

# Health reimaged

Extract from Megatrends 2015

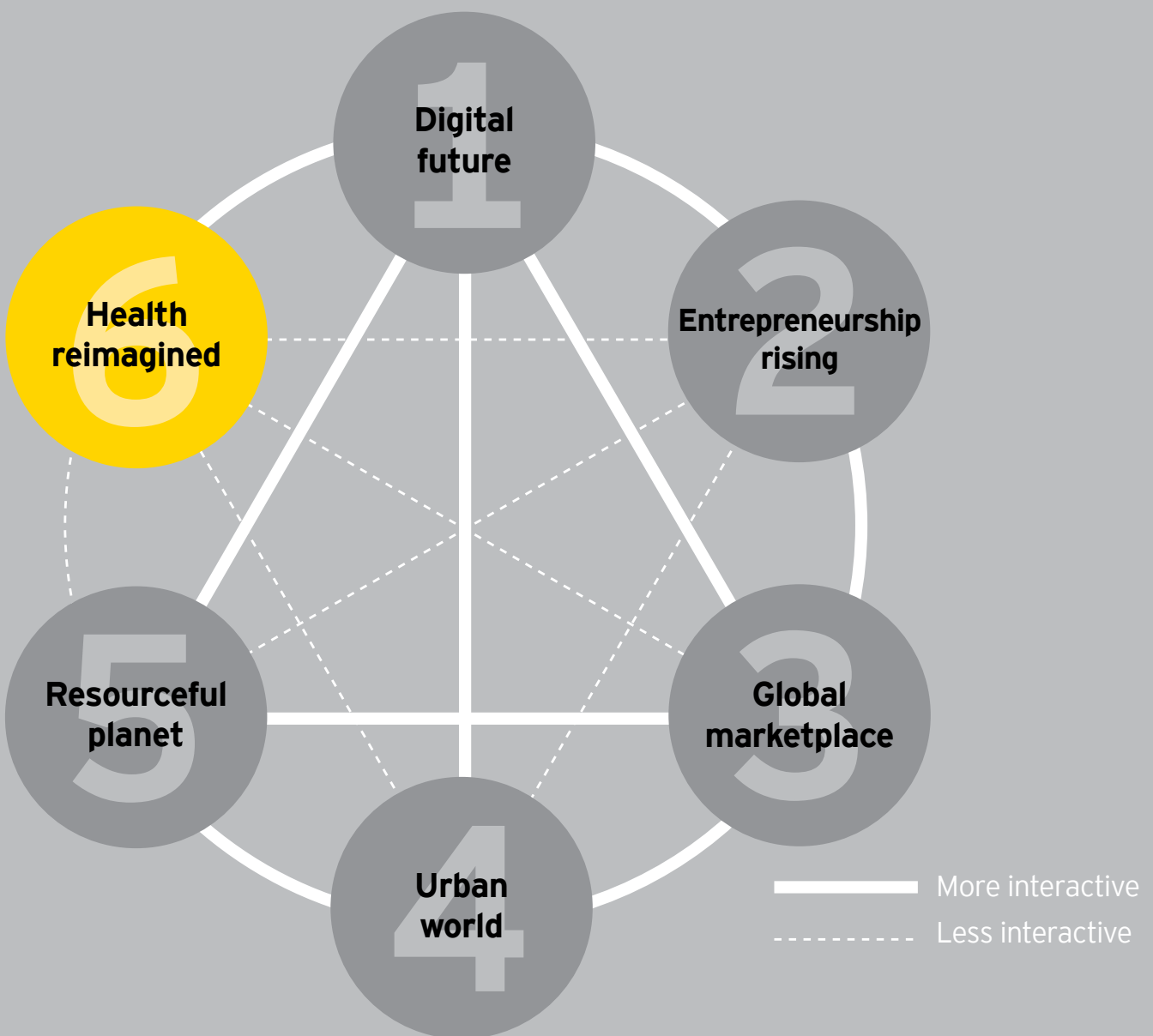
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# Health reimagined

Health care – which already accounts for 10% of global GDP – is embarking on a once-in-a-lifetime transformation. Health systems and players are under increasing cost pressure – driving them to seek more sustainable approaches, including incentives that emphasize value. These cost pressures are exacerbated by changing demographics, rising incomes in rapid-growth markets and an imminent chronic-disease epidemic. An explosion in big data and mobile health technologies is enabling real-time information creation and analysis. Companies beyond health care as traditionally defined are entering the fray, providing new sources of competition and partnering.

These trends are starting to drive a fundamentally different approach – moving beyond the delivery of health care (by traditional health care companies in traditional ways, i.e., “sick care”) to the management of health (by diverse sets of players, with more focus on healthy behaviors, prevention and real-time care). Success, in other words, demands that we reimagine our approach to health.

# Technology and demographics converge to drive a once-in-a-lifetime transformation

## 1. Cost, quality and access challenges will continue to spur health care reform initiatives

Health care systems across the globe are grappling with three goals: taming escalating costs, improving quality and outcomes, and expanding access.

