

Announcements

World Flu Day, Be Aware of the Unavoidable Enemy — November 1, 2020

George F. Gao

World Flu Day, designated to be every November 1, was initiated in 2018 at the Asian-Pacific Centenary Spanish 1918-Flu Symposium to commemorate the 100 years that followed the Spanish Flu Pandemic in 1918 (1). In an article in *Lancet*, I laid out four major purposes for World Flu Day: 1) to commemorate the centenary of the 1918–1919 influenza pandemic; 2) to raise public awareness of influenza; 3) to accelerate scientific innovation and basic research efforts toward remaining challenges of influenza, particularly the development of a universal flu vaccine; and 4) to push for stronger global political will in continuing the support of influenza prevention and control (1).

At the conference, five expert scientists from around the world, including Drs. Yoshihiro Kawaoka of the University of Wisconsin, Mark von Itzstein of Griffith University, Lei Liu of Shenzhen Third People's Hospital, and Kwok-Yung Yuen from Hong Kong University, together with me led the symposium and established this special day. Dr. Robert Webster, of St. Jude Children's Research Hospital, delivered the keynote speech, calling for the world to wake up to the inevitability of a pandemic and reminding us to respect "Mother Nature" and to control influenza viruses. Dr. Tedros Ghebreyesus, Director-General of the World Health Organization (WHO) and Dr. Hesheng Wang, Deputy Minister of National Health Commission (NHC) of the People's Republic of China stressed the importance of prioritizing highly influenza prevention and control, and emphasized the commitment of WHO and China to pandemic preparedness and response.

War against pathogens has been a constant event for mankind. Emerging and reemerging pathogens have been the most dangerous threats to humans, with coronavirus disease 2019 (COVID-19) a clear, recent example (2). Louis Pasteur, the famed French biologist, renowned for his contributions to vaccines and the invention of pasteurization, once remarked: "Gentlemen, it is the microbes who have the last word" (3); Nobel Laureate Joshua Lederberg said that: "The single biggest threat to man's continued dominance on the planet is the virus" (4); and Bill Gates remarked that: "If anything kills over 10 million people in the next few decades it's highly likely to be a highly-infectious virus rather than a war. Not missiles, microbes" (5). The relationship between mankind and microbes has become akin to cartoon characters Tom and Jerry of Warner Bros., where one constantly tries to outmaneuver the other. So far, mankind has managed to coexist with microbes, but the threat of pathogens will always remain.

The first mention of Spanish flu appeared in a weekly public health report on April 5, 1918, and described 18 severe cases and 3 deaths in Haskell, Kansas in the United States (6). Smith, Andrewes, and Laidlaw managed to isolate the influenza A virus in ferrets in 1933, which was then followed by Francis isolating influenza B virus in 1936 (7). Though we, as a global community, have experienced 4 influenza pandemics thus far (1918 H1N1, 1957–1958 H2N2, 1968 H3N2, and 2009 H1N1pdm09), together with the 1977 H1N1 recognized as a "pseudo pandemic", our preparedness is still woefully lacking as evidenced by the rapid spread of COVID-19 (8). The global community needs to unite against this common enemy, as divisions serve only to weaken our ability to respond to and control microbes.

Evidence from previous pandemic influenza viruses indicates the animal origin of the gene segments involved in each pandemic before the virus circulation in humans. Meanwhile, considering the continuously emerging human-infecting avian influenza viruses, e.g. H5N1, H7N9 and swine influenza viruses, e.g. Eurasian avian-like H1N1, poultry, wild birds and swine may provide reservoirs for the development of the next influenza pandemic (9–10). Thus, the concept of One Health is essential to ensure continued safety of not just the public's health, but of ecosystems and environments that reduce otherwise unbridled spread of dangerous microbes. Advocacy for One

Health involves multi-sectoral research, policy, legislation, and programs for surveilling, preventing, detecting, and responding to influenza pandemics (11).

A key purpose of World Flu Day is to gather political will to aggregate available resources and reduce the impact of influenza. The 2019 World Flu Day theme was “Know Flu, Prevent Flu, and Beat Flu” (12). This year’s theme is “Influenza Control and COVID-19 Pandemic Response”. In our landscape still being shaped by the COVID-19 pandemic, we must not forget the devastating impact of the influenza virus. We, as a global health community, have eradicated smallpox, and we can strive for victory over influenza by bolstering our combined research and surveillance efforts.

doi: [10.46234/ccdcw2020.227](https://doi.org/10.46234/ccdcw2020.227)

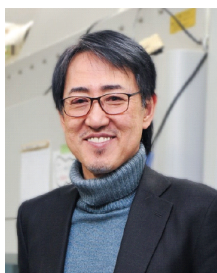
Submitted: October 28, 2020; Accepted: October 29, 2020

