

Notes on COVID-19

Part 15: 2020-08-11 to 2020-08-27

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2020-08-13 The Imperial College REACT study has published the results of a second survey into seroprevalance of SARS-CoV-2 in the UK, Ward et al, available from <https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings/> The study is based on self-administered LFIA for IgG. Results are “.... 109,076 participants, 5,544 IgG positive results and adjusted re-weightedprevalence of 6.0% (95% CI: 5.8, 6.1). Highest prevalence was in London (13.0% [12.3, 13.6]), among people of Black or Asian (mainly South Asian) ethnicity (17.3% [15.8, 19.1] and 11.9% [11.0, 12.8] respectively) and those aged 18-24 years (7.9% [7.3, 8.5]). One third (32.2%, [31.0-33.4]) of antibody positive individuals reported no symptoms. Among symptomatic cases, the majority (78.8%) reported symptoms during the peak of the epidemic in England in March (31.3%) and April (47.5%) 2020. We estimate that 3.36 million (3.21, 3.51) people have been infected with SARS-CoV-2 in England to end June 2020, with an overall infection fatality ratio of 0.90% (0.86, 0.94).”

2020-08-13 The UK ONS has studied the effects on Covid-19 from air pollution <https://www.ons.gov.uk/releases/airpollutionandcovid19mortalityrates> A useful summary is <https://www.theguardian.com/world/2020/aug/13/study-of-covid-deaths-in-england-is-latest-to-find-air-pollution-link> “[ONS] analysed more than 46,000 coronavirus deaths in England and showed that a small, single-unit increase in people’s exposure to small-particle pollution over the previous decade may increase the death rate by up to 6%. A single-unit increase in nitrogen dioxide was linked to a 2% increase in death rates. These increases are smaller than found in other research; a US study found an 8% increase and an analysis of the Netherlands found a 15% rise. This may be because those studies assessed earlier stages of the pandemic when the virus was mostly spreading in cities.”

2020-08-18 Javelle and Raoult comment on the comparison of Petersen et al (see Notes 12, entry 2020-07-08) of SARS-CoV-2 with influenza and other outbreaks of respiratory diseases. [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30650-2/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30650-2/fulltext) They note differences with, say, the 1918 influenza pandemic, in that autopsies have shown that much morbidity was due to co-occurring bacterial infections such as Strep. Pneumoniae, but the morbidity in SARS-CoV-2 is due to secondary vascular and inflammatory disease. In other words, a very different aetiology. They also note that age-specific discrepancies in influenza pandemics have been hypothesised to correlate with the immune history of the hosts, whereas evidence is lacking for such factors in Covid-19 progression.

2020-08-18 The Global Outbreak Alert and Response Network (GOARN) has expressed in Fisher

et al in The Lancet 2020-08-17 its opinion as to the appropriate public health measures to combat Covid-19 globally. They favor TTI and other “core pillars” of “response”.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31760-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31760-8/fulltext) and they elucidate four principles for governments and “partners at a local level”.

2020-08-18 Tocilizumab is an IL-6 inhibitor. Campochiaro and Dagna comment in The Lancet on 2020-08-14 [https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913\(20\)30287-3/fulltext](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(20)30287-3/fulltext) on the different apparent outcomes between the large observational study of Biran et al

[https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913\(20\)30277-0/fulltext](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(20)30277-0/fulltext), which showed a positive effect in those suffering the cytokine-storm-like symptoms, and the COVACTA RCT, which showed little to no effect of tocilizumab. They suggest the difference might be due to the different criteria used to select Covid-19 patients for treatment; RCT versus perceived clinical need. The Oxford RECOVERY trial is also conducting a RCT of tocilizumab <https://www.recoverytrial.net> so there will be more information coming soon.

