

Decision making in a crisis

First responses to the coronavirus pandemic

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About this report

The coronavirus pandemic required the UK government to take high-stakes decisions under conditions that make good policy making hard. This report examines three key groups of decisions made by the government in its early response to the pandemic: the economic support package, the commitment to run 100,000 tests per day by 30 April, and the lockdown and school closures.

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Summary

The coronavirus pandemic required the UK government to take high-stakes decisions under conditions that make good policy making hard. This report examines decisions made by the government about three key aspects of its early response to the pandemic: the economic support package, Covid-19 testing and the commitment to run 100,000 tests per day by 30 April, and the lockdown and school closures. We examine how these decisions were taken and how that affected the outcomes.

The economic support package

Decisions on the economic support package – the Coronavirus Job Retention Scheme (CJRS, or ‘furlough’), the Self-Employment Income Support Scheme (SEISS) and the Coronavirus Business Interruption Loan Scheme (CBILS) were taken very quickly. For instance, the CJRS was designed and announced within 48 hours, with the SEISS coming days later. The schemes were rolled out ahead of schedule and with remarkably few problems, preventing the immediate wave of job losses the government had feared. In large part, this was thanks to the steps taken by ministers and officials:

- Decision makers were clear that delivering fast financial support to the vast majority of affected workers and businesses was preferable to taking the time to cater to every individual circumstance.
- The government worked closely with business and union groups, which helped secure a positive public reception when the policies were announced.
- Delivery was factored in from the start. Treasury ministers and officials worked closely with HMRC officials, who would be responsible for implementing key measures, and choices about how the schemes would work were guided by what could be done quickly.

Covid-19 testing

The government’s commitment to 100,000 tests per day by 30 April increased its focus on the need to boost laboratory capacity and spurred it to work with a wider range of non-government laboratories. But the government’s decision was not well thought through:

- It had not determined the answers to important questions that should have underpinned its decision, including how a ‘test and trace’ strategy would work, who would be eligible for testing as capacity grew, and how much capacity would need to eventually grow beyond 100,000 tests per day.
- The government did not consult the diagnostics industry, the NHS or even some of the government’s own experts before making the decision.
- It did not properly allocate responsibility for carrying out the tasks needed to reach 100,000 tests.

This contributed to difficulties experienced by NHS and social care staff in accessing testing, undermined the credibility of the commitment and led to 'gaming' behaviour that was designed to meet the target but damaged the effectiveness of the testing programme.

Lockdown and school closures

The decisions taken to lock down and close schools in England helped contain the spread of the virus and reduce transmission, but key scientific advisers have argued more lives could have been saved had those decisions been taken sooner. The timing of decisions was driven by a combination of wariness about the enormous hardship a lockdown would inflict; a desire to 'follow the science' meaning heavy reliance on the Scientific Advisory Group for Emergencies (SAGE) – a body never set up to provide holistic policy advice; delays in the availability of data and evidence; and an objective to 'save the NHS' and focus on its capacity, rather than broader measures to save lives. We find that:

- **Lockdown and school closures were driven by the desire to avoid overwhelming the NHS.** The importance and clarity of this objective overcame ministers' reticence about the social and economic costs of a lockdown and brought decisions to a head. But saving the NHS was not a good enough proxy for the goal of saving lives.
- **Ministers did indeed 'follow the science' – but that was not enough to guarantee the right decision at the right time.** Gaps in the evidence base, some of SAGE's operating methods and the impact of politics on SAGE's work all inhibited earlier school closures and lockdown.
- **Both school closures and social distancing measures were contemplated in February.** But some of the key aspects of making them work – like remote learning arrangements for schools and guidance for police – were not considered until after decisions had been made.

To guide its future decisions during the pandemic and other crises, the government should recognise and act upon our conclusions that:

- **Poor decision making is not an inevitable consequence of a crisis. With the right inputs, the government machine is capable of fast and responsive action.** This is not to underestimate the difficulty of the situation in February and March. But the successful roll-out of the economic support measures shows that ministers and officials can find fast ways to consult those who will be affected by a policy or programme and think through how it will be carried out, before making a decision. This was the case even with the CJRS, which was developed and announced in around 48 hours. In a fast-moving crisis, there might be little time or opportunity to fix early mistakes. Consulting fast and considering implementation at the outset maximise the chances of success and minimise the likelihood of a later U-turn.

