

Offline: COVID-19—what have we learned so far?



COVID-19 has left little time for reflection about lessons to be learned. This coronavirus has provoked us, mobilised us, and distracted us. But with a vaccine on the horizon, it's perhaps time to pause. What have we discovered this past year? And how do these discoveries inform our future? Our annual *Lancet*-Chinese Academy of Medical Sciences conference—held virtually last week—provided a moment for such contemplation.

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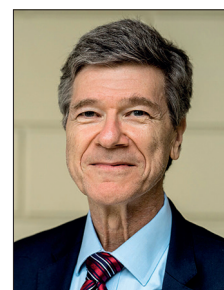
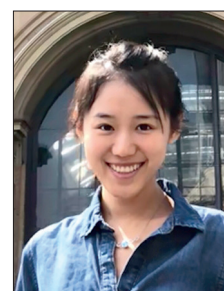
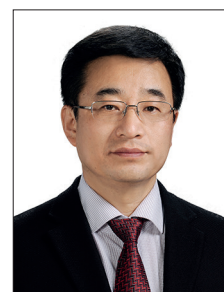
Gabriel Leung underlined the phenomenon of East Asian exceptionalism. Why had countries such as China, Japan, New Zealand, and South Korea performed so much better than those in the west? "Sociological imprinting", he suggested. The region has been a point of origin for so many new infectious diseases. People were primed to act and ready to accept government mandates. Luzhao Feng showed how the Chinese strategy of "zero-COVID-19" worked. Initial rapid containment followed by suppression. The principal threat now is from imported cases. Border controls and screening are high priorities. Till Bärnighausen explained how classic public health functions—surveillance, isolation, and health promotion—were relearned and reinvented. Surveillance became contactless. Isolation was delivered through Fangcang shelter hospitals. And health promotion used wordless interventions, such as education-entertainment videos. Holger Schünemann emphasised the importance of being transparent about uncertainty. An example: mask wearing. Pooling evidence suggests that masks might reduce risks of coronavirus spread by 14%. But that evidence is of low certainty. The potential impact of mask wearing also depends on virus exposure. In areas of low exposure, masks may not be necessary. In areas of high exposure, they may be a wise precaution. Jie Qiao explored the lessons of COVID-19 for child health. Her conclusions were chilling. Newborn children were separated from their mothers for over a month at the height of the pandemic. The potential effects of COVID-19 on infant motor, cognitive, personal, and emotional development are serious and severe. Bin Cao argued that the long-term consequences of COVID-19—physical, social, and psychological—are real and important. The existence of "long-COVID" should not be surprising for a virus that affects multiple organs. Roy Anderson looked ahead to vaccine distribution. Herd

immunity is the impact of the fraction of those who are immune on the rate of transmission of the virus. He estimated we will need to achieve 60–70% immunity to be safe. Vaccination should begin in cities. It will take 2–3 years to "mop up" the virus. Which groups should receive the vaccine first depends on the context. In high-income countries, it makes sense to prioritise older citizens. But in a country like Kenya, you might start with younger ages. Wei Cun discussed how second-generation COVID-19 vaccines are already being designed. It is unlikely that vaccines soon to be approved will be the same as those used in years to come. Simiao Chen made clear that even with a vaccine we will still need non-pharmaceutical interventions—some measure of physical distancing; an effective test, trace, and isolate system; the adoption of facility-based isolation, widely used in Asia, but not at all in western countries; and clear communication and education. Wenbo Xu warned of the risks of reintroducing coronavirus through hidden importation in cold chain products. Winnie Yip drew attention to the continuing risks for older people. Physical distancing in care homes is almost impossible. Isolation has disproportionately severe effects on the mental health of older citizens. And even partial lockdowns interrupt necessary patterns of care. Zhenguo Zhai focused on the importance of improving the quality of clinical care for those with COVID-19. The rapid development and implementation of clinical guidelines will save lives. And Zhong Liu illustrated how research in the middle of a pandemic—his example was the efficacy or not of convalescent plasma—can be immediately informative for refining clinical care.

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Finally, Jeff Sachs, who leads *The Lancet's* Commission on COVID-19, connected the importance of stopping the pandemic and understanding its humanitarian challenges with a wider set of no less urgent issues—the deep scarring of economies and cutting a path towards recovery. The lessons we learned from this Chinese-western collaboration were only a beginning. These exchanges must be part of a much larger effort to make sense of what has happened to us. But it was a beginning nonetheless.

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