2020-08-19 Xia et al report in JAMA on 2020-08-13 on preliminary results from a Phase 1/II trial of an inactivated-virus vaccine for Covid-19

<https://jamanetwork.com/journals/jama/fullarticle/2769612>

Mulligan comments <https://jamanetwork.com/journals/jama/fullarticle/2769609>

2020-08-20 Rupert Beale has written a fine short essay on where we are with vaccines, published in the London Review of Books 42(16) on 2020-08-13, with open access to the WWW version <https://www.lrb.co.uk/the-paper/v42/n16/ruPERT-beale/in-the-lab> He wrote about Spike, the predominant feature of SARS-CoV-2, in LRB 42(10) on 2020-05-21. The WWW version is at <https://www.lrb.co.uk/the-paper/v42/n10/ruPERT-beale/short-cuts> but I don't know whether this is open access.

Incidentally, he gets the attribution of the trolley problem right: Philippa Foot, 1967. Many US colleagues attribute it to Judith Jarvis Thompson, who wrote a 20pp article on it, called “The Trolley Problem”, in the Yale Law Journal 94(6):1395-1415 in May 1985, and a subsequent article “Turning the Trolley” in Philosophy and Public Affairs 36(4):359-374, Fall 2008. Thompson's papers are first-rate, as one would expect, and she credits Foot in the first sentence of her 1985 paper, citing a 1978 book of collected papers, and in the second sentence of her 2008 paper, noting Foot's original 1967 essay and 1978 republication. Which suggests that those who attribute Trolleyology to Thompson haven't actually read Thompson's papers on it.

Thompson's papers are available via the portal JSTOR at

<https://www.jstor.org/stable/796133> resp. <https://www.jstor.org/stable/40212830>.

Foot's essay is available in her collection, last reprinted 2002 by Oxford UP and available on-line via paywall at OUP's Oxford Scholarship Online site

<https://oxford.universitypressscholarship.com/view/10.1093/0199252866.001.0001/acprof-9780199252862-chapter-2> or in the original simply to download from

<http://www2.pitt.edu/~mthompso/readings/foot.pdf>

The reason Trolleyology (as the study of the problem is often called) is relevant to Covid-19 is that it is a moral puzzle about making a choice between two consequences, each of which involves harm. Such issues arise very clearly with self-driving cars. Beale suggests the situation in government with what to do about Covid-19 in March was also such a choice.

Concerning Trolleyology with self-driving cars, in April 2018 at the safe.tech conference in Munich <https://www.tuvsud.com/uploads/images/1519915089723921992135/safe.tech-2018-programm.pdf> I heard a plenary talk by Dr. Anton Losinger, Auxiliary Bishop (Weihbischof) of the Catholic Church in Augsburg, who had served on a German government advisory committee concerning "AI" in the public sphere, such as self-driving cars. As I understood him, Losinger claimed the Trolley Problem had already been "solved" by Kant and the German constitution ("Basic Law", Grundgesetz). That would be 200+ years before, respectively 70 years before, the conference. While it may be true (or not) that such guidance follows from Kantian ethics, respectively the German Basic Law, I found it odd that anyone should suggest that a genuine ethical dilemma could be "solved": by saying that, he was assuming Kantian ethics and the German Basic Law. Whereas not all philosophers, let alone all rational people, would accept Kantian ethics, and the German Basic Law has been amended well over 50 times since it was written 72 years ago. Presumably, if the "solution" it yields to the Trolley Problem is not acceptable to most Germans (in the appropriate procedural sense of "most Germans"), the Grundgesetz could be changed again. The incident served to highlight that public issues do need public discussion: some people see "solutions", whereas others see only consequences of assumptions, and try to figure out what consequences they prefer in order to guide their choice of assumption. It is not different with Covid-19.

