Reset:

How the UK's Covid-19 strategy must change to rebuild confidence

SAM ALVIS
JAMES BROWNE
IAN MULHEIRN
ALEKSEI OPACIC

JUNE 2020

TONY BLAIR
INSTITUTE
FOR GLOBAL
CHANGE

EQUIPPING LEADERS
AND GOVERNMENTS
FOR A GLOBAL FUTURE

Contents

Executive Summary

In navigating the complex trade-offs presented by Covid-19, the government has courted controversy by pressing ahead with easing lockdown measures at a time when the number of daily new cases appears to be well above that for comparable countries when they took similar steps.

Whatever the timing though, any attempt to restart the economy will falter if people lack confidence that there is a clear strategy to keep them safe. To date the government's approach has been lacking, and as a result public confidence in its handling of the crisis was ebbing away at a rate not seen anywhere else in Europe even before the Cummings controversy broke. In recent days it is likely to have fallen further.

This is far more than just a political problem. On the one hand polling suggests that many people may now be less likely to follow the government's guidelines, which risks a second wave of infections. On the other, it seems as though a growing number of people lack confidence in the government's plan and may consequently be even more reluctant to go back to work, spend money in shops or send their children to school. The dynamic of a loss of confidence fuelling distrust was on display in the recent controversy over the timing of reopening schools.

The economic consequences of the confidence deficit could be severe, with jobs and businesses unnecessarily lost either to fear, or further restrictions imposed to quell a resurgence of the virus, borne of strategic mismanagement.

But it is not too late to turn things around with a strategy reset. This should consist of overhauling the current plans to rebuild trust in three key areas: monitoring community-level risks, assessing individual-level risks, and controlling the virus.

Monitoring Community Risk

To have confidence, people need to know that the risk of catching the virus in the community is low and that government restrictions will respond appropriately if it rises. But the government has announced a confusing array of three "phases", three "steps", "five tests" and five "alert levels". These overlap with one another substantially, are poorly defined and assessed in opaque ways, and are not linked explicitly to the lifting of different restrictions. This opacity leaves the impression that considerations other than risk are governing the pace of easing. This lies at the root of the trust problem.

To rebuild trust the different approaches should be rationalised into a simple alert system, assessed by the Joint Biosecurity Centre, and based on two metrics:

- **Prevalence** of the virus, as measured by daily new infections
- Rate of spread of the virus, as measured by the **reproduction number**, R

Clear quantitative thresholds should be set for these metrics to define the alert levels based on a transparent assessment of community risk. Thresholds should be explicitly tied to strategic goals, such as the number of daily infections at which "test and trace" becomes operable, or at which health-system capacity comes under pressure, so that alert levels have practical meaning.

Assessing Individual Risk

For any given level of community risk, some occupations and activities will inevitably be more exposed than others. So the government needs to demonstrate to the public that its phased reopening plan is grounded in a detailed assessment of the relative risks of different activities.

Our analysis in this report of the risks associated with different occupations – based on the proximity to others, age profile and ability to work from home – suggests that this is broadly the case. But there is substantial scope for the government to provide a detailed risk assessment to businesses and individuals, and explain how relative risks are reflected in the restrictions associated with different alert levels.

Controlling the Virus

The final component of the strategy reset should be to clarify the containment strategy that will keep people safe as normality returns. To date, the government has focused on announcing impressive-sounding input targets, like targets for daily test numbers. Instead it needs to clarify what kind of strategy those test numbers are intended to enable.

Manual test and trace now appears to be the mainstay of the government's containment strategy. But rather than announcing input targets, such as the hiring of 20,000 manual tracing staff, the government should adopt meaningful outcome targets, such as the proportion of new cases who had been contacted by tracing operations, in line with best practice around the world. It would be simple for these numbers to be produced and reported at the daily press conference, and more informative than static capacity numbers. Success in achieving these goals would go a long way to raising public confidence.

It is time for a reset in the government's coronavirus strategy. The simpler, more transparent and more coherent approach outlined here offers that opportunity. To save lives and livelihoods the government should take it.

Figure 1 – A Reset Plan

Level	Description	R		DAILY NEW CASES	Action
5	Health capacity near limits	>1	OR	>100k per day	Stricter measures than April 2020
4	Health capacity sufficient but prevalence too high for Test and Trace	>1	OR	10-100k per day	April-style lockdown measures
3	Prevalence low enough for functioning Test and Trace	<1	AND	1k-10k per day	Step 2 reopening, defined by relative occupational risks
2	Negligible community risk	<1	AND	<1k per day	Step 3 reopening, defined by relative occupational risks
1	Covid not present in UK	N/A		0	Routine international monitoring

Introduction

In imposing a lockdown, the government has been more successful in persuading the public to "stay at home" than was initially anticipated. But as the prevalence of the virus subsides, the government faces the opposite problem. The public may be so worried about Covid-19 that many will be reluctant to resume many aspects of normal life, whether that's going to work, sending their children to school or heading to their local shop.

This poses a potentially severe threat to the economic recovery and could lead to persistently high unemployment for some time to come. If people lack confidence, they are more likely to remain at home and stop spending, causing unemployment to rise higher than it otherwise might. This would compound the already substantial damage of the lockdown itself, slowing the recovery.

On 11 May the government set out its roadmap for moving out of lockdown. As of 1 June the UK has moved to the second step of the government's exit plan. This has created controversy, with some experts raising doubts about whether the prevalence of the virus has been reduced sufficiently to justify such a step.

