

In the face of a public health crisis at a globalised scale, ethical consideration is far from being purely intellectual—it is at the core of any effective measure.

We declare no competing interests.

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- 1 Rich M. As coronavirus spreads, so does anti-Chinese sentiment. Jan 30, 2020. <https://www.nytimes.com/2020/01/30/world/asia/coronavirus-chinese-racism.html> (accessed Jan 31, 2020).
- 2 Kwong Wing Catering Facebook post. Jan 28, 2020. <https://www.facebook.com/116149449769292/posts/180459973338239?sfns=mo> (accessed Jan 31, 2020).
- 3 Johns Hopkins Center for Systems Science and Engineering. 2019-nCoV global cases. <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6> (accessed Feb 8, 2020).
- 4 Chow H. China coronavirus: Hong Kong government falling behind Macau in handling public health crisis. Jan 30, 2020. <https://www.scmp.com/comment/letters/article/3048194/china-coronavirus-hong-kong-government-falling-behind-macau> (accessed Jan 31, 2020).

## Early lessons from the frontline of the 2019-nCoV outbreak

The outbreak of the novel coronavirus (2019-nCoV) has been declared a public health emergency of international concern by WHO.<sup>1</sup> 2019-nCoV has spread throughout China and beyond. In China, as of Feb 9, 2020, more than 37 000 people have a confirmed infection, and 812 people have died.<sup>2</sup> Currently, the severe situation has not been effectively controlled, and many governments have sent special aeroplanes to take their citizens home.

The outbreak of 2019-nCoV has taught me a lot. First, early detection and early reporting were delayed. Early in December, 2019, eight doctors discovered unexplained pneumonia and were warned by the police for

spreading rumours.<sup>3</sup> One of them was finally admitted to hospital. Second, although the situation of early human-to-human transmission was described in the scientific literature,<sup>4,5</sup> local authorities did not inform the public early, allowing more than 5 million people to leave Wuhan to go home for Chinese New Year or travel abroad. As a result, an outbreak occurred in Wuhan with sporadic cases in other cities and countries, and there is an increasing trend. Third, there is a low awareness of the severity of pneumonia associated with 2019-nCoV. Many patients have atypical clinical manifestations<sup>6</sup> and visit different medical departments. Because patients might be contagious during the incubation period, many medical staff might not be fully protected and could become infected through their contact with patients. Research has shown that, in addition to droplet transmission and contact transmission, 2019-nCoV might be transmitted via the faecal-oral route.<sup>7</sup> Fourth, the reserves of protective equipment in hospitals are severely insufficient, worsened by the implementation of traffic control. A hospital's protective equipment is mainly supplied to designated infectious diseases departments and intensive care units. Medical staff in general hospitals and other departments are likely to be affected the worst because they do not have adequate protective equipment. Fifth, due to the previous medical custody control, many clinical drugs were identified as auxiliary drugs and their supply to the hospital was stopped. The general department of the hospital does not have the necessary treatment drugs, putting many medical staff at risk of infection. Sixth, because all hospital beds in designated hospitals have been filled, and the new hospital in Wuhan has not been completed, many confirmed patients cannot be admitted to hospital and stay in general hospitals or go home for isolation, inevitably increasing morbidity and mortality. Seventh, in

view of the current situation, to reduce cross-infection, many hospitals have cancelled outpatient appointments (except for emergency and fever clinics). This inevitably affects the diagnosis and treatment of patients with other diseases.

As a doctor working on the frontline of the outbreak in Wuhan, I hope that with the joint efforts of medical staff across the country, we can control the development of the 2019-nCoV outbreak rapidly and reduce the mortality of patients with pneumonia. I also hope the Department of Health will pay attention to the frontline doctors and provide adequate protective equipment to reduce their risk of infection. Only in this way can the outbreak be controlled and patients continue seeking treatment for other health conditions in hospitals.

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- 1 WHO. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Jan 30, 2020. [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)) (accessed Feb 6, 2020).
- 2 WHO. Novel coronavirus (2019-nCoV) situation report – 20. Feb 9, 2020. [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200209-sitrep-20-ncov.pdf?sfvrsn=6f80d1b9\\_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200209-sitrep-20-ncov.pdf?sfvrsn=6f80d1b9_4) (accessed Feb 10, 2020).
- 3 The Cover. Wuhan doctor Li Wenliang's 2020: "rumor educated" to confirmed cases. Feb 1, 2020. <http://www.thecover.cn/news/3487896> (accessed Feb 8, 2020; in Chinese).
- 4 The Lancet. Emerging understandings of 2019-nCoV. *Lancet* 2020; **395**: 311.
- 5 Zhu N, Zhang D, Wang W, et al. A novel coronavirus from patients with pneumonia in China, 2019. *N Engl J Med* 2020; published online Jan 24. DOI:10.1056/NEJMoa2001017.
- 6 Huang CL, Wang YM, Li XW, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020; published online Jan 24. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5).
- 7 Researchers at Shenzhen Third People's Hospital. Faecal-to-mouth transmission risk of new coronavirus. Feb 2, 2020. [http://www.xinhuanet.com/2020-02/02/c\\_1125520498.htm](http://www.xinhuanet.com/2020-02/02/c_1125520498.htm) (accessed Feb 8, 2020; in Chinese).



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