment is, by contrast, often very homogenous. Get ready for the moment when your medical way of reasoning will not resonate well anymore, and you will have to adapt to a plethora of different thinking patterns.

Digital Doctor roles are super rewarding. You can have a massive impact on society, and you will keep learning things that are way outside your comfort zone for the rest of your career. But will, in all likelihood, require you to reinvent most of who you were, professionally at least. What you got here won't get you there.

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