Indeed, the reform programs being considered or actively implemented in so many markets are essentially attempts to reconcile often conflicting pressures imposed by these three imperatives. Payers and providers are implementing measures

to boost the efficiency of current systems. They are experimenting with new delivery and payment models based on outcomes and value. And they are increasing the transparency of information on quality, price and other metrics – enabling patients and others to make better decisions.

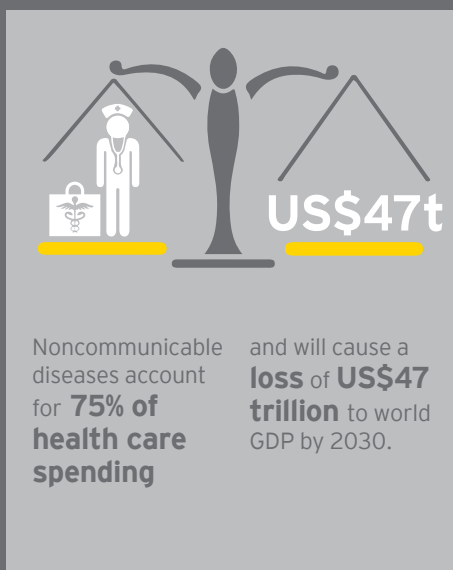
**Health care costs are an increasingly urgent issue everywhere.**



- US** – health care's share of GDP will increase from 17% in 2012 to 23% in 2023.
- Europe** – 13% of adults in France and 6% in the UK have serious problems in paying medical bills.
- India** – health care costs are a leading cause of poverty.



Sources: "NHE Fact Sheet," Centers for Medicare & Medicaid Services website, September 2014, [www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet.html](http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet.html); "Health Affairs Web First," The Common Wealth Survey 2013, November 2013; and Kamayani Bali-Mahabal, "Health Workers Central to Improved Health Outcomes in India," 9 April 2014, [www.ghets.org/2014/04/health-workers-central-improved-health-outcomes-india](http://www.ghets.org/2014/04/health-workers-central-improved-health-outcomes-india). Websites accessed 12 January 2015.



Source: *The Global Economic Burden of Non-communicable Diseases*, Harvard School of Public Health and World Economic Forum, September 2011.

## 2. Incidence of chronic disease will explode, requiring behavioral solutions

We are on the cusp of a global chronic disease epidemic. This chronic disease burden is projected to increase dramatically in the years ahead, thanks in part to aging populations in the West, Japan and China, where the number of people over the age of 60 will more than double between 2010 and 2030.<sup>1</sup>

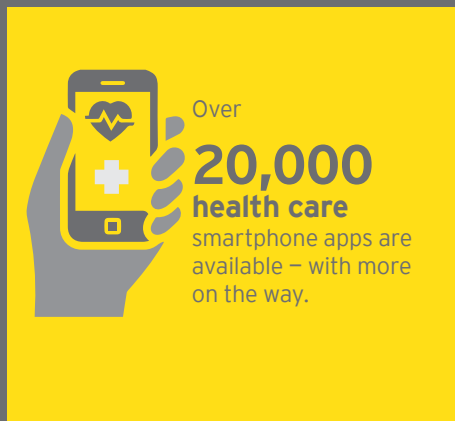
While chronic diseases were once largely present in more affluent countries, the number of chronically ill individuals across the globe will also swell due to increasing incomes, changed diets and increasingly

sedentary lifestyles in rapid-growth markets. Today, 80% of chronic disease deaths occur in low- and middle-income countries, up from just under 40% in 1990.<sup>2</sup> Since chronic diseases progress slowly and have a strong behavioral component, tackling them requires new approaches to driving desirable behavioral change. Areas for new behavioral approaches include tobacco use, harmful use of alcohol, physical inactivity and poor diet.

1. "World Population Prospects: The 2012 Revision," United Nations, Department of Economic and Social Affairs website, [esa.un.org/wpp](http://esa.un.org/wpp), accessed 12 January 2015.

2. *The Global Economic Burden of Non-communicable Diseases*, Harvard School of Public Health and World Economic Forum, September 2011.

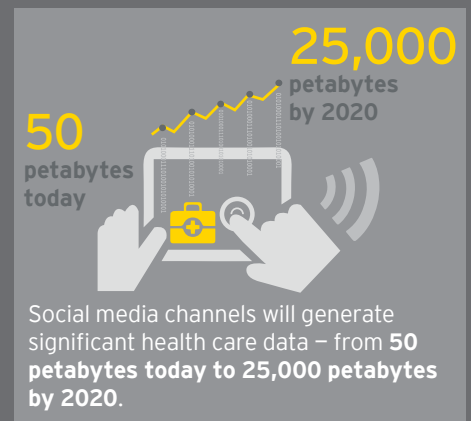
### 3. Health care will become more connected to daily life through the growth of mobile and social health solutions



Source: Robert J. Szczerba, *Why Mobile Health Technologies Haven't Taken Off (Yet)*, Forbes website, 16 July 2014, [www.forbes.com/sites/robertszczerba/2014/07/16/why-mobile-health-technologies-havent-taken-off-yet](http://www.forbes.com/sites/robertszczerba/2014/07/16/why-mobile-health-technologies-havent-taken-off-yet), accessed 12 January 2015.



