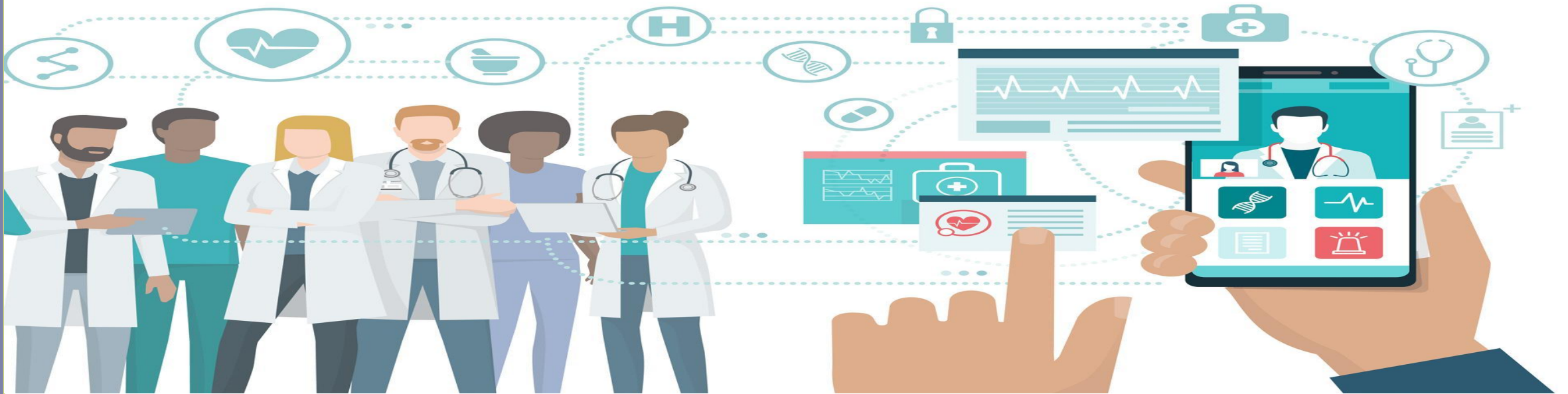


Healthcare digital transformation



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Agenda

***Market
overview***

Action plan

E-Retailing

***Marketing on
social Media
sites***

***Pharmacy
Site
Developmen
t***

***Increase
Pharmacies
Sales***

References

Introduction

Today digital healthcare technology promotes numerous changes in society and in the healthcare field in particular. These are the most popular technologies that are used to enhance the medical facilities and the industry in general:

- 1. Artificial Intelligence (has a great potential for data analysis thus providing better diagnosis).*
- 2. Augmented Reality (helps with the enhancement of efficiency and cost optimization of surgeries).*
- 3. Cloud Computing (enables storage and sharing of data across platforms).*
- 4. Blockchain technology (provides a chance for other doctors to see a patient's medical history and continue the treatment).*
- 5. Lot (wearable devices and supporting apps collect real-time data that could help doctors to have the full image of the patient's state; these data could also be analyzed and provide useful insights for numerous researches).*

The Healthcare field is only taking the first steps into the direction of digital transformation. Thanks to the available digital healthcare technology that is constantly enhancing and upgrading, we might see a new image of healthcare in the upcoming years, more efficient and almost flawless.

Recent findings show that AI can slash early drug discovery timelines by four years against the industry average, and generate cost savings of 60 percent. Overall, AI is predicted to bring \$150 billion dollars in annual savings for the US healthcare economy by 2026. Startups are already jumping on this opportunity; the number of active AI startups has increased 14-fold since 2000.

These numbers alone should be enough to convince any CEO looking to usher their health organization into

Market overview



Unfortunately , the healthcare and pharmaceutical industries have lagged behind when it comes to implementing digital strategies.

In a recent survey , only seven percent of healthcare and pharmaceutical companies said they had gone digital , compared to fifteen percent of companies in other industries.

Why digital transformation ?!



Every industry needs to adapt to current times , technology is constantly evolving and businesses need to catch up and then keep up with the times . Organizations responsible for providing health services (pharmacies and hospitails) is constantly innovating , from telemedicine to the use of RPA to enhance the patient experience. Thanks to innovative technology , patients undergo enhanced treatment with the help of virtual reality , wearable devices and much more.

