Blog: 6/9/2020

It's been a scarey week with two GPs sick with covid-19. Dr Joe Williams, a GP still working aged 82 years in his practice in Mt Wellington died yesterday, and a young Waikato GP we know came out of hospital to complete his managed isolation on Friday: both are connected to this latest Americold cluster.

I decided to stop getting annoyed with the extra work of screening patients into the surgery, keeping them far apart, escorting them out a side door to minimise waiting room sharing, and then disinfecting everything especially the hard plastic chairs behind them. We have been tight and strict I know and at times it's frustrating for us all, but then it's about keeping us safe and our patients safe. We will continue to do it, with apologies for the frustration, but not for keeping it up! I'm sure the Mt Roskill Evangelical Church prayer group thought that meeting in Level 3 was safe too. It doesn't take much for a cluster that was nearly closed down to suddenly take off again.

Immunity: it seems that mild cases, at least 10% in USA which means given our far more widespread testing here probably 40-50% of the total cases do not generate enough antibodies to give protection from Covid-19 for more than six months. The good news is that reinfections are generally very mild as the body mounts some defence. More severe infections- that cytokine storm with lung complications I have previously described in blogs- was described to me this week as breathing with a sack of sand on your chest by someone recently in hospital. Those infections generate a far stronger immune response, both in antibodies and in T cells, ie both sides of the immune system.

In May a fishing boat with 20 people on board went to sea. All had covid-19 tests-the pernasal swab kind- before embarking and were negative. But as we know now one test is not reliable. A person can be in those first 4-5 days [and it is known up to 11 days] when the virus is incubating and multiplying and still return a negative nasal swab. Saliva swabs were wrong even more times, what is called false negative results. At sea 17 people got sick. Back on land all 20 of them tested positive for antibodies. So 3 of the crew had Covid-19,

not recognised that, but still had enough antibodies in their body to fight off re-infection.

It is harnessing these antibodies taken out of covid-19 survivors that is called Plasma Therapy. Before we had effective antiviral medication for chicken pox and shingles we did this for years for our leukaemia patients under treatment, especially those who were in their preparation for a bone marrow transplant from another person usually a close relative, were rendered highly vulnerable. It had its downsides and risks just like blood transfusions have, Hepatitis C was one of them. When the need is desperate, then the risks are justified, but not if there are effective alternative treatments like the drugs acyclovir and valacyclovir, or the illness is not as severe. Given that Plasma therapy is produced from whole blood it will always be expensive and scarce. In our country that means it will be reserved for the sickest patients. Maybe in countries like America, Brazil and India it will be the rich who can afford it, or the most influential who can access it.

Does your blood type predict Covid-19 severity? Well, being O negative not only means anybody can give you blood but it seems to suggest that you might be better at coping with covid-19. Where an A type, and Rhesus positive blood has a slightly worse and more rocky course. Is this useful? We predicted this as O blood doesn't have a certain type of receptors on the outside and these receptors are a part of what those spikey bits on the coronavirus hook into. But what help is it medically? I don't think much.

Also given that our commonest blood pressure medications also compete with those viral hooks at similar receptors on the lung cells you would think that candesartan and cilazapril should be protective too. After locking the receptor it was thought it might block the virus's main gene entry to our lung cells. A decent recent study showed that there was no difference in the death rate or time in hospital between those on those blood pressure medications or other blood pressure medications. However the study examined mainly younger people: 75% were under 54 years of age and the highest death rate is in old people. So maybe it's useful, maybe not.

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In the USA less than 1% of hospitalised patients have been children and teens, and nearly all the deaths in this age group have been where they have another serious illness, heart disease, diabetes, autoimmune and obesity. In contrast nearly 50% of the hospitalisations are in the over 65year old group, underreported as their statistics don't include those admitted to retirement village hospitals.

Ethnicity has generated a lot of interest and there is no doubt in the United States Black and Hispanic people are dying more than 50% as more frequently as white populations. But when all those social indicators are taken into account, eg poor/lack of medical insurance leading to late presentation to hospital along with delays and less than optimal treatment, combined with being more likely to be working in crowded factory floors, needing to go to work to pay for food and rent, poor quality housing, which is cold and damp etc etc, then there is nothing actually medical that stands up to analysis.

In Britain it is the same, what they call BAME [Black, Asian and Middle East] groups have suffered the most. It was most striking in the early days of the pandemic when BAME doctors were dying. They had been recruited to fill the jobs UK born doctors did not want, in ED and ICU in hospitals located in lower class areas. Analysis did not show any of what in the beginning seemed to be acclaimed as a superiority of white and British born. It did say it wasn't healthy to be poor, but we knew that anyway.

There has to be some good news, right? Well I haven't seen any influenza this year yet since before the first lockdown. That's got to be good news. In 2019 it was estimated 400-500 Kiwis died of influenza. Then there were those who did not die but were damaged. Every year we picked up a couple of patients with heart damage caused by influenza, usually to the bag around the outside of the heart, the pericardium. And then there were the ones who were tired for many months after with Chronic Fatigue syndrome. Learning how good steroids have been at managing the cytokine storm has reduced hospital deaths heaps, as well as the intensity and duration of that 2nd and 3rd week of illness has helped our hospital colleagues manage

patients so much better. Learning to use positive pressure oxygen [like our snorers use] instead of relying on ventilators has also made a difference, and they are made right here in South Auckland by Fisher and Paykel Healthcare. At least there is a little solace there, if not much.

All of this means we are much better prepared to cope if the virus eventually gets loose like we were back in February -March this year.

But still please keep safe, be well. The Team at Tiakina Te Ora.