This report does not take a view on the appropriate timing. Rather it focuses on the government's strategy for reopening and its role in building confidence and compliance. Whatever timetable the government sets, the critical question is whether it can take people with it.

People are bad at quantifying and comparing risks. We tend to base our assessments on the context in which risks are presented. For example, the abundance of coronavirus news and conversation may magnify perceptions of risk through what psychologists call "availability bias". Research also suggests that we tend to worry more about risks that are new and over which we feel we have little control.

In a pandemic, our degree of personal control is inevitably limited. Risk depends on the virus's prevalence in society and our personal circumstances. So, we rely on the risk to be controlled at a society-wide level if we are to be confident in resuming normal activities.

That confidence depends upon the government's plans being adequate to the task. But just as important is the perceived credibility with which the risk calculus behind them is explained, and the transparency with which those assessments inform plans to ease the restrictions.

A FAILING PLAN

The government is currently failing on both the credibility and transparency of its plan. Confidence in its handling of Covid-19 has consistently fallen since mid-April, amid widespread speculation in the press about the nature and timing of exit plans. Following publication of the government's roadmap on 11 May, confidence saw its largest weekly fall. The proportion of YouGov survey respondents saying the government is handling the crisis well has plunged, from 60 per cent at the end of April to just 45 per cent by 22 May, the day before news of Dominic Cummings's Durham trip dominated the national discussion.

This is far more than just a political problem. The government cannot safely move out of lockdown and revive the economy without securing public consent. But it now faces twin problems. Confusion and fatigue about the rules, combined with unhappiness about the Dominic Cummings revelations, appears to have made some people less inclined to follow the remaining restrictions. This raises the risk of a second outbreak.

At the same time, waning confidence in the government's handling is likely to compound those anxieties people may already have felt. Recent polling by Ipsos Mori on behalf of the Kings Policy Institute suggests that some 41 per cent of respondents had not left their homes at all on five or more of the past seven days, meanwhile almost a quarter of children appear not to have left home within the past week.

The contrast with other countries is stark. According to YouGov, the UK is the only major European economy on a downward trend in public support. In Sweden, the only European country not to order a hard lockdown, confidence in the government's handling has hovered around 60 per cent since late March – even as its death rate grew. In the weeks following the publication of New Zealand's alert level system on the 21 March, trust in the government's response rose to 84 per cent.

Figure 2 – Confidence in the UK government's handling of Covid-19 has been falling
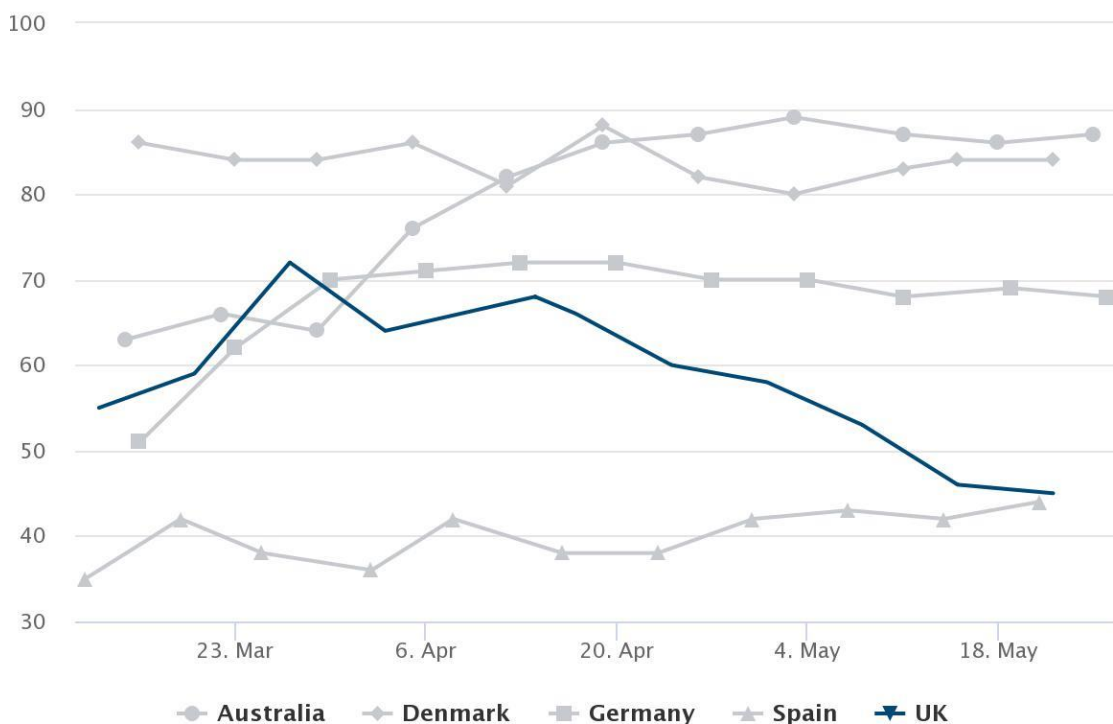
The real-world consequences of low confidence in the government's approach were borne out in the recent argument about reopening schools. A combination of a lack of clarity about how safety concerns factor in to the government's timetable, limited government guidance and planning about how to manage the risk of infection within schools, and substantial uncertainty about the role of children in transmission of the virus conspired to erode trust between government and teachers. The overwhelming feeling is one of worry from parents and teachers that government planning and communications have done little to dispel.

