

Notes on COVID-19

Part 7: 2020-05-12 to 2020-05-23

Peter Bernard Ladkin

2020-05-23

2020-05-12 The Oxford economist Simon Wren-Lewis worked on pandemic responses a decade ago. He is particular scathing about the British government's handling of this one, for the – dare I say – obvious reasons <https://www.theguardian.com/commentisfree/2020/may/11/britain-economy-coronavirus-deaths>

He worked a decade ago with John Edmunds on the economics of pandemics
<https://ideas.repec.org/p/oxf/wpaper/431.html>

Look at the sponsor of that work: *“This work was done as part of “SARSControl: Effective and acceptable strategies for the control of SARS and new emerging infections in China and Europe”, a European Commission project funded within the Sixth Framework Programme, Thematic Priority Scientific Support to Policies, Contract number: SP22-CT-2004-003824”*

[Sigh.]

2020-05-12 The renowned editor of The Storm Lake Times, Art Cullen, writes how USG's “strategy” for dealing with Covid-19 is going down in Iowa. You can see why Cullen wins prizes for his writing (2017 Pulitzer for Editorials) <https://www.theguardian.com/us-news/commentisfree/2020/may/11/midwesterners-were-already-doubting-trump-covid-could-seal-his-political-fate>

2020-05-12 Peter Piot, the Director of the London School of Hygiene and Tropical Medicine, co-discoverer of Ebola, talks to Science about his a hospital stay with Covid-19, followed by a cytokine storm after he had got rid of the virus, treated as an outpatient. He feels lucky these phenomena happened sequentially rather than concurrently
<https://www.sciencemag.org/news/2020/05/finally-virus-got-me-scientist-who-fought-ebola-and-hiv-reflects-facing-death-covid-19> To tell the truth, reading this article frightened me. As I wrote on 2020-05-08 concerning Peter Garner's note in the BMJ, you really, really don't want to get this disease.

2020-05-12 The Oxford epidemiologist David Hunter suggests that, while the conditions of “lockdown” are being eased, the UK government has not yet been clear about how the basic public-health measure of “test, trace, isolate” is going to work. *“Most of us have suggested that a system to do this was a precondition of easing the lockdown.”* Encouraging a return to workplaces without having such an effective strategy in place is risking outbreaks of disease. *“[L]et me make a prediction. If we take the prime minister’s advice and return to work in large numbers now – and without the ability to test, trace and isolate – then virus spread will increase, there will be super-spreader events and local or regional lockdowns will have to be reconsidered”*
<https://www.theguardian.com/commentisfree/2020/may/11/boris-johnson-advice-coronavirus-spread-work> Hunter commented extensively on what he thinks has been going on, on April 3, to the Pure Earth YouTube channel <https://www.youtube.com/watch?v=G8YJn65k2wY> (the video is just over an hour long, but the first 20 minutes or so are key). He suggested people only started to get really alarmed in early March, when the Italian situation developed. We had been complacent because it has been 100 years since anything similar. The countries that have dealt well, early, with

Covid-19 had all recent experience with SARS, in the case of Taiwan with MERS also, and had developed tracing and control systems on which they were able to rely, whereas Europe did not have those in place. His summary of the situation (up to 14:40 minutes in) is insightful, as are his answers to Richard Fuller's questions (up to 20:46 in)

2020-05-13 A genetic study is getting underway in GB to collect DNA samples from potentially everyone with Covid-19 in ICUs in GB to see what genetic determinants there are of susceptibility to severe disease resp. mild reactions. TheG article did not say what the study is called <https://www.theguardian.com/science/2020/may/13/coronavirus-patient-dna-study-could-tell-us-why-some-fare-worse>

2020-05-13 Steven Reicher, a social psychologist and member of the UK SAGE committee, argues that openness and transparency on the part of government is essential for formulating effective policy with which citizens will willingly comply <https://www.theguardian.com/commentisfree/2020/may/13/british-people-lockdown-coronavirus-crisis>

