## Masters World Championships, Cogne, Italy, 2020 – or not!

It was Friday evening, a little less than a week before the MWC was due to start in Cogne, and I was on my way home from a week's work in Kosovo. It was not very long after the bad storms which had hit the UK and, because I was due to set off for Cogne the following day, Saturday, but was worried that my plane home might be late, I'd left my car, with everything needed for two weeks' skiing, at Heathrow. It hadn't helped that, when I'd arrived at Heathrow a week earlier, my £45 a week meet-and-greet parking service hadn't shown up (the company involved, I've been told, is now of interest (but not that much interest) to the police) and I'd had to pay £115 on the spot for alternative parking, but that's a completely different story. Anyway, I'd been training hard since the Winter World Masters Games in Seefeld in January, and I was fully *ready* for the MWC!

Corona virus, or as it's now known Covid-nnnn19 (the average age of the combat disease in Vietnam) had been in the news, and Lombardia, the northern part of Italy around Milan, was starting to shut down. Cogne, however, further north than Lombardia, had no Covid cases. There had been some E-mails, during the previous week, from the World Masters Association saying that they and the Cogne Organising Committee (OC) were monitoring the situation but the plan was that the World Champs would still go ahead. Then, as I sat in Pristina Airport, the E-mail we'd been fearing, but hoping wouldn't arrive, did arrive – the whole event was *cancelled*. GB had eleven people scheduled to attend, and they were all informed by Julie.

Just to complete this part of the story, my plane home was bang on time, so the parking charge was a complete waste of money. There was a final E-mail from Cogne to say that, although the event itself was off, the tracks were all cut and open, anyone who wanted to come would be welcome, and hotels would only charge half price. I was sorely tempted, but the big risk would have been arriving in Cogne, Covid-19 to break out, and we might then have been quarantined there for 14 days. That was too much of a risk and, in the end, it meant that none of us made the trip, and I have no idea how many people from other countries made the trip, either.

We were all shocked because the MWC was one of the first major sporting events to be cancelled, and some of us, me included, believed that this was an unnecessary, far too cautious, move by the OC. There had been problems attracting racers to Cogne and the deadline had been extended but, even with this extension, the final count was just 609 men and 223 women, so a total of just 832, the lowest since the MWC really got established in the early 1990s (apart from Minneapolis two years ago). It is generally reckoned that about 1 000 participants are needed for an MWC to make a profit, so I even speculated that the event had been cancelled prematurely so that the OC could claim on their insurance and prevent them from making a large loss. If the event had been scheduled for, say, two weeks later, we would all have fully understood the reasons for the decision!

The cancellation meant financial losses, in terms of travel costs and accommodation, as well as the entry fee. No insurance claims could be made, because flights (or, in my case, the ferry) still departed and hotels were still open. At first it was feared that no refunds whatsoever would be made but, after some negotiation, it was agreed that half of the €200 entry fee would be given back and, for people who'd booked accommodation through the OC, deposits would also be repaid (but this didn't extend to anyone who'd booked privately). Nonetheless, some of us lost around £1 000, and it was a lot more than this for anyone coming from further afield, such as the US, Canada or, worse, Australia. Ironically, too, snow conditions in Cogne were apparently excellent! Anyway, with nothing to report on the MWC, instead we have an article about Covid-19 itself.

*What are coronaviruses and Covid-19?*

Let's start by asking exactly what we're talking about. "Coronavirus" is a generic term covering a large family of viruses, where "corona" (crown) refers to the spikes on the virus surface that look like crowns. They were first identified as human pathogens in the 1960s and, to date, seven coronaviruses that infect humans have been identified. Coronaviruses produce symptoms ranging from the common cold through flu-like illnesses up to severe respiratory problems and pneumonia. SARS and MERS, the viruses behind two previous outbreaks, were both coronaviruses. The virus behind the current pandemic is actually Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), and it is this virus which leads to the disease called Covid-19. Although the symptoms of Covid-19 may be flu-like and the transmission method is the same, coronaviruses are very different from flu viruses and they work in different ways.
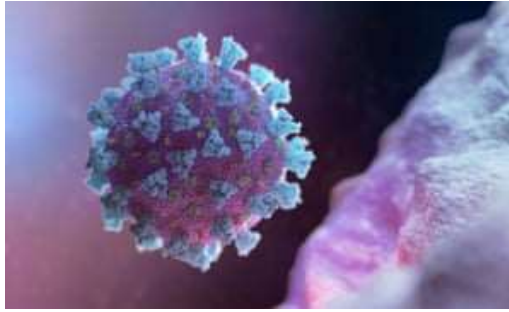
**A model of a betacoronavirus, the virus linked to Covid-19**