The contrast with countries such as Denmark is stark. There, union chiefs report high levels of support for the "collective approach" to reopening schools between teachers and government. Clear plans appear central to that, and teachers and parents know that the caseload is manageable, testing is readily available, distancing measures are in place and vulnerable staff are protected.

The European experience suggests that it's not necessarily what a government's plan is that matters for building confidence, but rather that the plan is credible, with a clear rationale. This needs more than just a change in slogan. The UK government needs to reset its strategy to recover control of the situation.

RESETTING THE PLAN

How can the UK government revise its approach to raise confidence and reduce fear? Getting the plan right in three areas we highlighted in our previous report, "A Roadmap for Exit", is critical.

1. Monitoring community-level risks

What matters to the public's perception of safety is the prevalence of the virus in society. If new case numbers are in the tens per day, and the reproduction number is safely under control, then even the most exposed workers will be safe. To have confidence, people therefore need to know that the disease is under control within the community, both nationally and locally. Is the government being clear about what prevalence of the virus is low enough to permit a safe re-opening of different parts of the economy? Does it have transparent plans to tighten up if the community risk deteriorates?

2. Assessing individual-level risks

Different occupations and activities carry different relative risks of contracting, or being severely affected by, Covid-19. Taxi drivers are more exposed than construction workers, for example. People are concerned about whether they can be safe at and in getting to work. A reopening plan that inspires confidence is one in which the staged reopening of the economy reflects an assessment of these relative risks across different occupations and activities. Has the government convincingly explained how their assessment determines the phasing of different levels of restrictions?

3. Controlling the virus

More than simply assessing the micro risks posed by different activities and monitoring the macro risks posed by the prevalence of the virus in the community, the government must also convince people that those risks are being controlled through a clear containment strategy. This involves more than announcing target numbers of tests, or the scale of the tracing workforce.

Getting these three elements right can rebuild public confidence. In the rest of this paper we explore how the current exit plan measures up in each area, and how it should be recast. If the government fails to right its core strategy, this will be the cause of not only ongoing strife but also much more severe economic pain than we can afford.

.

Figure 3 – Three pillars of a plan that builds confidence

1. Community Risk

The number of people with Covid-19 at any one time – the prevalence of the virus – is what determines the ambient risk of infection within the community. To feel safe the public needs to understand how the government is monitoring the prevalence of the disease and what will trigger a shift between different levels of restrictions.

The government's roadmap attempts to set out how it plans to monitor these risks. But what exactly will inform the level of easing is highly opaque, involving overlapping tests, phases, steps and alert levels that all appear to be trying to achieve similar things in different ways.

The current plan sees three qualitative phases from the initial lockdown (phase 1), through smarter controls that restrict the spread of the virus (phase 2, the current phase), and culminating in a future where reliable therapeutics and/or vaccines are available (phase 3). Within the current phase, however, there are three approaches to easing that are jockeying for position.

THREE STEPS

The current phase consists of a one-way timetable for easing, determined by dates on which the different steps will be taken. Step 1 began on Monday 11 May, and we have recently moved to step 2 on 1 June, with the hope that step 3 will be reached in July. However additional easing is also being announced outside these dates, such as non-essential retail opening on the 15 June. The government has said that if these measures increase infections then restrictions will return, but it is unclear how that will be judged or what new restrictions might be imposed.

FIVE ALERT LEVELS

At the same time, however, and in line with our previous recommendations, the government is apparently operating a system of five alert levels, managed by a new Joint Biosecurity Centre (JBC). The JBC will collect infection-related data directly or through local partners to inform the setting of the alert level. Eventually it is planned that this analysis of infections will be available in real-time at a local level.

Figure 4 – The government's five Covid-19 alert levels

Level	Description	Action
5	As level 4 and there is a material risk of healthcare services being overwhelmed	Social distancing measures increase from today's level
4	A COVID-19 epidemic is in general circulation; transmission is high or rising exponentially	Current social distancing measures and restrictions
3	A COVID-19 epidemic is in general circulation	Gradual relaxing of restrictions and social distancing measures
2	COVID-19 is present in the UK, but the number of cases and transmission is low	No or minimal social distancing measures; enhanced testing, tracing, monitoring and screening
1	COVID-19 is not known to be present in the UK	Routine international monitoring

Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884352/slides_-_11_05_2020.pdf

In communications on social media, but not the command paper explaining the plans, the government refers to the rate of infection and number of infections <u>informing the alert level</u>. How these two variables will be traded off against each another is not made clear. If the reproduction number, R, rises above 1 but the number of infections is half of today's level in four weeks' time, will the alert level be higher or lower? It is hard to see how the alert system can inspire confidence if it is unclear how it is supposed to operate, and what weight it puts on the prevalence of the virus – the key determinant of community risk.

Finally, there is no clear connection between the easing timetable and the alert levels. The JBC has apparently concluded that prevalence isn't low enough to move from alert level 4 to 3, yet the government has pressed ahead with its move to step 2 of easing. This raises many questions about whether future planned steps in the timetable, such as the move to step 3 in July, are in any way related to the JBC alert levels.

This is a critical flaw in the plan. If workers and consumers have the impression that the government intends to push a timetable-based approach to reopening, rather than a risk-based one, they will conclude that for all clever equations, risk of infection is not being adequately managed or is a secondary consideration. This is not a way to inspire confidence.

FIVE TESTS

As if the overlap between steps and alerts was not confusing enough, the government is also sticking to its original five tests for easing, which it says will also inform the reopening.