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- **Decisions work best when the government knows not just what it wants to do, but why it wants to do it.** At times, government lacked a wider sense of strategy. The health secretary made his testing commitment without a strong enough sense of how the government would use additional capacity. This undermined the credibility of the commitment and skewed the government's testing strategy away from making testing capacity useful to NHS staff, social care workers and others, and towards hitting an arbitrary target on a single date.

Decisions on the lockdown and school closures were driven by the desire to stop the NHS being overwhelmed. The government achieved this. But 'protecting the NHS' did not stop the country experiencing the highest number of excess deaths in Europe. Greater focus on the 'why' – saving lives – would have been a better basis for making decisions.

- **Science advice should inform, not make, policy and ministers needed to better understand its limits.** The government looked to SAGE for answers in the early part of the crisis, but the scientists were not always in a position to offer them. SAGE was reluctant to recommend sweeping and costly lockdown restrictions in the absence of supporting data, and strove for consensus rather than offering competing views to ministers and officials. SAGE is right to offer advice based on evidence rather than personal opinion and to run an informal peer review over its conclusions, but ministers need to appreciate this can delay firm advice.

Ministers need to be clearer about SAGE's remit. Its members did not always have a shared understanding of the extent to which it should consider the economic and social implications of its advice.

1 Introduction

The coronavirus pandemic required the UK government to make and implement high-stakes decisions far more quickly than usual. Civil servants have designed new programmes from scratch with little precedent to guide them, and ministers have taken decisions with significant consequences, with imperfect information and little time to reflect. Responsibility has crossed departmental boundaries and levels of government, and reached outside the public sector, too.

In such times, the practices that should normally guide good decision making – like properly defining the problem, setting goals, making good use of evidence, planning implementation at the same time as designing the policy, talking to those affected, being clear about who is responsible for what and building in feedback loops – might seem like a luxury. Crises do not wait for lengthy consultations or the results of randomised controlled trials; the greatest mistake for a decision maker can sometimes be to delay.

But when the stakes are high and there are no second chances, far from being a hindrance, taking the time to set clear and considered objectives, think through how a policy will work in practice before making a decision and involving representatives of the people who will be affected by the decision increases the chance of success. The task for ministers and their advisers is to strike the right balance with speed in a way that achieves a quick and effective response. This is not easy and involves a combination of experience and innovation.

This report looks at how well core policies were developed in the early stages of the pandemic and how the quality of that decision making contributed to their success or failure. The government can learn from the early phase of the pandemic to make more effective decisions in future.

