

## Revisiting the Role of Telemedicine Under the 2019 Novel Coronavirus Outbreak

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### To the editor,

With the increasing number of reported pneumonia cases infected by 2019 novel coronavirus (2019-nCoV) and its associated mortality, (1) there is no doubt about its public health impact. Spreading beyond borders to different continents, 2019-nCoV is pushing the global healthcare system's burden to a limit. With possible transmission between humans through close contact, (2) and a significant basic reproductive number (3), isolation is unavoidable as a public health measures.

Initially emphasizing mainly on distance and designed for rural area with remote access to medical facilities, telemedicine do play a role in patient care under the 2019-nCoV outbreak. It is particularly useful when significant proportion of people in the community have travelled to epidemic area, thus requiring self-quarantine for 14 days of observation period. Replacing routine services by telemedicine, the hospital not only saved manpower and resources to those infected cases requiring medical and ventilator support, but also prevented human-to-human transmission through public transportation and indoor clustering within waiting halls. Besides, stable inactive chronic diseases patients with regular hospital follow-up appointments could be diverted to these temporary "cyber-clinics"; whereas electronic service kiosks help streamlining monthly to quarterly interval dispensing of medications via pharmacies.

Telemedicine can be classified as tele-visits, tele-supervision, tele-monitoring, tele-interpretation and tele-consultation (4). Concerning patient's privacy, real-time (synchronous) interaction like tele-visits and tele-consultation are rather sensitive with medico-legal concerns. However, unidirectional communications (store-and-forward) by hinting or reporting

with subsequent feedback are much simpler (5). Common examples include actively hinting patients on timely usage of medication, regular physiotherapy or latest update of the 2019-nCoV outbreak. In contrast, patients can aid their caring doctors by updating blood pressure readings, hemastix results, or even ankle edema photos, thus facilitating home titration of anti-hypertensive medications, insulin or even diuretics respectively.

Geriatric patients are popular hospital visitors, especially with sub-specialization of medicine in modern dates. Counting from the first confirmed 2019-nCoV pneumonia case in Hong Kong on 23<sup>rd</sup> January towards the first 2019-nCoV mortality case on 4<sup>th</sup> February, there was a drastic rising trend on the daily clinic non-attendance rate from 4.0% to 42.1%. Five hundred eighty-six patients (29.4%) already defaulted our out-patient clinics' appointments during this period with different types of reasons, which telephone survey revealed "worrisome of 2019-nCoV transmission within hospital area" as the top cause (52.0%). Among these 586 patients, 61.8% were aged 65 years or older. It is understandable that hospital is a relatively high risk area, especially to elderly with multiple comorbidities, not to say those with frequent exacerbation of chronic obstructive pulmonary diseases, immunocompromised, cancer and transplant patients.

In conclusion, accessibility of healthcare service becomes the major public healthcare service gap under the 2019-nCoV outbreak. No matter how close the physical distance between the geriatric patients' home and the hospital, it is still considered as "remote" if inaccessible. Despite the strength of telemedicine on facing the 2019-nCoV globe challenge, basic infrastructure is still the prerequisite.

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**Received:** Feb 08, 2020 **Accepted:** Feb 26, 2020



**Cite this article as:** SCL Au. Revisiting the Role of Telemedicine Under the 2019 Novel Coronavirus Outbreak. Eur J Geriatr Gerontol 2020;2(1):26-27

**Keywords:** Telemedicine, coronavirus, disease outbreaks

### Ethics

**Peer-review:** Internally peer-reviewed.

**Financial Disclosure:** The author declared that this study received no financial support.

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