However, there is substantial qualitative overlap between the tests and the alert levels. For example, having "infection rates at manageable levels", test number 3, appears also to be a key determinant of the alert levels which take account of the number of infections, but no explicit connection is made. Similarly, a "sustained and consistent fall in the death rate" appears similar to an assessment of R that informs the alert levels. Finally, alert level 5 is defined as being when there is a risk of the health-care system being "overwhelmed", which overlaps with test number 1: that the NHS "can cope".

Figure 5 – the government's five tests

1 The NHS can cope

2 Sustained and consistent fall in the death rate

3 Rate of infection falls to manageble levels

4 Tests and PPE can meet demand

5 Adjustments do not risk a second peak

Despite the duplication, it is unclear how the alert levels and tests are defined or how they are intended to work together. Moreover, we don't know what any of these risk metrics would need to be showing for the government to depart from the timetable it has announced for the lifting of restrictions: What does a "manageable" level of infection mean and is it a level where workers would be taking their lives in their hands to get on a bus?

So the current exit plan consists of three different but overlapping approaches to easing, with no clarity on the metrics associated with each or on which one dominates.

SIMPLIFYING THE PLANS

The government should simplify and rationalise this array of tests, alerts and steps. Uncertainty is a major cause of public anxiety. While the government may not have all the answers, it can provide clarity to the public about how it will respond as circumstances change. With a simpler framework, businesses and individuals will at least know when and why they may see further easing or the future return of restrictions, and be able to trust that the government's decisions are based on a consistent and objective assessment of risks.

Two core metrics lie at the heart of the government's thinking on what should determine the easing of restrictions:

1. Prevalence of the virus: the total number of daily new infections
2. Rate of transmission: the reproduction number, R

Such a simple framework, applied either nationally or at a local level, is no blunter than the existing plan but is far more transparent. Rationalisation alone is not enough for the public to feel that community risks are under control, however. For each area, the government should clarify the thresholds at which it will change the level of easing. By making the reopening timetable contingent on some hard numbers, it could better achieve that goal. What should the government be measuring in each area?

Figure 6 – Simplifying the plans
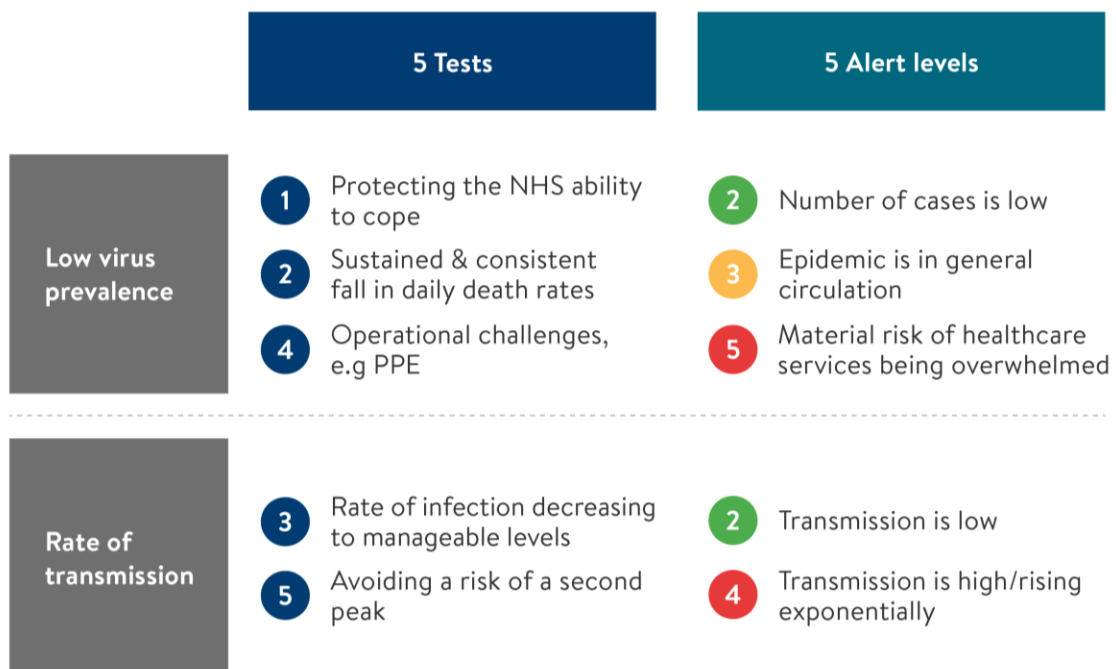
VIRUS PREVALENCE

A low caseload is perhaps the most important condition for easing because the prevalence of the virus directly determines the ambient level of risk in the community. As the government acknowledged in a recent press release on the reproduction number, the infection rate alone cannot inform response: If there are only 10 cases in the country, an R of 1 means that only a further 10 people will catch the virus in each infection cycle, but if there are 10,000 cases then a further 10,000 will catch it within days, representing a far higher community risk for the same level of R, and ultimately a vastly higher number of deaths.

Tying restriction measures directly to prevalence is therefore vital to allow the public to contextualise the risk. It will also inform the other measures that keep people safe. Without driving down total numbers, the efficacy of testing and tracing, and other containment measures, is questionable.

New Zealand and South Korea began lifting restrictions only when new daily cases were very low. Likewise, Austria's daily caseload was between 100 and 200 new infections per day at the time it reopened small shops, and has since remained well below 100.

The UK is trying something different. We are moving to a containment stage when transmission is still falling but absolute daily case numbers remain significant. With the ONS estimating that the number of new cases per day was around 8,000 for most of May, it will inevitably be more challenging for the new tracing regime to operate as effectively as in countries seeing only tens of cases each day.