Top Benefits Of Digital Transformation In Healthcare

1 - Better Services for Patients

2 - Better Analysis

3 - Better Organization

3 - *Better Organization*

**4 - *Better Time
Management***

**5 - *Better Environment
for Doctors***

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Action plan



- 1) The rise of on-demand healthcare.*
- 2) The importance of big data in healthcare.*
- 3) Treating patients with virtual reality.*
- 4) The growth of wearable medical devices.*
- 5) Predictive healthcare.*
- 6) The wonders of artificial intelligence.*
- 7) Blockchain and the promise of better electronic health records.*

The rise of on-demand healthcare (why patients want healthcare on their own schedule)



When you think of 'on-demand,' you think of consumers who want things at their own convenience, on their own time, and wherever they happen to be. The healthcare industry is entering the era of digital innovation, as patients seek on-demand healthcare because of their busy schedules. Mobile is especially important when considering content marketing.

People have simply become far more mobile in the past decade. Mobility is the name of the game, and recent statistics show that more than 50% of all web browsing in the world occurs on mobile devices as of 2018 (to be exact, 52%).

The importance of big data in healthcare

Big data aggregates information about a business through formats such as social media, ecommerce, online transactions, and financial transactions, and identifies patterns and trends for future use.

*For the pharmacies , big data can provide several important benefits, including:
Lower rate of medication errors – through patient record analysis, software can flag any inconsistencies between a patient's health and drug prescriptions, alerting health professionals and patients when there is a potential risk of a medication error.*



