Coronavirus: we are risking a covid-19 tragedy in Europe’s refugee camps, writes Nasar Meer

Urgent action is required to protect the inhabitants of over-crowded refugee camps in places like Greece from coronavirus

Two things public health experts routinely tell us about Covid-19 are that prevention is better than cure and that this pandemic does not respect geographic boundaries. Neither of these messages is being heeded in the response to refugees and displaced populations.

For the millions of people in official camps and informal settlements, the pandemic poses a terrifying threat that lays bare the inadequacy of current approaches. Take the Cox’s Bazar camp in Bangladesh for example, home to more than 855,000 Rohingya refugees, living in small and confined shelters and where the population density is such that 40,000 people share a single square kilometre. Social distancing there is impossible, and handwashing stations, triage centres, and isolation facilities are lacking.

The dangers are similar the world over, from those internally displaced in Syria and Venezuela, to the recent swelling of numbers of refugees in Idlib province, Al Hol in Syria, the Zaatari camp in Jordan, the Bekaa Valley in Lebanon and Ciudad Juárez in northern Mexico, to name the most obvious. These

populations have typically endured the worst of possible hardships, caught infectious diseases and developed respiratory conditions in the course of merely surviving in camps without planned sanitation or access to decent health care. Now add to this few means of Covid-19 prevention, little treatment for those infected and virtually no means of disease control.

Yet it is here, in Europe, that an entirely avoidable catastrophe unfolds. Lacking the most basic sanitation, including soap and clean running water, thousands face a perilous fate, sleeping in close proximity in overcrowded camps that they are prevented from leaving. On the Greek island of Lesvos, once a transit route for those crossing from Turkey, around 20,000 people are squeezed into an unfit makeshift encampment, originally intended for no more than 3,000. The outcome? Roughly one water tap between 1,300 people and entire families made to occupy spaces of little more than three square meters (and the entire population squeezed into less than one-tenth of a kilometre squared).

Increasingly desperate pleas

This means, as Dr Hilde Vochten, Médecins Sans Frontières' medical coordinator in Greece, makes plain, "recommended measures such as frequent hand washing and social distancing to prevent the spread of the virus are just impossible". Hence MSF has called on the European Union to work in partnership with Greece to close the camps and resettle people before it is too late.

From the residents of the Moira camp on Lesvos, meanwhile, we hear increasingly desperate pleas that if not all can be evacuated then priority be given to the elderly and vulnerable. Medics on the ground report horrific conditions. Speaking to the British Medical Journal, Siyana Marhroof

Shaffi, director of the UK-based charity Kitrinos Healthcare, which runs a medical clinic on Lesvos, says that many of the camp's residents already have respiratory infections and indeed that, in 21st Century Europe, scabies is "rampant" in these camps.

The situation is no better on the other Aegean islands of Chios, Samos, Leros, and Kos, where formal and informal camps have swelled since the EU-Turkey deal (signed in 2016) commenced to prevent onward movement from the camps.

While this treaty was designed to prevent the movement of asylum seekers into Europe, it was matched by a hardening in approach to those who had already arrived. Typical is the Pyli facility in Kos, an open structure to which thousands have been left to pin makeshift shelters with no organised water, sanitation or prospect of medical provision.

Overall however these are relatively small numbers of people – they run into the tens of thousands in a continent of over 740 million, and so could easily be absorbed if there was a political will to close the camps.

A disease that affects everyone

The call for urgent action however does not need to rest on altruism and goodwill but law: 1951 Refugee Convention insists that asylum-seekers and refugees should not be penalised for having entered or stayed irregularly and, most pressingly in light of Covid-19, the UN High Commissioner for Refugees (UNHCR) has a clear protocol for identifying and addressing vulnerability of asylum seekers and refugees. This is more relevant than ever and must now be heeded.

There are positive lessons we can draw on from elsewhere, including the recent decision of the Portuguese government to treat asylum seekers and refugees in Portugal as permanent

residents with access to health care, at least during the present crisis.

The EU could, for example, offer Greece debt relief in the first instance and then partner up with international agencies to help rehome people. There is an appetite to help.

We have seen in recent years how national level intransigence has been thrown into sharp relief by municipal, local or city-level initiatives.

This attitude has an older pedigree in the International Cities of Refuge Network, the Cities of Sanctuary, the Save Me campaign and the Eurocities network, each of which elevates the role of the cities to accommodate refugees.

In all the risk and uncertainty accompanying Covid-19, it is easy to forget safety is a relative concept and so while Covid-19 is a disease that can affect everybody, it will not do so equally.

Whatever else transpires in the coming weeks and months, what remains certain is that these camps are European constructions and all the responsibility for what befalls in them rests not with those who contract this illness, but in the failure of Greek and EU leaders to honour their obligations to the most vulnerable.

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Coronashock capitalism: the unintended consequences of radical biopolitics, writes Stefan Ecks

2020 is a significant year for the social sciences. Not only because COVID-19 changed how we think about global connectedness and local distancing. By some strange coincidence, 2020 also marks the 100th anniversary of Max Weber's death. He was only 56 years old when he died in Munich on June 14th, 1920. Weber was one of millions of victims of the Spanish flu pandemic that followed the First World War. Between 1918 and 1920, this strain of influenza killed up to 100 million people, more than the 40 million attributed to WWI. Some places were so severely hit that all social and economic activity collapsed. In Western Samoa, then under British rule, 95% of the population got infected and 22% died within a few weeks (McMillen 2016: 91-92). The Spanish flu was unusual both for its staggering death toll and for the demographics of its victims: "healthy young people in the age interval 15-40—not frail patients, nor children or elderly" (Karlsson, Nilsson & Pichler 2014: 1).

Weber was working on his great *Economy and Society* when he died. No other sociologist was as attuned to the gap between the intention of action and its consequences in the long run. The founders of Protestantism did not intend to create secular capitalism, and yet this was the accidental outcome of the Reformation. In his last years of life, Weber also wrote much about the economic impacts of WWI. But he never wrote about the economic shock of the flu pandemic. In 1919, Weber was

part of the German delegation to Versailles. He anticipated that the Treaty of Versailles would spell the ruin of the German economy (Radkau 2009). Meanwhile the scale of the economic damage of losing millions of people in their healthiest years was hardly noticed. In Germany, the authorities censored press reporting about the death toll (Witte 2003). Weber might have written about the pandemic if he had had the same flood of news that we have about COVID-19 (Engelmann 2020). The economic consequences of the Spanish flu were never studied in detail, either in Weber's time or since. The Great War drowned out historians' recognition of the flu.

How is the COVID-19 pandemic affecting the economy? In terms of GDP and stock market performance, COVID-19 is an all-out disaster for capitalism. The world is staring at the worst recession in nearly a century. Businesses are going bankrupt and people are losing their jobs at catastrophic rates. In the UK, one million people made new jobless claims within two *weeks* of the country's lockdown coming into effect. Compare this to the 2007-08 financial crisis: back then, one million people lost their jobs over three *years* after the downturn (Financial Times, April 2, 2020).

The economic disaster is *not* caused by COVID-19 itself. The 1918-1920 flu pandemic and the 1980-1990s AIDS pandemic strained economies because these viruses killed people of working age. The current economic disaster is entirely caused by the biopolitical response to the virus. Governments opting for strict lockdowns are putting population health above economic wealth. In Asia, Europe and the US, governments are "deliberately inducing one of the most severe recessions ever seen" (Tooze 2020). Government attempts at stalling the health disaster accept that this does unfathomable harm to the economy.

In a recent reflection on COVID-19, Bruno Latour argues that we are not witnessing a new form of politics but a rerun of nineteenth-century "statistics" in the sense of "population

management on a territorial grid seen from above and led by the power of experts" (Latour 2020). He holds that COVID-19 made an older form of politics return: "we are collectively playing a caricatured form of the figure of biopolitics that seems to have come straight out of a Michel Foucault lecture" (Latour 2020). Foucault characterized biopolitics as "focused on the species body, the body imbued with the mechanics of life and serving as the basis of the biological processes […] Their supervision was effected through an entire series of interventions and *regulatory controls: a bio-politics of the population*" (Foucault 1978: 139; emphasis in original). Biopolitics justifies interventions by whether they enhance the health of the population. Foucault never clarified if biopolitics takes health as supreme value, or if enhancing health is just a means to enhancing wealth. We should distinguish two modes of biopolitics, moderate and radical. In moderate biopolitics, health is enhanced in order to enhance wealth. This is what Foucault described. But the response to COVID-19 is far more drastic. When population health becomes the supreme value and economic wealth becomes subservient it, biopolitics turn radical. I agree with Latour that what we are seeing is biopolitics. I disagree with him that this is a "return": instead, we have never seen biopolitics on such a scale. 2020 is the birth year of radical biopolitics.

Previously it looked like economic wealth would always trump population health. The "return" of biopolitics comes long after neoliberalism seemed to have displaced it. In the 2000s, when neoliberalism was the only game in town, it appeared as if governments had ceased to rule over life and death. Back then, Nikolas Rose argued that liberal governments do not "claim—or are given—the right, the power, or the obligation to make such judgements in the name of the quality of the population" (Rose 2006: 254). In neoliberalism, individuals are to take responsibility for their own health while the state is "no longer expected to resolve society's need for health" (Rose 2001: 6). Arguably governments never ceased to

exercise power over life, at any point. But biopolitics were moderate, and easily subsumed by neoliberal economic policies. Now, coronashock has induced a radical turn.

Both the US and the UK are currently run by right-wing parties. Both the US and the UK dithered and delayed their responses to COVID-19. Both governments only turned to radical biopolitics when the exponential spread of the infection became a "tsunami" threatening to make health systems collapse. From January until the beginning of March, both Trump and Johnson declared their countries would "stay open for business." Both denied that COVID-19 was much to worry about, and both failed miserably in preparing for the coming wave of infections. In neoliberalism, governments are not meant to disrupt the market for the sake of health. Dominic Cummings, the UK prime minister's chief adviser, perfectly summarized the strategy: "protect the economy, and if that means some pensioners die, too bad" (cited in Walker 2020). Similar arguments were made in the US (e.g., Katz 2020). Letting the virus "run its course" while protecting the economy is a neoliberal response. Moderate biopolitics do not threaten wealth. Free movement and free markets are more important than saving lives. If there is something like "neoliberal eugenics" (Comfort 2018), they are not about "making live" but about "letting die."

The vast majority of people who are dying with the coronavirus are older than 65 years and most have multiple chronic health conditions. Sharon Kaufman's *Ordinary Medicine* (2015) shows the bioethical dilemma of how unevenly resources are allocated: older people take the most drugs, they receive the most treatments, they have the most complex multimorbidities, and they use up 90% of healthcare resources. Johnson and Trump initially responded to COVID-19 in a neoliberal mode: people are dying every day of natural causes, let them. COVID-19 mostly kills people deemed to be a burden on healthcare and welfare. From a neoliberal point of view, most COVID-19

victims are economically expendable. But the threat of skyrocketing death rates forced both governments to take a u-turn into radical biopolitics. Even pro-market governments opted for shutdowns and enacted tax-funded stimulus programs larger than any intervention since WWII. Even neoliberals could not put economic profits over population health any longer. Sticking to the neoliberal script would have been political suicide.

