

# Evolution of life sciences in a post-pandemic ecosystem

The COVID-19 pandemic revealed strengths and weaknesses across the spectrum of life sciences. As the dust settles, lessons learned from the crisis are accelerating a transformation process that was already under way.

Especially in the earlier phases of lockdown, life sciences supply chains came under enormous pressure as consumers stockpiled and governments sought to protect national interests. Beyond immediate shortages in personal protective equipment and bottlenecks for certain drugs, COVID-19 also disrupted product pipelines; willingness to take part in studies nosedived, many clinical trials were cancelled amid new social distancing rules, and resources were reallocated.

Pre-crisis, the life sciences ecosystem was already in a state of flux, with new alliances emerging as industry outsiders and established multinationals alike recognized the potential of collaboration. As we emerge into a post-pandemic era, life sciences players have a unique chance to revise their business models and approaches. This article explores three key questions and considers the role megatrends could play in creating an ecosystem that safeguards the health and wellbeing of patients and consumers, while securing a sustainable future for participants in the life sciences ecosystem.

## The value of health

What's wellbeing worth?



### The value of health

Around the world, government and private spending on healthcare is increasing steadily, with annual healthcare spending per capita averaging USD 3,994 in 2018<sup>1</sup>. Aging populations in the developed world are associated with higher healthcare costs, while emerging economies are building more sophisticated systems. But shifting attitudes could also play a role in this development, as an increased awareness of health, coupled with higher expectations as to the standard of care, mean that people seek healthcare services more frequently. In Switzerland, for example, the percentage of people visiting a doctor 5 to 9 times over the course of the year jumped from 10.7% in 2002 to 17.4% in 2017<sup>2</sup>.



### Growing personal responsibility for health

Growth in the over-the-counter (OTC) drugs market also suggests people are taking more direct responsibility for health. Worth an estimated USD 114 billion globally in 2020, OTC sales are projected to grow annually by 4.6% (CAGR)<sup>3</sup> over the next five years. Today's generations of consumers are comfortable seeking information independently – on websites or social media. To compete with (often more) successful private labels, pharmaceutical companies need to target their communication to reach

these valuable consumers more effectively. Applying new analytics, pharma companies can mine information from public dialogue on social media or internet forums and align their marketing strategies accordingly. Higher dependence on data also applies to prescription drugs, where highly personalized, technology-intensive and more expensive products are entering the market, e.g. in innovative cancer therapies.

At a time when personal responsibility for health is growing, leading healthcare centers are already integrating patients in the care process. As the KPMG case study (see box) shows, a participatory approach can have a significant positive impact on outcomes.

The cost of health will continue to rise – but will willingness to spend on it grow too? Depending on how the world's economies bounce back post-COVID-19, cost could become a sticking point for both private and public payers. This is especially true given that we may be close to natural limits on public funding. The WHO's 2019 monitoring report on universal healthcare shows a steady improvement in investment globally from 2000 to 2017; but progress has slowed since 2010. To maintain the trajectory, especially in light of evolving needs, governments will need to invest heavily in broader and better targeted health system capacities. Disruptive new market entrants could play a key role in tackling these challenges – especially if established players team up with innovative newcomers to deliver new value propositions.

## Embracing disruption

How can life sciences collaborate, not compete, with new market entrants?



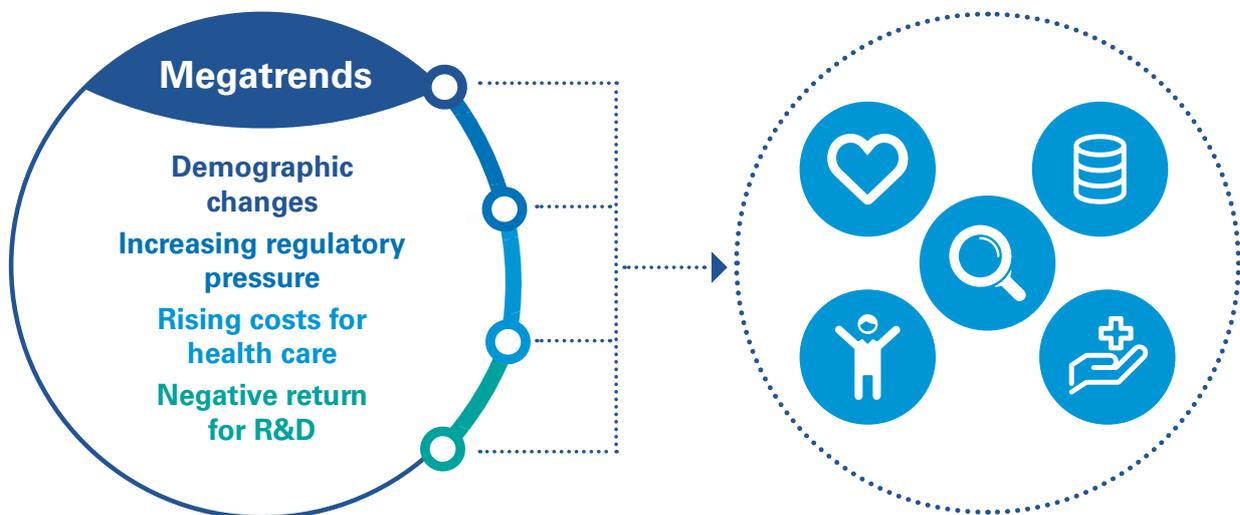
### Battle for data

The various life sciences have much to gain from advances in technology and data usage. But they're not alone. New market entrants are shaking up health services. From in-store testing services at supermarkets, health apps and telemedicine to online pharmacies and cloud-compatible wearables, a host of new business models have emerged rapidly.



