The quest for artificial intelligence began more than 80 years ago. I can perform 36 distinct acts. The idea was that computer technology would one day be powerful enough to carry out tasks better and more efficiently than humans. We've got to actually say hello to it. Today AI has come of age. It's already having an impact on many parts of human life, from self-driving cars to finding soulmates. But perhaps its greatest impact will be on medicine and the way we monitor human health. Dr. Eric Topol is one of the most influential doctors in digital medicine. The pioneering American cardiologist has helped develop drugs that have saved countless lives. He is now at the forefront of the AI revolution in healthcare. These are his prescriptions for transforming the future of human health. “The overarching goal is to bring back the humanity. If we do this right, we can rescue the problems of healthcare.” The doctor-patient relationship is a founding principle of healthcare and medicine. The first step is to eliminate keyboards and computer screens in clinical encounters.

1. Use AI for doctor’s clinical paperwork

Some doctors in the West can spend up to twice as many hours on medical paperwork than with their patients. “In the years ahead, we should be able to eliminate the data clerk functions of clinicians. These are mutually hated as much by patients as by doctors and clinicians.” AI tools such as speech recognition technology that are now commonplace in homes could be used in clinical settings for capturing data and notes, allowing doctors to concentrate on people.

1. Use machines to reduce errors.

“We have a problem with accuracy and efficiency.” Trained on a huge resource of medical data, the power of AI learning can read some images more accurately than humans. “Whether it's a pattern like a scan or a slide, or a prediction, AI can really rev up the accuracy. And that is important for a better diagnosis, better treatments, better outcomes, lower cost.” Powerful machines can interpret scans 150 times faster than radiologists, and can work 24 hours a day. AI can even suggest a diagnosis. “Many conditions could be AI-diagnosed. And so the time that a doctor comes into play is very specific to important diagnoses.”

1. Harvesting data to improve outcomes.

Data is critical for improving our understanding of disease and illness. The more we understand, the better the chances of preventing, diagnosing, and curing. But currently, only about 5% of medical data is used effectively. “We had a problem of generating so much data, terabytes of data for each person, but we didn't have a way to analyze it. We didn't have a way to extract the juice, the distillate of this. Now we do, and that's what artificial intelligence is really about.” Harnessed to wireless devices, AI could oversee every facet of people's health data, from family history to food intake to exercise. “People will have the opportunity to have this real, integrated view of themselves to help prevent illness, to help guide them for better management of conditions. Over time, we'll see this virtual coach for promoting health.” Constant AI monitoring could transform the most prolific diseases that demand the most care, such as diabetes. This would empower people to take charge of their own health.

1. Treat patients at home not in hospital

“Another way that AI will kick in over time is to get rid of hospital rooms. We can monitor patients in the comfort of their own home, because they can have the sensors that would provide the same type of monitoring as if someone was in the intensive care unit.” Caring for people outside of medical settings would not only prevent hospital-acquired disease, it could also save money. “All these things favor this shift of reliance on a patient's bedroom, rather than the hospital room. We're talking about a whole lot of people that don't need to be employed in the hospital setting; that is a great way to reduce the burden in the future. In the United States a hospital costs $5,000 a night, so you could get a lot of data plans that would go for years for that cost.”

IF you remember one thing

“If the clinical community stands up for patients and say all the power, efficiency, productivity, workflow from AI is going to be used to give the gift of time to doctors and nurses and patients, that's where we flip this thing and achieve a rescue mission for healthcare.”