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### Biomedical engineering technical support on oxygen therapy equipment and devices during COVID-19 in Nepal

Nepal was facing rapid increase of COVID-19 pandemic in the country due to second wave of pandemic in India and huge influx of Nepalese working in India are coming back to Nepal. There was sharp increase of cases and about 45% of the tested cases were identified COVID-19 positive and many cases were moderate to severe due to the new Delta variants. Due to high number of cases need oxygen support, all hospital beds were fully occupied with COVID-19 patients and there was huge demand of oxygen in the hospitals which was not manageable in the current capacity of hospitals. The demand of oxygen was much higher than the current production capacity and similarly increased demand of the ICU beds.

Most of the hospitals in Nepal do not have biomedical engineers and in this critical situation, breakage of oxygen support system in any hospital is life threatening to the COVID-19 critical cases, therefore, UNICEF Nepal seeks partnering with a biomedical technical organization championing in oxygen support system to the hospitals and isolation centers. Biomedical team have done rapid need assessment in COVID-19 designated health facilities, a functional help desk was established, spare parts, consumables and devices were arranged and supplied along with the technical supervision, conducted application training

of medical equipment to healthcare workers and team mobilized to repair, maintain in order to bring all the available critical medical equipment functional with full capacity without interruption and timely repair and maintenance of these equipment was crucial to save the lives of critical COVID-19 patients.

#### Biography

Bikash B Shrestha, PEng is renowned Senior Biomedical Engineer in Nepal and his contribution to the Biomedical Engineering Field in the country is quite invaluable and remarkable, He is Associate Professor and Department Head in Department of Electrical Engineering at Advanced College of Engineering & Management, Tribhuvan University, where he has been since 2016. He also had written "a Course Manual Book on Biomedical Instrumentation". He received an BSc Engineering from Bangladesh University of Engineering & Technology in 1993. He received his MTech. in Biomedical Engineering from the Indian Institute of Technology (IIT) India in 2001. From 1994 to 2016 he worked at Shree Birendra Hospital, Nepal Army in Kathmandu Nepal, eventually as a Senior Biomedical Engineer. He is First Professional Engineer in Biomedical Engineering in Nepal. Also, he was awarded "Distinguished Entrepreneur Award" by Former Prime Minister Honorable Shri. J. N Khanal on 57th Engineers Day organized by Nepal Engineering Association on July, 2019.

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