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Building a Community Shield to Suppress the Coronavirus

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Building a Community Shield to Suppress the Coronavirus: Foreword

For a Government that likes to campaign and govern through three-word slogans, there is one which it seems to have completely missed – 'test, test, test'. The WHO's exhortation could scarcely have been any clearer – yet ministers have squandered vital time in failing to listen. Worse, some scientific advisers have even suggested that its advice was an unnecessary measure to curb the spread of coronavirus in Britain.

Belatedly, Health Secretary Matt Hancock has recognised the urgency of ramping up testing in the UK, with a pledge to reach 100,000 tests a day by the end of this month. The chances of reaching that target currently seem slim. But the truth is that even if that target is met, testing on its own is not enough to break the chain of transmission.

This paper, which draws on the work of experts in the field, makes the case for an approach which combines testing with the establishment of 'community shields': in other words, a network of locally-based community protection schemes, co-ordinated by Public Health England's regional Outbreak Management Teams, working together with local authorities and GPs, to do the vital work of finding people with the virus, isolating them quickly, and tracing those they contacted. Strict isolation of cases and contacts can be monitored by appropriate phone apps and home visits. As Professor Anthony Costello has said, 'Without a proper programme of community surveillance and contact tracing, we won't stop the spread of coronavirus'.

If attempts to lift the lockdown are made before this infrastructure is in place, we're likely to see a repeating cycle of national lockdowns as surges of new cases of the virus occur. It therefore couldn't be more urgent that time and resources are invested in the community shield approach.

The government made a mistake and wasted valuable time by its failure to listen to the WHO's advice on testing. It would be criminally negligent if it compounded this error by failing to listen to the WHO's advice on the criteria which need to be in place before lifting the lockdown – advice that health systems must have the capacity to 'detect, test, isolate and treat every case and trace every contact.' It is profoundly worrying that the Five Conditions for Exit announced by First Minister Dominic Raab last week made no mention of this condition. It is the argument of this paper that the establishment of community protection shields, in line with the WHO advice, must be urgently added to the Government's Exit criteria.

Caroline Lucas MP
Brighton, 21 April 2020

A Message of Hope

The Corona virus has struck right across the world, challenged our hopes and expectations, and forced rapid and traumatic changes to almost everything about the way we live. In this unprecedented crisis we need clear political leadership and a sense that our government has the situation under control. Unfortunately, in the UK we cannot say that this is the case. There have been several changes of policy direction, and a failure to be transparent over the science backing up policy or to debate policy openly with the public.

There is no question that extreme restriction on our movement has limited contact, broken the transmission chain, and saved many thousands of lives. While, as Greens, we would always put the saving of human life as our over-riding objective, we are deeply concerned about the damage caused to our economy with every day that workplaces are closed. Nor do we underestimate the damage to the mental health of those who find much of their self-esteem through work, or who are confined for long periods on their own or in overcrowded homes, or who have lost jobs and income. And we are all suffering from not being able to hug those we love or to meet with family, friends and colleagues. So for everyone's sake, we need to find a safe route out of the lockdown.

At the local level, the pattern in normal times when people become ill is to visit a doctor they know and ideally trust, and, if needed, they feel supported in being offered treatment in the community or in hospital. This familiar process is no longer available at this time of their greatest need. Government advice is explicitly to stay away from your GP surgery and hospital. While this is an understandable precaution to prevent the risk of spreading the infection, it has left many people without adequate support.

People are offered the choice of calling 111 but only if their symptoms become sufficiently serious, and they are not able to receive a diagnosis or treatment unless their condition becomes life-threatening. Without medical advice, and in the case of a totally new virus, it is difficult for many to know when their symptoms are serious enough to merit medical attention. There are also many stories of people being unable to receive attention via the 111 number. This has led to some terrible examples[1] of people dying alone and without medical support.

We propose a solution to both those issues: by establishing a Community Shield we could both track and suppress the virus while also offering better support and care to those who have sadly fallen victim to it. We believe this Community Shield will offer people both hope and reassurance. We outline how the Community Shield would:

- Suppress Covid-19 by tracking its spread through our local communities;
- Provide support in their own home to everybody suffering from Covid-19;
- Offer people the reassurance they need to exit lockdown with confidence when the time is right.

[1] https://www.thetimes.co.uk/article/nurse-29-dies-at-home-alone-after-entering-isolation-gffqhxcr0

Here we are beginning a debate about a safe route out of lockdown, but we must be clear that at present we fully support the WHO and PHE advice to stay home, keep social distance, and wash hands. But we need the infrastructure to be put in place now so that we can, in due time, leave our homes safely.

Is it too late to contain the virus?