2020-05-15 David Spiegelhalter explains the important difference between the population fatality rate and the infection fatality rate <https://medium.com/wintoncentre/what-are-the-risks-of-covid-and-what-is-meant-by-the-risks-of-covid-c828695aea69> Thank you to Martin Newby for drawing my attention to this article. The population fatality rate (sometimes called the mortality rate) is the chance of dying from Covid-19 amongst people who do not currently have the disease. The infection mortality rate is the chance of dying amongst those with Covid-19. He concerns himself here with the PFR. Spiegelhalter looks at data from the five weeks to May 1st in England and Wales, during which there were 32,718 registered deaths connected with Covid-19. He notes inter alia that *“COVID rates have a fairly precise exponential increase with age, increasing at around 11–12% each year, corresponding to a doubling every 6–7 years. This means that a 20-year age-gap increased the risk by around 8-fold. So, compared to a 20-year-old, an 80-year-old had $8 * 8 * 8 \sim 500$ times the risk of dying.”*

2020-05-15 Roche's Elecsys Anti-SARS-CoV-2-immunoassay serological test has also been approved by Public Health England <https://www.theguardian.com/world/2020/may/13/public-health-england-approves-roche-test-for-coronavirus-antibodies> It already had FDA approval and a CE kite mark.

A note on terminology. I didn't know what to call the European Union “CE” designation, a specific graphic symbol attached to a product to demonstrate that the product has been assessed by a notified body as conforming with EU requirements. It turns out the BSI was the first organisation to do such product certification, in 1903, and the graphic they used, because it looks like a kite, is called the “Kitemark®” <https://www.bsigroup.com/LocalFiles/EN-AU/Brochures/Product%20Certification%20Brochure%20-%20online.pdf> A history of the Kitemark is, oddly, more easily found at <https://en.wikipedia.org/wiki/Kitemark> than it is on the BSI site. Since it is a trade mark, other similar graphics will have to be called something different. Lower-case “k” and two words seems appropriate.

2020-05-15 Martyn Thomas just pointed me to O'Donnell et al, evaluating the potential of oral rinses as possible prophylactic against SARS-CoV-2 infection <https://academic.oup.com/function/advance-article/doi/10.1093/function/zqaa002/5836301> A shame they didn't suggest what effect Romanée-Conti, Montrachet or Ravenswood Teldeschi Zinfandel might have.

2020-05-16 de Lusignan et al elaborate risk factors for SARS-COV-2 infection from data collected

in the RCGP Research and Surveillance Centre primary care network

[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30371-6/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30371-6/fulltext) This network is “one of the longest established primary care sentinel networks globally. It includes more than 500 urban and non-urban participating general practices, covering a population of over 4 million people..... Increasing age, male sex, population density, more deprived areas, and black ethnicity were associated with an increased risk of a positive SARS-CoV-2 test. Chronic kidney disease and obesity were the only clinical factors associated with a positive test. Current smokers had lower odds of a positive test.” The Comment by Jordan points out that it is clear that the pandemic exacerbates existing socioeconomic inequalities

[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30395-9/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30395-9/fulltext) A phenomenon which this report highlights is that tobacco smokers appear to be at lower risk of contracting Covid-19, but at higher risk of more severe outcome if they do.

2020-05-16 The full article on the January 2020 Bavarian outbreak has been published by Böhmer et al. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30314-5/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30314-5/fulltext) An earlier note on the same outbreak appeared in the NEJM and was referenced in Notes Part 1.

2020-05-16 A level-headed editorial in The Lancet Infectious Diseases on the uncertainties associated with Covid-19 and social and sociopolitical implications

[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30378-9/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30378-9/fulltext)

2020-05-16 There has been a worry that emergency ambulance services are being called out less to incidents of heart attack (STEMI) and stroke, for which “hospital treatment is highly effective”. Worrying if so, but Holmes et al looked at data from the West Midlands Ambulance Service, the second largest in the UK, and found “little evidence” for such a phenomenon

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31031-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31031-X/fulltext)

2020-05-16 Mahévas et al report a French observational study of the use of hydroxychloroquine in Covid-19 patients who require oxygen <https://www.bmj.com/content/369/bmj.m1844> Result: not much help. Tang et al report a RCT of hydroxychloroquine in Covid-19 patients with mild to moderate symptoms. <https://www.bmj.com/content/369/bmj.m1849> Result: not much help.

