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Building a Framework for Digital Emergency Response System for Aged, Long Term Care and Chronic Disease Patients in Asia Pacific Region

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Abstract : This paper proposes the formation of a digital emergency response system (dERS) in the aged, long-term care, and chronic disease setups in the post-COVID healthcare ecosystem, focusing on the Asia Pacific market where the aging population is increasing significantly. It focuses on the use of digital technologies such as wearables, a global positioning system (GPS), and mobile applications to build an integrated care system for old folks with co-morbidities and other chronic diseases. The paper presents a conceptual framework of a connected digital health ecosystem that not only provides proactive care to registered patients but also prevents the damages due to sudden conditions such as strokes by alerting and treating the patients in a digitally connected and coordinated manner. A detailed review of existing digital health technologies such as wearables, GPS, and mobile apps was conducted in context with the new post-COVID healthcare paradigm, along with a detailed literature review on the digital health policies and usability. A good amount of research papers is available in the application of digital health, but very few of them discuss the formation of a new framework for a connected digital ecosystem for the aged care population, which is increasing around the globe. A connected digital emergency response system has been proposed by the author whereby all registered patients (chronic disease and aged/long term care) will be connected to the proposed digital emergency response system (dERS). In the proposed ecosystem, patients will be provided with a tracking wrist band and a mobile app through which the control room will be monitoring the mobility and vitals such as atrial fibrillation (AF), blood sugar, blood pressure, and other vital signs. In addition to that, an alert in case if the patient falls down will add value to this system. In case of any variation in the vitals, an alert is sent to the dERS 24/7, and dERS clinical staff immediately trigger that alert which goes to the connected hospital and the adulatory service providers, and the patient is escorted to the nearest connected tertiary care hospital. By the time, the patient reaches the hospital, dERS team is ready to take appropriate clinical action to save the life of the patient. Strokes or myocardial infarction patients can be prevented from disaster if they are accessible to engagement healthcare. This dERS will play an effective role in saving the lives of aged patients or patients with chronic co-morbidities.

Keywords : aged care, atrial fibrillation, digital health, digital emergency response system, digital technology
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