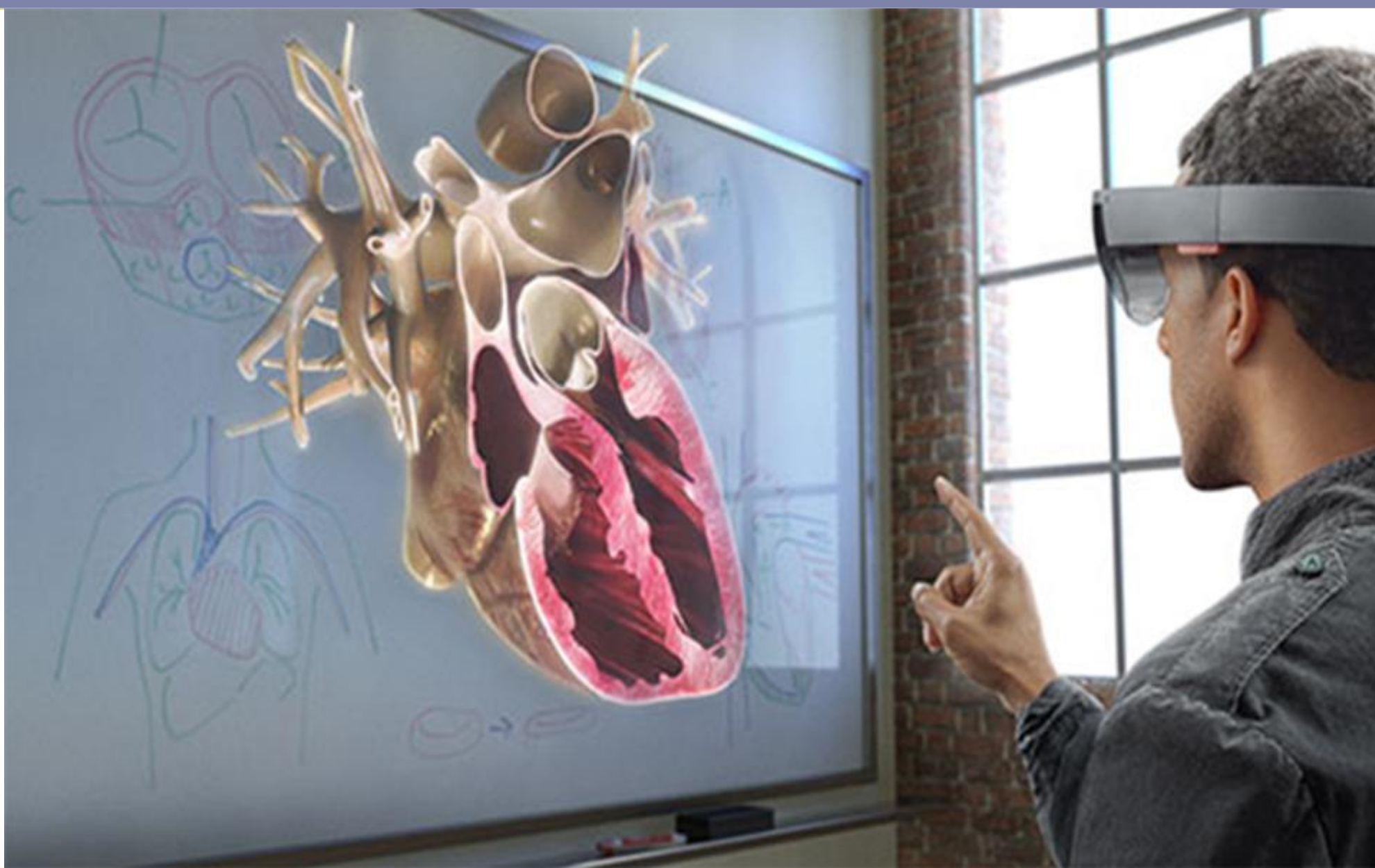
Treating patients with virtual reality

In 2018, Virtual Reality (VR) is the piece de resistance of digital transformation in healthcare. Its myriad of applications are profoundly changing the way patients are being treated.

From startups to pharma giants, everyone is betting on VR and there are numbers to back them up. The global virtual and augmented reality in healthcare market is expected to reach \$5.1 billion by 2025.

VR is a powerful communication channel that would allow you, among other things, to get a better sense of your customers' needs and virtually engage them with your products or services.