2020-05-16 Piccininni et al report on all-cause mortality in the town of Nembro, population 11,500, in Bergamo province in Lombardy. <https://www.bmj.com/content/369/bmj.m1835> In the 8 years to February 2020 (inclusive) it was about 10 per 1,000 person-years, with a max of 21.5 per 1,000 py. In March 2020 it went to 154.4 per 1,000 py, and came back down in the first 11 days of April to 23 per 1,000 py. In the period from outbreak onset to April 11, there were 85 Covid-19 deaths from 116 total. The accompanying graphical summary is striking and sad.

2020-05-16 Gabriel Scally, a member of Independent SAGE, wrote a BMJ editorial with Bobbie Jacobson and Kamran Abbasi bemoaning the UK response to the pandemic

<https://www.bmj.com/content/369/bmj.m1932> As others have, they criticise the lack of public health expertise on SAGE, as well as the presence of political advisors. There was a lack of remedial action in the wake of the result of Exercise Cygnus in 2016. As Allyson Pollock has done, they recommend classic public health measures to mitigate the effects of Covid-19.

2020-05-16 The UK Statistics Authority has written to the Secretary of State for Health and Social Care to urge HMG to be more clear about its testing. In response, the Department said it is being “open and transparent” <https://www.bmj.com/content/369/bmj.m1922> While wishing HMG God Speed in ramping up its testing capacity, the need for Minister Hancock to claim 100,000 tests a day is not clear, when a large proportion of those turned out to be testing kits which were being delivered, rather than actual tests being performed or evaluated.

2020-05-17 Intriguing. A llama named Winter whose antibodies counter SARS-CoV-1 and MERS viruses as well as SARS-CoV-2 in vitro <https://www.theguardian.com/world/2020/may/16/llama-coronavirus-antibodies-study-benefits> The original article is [https://www.cell.com/cell/pdf/S0092-8674\(20\)30494-3.pdf](https://www.cell.com/cell/pdf/S0092-8674(20)30494-3.pdf) In the picture of George Caldwell and Ana Claire Mancina in the TheG article is, in the right background, Evans Hall at UC Berkeley, in which I spent a lot of my time in the 1970's.

2020-05-19 An article in TheG on 2020-05-18 on five organisations trialling SARS-Cov-2 vaccines <https://www.theguardian.com/world/2020/may/18/five-organisations-in-the-race-to-develop-a-coronavirus-vaccine> Some partial results reported today from the Moderna study in the US are that 8 volunteers developed antibodies similar to those produced by those who have had Covid-19, as well as that the vaccine is safe for use in humans <https://www.theguardian.com/society/2020/may/18/first-human-trial-results-raise-hopes-for-coronavirus-vaccine> So the Moderna vaccine hinders replication of the virus, and ChAdOx1 nCoV-19 stops monkeys with Covid-19 from developing pneumonia. It looks like we are well on the way to serious prophylaxis. And all that in only four months.

2020-05-20 James Annan has a blog post showing that implementing the lockdown in GB a week earlier would have reduced the death count by three-quarters <https://bskiesresearch.wordpress.com/2020/05/12/the-human-cost-of-delaying-lockdown/> The maths is straightforward, as he points out. He estimates $R_{\text{before lockdown}}$ and $R_{\text{after lockdown}}$ and applies these figures to the figures released by HMG. Martin Newby has pointed me to some similar results from John Dagpunar <https://www.medrxiv.org/content/10.1101/2020.05.09.20096859v2>

2020-05-20 Again something I forgot to mention a couple of weeks ago. The UK Chief Medical Officer, Chris Whitty, is also a professor at Gresham College, which produces and publishes lectures to the public on topics of significant scientific interest. Whitty's Gresham College lecture on Covid-19 from April 30th is at <https://www.youtube.com/watch?v=3BdPKpWbxTg>