REFERENCES

1. The Lancet. World Flu Day: momentum from China for influenza control. *Lancet* 2018;392(10158):1600. [http://dx.doi.org/10.1016/S0140-6736\(18\)32770-3](http://dx.doi.org/10.1016/S0140-6736(18)32770-3).
2. Wang C, Horby PW, Hayden FG, Gao GF. A novel coronavirus outbreak of global health concern. *Lancet* 2020;395(10223):470 – 3. [http://dx.doi.org/10.1016/S0140-6736\(20\)30185-9](http://dx.doi.org/10.1016/S0140-6736(20)30185-9).
3. Beaubien J. Stinging report on pandemics makes Louis Pasteur look like a prophet. NPR News. 2016. <https://www.npr.org/sections/goatsandsoda/2016/01/13/462950704/stinging-report-on-pandemics-makes-louis-pasteur-look-like-a-prophet>. [2020-10-28].
4. Lederberg J. Medical science, infectious disease, and the unity of humankind. *JAMA*. 1988;260(5): 684-5. <https://pubmed.ncbi.nlm.nih.gov/3392795/>.
5. ET Online. Not missiles, microbes: Bill Gates had warned the world of an epidemic 5 yrs ago. 2020. https://economictimes.indiatimes.com//magazines/panache/not-missiles-microbes-bill-gates-had-warned-the-world-of-an-epidemic-5-yrs-ago/articleshow/74690072.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst. [2020-10-28].
6. CDC. 1918 pandemic influenza historic timeline. 2018. <https://www.cdc.gov/flu/pandemic-resources/1918-commemoration/pandemic-timeline-1918.htm>. [2020-10-28].
7. CDC. Influenza. 2019. <https://www.cdc.gov/vaccines/pubs/pinkbook/flu.html>. [2020-10-28].
8. CDC. Past pandemics. 2018. <https://www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html>. [2020-10-28].
9. Bailey ES, Choi JY, Fieldhouse JK, Borkenhagen LK, Zemke J, Zhang D, et al. The continual threat of influenza virus infections at the human-animal interface: What is new from a one health perspective? *Evol Med Public Health* 2018;2018(1):192 – 8. <http://dx.doi.org/10.1093/emph/eoy013>.
10. Sun HL, Xiao YH, Liu JY, Wang DY, Li FT, Wang CX, et al. Prevalent Eurasian avian-like H1N1 swine influenza virus with 2009 pandemic viral genes facilitating human infection. *Proc Natl Acad Sci U S A* 2020;117(29):17204 – 10. <http://dx.doi.org/10.1073/pnas.1921186117>.
11. WHO. One health. 2017. <https://www.who.int/news-room/q-a-detail/one-health>. [2020-10-28].
12. Xinhuanet. Chinese experts call for global cooperation in flu prevention. 2019. http://www.xinhuanet.com/english/2019-11/01/c_138521324.htm. [2020-10-28].



George F. Gao
 Director-General of the Chinese Center for Disease Control and Prevention
 Member of the Chinese Academy of Sciences
 Foreign Associate of National Academy of Sciences and National Academy of Medicine,
 USA



Yoshihiro Kawaoka
 University of Wisconsin-Madison
 Foreign Associate of National Academy of Sciences, USA



Mark von Itzstein
 Griffith University, Australia
 Fellow of the Australian Academy of Science



Lei Liu
Director of Shenzhen Third
People's Hospital



Kwok-Yung Yuen
The University of Hong
Kong
Member of the Chinese
Academy of Engineering



Hesheng Wang
Deputy Minister of National Health Commission of the People's
Republic of China

Wang sent a congratulatory letter to the inaugural World Influenza Day Conference:

Influenza is a public health issue of global concern. Since 2000, China has set up influenza surveillance network including 408 national influenza surveillance network laboratories and 554 sentinel surveillance hospitals, which cover all cities and key counties in the national influenza surveillance network. The Chinese National Influenza Center is also a WHO Collaborating Centre for Reference and Research on Influenza. China is ready to work under the WHO framework of the influenza pandemic prevention and control, actively participate in global health, and contribute Chinese experience and knowledge for public health.



Dr Tedros Adhanom Ghebreyesus
WHO Director-General

Dr Tedros sent a congratulatory video for the inaugural World Influenza Day Conference:

“WHO’s collaborating centers in China, the USA, UK and Australia, and Japan are the global connective tissue in continuously monitoring influenza around the world. Thank you for your commitment to pandemic preparedness and response, although another flu pandemic is inevitable, together we can make sure that the world is much better prepared and protected.”



Robert G. Webster
St. Jude Children’s Research Hospital, USA
Member of National Academy of Sciences, USA

Robert gave a keynote speech for the inaugural World Influenza Day Conference:

It is my great honor to be invited to this very important meeting to celebrate the beginning of World Flu Day. This is really an important day. I congratulate those who are involved in arranging the World Flu Day. We have many questions still remaining for the next generation of young people for influenza.