

## Notes on COVID-19

### Part 19: 2020-10-16 to 2020-10-29

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**2020-10-29**

2020-10-19 Trish Greenhalgh, Martin McKee and Michelle Kelly-Irving have an article in TheG on 2020-01-18 about the Great Barrington declaration: *"It's time to stop asking the question 'is this sound science?' We know it is not."* They suggest it is appropriate to ask who is funding this political intervention. <https://www.theguardian.com/commentisfree/2020/oct/18/covid-herd-immunity-funding-bad-science-anti-lockdown> Greenhalgh was the main author of, and McKee signed, the BMJ letter to the UK's Chief Medical Officers in response to the Gupta-Heneghan-Sikora-Williams open letter advocating a GB-like approach (see Notes Part 18, entry 2020-10-12). All three are authors of Alwan et al (see below, next entry).

2020-10-19 Alwan et al have published a response to the Great Barrington declaration in The Lancet on 2020-10-15 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32153-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32153-X/fulltext) The initial signatories include William Hanage, Florian Krammer, Marc Lipsitch and Devi Sridhar who have appeared with their own interventions in these Notes. Among the authors, Alwan, Bogaert, Rutter and Sridhar also signed the BMJ open letter to the UK's Chief Medical Officers (Notes Part 18, entry 2020-10-12).

Alwan et al describe the *"herd immunity approach"*, adducing the Gupta-Heneghan-Sikora-Williams letter and the Great Barrington declaration, and respond *"This is a dangerous fallacy unsupported by scientific evidence."*

Alwan et al call this document *"The John Snow Memorandum"*, and are asking for signatories at <https://www.johnsnowmemo.com> The signatures are vetted, unlike (notoriously) those of the Great Barrington declaration.

2020-10-19 In EClinicalMedicine on 2020-10-15 reported the results of the COQUIMA retrospective cohort study of 607 patients with severe Covid-19 in a hospital in Madrid between 2020-03-10 and 2020-04-15. [https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(20\)30335-7/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(20)30335-7/fulltext) The prescribed therapies were tocilizumab, glucocorticoids, lopinavir/ritonavir, hydroxychloroquine and cyclosporin. Only cyclosporine was associated with a significant decrease in mortality. The authors conclude *"In a real-clinical setting, inhibition of the calcineurin inflammatory pathway, NF- $\kappa$ B, could reduce the hyperinflammatory phase in COVID-19."*

2020-10-19 In The Lancet Infectious Diseases on 2020-10-15, Xia et al describe (successful) Phase I/II trials of a vaccine based on deactivated-SARS-CoV-2 virions, BBIBP-CorV. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30831-8/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30831-8/fulltext) In their comment, [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30832-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30832-X/fulltext) Isakova-Sivak and Rudenko note this is the first study to include a specific over-60 age group. This age group exhibited fewer "adverse events" than the younger cohort (18-59) and similar immunogenicity.

2020-10-19 In The Lancet Digital Health on 2020-10-14, Kendall et al describe the roll out of the NHS Test & Trace system on the Isle of Wight. [https://www.thelancet.com/journals/landig/article/PIIS2589-7500\(20\)30241-7/fulltext](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(20)30241-7/fulltext) The epidemic

on the Isle of Wight was controlled “*quickly and effectively*” after the roll-out.  $R_t$  went down from 1.3 to 0.5. In their Comment, Cook and Clapham review what such a system must do, and how [https://www.thelancet.com/journals/landig/article/PIIS2589-7500\(20\)30245-4/fulltext](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(20)30245-4/fulltext) T&T appears to have failed on the mainland since the Isle of Wight test.

2020-10-19 The Severe Covid-19 GWAS group have published on 2020-10-15 the paper on their discovery of two genetic loci associated with severe disease, as well as a higher risk of severe disease in blood group A and a lower risk in blood group O

<https://www.nejm.org/doi/full/10.1056/NEJMoa2020283> The comment by Kaser notes that this study will set directions for future research <https://www.nejm.org/doi/full/10.1056/NEJMe2025501>

2020-10-20 Karl Lauterbach is a prominent NRW politician and also academic epidemiologist & public health expert. His view on what helped Germany with the first wave of Covid-19 and what is key to addressing the second wave is published today 2020-10-20 in TheG

<https://www.theguardian.com/commentisfree/2020/oct/19/germany-covid-second-wave-virus>

2020-10-20 A fine essay in TheG clearly explaining the key notion of overdispersion by Kyra Grantz and Justin Lessler <https://www.theguardian.com/commentisfree/2020/oct/19/overdispersion-spreads-covid-transmission-virus>

