2019-nCoV

Daily updates on the emerging novel coronavirus from the Johns Hopkins Center for Health Security.

EPI UPDATES: The total number of confirmed cases is at least 631. Cases have now been found in most provinces in China.

HUBEI (WUHAN) UPDATES: In addition to Wuhan, travel has been shut down in nearby Ezhou and Huanggang has been suspended. Western media reports that grocery stores and petrol stations are low on stock. School vacation has been extended. Hubei Province reports that there is a shortage of designated hospital beds ("There is indeed a long queue of fever clinics and tight beds.") and that there have been additional healthcare worker infections. he Province has added an additional 3,000 beds from hospitals that were not previously designated. Contact tracing found fever symptoms in 35 people (2.5%) and 1 suspected case. The total quarantined population is now ~20 million Chinese citizens

Nationally , all large Lunar New Year celebrations have been cancelled.

DIAGNOSIS: Hubei Province reports that it can process 200 samples per day, and that results take two days. The Province is scaling up to a capacity of 2,000 samples per day.

Maca o announced a second case in a 66 year old male tourist from Wuhan. He was detected at an entrance screening.

Hong Kong officials announced they would turn two holiday camps, including a former military barracks, into quarantine zones for people who may have come into contact with carriers of the Wuhan virus.

SUPERSPREADING DENIED: Chinese state media denies that a superspreading event has been identified. The original announcement was made in an official press conference. "Rumor? Super communicators have appeared: On January 22, Gao Fu [George Gao], an academician of the Chinese Academy of Sciences and director of the Chinese Center for Disease Control and

Prevention, said at a press conference held by the State Council that there is no evidence that "super communicators" have appeared, but we will pay close attention. He further explained that MERS occurred in the Middle East and there has been no 'super communicator. In Korea, "super communicator" has appeared [when a MERS case was imported]."

FATALITY DETAILS PUBLISHED: The Chinese National Health Commission published clinical details of 17 fatal cases. 15 were over the age of 60, and most had underlying chronic conditions. Although a detailed analysis is not yet available, preliminary time from hospitalization to death is approximately one week on average.

DOMESTIC SCREENING: Nine passengers on a flight from China to Boston were medically evaluated at Logan International Airport after it was determined they came from Wuhan, … according to officials.

ADDITIONAL PHYLOGENY: This phylogeny shows evolutionary relationships of viruses from the novel coronavirus (nCoV) outbreak. All samples are highly related with at most three mutations relative to a common ancestor. This suggests these samples share a highly recent common ancestor.
We now observe clustering of related infections. These are a cluster of two infections in Zhuhai (Guangdong/20SF028/2020 and Guangdong/20SF040/2020) and a cluster of three infections in Shenzhen (Guangdong/20SF013/2020, Guangdong/20SF025/2020, Guangdong/20SF012/2020). These are noted in GISAID as "family cluster infection". This almost certainly represents human-to-human transmission.
Via https://nextstrain.org/ncov

Comment from Michael: The phylogenetic clustering is based upon very few informative positions, but that's unavoidable and given the very short real time between samples, not an issue with the results. That said, it's interesting that there are two Guangdong clusters. It is probably too early to attribute the mutations behind those clusters to adaptation. Rather, they are likely drift and local fixation through founder-effect.

SNAKES
The paper that describes the theoretical, and deeply suspect relationship between nCoV and snakes:
Homologous recombination within the spike glycoprotein of the newly identified coronavirus may boost cross-species transmission from snake to human
https://onlinelibrary.wiley.com/doi/abs/10.1002/jmv.25682

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