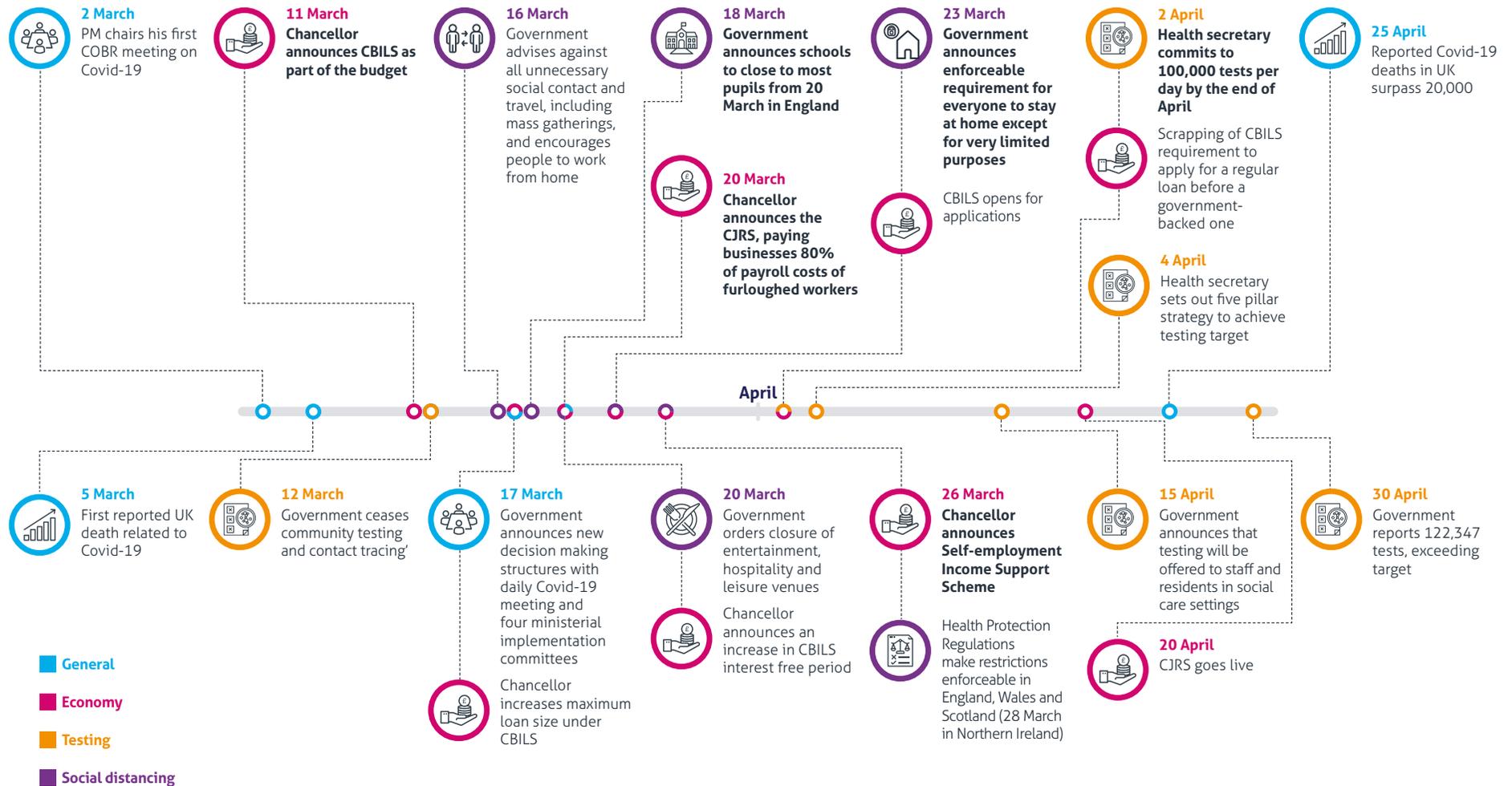
We look at three areas where important decisions were made before mid-April:

- key elements of the economic support package: the Coronavirus Job Retention Scheme, the Self-Employment Income Support Scheme and the Coronavirus Business Interruption Loan Scheme
- the commitment to conduct 100,000 Covid-19 tests per day by the end of April
- the social distancing restrictions, including 'lockdown' and school closures.

For each we set out a chronology of decisions and evaluate the steps that led to them, drawing out lessons for government. We look at:

- how effectively the government took decisions
- how the way decisions were made affected the success of the policy
- lessons for decision making during the rest of this pandemic and in future crises.

Figure 1 **Timeline of key government decisions during the coronavirus crisis**



Events in bold represent the decisions in the UK government's coronavirus response that are analysed in this report.

Source: Institute for Government analysis. CMO = Chief medical officers, CBILS = Coronavirus Business Interruption Loan Scheme, CJRS = Coronavirus Job Retention Scheme

2 Economic support package

When the government delivered its budget on 11 March, including £7 billion in economic support measures,¹ ministers expected Covid-19 to cause short-term disruption to supply. Less than two weeks later, that expectation changed dramatically: vast numbers of businesses had been ordered to close and the public was prohibited from leaving home except for a small number of essential purposes. The government quickly scaled up its response to this economic disruption. By early June, the cost of the package had exceeded £100bn.²

This chapter focuses on the Coronavirus Job Retention Scheme (CJRS), the Self-Employment Income Support Scheme (SEISS) and the Coronavirus Business Interruption Loan Scheme (CBILS). The government rolled out these new programmes quickly and with remarkably few stumbles, even though similar schemes would usually involve a months-long process of design, consultation and delivery.

