

# ASSIGNMENT

January 30, 2022

On

## EVOLUTION OF MODERN HEALTHCARE

*Submitted by:* **Sonali Kesharwani** Roll No.:21111062



NATIONAL INSTITUTE OF TECHNOLOGY  
RAIPUR

*Under the Supervision of:* **Saurabh Gupta**

# Contents

<b>1</b>	<b>EVOLUTION OF MODERN HEALTH HEALTH-CARE</b>	<b>3</b>
1.1	Evolution Of Healthcare . . . . .	3
1.2	Sequence Of Evolution Of Modern Healthcare . .	3
1.3	Digital Healthcare Equipment- Evolution In Modern Healthcare . . . . .	5
1.4	Conclusion . . . . .	7

# **1 EVOLUTION OF MODERN HEALTH HEALTHCARE**

## **1.1 Evolution Of Healthcare**

Evolution is a process of gradual change that take place over many generations.Necessity and requirement of anything is reason of evolution.Similarly when we need something new for improving healthcare ,system , evolution come in existence.

- 1.Emergency of life
- 2.Battle and war
- 3.Disease and cares
- 4.Discoveries and invention
- 5.Innovation and Technology

## **1.2 Sequence Of Evolution Of Modern Healthcare**

- 1.Rise of healthcare

-Hyppocratus Father of western medicine - 800AD herb used as medicine.Organised medical care for injured soldier. - Bubonic plague killed closed to 50 million people. Industrial Revolution- First step in improving health through meditation. In 1798 First vaccination for smallpox developed In1816 Stethoscope invention In 1849 Alxendar Graham Bell invented the telephone louis Pasteur founded germ theory. In 1895 Wilhelm Corned Rongten accidentally discover X-ray 1900-1940 Era of discoveries 1914 1st World war In1920

Adhesive bandage with an adsorbent center. In 1928 Alexander Fleming accidentally discovered penicillin. In 1939 First binary digital computer developed 1940-1980 Early modern healthcare (Era of invention and rise of health benefits). 1945 National health program offered by president Truman. 1948 First high level language for computer developed. 1953 Francis Crick and James Watson suggested the double helix model of DNA 1954 First successful organ transplant 1969 Apollo spacecraft landed human on moon. 1978 MRI Developed by Raymond V Damadian

2. Rise Of Modern Healthcare (1980-2000) Important healthcare system and rise of technology

1980-HIV was first clinically observed in United States. WHO eradication of small pox 1983 Minimally invasive and robotics techniques revolutionize surgery. 1984-85 Apple introduce the Macintosh 1990 WWW invented 1996 Dolly the sheep become the first mammal clone from an adult cell. Plavix launched lipitor

3. Rise of Digital Healthcare (2000-2015) Era of healthcare consolidation and digitalization 2000 First draft of human genome announced 2004 Rise of social media. 2006 First ever powered bionic arm invented Wearable tracking devices for monitor health 2008 Smart device used by healthcare professionals. 2010 Obamacare passed 2011 Top 20 drugs in US 2012 (Physician access declining) Healthcare Professional used social media for professional networking. 2013 ICD-10 is a new code set for reporting medical diagnosis and inpatient procedure. Ebola virus epidemic hits west Africa killing more than 16000 people. 2014 One in 11 adults diabetic and there

are over 2.1 billion overweight adults. 2015 - 3 billion internet over in world.

### 1.3 Digital Healthcare Equipment- Evolution In Modern Healthcare

1. Augmented reality- AR integrates digital information with the user environment in real time and is becoming more accessible and affordable for medical education and imaging, dentistry and nurse training. AR can't be used to perform accurate and low risk surgeries, but it can also help surgeons save time in case of an emergency surgery. Instead of searching among people or through electronic medical records, surgeons can have access to all of that information of their AR screen within seconds.