2020-05-23 A wide-ranging registry analysis, of 671 hospitals in 6 continents, has shown that hydroxychloroquine does not help with Covid-19 and might well be dangerous, correlating with increased deaths in those hospitalised and treated with it, as well as having the previously-known risks of cardiac malfunction. A summary is in <https://www.theguardian.com/science/2020/may/22/hydroxychloroquine-trumps-covid-19-cure-increases-deaths-global-study-finds> The study is published in The Lancet [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31180-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31180-6/fulltext)

2020-05-23 Preliminary results from a vaccine trial: *"The first COVID-19 vaccine to reach phase 1 clinical trial has been found to be safe, well-tolerated, and able to generate an immune response against SARS-CoV-2 in humans, according to an Article published in The Lancet. The open-label trial in 108 healthy adults demonstrates promising results after 28 days—the final results will be evaluated in six months. Further trials are needed to tell whether the immune response it elicits effectively protects against SARS-CoV-2 infection."* [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31208-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31208-3/fulltext) A comment on the study by Funck-Brentano and Salem is at [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31174-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31174-0/fulltext)

2020-05-23 A 2017 metastudy showed that Vitamin D protects against upper respiratory tract infections. It seems well possible that it could help in resisting Covid-19. Mitchell discusses what is known in The Lancet Diabetes and Endocrinology

[https://www.thelancet.com/journals/landia/article/PIIS2213-8587\(20\)30183-2/fulltext](https://www.thelancet.com/journals/landia/article/PIIS2213-8587(20)30183-2/fulltext)

2020-05-23 Beigel et al report on a RCT of remdesivir in the NEJM

https://www.nejm.org/doi/full/10.1056/NEJMoa2007764?query=featured_home Use of remdesivir shortened median recovery time to 11 days from 15 days, and there were fewer “serious adverse events”.

2020-05-23 Sood et al report in the JAMA on a serological test of residents of Los Angeles County in California in early April 2020 <https://jamanetwork.com/journals/jama/fullarticle/2766367> “*In this community seroprevalence study in Los Angeles County, the prevalence of antibodies to SARS-CoV-2 was 4.65%. The estimate implies that approximately 367 000 adults had SARS-CoV-2 antibodies, which is substantially greater than the 8430 cumulative number of confirmed infections in the county on April 10.*”

2020-05-24 The rules of contagion have not been suspended, no matter how tired some people may be of social distancing. On its live blog for Saturday 2020-05-23 TheG reports a superspreading event in Frankfurt at a religious mass, after churches had been reopened

<https://www.theguardian.com/world/live/2020/may/23/coronavirus-live-news-australia-hit-by-60bn-payout-error-as-trump-orders-places-of-worship-to-reopen?page=with:block-5ec94ea88f0886ce4f5d9220#block-5ec94ea88f0886ce4f5d9220> See the entry at 17:27 BST (times are BST on the live blog). 40 infected people, 6 hospitalised.

An aside. The church across the road from my house dates from the 9th century and the current building has 1000 year old foundations, and a superstructure construction from a couple hundred years later. Apart from the quarter-hourly timekeeping bells, there is a full peal of three bells at calls to service Sundays 0945-1000, and Saturdays 1800-1815, as well as a single bell daily at 0700, 1200, and 1900. I love them. Bells are amongst the oldest musical instruments. And, around here, only churches have them. When the road is without traffic, listening to the overtones is a meditative experience (it also takes practice to listen for them!)

When church services were suspended in March, the pastor added a special peal of two bells at 1730-1740, to remind everyone of the extraordinary times we are in (this was a general decision of the Evangelical Church in Bielefeld and wider. The Evangelical Church is the non-Lutheran, non-Methodist, non-Baptist, non-non-conformist Protestant church in Germany). Pastor Biermann hurried down the road on his bicycle at 1920, to ring the peal, and cycled back up at 1945, every day. The bells are arranged as a minor third, and a fourth. In solfège notation: mi sol la. (That is how I hear it. Some may instead hear: la do re. Wittgenstein's duck-rabbit for the hearing. If we think of the octave as consisting of thirteen more-or-less-equal semitones, it is a three-semitone interval followed by a two-semitone interval.) Mostly he would ring the alternating minor third, mi sol, but sometimes the alternating fourth, mi la.