Radical biopolitics cannot last long because the economy is hurting too much. True to form, Trump tweeted on March 23: “WE CANNOT LET THE CURE BE WORSE THAN THE PROBLEM ITSELF” (emphasis in original). What will come after the lockdown? The corporate sector will try to recuperate lost profits. Corporations are already calling on governments to bail them out with public money, in the same way as during the financial crisis 2007-2008. COVID-19 might also turn into an occasion for “disaster capitalism” (Klein 2007). Vincanne Adams (2020) argues that COVID-19 can be read as disaster capitalism because it exposes pre-existing inequalities and because it threatens the profiteering of industries in its wake. In the short run, radical biopolitical interventions are an unmitigated disaster for capitalism. In the long run, the catastrophic consequences of radical biopolitics could be used to justify sweeping pro-market reforms and to slash welfare and social security.

It could also happen that COVID-19 becomes the springboard for alternative politics. It might be “a portal, a gateway between one world and the next” (Roy 2020). Klein (2007) is wrong to imply that neoliberals have a monopoly on shocks. COVID-19 is a shock for everyone, and the shock can be channeled into other politics. Socialized health care and universal basic income have become far more plausible. Governments’ decree that citizens must selfisolate show that health can never be privatized. Adams (2020) hears her daughter say that, if “people with COVID-19 are going to get free tests and free

hospitalizations and the government was going to send checks to fill in the gap for missed wages, then it might make [US Americans] think that [socialism] actually could work." Instead of bailing out polluting industries, a Green New Deal might look like a better way to restart the economy. Dolphins are swimming in Italian ports and sea turtles are hatching on Brazilian beaches. The coronavirus has achieved a greater reduction of carbon emissions than decades of environmental politics.

Max Weber was cremated. In 1920s Germany, cremation was still rarely practiced among Protestants and strictly forbidden to Catholics. There was a heated contemporary debate about cremation. An argument made in favor was that it helped Nature. The experts believed that cremation would "enrich the carbon dioxide content in the atmosphere and thereby promote the growth of vegetation" (Radkau 2009: 549). They thought that burning human corpses could bring new life to plants. This morbid little detail of Max Weber's death may give you hope: perhaps death can be turned into life, maybe the disaster can be a portal. It may also make you despair: how could the experts ever be so wrong? How can the consequences of social actions be so drastically different from what they were intended to achieve?

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economics.

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COVID-19 and philanthropy in Africa: a stitch in time? By Kenneth Amaeshi

Globally, there are concerted efforts by the private sector to find creative ways of contributing to tackling the pandemic. Some businesses are adapting their manufacturing systems to produce some of the essential materials and equipment required to combat the pandemic such as sanitisers, ventilators, testing kits, et cetera. Others, especially those in the biochemical and pharmaceutical industries, have intensified their Research and Development (R&D) efforts towards a solution. It is literally all hands on deck!

The corporate sector in Africa is not left out. Given the paucity of manufacturing and R&D capabilities in the continent, local businesses are crowding in their capabilities in different forms through donations of funds, construction of isolation centres, and collaboration with governments and third sector organisations, amongst others. It is literally a matter of life and death and a race against time!

Whilst these good deeds are appreciated, they call for some reflections. Why does it take a crisis of monumental proportion for businesses to truly appreciate that they are part of society and need to contribute positively to it? Why is it unattractive for businesses to collectively contribute to institution building in Africa, instead of spending energy on ad hoc, in some cases tokenistic, individual corporate philanthropic initiatives?

Many more questions could be asked. However, one thing remains unquestionable – the reality that businesses love one thing in particular; more money! And even better when it comes with good reputation. Business leaders understand this and often do

their best to protect this interest. This understanding and philosophy is at the heart of the Corporate Social Responsibility (CSR) industry and practice – especially in Africa, where CSR is still mainly seen as voluntary corporate philanthropy (Adeleye et al., 2020[1]; Ezeoha et al., 2020[2]).

As the name suggests, corporate philanthropy is mainly "*an act of giving back to society at large*" (Amaeshi, et al., 2006[3]). This has included donations to schools, hospitals, local communities, prisons and orphanages; construction of roads and decoration of public spaces; economic empowerment and poverty alleviation.

However, the other side of the equation that is not often explored in the CSR debate is the idea that CSR should be a business philosophy, which takes the private governance of externalities seriously. Externalities here connote the positive and negative impacts arising from corporate entrepreneurial activities that are borne by some third parties who are unconnected to the business. This could be at the production, sale or consumption point.

Traditionally, the burden of governing corporate externalities has always been borne by the State. In order to curtail negative externalities, the State uses such regulatory mechanisms as taxes, subsidies and quotas. But institutions in many African countries are weak, hence the inefficiencies in the system. A classic case is the apparent revelation of the poor health system in many African countries in the evolving face of COVID-19. As the rich and poor confront their common demons, it makes much sense to now appreciate that we are all victims of the system. Unsurprisingly, these institutions need to be strengthened; and this is where true CSR comes in. This will require more collective action than isolated corporate initiatives.

CSR post-COVID-19 will need to be radically different. It

should focus on addressing the root causes of many of the inefficiencies in Africa, which are strongly linked to bad governance and weak institutions. To meet this goal, Corporate Social Responsibility, as corporate philanthropy, needs to become Collective or Collaborative Social Responsibility, where businesses will need to work with each other, and other possible partners, to address the weaknesses in the system.

The focus should primarily be on strengthening the public service in most African countries to function effectively and efficiently. And businesses will have to learn to overcome this challenge and find new ways of extracting value from collective or collaborative social responsibility.

By implication, the dominant view of CSR as corporate philanthropy amongst most African businesses needs to be seriously challenged. And there is no better time to do that than now. The good crisis should not be allowed to waste, as they say!

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Stay calm, be active: simple ways to boost your physical activity during COVID-19 – By Coral Hanson, Paul Kelly, Alice Pearsons, Chloe Williamson, Sheona McHale, Steven Hanson & Lis Neubeck

The COVID-19 global pandemic is rapidly changing the way that we live. Suddenly, large numbers of people are working from home, leisure facilities are closed, and we're social distancing from our family and friends. The benefits of physical activity for health are well known and emphasised in the 2019 UK physical activity guidelines.[1] Understanding how to build some physical activity into your new stay-at-home reality can help keep you healthy, calm, and connected.

Every time you are active, your mental health improves

We gain short-term mental health benefits from each bout of activity, so doing even small amounts is worthwhile. Physical activity of any intensity is good for your mood.[2,3] It does not matter what type of activity you choose. Different forms of exercise; walking,[4] cycling,[5] yoga,[6] dance aerobics,[3] tai chi[7] and running[8] all trigger similar positive mental health benefits. If you are unable to go out, changing your normal activities to something that you can do indoors will help your mental health. For example, replacing your normal cycling activity with an online dance aerobics

class will also help maintain your aerobic fitness, while replacing it with yoga will help with strength, balance and mental health. Anything is good, but more is better. This means that whatever your starting point, doing a bit more activity will help to combat social isolation and anxiety.[9]

Breaking up sitting time

A major change to physical activity levels for those now working at home is the loss of active commuting to work or other journeys, and the incidental activity of moving around the office. In normal times, office workers spend approximately 70% of an eight-hour workday sitting.[10] The move to home working could potentially increase this. Workplace studies have examined how to increase incidental physical activity while at work- and these same principles apply to working at home. Evidence indicates that using three different strategies can help; **standing up** (if you are able) at least every 30 minutes; **sitting less** by aiming for approximately equal amounts of sitting and standing time, and **moving more** by increasing the type of physical activity you do just from one activity to another.[11] Some practical tips are that you can set reminders (use your online diary or phone) to stand up every 30 minutes, walk to get water regularly, or stand when you feel uncomfortable and need to change position. If you have an adjustable desk at home, try to spend equal amounts of time standing and sitting. If not, you can sit less by standing during online meetings and telephone calls. Be creative and use other things in your home to make a standing desk. We found that cardboard boxes on top of our desks work well. If you are chairing an online meeting, initiate a standing culture at the beginning. Move more by combining every other 30-minute stand up with walking laps around your house. If you have stairs, make sure that you include them in your lap. If you have more than one toilet in your house, use the one furthest from where you are working.

Moving for 1-2 minutes half an hour is enough to break up your

sitting.[12] You can perform body weight exercises in small spaces and with little equipment. For example, calf-raises, knee to elbow and standing wall press-ups target strength, flexibility, coordination and balance. More advanced exercise such as lunges, squats and sit-ups are alternatives for those who are already active. If you do not have any fitness equipment, look around your home and see what you can use instead. For example, you can use tins of food as hand weights for upper body strength exercises.

Physical distancing, social connectedness and the use of technology

The new guidelines about social distancing mean that it may be impossible to be active with friends. Technology offers those who are self-isolating a way to connect with friends, family and colleagues. Studies using mobile apps have shown that texting has a positive effect on increasing physical activity.[13] You can encourage your friends and family to be more active via telephone, text or social media. If you want to know how much activity you are doing, mobile apps that count steps and press-ups are almost limitlessly available. Regardless of starting levels, there are a range of beginner to advanced online resources such as yoga workouts or entertainment dance apps that you can use at home. If you normally use a leisure facility, check whether they are offering online classes or look for established commercial virtual classes. Creating a definite schedule for activity by signing up to join a timetabled session will help to establish a routine.

Take the opportunity to engage with those self-isolating with you (your family and pets). Play fetch with the dog in the garden if you have one, have a quick game of hide and seek with your children or grab a paintbrush with your partner to repaint that bathroom ceiling. It does not matter what you do, how much you do or how you do it, any increase in physical activity accompanied by increased connection to those around

you will benefit your physical and mental health. Keep up to date with government guidelines about being active outside. If regulations allow, walk solo/with those you live with responsibly. Remember to keep a distance of two metres from anyone that you do not live with.

Being physically active during COVID-19: an infographic for the public

To make sure that **the general public** becomes or remains active during this global pandemic, we created this infographic using evidence-based principles on how to construct and deliver messages to promote physical activity.[14] We encourage you to share it with your channels.

Who is this infographic for? The infographic is for all adults aged 18-69 years who are working from, or staying at home. This population may have recently lost access to active travel, gyms etc. Some of these individuals may also be facing being at home with their children, and have the added challenge of keeping their children active.

What is the aim of the infographic? The aim of the infographic is to give people some ideas about how to remain active safely during the COVID-19 outbreak and to motivate them to do so. We hope this can encourage and improve one’s confidence to be active during this pandemic.

What is the content of the infographic? Evidence supports the use of gain-framed messages (information on the benefits of physical activity) with particular focus on the short-term social and mental health benefits. We have positively framed messages on links between physical activity and productivity, mood, stress, energy levels/fatigue, depressive symptoms, and anxiety. We have given practical examples or “how to” remain active during COVID19.

Our call to action! We encourage you to share this infographic with your friends and family using your social channels

(Twitter, Facebook, WhatsApp etc.). You could also print it out and stick it on a wall at home to remind you to remain active!