The growth of wearable medical devices

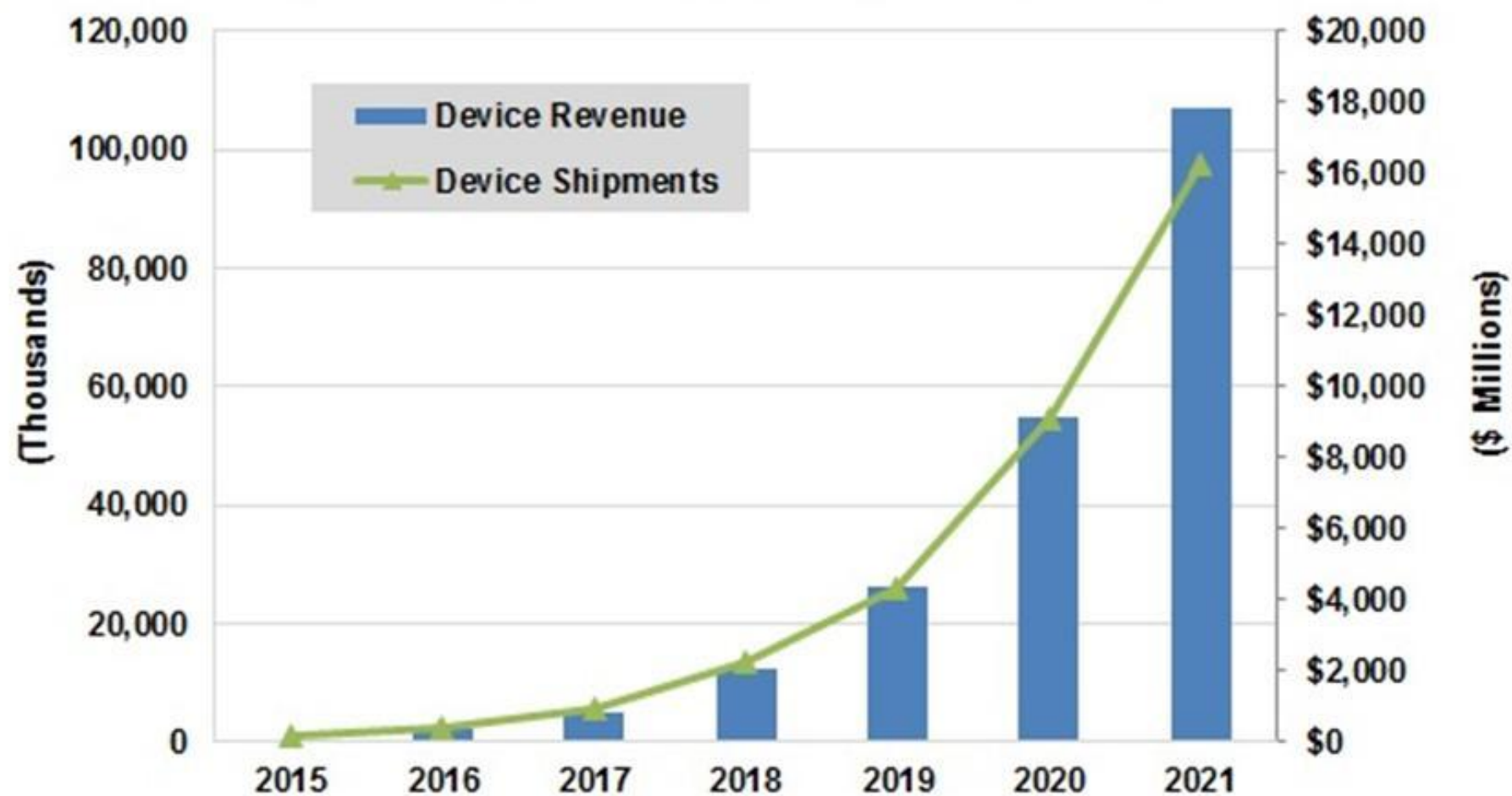


Another trend of the digital transformation in healthcare is companies collecting their own health data from medical devices, including wearable technology. According to a recent report, the wearable medical device market is expected to reach more than \$27 million by 2023, a spectacular jump from almost \$8 million in 2017.

Some of the most common of these devices include:

- Heart rate sensors.*
- Exercise trackers.*
- Sweat meters .*
- Oximeters.*

Healthcare Wearable Device Shipments and Revenue, World Markets: 2015-2021



Source: Tractica

Predictive healthcare

Information aggregated through Big Data and other marketing sources can help healthcare companies develop healthy lifestyle recommendations for their patients.



For example, you could hire an analyst to analyze keyword activity across social media channels and on major search engines to determine the most common searches for medical conditions, illnesses, and general health. The analyst could then develop a predictive model that would anticipate where and when the next big health scare will occur, and how your company can prepare for that event.

DIGITAL TRANSFORMATION IN HEALTHCARE | TOP 2019 TRENDS

Patients want on-demand healthcare



52% of all web browsing in the world occurs on mobile devices

2.7 billion people worldwide own smartphones

77% of customers are going online to book medical appointments

Physicians and hospitals need big data insights

47% of healthcare organizations are already using patient data predictive analytics

57% of healthcare companies think predictive analytics will save them 25% per year

The Big Data market share is expected to reach

\$14.9 billion by **2022**



Virtual reality helps doctors get better training

The medical virtual reality market will reach \$5.1 billion by **2025**

VR visualizations can reduce post-surgical wound pain by **24%**

Surgeons who trained on computer simulators performed surgeries **29%** faster and made 7 times fewer errors than their non-VR-trained peers

Medical wearable devices improve preventative medicine

44% of people feel more in control of their health thanks to their wearable devices

80% of consumers are willing to wear smart-watches that measure health data

33% of U.S. consumers regularly use smart-watches and fitness trackers



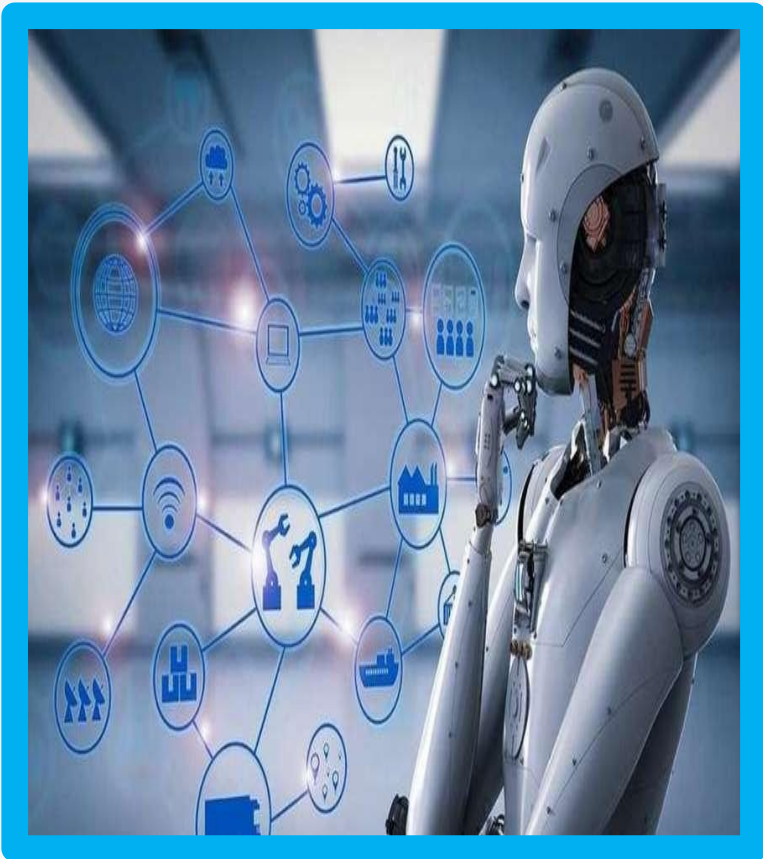
Artificial intelligence makes personalized treatment possible