2020-08-20 On 2020-08-10 I noted a BMJ article about use of the term "behavioural fatigue" by HMG as a reason for not imposing a lockdown in early March. The idea was that imposing a lockdown would lead to "behavioural fatigue", namely people no longer respecting the necessary distancing measures to dampen transmission of SARS-CoV-2. And HMG didn't want that phenomenon to happen early in the development of the pandemic. BMJ reported that nobody now wants to own the concept. But it is intuitive and real. Young people in Bielefeld are increasingly ignoring social distancing measures while not wearing masks. For example, we have a problem with impromptu partying in the art museum sculpture park, a (formerly) lovely space, at weekends. Police have been called in the early hours of the morning because of loud noise from lots of people; fighting has broken out, even with the police; people are urinating and defecating in the open. Two months ago that wasn't happening. And it is not just in Bielefeld, it is everywhere. Berlin is apparently a lot more lax about social distancing amongst young people. The infection numbers are showing it. There is a danger of this developing into a serious generational difference. The ensuing social tensions that result may be politically quite significant.

2020-08-21 Some preliminary results of the PERFORM study (Reid et al, University of Bristol) are available on singing and speaking. From the University of Bristol press release at <http://www.bristol.ac.uk/news/2020/august/performsing-study.html> *"[t]he researchers discovered that there is a steep rise in aerosol mass with increase in the loudness of the singing and speaking, rising by as much as a factor of 20-30. However, singing does not produce very substantially more aerosol than speaking at a similar volume. There were no significant differences in aerosol*

production between genders or among different genres (choral, musical theatre, opera, choral, jazz, gospel, rock and pop)."

A preprint has been published on 2020-08-20 by Gregson et al on ChemRxiv

https://chemrxiv.org/articles/preprint/Comparing_the_Respirable_Aerosol_Concentrations_and_Particle_Size_Distributions_Generated_by_Singing_Speaking_and_Breathing/12789221

The reported work concerns singing and speaking in comparison with breathing, and measures the aerosols generated. The tests were performed in a completely clean particulate-free atmosphere. From the abstract: *"Here, we measure aerosols from singing, speaking and breathing in a zero-background environment, allowing unequivocal attribution of aerosol production to specific vocalisations. Speaking and singing show steep increases in mass concentration with increase in volume (spanning a factor of 20-30 across the dynamic range measured, $p < 1 \times 10^{-5}$). At the quietest volume (50 to 60 dB), neither singing ($p = 0.19$) or speaking ($p = 0.20$) were significantly different to breathing. At the loudest volume (90 to 100 dB), a statistically significant difference ($p < 1 \times 10^{-5}$) is observed between singing and speaking, but with singing only generating a factor of between 1.5 and 3.4 more aerosol mass. Guidelines should create recommendations based on the volume and duration of the vocalisation, the number of participants and the environment in which the activity occurs, rather than the type of vocalisation. Mitigations such as the use of amplification and increased attention to ventilation should be employed where practicable."*

There is a report of these results in TheG on 2020-08-21

<https://www.theguardian.com/music/2020/aug/20/performers-could-sing-or-play-softly-to-reduce-covid-risk-study-shows> The article says that the research has already contributed to HMG guidance (from Departments BEIS and DCMS) updated on 2020-08-13 at <https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/performing-arts>

Under Section 3.2 "Managing Audiences", the guidance says *"People should continue to socially distance from those they do not live with wherever possible. Social interactions should be limited to a group of no more than two households (indoors and out) or up to six people from different households (if outdoors). It is against the law for gatherings of more than 30 people to take place in private homes (including gardens and other outdoor spaces)."* I read this as general guidance, not activity specific. There seem to be no specific numbers or orientations given.

2020-08-22 The 22nd item in Risks Forum Digest 32.21 mentions an Israeli saliva test for Covid-19 <https://catless.ncl.ac.uk/Risks/32/21#subj22> It might mean this. Reuters reports on 2020-08-13 on initial testing of a saliva test for CoVid-19 at Sheba Medical Center.