Source: *Infiniti Research Limited report*, HIT Consultant, September 2014.



Source: *Care customization: applying big data to clinical analytics and life sciences*, Healthcare IT News, October 2013.

An explosion in mobile health technologies is empowering patients with more transparent information and more control over their health. Smartphone apps and wirelessly connected medical devices are creating real-time data and enabling real-time interventions.

Social media sites are also playing an increasingly important role, connecting patients and providers, and allowing them to interact and learn from each other in new ways.

The emerging field of wearable and implantable sensors promises to integrate

mobile health technologies even more seamlessly into our everyday lives. These technologies are transforming “health care” (delivered primarily in hospitals and clinics) into “health” (managed wherever the patient is).

### 4. Health care has entered the era of big data

Reams of information being generated by electronic health records, payer claims, pharmacy data, mobile health technologies and more offer enticing possibilities to utilize “big data” technologies in the service of health care. Many entities – from startups to consortiums to large firms – are actively integrating and analyzing these disparate streams of data to improve the efficiency of everything from drug R&D to care-coordination. Life sciences R&D will improve the sector’s productivity, using big

data analytics to recognize research failures more quickly, to design more streamlined clinical trials, and speed the discovery and approval of new medicines. The ability to build and analyze large repositories of genetic, phenotypic, prescribing, health outcomes, population and other kinds of data will be integral to the ultimate success of both predictive and preventive health care.



Source: Denise Amrich, “Healthcare analytics market to exceed \$10bn by 2017,” ZDNet, 31 March 2013, [www.zdnet.com/healthcare-analytics-market-to-exceed-10b-by-2017-7000013322](http://www.zdnet.com/healthcare-analytics-market-to-exceed-10b-by-2017-7000013322), accessed 12 January 2015.

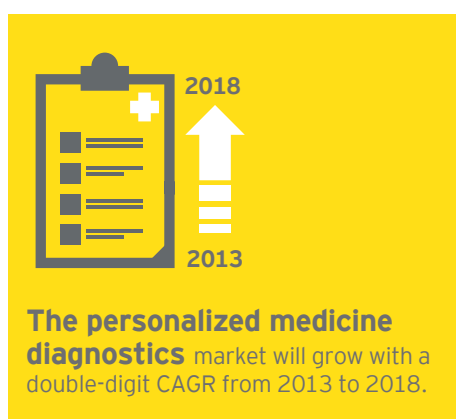
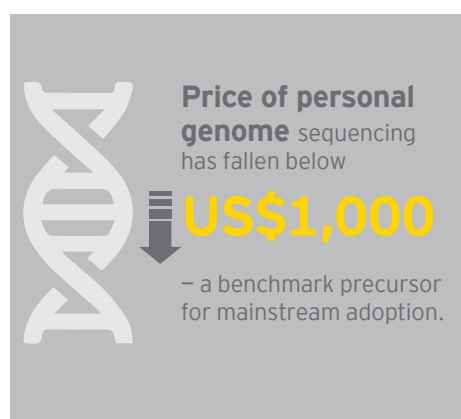
## 5. Genetic and genomic information is transforming drug development

The availability of genetic and genomic information (pharmacogenetics and pharmacogenomics) is helping to bring in sweeping changes in the development of new therapies. Genes and gene products (such as proteins) thought to be involved in specific disease mechanisms represent new

targets for intervention, driving promising new drug discovery programs. Gene expression profiling will help gain novel insights into drug-disease interactions, showing how the cells react to a particular treatments. Combined, these techniques will make major improvements in the

identification of new drug candidates. Pharmacogenetics will also reduce the number of new molecules that fail in clinical trials, thus reducing drug development costs.

## 6. Personalized medicine will come of age



Source: "Personalized Medicine Diagnostics Market and Forecast," RnRMarketResearch.com, July 2014.

At the clinical level, the long-awaited personalized medicine revolution is finally arriving. With the price of personal genome sequencing falling significantly, manufacturers are increasingly focused on personalized medicine approaches.

The high price of targeted therapeutics is poised to exacerbate the pressure on payers, while the anticipated increase in genomic data will create new opportunities, and challenges, for companies looking to gain access to, and make sense of, this information. The personalized medicine diagnostics market, for example, is expected to grow with a double-digit CAGR for the period of 2013 to 2018.<sup>3</sup>

## 7. Health care companies will increasingly compete with entrants from nontraditional fields

Companies from sectors once far removed from health care are entering the health business. Telecommunications firms are developing approaches to empower patients in managing their health. Information

technology companies are entering the fray to tackle the challenge of data analytics. Retailers and food manufacturers are experimenting with healthier foods and could play a role in guiding healthy

behaviors. These approaches create new opportunities for cross-sector partnering – but also raise the specter of disruption for mature health care incumbents.

3. "Personalized Medicine Diagnostics Market and Forecast", RnRMarketResearch.com, July 2014.

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