

## 13.09.2020 – CORONAVIRUS UPDATE

[I am a UK-based infectious disease epidemiologist with specialism in new and emerging infections, and write regular “explainer” posts about the pandemic, of which this is the latest. There’s currently a lot of misinformation and misunderstanding swirling about the internet regarding COVID-19 – so please do remember to check someone’s credentials if they are posting about it. You can find my CV on LinkedIn (Georgia Ladbury). Usual disclaimer that I am writing in a personal capacity and my views don’t necessarily reflect those of my employer]

Hi again everyone,

Well, the coronavirus situation has all got a bit complicated and confusing lately, hasn’t it? One minute you’re being encouraged to Eat Out to Help Out and the next minute you’re having to cancel your family get-together in the garden next weekend. The newspaper headlines are screaming that the situation’s getting worse, and yet shops and businesses remain open – so, what’s going on? And should we be listening to all those people who are saying that it’s all been a massive over-reaction and COVID-19 is no longer anything to worry about?

In this post I’ll try to answer the questions people are asking me most frequently at the moment



. I’ll warn you now it’s LOOOOOONG (there are so many questions!!!!) so here’s the take home message – Covid has not gone away and we’re not sure how things will pan out over the next few months, so keep being cautious, but don’t be terrified and enjoy your new-found freedoms – safely.

<<<What’s the situation?>>>

You are no doubt aware that case numbers are going up. This is partly due to the fact that more people are doing tests now – everyone with symptoms now has access to a test through the Test and Trace system, compared to the spring when it was mainly people with severe disease who were tested in hospital (which is why scary headlines comparing how many cases who are testing positive now compared to March/April/May aren’t actually that meaningful). However, rising positive tests in the community is NOT just a result of people doing more tests. Test positivity is going up (i.e. the

proportion of people testing positive out of everyone who is doing testing), which suggests it's not just that we're picking up more cases because we're testing more – it's evidence that the outbreak is taking hold again.

Right now mostly the cases are mainly in younger adults in the community, likely because they are the ones who have been mixing a lot lately (not because they are reckless, but because they are more likely to live in shared houses, have public-facing jobs, have to use public transport, as well as having more active social lives than older groups).

<<<Why the concern?>>>

You may be thinking, but young adults don't tend to get ill with Covid very often so why does it matter if they're getting infected? Well, there are a few reasons why it matters.

Firstly, nobody in any community is completely isolated from others. Young people don't exist in a bubble apart from the rest of society, so if rates in younger adults start rising, they will eventually creep into other age groups who are more vulnerable to the illness. If rates get high even in a healthy sector of the population, we can expect to see hospitalized cases and deaths rising again after a short lag. This phenomenon has been seen in several countries by now. So if we want to prevent another wave of severe illness and deaths, we have to act now.

Secondly, the devastation wreaked by COVID-19 doesn't just take the form of hospitalisations and deaths. We are only now beginning to learn about so-called "Long Covid" – a form of disease where people find themselves suffering debilitating symptoms weeks and even months after infection, even if they were never ill enough to go to hospital and managed their first bout of illness at home. The research into Long Covid is only just starting out as most of the efforts in the first wave went into emergency management of severe illness and death. However, it looks as though the disease can affect younger age groups and people with no previous underlying health conditions. So we need to get away from this idea that COVID-19 is only something to worry about for people who are old or in poor health. Thirdly, we are standing on the precipice of the autumn and winter – the "cold and flu season". This is the time of year that seasonal viruses come out to play. Because SARS-CoV2, the coronavirus that causes Covid, has only been around for a few months and not a full year, we don't yet know if it is seasonal or not. However, we do know that other coronaviruses that infect humans (known to cause

common colds), are highly seasonal and peak in winter months. So, just like it's corona cousins, it's anticipated that SARS-CoV2 might prove to be seasonal also – which means it could take off again as the weather gets cold. Don't forget, this is all with the backdrop of flu starting up again, which causes annual winter pressures on the health service as it is (side note: so get a a flu jab this year to help relieve this pressure!). This is why it's so important to go into the autumn/winter season with as low a number of SARS-CoV2 circulating in the community as possible, so that if it does take off, we will have a chance of keeping on top of the cases. If it takes off from a high background level of cases to start with, we'll be in for a much harder time. Nobody, but nobody, wants to see another strict lockdown again, so in order to prevent this, we need to keep up with control measures to keep Covid levels low.

<<<But the control measures don't seem to make sense!">>>

That's all very well, you might say, but why does it make sense that school children can go to school and mix with scores of friends from different households indoors all day, and yet I can't meet up with more than five other people in my local park? If me and my friends could theoretically book out all the tables in our local restaurant, why can't I have them round for dinner in my home?

Well, let's first remember that we're talking about risk \*reduction\* here, not risk elimination. There is never going to be a perfect way to eliminate risk, but there are all sorts of different things you can do to reduce it. This is something we do in our everyday lives. For example, if you were driving a car and the brakes felt dodgy, would you then throw caution to the wind and say, well in that case I'm going to take off my seatbelt, disable the airbag, speed, and get drunk as a skunk before continuing to drive? Obviously not – you'd take all the precautions you could reasonably take until you managed to get yourself to a safe situation. Likewise with Covid, now we're opening up society again it's impossible to eliminate the risks so we have to reduce them where we can. And that's what the advice to individuals to continue to handwash, social distance, wear masks etc, as well as the population-level control measures are attempting to do.