<https://www.reuters.com/article/us-health-coronavirus-israel-detection/israeli-hospital-trials-super-quick-saliva-test-for-covid-19-idUSKCN25923A>

The device has been developed by company Newsight Imaging. The device irradiates a sample using EM of the wavelength of light, and the results are analysed. "Machine learning" is used to improve the analysis. No other technical details are given. *"The center said in an initial clinical trial involving hundreds of patients, the new artificial intelligence-based device identified evidence of the virus in the body at a 95% success rate."* – whatever a "95% success rate" means.

There are already saliva tests for Covid-19, five of them authorised by the US FDA under EUA. Yale University has developed one called SalivaDirect, which received a EUA from the FDA on August 15 or before

<https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-issues-emergency-use-authorization-yale-school-public-health> A report on SalivaDirect can be found at <https://www.scientificamerican.com/article/covid-19-spit-tests-used-by-nba-are-now-authorized-by-fda/>

Most such tests chemically manipulate the saliva constituents. The Israeli test appears not to do so.

2020-08-22 On 2020-08-09 I reported on some news whereby the Karlsruhe District in Baden-Württemberg and the Offenbach District in Hessen had sent notes to parents of children in kindergarten where a Covid-19 case occurred. The children shall be quarantined, also isolated from other members of the household, and in case a household is unable to do this then the children can be removed from the household and put into state custody. Hard to believe. People all over, especially recipients, were outraged. I mentioned “tin-eared bureaucrats”. It was “clarified” by the following: the law concerning protection from Covid-19 infection does not distinguish between adults and children; and government offices are required by law to spell out the legal situation of not following requirements – it is called “Rechtsbelehrung”. Some lawyers pointed out any such action would likely be unconstitutional, since the state and (obviously) the parents are required to act in the best interests of the child, and it is manifestly not in the best interests of, say, a three-year-old who is not sick to isolate him/her in a room by his/herself for two weeks and, um, push the meals under the door. The Health Ministry in my state of North-Rhine Westfalia (NRW) came right out and said we will not not not do this in NRW, full stop. This has been repeated.

After this, it became known that the district of Ludwigslust-Parchim in the Baltic-coast state of Mecklenburg-Vorpommern had sent an almost-identical letter to parents of quarantining secondary-school kids. Better than kindergarten, I guess. Oh, and the parents would be subject to a fine or up to two years in prison. All reported in my local newspaper NW on 2020-08-19.

Today it is getting closer. In the Märkisch District of NRW, in the hilly area of Sauerland, parents of kindergarten kids who are quarantined received an “almost identically-phrased letter” (“*fast wortgleiche Anordnung*”) from their local health department. The NRW Health Ministry has been informed: “*We are looking into it.*”

The persistence of this trope is astonishing. This is a blunder of massive proportions. Many people receiving such a letter are not going to have the wherewithall to judge that it is bullshit (consider that the official writing it did not). Why is it spreading? Why hasn't it been fixed already? Where is an infodemiologist when you need one?

2020-08-24 The American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) has produced a position document on infectious aerosols (Schoen, ASHRAE Journal 65(5), May 2020) available from https://www.ashrae.org/file%20library/about/position%20documents/pd_infectiousaerosols_2020.pdf There is an extensive list of references. I see two immediate takeaways. First, UV is most effective germicidally in the 200-280 nm wavelength range (UV-C) “*UVGI inactivates microorganisms by damaging the structure of nucleic acids and proteins with the effectiveness dependent upon the UV dose and the susceptibility of the microorganism. The safety of UV-C is well known. It does not penetrate deeply into human tissue, but it can penetrate the very outer surfaces of the eyes and skin, with the eyes being most susceptible to damage. Therefore, shielding is needed to prevent direct exposure to the eyes.*” Second, relative humidity is important: “*immunobiologists have correlated mid-range humidity levels with improved mammalian immunity against respiratory infections (Taylor and Tasi 2018). Mousavi et al. (2019)*

report that the scientific literature generally reflects the most unfavorable survival for microorganisms when the RH is between 40% and 60% (Evidence Level B)."