Applications for both the CJRS and the SEISS opened ahead of schedule.³ The government has managed to process an enormous number of claims: in the CJRS's first four days, employers made more than half a million claims in respect of 3.8 million jobs; the scheme has now supported 9.6m jobs in total. A further 2.7m claims were made for the SEISS to 19 July.⁴ Apart from initial delays processing CBILS applications and concern from groups ineligible for assistance, the lack of major problems in the schemes' implementation has been striking and the public reception has been largely positive. For instance, Andrew Goodacre, CEO of the British Independent Retailers Consortium, reported his organisation had not received any negative feedback about the CJRS.⁵

The task of administering cash payments was more straightforward than setting up new diagnostic testing infrastructure or weighing life-and-death decisions about a lockdown, as explored later in this report. But even so, this chapter highlights that the early success of the package can in large part be credited to the quality of decision making, particularly in the way the government consulted interested parties and joined implementation planning with policy design. Close working between policy officials and those responsible for implementation meant schemes were designed in full knowledge of what was practically possible. Effective consultation with business and union groups contributed to the positive reception for the measures on announcement. Spurred by time pressure and the risks of getting the response wrong, consultation was more dynamic than usual.

The final verdict on the package will depend in part on changes in unemployment and business failures as the CJRS and SEISS are withdrawn and CBILS loan repayments fall due. But, at least in the early phase of the crisis, the rapid action enabled by a good policy making process worked well to stop mass insolvencies and job losses. That is particularly the case compared to countries that chose to boost unemployment benefits rather than provide wage subsidies.⁶

Economic support timeline

Government announced the first major measures in the 11 March budget

The first tranche of the economic support package was announced in the budget on 11 March. Assistance included the CBILS, offering businesses with turnover of less than £45m government-backed loans of up to £1.2m, administered by the British Business Bank (BBB).^{*} The CBILS was intended to preserve cash flow for SMEs and prevent business collapse. Following consultation with banks, it was modelled on the BBB's enterprise finance guarantee, which offers loans to small businesses that cannot meet normal security requirements.⁷ The CBILS was less generous than simpler schemes in some other countries,⁸ such as Germany, and included conditions to limit costs to taxpayers: banks were liable for 20% of the loan in the event of default and were required to apply viability tests.

Compared to later measures, the initial 11 March package was relatively modest at a cost of £7bn: the lockdown was not yet in place and the virus was seen by the government as a temporary supply shock.⁹ Even so, it was accompanied by ambitious rhetoric: the chancellor was clear the pandemic was "also an economic emergency", that he would "do whatever it takes to support the economy",¹⁰ and promising that "if further action is needed... I will not hesitate to act".¹¹

Further measures were introduced immediately before and after lockdown

That time soon arrived: as the government advised against mass gatherings and contemplated a lockdown, it recognised it would need to offer more extensive help to mitigate the economic impact. On Friday 20 March, the same day as the prime minister ordered the closure of pubs, restaurants and other social venues, the chancellor announced the CJRS.¹² It was drawn up over a 48-hour period before the announcement. During this time, ministers and officials consulted major business groups and the Trades Union Congress (TUC) about the scheme's key parameters, such as the percentage of wages it would cover.