Another consideration woven through the government's statements is whether the health system has sufficient capacity to cope with the number of infections. It is obviously critical that there are enough intensive care beds and ventilators to prevent excess deaths from Covid-19. Equally we need to be sure that health and care staff have access to all the necessary PPE to do their jobs as safely as possible. These concerns are reflected in both the five tests and the alert system, but this adds unnecessary complexity.

Apart from the initial phase of the crisis where there were significant problems in these areas, capacity questions can be monitored through the wider prevalence of the virus at a local level. For example, if daily new cases remain below their current level, health-care capacity should now be more than adequate. If there is a threat to health capacity it will be because the prevalence of the virus has increased again.

Quantitative thresholds for prevalence that dictate the alert level should be defined by these considerations. For example, what rate of new daily cases is deemed manageable by the available test and trace infrastructure? And what prevalence is consistent with the NHS and wider health and care services being able to cope, at both a local and national level?

RATE OF TRANSMISSION

While prevalence dictates the community risk for individuals today, the R number tells us about how that risk is evolving. This is particularly important because the virus can spread rapidly and there is a substantial lag until that spread shows up in test data or fatalities. Even if prevalence is low today, an R much above 1 will quickly lead it to grow, as we saw in the weeks before the March lockdown was imposed.

Monitoring R in real time is, however, challenging due to the inevitable delays caused by the incubation period and the time it takes to text and collate results. In Germany, where the Koch Institute makes a daily assessment of R, the modelling takes account of cases with illness onset up to four days ago, meanwhile the incubation period perhaps adds a further five days to the lag. Consequently, the estimate may be around nine days out of date. R estimates based on death rates are likely to be two to three weeks out of date, limiting their use as a real-time policy tool.

For this reason we recently proposed the use of population mobility as a more real-time proxy for R. Our paper *Smart Exit*: A Covid-19 Early-Warning Model demonstrates how it may be possible to identify "mobility budgets" at a local geographic level, representing a safe level of movement for the population that is consistent with R remaining below 1.

Whatever method of assessing R is used by the government or the JBC to determine how the risk of the virus is changing, it needs to be clearly explained how that metric interacts with prevalence to drive the alert level, and the restrictions in force. Without an explicit quantitative link, the necessary transparency will be missing.

BOX 1: Case Study – Berlin State

The Berlin State Senate recently published its own traffic light alert system to communicate with the public and determine the shift between levels of restriction. Their approach demonstrates many of the features of the revised approach proposed above. An assessment of R is used in combination with the total number of infections in the community, and the percentage of occupied care beds. Critically the Berlin plan also explains how the three measures interact to trigger a shift in restrictions: If two out of three conditions are met, then easing is reversed.

- Red: R = 1.3 for three days, more than 30 cases per 100k, 25 per cent of intensive care beds occupied
- Yellow: R = 1.1 for three days, 20-30 cases per 100k, 15 to 25 per cent of intensive care beds occupied
- Green: R = below 1.1, few than 20k cases, under 15 per cent of intensive care beds occupied

Such an approach is simple for the population to understand and can be readily monitored. It also provides people with reassurance that the community-level risks are being monitored and demonstrates the government's commitment to reimpose restrictions if the situation deteriorates according to pre-announced metrics.

2. Individual Risk

Prevalence of the virus captures the general level of risk within the community, but the relative riskiness of different occupations or activities varies substantially. As we set out in our earlier report, the most effective Covid-19 management plans around the world tie different levels of alert to a set of rules for different businesses and individuals that reflect these relative personal risks (among other things). Restrictions on different activities should be informed by a careful consideration of the risks involved in each of them. For instance, the ONS has found that the mortality risk from Covid-19 is more than three times higher for taxi drivers than for large-goods vehicle drivers.

Judging these personal risks in different parts of the economy is far from easy, especially when our understanding of the most likely modes of transmission of the virus is incomplete. What's more, the individual characteristics of those working in different sectors strongly influence the risks associated with a given line of work – for example age, health or the make-up of an individual's household. Nevertheless, attempting such an assessment is critical in constructing the levels of alert, since individuals will only be confident about returning to work if they believe their exposure risk is sufficiently low.

Towards this goal, the ONS recently presented data on how proximity to others varies across occupations and, therefore, which occupations have the highest potential exposure to coronavirus. Such an approach yields important insights.

However, proximity to others in the course of a normal day's work is only one aspect of risk. This is particularly so since, as recent weeks have proved, many occupations can be done from home. The effect of proximity on risk is therefore moderated by whether that occupation can be done remotely: Potential exposure clearly falls to zero if a job that ordinarily entails high physical proximity is done from home (for example, a physiotherapy consultation).

Given the strong association between age and mortality rates from Covid-19, despite the broadly uniform risk of infection across age groups, it is also important to factor age into an assessment of occupational risk. By mid-May, fewer than 1 per cent of the those who had died from Covid-19 were under 45. Just 11 per cent were under 65. Given that the risk for working-age individuals is very small and rises substantially for older workers, a consideration of the age profile in different occupations is important.

We therefore build on the ONS analysis in these two ways, categorising an occupation not only according to the physical proximity to others involved in that occupation's tasks but also according to:[1]

- the occupation's capacity to be performed from home
- its age profile.