It's also worth remembering again that COVID is a new disease, and this is an evolving situation. This means two things: firstly, it's actually quite hard to know what mix of control measures will work best, as there's no Textbook of Covid Pandemics to consult, and secondly, the situation changes all the time, so what worked three weeks ago isn't necessarily going to work now. So if it seems as though public health

advisors are just making it up as they go along, that's because to an extent they are, and because they have to change things in response both to changes to what the virus is doing, and to new evidence about what is working well and what isn't.

That's not to say there isn't method in the madness, though. Here's what's behind the thinking.

One key guiding principle is that it's really important to get society and the economy up and running again. This is often viewed as a callous and distasteful perspective, but in public health terms it makes perfect sense. Infectious disease control may be flavour of the month at the moment, but in reality it's usually a pretty miniscule part of public health work. People's physical and mental health and wellbeing doesn't orbit solely around whether they have an infection or not, and a lot of basic public health endeavours centre around what we call "wider determinants of health" – basic things like, being employed, having a roof over your head, having had a decent education, being safe in the knowledge that your income is going to cover your family's food and living expenses every week etc. If the economy were to tank in pursuit of perfect Covid control, we'd be setting ourselves up for far more wide-reaching and longer lasting physical and mental health problems than anything a virus could ever cause alone. "Health vs the economy" is a false choice; you can't have one without the other. The glib memes circulating at the moment summing up the current restrictions as "Covid advice: if it boosts the economy, it's fine" might be intended as sarcastic, but they contain an element of truth. Boosting the economy *IS* good public health advice, so long as we can do it safely.

That's not the only principle behind what's being permitted and what's not in the new measures, though. They are also based on what we know about viral transmission.

Remember that Covid likes conditions where people are in close contact for a prolonged period of time. Picture the scene: your friend's having a birthday party and has invited some people over. It's not a huge event, just close friends and family. It starts off with the best of intentions: a group of, say, 20 people who've spent a good few months deprived of social contact and who've missed each other, having a low-key barbecue in the garden. The beer flows. The bottles of fizz get pop. After an hour or so the rain starts, so everyone piles indoors. Not so socially distanced now. Everyone's a bit tipsy by now and starts forgetting which glass was theirs and accidentally picking up the one their cousin/neighbour/friend's new girlfriend just drank

from. More beer. More bubbles. More hours pass and suddenly it's midnight and you find yourself in the living room, drunkenly hugging your mates while you all lustily sing karaoke. Those scenarios are actually far higher risk than a meal out in a pub that lasts a couple of hours, everyone signs in for track and trace, and the venue has been risk assessed to be Covid secure.

We humans aren't very good at assessing risks independently, and even less so when we're in an environment we feel safe in and with people whom we love and whom we've missed – especially if there's alcohol involved. This isn't just a theoretical scenario; it's borne out by the Test and Trace data that show that a sizeable proportion of transmission is occurring through people having family and friends over.

Hence the Rule of Six. It may suck, especially if you're a member of a larger family (edited to add: personally I think under 12s should be exempt as they don't appear to contribute much to transmission, and it's hard for a young family to socialise without bringing their children), but it could potentially help reduce transmission pretty substantially whilst still allowing us to go out for dinner, head to the gym, indulge in some retail therapy, send our kids to school, and get back to some semblance of normality.

<<<WHAT IS THE END GAME??>>>

The \$64,000 question: how and when will this all end? Again, a difficult question which nobody has the exact answer to – but, politically poisonous as the term has become, the outbreak will likely only really “end” once we have a background level of herd immunity, i.e. when enough people have sufficient immunity to SARS-CoV2 that it stops spreading so well. Herd immunity can be achieved either by vaccination or by natural infection. The vaccine trials are going well but will still take a while; meanwhile, there are encouraging signs that we might perhaps have more natural background immunity than we first thought and we might achieve herd immunity sooner than first predicted. It's simply too early to tell – we are still in the realms of predictions and theory rather than hard and fast evidence. We will learn a lot more over the next six months and will be better placed to answer these questions once we're out the other side of winter.

In the meantime, we all need to grudgingly accept the fact that Covid is likely to mess up our lives for a while longer yet, and follow the public health advice. Quick summary of that advice to sign off with:

<<<COVID-19 PUBLIC HEALTH ADVICE>>>

\*HANDS-FACE-SPACE: Wash hands frequently; wear masks indoors and in crowded areas; keep the 2m rule

\*Limit your contacts – includes the Rule of Six

\*Self-isolate and get tested if you have symptoms

\*Quarantine if you need to

\*Get a flu vaccination this year (free for children and risk groups, and about £10 per jab in private pharmacies) - this will help limit the number of fires the NHS has to fight at once, given flu always puts pressure on the health service even in the absence of Covid. Note that unlike Covid, children are super-spreaders of flu so it's important to get them vaccinated now they're back at school to prevent spread in the wider population

Take care, everyone. We'll get there in the end.