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FUTURE OF HEALTH CARE

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1 Future Of Healthcare

1.1 Introduction

The future of healthcare is shaping up in front of our very eyes with advances in digital healthcare technologies, such as artificial intelligence, VR/AR, 3D-printing, robotics or nanotechnology. We have to familiarize with the latest developments in order to be able to control technology and not the other way around. The future of healthcare lies in working hand-in-hand with technology and healthcare workers have to embrace emerging healthcare technologies in order to stay relevant in the coming years.

1.2 Personal Healthcare

Already, the assumptions of mass production are changing. For example, today's 3D printers are capable of making objects of any shape; they are slightly less efficient than standard mass production, but the costs of custom objects of certain sorts has been lowered significantly. It is now possible to custom make titanium implants the right shape and size to fit. Going further, it is widely envisaged that custom drugs will be manufactured, customized to the patient's disease and genetic makeup. While this seems to be enormously beneficial to patients, there are dangers. For example, a customized drug may be very effective, but its side effects will be unique to the patient too, and therefore harder to diagnose and manage. Personal healthcare has an interesting technological imperative. If we can personalize healthcare, we get population-sized markets: instead of selling to clinicians, manufacturers can sell to individuals – a market 1000s of times larger.

1.3 Technology that will shape The Future of Healthcare :

Medicine will advance more in the next ten years than it did in the last 100 years. The future of healthcare is shaping up in front of our very eyes with advances in digital healthcare technologies, including 3D printing, Remote diagnosis, Wearables, Electroceuticals, Digital therapeutics, Virtual Reality(VR), and Augmented Reality, Artificial Intelligence(AI), Computer vision, etc. Health-tech startups are incorporate these digital technologies in bringing the future to the present and help millions of patients. The most significant disruption in healthcare is the convergence of these multiple technologies, which exponentially amplifies the impact.

1.3.1 Artificial Intelligence and Machine Learning

Industry players are watching with interest as AI/ML-reliant healthcare applications emerge. Nearly all payer respondents rank AI/ML gains as either a high or moderate organizational priority. Meanwhile, most clinicians 62 percentage haven't yet begun working with AI/ML tools but are interested in doing so.

1.3.2 3D Printing

Of all the technologies in the digital age, 3D printing is arguably one of the most revolutionary. This technology came into prominence during the Covid pandemic, with critical parts of ventilators being 3D printed. Both outside and inside the body, 3D printing has the potential to disrupt medical technology radically, including dental implants, prostheses, hearing aid molds, surgical guides, etc. We can now print everything from bio tissues to blood vessels and even medicine tablets. The wearable devices and diagnostic equipment developed by NeuroEquilibrium are 3D printed to allow for rapid prototyping and production.

1.3.3 Virtual Reality(VR)

VR is now increasingly used in the medical field to diagnose and treat neurological conditions and mental disorders. VR is also being used to train future surgeons and for practicing surgeons to develop improved surgical techniques.

1.4 Conclusion

Individually, none of these trends are themselves transformation-al and it is unclear which will become dominant in the future, nor what the effects will be on different sections of the community, particularly minority groups. However, collectively, they do provide some insights into our future care system, in which there is likely to be a better understanding of health and wellbeing, shared responsibility for health, mobilised civic engagement, and innovative models of care. At the very least they suggest that, if we're going to address the seemingly intractable health problems of today, we will need to think much more broadly and creatively than we have before.