2. Virtual Reality- VR captured their attention and block



same signal from reaching the brain. Like when the patient is in pain, VR distracts them by blocking pain signals to reach the brain and allows the patient to rally the neurotransmitter mechanism to decrease pain. VR programs are typically considered to be an effective and safe therapy. It is used in drug rehabilitation, etc.

3. Robotics- Medical robots supported minimally invasive

procedure , customised and frequent monitoring for patients with chronic disease, intelligent therapeutic and social engagement for elderly patient. In addition, as roles alleviate workloads, nurses and other caregivers can often provide patients more empathy and human interaction which can promote long term well being.

4. Artificial Intelligence- AI in healthcare refers to the use of complex algorithms designed to perform certain tasks in an automated fashion. When research, doctors and scientists ingest data into computers the newly built algorithm can review, interpret and even suggest solutions to complex medical problems. Application of AI in healthcare are endless.

5. Tissue Engineering- It is the construction of biological tissue in vitro as well as the alteration of cell growth and function through the implantation of suitable cells isolated from donor tissue and biocompatible scaffold material.



6. Portable Diagnostic- Portable diagnosis are very useful for space researcher health. On space we can't go with a bulky machine. We need a portable diagnosis, also like COVID

pandemic people suffer problem to go to hospital ,portable diagnosis help them is such type of care . Some wearable healthcare as se time a special type of app on smartphone which helps people for measuring their daignosis.

7.Digital Tattoo - In digital tattoo the information exist between you and your activity. All records are seen by your doctor or any other healthcare person who ensure you about it.Example If you're diabetic person then it record how much calories you take it record how much calories you take if it high or low than doctor ensure you about it to balance it.

8.Nutrigenomics- Nutirgenomics give a better understanding of toxicity and safely profile of macro and micronutrients, prevention or certain diet associated disease,the enjoyment of otherwise less healthy food by individuals whose health is not likely to be well

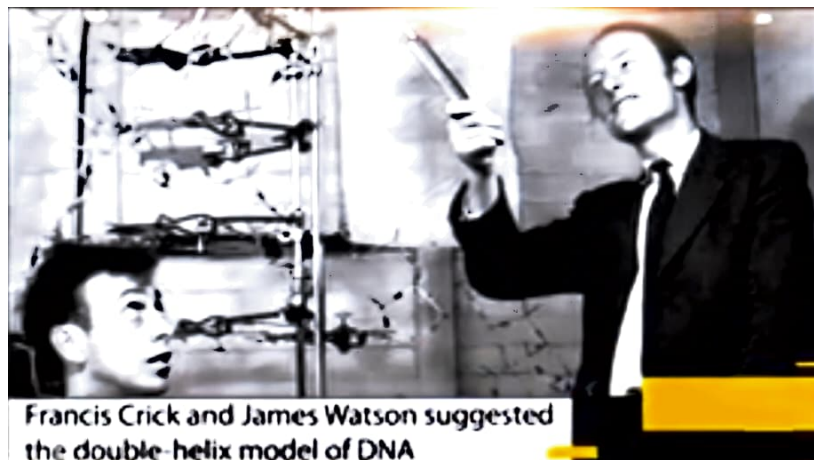
9.Chatbots- A chatbots is a computer program that stimulate human conservation through voice commands or text chat or both.Chatbot,short for chatterbot is an AI feature that can be embedded and used through any major messaging application.

## **1.4 Conclusion**

As we know evolution of anything is sometime good or sometimes bad also. But the limitations use of anything can't harm us.As evolution of healthcare is start around 400AD now it's is twenty first century and evolution is skill continue.And no doubt,evolution of healthcare save money life like in pandemic,vaccine ,save many life which is also a part of revolution.

This revolution maintain

1. Priorities mental health
2. Shorten waiting time
3. Reduce hospital overcrowding
4. Expanded primary care
5. Support older people to stay in home and in supported communication.



6. Reduced healthcare
7. Reform health services delivery.