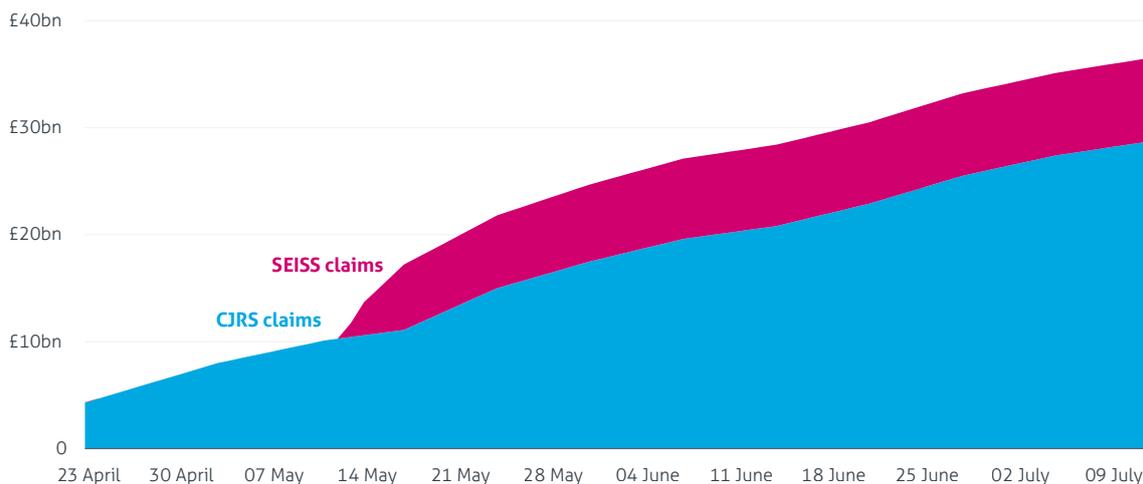
The CJRS paid businesses 80% of the payroll costs of furloughed workers, up to £2,500 per month per person. The government chose a wage subsidy, rather than relying on Universal Credit, to maintain the connection between workers and employers, limit job losses and enable businesses to reopen swiftly once restrictions were lifted.¹³

The CJRS was limited to employees, and the government soon came under pressure from opposition parties, business and union groups, and its own MPs¹⁴ to provide similar help to the self-employed. The SEISS was announced on 26 March, offering a taxable grant of 80% of average profits over the last three years (where that average was less than £50,000), again up to £2,500 per month.¹⁵ Applicants were also required to draw more than half of their income from self-employment. The government has cited income support and equity with employees as rationales for the SEISS.¹⁶

* Other measures included: more generous statutory sick pay provisions, business rates relief and small business grants to be delivered via local government.

With no requirement for claimants to prove their income had been hit by the pandemic, it was more generous than the CJRS. But it had more 'rough edges': because HMRC calculated payments from average profits up to the 2018/19 tax year, the last year for which it had reliable and complete records, anyone who had become self-employed since April 2019 was excluded. Owner-managers of incorporated businesses drawing their income from dividend payments were also ineligible because HMRC had no way of distinguishing between dividend income from self-employment and dividend income from shares or other investments.

Figure 2 **Value of claims for SEISS and CJRS**



Source: Institute for Government analysis of HM Revenue and Customs, 'Coronavirus (COVID-19) statistics', 23 April–12 July 2020.

Government revised the schemes after announcing them

Three weeks after the budget, the cost of the package was estimated at £43bn, a six-fold increase on the 11 March announcement; by mid-April, it reached £90bn.¹⁷ Throughout March and April, the schemes were revised several times to clarify questions about eligibility and how they would work in practice, speed up roll-out and expand the scope of assistance. The government increased the maximum CBILS loan size from £1.2m to £5m and undertook to cover the first six months of interest payments (announced 17 March),¹⁸ followed by an increase in the interest-free period to 12 months (20 March).¹⁹ The government also dropped the requirement for businesses to seek a regular loan before turning to CBILS on 3 April in an effort to speed up loan approvals.²⁰ On 12 May, the CJRS was also extended in its original form for a further month to the end of July, and in modified form to the end of October.²¹

As well as these major changes, the government moved to resolve points of confusion and remedied unintended consequences, like the hit to maternity leave pay for some women on the CJRS. It did this by regularly issuing and updating guidance.*

* The government made regulations to address the issue of maternity pay on 23 April so that when an employee's 'normal weekly earnings' are calculated for the purposes of statutory maternity pay (or other statutory payments) and the employee was furloughed at any point during the eight-week reference period, their earnings would be calculated as if they were paid at their full rate of pay rather than at a reduced rate: Ferguson D, *FAQs: Coronavirus Job Retention Scheme*, Briefing Paper Number CBP 8880, House of Commons Library, 7 May 2020, p. 64.

