

Lessons learned from the first six months of COVID-19

1. As of 29 June, 2020, the [World Health Organization \(WHO\)](#) had, since January, recorded 10,021,401 'official' cases of COVID-19, with 499,913 deaths globally. These numbers are certainly too low. 'End of life' is unmistakable, so those counts may prove to be no more than two-fold out when we later see annual excess death statistics. But case numbers must inevitably reflect differential capacities to identify **asymptomatic** and mild infections by expensive PCR testing.
2. Until we have reliable, cheap serological assays that can be used at very large scale to detect the antibody 'footprints' of past infection, it is possible that the real 'case numbers' globally could be as much as 5 to 10-fold higher than the WHO figures. Following the extreme '10x-too-low' scenario, a simple calculation tells us that 98 per cent of the global population is still vulnerable. Most epidemiologists think that 'herd immunity' should cut-in for COVID-19 when about 60 per cent of people have been infected. Some regions, like Brazil, where there has been minimal intervention by government will hit that earlier than others. Such 'natural experiments' are being closely watched. But it's obvious that, for many countries, there is a way to go. This may only come to an end for most with the roll-out of effective vaccines to boost 'herd immunity' across the planet.
3. (1) Real viruses don't move themselves. (2) They don't blow across the oceans like dust plumes from the Saharan Air Layer and they are not, like computer 'viruses' and conspiracy theories, disseminated via 5G networks. (3) SARS-CoV-2, the virus that causes the disease COVID-19, flew around the world in people travelling in Boeings and Airbuses. (4) Could the global spread of this virus have been slowed, even stopped, if there had been an early decision to shut down non-essential international air travel and impose quarantine restrictions on incoming passengers and flight crew? (5) The thinking of responsible bodies like the WHO and the public health authorities advising national governments was, I suspect, conditioned by the influenza mantra, that it isn't possible to block the global spread of respiratory viruses by stopping the planes. (6) But is that true?
4. We now know, particularly from the Australian and New Zealand experience of confining newly arrived travellers in supervised hotels, that a properly monitored 14-day quarantine can greatly limit virus entry. The influenza model was, perhaps, more historical and 'conviction-based' than fact-based. Both influenza and COVID-19 can be transmitted by people who are pre-symptomatic and, in the case of the coronavirus, we can add 'remain asymptomatic' to that. The R_0 (the basic reproductive number for a virus, essentially, how infectious the disease is) for a highly infectious influenza A virus and for SARS-CoV-2 is about 2.5, so what works for one should work for the other.
5. Influenza is an old and familiar disease, and we don't stop the world for it. But one of the lessons we could learn from COVID-19 is that if an influenza A virus strain that's as bad as the 1918-19 'Spanish flu' virus comes out of nature sometime in the near to distant

future, it would make sense to put strict controls on internal and international travel fast. Then, with SARS-CoV-2 being the third bat coronavirus to cause a human epidemic in the past 20 years, we are acutely aware that bats host many more coronaviruses, along with known human **pathogens** in the *henipavirus*, *ebolavirus* and *rhabdovirus* lineage. Of course, not all of these have obvious pandemic potential.

6. Is COVID-19 telling us that, without effective and agreed global policies, jet planes and cruise ships may be as dangerous to humanity as the sailing ships that, from the 15th century, transported Europeans to the remote 'New Worlds' of the Americas and Australasia? Smallpox, measles, yellow fever and so forth travelled with those adventurers to wipe-out large numbers of the immunologically naïve, and totally vulnerable, Indigenous peoples. What we are doing now with such large population sizes and food stress in our connected (yet massively unequal) world is to 'sample' the remotest corners of the earth for novel, pandemic pathogens.
7. Pandemic influenza A viruses may be novel but, as I will discuss later, there can be significant cross-protective immunity resulting from prior exposure to other flu strains. The thought may come as a surprise, but COVID-19 could, in fact, be the first global pandemic caused by a completely new (to humans) respiratory virus since modern science began in the 17th century. As such, it joins the human immunodeficiency (HIV) viruses that so dramatically impacted on us from the early 1980's, though there's now reasonable evidence that these retrovirus infections were grumbling away in West Africa for the previous 50 years. Like SARS-CoV-2, they were disseminated globally by jet air travel. Of course, HIV and COVID-19 pose different levels of threat. Changing behaviour and cleaning up the blood supply stops HIV transmission, but we can't decide not to breathe!
8. As we think about the lessons learned so far from COVID-19, a major consideration may be to work out how we ensure that a rapid, hopefully short, sharp lockdown of people-transfer between nations states could be implemented without causing major economic damage. That would cost all countries infinitely less than yet another, and likely much more severe, pandemic. More of this six-month report next week.

Link to the article: <https://www.doherty.edu.au/news-events/setting-it-straight/lessons-learned-from-the-first-six-months-of-covid-19-part-1>

Question 1: What is closest meaning of the word “asymptomatic”? (Paragraph 1)

- A. showing no symptoms of a particular disease
- B. continuing for a long time
- C. not working or reacting to changes, instructions

D. in a way that is not reasonable or normal, or cannot be controlled

Question 2: Which sentence is the main idea sentence of paragraph 3?

Sentence 5

Sentence 3

Sentence 4

Sentence 1

Question 3: What is your view about the last question in paragraph 3?

Question 4: What is the main idea sentence of paragraph 4?

- A. We now know, particularly from the Australian and New Zealand experience of confining newly arrived travellers in supervised hotels, that a properly monitored 14-day quarantine can greatly limit virus entry
- B. The influenza model was, perhaps, more historical and ‘conviction-based’ than fact-based
- C. Both influenza and COVID-19 can be transmitted by people who are pre-symptomatic and, in the case of the coronavirus, we can add ‘remain asymptomatic’ to that
- D. The R0 (the basic reproductive number for a virus, essentially, how infectious the disease is) for a highly infectious influenza A virus and for SARS-CoV-2 is about 2.5, so what works for one should work for the other.

Question 5: What does the word PATHOGENS stand for? (Paragraph 5)

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Question 6: What is the topic of paragraph 5?

- A. The cause of Influenza
- B. COVID-19 and travelling
- C. Similarities between Influenza, Spanish Flu and Covid-19

Question 7: Which virus is NOT mentioned in the article?

Henipavirus

Thogotovirus

Ebolavirus

Rhabdovirus

Question 8: Which of the following sentences is FALSE?

- A. A properly monitored 14-day quarantine can greatly limit virus entry.
- B. Without effective and agreed global policies, jet planes and cruise ships may be as dangerous to humanity.
- C. SARS-CoV-2, the virus that causes the disease COVID-19, moved itself around the world.
- D. Changing behaviour and cleaning up the blood supply stops HIV transmission.

Question 9: Which writing patterns does writer use in paragraph 7?

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Question 10: What is the pattern used in paragraph 8?

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