The tone of government policy from the start has been one of fatalism: government powerless in the face of an unstoppable virus. The direction of policy has been to 'protect the NHS' and to guarantee those suffering from Covid-19 a hospital bed and a ventilator, even though by the time they need one their chances of survival are only 50:50. We refute this sense of helplessness: in the face of such a deadly disease the policy should always have been to limit its spread through the use of testing, contact tracing, and quarantine. Letting the genie out of the bottle through failing to implement effective quarantine was negligent, but it does not prevent us from taking back control of the coronavirus.

It is true that if we relax movement restrictions, we risk a resurgence of infection, which raises the spectre of an endless cycle of lock-down and release until we have a reliable vaccine. This gloomy prospect rests on the assumption that lockdown is the only weapon in our armoury. This is not the case. We have a nationwide, locally-based, public health system and extensive community health services: we should use them now to control this public health crisis as we would with the outbreak of any other dangerous disease.

At the press conference on 9th March, Johnson prepared[2] the country for the end of the containment phase, while Chief Scientific Advisor Patrick Vallance said: 'What you can't do is suppress this thing completely, and what you shouldn't do is suppress it completely because all that happens then is it pops up again later in the year when the NHS is at a more vulnerable stage in the winter and you end up with another problem.' In other words, he was more focused on resource management than on controlling the virus. This is the point at which UK policy went wildly off track. We have to rewind to that point and return to a policy of containment and suppression.

Because of the abandonment of community testing, we currently have no clear sense of the spread of the virus. In the absence of widespread testing, estimates of incidence of the disease can only be derived from extrapolating backwards from deaths and hospital admissions, meaning there is always a lag of 2 to 3 weeks. However, we can identify areas where the pandemic is less intense; in these areas the policy of containment – that was abandoned nationally with the ending[3] of community testing on 12th March – can be reintroduced. As the virus becomes starved of new hosts in our urban centres, as a result of strict social distancing, we can gradually reintroduce containment there too.

[2] https://www.theguardian.com/politics/live/2020/mar/09/boris-johnson-cobra-labour-trevor-phillips-says-his-suspension-by-labour-suggests-party-turning-into-brutish-authoritarian-cult-live-news

[3] https://www.theguardian.com/politics/2020/apr/03/coronavirus-testing-in-uk-timeline-of-ministers-mixed-messages

We are not starting from a good place and we do not underestimate the size of the challenge. But there are only two alternatives to this, both of which rely on herd immunity. The only safe way to achieve herd immunity is via a vaccine, for which the best guess is that we will have to wait 12-18 months. The eccentric and dangerous idea of achieving herd immunity through allowing a live and deadly virus to run through the population unchecked has been widely condemned[4] by epidemiologists and public health experts.

Even in its own terms of accepting hundreds of thousands of deaths, the idea that we could control Coronavirus through infection-based herd immunity was always misguided. Any such policy makes an assumption about the longevity and effectiveness of immunity acquired through infection. Evidence is emerging that, as with other Coronavirus infections, human immunity to Covid-19 may well be weak and short-lived and the WHO's Michael Ryan has said[5] that '*You might have someone who believes they are seropositive (have been infected) and protected in a situation where they may be exposed and in fact they are susceptible to the disease.'*

The early flirtation with this flawed idea of herd immunity has made it more difficult to take control of the spread of the virus but, given that we have no vaccine and no guarantee that infection confers immunity, we have no alternative. We must be positive and start building the infrastructure we need to trace and isolate the virus in our communities. This is what we are calling the Community Shield.

We note that in mid-April, First Secretary Dominic Raab outlined five conditions that must be met before we can begin to relax the lockdown, but he pointedly failed to mention the second of the conditions set by the WHO, namely that countries should keep restrictions until they their health systems have capacity to 'detect, test, isolate and treat every case, and trace every contact'. We fully support the WHO on this point and would not support any emergence from lockdown until it is met.

Given this globally shared understanding, we were shocked to hear Deputy Chief Medical Officer for England Jenny Harries comment[6] towards the end of March that 'there comes a point in a pandemic where that is not an appropriate intervention' and that testing was somehow appropriate for countries 'less developed than Britain'. This bizarre and exceptionalist approach to testing has left us running to catch up and led to many of the other serious issues with our pandemic response, especially the loss of health workers from their workplaces and the shocking spread of a deadly disease within our care homes.

