



The personalised healthcare boom

Personalised healthcare is a fairly new term relating to technology that gives individuals effective healthcare based on their own unique attributes. This is distinct from personalised medicine, a well-established area whereby patients receive the right drug or dosage regime that works for them.

Under personalised medicine, a recipient could undergo DNA screening to see what specific form of a disease they have or checks to see whether they have mutations or enzymes that affect whether a drug works for them or not.

Meanwhile, personalised healthcare typically involves interdisciplinary innovations, such as combinations of engineering, physics, chemistry and biotech, offering solutions that 20 years ago would have sounded like science fiction.

For example, treatments now available include using a patient's cells to grow them a new blood vessel, organ, or customised implant to replace a part of a jawbone. Researchers at Nottingham Trent University have 3D printed realistic organs from scans of cancer patients so doctors can practice surgery to remove tumours from those individual patients.

A Swiss company has developed a way to take skin cells from a patient and then grow them in the lab to create a personalised skin graft, which should give better outcomes than conventional skin grafting.

What also marks out personalised healthcare as an exciting area is a rapid acclimatisation among consumers of the elements that require it to work: the monitoring and storing of health information, known as the "quantified self".

Millions of people are already willing users of personalised tracking of their health via

smartphones and wearables. Fitness watches have maintained their popularity and are becoming more advanced almost with every iteration.

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The latest Apple device monitors pulse and oxygen saturation and stores it in the cloud. And the COVID-19 pandemic has driven a boom in people buying thermometers and oximeters.

These developments show a direction of travel towards people being comfortable with devices that monitor them personally. It is not hard to see the ready adoption of devices that also, for example, send that information to their doctor.

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