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> *Stay calm, be active: simple ways to boost your physical activity during COVID-19*

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Covid-19 laboratory preparedness in Africa: lessons can be learned from the Ebola outbreak, write Dr. Ann H. Kelly, Eva Vernooij, and Dr. Alice Street

As Covid-19 pandemic expands its global reach, increasing testing capacity has taken centre stage in government and international agendas. Drawing on research and policy engagement in Sierra Leone, the DiaDev (Investigating Diagnostic Devices in Global Health) team at the University of Edinburgh show the critical importance of investing in laboratory capacity. New diagnostic devices are only effective insofar as they can be integrated into the broader health system and supported by continuous supply chains, trained medical staff and closely aligned information systems.

"We have a simple message for all countries" declared Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization. "Test, test, test." Accurate diagnosis is essential to mitigate the increasingly disastrous impact of the COVID-19 outbreak. Without knowing who among the general population is sick or has previously been infected, policy makers are flying blind, facing unpredictable surges in cases, health workforce shortages and an interminable cycle of lockdowns and forced closures.

But while the economic and public health rationale of mass testing is irrefutable, if the past two months of this pandemic has taught us anything, it is that following Tedros' mandate is hardly straightforward. Rapidly developing tests

from scratch and deploying them widely demands clinical, commercial and regulatory coordination and, above all, a sufficiently-prepared and well-integrated laboratory system.

As the outbreak moves into the African continent, the question of diagnostic capacity looms large. A position piece, published last week in the *African Journal of Laboratory Medicine*, offers a key perspective on what is needed for robust diagnostic response in an outbreak and the role tests can play in building resilient health systems. Co-authored by the DiaDev team at the University of Edinburgh and Kings College London and policy-makers, doctors, public health experts, laboratory scientists from Sierra Leone, the paper reflects on efforts to scale up diagnosis during the Ebola outbreak, the longer-term impact of those investments on the health system and provides some key lessons for the COVID-19 response in Africa and more widely.

Diagnostic tests need diagnostic systems

At the root of the 2014–2016 Ebola Outbreak was an inability to quickly diagnose and isolate cases. With unprecedented speed, a range of novel Ebola diagnostic tools, from automated PCR machines designed for laboratory benchtops to rapid test kits that could be used at the point of care, were trialled in Sierra Leone, helping to bring the outbreak to an end. But while important, increasing the availability of tests was only a first step. To safely transport samples, source reagents, dispose of hazardous materials, and correctly interpret and feed-back diagnostic data into clinical and public health decision-making necessitated health system-wide support.

The extent to which laboratory strengthening efforts during the Ebola outbreak have prepared West African countries for Covid-19 remains uncertain. One important legacy in Sierra Leone is a national cohort of laboratory workers with

experience of PCR testing. A number of GeneXpert PCR machines, which can be repurposed for SARS-COV-2 testing, also remain in country. But prioritisation during the outbreak of disease-specific Ebola tests, to the detriment of broader laboratory strengthening efforts, means weak supply chains and waste management systems remain major points of vulnerability across the region.

National experts and institutions need to be fully engaged

When it comes to the ready deployment of global health innovations in Africa, regulatory capacity is often neglected. In an effort to accelerate R&D for Ebola diagnostics, the World Health Organization developed the WHO Emergency Use Listing (EUL) to expedite the evaluation of new tools in the epidemic. While ostensibly the aim was to alleviate the regulatory burden on National Regulatory Agencies (NRAs), without local input or support, national agencies struggled to register the influx of new tests. Regulatory authorities can be advocates for new medical products, but need manpower and expertise to evaluate device performance, guide deployment and procurement and to provide the quality assurance and post-market surveillance essential for safeguarding patients and health staff. The leadership of the Africa CDC in coordinating diagnostic capacity in response to the Covid-19 outbreak has meant national experts are more likely to be heard. A modified EUL procedure launched for COVID-19 places increased emphasis on the role of NRAs, but for regulatory alignment to be feasible this must be accompanied by enhanced resources, training and investment.

Africa’s Diagnostic Futures

Africa is the next frontier for the pandemic. At the time of writing, the number of confirmed cases is near 10,000. What

epidemiological realities lie behind that number is unclear, as diagnostic capacities across the continent differ widely.

Currently, there are more than 100 rapid point-of-care devices for Covid-19 in the pipeline, and the global health organisation FIND is assisting African governments with evaluating rapid tests for Covid-19 coming onto the market. But the emphasis on novel tests, while important, distracts from interventions that are just as critical for a successful response while building capacity for the future.

The Sierra Leonean experience makes clear that investment in new tests is just the starting point. If COVID-19 is going to be contained, substantial investments must be made in national laboratory networks and the supply chains, waste management systems, and health information infrastructures that support them. This is the key to building strong laboratory systems for the next epidemic.

An earlier version of this piece was published on 9th April 2020 on the Kings College London Covid-19 website.

Images included in this essay feature laboratory workers and cleaners working at health facilities in and around Freetown and were taken by Olivia Acland for the DiaDev research project.

Research for this article was undertaken as part of the 'Investigating Diagnostic Devices in Global Health' research project (www.diadev.eu) and was supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme grant agreement No 715450.

InterSci interview with Dr Luciana Brondi on the public health significance of covid-19

On 26 March 2020, Dr Luciana Brondi was interviewed by the InterSci Edinburgh team on a Facebook livestream on the historic and current significance of the COVID 19 as a public health issue.

Highlights from the interview include:

- How predictable a pandemic by an emerging virus infection like the current COVID 19 was and why
- Some of the main public health, clinical and research challenges posed by the current pandemic
- Concepts of infectious diseases epidemiology that are relevant to understand the main features of this current pandemic
- Measurements of infection transmission used in epidemiology and the current factors influencing the transmission of the novel CORONA virus (i.e., SARS-CoV-2)
- The clinical impact of COVID 19 in different countries depending on context-specific characteristics
- The importance of strong health systems in order to minimize both the mortality and the morbidity of this

pandemic

- The importance of using epidemiological model-based predictions to devise effective strategies to “slow” such a fast spreading pandemic and save lives
- The likelihood that new interventions will be available in the near future to improve the control of the pandemics

Watch the complete interview here: https://www.facebook.com/InterSciEd/videos/243280723510523/

Dr Brondi is a physician and epidemiologist and has worked in the field of infectious diseases for over 25 years. Her work experience includes public health and research in Brazil, UK, Europe, South Asia and Sub Saharan Africa. Her main area of work in Public Health has been on Infectious Diseases Control, with emphasis on respiratory and vaccine preventable diseases.

Since 2012, she has been teaching (Masters in Public Health) and conducting research on Communicable Diseases Control and Epidemiology at Edinburgh University. Apart from infectious diseases, her main research interests include social determinants of health (including gender), especially in developing countries.

Medicine Anthropology Theory journal publishes virtual issue “Outbreak, Epidemics, and Infectious Diseases”

Medicine Anthropology Theory is an open-access journal in the anthropology of health, illness, and medicine. In January 2020, *MAT* moved to its new institutional home in Edinburgh, where the Edinburgh MAT collective has taken on the editorialship for the next five years. The MAT collective is based in the Edinburgh Centre for Medical Anthropology (EdCMA), at the School of Social and Political Science, at the University of Edinburgh.

The MAT collective is delighted to announce the publication of MAT’s virtual issue “Outbreaks, Epidemics, and Infectious Diseases”. This issue is a retrospective collection of pieces published in *MAT* in the past and has been curated by the MAT collective and editorial staff in response to the ongoing COVID-19 pandemic outbreak.

Over the past six years, *MAT* has published a large variety of readable, accessible and original research engaging ethnographically and critically with infectious diseases and epidemics. In the context of a global pandemic like the one we are witnessing, it is crucial to have cross-cultural perspectives, and a global scope to our understanding of epidemics and our responses to them.

We hope that this Virtual Issue, as well as the extended collection curated by our Assistant Editor (available in the opening blog) will enrich critical thinking, foster interdisciplinary exchange, and support the ongoing work of scholars in our community and beyond.

Find out more:

MAT Virtual Issue: Outbreaks, Epidemic, and Infectious Diseases

Medicine Anthropology Theory journal

The MAT collective, at the Edinburgh Centre for Medical Anthropology (EdCMA), University of Edinburgh

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Seeing Covid-19, or A visual journey through the epidemic in three acts, writes Cristina Moreno Lozano

Digital newspapers and TV news in Spain (and surely, elsewhere) are full of images and videos narrating the COVID-19 pandemic (caused by the SARS-CoV-2 virus). Through these images, we can see the situation as it happens in our hospitals, parliamentary rooms and balconies throughout the country from a distance. Thousands of conversations circulate on social networks like Twitter or Facebook (in many languages) including images. We can see images of professionals and citizens wearing masks and medical equipment, animals walking around empty cities, police or military officers working out in the streets, etc. Memes and infographics circulate through WhatsApp or Telegram groups of family, work, or friends. In national and local newspapers, we can see graphs of infected cases or mortality, or estimates of the number of infections. This visual scenario, which is difficult to depict in words, is not limited to Spain. We can

see similar images circulate in English-speaking newspapers and social media channels. For a migrant PhD student in lockdown like myself, I wonder if it is this *seeing* that keeps me closer to family and friends in my hometown Madrid. Is there something comforting in the visual? Images, videos, illustrations and graphs, play journalistic and scientific roles, but also social, political and affectional ones.

Infectious diseases such as the plague, cholera, or syphilis populate our literature and cinema, in many languages. The epidemic imaginary is quite present in popular cultures (in many languages and places). Outbreaks of realistic or fictional epidemics have been imagined by dozens of authors and artists over the years. Perhaps the infamous *The Plague* by Albert Camus is the first that comes to mind. I'm currently (re)reading Angela Carter's *The Passion of New Eve* (1977), an otherwise apocalyptic fiction. Carter's fiction is unexpectedly full of infective or pandemic metaphors. Or rather, I am particularly receptive to them these days. Not to mention video games (like *Plague Inc*., *Deus Ex* or *Infected*), board games (like *Pandemic* or *Virus*), and films and TV series (*The Walking Dead*, *Contagion*, *I Legend*, etc.). In most of these, the main plot is an epidemic outbreak of bacterial or viral origin (see also Comelles and Perdiguero-Gil 2016; Benton 2020 in the previous Covid-19 Forum). Epidemiologists, zombies, politicians, doctors, wild animals, viruses and bacteria populate our imagination, becoming "cultural heroes" (Lynteris 2016, 2019) in popular culture. There is something in these epidemic and apocalyptic fictions that captures our attention. These imagined worlds that have captivated me so much for years now are not very easy to bear. I'm sure I'll have time to re-imagine them in another occasion. At this point, "the next" outbreak (pandemic, this time) has arrived (Caduff 2018) and the mass media is full of news stories, but also of icons, videos, and images. How do we visually represent the pandemic in the media and social media in Spain? In these last weeks, visual representations of the

COVID-19 epidemic outbreak have travelled at scales and speeds that exceed my capacity to analyse. Join me on a visual journey through the COVID-19 pandemic in three acts, where we'll think with three different vignettes at different scales.

1. **The Viral Portrait**

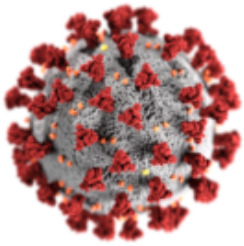

Figure 1. Illustration of SARS-CoV-2 virus, designed at the CDC, in the U.S. in 2020.

