Digital Health:
Built upon social revolution, internet revolution and mobile revolution. The social networks help shape new roles in digital health. Social networks existed before digital technologies, but how do they help with understanding patients, customers, and collaborators.

Important to defamiliarizing the technologies that pervade most aspects of our daily lives. A social network is a set of relations among network members, either through people, organizations, or nations. Important to note that it is not the sum of individuals or of two person ties, so in a sense everyone is embedded in structures of relationships that provide opportunities, constraints, coalitions, and work-arounds.

We use a conceptual framework of a network by analyzing the situation or a technology to focus on relationships between people and not the individual people. The multiple and varied sites of connection with each other. With the digital age, social networks have changed because of three key areas, widespread connectivity, weaker group boundaries, and increased personal autonomy.

It's easier and cheaper to travel, so it's easier to expand social networks by physically moving around the world. Telecommunications are a lot more efficient and person, and the global spread of trade has helped with driving commercial, industrial and personal social networks. Alongside that, there are weaker group boundaries not only within families and households, which have redefined gender roles and responsibilities, but fewer people are participating in highly structured civic groups. Lastly, the increased connectivity leads to increased personal autonomy, by being connected it allows for more flexible and creative work but still within set boundaries, it's just that the freedom to look at a situation has allowed for greater variability.

Though this is great, digital social networks is also the same technology that can threaten people by overloading them with extra work, by coming up with new technologies and new ways to solve problems to meet social needs, it also requires new skills and strategies and often people can fall behind in their times like this.

Despite there being social networks way before the advent of digital technology came about, it's important to understand why the internet works the way it does and why it happened the way it did. The internet was peculiar because of the rate of adoption, radio took 38 years and television took 13 years to reach 100% market penetration. However, with the internet it only took about 4 years before the majority had joined in and reached a similar audience size of that of radio and television. As the internet became more and more accessible and popular, it's also important to understand the affordances of the internet that made people want to keep using it. The internet, as mentioned before, helped to connect people, they were humanized by having the ability to have custom and private communication. There was individual choice and widespread access to information. However, this also led to a digital divide that led to worsened social inequalities, of which income and education are leading indicators.

With the advent of the internet, the next large technological revolution was the mobile revolution. Mobile phones have changed the ways of communication and accessing information but it's also important to see how it has helped in digital health. Mobile health interventions and what not have been found to help with more public health initiatives and general care. According to Nielsen Research, by September 2014, 71% of all Americans owned smartphones.

When we became untethered from landlines and wired connections, mobile adoption happened much more rapidly in some locations because it was a true revolution by providing a method of communication. In many countries, it didn't replace landlines, mobile adoption replaced the total absence of telecommunications. To this point, although almost everyone may use mobile media, not everyone uses it in the same way. Teenagers text far more than they talk. Seniors who can afford them like tablets more than smartphones. They offer bigger text, which is easier for aging eyes. And, just as there's a digital divide in terms of internet access, there's also a mobile digital divide, but the contours of this divide are complex. For instance, Pew Research has shown that more low income users access health information online through their mobile phones than through desktop computers, but there are still divisions among types of mobile users that follow along lines of race and ethnicity, income, and educational attainment, as well as age.

Since 1995 the numbers of adults who have access to the internet has risen significantly. This most recent data from the Pew Internet and American Life Project show that upwards of 80% of adults have access to web. While these numbers are likely higher at this point, what's perhaps most interesting is the fact that they remain a segment of the population that's not connected. As important as the number of people have access to the web are the ways that people get there. Nearly 2/3 of Americans have access to the internet using their mobile phones. Again, these are the most recent numbers from Pew, but they're likely much higher at this point as you'll see this rising tide of mobile adoption play significantly to the story of access. This is real relevance beyond the borders of the US where access is only through mobile devices. And beyond the information that's being found people are actually finding one another.

It reflects a new kind of patient, the e-Patient. An e-Patient is a health consumer who participates fully in his or her medical care. e-Patients gather information about medical conditions using the internet and other tools. Specifically, e-Patients are equipped with the skills to manage their own condition. They're enabled to make choices about self-care. They're empowered. They are equals in their partnership with the physician involved in their care. So how did things change such that a patient would interrupt her doctor in order to get information somewhere else? Where did the e-Patient come from? It really all changed with our capacity to access information. And you'll see over the next three weeks, information is key to medicine in the digital age. It's the availability of information that's given the patient the power, wisdom, and confidence to participate in their own care. Consider how things have changed just in the past 15 years. It used to be that when you went to the doctor, the patient just did what the doctor said. Then the internet appeared and patients developed the ability to go to look for information. Then patients got access to one another. And now, interestingly, tables have turned and information now finds patients through their social networks. The e-Patient has driven a change in the doctor/patient relationship.