Many of these changes were made as a result of feedback from business groups and unions. Ministers and civil servants met regularly with these groups; in late March, some reported daily calls with officials and weekly calls with ministers. The chancellor and Bank of England governor convened a banking industry summit shortly after the announcement of the CBILS.²²

Assessment of decision making on economic support measures

Ambitious overarching goals helped set direction and buy time

The government articulated overall goals for the package from the time of the budget, which set direction and secured public confidence against a backdrop of uncertainty. There was a risk that the lofty, generic “whatever it takes” goal might have raised expectations beyond the delivery powers of any government. Groups who missed out on the measures, like those who had recently become self-employed, did express frustration.²³ But overall, given the quickly changing environment, framing the problem in a broad way, rather than committing to specific outcomes (like promising to keep unemployment below a certain level), worked well, particularly when supported by more specific objectives for individual schemes as discussed below.

In particular, the ambition to hold job losses at bay and to spend in order to minimise the economic damage, which the chancellor signalled from early on, reassured businesses and unions,²⁴ and gave a sense of direction to officials. This helped secure the government time and public support to design new measures and make further decisions. It also helped build public confidence that the government would be prepared to revise its approach if initial measures were lacking.

Keeping goals broad also helped the government maintain a consistent narrative as it announced new measures and amended or refined existing ones as new information came to light.

Clear, programme-specific objectives focused decisions on what could be delivered quickly

For each of the three schemes, ministers had specific objectives whose fulfilment would help achieve the government’s overall goals. Those objectives were preserving business cash flow for the CBILS, preventing job losses for the CJRS, and income support and equity with employees for the SEISS. Ministers’ intent was clear to officials. In the context of a fast-moving crisis, being clear about objectives had several benefits: it helped ministers and officials make decisions about how to trade off speed against risk, made it easier to explain policy design choices to the public and helped officials sequence and prioritise. It also helped avoid the need for major revisions or U-turns after the schemes were announced.

Ministers and officials had a shared understanding of objectives for the different measures thanks in part to the fact that ministers worked unusually closely and directly with the officials who drew up policy designs (especially on the CJRS and the SEISS). Each measure had different objectives, but speed was common to all three: ministers and officials understood they would need to develop and deliver the measures quickly if their other objectives were to be met.

This shared clarity contributed to clear connections between the policies' objectives on the one hand and choices made about policy design and trade-offs on the other. Across all three measures, ministers and officials had to make design choices that balanced speed, risk of fraud and loan defaults, and coverage – that is, catering to the full range of circumstances of the individuals and businesses they wanted to target. Being clear about objectives helped with decisions about where to strike this balance.

In most cases, that meant choosing speed over complexity. Simple designs that could be rolled out to large numbers of workers and businesses quickly were preferred over more complex schemes that would have smoothed over 'rough edges' but taken longer to develop. For instance, ministers consciously chose to exclude groups from the SEISS whose entitlements could not have been calculated reliably within a reasonable time frame, like the newly self-employed and owner-managers of incorporated businesses paying themselves dividends, rather than a salary. Treasury director general Beth Russell noted that including the latter group would have required HMRC to check every single claim, which would have taken far longer, unlike other SEISS and CJRS claimants, for whom HMRC already held the relevant information.²⁵

The emphasis on speed also led to the design and infrastructure of the CBILS being modelled on the enterprise finance guarantee, an existing template, which meant roll-out could begin before more tailored arrangements would have been ready. This was done in the knowledge that its 'cumbersome'²⁶ platforms were not designed for a high volume of applications, but could be adjusted later.