Across many digital newspapers, TV news or social media (in Spain and elsewhere) we can find virus icons, both black & white and in full colour, of the virus SARS-CoV-2. Blurred behind headlines or on the front line of your screen, a greyish sphere, with spikes or pegs shaped like cloves around it in orange and maroon red on a dark, empty background. Where does this 3-D image come from? On January 21, 2020, just after the U.S. Centers for Disease Control (CDC) activated its emergency response, CDC's illustrators were asked to produce an icon, or "beauty shot" of the virus (CDC 2020, Figure 1). These medical artists have created illustrations for other pathogenic bacteria and virus of public health interest like gonorrhoea or Zika virus before. Apparently someone told one of the illustrators (Alissa Eckert) that this image haunts them on the sporadic trips to the supermarket: when they reach something on the shelf, they picture the spiky thing in their head and pause (Giamo 2020). Reflecting on such spread of the "beauty shot" – which has even been made into cookies and knitting projects (I haven't seen images of these,

unfortunately!) –, Eckert seems to be glad the image is "out there doing it's job" (quoted in Giamo 2020).

But, what is the image's "job"? I started to reflect on this thanks to the contributions made in a Twitter thread started by architectural historian Anna-Maria Meister (@tweetissima, see Twitter thread). Historians Lukas Engelmann and Robin Wolfe Scheffler (see Wolfe Scheffler 2019, on cancer molecular research, also pertinent to the discussion) commented on this thread at the end of March 2020. They noted that the illustrated spiky illustration is the visualisation of a model, produced using an EM (electron microscope) image. These images have no optical colour – the "beauty shot" is thus a colourised version, which draws attention to particular structural protein components of the model (i.e. the spikes). This reminds me of Lukas Engelmann's work on the HIV models and the HIV icon (Engelmann 2018), where he precisely analyses these points in detail; but I am also instantly reminded of a book I greatly enjoyed reading during my Masters studies, Emily Martin's *Flexible Bodies: the role of immunity in American Culture from the Age of Polio to the Age of AIDS* (1995).

Whilst these protein spikes represented in EM images are relevant for the daily work of molecular microbiologists working with these models and systems, the "beauty shot" image illustrated by the CDC (and its multiple variants created thereafter) play an important role in science communication or public health awareness instead. Is it this the job these coronavirus images need to get done? Diagrammatic, structural representations of microscopic entities like the SARS-CoV-2 virus are turned into portrait-like (viral) images of the virus, as Engelmann goes on to say in that same thread, resulting in pictures of the viral enemy, where uncertainties and unknowns seem to dissipate (see more on diagrams in the special issue edited by Engelmann, Humphrey and Lynteris 2019). Theirs is a specific kind of labour, i.e. emotional

labour: in getting their job done, these viral portraits might suggest control, risk, or fear, mobilising our emotions and having a strong impact in social life.

2. **Epidemiological Diagrams**

Data, charts and maps proliferate and circulate widely in these weeks of confinement within and across countries (I will reiterate on the idea of 'circulation' again and again. For an extended consideration of the notion of circulation as applied to the analysis of scientific images and objects, see Santesmases 2017, 2018, and Santesmases and Gradmann 2011). Numbers, percentages – both counted and estimated – are more often than note shown in tables, charts and graphs. In Spain, for instance, the numbers of incoming and outgoing protective gear sets bought and sold populate news headlines. Likewise, the number of temporary beds provided by the ephemeral emergency hospital set up in IFEMA convention centre in Madrid. Number of deaths, number of infections. All of them, divided by age. These numerical data are often displayed by regions, or compared to data from China or Italy. But I'm not that taken by the proliferation of these numbers as much as by how they are represented. How are we *seeing* these numbers?

Figure 2. Map and a graph representing the number of cases diagnosed positive with SARS-CoV-2 virus in Spain as of April 4th 2020. These images feature in a newspaper article in El País

newspaper (Zafra, Blanco and Pires, 2020).

Epidemiological models and mathematical projections are extremely speculative, but in their if-scenarios they enact control. The promise of such near-real time surveillance of the epidemic (see Engelmann 2020, in the previous Covid-19 forum) takes visual forms, giving the 'illusion of epidemiological "nowcasting" (ibid.). Epidemiological data is given visual form as it is produced (see as an example, Figure 2). Is it these graphs, maps and charts, full of coloured and curvy lines, names of countries or regions, and arrows that allow the unknown to be "cooperatively predicted", I wonder? These representations circulate across mass media and social media, bringing (real and speculative) epidemiological numbers and other kinds of data to our homes. It fascinates me how some of my friends want to *know* the estimates, they discuss these models and graphs on WhatsApp. These graphs, charts and maps may also be getting a job done. These visuals might also give us reassurance and hope in the midst of the uncertainty of so many unknowns (on diagnostic certainty, see Street and Kelly 2020 in the previous Covid-19 forum). Whilst both the virus portrait and the epidemiological graph or diagram enact control in various ways, I adventure to speculate that these diagrams might combine with the emotional labour performed by the spiky viral icon.

3. **Nostalgic Illustrations**

Figure 3. Poster created and published by Javier Parra (see on Twitter), on March 16th 2020.

The present pandemic outbreak is a new chapter in the "war against microbes". Such language, and the war metaphor, has never died out and it seems it's here to stay (e.g., see more on metaphors by Martin 1995, among many others). As I've seen in my own work on resistant infections and antimicrobial resistance (AMR), with the Covid-19 outbreak this war metaphor is also fruitful in its visual form. In the last weeks, a fascinating kind of illustrations have circulated through social media platforms in Spain, such as those made by illustrators Mr Z (https://www.mrzethecreator.com/) and Javier Parra (Figure 3). They resemble the aesthetics of the Republican propaganda that circulated throughout the country during the Spanish Civil War. In these, not only a war metaphor (the war against the virus, that is) is very much present, but their aesthetics evoke a certain kind of historical nostalgia, and the politics of such aesthetics cannot be overlooked. These images are directed at those who by staying at home are "resisting" the virus together, "flattening the curve". They are somehow also aimed as public health awareness images, yet not produced by health authorities (like the "beauty shot" made by the CDC), but by artists of their own accord.

In these illustrations the protagonists are both Spanish society, one might say, as well as public healthcare workers. What is represented in these images is an idealised public health system and its workers, and and idealised Spanish society, however: that which stays in the balconies and applauds their healthcare workers every evening, whilst they heroically fight this new bout. I wonder how do these images get their job done, as epidemiological graphs or spiky icons might do, and what kind of emotions they evoke this time. Is it control? Maybe solidarity? That's an open question. It's difficult not to feel a kind of emotional attachment to some of the illustrations, photographs and videos that circulate among my personal networks today. Whatever job these visual forms of information might be getting done during this

outbreak, the truth is that I somehow also find comfort (not just fear and distress) in *seeing* them, discussing them with my loved ones back home, and going on a visual journey with them.

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#Covid19: The Spectacle of

Real-Time Surveillance, writes Dr Lukas Engelmann

One of the most striking factors of the 1918 Flu pandemic is that the pandemic's global scope and devastating impact only became visible after the fact. To determine the flu's global distribution and to reconstruct its case numbers and fatality rates at the end of the First World War was a task eventually left to the pandemic's historians. To those in the trenches and hospitals, a global flu catastrophe had been unthinkable and for flu to have such devastating effects was simply unimaginable. The history of pandemics has many such examples. When twenty years earlier, the city of Porto was hit by an outbreak of bubonic plague, scores of physicians and medical officers traveled to the Portuguese port-town to verify what had been equally unimaginable: that plague could find a strong-hold in the hygienic modernity of Europe. In similar terms, in the 1980s, while AIDS ravaged communities in Western urban centres, it took enormous efforts to convince the global community that the same epidemic was rampant in sub-Saharan Africa, where it had followed different patterns of transmission. In almost every epidemic in history there has been a substantial delay between its emergence and the development of a widely agreed-upon representation of its scale, distribution and overall dynamic. Crucially, the historical reconstruction of epidemics is not merely a task of accurately counting cases and fatality rates, but also often one of overcoming and revising those tired concepts, outdated assumptions and political dogmata, which the epidemic had rendered redundant.

With COVID-19, things seem to run on a different scale. Digital epidemiology holds the promise of offering near-real time surveillance of the epidemic, cum-pandemic, while it keeps emerging. Circumventing dated and excruciatingly slow

reporting chains from front line-physicians to laboratories to national reporting institutes and clearing-centres to the World Health Organization, the disruptive promise of digital epidemiologists is attractive. Any ongoing epidemic could be inferred directly and seamlessly from the global data exhaust, collected from what people do and what traces they leave online. As demonstrated with Google Flu Trends, applying simple models of epidemic dynamics could render the geographical spread of search terms into an indicator of viral distribution. Early on in the COVID-19 crisis, reports circulated of a Canadian company whose system had shown the threat of the new virus earlier than any health reporting institution. The BlueDot algorithm digests news reports from languages other than English, taps into global animal disease reporting and – its true asset – tickets data from airlines to predict possible global distribution patterns following any unusual event. In this case, a week ahead of health bodies, the company had already alerted its customers of an imminent threat. Wired accordingly announcee shortly after the coming reign of the "AI-epidemiologist."

Apart from such debatable sophistication of prediction, the COVID-19 history is written daily, if not hourly on social media. Countless apps offer hourly updates, various services bring animated maps to trace the live-progress of the virus and following the COVID19 hashtag on Twitter combines an endless stream of case and fatality updates, infused with an equally infinite stream of opinion pieces, interpretations and reflections (just like this one). Real-time surveillance brings the global community face to face with the developing epidemic, suggesting a sense of participation as well as control. The epidemic's live feed enables a mode of global observation that allows for contemplative reflection of the theatre of global contagious relations. The show is perhaps best consumed in this Youtube livestream, with its neat slideshow of maps, representing up-to-date numbers complete with an 'easy-listening' auditory pastiche.

In China, meanwhile, the spectacle of real-time surveillance was quickly rendered into a Foucauldian caricature. A new app, designed to assign its users a risk score based on their location data compared with national transport data, existing case records and whatever else the Chinese government has access to, folds surveillance and containment into one. Scrutinizing social networks and spatial proximity of citizens, a higher risk score suggests individual behavior changes at the risk of social stigma. The design exploits social and political vulnerability to encourage social distancing on the basis of obfuscated correlations and deeply flawed assumption of reliability. With false accusations, xenophobia and an "infodemic" of false information rampant, the unknowns about COVID-19 remain overwhelming. Investigating the epidemic's distribution requires careful modesty and critical reflection on the conditions of data reporting, and interventions need to balance human rights with containment strategies. However, the constant stream of real time updates, animated distribution maps and refined predictions delivers a dangerous sense of oversight and certainty.

Further, the spectacle of real-time surveillance does not offer an agreed-upon, well-established and heavily scrutinized picture of the epidemic. The cacophony of images, representations, interpretations and framings reminds us of what Treichler has called an "epidemic of signification" in the case of HIV/AIDS: thousands of attempts to make sense of the event and to give meaning to a crisis while we are still in the thick of it. However, on the Twitter timeline, constantly updated maps and livestreams appear to promise more than just interpretations. What they deliver is the result of folding the weak and unreliable modeling tools of forecasting and prediction into the illusion of epidemiological "nowcasting."

