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Editorial

A short note on Coronavirus disease 2019 (COVID-19) outbreak

DS Briggs

University of New England, Armidale, New South Wales, Australia

Email: dsbriggs007@gmail.com

This short note is provided to readers as the current coronavirus disease 2019 (COVID-19) pandemic coincides with the publication of the latest issue. We have sourced summarised data from existing publications and links to those articles rather than attempt a detailed coverage and analysis of a complex, rapidly changing context that requires a range of diverse expertise to address.

While the articles were sourced from Google Scholar and are contemporary, the spread of the virus has been rapid and variable and, the data has changed. However, we have attempted to provide articles focussed on 'lessons learned' as we would like our readers to reflect on what the lessons might be and as academics, researchers and health professionals we might consider what actions we might take to plan for better pandemic and public health controls. In fact, we would appreciate responses, preferably in the form of articles for publication.
The ASEAN Institute for Health Development and this Journal have a focus on global health, primary healthcare and health systems management. We would appreciate articles on this topic that are relevant to those interests.

DS Briggs
Honorary Chief Editor

How will country-based mitigation measures influence the course of the COVID-19 epidemic? ***Roy M Anderson Hans Heesterbeek Don Klinkenberg T Déirdre Hollingsworth Published: March 09, The Lancet. 2020 DOI:https://doi.org/10.1016/S0140-6736(20)30567-5 PlumX Metrics***

'Governments will not be able to minimise both deaths from coronavirus disease 2019 (COVID-19) and the economic impact of viral spread. Keeping mortality as low as possible will be the highest priority for individuals; hence governments must put in place measures to ameliorate the inevitable economic downturn. In our view, COVID-19 has developed into a pandemic, with small chains of transmission in many countries and large chains resulting in extensive spread in a few countries, such as Italy, Iran, South Korea, and Japan.1 Most countries are likely to have spread of COVID-19, at least in the early stages, before any mitigation measures have an impact.'[1]

Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention - ***Wu Z, McGoogan JM. Characteristics of and Important Lessons From the***

Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. JAMA. Published online February 24, 2020. doi:10.1001/jama.2020.2648

'Among a total of 72 314 case records (Box), 44 672 were classified as confirmed cases of COVID-19 (62%; diagnosis based on positive viral nucleic acid test result on throat swab samples), 16 186 as suspected cases (22%; diagnosis based on symptoms and exposures only, no test was performed because testing capacity is insufficient to meet current needs), 10 567 as clinically diagnosed cases (15%; this designation is being used in Hubei Province only… Most case patients were 30 to 79 years of age (87%), 1% were aged 9 years or younger, 1% were aged 10 to 19 years, and 3% were age 80 years or older. The overall case-fatality rate (CFR) was 2.3% (1023 deaths among 44 672 confirmed cases).

- The timing of the COVID-19 outbreak, prior to China's annual Lunar New Year holiday, was an important factor as China considered how to respond to the outbreak.
- China focused on traditional public health outbreak response tactics—isolation, quarantine, social distancing, and community containment
- another major goal of China's current outbreak response activities is to help "buy time" for science to catch up before COVID-19 becomes too widespread. China must now focus on adjusting tactics and strategies as new evidence becomes available.
- China is very grateful for the help it is receiving from the international scientific, health, and public health communities. The global society is more interconnected than ever, and emerging pathogens do not respect geopolitical boundaries. Proactive investment in public health infrastructure and capacity is crucial to effectively respond.
- it is critical to continue to improve international surveillance, cooperation, coordination, and communication about this major outbreak and to be even better prepared to respond to future new public health threats.'[2]

The SARS, MERS and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: what lessons have we learned? ***Noah C Peeri et al. International Journal of Epidemiology, 2020, 1–10 doi: 10.1093/ije/dyaa033 Opinion***

'Key Messages

- Inadequate risk assessment by the Chinese government hampered efforts to contain the virus.
- The current novel coronavirus (COVID-19) has surpassed Severe Acute Respiratory Syndrome (SARS) in the number of cases and deaths from the disease.
- Closure of the live-animal markets in China may decrease the likelihood of another zoonotic outbreak occurring.
- Human-to-human transmission has been confirmed, and although several measures have been taken to mitigate the virus' spread, travel to impacted regions should be avoided if possible

Conclusions: We conclude that we did not learn from the two prior epidemics of coronavirus and were ill-prepared to deal with the challenges the COVID-19 epidemic

has posed. Future research should attempt to address the uses and implications of internet of things (IoT) technologies for mapping the spread of infection.'[3]

Immune responses in COVID-19 and potential vaccines: Lessons learned from SARS and MERS epidemic ***Eakachai Prompetchara,1,2,3 Chutitorn Ketloy,1,2 Tanapat Palaga4,5. Asian Pacific Journal of Allergy and Immunology. REVIEW ARTICLE DOI 10.12932/AP-200220-0772.***

'Looking at the similarities and differences between the current SARS-CoV-2 and the previous outbreak of SARS and MERS,

- a striking similarity emerges with some unique features of its own. As the COVID-19 causes serious public health
- concerns across Asia and on the blink to affect world population, investigation into the characteristics of SARS-CoV-2, its
- interaction with the host immune responses may help provide a clearer picture of how the pathogen causes diseases in some individuals while most infected people only show mild or no symptoms at all.
- In addition, the study of the immune correlates of protection and the long-term immune memory from convalescent individuals may help in design prophylactic and therapeutic measures for future outbreak of similar coronaviruses.'[4]

Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts. ***Joel Hellewell et al. The Lancet Global Health https://doi.org/10.1016/S2214-109X(20)30074-7.***

'Interpretation

In most scenarios, highly effective contact tracing and case isolation is enough to control a new outbreak of COVID-19 within 3 months. The probability of control decreases with long delays from symptom onset to isolation, fewer cases ascertained by contact tracing, and increasing transmission before symptoms. This model can be modified to reflect updated transmission characteristics and more specific definitions of outbreak control to assess the potential success of local response efforts.'[5]

Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, ***Yokohama, Japan, 2020. Mizumoto Kenji , Kagaya Katsushi , Zarebski Alexander , Chowell Gerardo . Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020. Euro Surveill. 2020;25(10):pii=2000180. https://doi.org/10.2807/1560-7917. ES.2020.25.10.2000180.***

'In summary, we have estimated the proportion of asymptomatic cases among individuals who tested positive for SARS-CoV-2 along with the times of infection of confirmed cases on board the Diamond Princess cruise ship after adjusting for the delay in symptom onset and right censoring of the observations.'[6]

Prevention Is Better Than the Cure: Risk Management of COVID-19 ***Michael McAleer Editorial. . Risk Financial Manag. 2020, 13(3), 46; https://doi.org/10.3390/jrfm13030046.***

Editorial

'Abstract: A novel coronavirus was reported to the World Health Organization (WHO) in China on 31 December 2019. The WHO named the disease COVID-19 on 11 February 2020. As of 26 February 2020, the disease has been detected on all continents, except for Antarctica. Daily updates on COVID-19 since early February 2020 have made headline news worldwide for much of 2020. This editorial evaluates risk management based on the Global Health Security (GHS) Index of global health security capabilities in 195 countries. The GHS Index lists the countries best prepared for an epidemic or pandemic. COVID-19 is compared with two related coronavirus epidemics, SARS and MERS, in terms of the number of reported human infections, deaths, countries, major country clusters, timelines, and the likelihood of discovering a safe, effective, and approved vaccine.'[7]

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