Technology in Medicine

In medicine, technology has given us the ability to monitor patients and make sure they are healthy. We're able to measure their heart rate, analyze DNA samples to see if an infection is present, and even use technology to train doctors and nurses in how to perform certain procedures through simulations.

Artificial Intelligence:

Artificial intelligence has had a great impact on the healthcare sector. A large share of healthcare executives are already applying artificial intelligence in their operations. As the technology becomes more developed and widespread, it's expected that AI could help diagnose strokes, eye disease, heart disease, skin cancer, and other conditions.

Virtual Healthcare:

Also known as telehealth or telemedicine, virtual healthcare allows patients and doctors to communicate remotely using technology such as video conferencing or mobile apps. Many patients are also becoming comfortable using wearable technology to monitor any changes in their health – and sharing that data with their physicians.

Convenience, ease of use, and travel times to their closest doctor are main reasons why patients choose virtual care. On the flip side, many are concerned about the quality of care, or fear a loss of a personal connection with a doctor.

Nanomedicine:

Nanomedicine is rapidly evolving field which controls individual atoms and molecules at the extremely minute "nanoscale" of 1 to 100 nanometers. Nanomedicine is mainly used to effectively diagnose, treat, and prevent various diseases. Compared to conventional medicines, it's much better at precise targeting and delivery systems, paving the way towards combating complex conditions such as cancer.

Virtual Reality:

Although it's normally been associated with entertainment, virtual reality is making waves in healthcare as well. The multi-sensory, immersive experience that VR provides can benefit both physicians and patients:

- **Healthcare worker training**
  VR can be used to train surgeons in a realistic and low-risk simulated environment.

- **Physical and mental health**
  VR offers therapeutic potential and rehabilitation for acute pain and anxiety disorders.

VR is thus considered a cost-effective and efficient tool for both teaching and treatment.

3D Printing:

3D printing has come a long way since its debut, especially in its uses in the healthcare industry. The technology offers faster prototypes, creating everything from personalized prosthetics to "poly-pills" at a fraction of the cost.

The customizable aspect of 3D printing is revolutionizing organ transplants and tissue repair, and it's even able to produce realistic skin for burn victims.

Robot-assisted Surgery:

Robotic surgery is sweeping through hospitals. It allows doctors to perform delicate and complex procedures that might be otherwise impossible.

Typically, surgeons control a device with a camera and mechanical arms, giving them a high-def view of the surgical site. This method generally:

- Enhances precision, flexibility, and control
- Comes with fewer complications such as infections
- Results in less obvious scars as it is minimally invasive