Rather than closing the gap between the historic event and its delayed critical analysis, real-time surveillance is

fundamentally simulation. The pictures, maps and inferences emerging in real-time are based in a few routinely used models, which inscribe assumptions and theories when allocating numbers to reduce the complexity and contingency into drastically simplified social mechanics. “The knowledge produced through the simulation of pandemics”, Sven Opitz wrote recently, “is characterized not by correlation but is constitutively infused with approximations, estimations and speculations.” The result is not a more or less accurate representation of what is really going on with COVID-19 in the world, but a series of presentations that constantly invoke yet another world of COVID-19. However, the simulations of possible – or with Deleuze, virtual – epidemics assume nonetheless a status of real representations. As such the “nowcasted” epidemic has palpable effects on social worlds, which as in the case of the app of the Chinese Government, require urgent critical scrutiny.

One of the first, and perhaps one of the most significant, models of epidemic theory was developed in the aftermath of the 1918 Flu pandemic. Confronted with the uncertainty fueled by the shock of the unseen scope of the pandemic, the Reed-Frost model was charged with reproducing the standard dynamics of epidemics. It was supposed to deliver an experimental workbench to the epidemiologists, who had failed to deliver actionable results based on (the lack of) observation. In the digital age, the spectacle of real-time surveillance in epidemic crisis let us take part in experimenting with the fragments of data that this developing crisis offers. However, outside of the lab and nurtured by the global hype around data science and AI, this epidemiological experimentation now involves an unprecedented scale of research subjects on- and offline, while its operation appears largely ungoverned by ethical oversight or researcher’s virtue.

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Pandemic series (6 March 2020). Original article: http://somatosphere.net/forumpost/covid19-spectacle-surveillance/

Lukas Engelmann is a Chancellor's Fellow in History and Sociology of Bio- medicine at the University of Edinburgh. His work focuses on the history of epidemics and epidemiology in the long twentieth century, and he is currently working on the history of epidemiological modeling. Recent publications include Mapping AIDS: Visual Histories of an Enduring Epidemic *(2018) and, co-authored with Christos Lynteris*, Sulphuric Utopias: A History of Maritime Sanitation *(MIT Press, 2020).*

When there is an epidemic, social prejudices arise, writes Amitangshu Acharya

In the early 1900s in New York, a strange event took place in the upscale enclaves of Long Island. Many of its denizens began to mysteriously contract typhoid. The emergence of a disease associated with filth and poverty in a slick and affluent quarter deeply unsettled the city's medical establishment.

A sanitary engineer named George Soper was asked to investigate the phenomenon. He discovered that a cook named Mary Mallon, a middle-aged Irishwoman, had worked for at least eight of the families that had been attacked by typhoid. Mallon, herself perfectly healthy, would leave her employment each time a case broke out and move to another family. Soper set off on a hunt. He traced Mallon's whereabouts, stalked her

to find where she lived, and finally confronted her, accusing her of being a carrier of typhoid. When Mallon refused to cooperate and undergo medical tests, Soper convinced the police to arrest her.

Incarcerated purely on a hypothesis, Mallon's blood, urine and faecal samples were then collected against her will. When the results came back, they showed the presence of *Salmonella typhi*, the bacterium that causes typhoid, and the noose of public disapproval quickly fell around her neck.

Soper was celebrated for having established the existence of 'healthy carriers' – people who carry and spread disease-causing pathogens but stay unaffected. Mallon was disgraced and went down in history as 'Typhoid Mary'.

For decades, that unkind moniker normalised the violence and vilification of a poor, illiterate, immigrant woman, who was also a passionate and gifted cook. Mallon was demonised by the medical establishment and the press as a 'super-spreader', akin to a mass murderer. She was believed to have infected 51 people, three of whom died, but exact numbers were difficult to establish.

Finding the enemy

Mallon was sent into quarantine for 26 years, next to the Riverside Hospital on North Brother Island, where she finally died in 1938. An impassioned exoneration came 63 years later, from an unexpected yet unsurprising quarter. In *Typhoid Mary: An Urban Historical* (2001), the late Anthony Bourdain wrote with great empathy for his fellow chef: "Cooks work sick. They always have. Most jobs, you don't work, you don't get paid. You wake up with a sniffle and a runny nose, a sore throat? You soldier on. You put in your hours. You wrap a towel around your neck, and you do your best to get through. It's a point of pride, working through pain and illness."

Typhoid outbreaks were not new to New York City, but Mallon

had been singled out as a public enemy, more deadly than the disease itself. Her true crime, perhaps, was reminding the rich and powerful that pathogens had little respect for the class divide that separated Long Island from the Bronx.

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The story of people and pathogens is that of a difficult evolutionary marriage. Pathogens want to live and prosper. Killing off humans – the hosts – would become a self-defeating exercise. Both parties, therefore, try to work towards mutual survival. After a certain point in time, the two declare an uneasy truce and humans start to live with the pathogen. We have done so many times before, and we will do so with the novel coronavirus.

The biological coexistence that emerges out of a pandemic is in stark contrast to its social effects. Diseases don't have a social preference, and pathogens don't distinguish victims by race, class, religion, gender or other identities. However, history shows that each time there is a pandemic, deep-rooted social prejudice resurfaces, often with horrifying results.

During the Great Bubonic Plague in Europe in 1348, the Catholic Church was convinced that the Black Death was a Jewish conspiracy to undermine Christianity. Accused of poisoning wells to spread the disease, Jews were subjected to horrific torture and forced to make false confessions. Soon, the mephitic smell of the burning flesh of thousands of Jews lingered in the air of Strasbourg, Cologne, Basel and Mainz.

The Roma of Europe faced similar persecution. Giorgio Viaggio, in his book *Storia Degli Zingari in Italia* (1997), has documented 121 laws framed in Italy between 1493 and 1785, restricting the movement of *Zingaris* (a pejorative term for Romas). Such laws were driven partly by the prejudiced view that the Roma people caused and spread epidemics.

In medieval Europe, outbreaks of plague were blamed on people

who practised traditional medicine. They were branded ‘witches’ and persecuted. Historian Brian Levack (2006) estimated that 90,000 people were punished for witchcraft in Europe. Though we don’t have exact figures, the brunt of it seems to have been borne by women.

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The medieval belief in plague spreaders was dispelled with the arrival of germ theory. Diseases were spread not by people but by micro-organisms or pathogens. They could travel through air, water or physical contact between humans and non-humans. We learnt that germs had no regard for social categorisations. One assumed that the discovery of this apolitical and amoral ‘germ’ would lead to epidemics being seen through the clear lens of a microscope and not by glasses tinted with prejudice.

But the microscope was not only an instrument of discovery; it was a tool of the Empire. The tropics were teeming with diseases, detrimental to the health of Anglo-European administrators. Mosquitoes, it seemed, were far more insurgent than colonial subjects. It was the microscope that shaped the colonial understanding of “tropical disease”. The outbreak of ‘Asiatic cholera’ in 1817 – a pandemic named because it was believed to be endemic to India’s Gangetic region – soon spread to Europe and sparked fears of an invasion of diseases originating in the colonies.

This prompted intense scientific enquiry. In his nuanced account of the attempt of 19th-century medical science to localise diseases, historian Pratik Chakrabarti writes in 2010 of how Robert Koch’s discovery of *Vibrio cholerae* – the comma-shaped cholera pathogen – was pinned to the tropical environment and body. Specifically, the intestine and biliary tract of the colonial subject.

Then there was leprosy, so stigmatised that the word ‘leper’ became synonymous with a social outcast.

The *Manusmriti* mandated the ostracisation of lepers as 'sinners'. Even after the Leprosy Commission report in 1891 concluded that the "amount of contagion is so small it may be disregarded," Indian and European upper classes actively campaigned against allowing the afflicted to be seen in public, as their sight produced disgust and loathing. This led to the Leprosy Act of 1898, which institutionalised people with leprosy, even using gender segregation to prevent reproduction. All to please the aesthetic sensibilities of the colonial elite.

If colonial science contributed to the tropicalisation of epidemics, literature reified it. Thomas Mann's novella *Death in Venice*, set in the city of water during a cholera outbreak, described the disease as 'Indian cholera', which, "…born in the sultry swamps of the Ganges delta, ascended with the mephitic odor of that unrestrained and unfit wasteland, that wilderness avoided by men…".

Epidemic orientalism

Researcher Alexandre White in 2018 referred to such incidents of colonial construction as "epidemic orientalism" in his thesis. This often shaped the way diseases were named – Asiatic cholera (1826), Asiatic plague (1846), Asiatic flu (1956), Rift Valley fever (the 1900s), Middle East respiratory syndrome (2012), Hong Kong flu (1968), to cite a few. Now, the World Health Organisation has guidelines to name infectious diseases in neutral, generic terms.

Socially, however, epidemics and diseases continue to be pinned to race, gender, sexual preference and geography. The Trump administration has repeatedly called COVID-19 the 'Chinese virus', and some refer to it as 'Kung Flu'. Naming reinforces prejudice. The original term for HIV/ AIDS was the acronym GRID – Gay Related Immunodeficiency. Though short-lived, it worked to boost what American televangelists were already calling it in the 80s: "gay plague" – divine

punishment for sexual deviance. The belief that HIV/ AIDS has a preference for gay men now lives on in legislation in various countries, prohibiting men who have sex with men (MSMs) from donating blood or organs.

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If history tells us one thing, it is that we have managed to deal with disease-causing pathogens significantly better than with our entrenched prejudices. Pandemics don't produce hate, but they do serve to amplify it.

The Trump administration would like to believe that the Chinese government's mismanagement and attempts to cover up the incidence and spread of COVID-19 is a conspiracy aimed at destabilising America. It recalls the Catholic Church's invocation of the notion of *pestis manufacta* (diabolically produced disease) to accuse Jews of trying to sabotage Christianity. Similarly, European politicians Le Pen and Salvini's racist invectives against migrants and refugees as carriers of the coronavirus intersects with Trump's rhetoric. During his campaign for the U.S. presidency four years ago, Trump revived the medieval European idea of 'plague spreaders' by claiming, "Tremendous infectious disease is pouring across the border" carried by Mexican immigrants. Ironically, it is Mexico today that's guarding its borders from carriers entering from the U.S.

India's latent prejudices have similarly risen in tandem with COVID-19. Building owners have barred entry of medical staff into their own homes. People speak of social distancing using the terminology of caste and untouchability. People from Northeast India are facing racist comments and threats of eviction. The same government that sent planes to ferry Indians back from foreign countries failed to house its poor migrant labourers or to send them safely home. The ongoing lockdown has seen a mass exodus of workers, trekking hundreds of kilometres to get home, sleeping on streets, struggling for

food and water. Some 20 have died so far. As this goes to press, governments are scrambling to set up relief camps for those persuaded to stay back, and transport those who insist on leaving. And in U.P., returning workers are hosed down with surface disinfectants as if they were the pathogens. Added to this, communal prejudice has found new viral spread, riding piggyback on the Tablighi Jamaat conclave in New Delhi's Nizamuddin area.

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Science was supposed to liberate people from irrational beliefs by proving that pathogens don't look for a particular race or place – all they need is a human body, warm, moist and nutrient-rich. Unfortunately, even the scientific understanding of hosts, vectors and carriers has been appropriated to reinforce social prejudices.

