

Investing in the Technologies Driving Change in Healthcare

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Key points

- Digital delivery of healthcare is driven by increasing demand, rising financial burden of healthcare, declining healthcare workforce, changes in regulation, and consumerisation.
- There has been a significant increase in investment into emerging technology driven healthcare companies.
- Overcoming challenges to growth is required to realise the full potential of the technologies transforming healthcare.

Trends in digital health

The COVID-19 pandemic has accelerated the digital delivery of healthcare by translating technology platforms across biotech, medtech, and digital health. There is increasing demand for digital health, with ageing populations and chronic disease burden driving demand for services. Healthcare costs are rising faster than our ability to pay, and a declining healthcare workforce is causing a brain drain driving a necessity to achieve more with fewer people. These trends highlight the opportunity of digital models of care and new legislation, regulation, and payer reimbursement, has further created opportunities for early entrants. We are witnessing a consumer shift as spending on digital health solutions are focused on convenience, prevention, and choice.

Investment trends

Public and private providers are appreciating the financial incentives of the digital first approach and using data to enhance preventive care. There has been a significant increase in investment funding in emerging healthcare companies using

technological solutions around the world.ⁱ Specifically, trends include deep tech, virtual care, medtech, drug research and development, women's health, and mental health. The highest funded value propositions in the first half of 2021 include research and development, on demand healthcare, fitness and wellness, treatment of disease, and consumer health information.ⁱⁱ Highest funded clinical indications include mental health, cardiovascular disease, diabetes, primary care, and substance use disorder.ⁱⁱ

Investment capital

Funding into digital health is increasing and, in the U.S., the first half of 2021 saw more investment capital than that of the full year in 2020. The first half of 2021 closed with \$14.7 billion invested across 372 U.S. digital health companies.ⁱⁱ Investments are both private and public with acquisitions from public companies as well as the increasingly popularity of the Special Purpose Acquisition Company (SPAC) structure. In 2020, 7 digital health companies exited to the public markets.ⁱⁱ In the first half of 2021, this was already

exceeded with 11 exits, and acquisitions averaged 22 each month, compared to 12 in 2020.ⁱⁱ

Challenges

Healthcare challenges are best understood by those with direct experience of patient care. However, they frequently have restricted opportunity to develop and fund solutions to the problems they face. Programmes dedicated to encouraging clinical entrepreneurs are growing, with the UK's NHS Clinical Entrepreneur Programme forming the largest entrepreneurial workforce development programme globally. Untapped innovation in academic and clinical settings arises from lack of trust and understanding of the incentives driving commercial partners. Investment has started to flow into these untapped networks. However, while there are many early-stage innovative technologies, many companies find it difficult to scale where they can be adopted into healthcare systems. For such companies to grow, they need to find appropriate payment models, for example generating revenue from insurers and other healthcare payers. In addition, regulatory hurdles also present a challenge. Established and sector focused investors can support by helping founders to navigate the regulatory landscape and identify distribution partners.

The earlier a company is in its growth trajectory, the riskier it is to invest in it,

REFERENCES

ⁱ Tyrrell CSB, Allen JLY, Gkrania-Klotsas E. Influenza: epidemiology and hospital management. *Medicine* 2021; 49, 12:797-804. ISSN 1357-3039. <https://doi.org/10.1016/j.mpmed.2021.09.015>

ⁱⁱ Krasniansky A, Zweig M, Evans B. H1 2021 digital health funding: Another blockbuster year...in six

therefore, strategic incentives are needed to support early-stage investments. This comes from strategic distribution partners and/or governmental research and development tax incentives and grant funding.

The use of technology in healthcare presents additional challenges around data protection, ownership, interoperability, and fragmentation. In addition, training healthcare professionals for adoption of digital technologies. These challenges may be overcome by healthcare systems with support on global collaboration from organisations such as the United Nations and World Health Organization. This includes the adoption of the Global Strategy on Digital Health 2020-2025,ⁱⁱⁱ as there exist huge opportunities to increase access and reduce costs in the digital delivery of healthcare.

Conclusion

Technology is shaping the delivery of healthcare with digital health becoming the new model for the future of care delivery. The new wave of technological growth faces multiple challenges which need to be addressed to properly harness the opportunities provided by investing in the technologies driving change in healthcare. The use of digital technologies in healthcare systems is increasing access, reducing cost, and improving quality of care.

months. *RockHealth.Org*. <https://rockhealth.com/insights/h1-2021-digital-health-funding-another-blockbuster-year-in-six-months/>

ⁱⁱⁱ World Health Organization. Global strategy on digital health 2020-2025. *World Health Organization* 2021. ISBN 978-92-4-002092-4. <https://apps.who.int/iris/bitstream/handle/10665/344249/9789240020924-eng.pdf>