



## COVID-19 and the Asia-Pacific Journal of Public Health (APJPH) - update as on 12 April 2020

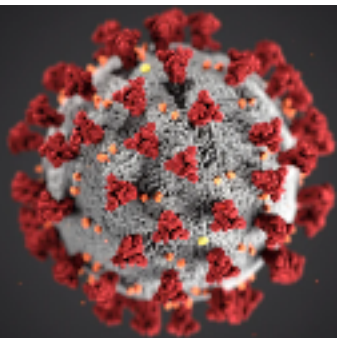
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COVID-19 is dominating our world at the present time. The Asia-Pacific Journal of Public Health (APJPH) Editorial Office is in Kuala Lumpur, which like many places in the world is under lockdown at present and our hard-working staff are working from their homes. The APJPH is published for APACPH by SAGE who do a lot of their production work in India. India is also under lockdown and journal issues may be delayed. This makes it difficult for us to present information on COVID-19 in a timely fashion. We prepared an editorial on COVID-19 which evolved into a short commentary (1). When we were preparing it in March, there were reports of 98 000 cases and 3 200 deaths to the end of February 2020. Now a month later, the reported number of infected people is 2.1 million and more than 146,000 have died (1). The epicentre of the epidemic has shifted and is now in the USA with 633 000 cases and more than 28 000 deaths. It will be very interesting when the epidemic subsides to discuss the reasons for the disparities in cases and deaths.



One important issue will be how to count the number of cases, issues of definition, testing and the interpretation of the test results to ascertain all cases, including in sub-clinical cases. Some of the small European countries have tested up to 10% of the population (e.g. Iceland) while some larger countries like the USA and Russia have much lower testing rates. Most Asian countries have very low rates of testing.



In most epidemics of new disease (e.g. Lassa Fever), initially only severe cases are tested and recorded. Cases with minimal symptoms are not tested and are therefore ignored. Then there is the issue of asymptomatic cases. These are often infectious and can transmit the disease, but so far, no countries have undertaken serology testing of a population sample to estimate the true incidence. A new study by Christian Bommer & Sebastian Vollmer of the University of Goettingen, estimates that the average detection rate of severe acute respiratory syndrome coronavirus (SARS-CoV-2) infections is around six percent. Their letter will be published soon in Lancet Infectious Diseases, but is available now on their website (2). The Johns Hopkins Corona Virus Center keeps a tally of the many reasons that totals of cases and to a lesser extent, deaths, are being unreported (3).

Counting of numbers is the basis of public health and as they become stabilised, we look forward to receiving papers on the topic. In the meantime, we propose to publish selected letters on the topic. When it appears that the situation has stabilised sufficiently, we will gladly publish good papers that use data will not be too-dated before it is published. At present, we are receiving a number of papers that seem to be little more than summaries of newspaper reports without adequate data and analysis.



### **Why is COVID-19 spreading so rapidly?**

- 1) It has a high transmission rate
- 2) Rather ironically it is a “successful” because it is so “unsuccessful” as a virus. Severe acute respiratory syndrome (SARS) was highly effective at killing and had a very high case fatality rate (CFR) of perhaps 80% and no-one was left alive to spread the virus. With isolation and contact tracing, it was possible to eliminate transmission. On the other hand, COVID-19 is a less “successful” virus and has a CFR of 1-3% leaving plenty of cases remaining in the community and spreading the virus. In this scenario, only strict “lockdown” and hygiene (e.g. hand washing, etc) is our only defence until a vaccine or treatment is found. There is also the deterrent for less severe cases in some countries (notably the USA) of the cost of testing or the bankrupting cost of treatment. This encourages spread and not prevention.
- 3) Second Wave. It may be possible to close all borders and trace and isolate all contacts. New infections will then stop. However, unless infections are stopped all over the world, new infections are likely to be imported. Australia tries to overcome this problem by quarantining everyone who arrives from overseas for 14 days. But shutting down business and tourism indefinitely is not possible. Singapore has recently experienced a second wave as the virus has entered labour camps where people live in crowded circumstances. As countries relax restrictions, new waves of infections can be expected until a vaccine is available.

## Interpreting statistics

Some problems we have noticed:

Many graphs have appeared using a logarithmic 'Y-axis'. Superficially, it may look like a slowing of the incidence. It is a very basic epidemiology to remember to check the scales of both axes.

Calculation of Case Fatality Ratio needs to be done carefully. If the incidence is increasing rapidly, the denominator will be inflated (unless adjusted) and will underestimate the ratio.

## Preventing infection for health workers

In all countries, health workers are at greater risk. For my clinical work (CB), I wear "scrubs", gloves, glasses and mask. My hands are washed or sanitised every time I touch an instrument or a person. I live near the clinic where I work and as soon as I get home, I immediately place all clothing in the washing machine (hot water) and then shower. Masks have to be changed frequently, but we don't have enough. They can be microwaved for 3 minutes (600 Watts) which will kill all bacteria and viruses.

Here is the Australian website on hand hygiene with a downloadable handbook (an excellent advice based on WHO standards). If you complete the exam (and pass) you will be sent a certificate (not sure if this applies outside of Australia) (4).



## References:

1. Binns C, Low WY, Lee MK. The COVID-19 pandemic: Public Health and Epidemiology. *Asia-Pac J Public Health*. 2020;32(4).
2. Bommer C, Vollmer S. Average detection rate of SARS-CoV-2 infections is estimated around six percent. *Lancet Infect Dis*. 2020 (published online).
3. Johns Hopkins University. Corona virus resource centre. 2020. Accessed April 17, 2020. <https://coronavirus.jhu.edu/map.html>
4. Australian Commission on Safety and Quality in Health Care. National Hand Hygiene Initiative Manual. 2019. [https://www.safetyandquality.gov.au/sites/default/files/2020-03/nhhi\\_user\\_manual\\_-\\_october\\_2019.pdf](https://www.safetyandquality.gov.au/sites/default/files/2020-03/nhhi_user_manual_-_october_2019.pdf). Accessed April 11, 2020.

**Note:** Colin Binns is the Editor-in-Chief of Asia-Pacific Journal of Public Health (APJPH) ([c.binns@curtin.edu.au](mailto:c.binns@curtin.edu.au)) and Wah Yun Low is the Managing Editor of APJPH and also the President of APACPH ([lowwy@um.edu.my](mailto:lowwy@um.edu.my))