Stigma produced in the churn of a pandemic has a long afterlife. No one understood that better than Mary Mallon. Quarantined for more than a quarter of her life, her name is still synonymous with disease.

The same aggressive hounding of the afflicted persists today. Desperate to maintain quarantine, governments are publishing patient names and addresses, affixing door stickers, stamping their skin with indelible ink, all of which violate medical ethics and could lead to social ostracism.

And we stand today facing the same question a poor, immigrant woman asked of society at the beginning of the 20th century. Is it necessary to forego humanity in order to save human life?

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https://www.thehindu.com/society/pandemics-and-prejudice-when-there-is-an-epidemic-social-prejudices-resurface/article31246102.ece

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Behavioural Responses to Pandemic Influenza: Contingency Planning and its Implementation in the UK, by Prof. Joyce Tait and Dr. Ann Bruce

Government contingency planning for a future pandemic has been undertaken at frequent intervals since before 2005. The Innogen Institute was involved in one such initiative in 2008 in the context of the H5N1 'bird flu' event, looking at the likely viability of the UK's pandemic preparedness plans. We looked at the systemic interactions across a broad range of technical and societal drivers that would have an impact on the progression of the pandemic and on state of the UK economy. We particularly noted the mutual incompatibility of the two key government messages – 'social distancing' to avoid infection and 'business as usual' to protect the economy, and predicted most of the economic impacts that are arising today from government reactions internationally to Covid-19.

The full paper can be accessed here.

Social justice should be key to pandemic planning and response, writes Dr. Agomoni Ganguli-Mitra

At the start of every public health ethics course I teach, I give my students a list of questions to explore, but leave the most important one until last: ‘What kind of society do we want to be?’

I want them to circle back to this thought, no matter the topic, to instil in them the understanding that public health practice and policy are always based on value judgments. Our job, as ethicists, is not always to provide the right answer, but to clarify the values and interests embedded in our decision making.

The Covid-19 crisis illustrates why questions of social justice should be at the core of medical and public health responses. During a crisis, health care professionals are forced to make tragic choices. Should ventilators be prioritised for those with no underlying health conditions to help ensure better survival rates? Or should people in greatest need take precedence? The moral dilemmas facing health workers can be excruciating, but ethicists can help to illuminate the values that inform such decisions.

In our response to the current crisis, we can also provide direction on wider questions of social justice, which go far beyond how we determine medical priorities. Indeed, we face ethical dilemmas at a broader policy level. By adopting, for instance, a model that favours acquiring herd immunity – and

opting to sacrifice some lives to save many more – we might fail to weigh up which lives, and vulnerable groups, we would be sacrificing.

Similarly, curbs on individual freedom – so highly prized in liberal societies – can become a focus of ethical tension. We might justify restrictive measures by invoking the collective good, or by showing that a relatively small burden on the general population will protect the most vulnerable. These varying approaches reflect different ethical values and attitudes towards justice, and the solutions are not straightforward.

Pandemics are as much about moral questions as medical ones. Issues of social justice, human vulnerability and structural inequality come into play at home and abroad. Pandemics, as we know, do not respect borders. Our global response should be one of partnership, rather than protectionism, and one based on solidarity and even a minimal sense of global justice.

A fresh approach is needed in our collective ethic. Reports of racism prompted by the pandemic are hugely concerning – a situation that is exacerbated by the protectionist political measures adopted by several countries, fuelling further nationalist sentiments. At an individual level, we see this ethos of looking after our own interests, at the expense of others, reflected in our empty supermarket shelves.

As politicians hasten to address economic concerns, we must stop to consider how our decisions are exacerbating inequalities associated with race, age, class, gender and disability. Are we only hearing the voices of the powerful, and silencing those of the most disadvantaged? It is a question we need to grapple with, individually and collectively.

There is growing evidence that the long-lasting effects of the pandemic will deepen structural and social inequalities. The

imposition of strict social distancing will see many women and children forced to remain with their abusers while, in even the most privileged circumstances, women will bear the brunt of care work and provision of emotional support.

Similarly, people with disabilities not only face greater health risks, but will also suffer most from a lack of support services. In our rush to save lives, there is a growing risk that people with disabilities are seen as expendable. Among the worst affected will be those who have little or no claim on our governments; think of migrants stranded on the margins of society. There is no possibility of self-isolation in a refugee camp, or when you have a forced mass migration.

In the coming months, as our health systems focus on how to save lives – and, eventually, rebuild – an ethic based on social justice might prompt us to consider those socio-economically vulnerable members of society who have helped to prop up our economy and political structures during this crisis. Indeed, although we speak of a crisis, a pandemic of this nature has severe long-term repercussions. Will those of us who enjoy much privilege be willing to endure further sacrifice so that those who have lost the most in this pandemic are able to recuperate?

When I teach my class this autumn, the pandemic will loom large in my thinking. As I sit just now in my makeshift home-study and imagine training the next intake of doctors, lawyers and policy makers, I am increasingly convinced that ethics and justice should underpin all of public and global health. My key question to my new students will be: What kind of society do you want to build in the decades ahead? It may just make its way to the top of my list.

This post was first published on the Justice in Global Health Emergencies & Humanitarian Crises website, A Wellcome Trust project

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We urgently need to understand the medication histories of COVID-19 victims, writes Dr. Stefan Ecks

On March 18, 2020, Dr. Anthony Fauci and Dr. Howard Bauchner discussed a possible link between common hypertension medications and a heightened risk of dying with a coronavirus infection. Dr. Fauci directs the National Institute of Allergy and Infectious Diseases and is a key advisor on the White House Coronavirus Task Force. Dr. Bauchner is the Editor of *JAMA*, the *Journal of the American Medical Association*. Not exactly lightweights, as Walter Sobchak would say. Fauci and Bauchner responded to reports of a link between ACE (angiotensin converting enzyme) inhibitors and COVID-19 fatalities. Fauci said that ACE inhibitors can increase "the expression of the receptors for the virus" (JN Learning 2020). Fauci was struck by reports from Italy that the vast majority of those who died with COVID-19 suffered from hypertension. Italy is a rich country with excellent access to care, so chances are that most of the patients had been taking ACE

inhibitors to treat their hypertension. “Why should someone who has hypertension that’s well controlled have a much greater chance of dying than somebody else with any other kind of underlying condition?,” Fauci asked. “We really need to get data and we need to get data fast” (JN Learning 2020).

As the SARS-CoV-19 pandemic is unfolding, strong links between the infection and “underlying health conditions” have become evident. Studies of mortality rates in China show that almost all the people who died with the virus had pre-existing disorders (Novel Coronavirus Response Team 2020). COVID-19 is an acute infection with mild to moderate flu symptoms in most people. But in combination with noncommunicable disorders such as heart disease, diabetes, chronic respiratory disease, high blood pressure, and cancer, the infection can be fatal. Multimorbidity is the first key to understanding COVID-19 mortality rates. What is not yet known is if COVID-19 victims also have similar patterns of medication use. Multimorbid patients tend to be on several chronic medications simultaneously. It is likely that some of these medications put people at a heightened risk of dying from the infection. The data that we urgently need, but completely lack, are the medication histories of COVID-19 victims. Medication profiles could prove to be the second key to understanding COVID-19 mortality patterns.

Multimorbidity occurs when the same person suffers from two or more chronic disorders. The disorders can be noncommunicable, infectious, or mental. Noncommunicable diseases are cancer and heart disease; mental disorders are depression and dementia; long-term infectious diseases are HIV and tuberculosis (Academy of Medical Sciences 2018: 6). There is no agreed definition: some classify multimorbidity by the number of disorders that occur together, others look for recurrent clusters (Busjia 2019). What comes into the clusters varies, some consider only a handful of chronic disorders (Dugravot et al. 2020), while others capture dozens of conditions (Payne

2020).

Multimorbidity is increasing across the world. In rich countries, multimorbidity makes up 25-50% of the overall disease burden (Garin et al. 2016; van der Aa et al. 2017). Longer lifespans mean more multimorbidity: the older people get, the more chronic health problems they have. Up to two thirds of people over 65 are multimorbid. Treating older patients accounts for a large chunk of all health expenditures (Kaufman 2015). The pharmaceutical industry promotes the chronic consumption of five or more medications as necessary for the maintenance of "normal" health (Dumit 2012).

Multimorbidity is not a new condition, there have always been people with more than two health issues at the same time. Yet the medical focus on multimorbidity is new. According to Dr. Chris Whitty, the UK government's chief advisor on COVID-19, multimorbidity did not come into view for so long because biomedicine is organized "vertically" on specific diseases, while a "horizontal" understanding of simultaneous disorders is lacking (Whitty et al. 2020: 1). Biomedicine is founded on specific aetiology and specific treatment. The "medical model" tries to capture the specific causes of disorders and to develop therapies that target unique pathogens or other similarly specific causes (White 2006: 141-142). It is almost impossible for individual clinicians to control for all possible side effects of multiple medications taken over a long period of time. In an era of rising multimorbidity, biomedical specificity has serious limitations.

Iatrogenesis takes three forms: (1) polypharmacy, when too many different treatments are given at the same time; (2) drug-drug interactions, which happen when two or more drugs together produce adverse side effects; and (3) inappropriate treatments that harm instead of heal (Novaes et al. 2017). Different forms of iatrogenesis can happen together and augment harmful effects. Patients with multiple chronic disorders are at a particularly high risk of iatrogenesis

because they are consuming different medications simultaneously and for a long time. Multimorbidity exacerbates the risks of iatrogenesis. For example, beta-blockers prescribed for heart disease or high blood pressure can worsen asthma and mask dangerously low blood sugar levels in diabetics (Onder 2013). Public health researchers are speaking of the first iatrogenic epidemic in history (Mangin & Garfinkel 2019). “Polyiatrogenesis” is the deepening of multimorbidity through isolated vertical interventions. In an era of rising multimorbidity, the adverse effects of taking different medications for different chronic conditions are increasing.

Medical researchers have done excellent work in teasing out the various chronic conditions of people who died with the coronavirus infection, but a deeper examination is needed. In the next step, we need to go beyond specific conditions and look for nonrandom clusters among the patients’ chronic conditions. In a further step, medication histories of COVID-19 victims should be recorded and analysed. There are a myriad of possible interactions between SARS-CoV-19, existing comorbidities, and medication histories. The possible link between taking ACE inhibitors and an increased risk of dying with a SARS-CoV-19 infection might just the tip of the polyiatrogenic iceberg. There are potentially dozens more such interactions. We need to know what drugs people take and if there are nonrandom clusters of medication use and fatal COVID-19 trajectories.

Tracking medication histories of multimorbid patients will also help to model population-based mortality rates with greater accuracy. By early April 2020, the impact of SARS-CoV-19 is far more severe in rich countries than in low-income countries. The United States now have the highest number of confirmed infections and are on course to overtake Italy and Spain in the number of fatalities. This pattern is surprising, because infectious diseases usually strike much harder in low-

income countries. One reason why Europe and North America are the current epicenters of the COVID-19 pandemic could be that patients have longer life expectancies and, therefore, higher rates of multimorbidity. But it is also possible that COVID-19 strikes harder in multimorbid patients with a long and complex medication history. The world map of COVID-19 victims does not show a Global North/South distribution of wealth gaps or lack of healthcare. Instead, the COVID-19 map looks like an atlas of industrialized countries with a deep presence of biomedicine. Monitoring victims not just for underlying health conditions but also for their medication histories is the only way of knowing if COVID-19 mortalities might be linked to medication use patterns. Finding clustered relations between COVID-19, underlying conditions, and medication use will save thousands of lives.