This clarity about goals and objectives also helped ministers and civil servants make informed choices about the risks they were willing to take. With the CJRS, they knew they were facing a 'cliff-edge' of job losses, so had greater risk appetite than for some other schemes. We were told that risks had been actively discussed when shaping the CJRS (as well as the SEISS). For instance, HMRC chief executive Jim Harra noted the CJRS would be a target for organised crime and fraud, but told the Treasury Committee that it was a conscious trade-off to act swiftly to protect jobs.²⁷

The CBILS was different. In weighing the trade-off between quickly getting funding to SMEs and protecting taxpayers from liability for defaults on loans, ministers and officials took a more cautious approach than in other countries.²⁸ As a result, they built in measures that they knew would slow the approvals process but would reduce the risk that taxpayers would be left on the hook for loans. For instance, the requirement to guarantee 20% of the loan gave banks a greater incentive to properly assess viability when considering applications but also slowed loan approvals.* This is not to say there was universal agreement about the risk balance or that government always got it right the first time: several changes were made to the CBILS to help speed up the process, like removing the requirement to seek normal financing first. Further, the checks built into the CBILS process led to the suggestion it was equivalent to "giving life vests to people who have already swum to shore".²⁹

* The government had greater appetite to risk taxpayers' funds when it set up the Bounce Back Loan Scheme, where it guaranteed 100% of loans under £50,000 to small businesses. Lending under this scheme quickly outstripped that of the CBILS, but the banking industry has warned that up to half of these loans may never be repaid: Morris S, Parker G, Thomas D, 'UK banks warn 40%-50% of 'bounce back' borrowers will default', *Financial Times*, 31 May 2020, retrieved 24 August 2020, www.ft.com/content/8a551c37-2de8-446b-a8b8-d4a61d33ef73

Clear objectives also helped ministers and officials set priorities

Clarity of objectives allowed ministers and officials to sequence their work and avoid trying to do more than they could deliver at any one time. In particular, they recognised that the objective behind the CJRS (avoiding imminent redundancies) meant they needed to prioritise its design ahead of other measures. While the SEISS was still developed as a matter of urgency, its primary objective (income support) could be met through other means like Universal Credit in the interim, and as the number of self-employed people is vastly outweighed by those who are employees, ministers and officials focused on the CJRS first.³⁰ In a moment of crisis, when time was short, clear goals gave the government a framework for prioritising the most important activity.

The government found it easier to explain its choices to parliament and the public where its objectives and goals were most clear

Being able to trace decisions about policy design back to clear goals and objectives made it easier for ministers and civil servants to explain their choices to parliament and the public. This was most straightforward with the CJRS, which had a clear rationale that informed its key design features. For instance, when asked why the scheme was not available to workers whose hours had been cut or why it did not cover tips paid to restaurant staff, ministers and officials could cite its purpose of stemming job losses, rather than as income support.³¹

This was less true of the SEISS, which was driven in part by strong political pressure to match assistance provided to employees.³² Explanations for the need for the scheme were less convincing than for the CJRS, particularly when ministers and officials were questioned about assistance for self-employed people who were ineligible for the SEISS. While ministers and officials pointed to the availability of Universal Credit as a source of income support for those excluded,³³ they did not explain why, if income support was one of the main objectives of the SEISS, Universal Credit was inadequate for self-employed people who were able to access the scheme.

Ministers and officials focused on how the schemes would work in practice and how they could happen quickly

The rapid launch of these schemes was made possible because civil servants responsible for delivery were involved in policy design and had a direct line to ministers.

In interviews for this report we were told there was a greater than usual level of ministerial interest, particularly from the chancellor, on the CJRS and SEISS, in hearing directly from civil servants responsible for delivery, not just from those in the Treasury responsible for policy design. This meant delivery departments such as HMRC had a better understanding of what ministers wanted, while ministers could get advice about deliverability and risks directly from those responsible for implementation. The intensity of the work seems to have helped drive closer collaboration between policy and operational teams.

One example was the decision to exclude owner-managed incorporated businesses from the SEISS, taken because HMRC did not hold information that could easily distinguish between dividend income from shares and dividends paid in lieu of salary. Knowing this before the decision was taken meant the government didn't need to reverse course later.