There has been some public debate suggesting that, during this crisis, there is a trade-off between saving life and saving the economy. We utterly reject this. A good strategy of containment would achieve both of these objectives simultaneously, as we are seeing from the German example. As a result of a widespread testing campaign, the German government can track where the virus is and be selective about how they open up society; and can then chase and damp down the inevitable secondary outbreaks of Covid-19 that will follow. This will enable a controlled relaxation of movement restrictions and a return to

[4] https://www.theguardian.com/commentisfree/2020/mar/15/epidemiologist-britain-herd-immunity-coronavirus-covid-19
[5] https://www.itv.com/news/2020-04-17/no-evidence-people-who-have-survived-covid-19-have-immunity-who/
[6] https://www.irishtimes.com/news/world/uk/unflappable-confidence-of-uk-s-health-establishment-about-to-be-tested-1.4214245

economic activity. Because of the failure to test, UK politicians are flying blind and have only blunt instruments at their disposal.

Contact tracing and developing a Community Shield

To ensure a safe return to greater social interaction, we need to have in place a nationwide system of testing, identifying infected individuals, tracing their contacts, and imposing quarantine requirements. So, to prepare for our eventual emergence from the most stringent lockdown requirements, the UK must put in place the infrastructure for a comprehensive, targeted system to report, isolate, test, monitor and contact trace potentially millions of people across the UK. This is the only proven safe route to end the lockdown while preventing the spread of Covid-19.

Following Professor Anthony Costello, we think of this system of contact tracing as a 'community shield', and preparations should be made now to put it in place well before the ending of lockdown once the upward curve of infection has been brought down. As he suggests, this system could be activated immediately in communities where the prevalence of infection is lower and rolled out more widely as the number of cases declines.

Such a Community Shield will only be fully effective where there is a testing regime to confirm the presence of the virus. However, it could begin with cases diagnosed by GPs based on symptoms, backed up by data from the 111 phone service. This work is labour-intensive and would need the creation of a new public-health workforce and the reversal of the cuts to public-health funding of recent years. Since time is short, we could seek to fill the gap by inviting some of the many thousands of people who volunteered to support the NHS but have not yet been found a role to play their part. Support from retired doctors, nurses and other medical professionals would also be required. Government should be working to establish this Community Shield now, but if that is not happening, local authorities could build their own shields for their local populations.

The traditional response to a disease outbreak is for our public health and primary care system to offer support in their local communities. Since the transfer of various responsibilities in the Health and Social Care Act 2012, primary healthcare has continued to be the responsibility of the NHS, while much of public health has become the responsibility of local authorities, supported by the new body Public Health England (PHE), established on 1st April 2013. Although the control of outbreaks of disease continues to be the responsibility of the public health arm of government – as witnessed by the fact that notifiable diseases including Covid-19 must by law be reported to PHE – their work, outside their specialist laboratories, has mostly been focused towards improving the health of their local populations with a focus on obesity, sexual health, immunisation, and screening. However, immunisation, a key element of public health and a service that will eventually become central to the response to this epidemic, remains the responsibility of NHS England.

It seems that warnings from the Faculty for Public Health in March 2013 were ignored, for example their caution that 'Roles and responsibilities must be clear . . . if the system is going

to be safe. Otherwise lives could be at risk if outbreaks of infectious diseases and similar health protection matters are not dealt with efficiently.' This system is now being tested for the first time and these concerns seem to be being borne out, but it is not too late to call on the expertise and dedication of the network of public health professionals across the country.

Any outbreak of a dangerous disease is a public health crisis and every higher-tier local authority has a public health team who could, if properly supported and funded, drive the nationwide effort to contain Coronavirus. PHE's operational guidance[7] on managing a communicable disease outbreak assigns a considerable responsibility to local authorities and their Outbreak Management Teams: 'The primary objective in outbreak management is to protect public health by identifying the source and implementing control measures to prevent further spread or recurrence of the infection.'

The environmental health officers located in unitary and district local authorities are well used to investigating outbreaks of disease in the community and, along with health visitors and school nurses, also represent a valuable community resource that could be mobilised.

We have already seen that, following a period of drift, the government has made mistakes by over-centralising, most obviously in the case of testing. We strongly recommend that this mistake is not repeated in the case of the test-trace-isolate regime that we now need to follow. Rather than centralising, the government should assign responsibility to local authorities' outbreak management teams to create the infrastructure for the Community Shield.

A range of countries have already produced detailed plans for community containment, which raises the question of why we are still waiting for a similar proposal for the UK. Ireland has established a national network of Contact Tracing Centres and provided[8] them with clear guidance. Johns Hopkins University has produced [9]A National Plan to Enable Comprehensive COVID-19 Case Finding and Contact Tracing in the US. We can also learn much from other countries where, rather than relying on behavioural modelling and command-and-control, they have mobilised[10] local communities.