To my disappointment, this peal stopped when the churches reopened. I had come to hear it as daily recognition of the extraordinary time we are in and our social duty to each other. We still have that duty, and need such recognition, for maintaining social cohesion is not easy and some will inevitably have been lost. On that score, so to speak, I tried to convene a weekly distributed performance of John Cage's Musicircus on Sundays 1800-1805 amongst musical acquaintances from outside our houses. I figured we would need round about ten reliable participants, but I didn't manage to find enough enthusiasts. Maybe for the second wave

2020-05-23 An article by the President of the Royal Society, Nobel Prizewinner Sir Venkatraman Ramakrishnan, elucidates in <https://www.theguardian.com/world/2020/may/24/everyone-wants-to-follow-the-science-but-we-cant-waste-time-on-blame> the role which “science” plays in political

decision making about the current pandemic, in light of HMG's claim to be “follow[ing] the science”, and indeed of a UK government minister's attempt to suggest that wrong policy, for example concerning care homes, was a consequence of “wrong” science

<https://www.theguardian.com/world/2020/may/20/uk-scientists-must-not-be-blamed-coronavirus-advice-says-royal-society-head> Alex Stephens, who served on the Advisory Council on the Misuse of Drugs, wrote an insightful note on 2020-05-14 elaborating the often difficult interactions between politics and political will and scientific advice <https://www.nature.com/articles/s41562-020-0894-x.epdf>

2020-05-23 A review led by Russell Viner of UCL and coauthored by Rosalind Eggo of LSHTM has found that children are 56% as susceptible to Covid-19 as adults over 20. The review was unable to estimate their infectiousness, which would be critical information for teachers and small-child carers, as well as crucial for informing policy on school and child-care reopening, were it to be available <https://www.ucl.ac.uk/news/2020/may/children-appear-half-likely-catch-covid-19-adults> I don't know of a link to a preprint of the paper, but the work seems to be related to that by a SAGE subgroup, which published a summary at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886995/s0258-viner-eggo-susceptibility-transmission-in-children-updates-250420-sage30.pdf

2020-05-23 The consensus in Sweden concerning their approach is not perfect. The previous state epidemiologist, Annika Linde, thinks a mistake was made <https://www.theguardian.com/world/2020/may/24/sweden-wrong-not-to-shut-down-says-former-state-epidemiologist> The figures below show that Sweden currently has a CFR of 12.0. The CFR of its Nordic neighbours Finland, Norway and Denmark are respectively 4.7, 2.8 and 4.9.

2020-05-23 I wrote the last benchmark on 2020-05-06 from numbers on 2020-05-01. Here are numbers from JHU Dashboard on May 23 at about 12:40 (AT and IS from about 1600). As before, countries are identified by ISO-3166-1 Alpha-2 code, and are the same ones as before (though on 2020-05-06 I denoted GB with the wrong code; here with the right one). As expected, CFR has gone up as more people from earlier infections have died and new infections are in many of these countries much reduced. In two countries the CFR has reduced: GB and SE.

Country	Confirmed Cases	Deaths	CFR in % (to 1 decimal-point place)
US	1,622,670	97,087	6.0
GB	258,509	36,757	14.2
ES	235,290	28,678	12.2
IT	229,327	32,735	14.3
FR	182,036	28,218	15.5
DE	179,986	8,274	4.6
BE	56,870	9,237	16.2
NL	45,265	5,830	12.9
SE	33,188	3,992	12.0
CH	30,725	1,905	6.2
PT	30,471	1,302	4.3
IE	24,582	1,604	6.5

PL	21,236	995	4.7
AT	16,503	640	3.9
DK	11,487	561	4.9
NO	8,346	235	2.8
FI	6,579	307	4.7
LU	3,990	109	2.7
IS	1,804	10	0.6

2020-05-23 Pascal Soriot, CEO of AstraZeneca, says a vaccine will be delivered in September, but is concerned that Oxford U will recruit enough people to finish trials, now that the infection rate is going down. <https://www.theguardian.com/world/live/2020/may/24/uk-coronavirus-live-dominic-cummings-under-intense-pressure-over-lockdown-breaches> article at 1533 BST.