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Lessons for self-isolation from chronically ill patients, writes Ritti Soncco

Since the first cases of Covid-19 were confirmed in the UK, the freedoms of movement, socialisation and conviviality that many of us take for granted have been radically reduced. But for patients who are chronically ill, the social patterns currently dictated by the government are very familiar. My

social anthropology research involves fieldwork with Lyme disease patients in Scotland whose lifestyles are dictated by their immune systems. Where they go, how long they leave home, and who they meet, are all carefully managed in accordance with their immune systems. So when coronavirus hit the United Kingdom, I expected the pandemic to dominate conversations in the Lyme disease circles as much as it did in my other circles. Coronavirus is after all touching all corners of the world. But to my surprise the one place coronavirus did not dominate was in the world of Lyme disease.

The online forums continued at their normal pace: exchanging the latest medical research, supportive stories of everyday victories, reaching out for comfort. Discussions of coronavirus trickled in over the weeks but most of the time my participants had other things on their mind. This was not the sheer panic I was seeing in the mainstream media. I asked Pauline, one of my participants, who told me: "It will work itself out. Life goes on." No matter which angle I tested, Pauline resisted falling into the patterns of panic I was seeing everywhere else. I was ready to categorise her lightheartedness as a poised British coping mechanism when she said: "People were having a panic and I was saying, 'There's nothing you can do about it' because I think the stress makes them worse."

Her words boomed with familiarity. The stress, anxiety, and fear all around us are familiar emotions to Pauline who, like so many other Lyme disease patients, had spent years managing their impact on her mental health. In this time of radical uncertainty, the ones with a map are those experienced with dealing with the mental health impacts of risk: chronically ill patients. Speaking to other research participants seems to confirm this. Lyme disease patient and advocate Alice stated frankly: "I don't feel too much out of depth. I've been terrified for 13 years and I'm not getting any more terrified." The author of *Finding Joy,* a novel based on her 10

year experience living with Lyme disease in Inverness, Morven-May MacCallum said, “When you have Lyme disease, you live with death for so long, it becomes normal”.

As coronavirus sweeps across the planet, it is also inverting the world from a place of health to a place of illness. What may be strange and frightening ‘states of pandemic’ to many are, to those who living with chronic illnesses, continued ‘states of normality’. To them, this new world ruled by stockpiling, isolation and social distancing is comfortable territory: “This is what’s known to us. This is what we’re good at. We know to buy our medication in advance. We know how to avoid germs, avoid people,” Morven-May said. “Everybody is entering our world, whereas before we were trying to enter your world.”

To those of us entering this new world, some comfort may be found in knowing it is already inhabited and in listening to its inhabitants. My participants’ journey will now sound all-too familiar: mourning the end of a way of life; changing from being active members of communities to being house-bound; confining big lives into small spaces. Difficult as it may be, we have the important opportunity to make visible the chronic patients who have experience and listen.

Given the multitude of platforms available for contact (Skype, Facetime, WhatsApp, Snapchat), Alice suggests the term ‘social distancing’ is inaccurate. “Socially we might come closer in many ways,” she says. The term may even be problematic as it can generate unnecessary fear of isolation. “Make every attempt to try and maintain social interaction even if you’re physically isolated,” Alice recommends.

Both Morven-May and Alice recall the pressures isolation had on their mental health. “For each person, self-isolation will bring out different things,” Morven-May admits. “Some people will become claustrophobic, irritable, apathetic, retract into themselves, they won’t want human company at all.” Alice warns

of the loss of self-esteem when the sources for it are gone: “If you’ve lost your ability to work, the esteem that comes from that might dissipate. People will start to question themselves so they should try and do something to avoid this.” To this, Morven-May recommends finding laughter to dissipate the anxiety and honouring the simple comforts. She recalls: “One thing that made a difference to me when I was really unwell is get a chair and sit it by the window, open the window and just breathe in fresh air. People need to look for those little luxuries.”

As we navigate the lockdown and adapt to this changed world, new and important conversations become possible, perhaps with a lasting effect: “Maybe it’s a moment for people to have empathy with those who are trapped inside their homes more permanently,” Morven-May hopes.

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With gratitude to the participants of my PhD research: Alice, Morven-May and Pauline.

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The social value of testing has been ignored by public health responses to the Covid-19 outbreak, writes Dr Alice Street.

We now know that testing is essential to our ability to limit the scale and impact of the Covid-19 outbreak. No government that seeks to minimise loss of life can ignore the importance of diagnosis.

The UK Government's announcement that they will scale up testing to 25,000 tests a day is a rapid U-turn on their previous position that testing of mild cases was not necessary as we moved from 'containment' to 'delay'.

The policy change followed a flood of criticism from the global public health community, including renowned epidemiologists and the Director-General of the World Health Organisation (WHO). The reversal also feeds suspicions that the decision to reduce testing was driven less by science than by resource limitations and a lack of laboratory preparedness.

Why is testing so important? The conversation so far has focused on the public health benefits of diagnosis. These include containment. Testing of suspected cases informs doctors and authorities who should be isolated, whose contacts need tracing, and when it is safe to release patients back into the community. Its main purpose it to break chains of transmission in the community.

But containment only works if all suspected cases are tested

and the scale of the Covid-19 outbreak is pushing our existing laboratory infrastructure to the limit.

Large-scale diagnostic data-sets help epidemiologists know where and how fast the virus is spreading, enable forecast modelling and assist authorities with the distribution of limited resources.

The Government's current surveillance system involves testing a random sample of patients from different geographic areas. But experts have argued that this approach is flawed and comprehensive surveillance involving real-time data collection of all individual cases is essential for a fully informed, targeted and effective response.

Covid-19 is a novel pathogen with no established scientific evidence base. Testing is an essential research tool in the race to understand the virus and answer fundamental questions like:

How did animal-human transmission occur?

Why is Covid-19 more contagious than previous coronavirus strains?

What is its case fatality rate?

How has the virus mutated over the course of the outbreak?

Infected, but no symptoms

The race to develop an accurate point-of-care antibody test that can detect who has been exposed to the disease will help scientists understand the numbers of infected people who do not experience symptoms.

Public debate about Covid-19 testing has so far been dominated by epidemiology and public health. This is at the expense of discussion on the social value of testing.

We have been told that testing will do little to change individual clinical outcomes. But in the US people are queuing for over three hours at drive-thru testing centres.

In the UK, private firms are selling thousands of unapproved testing kits to the public at £295 each. People understandably want to protect their loved ones. NHS staff are demanding testing so they can protect patients while they work and continue to work if they are not infected.

But what else is driving the public demand for testing? Medical anthropologists have long observed that people desire a diagnosis for multiple reasons, and that these are not always about medical care.

A diagnostic label gives people a sense that their suffering has been recognised as valid, gives reassurance that they are being looked after, provides the basis for legal rights in some circumstances, and can be the basis for new social identities and solidarities.

In a context of deep uncertainty and public anxiety, access to diagnostic testing gives people a wider sense of control and the confidence that authorities have the situation in hand.

Public trust at a time of crisis

Diagnosis also gives patients the confidence to follow through on the advice they are given. Expecting whole households to self-isolate for 14 days without a diagnostic test is a big ask. In cases where symptoms are mild, doubts are bound to creep in. Uncertainty depletes resolve.

The challenge the Government faces is that, even when it is available, diagnostic testing rarely meets people’s expectations for certainty. We have seen this most starkly in the scandal over test quality in the US, but even the best available tests have limitations to their accuracy.

Research by my team on the social role of diagnostic tests in under-resourced health systems has shown that when testing is not properly supported by wider systems, it can increase uncertainty and deplete trust in health care.

In some places, people link failure of diagnosis to state failure, with potentially profound implications for people's trust in government at a time of crisis.

The Government needs to invest immediately and heavily in laboratory systems. This means investing in the development of new diagnostic tools but just as important are investments in the people, laboratory infrastructure, transportation systems and waste management systems that deploying those tests will depend on. They need to start viewing testing infrastructure as a source of public reassurance and not just a public health tool.

The tsunami of criticism from public health experts has now pushed testing to the top of the Government agenda. But it is also important to understand why demand for testing among the UK public is so high.

As public discourse descends into panic, the Government continues to ignore the social value of diagnostic testing to its peril.

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The COVID-19 pandemic: are law and human rights also prey to the virus? Asks Prof. Graeme Laurie

COVID-19 was declared a global pandemic by the World Health Organization (WHO) on 11 March 2020. In the United Kingdom, after extensive criticism across different sectors of society regarding government inaction and ineffective policies – as well as piecemeal communication about possible measures relating to citizens over age 70 to maintain social distancing for a period of months – HM Government announced on 15 March that daily press conferences will be held "…to keep the public informed on how to protect themselves". As for first responders and other professionals who find themselves at the front line of the battle to delay the spread of the virus, guidance is available, but its accessibility and absence of detail is worrying, as a cursory look at the official website will reveal. Importantly for this blog, the Department of Health and Social Care's Coronavirus Action Plan makes no mention whatsoever of the legal position underpinning any of its initiatives. So, in this blog I ask:

Are law and human rights also prey to the impact of the COVID-19 virus?

In attempting to answer this question, I make the case for constant vigilance with respect to the role of the law and human rights in a public health emergency, as well as giving a brief account of the complex legal provisions that can be deployed as public health measures. I offer a checklist of

considerations for delivering legal preparedness in emergency contexts, including the value of civil liberties impact assessments that can help to monitor compliance with law and human rights throughout these difficult times.

On the importance of law in a public health emergency

Law is a social tool of considerable importance. This is never truer than in the middle of a global health crisis when the situation changes rapidly and dramatically on an hourly basis. Law and legal institutions become crucial in maintaining the delicate balance between order and chaos, between public and private interests, and between promotion of the common good and protection of civil liberties. Global health emergencies require rapid, complex, multi-agency and multiple agent actions, as well as multi-layered-readiness at four stages, being: (1) preparation, (2) response (3) protection and (4) recovery. Lack of clarity about the role of law, or continued uncertainty about legal rights and responsibilities, can seriously hinder or impede effective responses. It is now clear that we are deep in the third phase (protection) of the COVID-19 pandemic, and any national and international governmental failures to prepare in advance for this latest pandemic will rapidly become apparent. This makes it all the more crucial that attention is paid to *legal* preparedness to respond responsibly to an rapidly-changing – and undoubtedly in the short-term – worsening situation, as plans and contingencies fail.

At the time of the N1H1 flu pandemic, just over a decade ago, a speaker at a US summit on preparedness made the following astute comment:

…when it comes to pandemics, any community that fails to prepare – expecting that federal government can or will offer a lifeline – will be tragically wrong. Leadership must come from governors, mayors, county commissioners, pastors, school principals, corporate planners, the entire medical community,

individuals and families [1].