2020-08-24 In the BMJ on 2020-08-20, Wilson, Corbett and Tovey emphasise again the importance of aerial transmission of Covid-19 and how consideration should not be limited to (arbitrarily defined) "droplets" taken to precipitate under gravity within short distances (1-2m).

<https://www.bmj.com/content/370/bmj.m3206>

2020-08-24 Islam et al in the BMJ on 2020-07-15 used data from 149 countries, consisting of a "[n]atural experiment using interrupted time series analysis, with results synthesised using meta-analysis" to estimate the effect of physical distancing measures on Covid-19 transmission.

<https://www.bmj.com/content/370/bmj.m2743>

Citing a Cochrane review, the authors say that most data on the effectiveness of physical distancing comes from modelling studies plus only four observational studies on SARS and MERS. It follows this observational study is important. They used the Oxford Covid-19 Government Response Tracker, and looked at the following seven variables (five major, two split): (1) closure of schools, (2) closure of workplaces, (3) restrictions on mass gatherings, involving (3a) stay-at-home regulations and (3b) restrictions on gathering, (4) public transport closure, and (5) lockdown, involving (5a) stay-at-home regulations and (5b) restrictions on movement within the country. They merged the similar variables (3a) and (5a). The results were: *"On average, implementation of any physical distancing intervention was associated with an overall reduction in covid-19 incidence of 13% Closure of public transport was not associated with any additional reduction in covid-19 incidence when the other four physical distancing interventions were in place Data from 11 countries also suggested similar overall effectiveness when school closures, workplace closures, and restrictions on mass gatherings were in place. In terms of sequence of interventions, earlier implementation of lockdown was associated with a larger reduction in covid-19 incidence..... compared with a delayed implementation of lockdown after other physical distancing interventions were in place"*

2020-08-24 In the BMJ on 2020-08-14, Sharoon et al consider how the rate of household transmission from an index case could be reduced. <https://www.bmj.com/content/370/bmj.m3181> To show the importance of this, they cite a Chinese study which suggests it is responsible for up to 70% of transmission when other community control measures are in place, and they cite a NY study showing a 38% secondary infection rate, and "similar" rates in Chinese studies.

2020-08-25 The moral philosopher Ben Bramble has written a book on practical ethical questions surrounding the Covid-19 pandemic, called Pandemic Ethics. He has made it open access. It is well worth reading, amongst other things for the simplicity with which he considers certain questions which others have obscured. Available from <https://philpapers.org/rec/BRAPE-7> .

The book is an essay in practical ethics, discussing pressing ethical issues while taking clear positions on ethical principles. It does not address how to ground those principles in the common philosophical foundations for ethics, say a Kantian or Rawlsian or so foundation. Bramble's interest here is in discussing actual dilemmas and issues and providing straightforward guidance on what we should do and why. So he proceeds assuming various sorts of human equity, for example not accepting a disadvantage which accrues because of a lack of opportunity, but noting we as a society incur an obligation both to compensate for the disadvantage as well as to remedy that lack. Use of such principles has been lacking during many political discussions concerning Covid-19 and government in a number of countries.

He takes an interesting and worthwhile attitude towards triage, towards deciding who gets support

equipment when there is more demand than equipment available. He doesn't pretend to solve the issue. There is the "ask the patient" solution. He doubts whether patients are mostly freely able to choose whether they should be invasively ventilated or not, and suggests we should not actively be soliciting patients' preferences. Savulescu has a triage algorithm based on "Resource Adjusted Probability Ratio". White has a preferable algorithm. Bramble suggests a third, which he demonstrates improves on both in that it does not have their respective anomalies. It requires a bit more arithmetic computation, but he suggests triage specialists should be doing this semi-off-line anyway, and not first-line doctors. His idea is not to devise an ideal solution, but simply to improve on what is out there already.

