The Doctor’s Office of 2050, What Can Medtech Expect?

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Through the pre-coffee haze of your morning ritual you notice a red dot blinking on the bathroom mirror that is fogged with shower steam, “oh dear” you think “I wonder what’s wrong.” You press the illuminated mirror and a message pops up letting you know your body temperature is elevated. A menu of options appears on your mirror, and you select ‘speak to health worker.’ Welcome to the doctor’s office of 2050: your home.

There’s no doubt that the route by which we access healthcare will change. Current levels of healthcare expenditure are unsustainable; the US spends the equivalent of 19% of the country’s GDP on healthcare, and even the UK’s comparably modest 10% is a number payors strive to reduce. Yet we continue to live longer and, with that, suffer more chronic diseases that cost more to treat; stretching already strained healthcare infrastructures to breaking point. Neither government nor individuals have a choice, the way we provide and access healthcare must change.

The struggling drug discovery pipelines and ever ballooning costs of R&D at pharmaceutical and biotechnology companies have become a familiar story, as have the initiatives and innovations proposed to combat it. If we are to assume that medicines will continue to be expensive and people will continue to need them, then where else can governments and insurers save money? In the infrastructure! In those large, expensive buildings and the plethora of staff required to run them – a staff base that is much broader than healthcare professionals. No one enjoys a visit to the hospital and the family doctor’s surgery is little better; there is still the waiting around, the abundance of sick people. By reducing the need for these facilities we reduce healthcare costs, but shutting down hospitals is, understandably, extremely unpopular. In contrast, reducing a patient’s need to visit a hospital or doctor’s office will always be popular. The medical technology industry is the vehicle that will enable the latter, which will in turn drive the prior.

Recent advances in technology mean that for the first time we are moving into a period when less face-to-face access to doctors doesn’t have to mean reduced quality of care. Connectivity, data processing and storage technology, combined

with advances in imaging, microfluidics, haptic feedback, robotics, and our growing knowledge base of biomarkers offer the potential of truly mobile healthcare. Remote monitoring, diagnosis and treatment doesn't mean reduced quality of care, it means effective mobile healthcare. Such technology puts the power back in the hands of the patient. It creates a level of triage that frees healthcare professionals to focus on patients where it is most needed.

The current shift of a primary healthcare centric provision will move even further to 'home' centric care. This will be facilitated by the already growing wellness industry that will mature as the convergence of consumer and medical brings forward products that diagnose and treat you, and your lifestyle, before you get sick. The rocket fuel required to accelerate this industry will have been provided through partnerships and acquisition by telecoms and IT companies. These companies will provide the sensing, networking and data aggregation platforms required to change your pedometer into part of your hypertension control system.

The concept of patient-led healthcare will be ubiquitous throughout the value chain. User driven design and innovation will be paramount to the successful uptake of new products as the patient, rather than the doctor, becomes the primary user. This will go further than usability and human factors in product design. Designing a product that's usable doesn't guarantee the device is used; it must also satisfy a need and add value to the patient. The truly forward thinking company will be exploiting technology platforms of social media and data aggregation to engage and mine large scale patient groups and their lifestyle and clinical data. This newly accessible resource will allow the medtech industry to leverage the patient and their data not only to inform product concepts, but to actually identify and create them.

We'll explore more aspects of the Doctor's Office 2050 in future posts and point you to the technologies that could allow your company to deliver the medtech products of the future.

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