

Emerging understandings of 2019-nCoV



"There is an emergency in China, but it has not yet become a global health emergency...WHO is following this outbreak every minute of every day", said Dr Tedros Ghebreyesus, Director-General of WHO, on Jan 23. A novel coronavirus (2019-nCoV) outbreak is emerging, but it is not yet a Public Health Emergency of International Concern (PHEIC). As we went to press, more than 500 cases have been confirmed in China, as well as in Japan, South Korea, Thailand, and the US. The virus can cause a severe respiratory illness, like SARS and MERS, and human-to-human transmission has been confirmed. These characteristics are driving China's urgent public health actions, as well as international concern. But much remains unknown. The pieces of the puzzle that is 2019-nCoV are only now beginning to come together.

On Jan 24, we published the first clinical data from individuals confirmed to be infected with 2019-nCoV from Wuhan, China. Chaolin Huang and colleagues provide comprehensive findings for the first 41 laboratory-confirmed cases. 27 of these 41 cases had direct exposure to the Wuhan seafood market that is thought to be the initial site of infection from an animal source. All had viral pneumonia. The severity of illness is concerning: almost a third of patients developed acute respiratory distress syndrome requiring intensive care; six patients died; five had acute cardiac injury; and four required ventilation.

Separately, Jasper Fuk-Woo Chan and colleagues report clinical and microbiological data from a family of six people who had travelled to Wuhan and later presented with pneumonia to Shenzhen Hospital in Guangdong province. Five were identified as infected with 2019-nCoV. Notably, none had been to the Wuhan market, but two had visited a Wuhan hospital. The authors suggest these findings confirm human-to-human transmission. Together, these Articles provide an important initial picture of the clinical spectrum and transmission of this new disease.

In an accompanying Comment, Chen Wang, George Gao, and colleagues describe the early sharing of clinical data from the outbreak and emphasise the urgent need for more information about pathogenesis and viral transmission, as well as the pressing need to develop best supportive care and a vaccine. They also caution against overstating the mortality risk, as early reported case-fatality rates may be high due to bias towards detecting

severe cases. As David Heymann reflects in another accompanying Comment, publication of these Articles provides peer-reviewed information urgently needed to refine the risk assessment and response, which are happening in real time.

China has quickly isolated and sequenced the virus and shared these data internationally. The lessons from the SARS epidemic—where China was insufficiently prepared to implement infection control practices—have been successfully learned. By most accounts, Chinese authorities are meeting international standards and isolating suspected cases and contacts, developing diagnostic and treatment procedures, and implementing public education campaigns. Dr Tedros has praised China for its transparency, data sharing, and quick response. Likewise, WHO has reacted fast and diligently. Despite massive attention and conjecture about the level of threat posed by 2019-nCoV, and whether WHO should declare a PHEIC, the agency's emergency committee has not bowed to pressure to take such a decision until necessary. We commend WHO for its resilience.

There are still many gaps in our understanding. The early experiences of these patients and the response to their symptoms before cases were reported remain undocumented. The exposure and possible infection of health workers remain extremely worrying. We will not know for some time the consequences of the quarantine imposed in Wuhan on Jan 23, 2020. Chinese public health authorities are under enormous pressure to make difficult decisions with an incomplete, and rapidly changing, understanding of the epidemic. The shutdowns may seem a drastic step—whether they represent an effective control measure deserves careful investigation and much will likely depend on maintaining trust between authorities and the local population. News media that worsen fears by reporting a "killer virus" only harm efforts to implement a successful and safe infection control strategy.

Openness and sharing of data are paramount. There are enormous demands for rapid access to information about this new virus, the patients and communities affected, and the response. But equally crucial is the need to ensure that those data are reliable, accurate, and independently scrutinised. As for all public health emergencies, we will be making all related *Lancet* content fully and freely available. ■ *The Lancet*



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