

OPPORTUNITY #19

WHAT IF WE HAD IMMEDIATE ACCESS TO CRITICAL MEDICINES AND SUPPLEMENTS?

HOME-PRINTED REMEDIES

Home nutrition and medicine machines enable people to optimise their health by continuously assessing key biomarkers and printing out personalised drugs and supplements as required



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WHY IT MATTERS TODAY

Half of the world's population do not have access to essential health services¹⁸⁶ and nearly 2 billion people have limited access to basic medicines.¹⁸⁷ For those who do have access, the average person aged 65 and over takes around seven drugs a day.¹⁸⁸

Research shows that almost all biopharmaceutical executives agree that the future of healthcare will be people-driven.¹⁸⁹ Individuals will increasingly manage their own health. The nature of healthcare will also change to become preventive, personalised, digital, integrated into daily life and enabled by new regulatory, organisational and business models.¹⁹⁰

Precision medicine involves tailoring treatment to the person, taking into account their genetic and biological make-up as well as how and where they live.¹⁹¹ The precision medicine market is expected to be worth \$126.14 billion by 2025, growing at 1.25% per year.¹⁹² The shift is expected to lead to cost savings in drug development of 17%, leading to a potential annual saving of \$26 billion for the pharmaceutical industry worldwide.¹⁹³

SECTORS

AGRICULTURE & FOOD · ADVANCED MATERIALS & BIOTECHNOLOGY · HEALTH & HEALTHCARE · MANUFACTURING



THE OPPORTUNITY TOMORROW

Advances in non-invasive monitoring of people – for example, for protein markers and microbiome indicators – can combine with new solutions in on-demand drug production to make health treatment more home-based and personalised.

Home nutrition and medicine machines can enable people to optimise their health as data analysis from home-based monitoring – in combination with the person's DNA sequence – detects needs for medicines or nutritional supplements. With 3D-printed drugs, home-based machines will enable people to produce their own medicines according to the prescriptions generated.¹⁹⁴

This enables progress in remote diagnosis and treatment – an emerging sector that generated \$40 billion in 2020 and is projected to grow more than ten-fold by 2030 at an annual growth rate of 26% from 2021 to 2030.¹⁹⁵ This includes the pharmaceutical industry's growing focus on producing home equipment devices and the raw materials to supply them.

BENEFITS

Home-based systems can help prevent common conditions or enable them to be diagnosed and treated at an early stage. Improved nutrition and early intervention reduce the need for primary care visits, while constant monitoring provides early warning of infectious disease risks. Telemedicine also provides easier access to professionals and diagnosis.

RISKS

Inequalities in access to the technology can risk widening health gaps, while increased reliance on automated diagnosis and treatment solutions increases vulnerability to accidental errors. Mental health could be affected as ailments are not resolved and people do not feel better.