5 solutions to covid 19 provided by biomedical

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1 Role of Biomedical Engineers in COVID-19 Treatments

Advancements in medical technology have improved the quality of patient care for patients. To use these technologies effectively, hospitals and treatment facilities need qualified biomedical engineers. These devices have a direct impact on the survival rate of critical cases. Any while using such equipment can hamper the health of patients and even lead to fatalities. Hence, the need for biomedical engineers is certainly critical and evident at this juncture of the global health crisis.In the past two months, thousands of biomedical engineers working in the fields of medical research, device manufacturing, and drug development have come to the rescue. Indian biomedical engineers have actively responded to this crisis by adapting their knowledge, skills, and equipment for the treatment of patients.

1.1 Biomedical Engineers Behind the Scenes

The role of a biomedical engineer is in the treatment of patients. Biomedical engineers are responsible for designing a variety of biomedical equipment. These engineers are currently set up in industries and ensuring proper manufacturing of ventilators, in-vitro diagnostic kits, antibody test kits, and . In this capacity, they are aiding the recovery of patients by developing high-quality , artificial organs, supports, and other devices.

Several engineers are employing reverse engineering techniques for the deconstruction of these devices and using the effective parts to understanding their make-up better. They are using optimum methods for developing these devices without any biomedical wastage. The biggest challenge that these biomedical engineers have overcome is expediting the process of manufacturing these devices. Normally, building a ventilator takes months but these smart engineers have shortened the time frame to days and ensure quality control at all stages of manufacturing. In the meantime, these professionals have also sped up the testing process so that these devices meet all the health and safety regulations properly and get distributed quickly.

1.2 Biomedical Engineers At Ground Level

Next, these engineers are using their in-depth knowledge of biology, computing, and genetic engineering for drug administration. The Indian Council of Medical Research is deploying a vast number of biomedical engineers across hospitals around the country. Under the protocols, these engineers guide the doctors and medical staff with the operations of ventilators and biomedical devices at Intensive Care Units. They are helping in the purposeful use of these devices, where these machines are able to effectively treat the maximum number of patients within the required time periods.

1.3 Instrumenting Biomedical Innovations

In addition to their significance in the actual fight against COVID-19, some of the country's top biomedical engineers have teamed up for developing new techniques of biomedical device manufacturing. Leading biomedical manufacturers in India are using 3D printing innovations to make accurate copies of delicate biomedical devices such as capillaries. These techniques are also being used for the production of surplus visors and surgical face masks for healthcare workers.Medical colleges across the country would be encouraging students to specialize in biomedical engineering. Such pandemics are likely to revisit us from time to time which is why biomedical engineers have the opportunities to grow their careers and overcome these challenges. Despite being the hidden heroes, biomedical engineers would always be appreciated by billions of Indians for being of greater service to mankind.