*Where did it come from?*

Covid-19 first emerged in Wuhan, China, in late December 2019 – that much is well known. There are different opinions on where it actually came from: some reports suggest that bats are the most likely source, another report suggests that both bats and pangolins (scaly anteaters) contain viruses similar to SARS-CoV-2, with the bat virus, RaTG13, being the closest. Some newspapers report that it got into humans by bats biting pangolins. Finally, the European Centre for Disease Prevention and Control (EDCP) says that the source is currently unknown. Both bats and pangolins are native to China, but one report suggests that pangolins are illegally imported, for food, from Malaysia and are sold live in Chinese markets. There are two possibilities for how SARS-CoV-2 developed: it mutated within an animal and was then transmitted to humans, or a different virus was first transferred to humans and then mutated into SARS-CoV-2 within humans. Detailed genetic analysis provides strong evidence that SARS-CoV-2 is not the result of deliberate manipulation, i.e. it was not manufactured in a germ laboratory and then either accidentally or deliberately released, dispelling one rumour!

*How is it spread and how does it work?*

The World Health Organisation (WHO) says that, as a respiratory disease, people catch Covid-19 from others who have the virus. The disease mainly spreads from person to person through small droplets from the nose or mouth which are emitted when a person with Covid-19 coughs or exhales. These droplets land on objects and surfaces around the person, other people then catch Covid-19 by touching these objects or surfaces, followed by touching their eyes, nose or mouth, through which the virus enters their body. People can also catch Covid-19 if they breathe in droplets from a person with the disease who coughs out or exhales droplets. Other transmission routes might be possible (such as from faeces) and these are still being examined, but they appear unlikely to be anything other than very minor sources of transfer. There's a difference of opinion about transmission, though. WHO says that most Covid-19 transmission occurs once symptoms have appeared, whereas some virologists say that transmission can, and does, happen well before this.

Droplets being inhaled explains why it is important to stay more than 2 metres away from a person who is sick (although research suggests that particles from a sneeze can travel at least 8 metres), while picking up the virus from surfaces, using a hand which then touch the face, explains why washing hands regularly is crucial, and also why people are not allowed to sit on benches, for example, when outside, because the next person to sit on that bench might then pick up the virus from there. But, hang on a second, *standing* 2 metres apart might be fair enough, but if *moving* 2 metres apart (if we assume that 2 metres is far enough), aren't we moving into possibly contaminated air? Doesn't logic suggest that we need to be much further apart if we're moving?

Many people with the disease experience only mild symptoms, particularly in the early stages. It is therefore possible to catch Covid-19 from someone who has, for example, just a mild cough. Once virus-ridden particles are inhaled, they come into contact with cells lining the throat and larynx. These cells have large numbers of receptors, known as Ace-2 receptors, on their surfaces. SARS-Cov-2 virus has a surface protein that is primed to lock on to Ace-2 receptors and slip its RNA (genetic material) into the cell. Once inside, that RNA inserts itself into the cell's own replication machinery and makes multiple copies of the virus. These burst out of the cell, and the infection spreads within the person's body. Antibodies generated by the body's immune system eventually target the virus and, in most cases, halt its progress.

Occasionally, however, the virus can cause severe problems. This happens when it moves down the respiratory tract and infects the lungs, which have even more cells with Ace-2 receptors. The lungs become congested and patients need treatment in intensive care. Even worse, in some cases, the immune system goes into overdrive, attracting cells to the lungs in order to attack the virus, resulting in inflammation. This process can run out of control, more immune-system cells pour in, and the inflammation gets worse. In some cases, this can kill the patient. Just why this occurs in some patients but not in the vast majority is unclear. One possibility is that some people have versions of Ace-2 receptors that are slightly more vulnerable to attacks from the coronavirus than are those of most people. The main symptoms of a Covid-19 infection are the following:
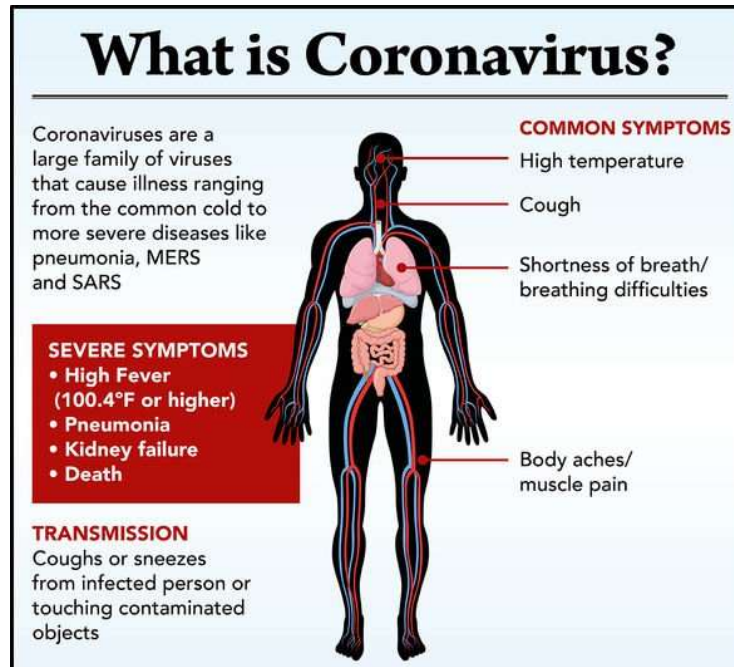