---

[1] We use a measure of occupational proximity derived by the ONS based on data from the US O*NET database and supplement this with a variable measuring the proportion of individuals in an occupation aged over 55. In addition, in order to capture the extent to which a job can be done remotely, we draw on a recent survey indicator which asks workers to report the share of tasks performable from home (see A. Adams-Prassl, T. Boneva, M. Golin and C. Rauh, "Work tasks that can be done from home: Evidence on the variation within and across occupations and industries", https://drive.google.com/file/d/1ssoMlefI6N9CBEPPsWKqy6F3M9_Wcbzu/view).

Figure 7 shows a plot of occupations categorised in this way. Those that appear further to the right and further to the top are deemed risker based on physical proximity and age composition, respectively. Darker-shaded bubbles represent those most easily done from home, and the light-shaded occupations, those that cannot be done remotely. This allows us to identify those occupations most and least at risk of exposure to Covid-19. Pale-shaded occupations in the upper-right of the quadrant are at the higher end of the risk spectrum, while those that are dark-shaded at the bottom left are lowest in risk.

We next disaggregate these occupational plots into four groups which reflect the government's planned timeline for phasing occupations "back to work".[2] This allows us to assess whether the government is leading with those occupations at lowest health risk first. If the government's easing plan does in fact phase occupations back to the workplace in accordance with their risk of Covid-19 exposure, then we should see occupations involving unavoidable proximity to others returning last (apart from those on the frontline of the health response).

Figure 7 – Exposed occupations and remote working
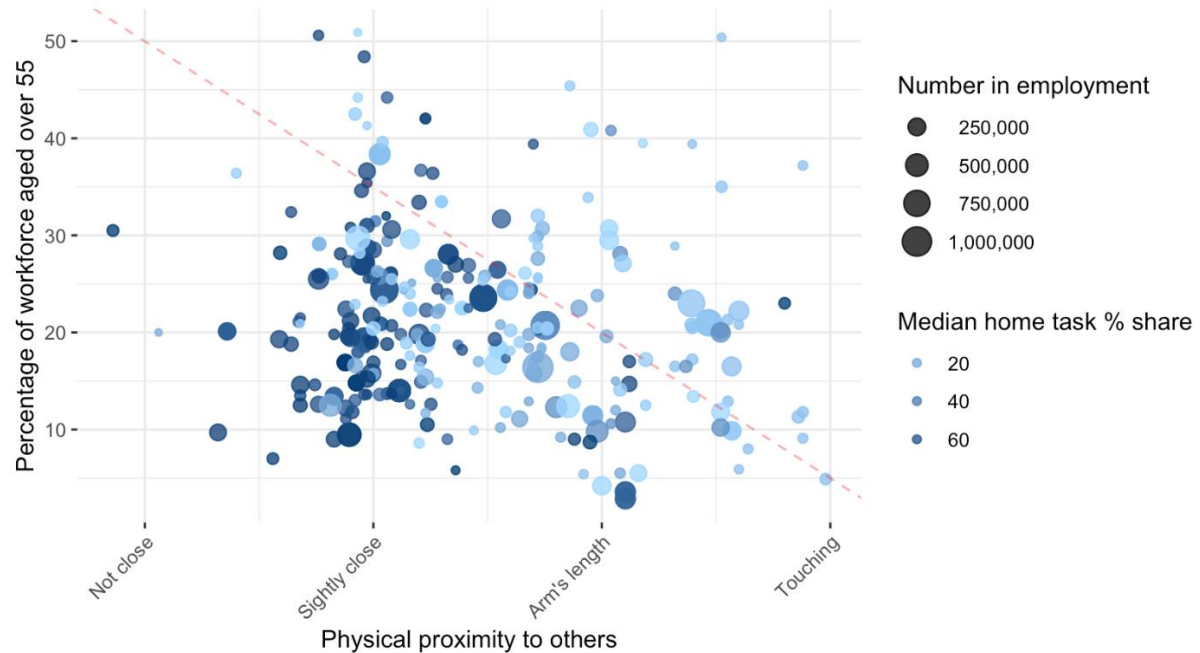
Source: TBI calculations using data from ONS, ONET and Adams-Pressl et al. (2020)

---

[2] We attempt to match the occupations in our dataset to one of the four stages outlined in the government strategy document. So for example the first stage of workers who were expected to return to work in mid-May include those in construction and manufacturing as well as those providing local public transport services, whereas the second stage returning to work at some point after 1 June include teachers and other school workers and those working in non-essential retail. Those working in hospitality and the leisure industry have to wait until at least 4 July before returning to work.

The first quadrant shows the occupations that have continued to work since lockdown was imposed on 23 March. As we might expect, the chart is dominated by occupations able to work from home. However, there are also many occupations whose workers are in close contact with others and unable to work remotely. These are primarily health-care professionals, including midwives, nurses, care workers, pharmacists and pharmacy dispensers, as well as other essential workers such as police officers, public-transport workers and delivery drivers. All of these occupations involve at least arm's length proximity to others, and have among the lowest median share of tasks that can be performed at home (less than 10 per cent).

The first stage of reopening includes predominantly workers in manufacturing and construction and related building trades. These are occupations that involve somewhat close contact with colleagues – generally between "slightly close" and at arm's length – and which cannot be readily done from home. But within this group there are certain occupations that might be considered at particular risk. For example, as the government has sought to open up local transport services, bus and coach drivers have returned to work. They might be deemed at particular risk, since this occupational group not only scores highly on our proximity measure and has a low percentage of tasks that can be completed from home (1 per cent), but it also contains a high proportion of the at-risk over-55 demographic (41 per cent). Those due to return to the workplace in the second and particularly the third stage of the government's phased reopening have to work

at greater proximity and again are (for the most part)[3] not occupations that can readily be done from home.