I have my reservations about his discussion of immunity and "immunity passports", the idea being that those who are immune can perform socially valuable tasks and jobs which would be risky for those who are susceptible. This could be so if "immune" really meant unable to catch the illness. People who have caught the illness and recovered are proposed to be "immune", and it is clear that having had the illness recently does afford some level of protection against catching it again, simply through the enhanced presence of antibodies. But at the current stage of knowledge about Covid-19, it is not clear what kinds of protection against reinfection are offered by having had the disease already. Yesterday came a report of a Chinese man who had had Covid-19 in April, and who is ill with it again. It is known to be a reinfection because the strain of the virus is different from that which infected him in April. <https://www.theguardian.com/world/2020/aug/24/case-of-man-with-coronavirus-for-second-time-stokes-reinfection-fears-hong-kong>

2020-08-26 Originally in Notes Part 14 on 202-08-09, and then again, above, on 2020-08-22 I reported on the trope making the rounds whereby parents of children who are in quarantine because someone at their school or kindergarten has Covid-19 are sent letters threatening removal of their child from the household if the household cannot isolate the child. The Health Ministry of the state NRW has said stridently that it considers this threat disproportionate. And now it has apparently happened in my city of Bielefeld, as well as in the neighboring city of Herford, some 16-17km away. Our city health department head is in the newspaper almost every day nowadays because of Covid-19, giving the impression of being very aware and very active. Now this.

The latest tale appears to be as follows. The letter was formulated originally as a pattern by the Federal government's public health body, the Robert Koch Institute. Such letters must say what the law is governing quarantine ("Belehrung"). And someone there obviously thought that, if you don't isolate your child, the law says that the child may be removed from the household. But nobody has yet quoted the law or the legal reasoning which supposedly contains or leads to that consequence.

Bielefeld and other districts have said they need to "improve the formulation" of the statement. But either the law says it or the law does not. If the law says it, then that is what administrators must say to parents. And in this case the law should obviously be modified, rapidly, given every administrator is rapidly saying they would never do that. And, on the other hand, if the law doesn't say it, then it doesn't need to be said, so why is it in there?

In Herford, the head of the public health department said there is no way they would separate kids from parents on those grounds. And it turns out it wasn't in the letter sent to parents. A resident reported to the newspaper that a city health official repeated the threat to her during a telephone call. That seems much less black and white – maybe the official was having a bad moment, or the official and the resident were arguing over something, or the resident misunderstood something being said.

So if Herford can omit it from the letter sent to parents, it cannot be part of the legal instruction (Belehrung) because that is required to be in there. And if it is not part of the Belehrung, then it is

not part of the law. And if it is not part of the law, then this is indeed a concoction of a tin-eared bureaucracy.

I talked to a lawyer expert in public-administrative law. He firmly opines that it is a product of unreflective bureaucrats, what I am calling tin-eared bureaucracy. The letter template comes from RKI (the first instance of a tin ear, presumably formulated with the help of an equally tin-eared civil-service lawyer), and we shouldn't really be all that surprised that there are functionaries prepared to pass it along without thinking. He also observed in general that this is the first time district and city public health departments have had something serious and consequential to do, nationwide, in decades, if not since the Republic was formed. It is thereby no surprise that some of them are mucking it up.

The legal reasoning, as I see it, is trite. (I) The quarantine has within-household isolation requirements, which do not distinguish between children and adults. (II) If a quarantine is not being executed as required, then the child's welfare is thereby endangered. (III) If a child's welfare is endangered, then that is legal ground for removing the child from the household. Both I and III are certainly true. But II is questionable at best; indeed, it is obvious that isolating a very young child from his/her parents for two weeks, as the quarantine requirements specify, is itself almost certain to influence the child's welfare negatively. (It is not as if the child is ill – we are speaking only of prophylactic quarantine because someone in the kindergarten contracted Covid-19.) If that is so, then no matter what a household does – either following the requirements or contravening them – the child's welfare nominally suffers. *Reductio ad absurdum*.