There is currently no specific treatment or vaccine against coronavirus-caused respiratory illness (antibiotics, which deal with bacteria, have no effect on viruses). Supportive care is the mainstay of management for all patients confirmed with Covid-19; oxygen, IV fluids and possibly mechanical ventilation may be warranted for patients with severe symptoms. Several antiviral treatments are under investigation for use against SARS-CoV-2 but it will take many months, if not years, before any such treatment is first identified as being affective and then receives approval for use on humans.

*So why the big panic?*

WHO estimates that the flu kills 290 000 to 650 000 people per year while, at the time of writing, Covid-19 has taken about 175 000. Although the Covid-19 total will certainly rise, and could rocket if it takes hold in the developing world, one might ask why, when flu seems to kill far more people, every year, and yet is relatively preventable and treatable, more isn't done to combat it. But I have no real answers for this. We also tend to forget than Covid-19 has not *replaced* flu, other diseases or, indeed, other causes of death, it has come *on top of* these, which explains why NHS and other resources are struggling.

The major difference between Covid-19 and flu are the severity of the illness and is the death rate. For Covid-19, 80 % of cases are mild or asymptomatic, 15 % are severe, requiring oxygen, and 5 % are critical, requiring ventilation while, for flu, only about 2 % of cases result in hospitalisation. For flu, the death rate is about 1 in 1 000 (0.1 %), while for Covid-19 it is between 30 and 40 (3-4 %) according to WHO. However, a report in New Scientist on the 11th February suggests that 18 % of people in Wuhan, confirmed to have the disease, have died, while a recent article in the Daily Telegraph suggests death rates between 0.7 % and 3.4 % depending on the location and, crucially, access to good hospital care (this article also suggests that SARS-CoV-2 has already mutated into two strains, one more aggressive than the other, which makes finding a vaccine more challenging).

Currently, about 2 600 000 people have Covid-19, of which 7 % (175 000) have died. This is a lot higher than the WHO's 4 %, but this difference may be because many people who have Covid-19 are not recorded. It seems that the main reasons for the drastic control measures put in place for Covid-19 stem from three issues:

- there is currently no treatment for and no vaccine against it,
- there is no immunity against it, because it is a new virus (many people have some immunity to flu),
- the rate of infection could become so high that health services would be unable to cope.

The real question would seem to be whether the control measures were justified or excessive. Please note that I'm making no moral judgement here whatsoever about the importance of life against economic activity, I am only presenting figures; it is up to others to make their own judgements. To make this judgement, though, it is necessary to estimate how many people might have become infected without the control measures, and here there is a great deal of uncertainty.

An unpublished modelling study in the UK, which is subject to some criticism, suggested that between 36 % and 68 % of the UK population could catch the disease, although even these figures are subject to a lot of assumptions. Other reports suggest that 80 %, if not 100 %, of people in any country could catch the virus. We can judge the severity by considering eight countries which probably have the highest rates of the virus, and we will assume a low-level of total infection (35 %) and a death rate of 3.5 %:

| Country | Population | Current infections | Current deaths | Infections at 35 % of population | Death rate at 3.5 % of infections |
|---|---|---|---|---|---|
| United States | 330 000 000 | 810 000 | 44 000 | 115 500 000 | 4 040 000 |
| Italy | 60 000 000 | 185 000 | 52 000 | 21 000 000 | 740 000 |
| United Kingdom | 70 000 000 | 130 000 | 17 000 | 24 500 000 | 860 000 |
| China | 1 440 000 000 | 85 000 | 5 000 | 504 000 000 | 17 640 000 |
| Spain | 50 000 000 | 205 000 | 21 000 | 17 500 000 | 610 000 |
| Iran | 80 000 000 | 85 000 | 5 000 | 28 000 000 | 980 000 |
| France | 70 000 000 | 120 000 | 21 000 | 24 500 000 | 860 000 |
| Germany | 80 000 000 | 150 000 | 5 000 | 28 000 000 | 980 000 |
| Totals | 2 180 000 000 | 1 770 000 | 170 000 | 763 000 000 | 26 710 000 |

