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TELEMEDICINE AND NEW VITAL SIGNS

The COVID-19 pandemic has a profound effect on the entire world. One of the areas greatly affected is health services that cancelled all elective, non-urgent procedure and in-person appointments. In this context, telemedicine has emerged as a possible solution that can digitally bridge the gap between physicians and patients and help reduce the virus spread. However, not-being in contact with the patient raises challenges related to measuring the typical vital signs and obtaining the required lab values. In this talk I will discuss possible alternative vital signs provided by in-home sensors, that while not intended to replace the values obtained in an office visit, might be used in the clinical decision-making process. The in-home sensors are either newly developed, such as depth camera, infrared thermography, ballistocardiography and accelerometers, or existent in clinical practice, such as ECG and blood pressure. I will discuss both the opportunities and the challenges raised by these possible vital signs. Among challenges, one of the most important is dealing with the huge amount of data generated by in-home sensors by summarization and display in a clinically relevant manner.