This suggests that there is a risk in over-centralisation of response mechanisms to global health emergencies. The threats are manifold, potentially affecting communication, coordination and contingency planning. From a legal perspective, it highlights that first responders and others, such as healthcare professionals, hospital and school administrators, and local officials must be properly supported and folded into rapid decision-making when responsibilities for hands-on management of the crisis falls to them. As a minimum, there must be clarity of legal responsibilities and obligations, including domestic laws and international human rights.

What is the legal position on public health emergencies?

The legal position on responding to a public health emergency of international concern (PHEIC), as it is officially termed in legal parlance, begins with the International Health Regulations (IHRs, 2005). These establish 'an agreed framework of commitments and responsibilities for States and for WHO to invest in limiting the international spread of epidemics and other public health emergencies while minimizing disruption to travel, trade and economies'. However, while acknowledging that the WHO and the IHRs may play an important role in surveillance and reporting of pandemics, and in providing a framework for tackling them, effective action must begin and end at the state level, as it remains the sole entity – in principle – with the sanctioned power to enact policies that can lawfully curtail civil liberties. This is also because of an obvious and serious limitation within the international regime: the absence of sanction mechanisms within the international framework to require compliance by countries. And, while WHO can assist a country in its surveillance and response if requested (Article 44), the real problem of dealing with an aberrant state remains.

Domestically in the UK, the legal position is piecemeal (to say the least). While the Coronavirus Action Plan acknowledges the importance of all four nations' administrations to work together, the legal basis for this is fragmented. For example, in England and Wales, the bulk of legal authority is found in the Health and Social Care Act 2008, amending the Public Health (Control of Disease) Act 1984. The 2008 Act amendments are largely concerned with responses once a threat has already presented itself; it less concerned with contingency planning to coordinate responses prior to any such threat. While there are provisions for monitoring and notifying outbreaks, there is far less consideration for joined-up working beyond the very local response. Sections 45B and 45C of the 2008 Act confer powers on the Secretary of State to make provision by Regulations with respect to health protection measures for international travel and domestic affairs respectively. Provisions can be made both with respect to requiring action from professionals and authorities in the face of a public health threat and with respect to members of the public, their behaviour and their rights. As to the effect on members of the English and Welsh public, Regulations can impose restrictions or requirements in relation to persons, things or premises in the event of or in response to a threat to public health (s.45C(3)(c)). In particular, this can include a requirement that a child be kept away from school, and a prohibition or restriction on the holding of an event or gathering (s.45C(4)). Regulations can also include provision for imposing 'a special restriction or requirement' as set out in Sections 45G(2)(e)-(k), 45H(2), and 45I(2). These include, among other things, that a person be disinfected or decontaminated; that a person wear protective clothing; that a person's health be monitored and the results reported; that a 'thing' be seized or retained, or be kept in isolation or quarantine; or that a premises be closed, decontaminated, or destroyed. Pursuant to section 45D(3), however, and unlike the powers in relation to international travel, domestic Regulations may not require that a person (i) submit to a

medical examination; (ii) be removed to a hospital or other suitable establishment; (iii) be detained in a hospital or other suitable establishment, or (iv) be kept in isolation or quarantine. Such measures may be imposed only by an Order from a Justice of the Peace on application from a Local Authority.

Similar provisions exist in Northern Ireland and Scotland, but underpinning all of this at the UK national level is the Civil Contingencies Act 2004. The Civil Contingencies Act 2004 (CCA) is a measure of last resort when it comes to the creation of 'emergency powers', leaving existing legislation to govern responses across an incredibly wide range of areas and actors. The ability of this legislation to empower all relevant actors to respond adequately is questionable. The CCA itself lays down a broad framework for preparedness, but it is far from clear how, or indeed when, this would operate when we move from the stage of preparation to action, and whether the complex lines of communication and coordination that are essential to an effective response to a public health emergency are in place. Nor is it clear whether relevant actors are sufficiently apprised of the measures and the legal parameters within which they will be expected to act when an emergency such as COVID-19 is upon us.

The legal position, albeit complex can be summed up as follows: legislation such as the 2008 Act (and equivalent measures in Scotland and Northern Ireland) should be used in the first instance, while escalation of a crisis to an 'emergency' – defined to include "(a) an event or situation which threatens serious damage to human welfare in a place in the United Kingdom" – triggers the centralised provisions of the CCA 2004. But how are officials, professionals and the public to navigate such complexities and to know what is being done legally or when the balance has been tipped too far away from the adequate protection of civil liberties in favour of a putative threat to public health?

Legal preparedness in the face of public health emergencies

In an attempt to begin to answer this question, I offer further core questions that should be at the heart of all plans and planning exercises for global or public health emergencies. These are:

1. Are all public health officials and other actors with responsibilities fully apprised of the relevant legal provisions, their duties and the limits of their roles?
2. What is the level of informational joined-up-ness between sectors, jurisdictions, disciplines and professionals? That is, are lines of communication and balance of responsibilities clear within the complex web of potential actors?
3. iii. Do existing laws impede preparedness, either through unnecessary provisions or lack of clarity or inflexibility?
4. Are we aware of gaps in existing legal provision and are we clear on how these gaps will be filled (in particular how the CCA will be deployed)?
5. Are we naive in our premises, for example, that voluntary compliance with self-isolation or quarantine will prevail? If so, are we clear enough on what will happen next?
6. Do we have adequate mechanisms to test legal preparedness and to benchmark best practices?
7. vii. Do we have adequate mechanisms to test the competencies of relevant actors with respect to legal preparedness?
8. viii. What are provisions for effective communication and coordination of legal materials and information about legal responsibilities?
9. What provisions exist for decision-making when information is ‘less than complete’?
10. What is the role of social distancing and who has authority to require or restrict it?
11. What is the role, if any, of the military?

Wither human rights?

For so long as the UK remains a member of the Council of Europe and signatory to the European Convention on Human Rights, all legal preparedness must also be about ensuring that any measures taken that impact on civil liberties and human rights are necessary and proportionate to the social objective sought. The Civil Contingencies Act 2004 cannot amend the Human Rights Act 1998 (c.42), and any emergency regulations made under the Act are treated as subordinate legislation for the purposes of the 1998 Act.

Pursuant to Section 22 of the 2004 Act (Part 2), emergency regulations may provide for:

- The confiscation of property (with or without compensation);
- The destruction of property, animal life or plant life (with or without compensation);
- The prohibition or requirement of movement to or from a specific place;
- The prohibition of assemblies (of specific kinds, at specific places or at specific times);
- The prohibition of travel.

Most obviously, these provisions could raise the following human rights/civil liberties issues:

- privacy; (Article 8 of the European Convention on Human Rights)
- property; (First Protocol to the Convention);
- mobility/liberty; (Article 5 of the Convention); and
- freedom of association; (Article 11 of the Convention).

There are a number of points to note about the nature and operation of human rights laws as they relate to global/public health emergencies. It is trite that while human rights are fundamental rights, in most instances they are not absolute. That is, while human rights instruments identify protections

that are considered to be of core value to our society, these do not deserve protection at any cost. Exceptions are possible. The starting point is, however, that fundamental rights should be protected and the onus is on those who would interfere with such rights to justify any interference. Thus, Article 5 (protection of liberty) allows for detention of persons 'for the prevention of the spreading of infectious diseases', while Articles 8 and 11 (privacy and association respectively) permit interferences '…for the protection of health…or the rights and freedoms of others'. By the same token, interference with some rights is more readily justified than in other cases. For example, Article 5 only permits exceptions from a restricted and limited list, while Articles 8 and 11 permit a range of exceptions which are subject to the watchwords of necessity and proportionality. In such cases, interferences with human rights are only justifiable when they are in accordance with the law, necessary to address a pressing social need, and employ proportionate means towards specified ends. This can only be judged on a case-by-case basis, but permits a degree of latitude in determining what is necessary and proportionate, albeit with the proviso that interferences should be minimal to achieve the social objectives. The practical consequence of Article 5 is, however, that a potentially higher level of protection is accorded, in that it is more difficult to depart from its provisions. This gives effect to a form of hierarchy of rights, such that the ease with which interferences can be justified ranges from most difficult (Article 5) through moderate (Articles 8 and 11) to more easily justified (Article 1; Protocol 1 on property).

Thus, central to the protection phase of legal preparedness is the need for the courts to be maintained, or at least for judicial oversight to be made possible at all times. There is a lack of clarity in the possible meanings of the threshold terms used in law, such as 'necessary', 'proportionate' and 'public interest'. Notwithstanding, there is a wealth of case

law and literature which has attempted to flesh-out meaning over time and on which to draw.

Moreover, from the perspective of the ethical content of the value-based decisions, we can consider the intervention ladder developed by the Nuffield Council on Bioethics which offers a way of thinking about possible government action and appreciating the associated consequences for civil liberties. This ranges across options from 'doing nothing' and monitoring a situation, through measures oriented towards 'enabling choice', 'guiding choice', 'restricting choice' and, ultimately to 'eliminating choice'. As the intervention becomes more intrusive, so the need for justification becomes more compelling. While acknowledging that there is an ethics element built into UK planning, governments and other responsible parties would do well to consider a **Civil Liberties Impact Assessment** to accompany all contingency plans with particularly close attention paid the points at which escalation of action will take place. Such an impact assessment might be modelled, for example, on existing privacy/data protection impact assessments which have operated in many countries world-wide for many years and that in some instances are now required under the EU's General Data Protection Regulation (GDPR). A Civil Liberties Impact Assessment is also akin to human rights impact assessments, save that its scope will be wider than only looking at rights – our civil liberties encompass both rights and civic freedoms and protect us from state action even when any given human rights instrument might not apply. This is particularly important to bear in mind in the current UK post-Brexit era where there is open hostility in many quarters towards the European Convention on Human Rights.

Legal Preparedness for Pandemic: a 10-point Plan

Drawing on all of the above, I suggest that there are 10 key areas where the UK could pay close attention to improving legal preparedness for dealing with the current COVID-19

pandemic (and all future global/public health emergencies).

1. Assessing and meeting the (legal) training needs of all relevant actors, and not merely responders identified in legislation;
2. Drafting legal instruments to govern practices in emergencies and testing legal validity beforehand;
3. Establishing an open access central repository of legal instruments and measures;
4. Identify more clearly tolerances for escalation of efforts and carrying out civil liberties impact assessments on all stages of contingency planning;
5. Assessing and providing support for courts and associated personnel as crucial mechanism for dispute resolution and protection of civil liberties during outbreaks;
6. Articulating and exploring the legal situation in the event of full escalation, and in particular, considering worst case scenario planning and the arrangements for policing such scenarios;
7. Establishing and clarifying legal authority for deployment of military, limits and controls, if contemplated;
8. Learning (legal) lessons from other public health emergencies, for example, SARS in Canada & Asia, Anthrax in Scotland, or even emergencies in other government departments such as the experiences of the Department for Environment, Food and Rural Affairs with foot-and-mouth disease.
10. Clarifying and assessing balance of powers and competencies across jurisdictions;
11. Conducting further research on evaluating legal preparedness, for example, how best to protect civil

liberties as threats increase and/or plans fail.

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[1] Special Supplement, The National Action Agenda for Public Health Legal Preparedness, (2008) 36:1 Journal of Law, Medicine and Ethics at 11.

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