Digital clones of real-life medical experts that give personalized advice and support on a vast range of medical issues around the globe – far-fetched? Not at all.

Medical avatars that look and sound like your own doctor are under development at the University of Southern California.¹ Virtual reality technology and artificial intelligence come together as an interactive and responsive virtual physician – one that maximizes quality time spent with you, in partnership with your regular physician or health professional.
Now is not the time to be thinking about how health care might benefit from digital technologies — that time has long passed. In fact, the important conversation around the future of health care is not about shifting to digital at all. It is about people.

The real force for change in health care is patient mediated — the power of the patient or consumer to engage and participate. A new health care ecosystem is arising from convergence between traditional and non-traditional players that blends health care expertise with network and platform capabilities. New pathways of health and wellness arise at the interface between the consumer and the system that transform the industry into one that is online, networked and participatory.

Participatory health — a radically different future

A significant catalyst for change is an engaged and participating patient or consumer who acts as an equal partner in their care. Market dynamics are shifting rapidly to the consumer as integrative platforms form ecosystems that disrupt both supply and demand with new ways of creating and consuming health care goods and services. Central to this is the deep and profound shift in the model of care toward participatory health.

Integrating participatory health as a pillar of the system, as part of the core business of health care, takes the industry into a radically different future. The digital revolution has changed what is possible in health care. Low-cost, fast mobile connectivity and smart devices redefine how consumers manage their health and engage with care systems. Sensor technologies and mobile solutions are reinventing how the health industry can connect and communicate with patients. In participatory health, it is the fusion of all these tools that builds an ecosystem and capabilities to deliver at scale.

The first paper in this Health reimagined series A new participatory health paradigm discusses how demand for health care can be reshaped by participation, strengthening an individual’s capabilities to manage their health status and lifestyle choices, foster prevention and wellness, and support chronic conditions in vastly different ways. In this second paper, we suggest that convergence or points of intersection between traditional players (providers, payers, life sciences and devices) and non-traditional new entrants (retailers, telecommunications and technology companies, entrepreneurs and venture capital investors) create the tools and platforms by which participatory health can be delivered. Exponentially developing technologies through integrative platforms delivers a suite of new offerings around well-being, remote care, medical imaging at home and the internet of things (IoT). Participation is the underlying premise as the notion of health transitions from reactive to proactive care systems focused on wellness, chronic care and population health management.

This paper discusses a model of industry transformation and three conditions necessary to achieve scale:

- Consumer participation through curation and navigation technologies that are the interface between the consumer and the health care system
- Data-fusion platforms, which are the glue that hold the system together
- Global aggregators or “orchestrators”2 that pull together a scalable ecosystem

We conclude with some thoughts around opportunities that emerge at the intersection of consumerism, technology and markets for those willing to explore beyond their traditional boundaries.
The challenge

The awkward truth is that, for the most part, the current reach of digital health technologies is restricted to pockets of activity globally, directed toward a specific condition, operational or administrative problem. In a fast-moving and early stage environment, adopting an incremental approach makes sense, picking the “battles to be won” by targeting outcomes that are amenable to action. Getting across the “last mile” to the hardest-to-reach consumers — whether they are in remote underserved areas or disinclined to engage in managing their health and wellness is a clear focus for disruptive innovators, health professionals, technologists and payers.

Emerging and developing economies may well take the lead, being less constrained by existing infrastructure and vested interests seeking to preserve the status quo. Delivering participatory health care and well-being at scale is immensely complex. What is not yet clear is how health care systems — either national, regional or local — will transition to incorporate or replace existing ways of doing business with participatory health. The case for change is being written today but, in an industry notoriously slow to change, this will be a deep-seated journey of transformation — for the system, for the professionals and for the consumer or patient.
Background

“One more of the same” can't resolve 21st-century health care problems

Future adoption of advanced technologies built upon networks or platforms that organize transactions and interactions is important for all economies – whether they be emerging and developing or developed. Economic, epidemiologic and demographic shifts mean that legacy systems of providing health care or “more of the same” are failing to deal with the many difficult problems facing 21st-century health care. Rising costs, consumer expectations, new technologies and increasing globalization place intense pressure on the health sector to align better with economic constraints. Long-established systems of primary, secondary and tertiary care are increasingly unsuited to deliver responses to challenges arising from aging populations and as the burden of disease shifts to chronic conditions such as diabetes, musculoskeletal disease and cardiovascular disease. Chronic conditions and increasing longevity extend the end-of-life cost burden. Growing middle classes in emerging/developing economies will bring increased demand through rising health consumption expectations and health-related outcomes of lifestyle changes. Moreover, how care is organized and delivered is being reshaped by changes in the broader environment, including self-determination, social and crowd source networks, and a cultural shift toward sharing and participation.

Population aging and a rising middle class push health systems toward participatory health

By 2050, 1 in 5 people globally will be aged 60+ years. Rapid population aging places increasing demands on health care systems and expenditure.

In some regions, around 25% of the population will be aged more than 60 years old by 2030. Improved longevity and larger numbers of the aging put pressure on health systems.

Overall, the middle class will grow from 1.8 billion (2009) to 4.9 billion (2030), bringing rising consumption expectations. Growth will be in Asia-Pacific, with two in three of the growing middle class located in this region by 2030.

Mobility and rapid telecommunications underpin the shift to integrated, digital health care systems.

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Source: UN World Population Aging 2015.

