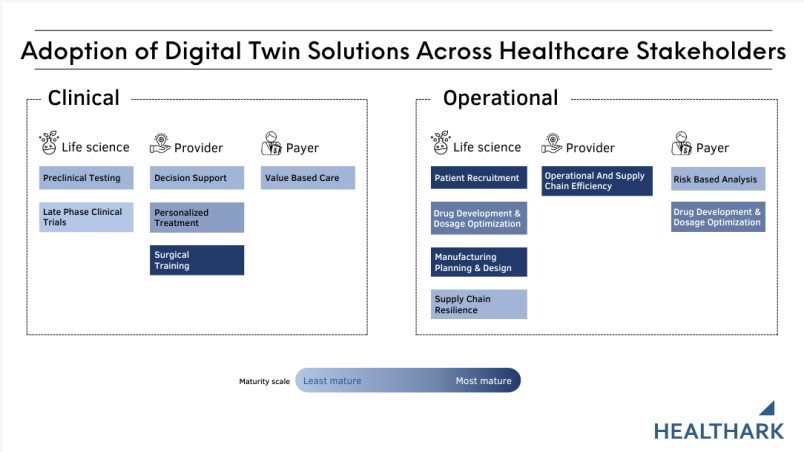
Readiness of Digital Twins to Impact Healthcare

Life sciences companies are boosting their adoption of digital twins, and this positively impacts the companies as well as the payers and providers



Adoption and applications of Digital Twin in healthcare

AHMEDABAD, GUJARAT, INDIA, November 25, 2022 / EINPresswire.com/ -- According to the Digital Twins: The Game Changers In Healthcare Research whitepaper released by Healthark Insights the digital twin market across industries is currently estimated to be over USD $3.0 billion and is expected to grow at a CAGR of 58% to reach the projected value of UDS $48.2 billion by 2026. Digital Twins are more than just a blueprint or schematic, these are the living dynamic digital versions of a product, process or a person. There are three core components for creating a digital twin, which culminate in an intuitive physical interface -

i. Data
ii. IoT sensors
iii. AI and extended reality (ER)

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> *Dr. Purav Gandhi*

Digital simulation has paved the way for better business decisions by predicting problems, providing early warnings, preventing downtime, developing new opportunities, and even planning better products in the future at lower costs. The report defines a framework and comprehensively talks about the impact and adoption levels of digital twins across healthcare stakeholders i.e. payor, provider and life sciences, both from a clinical and operational perspective.

1. Applications in Life Science

1.a. Impact on clinical functions
In preclinical testing and late phase clinical trials, digital twins improve the understanding of comparative biology between the animal and the human model in the former and help in understanding the correlation between biomarkers and clinical outcomes in the latter.

1.b. Impact on operational functions
Digital twins enhance patient recruitment by addressing the bottlenecks of clinical trials like reducing the recruitment time. They also enhance drug development and dosage optimization by making the drugs and therapies personalized and more efficient. Furthermore, digital twins aid in reducing the lead time wastage and cost at the time of manufacturing and ensures the drug availability till the last mile for better supply chain functions.

2. Applications in healthcare provider workflow

2.a. Impact on clinical functions
Due to increased data sources and ability to gather more medical insights by the twin, the providers are now well equipped to counsel a personalized treatment plan more time and cost effectively. Digital twins will also be eminent in enhancing surgical training for residents, by allowing for simulated practice - a 360-degree view of the heart!

2.b. Impact on operational functions
Digital twins will streamline operations of care units, multiple departments, labs, and an entire hospital, enabling the healthcare providers to be more predictive of the clinical workflow and patient flow to deliver effective operations and care.

3. Applications in payor workflow

3.a. Impact on clinical functions
Digital twins will have a quantifiable impact in the value-based care segment, helping the payors in assessing the care effectiveness.

3.b. Impact on operational functions
With respect to risk based analysis, the digital twin paradigm will be unparalleled in not only acquiring the pure data, but also in running the entire risk management process in real-time, making the insurance companies examine optimum premium charges and claim likelihood. Moreover, the front line employees of insurance companies now communicate with patients better as the digital twins reduce call handling time and increase Net promoter score.

What does the future hold?
Digital twins are a step towards a highly advanced digital revolution with unprecedented

efficiencies to determine best treatment and care delivery. With more companies maturing their adoption strategies to stay ahead of the curve, they will continue to strengthen their personalized and preventive healthcare solutions. The stakeholders involved are expected to invest in relevant technologies, develop digital communities through right partnerships, build suitable infrastructure, and successfully navigate regulatory changes.

Digital twin intervention in healthcare has an immense potential to provide meaningful insights about lifestyle, psychological state, socio-demographic and environment of a given entity, thereby achieving precision health!

About Healthark Insights
Healthark insights is a global management consulting firm developed by a team of experts from diverse fields such as consulting, pharma, medicine, medical devices, digital health, public health, and management with a common vision to cater to the healthcare and life sciences industry, along with a relentless focus on delivering executable solutions.

Healthark Insights team helps customers make critical decisions every day through expertise that combines deep domain knowledge, rigorous research, and analysis, understanding of markets, technology, and experience. With the right experience and expertise, the team not only provides insights but also works closely with clients to execute the strategy that they have helped develop.

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