This table appears to answer the question extremely clearly. If the virus was allowed to spread uncontrolled, more than 25 000 000 might die in just these eight countries. The last major pandemic, Spanish flu in 1918, killed 50 000 000 and Black Death 25 000 000 (the world population was a great deal lower for these two latter, however). Just by way of comparison, with 7 800 000 000 humans in total, if Covid-19 really did go around the whole world, almost 100 000 000 could die. Even with the restrictions in place, it might reasonably be assumed that total deaths might double, to something like 350 000, making this still a major cause of death, roughly on a par with flu but, of course, in addition to flu and other causes of death.

*What other effects has Covid-19 had?*

The pandemic has brought out the best and the worst in people, so let's look at some of these things, starting with just a selection of the worst:

- the country of origin of the pandemic, economically the most powerful country in the world, turning a blind eye to the sale of live animals and the illegal import of endangered animals for food,
- panic buying in the UK: why? Did people honestly think that they were going to starve in their own home? Not only was there panic buying of food (with the only amusing aspect being that one of the first things panic-bought was tinned tomatoes followed, about a week later, by panic buying of pasta when people woke up and realised that they needed something to go with all those tomatoes!), but there was also panic buying of freezers to put it all in. And why panic buy toilet paper, when Mr Murdoch produces tonnes of material, every day, which could serve exactly the same purpose?

- news media reporting on panic buying; do these idiots not realise that the best way to promote panic buying is to report that people are doing it? Or do they, these days, do it deliberately (but unconsciously), so that they can then report on it?
- not-so-Priti Patel trying to apologise to health care workers by saying "I'm sorry if people feel there have been failings". Sorry, darling, the dictionary definition of "apology" is "an act of saying that you are sorry for something wrong you have done", and yours just doesn't hack it. I think that what you meant to say was "I'm sorry that we have failed to get sufficient personal protective equipment to you, even when you have been telling us that you don't have it. I am going to resign immediately, and get a job in the NHS, putting my life on the line every day, just like you have been doing"[1]!
- the conspiracy theory that Covid-19 could be spread by the 5G network, leading to people setting fire to wireless masts; I asked a friend of mine why, because these Australopithecuses had obviously just learnt to walk upright, were they not concentrating on their next task – searching for the secret of fire but then I realised that they *had* found this secret, and just wanted to try it out;
- a minority of people flouting the social distancing rules and movement restrictions, threatening the restrictions being made even tighter (France and Italy both banned going outside for exercise, for example); it would be a strange legal precedent if the innocent majority was penalised for the actions of the guilty minority;
- footballers complaining about potentially having to give up 30 % of their salaries while they are not playing, while it was pointed out that what the average premier league player was being asked to sacrifice every two weeks is more than many nurses earn in a year!
- the ineptitude with which the restrictions were written – we needed restrictions, of course, but laws should only be enacted if they can be sensibly enforced. Three limitations make very little sense: 'essential shopping', 'local travel' and 'one hour of exercise'. People should limit shopping to the minimum required but, while in the supermarket, why not buy everything that's needed, to avoid a second trip when something which isn't current essential runs out? It's not distance travelled or time outside which contribute to the risk of transmission, it is contact with other people and surfaces. Poorly drafted rules lead to even law-abiding people breaching them because they make no sense (as happened to the Chief Medical Officer in Scotland);
- protests in the USA which, if we paraphrase them, are saying "Our income before your lives".

On the best side:
- people volunteering, for the NHS and their neighbours, proving that 'society' still exists, and Boris confirming this, reversing all the damage previously done by Mrs Thatcher with her famous "There's no such thing as society" comment;
- some BMCCSA members donating their returned MWC entry fee to charity;
- captain Tom Moore, an extremely modest 99 year old who set out to raise £1 000 by walking 100 lengths of his garden before his 100th birthday, and ended up raising more than £27 million!
- people starting to talk about how things will be different, and better, once the current pandemic dies down, which brings us nicely to …

*What's the future?*

There are two parts to this section: the future of coronaviruses and then, more importantly, what sort of society might come out as a result of the pandemic (assuming, of course, that societal changes do happen).