2020-10-21 Peto et al hypothesised in April in The Lancet that frequent testing of all along with quarantine and contact tracing would likely end the epidemic (Notes Part 4, entry 2020-04-18). Peto et al have a short article in Royal Society Open Science 7:200915 that (to quote the title) “*Weekly COVID-19 testing with household quarantine is feasible and would likely end the epidemic*”

<https://royalsocietypublishing.org/doi/pdf/10.1098/rsos.200915> The catch, I suspect, lies in that word “feasible”. Germany is held up as a model for testing, currently conducting about 1m tests per week, and capacity, according to Karl Lauterbach, is 1.5m tests per week (see above, entry 2020-10-20). It is a non-trivial logistical question whether capacity could be ramped up 50-fold to 80m tests per week (the approximate population of Germany). An answer surely depends on a much simpler (but likely less sensitive) testing regimen, likely backed up by RT-PCR for confirmation. Such a regimen, in October 2020, is not yet available anywhere. Some idea of the logistics involved without such advances in testing can be gleaned from the experience in Rheda-Wiedenbrück and Gütersloh in June with the Tönnies outbreak. Gütersloh has about 100,000 residents, Rheda-Wiedenbrück about 48,000. Not only did the 7,000 employees of Tönnies all have to be tested, but it was the beginning of holiday season and many other destination states in Germany hung a prohibition on overnight stays from residents of the Gütersloh district (population about 365,000) unless they had and could show a recent (within two days) negative test result. So lots of prospective holiday makers needed tests. The army was drafted in to help. The district managed to get through testing and contact tracing for everyone who needed it/wanted it in somewhat under two weeks. So that would need to be speeded up. Of course the army can't help out to that extent, everywhere, permanently. And the reagents need to be available, permanently.

2020-10-21 Rossen et al have published a report on US excess deaths from January to early October 2020 in the CDC MMWR on 2020-10-20

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6942e2.htm> There were almost 300,000 excess. That sheds some light on possible underestimates of Covid-19 related deaths (there were just over 216,000 reported to October 15<sup>th</sup>, according to the authors), but it is not clear exactly what conclusions one may reasonably draw.

2020-10-21 John M. Barry, a public health expert at Tulane University, has a scathing comment in the NYT on 2020-10-19 on what following the Great Barrington Declaration proposals would mean for US deaths <https://www.nytimes.com/2020/10/19/opinion/coronavirus-herd-immunity.html>

The BMJ has recently published two articles on risk assessment (of disease progress, and of mortality) in the UK, the QCOVID algorithm, by Clift et al (2020-10-20) <https://www.bmj.com/content/371/bmj.m3731> and the 4C mortality score, of patients admitted to hospital using the ISARIC WHO Clinical Characterisation Protocol by Knight et al (2020-09-09) <https://www.bmj.com/content/370/bmj.m3339> The best comment on what these validated assessments from cohorts do and do not do is likely provided by the summary editorial of Sperrin and McMillan on 2020-10-20 <https://www.bmj.com/content/371/bmj.m3777>

2020-10-23 TheG reports that testing for SARS-CoV-2 in wastewater is happening at 90 sites in GB, covering about 22% of the population. It can warn of otherwise-undetected outbreaks. <https://www.theguardian.com/world/2020/oct/23/testing-sewage-for-covid-could-detect-outbreaks-early-scientists-say>

2020-10-23 Redlener, Sachs, Hansen and Hupert of the National Center for Disaster Preparedness at Columbia University have reported on 2020-10-21 that 130,000 to 210,000 US deaths from Covid-19 could have been avoided, and how so <https://ncdp.columbia.edu/custom-content/uploads/2020/10/Avoidable-COVID-19-Deaths-US-NCDP.pdf> The report is easily readable and persuasive.

2020-10-24 Stone et al report in the NEJM on 2020-10-21 the results of a randomised double-blind placebo controlled trial of tocilizumab in 243 hospitalised patients with Covid-19. <https://www.nejm.org/doi/full/10.1056/NEJMoa2028836> Tocilizub is an IL-6 receptor blocker. Their conclusions: *"Tocilizumab was not effective for preventing intubation or death in moderately ill hospitalized patients with Covid-19. Some benefit or harm cannot be ruled out, however, because the confidence intervals for efficacy comparisons were wide."*

2020-10-23 Liu et al report in JAMA on 2020-10-23 on a seroprevalence survey of around 35,000 adults in Wuhan, China, between 2020-03-27 and 2020-05-26, showing overall seroprevalence of 3.9% <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2772148>

2020-10-23 Omer, Yildirim and Forman discuss the concept of "herd immunity" concisely in JAMA on 2020-10-19 <https://jamanetwork.com/journals/jama/fullarticle/2772167>

2020-10-23 Fine, Eames and Heymann wrote a "rough guide" to "herd immunity" in Clinical Infectious Diseases 52(7) nine and a half years ago on 2011-04-01. <https://academic.oup.com/cid/article/52/7/911/299077> The article is open-source. It makes clear that the term applies to situations in which vaccines are available. It discusses the practical public health and immunological issues involved in attempting to reach and maintain group immunity.

