

Nano Science, Technology and Industry Scoreboard

Soaring Healthtech Investment is More than Just a Shot in the Arm

2021-04-06

Healthcare technology investment soared 47% last year, to a new high of \$51bn in 2020. Venture capital (VC) fundraising was particularly strong across the sector with \$17bn available in new venture funds focused on healthcare.

Nanomedicine investment alone grew by x2.5 in the last five years, according to Pitchbook. The investment monitoring platform also reported that 2020's global funding for digital health and telemedicine rose 45% over the previous year, while equity funding to digital health companies hit an all-time high last year, reaching \$26.5 billion.

Rather than a COVID-19 driven 'shot in the arm', such growth supports a long-term healthcare industry projection that it will be worth over \$10 trillion by 2022.

Since Jan 2021 £3.79bn has been invested into tech companies delivering disruptive innovations specifically related to pandemic protection and preparedness, but also having wider applications and impact for global health – a trend set to continue for the next 10 years, now being called the 'COVID decade'.

And whilst the world needs this major boost to avoid being caught out by future pandemics, it is also creating new opportunities to democratise and decentralise healthcare through early detection diagnostics, precision medicine and early intervention therapies that will transform global health.

This will create a more sustainable point of care-based healthcare ecosystem that is more affordable and available to everyone, say, health experts.

The message is already being picked up. A recent report by tech market analysis specialists CB Insights stated that healthcare start-ups attracted a record \$80.6 billion in equity funding in 2020, and general investment in the sector grew in the three consecutive quarters after

the outbreak, helping to drive intense innovation.

Some experts suggest the sector has advanced 10 years in just six months, with new datadriven technologies and digitisation practices being used more, while vaccines have developed at unprecedented speed; the research and rollout for the Pfizer and AstraZeneca COVID-19 vaccines were the fastest in history.

Testing has improved, too; the largest manufacturer of lateral flow tests, Innova medical group, has produced LFTs that is at least 99.99% specific while taking just 30 minutes to show results. These simple tests use colloidal gold nanoparticles and are now being manufactured and supplied to countries around the world, particularly by the <u>UK</u>, which has built a world-class testing and vaccine programme.

Harvard professor Dr. Michael Mina has been a major advocate of frequent mass testing using LFTs in the community and workplace to stop the spread of virus transmission and said: "An over-the-counter rapid test is a tremendous advance. It means that some people will have ready access to a much-needed test to help know their status, without having to go through a physician."

A world-first new national health agency is also launching in the <u>UK</u> in April 2021, focusing on prevention of and response to external health threats such as infectious diseases.

The <u>UK</u> Health Security Agency (UKHSA) will protect against future health threats and take over the COVID-19 pandemic response from Public Health England (PHE) and NHS Test and Trace. This includes harnessing the data analytics and genomic surveillance capabilities of both organisations, along with scale testing and contract tracing capability.

But far more is needed to avoid repetition of COVID-19's devastation, which has caused 2.74m deaths to date, plus severe financial, health, and social impacts.

An estimated \$5.6 trillion in global GDP has been lost, and the World Bank states the global recession is the deepest since WW2 and twice the depth of the 2008 financial crash; and mental health problems, unemployment, and poverty have all increased, while many people with underlying, life-threatening diseases have gone undiagnosed.

And the world is still alarmingly unprepared for another outbreak. It's been reported that two new viruses have spilled over to human hosts every year for the last century, while the Royal Society of Chemistry claims only 10 of 220 viruses known to infect humans have clinically approved antiviral drugs available to combat them.

We now know that the current Coronavirus was transmitted into humans through bats and other animals, according to the latest World Health Organisation report. This will continue to happen, so investment into technologies that analyse these trends is essential.

Avoidance of future pandemics also needs fast support for innovation, according to Executive Chair of Scottish Health Innovations Ltd, Graham Watson, who forecasts a future where healthcare innovation, rapid development, and early adoption become routine:

"If modern healthcare innovation is to continue to grow at pace post-pandemic, then having an 'optimal investment ecosystem' is vital to encouraging its advancement."

Despite rising investment and innovation, processes must also evolve to keep pace with healthcare. Leading medical journal The Lancet showed how a 2020 assessment from the Global Preparedness Monitoring Board found gaps in the pre-COVID R&D preparedness ecosystem.

The report exposed a need for capabilities to ensure rapid manufacturing and distribution during a pandemic. Waiting time also needed to be cut so that innovators and scientists could develop new products quickly, an approach proving highly attractive to investment funds.

The Lancet stated: "A true, end-to-end R&D ecosystem must deliver needed products to people as rapidly as possible, and at scale in a globally fair and equitable fashion."

Healthcare investments may not be the only way to get ahead of the next outbreak. Ending deforestation and the wildlife trade would protect us from animal diseases transferring to humans. Investing to prevent these acts could stop outbreaks in the first place.

Paul Sheedy, co-founder of the not-for-profit World Nano Foundation, advocates continued investment into nanotechnology towards better healthcare and pandemic

protection: "Healthcare innovation is more exciting than ever, with new technologies and techniques being developed and improving constantly. Increased investment into healthcare during COVID-19 has been outstanding but must be maintained.

"2.74m people to date have lost their lives during this pandemic, global economies have entered recession, unemployment and poverty have risen substantially, suicides and mental health cases are increasing, and there are fears many people have gone undiagnosed with life-threatening diseases because of COVID protocol.

"Continued, efficient investment where innovators can access critical capital at a faster rate is crucial to developing healthcare innovations that can prevent and combat future pandemics."

Read the original article on GHP News.