The government should develop and publish a risk assessment of this type for each occupation and explain how it informs the restrictions associated with the different alert levels. The above analysis could be developed as our understanding of transmission risks improves, but building confidence requires such transparency about how the back-to-work phasing has been determined. This will become increasingly important as the economy returns to a new normal. If there is a risk of further outbreaks, workers in different occupations will want to know that the government has determined its alert levels based on a clear risk assessment.

This analysis has looked at occupations. But personal risks are, of course, not just present for those delivering services but also those using them. This will extend beyond the formal economy to other aspects of society like sport and exercise, religious ceremonies, or arts and culture. Currently, the government appears to be assessing the risk of such activities as a function of the number of people involved, rather than whether the activity itself is a health risk. A more detailed risk assessment, similar to that proposed here for occupations, should inform the re-opening of consumer and leisure activities.

---

[3] Note that there are a few occupations that do not fit into this pattern and are returning to work later even though they do not involve working in close proximity to others and involve many tasks that can be done from home: These are predominantly managers of hospitality businesses who are unable to do their jobs without the involvement of other staff who do have to work in close proximity to colleagues and clients.

Figure 8 – Exposed occupations and the easing plan
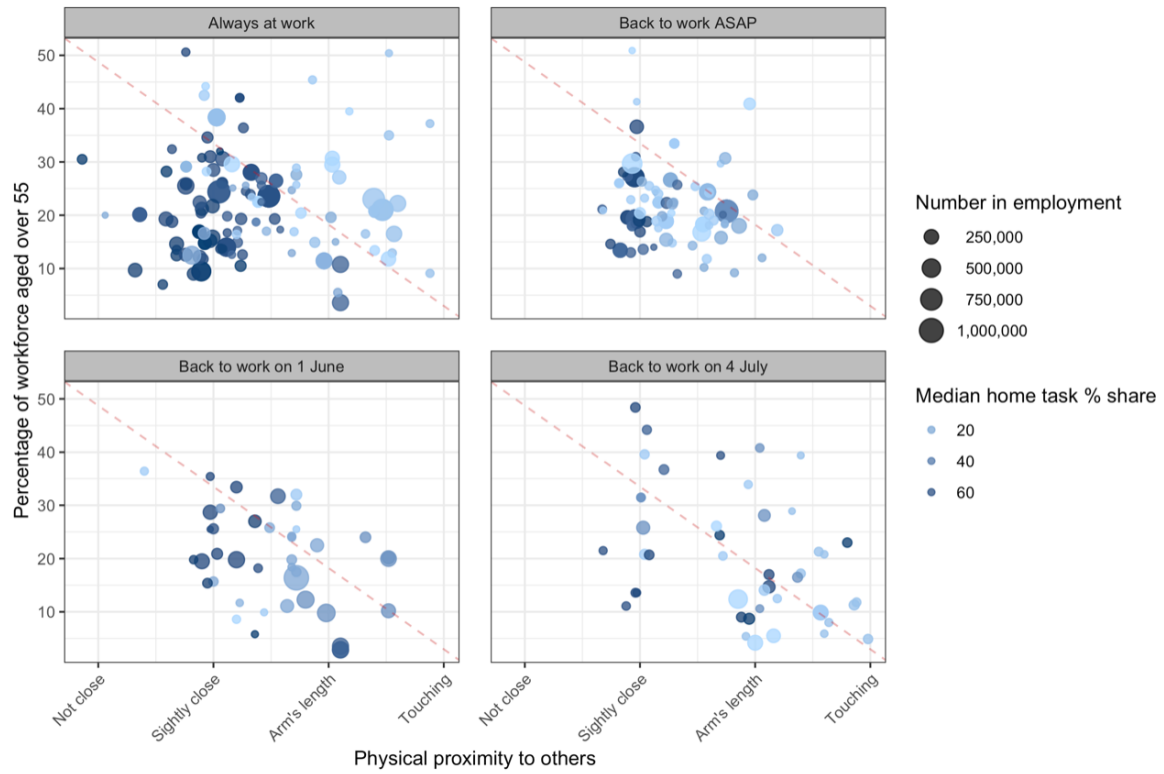
Source: TBI calculations using data from ONS, ONET and Adams-Pressl et al. (2020)

3. Controlling the Virus

A clear assessment of the risk posed by the virus, at both personal and community levels is essential to establishing public confidence as restrictions are lifted. But the third ingredient is a clear containment strategy. The virus may be rare and under control, but will it stay that way? So far, the government's containment strategy also falls short of providing that security.

TESTING

To date the government has set high-profile targets and aspirations for testing capacity and contact-tracing staff. On testing, most notably, the prime minister set out an intention to raise capacity to 200,000 per day by the end of May. On 30 May this was met with the combined capacity for diagnostic and antibody tests reaching 206,000.

But aiming for arbitrary testing targets does little to build confidence. The appropriate level and type of testing depends upon the containment strategy they are being used for. The table below outlines some of the approaches that testing capacity could be (and some already are being) applied to. As testing capacity is expanded, it should be made clear how it is to be used and why.