2020-10-26 Head of NHS Test&Trace, Baroness Harding, has detailed in a letter to the House of Commons Science and Technology Committee on 2020-10-12 that *"saliva tests and rapid turnaround tests"* are *"being piloted in Hampshire, Southampton and Salford"* (last I looked, Southampton was in Hampshire). *"The pilot showed the at-home saliva sampling kit to be a reliable means of testing for large-scale, regular testing."* 5,000 "Nudgebox" machines, which process nose swabs at point of care in 90 minutes, are being distributed to hospitals. Other tests are being evaluated. These points in the answer to Question 5 at <https://committees.parliament.uk/publications/3066/documents/28784/default/>

2020-10-27 The US National Academies Press has just published the brief proceedings of a workshop on Airborne Transmission of SARS-CoV-2 <https://www.nap.edu/download/25958> It is only 19pp long, and an easy and quick read. Much of the information has already appeared in these

Notes, but here it is available in condensed form. I am glad to see most of the information is consistent with the paper I finished last week for the October SCSC Newsletter about making group music while staying relatively safe from airborne transmissions.

2020-10-27 TheG is reporting on a closed academic meeting about the AstraZeneca vaccine AZD1222. Apparently data is showing similar immunogenicity in older people to that in younger people, and less reactogenicity. The results have been written up but not yet peer-reviewed for publication; the data are not yet available. So this is a sort of indirect press release, if you will. <https://www.theguardian.com/world/2020/oct/27/covid-vaccine-uk-oxford-university-astrazeneca-works-in-all-ages-trials-suggest>

2020-10-29 The newspaper El Pais has produced an article with a series of graphics illustrating well how Covid-19 can be transmitted in indoor situations <https://english.elpais.com/society/2020-10-28/a-room-a-bar-and-a-class-how-the-coronavirus-is-spread-through-the-air.html> The article itself has no date, but the URL indicates it is from 2020-10-28. The graphics show examples of a living room, a bar, and a classroom in various situations. They are based on the results of an Estimator designed by José Lius Jiménez of the University of Colorado <https://cires.colorado.edu/news/covid-19-airborne-transmission-tool-available> . The cases consider transmission under varying conditions of face-mask use, length of exposure, and ventilation. It is assumed that distancing is practiced. Hence transmission is assumed to be via aerosols (according to El Pais, the ECDC has observed that not a single case of fomites transmission has been seen).

The article includes the claim that in a “worst-case scenario” (shouting or singing in an enclosed space) an infected person releases the equivalent of 1,500 infectious doses. I would dearly love to know how “infectious dose” is calculated. Germany's prominent virologist Christian Drosten said three weeks ago that no one knows what amount of virus shedding is infectious (Notes Part 18, entry 2020-10-12).

2020-10-29 The US CISA has released Alert AA20-302A along with the FBI and HHS warning of increasing cyberattacks using Trickbot ransomware toolsets on US hospitals <https://us-cert.cisa.gov/ncas/alerts/aa20-302a> According to TheG live blog, entry at 0448 UTC <https://www.theguardian.com/world/live/2020/oct/29/coronavirus-live-news-france-second-wave-likely-harder-and-more-deadly-says-macron-global-daily-cases-pass-500000?page=with:block-5f9a5ff68f0866fbe9e4537a#liveblog-navigation> . says, without attribution, that 5 hospitals have suffered ransomware attacks already this week. I don't know what the “usual” rate of successful ransomware attacks on hospitals is, but I doubt it is zero.

2020-10-29 Germany's daily rate of new infections has gone over 15,000 for the first time. The RKI is reporting 16,774 for Wednesday 2020-10-28.

2020-10-29 Krammer reviewed SARS-CoV-2 vaccines in development in Nature on 2020-09-23 (it was received a month earlier) <https://www.nature.com/articles/s41586-020-2798-3.epdf> Somehow I seem to have missed reporting this, although I have known about it for weeks.