No one knows how long this pandemic might continue, although some reports suggest that we have roughly reached the peak in the UK. Coronaviruses will be with us indefinitely, either as SARS-CoV-2 or as mutations although, from an evolutionary point of view, SARS-CoV-2 has been extremely successful at spreading itself around the world, so there's little incentive for it to change. Two main hopes exist, however: that we will gain immunity over time, and that a vaccine will be developed. Some research, though, suggests that, even if we do develop immunity, this will last only two years, and will not be fully effective against a next-mutation coronavirus. The hope is that a vaccine will be found similar to that used against mumps, i.e. immunity will be provided for a long time, but this still had to be developed. Ultimately, a combination of long-term vaccine plus routine, milder, outbreaks which build shorter-term immunity, may well be the future

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[1] The recommended contact distance for Ms Patel is 2 km, according to all civil servants.

Future mutations might be less severe than SARS-Cov-2 but, according to one virologist, SARS-CoV-2 is already more deadly than the original SARS-CoV virus discovered in 2003 and which was behind the SARS outbreak at that time. The first SARS virus went straight to the lungs, so symptoms appeared quickly and it was possible to isolate those who had the virus, thus controlling the outbreak. SARS-CoV-2 has a longer incubation period, 5 days, and can spread well before symptoms become evident. SARS-CoV-2 is already mutating, but these mutations are minor, so should not affect the efficiency of a future vaccine.

Two final, and perhaps ironic, aspects of this pandemic have emerged. Firstly, Covid-19 might actually result in a net *increase* in the world population! When Wuhan and other areas shut down in China, Chinese pollution rates dropped immensely, and this pollution kills far more people, 1.6 million per year, than the virus. The reduction in deaths from pollution might actually exceed the deaths from the virus. Finally, and sadly, death rates from other reasons might actually increase, as people no longer go to their GP or to hospital.

As for societal changes, I have been waiting for this for more than a third of my life. You, dear readers, believe that I took on the role of BMCCSA president to serve British skiing, but you'd be wrong. For 22 years I *have* served British skiing but only in the hope that, one day, I would have the chance to put my radical societal philosophy to you. That moment has now arrived! If I have any choice in the matter, my post-virus society would include the following:

- no one to earn, net, more than (say) £2 000 000 a year or, better, no one to earn, net, more than five times the salary of the lowest-paid people in a country (the situation, for example, in Norway and Finland),
- an education system which teaches kids *how to think*, rather than simply teaching them *facts* which are of little use to them,
- an education system, and society in general, which promotes altruism and the interest of other people and beings above simple self-interest. As long ago as the seventh century, for example, Shantideva, an Indian Buddhist master, wrote:

   > *All the joy the world contains has come through wishing happiness for others.*
   > *All the misery the world contains has come through wanting pleasure for oneself.*

- companies and individuals throughout the world having to pay, properly, for their contribution to climate change, but with an upper limit so that the super-rich can't destroy things for the rest of us;
- things which bind society together to be re-established, moving us away from the only current binding factor of vacuous 'celebrity',
- all UK government ministers and civil servants forced to learn how to write sensible laws and also that 'laws' aren't the solution to everything,
- 'contentment' to mean something totally different from wealth!

Wild dreams? Who knows? But if we have a chance to make things better, surely it is now. You might, though, need a special passport if you plan to enter my world!

There will, no doubt, be an endless series of studies and reports once things return to something like normal (although the news tonight suggest that this is a year or more away!). Did the government overact? The evidence seems to suggest absolutely not. Did the government act too late? Possibly; a new theory suggests that peak infections occurred in the UK a few days *before* the lock-down started in full. Was the government prepared? Almost certainly not! Why do we rely on importing personal protective equipment (PPE) from low-cost countries, with the assumption that it would always be available, and why is the UK *exporting* PPE to other EU countries? No idea!

Perhaps it's difficult to criticise the government too much for acting too late; after all, this was the first real pandemic anyone has dealt with. But did it put economics above lives? This is very difficult to know. Of course, hindsight will do wonders in the analysis and it is, after all, a wonderful tool. In fact, just a few days ago, a friend of mine asked what, if I were a super-hero, my super-power would be. I replied that I'd love to be a master of hindsight. When he suggested that this wasn't much of a super-power, I replied "Well, of course, I know that *now*". Thank you, fans, I'm (stuck) here all week (and for weeks after this)!