

Technological Advancements in Medical Fields



There is a constant evolution in technology and this helps provide improvements to disease treatments due to increasing our understanding of healthcare related fields. The use of health monitors such as wearable devices can check for heart rate, blood pressure, and blood oxygenation are also becoming more and more commonly used and is one such example. With the new advances, web-enabled and app-enabled supplements are more widespread and easier to operate. These can also filter patient requests accordingly and save both providers and patients critical time and energy. For elderly people, especially those living alone, regular

access to this data can help avoid strokes, heart attacks, and other adverse events, and, logistically, there is less risk of exposure to other diseases. Algorithms and virtual assistants are also another major example of technological advancements. These enable physicians to see more patients a day and use the time with each patient more effectively. AI is increasingly being used in remote monitoring and telehealth applications. Future revolutions in computing power, such as quantum computing, could make it possible to analyze millions of CAT scans (or, with secure sharing infrastructures and pooled datasets, practically every CAT scan in existence). From that could come major revelations for medical science, as detected patterns could be used to treat, prevent, or predict diseases. AI and ML are, like many disruptive technologies, ones that get better with use.

None of us can deny that advancements in medical fields due to the advancements of technology are some of the most important improvements in recent times. These technologies are changing healthcare and making vast developments on our ability to understand diseases, disease progression and treatment strategies.

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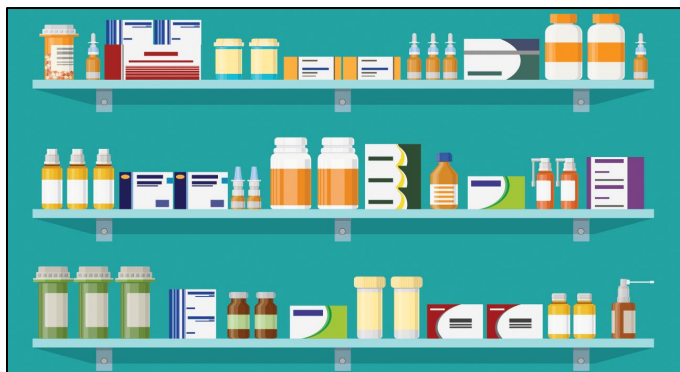
Treatment options of Parkinson's disease: How far we are from the cure?

Parkinson's disease (PD) can be defined as a neurodegenerative disorder, which is associated with movement disorders and comprises of four prevalent cardinal indications, which are rigidity, bradykinesia, tremor and postural instability. During the progression of the disease, different movement and non-movement complications arise in patients. Different pharmacological and non-pharmacological treatment interventions are accessible for the control of Parkinson's disease. The pharmacological treatment approaches are explained on the basis of early, advanced and complicated stages for

improving the motor and non-motor symptoms of this disease. This will give a clear knowledge of the drugs, to use them effectively in different stages of the treatment process. Levodopa, Dopamine receptor agonists, inhibitors of catechol-O-methyl transferase (COMT) and inhibitors of monoamine oxidase-b (MAO-B) are popular pharmacological treatment choices. The complications can be prevented through adjunctive therapy and recent discovered approaches has brought new dimension in the treatment process of this disorder.

Additionally, a better presentation of the non-pharmacological treatment approaches based on the symptoms of PD also needs to be understood. The conventional treatment with levodopa therapy only focuses on improving the motor complications and its excessive use causes motor fluctuations.

Recent advanced treatment approaches, for instance, surgical procedures, neuroprotective agents and restorative therapies, which are used for preventing continuation of the disease and regeneration of dopaminergic neurons are also up and coming treatment options. Moreover, new discovered drugs and disease-modifying therapies are being analyzed through the



concept of clinical trial to address a possibility of cure in future. Scientists and researchers should concentrate on the new advancements to bring a potential cure of Parkinson's disease.

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Telemedicine: The Fastest Growing Health Service



A report of WHO shows there will be a lack of approximately 9.9 million healthcare service provider all around the world by 2030. So, what can be the best way to ensure the best health care of the people even in a larger doctor to patient ration? The pandemic of 2019, SARS COV 2, probably gave the best answer to that. An amazing consolidation between health care provider and technology to give the possible best healthcare service is known as telemedicine. It was first introduced by giving health tips in the ships back in 20th century, and then it took a new dimension when in 1950's psychiatric service

was given to serious mental health patient. Today all the electronic health data, health mobile applications, medical services through websites, digital gadgets are part of this fastest growing market place. Even, after the declaration of covid-19 as a pandemic, we saw how all the healthcare service provider managed to mitigate the pain of less vulnerable patients sometimes by being at home, or sometimes the patients being at home. In this rush most beneficial was the data which could be collected only by the email addresses of the patients. Many tech-devices like apple watch can calculate the blood pressure, oxygen level, heart-rate of patients mostly close to correct. When anyone merge these devices with their phones which have health apps all the data get stored. In this process taking and checking the health condition report becomes easier. Even the detection of diseases becomes faster. By only seeing the data of alone United States we can understand how potentially prominent and promising this health service is going to be. Statistics shows telehealth had a market size of \$45billion in 2019 which is estimated to grow by around \$175 billion in 2026. As innovation moves slowly in health care since it is one of the most challenging things to do, we can easily expect that telemedicine will dominantly rule over in this era of technology.

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