Figure 9 – Different uses of testing capacity

Community	Individual
Surveillance / sentinel: Sampling randomly to establish prevalence, like the current Infection Survey pilot by the ONS. This could be done nationally with a few thousand, or at a local level with a few hundred thousand per week.	**Shielding:** Managing individual-level risks for older groups by encouraging testing as part of a shielding strategy (e.g. on demand tests for people visiting older relatives)
Universal testing: Widespread, regular testing for everyone in order to prevent spread of the virus without the need for reliance on contact tracing. Would require perhaps millions of tests per week.	**Protecting institutional settings with high prevalence:** Frontline workers and residents in care homes, prisons, hospitals etc.
Tracing: to confirm cases and test all contacts. Using testing systematically in this way may help increase adherence to instructions to contacts to isolate. Advice to SAGE in the UK suggests test-based contact tracing is likely to improve its effectiveness.	**High-exposure or essential occupations:** regular testing of high-contact occupations, or those deemed critical beyond institutional settings such as government, food supply or the military. This could also be expanded as integral, high risk definitions change including schools, transport and other sectors.
International travel: testing for potential imported cases.	

These different approaches are not mutually exclusive, but each has different implications for the required testing capacity.

- Relying largely or exclusively on a universal mass testing strategy, for example, might require millions of tests per week. Current capacity falls well short of this.
- A test and trace strategy may need fewer tests for any given prevalence of the virus, but also requires much clearer goals for the tracing element. South Korea is an example of a successful tracing strategy operating in an environment with few cases, and testing capacity there appears to be only around 20,000 per day.
- A shielding strategy, to protect older people and those in care homes, would require a different rate of testing again.

The right level and type of testing capacity therefore depends on the objective. So far, however, the government's approach seems to have been vague on the latter, at least in its public communications. As former Business Secretary Greg Clark has said, "Capacity drove strategy, rather than strategy driving capacity." The government could usefully clarify how its targets have been derived to support which of these objectives.

CONTACT TRACING TARGETS

Whatever the other uses of the UK's growing testing capacity, contact tracing is clearly now the mainstay of the government's containment plan. The NHS Test and Trace programme, launched on 27 May, involves a team of 25,000 contact-tracing staff which the Department for Health and Social Care believes will be sufficient to trace the contacts of 10,000 new cases each day. But rather than setting impressive-sounding inputs, the government should target directly relevant outcomes.

In Iceland, for example, the tracing operation was able to trace 92 per cent of diagnosed cases even back in April, and as a result over half of all new cases are occurring among people who had already been asked to self-isolate, drastically reducing the spread of the virus. In the UK, the Scientific Advisory Group for Emergencies (SAGE) appears to have concluded that for contact tracing to be effective, at least 80 per cent of an infected person's contact would need to be traced and isolated within 48 hours.

Such clear metrics have not yet made it into government plans, but it should be fairly simple for these numbers to be produced and reported at the daily press conference. Success in achieving these goals would go a long way to raising public confidence.

BOX 2 – Smart targets from rigorous containment regimes around the world

South Korea – COVID-19 Smart Management System   **Priority: Speed**

- Launched on 26 March, the South Korean system aims to complete contact tracing for each patient within 10 minutes.

Germany – Test and trace system   **Priority: Coverage**

- On March 25th, Germany set a target to have at least a team of five tracers per 20,000 residents.

Iceland – Test and trace effectiveness   **Priority: Coverage**

- Relative to many European countries, Iceland was slow to move to a strategy of containment, but its Ministry of Health monitors the proportion of cases traced and the proportion of new infections that occur among people told to isolate via the contact tracing regime.

Harvard, Edmond J Safra Center for Ethics – Pandemic Resilience   **Priority: Suppression**

- The plan for the US sets out a minimum level of five tracers per new case per day, finding contacts within 12 hours to suppress the disease (based on Feretti et al 2020). This would require capacity for five to 20 million tests per day. The range is dependent on number of locations in deemed 'critical', and the frequency of sentinel testing.

Conclusion

The government has courted controversy by pressing ahead with easing lockdown measures at a time when the number of daily new cases appears to be well above that for similar countries at the time they took similar steps.

Whatever the timing though, any attempt to restart the economy will falter if people lack confidence that there is a clear strategy to keep them safe. To date, the government's approach has been lacking, and public confidence is ebbing away. The economic consequences could be severe as a result.

It is not too late for the government to turn things around with a reset of the exit strategy. By taking action across the three dimensions outlined in this report, the government can create a single integrated plan that should look similar to the one set out in Figure 10.

This would represent a simpler, more accountable, and therefore more effective plan to control the risks of Covid-19 and thereby rebuild public trust. With each day that passes, failure to do so will be measured in higher unemployment and lasting damage to living standards.

Figure 10 – A reset plan

Level	Description	Triggers			Action
		R		DAILY NEW CASES	
5	Health capacity near limits	>1	OR	>100k per day	Stricter measures than April 2020
4	Health capacity sufficient but prevalence too high for Test and Trace	>1	OR	10-100k per day	April-style lockdown measures
3	Prevalence low enough for functioning Test and Trace	<1	AND	1k-10k per day	Step 2 reopening, defined by relative occupational risks
2	Negligible community risk	<1	AND	<1k per day	Step 3 reopening, defined by relative occupational risks
1	Covid not present in UK	N/A		0	Routine international monitoring

Read our other reports on UK Covid-19 policy:

- Smart Exit – A Covid Early Warning Model
- A Roadmap for Exit – Lessons from Around the World
- A Sustainable Exit Strategy – Managing Uncertainty, Minimising Harm
- Suppression Exit Strategies – Options for Lifting Lockdown Measures in the UK
- The Economic Policy Response to Covid-19

GENERAL ENQUIRIES
info@institute.global

FOLLOW US
facebook.com/instituteglobal
twitter.com/instituteGC
instagram.com/institutegc

FIND OUT MORE
INSTITUTE.GLOBAL