A Star Trek-style scanner would eliminate routine trips to the GP, allowing any of us to claim: “Dammit, Jim, I’m a doctor!” Lilian Anekwe reveals the future of healthcare.

HE CREW OF the USS Enterprise became ill with alarming regularity. From Andorian shingles to Zanthi fever, all manner of intergalactic diseases were waiting to pounce on the crew whenever they set foot on alien planets. Mercifully, the ship’s doctor always had a tricorder to hand, which could diagnose all manner of alien ailments in seconds. A quick once over was all it took to find out if a patient had a case of chorinocytosis (a deadly disease for Vulcans) or just a common cold. There were no lab tests, no needles and no waiting. It’s an idea that seemed more science fantasy than fiction, but that might be about to change.

Last year, a new $10m (£6.5m) X Prize was launched that challenged inventors to build a real-life tricorder. The X Prize’s philanthropic backers are offering to fund a team that can design a device weighing less than 2.3kg that is...
"There hasn't been innovation in tracking your health at home since the thermometer"
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MAY 2015

Parkinson’s. It also tells you if you have genes that are linked to inherited conditions like cystic fibrosis.

The data is stored by Cloud DX and can be accessed and tracked, allowing you to look at one-off measurements are seldom of use.

The makers of both devices say that the aim is to eventually make their tricorders available direct to consumers. Both still need to be tested in clinical trials and approved for accuracy and safety by the US Food and Drugs Administration in the case of the Scanadu Scout, and by the UK CE marking body for the Q-POC before its slated soft launch in late 2016.

De Brouwer is convinced that giving everyone this level of information about their health is an empowering force for good. “Having that knowledge empowers you to have more informed conversations and more productive visits with your doctor,” de Brouwer states.

And Warburton agrees with him. “We’re working with clinicians on the nature of the output – the actual results the Q-POC generates on-screen. They need to be accurate, of course, but also presented in a way that is most useful to the user, be that a pathologist, a healthcare professional or Joe Public.”

But there’s scepticism from the medical community about whether the tricorder could ever be useful. Dr David Warriner, a member of the Royal College of General Practitioners’ overdiagnosis group (and a Star Trek viewer in his youth), says the tricorder pretenders are some way off being diagnostic devices in the clinical sense. Warriner argues that when it comes to our health, more information is not always better. By giving everyone access to their health data out of context and without any medical counselling, it could mean that doctors are left to deal with the fallout from these devices when worried patients incorrectly interpret the results and rush to their GPs for reassurance. Nevertheless, de Brouwer insists that being aware of your health data can alleviate anxiety.

While Warriner agrees that the devices will empower patients, he cautions that one-off measurements are seldom of use. “It is patterns, which emerge over time, that indicate the presence of significant pathology.”

Despite the doubters, de Brouwer is convinced the potential for the Scanadu Scout is limitless. He states that consumers want to be more informed, so the potential market is huge. This is backed up by the diverse group of prospective customers that Warburton says is already interested in the Q-POC. These include Western governments interested in detecting biological weapons, forensic police units wanting them for crime scene investigations, and archaeologists identifying fossil species.

But it’s in the medical field that a tricorder could really create a fundamental change in how we think about our health. Checking your symptoms online could become a vastly different experience, and it could soon be the norm for your GP to take a look at your symptoms with their smartphone. Dr McCoy would be proud.

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To watch an episode of Click that covers tricorder devices, visit http://bbc.in/14gLWlx

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