On 31 December 2019, China notified WHO of a pneumonia outbreak of then unknown aetiology in Wuhan,1 a city of 11 million people in Hubei province. The seafood market which was thought to be the source was closed on 1 January 2020.2 The causative organism was identified on 7 January 2020 as a novel coronavirus (nCOV). The genetic sequence of at least 19 strains found in infected patients has been published so far.3 4 To date, COVID-19 has already confirmed to have affected almost >68,000 with >1600 deaths in China, and over 680 cases outside of China spanning 25 countries over South East Asia, Europe, North America, Australia and the Middle East, etc. This number is expected to rise over the next few months worldwide. So far, 41 million from China and at least 14 cities in the Hubei province have travel restrictions, some with suspension of outbound flights and trains as well as other public transport, and many countries are taking measures to quarantine travellers from China.

Comparisons are being made with severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), also both caused by coronaviruses. SARS emerged in 2003 and caused the first pandemic of the 21st century, affecting more than 8000 people, killing 774 in 26 countries.5 MERS-CoV was isolated in 20126 and has seen over 2400 cases reported to WHO to date, and over 850 deaths.7 Of the 2223 laboratory-confirmed MERS-CoV cases reported to WHO, 415 were healthcare workers, representing over one-third of all secondary transmission.8 SARS and MERS spread principally by direct transmission and respiratory droplets.9 10 However, SARS-CoV, and perhaps also MERS-CoV, may shed and be transferred to environmental surfaces, and thence contaminate hands and mucous membranes subsequently.10

Ocular involvement has not been described with either MERS-CoV or SARS-CoV11–13 although polymerase chain reaction on tears from patients with SARS-CoV infection demonstrated presence of the virus.14 There is also evidence that some coronavirus can occasionally cause conjunctivitis in humans. In fact, human coronavirus NL 63 (HCoV-NL63) was first identified in a baby with bronchiolitis and conjunctivitis.15 Subsequent in 28 cases of children with confirmed HCoV-NL63 infections, 17% had conjunctivitis.16

There is now growing evidence that human-to-human transmission is occurring among close contacts, and reports that >1,700 healthcare professionals having been infected with 6 deaths including one ophthalmologist.17–19 Of the affected healthcare workers, one was part of the expert task force who visited Wuhan, and he has reflected on his experience of the disease. Despite being fully gowned with protective suit and N95 respirator, he was still infected by the virus with the first symptom being unilateral conjunctivitis, followed by development of fever a few hours later.13 Since his report, healthcare professionals in China have been urged to use eye protection when they are in close contact with patients.
the disease. Ophthalmologists should take particular care when examining patients, because of both the proximity to patients’ nose and mouth, and the potential exposure to tears which may contain the virus. Research into if COVID-19 can be found in tears and conjunctival scrapings would be valuable and inform ongoing disease-prevention strategies.

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