DTU Researchers develop unique new non-invasive ventilators

The coronavirus COVID-19 has already infected 3 million people worldwide and more than 200,000 have died, with new cases occurring day after day. With government support, DTU has teamed a group of dedicated experts to focus their efforts on the research and development of a unique new noninvasive ventilator, named the DTU-Vent, to fight the widely spreading disease.
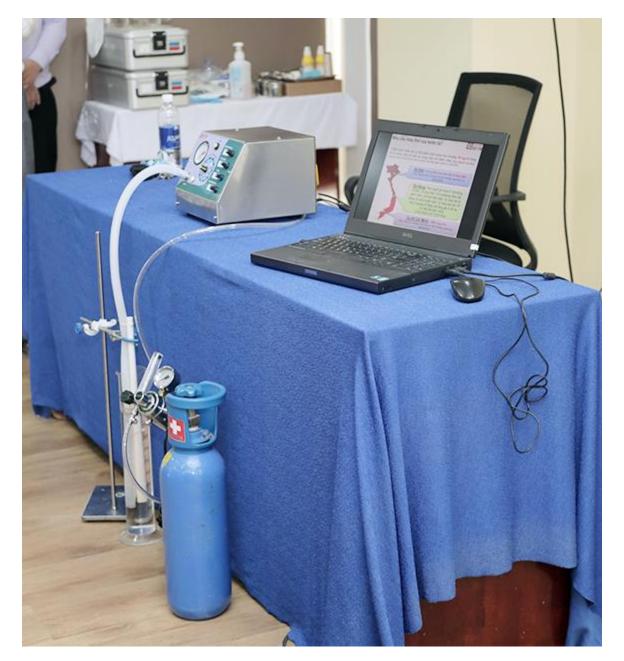

DTU lecturers present the DTU-Vent. Photo: AN

Non-invasive ventilators have been developed to save the lives of Covid_19 patients with severe pneumonia or acute respiratory distress. According to Dr. Le Hoang Sinh, the DTU-Vent group leader, the DTU-Vent non-invasive ventilator feeds oxygen to the lungs at a fixed rate, through a nasal or full face mask, with sufficient quantities of air to stimulate the breathing of patients suffering respiratory distress.

Dr. Le Hoang Sinh said: *"DTU-Vent allows ten different position settings according to patient height, to expedite time and ease of operations. Other settings control air pressure, providing instantaneous*

response to Covid-19 patient's vital signs, with a battery to guarantee three hours of continuous operation in case of power failure."

DTU-Vent allows ten different position settings according to patient height. Photo: AN

The DTU-VENT non-invasive ventilator has several outstanding features, such as pressure and volume controls, to meet the needs of each patient.

"Technical measurements, such as air flow volume, breaths per minute, aspiration/exhalation rates and airway pressure, are controlled by ventilator sensors with software programmed by our research team", added Dr. Sinh.

The development of DTU-Vent will positively assist in combating the Covid_19 pandemic and provide promising opportunities to export the ventilator in the future.

(Media Center)