### New and unexpected competitors

As we move into the age of personalized medicine, pharmaceutical companies need to embrace collaboration as part of the picture for participative care. Case in point: non-invasive wearables for diabetics. The latest innovations measure blood glucose levels continuously and painlessly, alerting patients to the need to take medication and informing them of the precise dosage. Data can also be sent directly to the patient's physician to allow long-term monitoring. Another example is the collaboration between Zurich University Hospital and Roche: innovative molecular tumor profiling uses a minimum of tissue for maximum insights. These examples underline why it's so important for all industry players to work together to secure the best possible outcomes.



<sup>1</sup> OECD average

<sup>2</sup> Federal Statistical Office, 2016 (most recently available data)

<sup>3</sup> <https://www.statista.com/>



Amid the euphoria at the opportunities of digitalization, patients must be placed at the center of any company's data strategy. It will be interesting to see how public attitudes to privacy develop in the post-pandemic world. While health data is traditionally protected with the highest level of security, public acceptance of contact tracing apps during the COVID-19 crisis point to a greater willingness to share data where the perceived benefits outweigh privacy concerns.

### **P for performance**

How will predictability, prevention, precision and personalization transform the life sciences ecosystem?



#### **The four P's of well-being: Predictability, prevention, precision and personalization**

Digital transformation changes not only how life sciences companies operate, but also what they aim to achieve. Better data access and use unlocks hidden insights and sets a new pace in research and development. During the pandemic, the University of Basel was involved in a global "Virtual Pharmacy" project to screen almost a billion substances as potential treatments for COVID-19.

Analyzing large cohorts enables us to predict future patterns with unprecedented accuracy and speed. At the individual level, increasingly accurate and personal genomic data is an exciting way to predict, prevent and treat illnesses. Collaboration and communication between actors in the life sciences and healthcare ecosystem is essential in turning those insights into better quality of life.

Armed with the right data, physicians and pharmaceutical companies can target their offering to get the best possible outcomes for patients. And it's increasingly outcomes that count. In an environment of intense cost pressure, payers are embracing outcome-based remuneration models (pay-for-performance). If companies are prepared to share data or collaborate in other ways, product pipelines will be much quicker. Swiss universities and life sciences companies are also contributing to vaccine development, e.g. the joint project between the University of Bern and Swiss biotech firm Saiba. Initiatives like these show how collaborative impact can exceed the simple combined potential of two expert organizations.

The overall burden on healthcare resources could be massively reduced in a system focusing on predictability, prevention, precision and personalization. Investment will still be necessary, but we'll see a shift in spending towards predictive analytics, personalized treatments and preventative approaches. Combined with the trend towards greater individual responsibility for health, today's healthcare landscape could become unrecognizable.

Pharmacies, doctors' offices and hospitals will no longer be visited by a steady stream of ad hoc patients if conditions are proactively predicted, managed and treated. Direct cloud delivery of healthcare data from wearables could also cut the need for in-person visits. Telemedicine spiked during the COVID-19 crisis, when non-essential medical interventions were postponed. If this trend continues, the need for patients to report in person at a hospital or other facility will decrease even further. A more participatory care approach could also accelerate trends toward treatment at home as providers embrace new cost-efficient settings for medical services.

## A new normal

### The next phase for life sciences

The COVID-19 crisis has brought home the value of health for many people. Besides ensuring basic healthcare provision, pharma companies and healthcare providers should invest in solutions that add value for patients and consumers. If the first half of 2020 has taught us anything, it's that innovation, communication and collaboration are vital in safeguarding resilience. This is true not only in the pandemic context, but also for the future of the life sciences healthcare ecosystem.

# Treat-to-Target

## Best practice approach

Rheumatoid arthritis (RA) is a chronic inflammatory disease. Caused by a combination of genetic and environmental factors, the condition has a severe impact in terms of disability, comorbidity and mortality. Effective diagnosis, treatment and management are essential to limit the health, financial and lifestyle impacts of the disease.

Sanofi Genzyme commissioned KPMG to develop a set of guiding principles for the management of RA and comorbidities in Europe. KPMG identified a treat-to-target approach as the leading strategy for overall management of RA. This holistic, patient-centered approach relies on collaboration between rheumatologists and other physicians, nursing staff, therapists and patients.



**1.**

Share  
decision-making



**2.**

Maximize quality  
of life



**3.**

Reduce  
inflammation



**4.**

Treat to optimize  
outcomes

## More details are available online:

<https://home.kpmg/uk/en/home/insights/2017/01/improving-quality-of-care.html>