Singapore and several provinces in China have been able to limit the size of the outbreak through widespread testing, contact tracing and quarantine, and these efforts remain key for ongoing containment. South Korea has managed[11] to avoid the lockdown of society by introducing a targeted programme of testing and quarantine, using its strong public health systems built up after the experience of SARS. German has mobilised[12] its resources to follow community spread, including setting up 'Corona taxis' that have ferried doctors in

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[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/343723/12_8_2014_CD_Outbreak_Guidance_REandCT_2__2_.pdf

[8] https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/contacttracingguidance/

[9] https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/a-national-plan-to-enable-comprehensive-COVID-19-case-finding-and-contact-tracing-in-the-US.pdf

[10] https://www.theguardian.com/commentisfree/2020/mar/15/uk-covid-19-strategy-questions-unanswered-coronavirus-outbreak

[11] https://www.theguardian.com/commentisfree/2020/apr/11/south-korea-beating-coronavirus-citizens-state-testing

[12] https://www.nytimes.com/2020/04/04/world/europe/germany-coronavirus-death-rate.html

protective gear to test patients in their homes. They then use their symptoms to assess their ongoing needs for medical support of hospitalisation.

Contact tracing is undoubtedly resource intensive. However, even if not all contacts of each case are identified and traced, contact tracing can still contribute to reducing transmission and work in synergy with other measures such as social distancing. It can work through our existing community-based health services to create a Community Shield that prevents further infections and provides support and care to those who are already infected.

Track-and-trace technology and privacy Issues

It is clear that contact tracing will have to be a big part of the solution to any exit from the coronavirus lockdown, in combination with widely available testing. Smartphone technology, including GPS tracking, is already being used for this by several countries that are achieving relative success in controlling the spread of the virus, and the UK government is planning to develop an app for this purpose.

Evidence given by Matt Hancock to the Health Select Committee suggests that he is considering running the contact tracing via national phone banks and an app. While an app is essential, it is only as good as the data that supports it. Only a community-led process of contact tracing can provide the fine-grained and reliable data that such an app would depend on.

There are also significant issues of privacy and civil threats to liberties around the use of such technology. There are different ways of using it, some of which expose citizens to unacceptable levels of individual surveillance as well as potential – indeed likely – abuses of personal data by the state and private interests. These risks also make it less likely that individual citizens will opt into using such apps – and without widespread take-up their effectiveness will be greatly reduced.

We believe that four essential principles must be followed in developing and rolling out such track and trace technology:

1) Transparency: It must be clear how any data gathered will be used, and who will have access to it. This is not the case with the systems currently being used by China, Israel and South Korea, and in the case of South Korea use of data by police to publicly shame individuals is known to have deterred others from opting into the app.
2) Anonymisation of data: Personal data gathered by track and trace apps should be anonymised, so that it cannot be used to identify individuals, either by the state or by corporate interests that may be involved in developing the technology and/or processing the data. The Decentralised Privacy-Preserving Proximity Tracing (DP-PPT) system developed by scientists at eight European universities shows how such anonymised data can be used effectively to track and trace infected individuals and alert their contacts if they have been exposed to infection. This system avoids

creating centralised pools of data and is designed specifically to avoid the risk of 'surveillance creep'.

3) Voluntary opt-in: Citizens must not be forced to use any track and trace app (as they are in China). Evidence from Singapore – one of the most successful countries in monitoring and controlling the virus – indicates that if people understand how such an app works and are confident that their data will not be abused, a high level of voluntary take-up can be achieved.
4) Choice of responsible partners: Not-for-profit partners, such as the universities that have developed the DP-PPPT system, have much to offer, but if private-sector resources are to be used, corporate partners must be able to show a strong commitment to protecting the privacy of personal data. The recent joint initiative by Google and Apple to develop privacy-preserving contact tracing technology suggests that such responsible private-sector partnerships may indeed be possible. But the involvement of the private sector companies Palantir and Faculty in the government's coronavirus data project points in a disturbingly different direction.

Conclusion: Build the Community Shield

From the beginning of this crisis, our government has looked flat-footed, incompetent, even callous. But the overwhelming sense we have had is one of fatalism. We were all doomed to catch Covid-19, they told us, so we might as well 'take it on the chin'. Now we are told that 'the genie is out of the bottle' and the virus cannot be contained. We were told that health services would be overwhelmed so that now, when people are most anxious and many are facing the most serious health crisis of their lives, they are left alone without even the most basic medical support. We utterly reject this fatalism. We can find a way to suppress the virus so that it is contained and under control and we can offer support in their homes and regular contact – in person or by phone or app – to all those who are suffering. The image of our fellow citizens – even health-care workers in some cases – dying in their own homes, terrified and alone, and without medical support, is the consequence of the hopeless fatalism of this government. An effective Community Shield would protect us all from such a terrible fate. It is a vision of hope, based in the community solidarity that we have all experienced so strongly in recent weeks. We warmly commend it to the country. Practically, it is possible. Now we have to build the political will to make it a reality.

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