



Rapid health systems change: online medical consultations to fight COVID-19

Haiyin Wang¹, Peipei Song^{1,2}, Yuanyuan Gu³, Elizabeth Schroeder^{3,4}, Chunlin Jin¹

¹Shanghai Health Development Research Center, Shanghai, China; ²Institute for Global Health Policy Research, Bureau of International Health Cooperation, National Center for Global Health and Medicine, Tokyo, Japan; ³Centre for the Health Economy, ⁴Department of Health Systems and Populations, Macquarie University, Sydney, NSW, Australia

Correspondence to: Peipei Song, Shanghai Health Development Research Center, No. 181 Xinbei Road, Shanghai, China; Institute for Global Health Policy Research, Bureau of International Health Cooperation, National Center for Global Health and Medicine, 1-21-1 Toyama Shinjuku, Tokyo 162-8655, Japan. Email: ppsong-tky@umin.ac.jp.

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Coronavirus disease 2019 (COVID-19) was firstly reported in Wuhan, Hubei, China in December 2019. Its mode of transmission was exacerbated by the “Spring Festival travel rush” which enabled it to become epidemic in China. Now, it has become an unprecedented challenge globally with the spreading COVID-19 pandemic.

The rapid growth in infections and deaths caused anxiety, panic, and rumormongering in the early days in China (1), which led to a large number of people seeking medical care in hospitals, overwhelming the healthcare system and potentially placing many people at risk of cross-infection. Limited time outdoors with home-based quarantine became a measure of health care management, though it created the unintended impediment for access to necessary care services.

In response, internet-based medical enterprises in China quickly launched online platforms and renowned health professionals began providing free consultations and livestreaming to provide health information. Many online apps emerged, including Ali Health, WeDoctor, Ping An Good Doctor, and haodf.com. Online medical consultations rapidly became the preferred option of choice. As of 29 February, 160,000 online consultations were provided by 28 internet hospitals in Shenzhen (2). And Tianjin’s WeDoctor Internet Hospital, an online medical consultation service only established in late January 2020, received 20 million visits in its first month (3).

These online hospitals have provided a broad range

of services: epidemic updates, symptom diagnosis, psychological counselling, guidance for self-quarantine, follow-up care for chronic disease and health management. For example, haodf.com has provided free daily online care services for patients quarantined at home; where patient data is collected through online self-completed forms and is monitored by a medical team who offer health guidance until the end of quarantine.

The online medical consultations have been shown to be highly effective in avoiding cross-infection, mitigating anxiety, relieving health system pressures, and promoting hierarchical care. It also seems that online medical experience has been proven convenient (4,5); as of 1 March 2020, following the opening of online health services, patient visits to fever clinics in the Zhejiang province declined by 50% (6).

The value provided by online medical consulting services during the COVID-19 epidemic has also been recognized by the Chinese government. Previously the Government monitored growth in the online medical care market with caution. In principle, online doctors were only allowed to attend to repeat prescriptions and follow-up consultations. A draft government policy from 2017 even recommended internet hospitals be shut down (7). COVID-19 seems to have radically changed this policy stance; and on the 4th and 7th of February the Chinese National Health Commission issued two policy documents, asking every province to make full use of the advantages of internet-based consulting



Figure 1 The coverage, effectiveness and limitations of online medical consultations.

services for diagnosis and treatment. On the 2nd March, and for the first time, the National Healthcare Security Administration issued another policy, allowing eligible internet hospitals and medical institutes (already permitted to run online services) to have their follow-up consultations for chronic diseases financially reimbursed by the national health-insurance scheme. Here electronic prescriptions, with diagnosis and drug expenses are recorded and are paid through the public health insurance (the insured part) and personal banking (the co-payment). Drugs (or pharmaceuticals) can be obtained in various ways, from a patient's community pharmacy store or home delivery.

While the value of online medical consultations in scaffolding public health care responses to the epidemic is uncontested, constraints, risks and inequities do exist, such as for those residing in remote and poor regions with limited internet access, insufficient medical staff, and the absence of integration between online and traditional face to face diagnostics. Moreover, verification of medical professionals' qualifications, and their diagnostic, prescription and treatment behaviours, and data security are not likely to be stringently regulated (*Figure 1*). Only when both safety and quality can be ensured, and treatment fidelity be evaluated compared to face to face consultations, should online medical consulting gain the appropriate trust and recognition of the public and scale-up to become a regular choice among healthcare options.

More broadly, as of 15th March, there were 153,517 cases of COVID-19 across 144 countries and territories (8).

Tackling COVID-19 has now become the most pressing global issue. In some countries, medical consultation via telephone has become the default and preferred pathway. For example, in the United Kingdom the public are recommended to first call NHS111 for a consultation. The UK has an established and monitored system of telecommunication, effectively funded within the NHS. The Australian Government announced reimbursement for primary care services delivered via 'telehealth' to 30 September 2020 in the first instance, as an interim COVID-19 measure to supplement face to face consultations. For other countries, whilst telephone consultations can be useful supplementary tools, their provision and integration are less mature and might be a weaker means for diagnosis, treatment and care management.

Countries differ to the extent that they engage with the increasing proliferation of online and digital technologies, and to how these are integrated into routine medical practice (9). Whilst we applaud China for utilizing online medical consulting services to contain COVID-19, and to creatively manage healthcare constraints, we propose that the quality and safety of the online services be closely monitored to protect population health, and to further develop them into important weapons to tackle infectious disease outbreaks in the future.

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Footnote

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