Again the question arises why this has not been fixed. One reason may be that fixing it requires work, people have other things to do and were relying on the common sense of people further down the chain. Which hope has apparently not been realised everywhere. Another reason might be that all the people in the chain think it is someone else's responsibility to fix, and no one is “owning” the problem.

My lawyer colleague observed that the *Belehrung* couldn't be executed as written. First, there is no practical way the situation with families with a child in quarantine can be supervised – no public authority has any spare capacity to go around checking up on how households might be conforming. They barely have enough to check whether a person nominally in quarantine is indeed at home, as was necessary during the Tönnies case in June. Second, no family court would order a child removed from a family for that reason alone (there might well be other reasons for a child to be removed from a family, of course; the district child welfare agencies are in regular contact with such “problem families”).

2020-08-27 It goes on and on. The NRW Health Ministry has had to change its previous advice that breaching quarantine-isolation regulations would not lead to a child being taken away from the family into protective custody. The Ministry was quite clear when this issue first arose, weeks ago, that “we wouldn't do that – it would not happen here.” The latest clarification reads “*When a child's welfare is at risk because of a lack of adherence to quarantine regulations, then it can result in a child being taken away from the family by the child welfare authority.*” (my translation). Taken literally, of course it can. Any risk to the welfare of a child living in a family can result in the child welfare authority taking the child into protective custody. That is what the law says, and has said for decades. But this is all theoretical. It stems from the fact that government authorities are obliged to clarify the law (“*Belehrung*”) every time they enact a regulation or make a decision. Sometimes this is useful: when you get your tax decision from the Finance Ministry, or you are a senior civil servant (“*Beamter*”) and receiving state-mandated compensation for medical expenses incurred (“*Beihilfe*”), it is accompanied by a *Belehrung* which tells you when and how the decision becomes final and how to appeal it. And sometimes this is not. As when the local health authority sends you

a letter saying your child is in quarantine because of a Covid-19 case at the kindergarten, you have to keep your child in isolation and use physical distancing measures and masks, and (the Belehrung) if you don't do that the state has the right to remove the child from the family into protective custody.

The problem arises because (a) the law on household quarantine during Covid-19 is obviously impractical for very young children; (b) the requirement for the Belehrung; (c) the understandable reaction of normal people to receiving such an impractical Belehrung. The problem with the Belehrung in this case is that recipients understandably see it as threatening, and it refers to a piece of completely untested law. So authorities are being forced to say what they would and would not do, constrained by the requirement of ill-formulated, impractical and untested legislation. Any lawyer will advise you not to be the test case for a piece of new legislation if you can avoid it, because neither you nor they can tell how things will turn out, and this is even more theoretical than that, because there is no test case and the involved authorities have all said they imagine there won't be. The health authority in Bielefeld as well as various other health authorities have said that the Belehrung is "ill formulated", but even if it is formulated "better", (a), (b) and (c) above remain the case. The authorities have to say, after (b), what the consequences are of violations of the law (a).

This won't be the last we hear of this.

2020-08-27 TheG reports on 2020-08-26 on a study from the University of North Carolina at Chapel Hill with the Saudi Health Council and the World Bank into the effects of Covid-19 on obese people. <https://www.theguardian.com/world/2020/aug/26/obesity-increases-risk-of-covid-19-death-by-48-study-finds> Obesity is defined for the study as a BMI of over 30. The increased risk of hospitalisation is a whopping 113%. The increased chance of admission to ICU is 74%. The increased risk of death is 48%. These are huge figures. The newspaper article does not reference a scientific paper; the news release from UNC says a paper has been published in Obesity Reviews <https://www.unc.edu/posts/2020/08/26/obesity-linked-with-higher-risk-for-covid-19-complications/> and indeed the open-access full paper by Popkin et al is here <https://onlinelibrary.wiley.com/doi/10.1111/obr.13128> There is a "major concern" that vaccines may be less effective in obese people, as are many flu vaccines.