84% of industry leaders think artificial intelligence will soon transform healthcare

The healthcare AI-powered tools market will exceed **\$34** billion by **2025**

The number of active AI startups has increased **14-FOLD** since **2000**





Chatbots and virtual health assistants are another AI-based technology that patients are becoming familiar with. Chatbots can fill a multitude of roles from customer service representatives to diagnostic tools and even therapists. Their versatility is being translated in heavy investments. The global healthcare chatbots market is projected to reach \$314.3 million by 2023 from \$122 million in 2018.

What's more, top pharmaceutical and biotechnology companies are using machine learning algorithms to shorten the drug development cycle. In fact, recent findings show that AI can slash early drug discovery timelines by four years against the industry average, and generate cost savings of 60 percent.

Blockchain technology can prove to be just as effective a solution as AI. It can help improve the drug supply chain and make the clinical trials process more efficient. To quote PR Newswire:

The most prominent beneficiaries of the [blockchain] technology will be the pharmaceutical companies, which lose approximately \$200 billion to counterfeit drugs each year. By enabling complete visibility and transparency throughout the drug supply chain, blockchain will allow tracking of drugs to their point of origin and thus, help to eliminate falsified medication, reducing revenue loss by up to \$43 billion annually for pharma companies.

BLOCKCHAIN IN HEALTHCARE:

AN EXECUTIVE'S GUIDE FOR 2019

Blockchain is amazing for healthcare. Here's how the blockchain technology is transforming healthcare, improving delivery of care and patient outcomes.

BLOCKCHAIN ALLOWS FOR SECURE DATA TRANSFERS BETWEEN DEVICES AND PROVIDERS

01

Blockchain is effective in preventing data breaches by enabling organizations to securely record every transaction and track every health record exchange.

- One in five healthcare organizations plans to adopt blockchain by 2020.
- 75% of health data breaches in the past seven years were due to hacking.
- Hackers are selling electronic medical records for up to \$1,000 each on the black market.
- The FDA built a pilot blockchain-based platform to exchange healthcare data from varied sources including trials and wearables to test the security of the solution against existing alternatives.



BLOCKCHAIN HELPS FINDING THE RIGHT PATIENTS FOR MEDICAL TRIALS FASTER

Blockchain-based data management software solutions accelerate the clinical trial recruitment process by allowing researchers to access patient data from various sources in one place.

02



80%
of clinical trials fail to meet enrollment timelines.



50%
of pharma market research companies enroll one or no patients.



20%
of cancer clinical trials fail because of inadequate patient recruitment.

THE BLOCKCHAIN TECHNOLOGY ALLOWS FOR THE EXECUTION OF SMART CONTRACTS AND ACCURATE MEDICAL RECORDKEEPING

03



Blockchain-based "smart contracts" will allow patients to upload a single medical form on the blockchain network and send it to every new physician they see.

- 86% of mistakes made in the healthcare industry are administrative.
- Patient charts cannot be found for 30% of hospital visits.
- 1 in 4 patients say their medical records from one provider didn't arrive in time for their appointment with a new provider.

BLOCKCHAIN HELPS HEALTHCARE ORGANIZATIONS WITH REVENUE LIFECYCLE MANAGEMENT

Blockchain technology removes third-party payment services. The blockchain ledger also allows payers and providers to identify inaccurate payments.

- Health insurers claim clerical errors cost the healthcare industry up to \$17 billion annually.
- Medicalchain startup is developing an app to help patients record all their transactions on the distributed ledger.
- Blockchain is also ideal for enrolling patients in health rewards programs without having them submit a claim form.

04



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