Involving scheme users in decisions contributed to their success

The government engaged unusually closely with unions and business representatives on core aspects of scheme design, especially the CJRS and the SEISS. Far from being a barrier or a roadblock, the government's approach to consultation compensated for some of the difficulties of accelerated policy development, because it gave it fast access to information, and an early sense of whether the measures would work and how they would be received by businesses and workers. This contributed to both positive reception on announcement and successful roll-out.

Interviewees outside government commented on how well this consultation had worked, though one interviewee told us that in comparison to the CJRS and the SEISS, the CBILS was developed with a more 'business as usual', inward-looking approach to policy making. On the other hand, the quality and intensity of engagement on the CJRS and SEISS were described to us as being markedly different from normal experience of working with government. Non-government representatives felt their discussions were not just a 'tick box' exercise but had helped steer major decisions. The quality of this engagement was facilitated in part by the fact that business and union groups had broadly similar aims to those of the government discussed above, and they also had similar ideas about the types of measures that were needed: for instance, the TUC had already called for a wage subsidy for workers who were temporarily laid off.³⁴

From inside government, we were told business and unions had been constructive partners and that "everyone knew their position on the pitch and played it well". This consultation provided intelligence on whether major features of the schemes would have their desired effects, like whether the 80% wage subsidy offered by the CJRS was enough to stop mass redundancies. And having involved major business groups and the TUC in shaping the measures, the government secured their broad support for those measures once they were announced.

Close consultation also ensured the success of the government's strategy of leaving fine details to be worked out after it announced the measures and their high-level features. Government can encounter trouble when it floats policy ideas that have not been fully developed and stakeholders ask probing questions that government cannot answer. In this case, the government knew it would have to return to detailed questions. But having been involved in initial decisions, business groups and unions understood the government's plans and endorsed its approach of returning later to fill in gaps.³⁵

Unsurprisingly, groups that were not consulted were less positive. Alasdair Hutchison of IPSE, the Association of Independent Professionals and the Self-Employed, told the BEIS Committee on 17 March he had very little meaningful dialogue with government despite having “real-time, useful information that could help”.³⁶ While some groups were understandably frustrated, consulting every interested party would not have been possible given the time constraints government was working against. The government did regularly consult groups who count the self-employed among their members, like the Federation of Small Businesses.

Seeking regular feedback led to incremental improvements

The government continued regular discussions with business groups and unions after the schemes were announced, which provided timely feedback to inform improvements. Business groups and unions drew on feedback and surveys of their members to highlight to government points of confusion, unintended consequences, difficulties accessing loans and payments, and the measures’ initial success against their aims.

This feedback led ministers to make significant changes to improve the measures, particularly for the CBILS, where it asked banks not to demand personal guarantees and removed the requirement to seek normal commercial lending before applying.* While the government has not published data showing waiting times for CBILS loan approvals, business groups reported that these changes helped speed up the process for their members.³⁷

In other cases, feedback was used by officials to update online scheme guidance. This helped clarify points of confusion and avoid unintended consequences. For instance, guidance issued on 4 April confirmed that businesses who were claiming the CJRS for part of their workforce could rotate their staff between the workplace and furlough, as long as staff were furloughed for at least three weeks at a time.³⁸ The government did not always make the changes sought by business and union groups: for instance, Martin McTague of the Federation of Small Businesses noted that even though they had provided “lots of evidence of real hardship” for excluded owner-managers of incorporated businesses, he had concluded that the government “don’t intend to respond to this problem”.³⁹ But overall, we were told that the government had been more willing than normal to make changes in response to feedback.

To supplement this feedback, ministers made a concerted effort to increase the civil service’s use of real-time economic data in its advice, like electricity use.⁴⁰ This has built on the Office for National Statistics’ existing ‘faster economic indicators’ project: a collection of close-to-real-time datasets, like shipping and road use data, which can help identify large economic changes before official statistics such as GDP are validated and published.⁴¹

* The government also improved the accessibility of government-backed finance for the smallest businesses through the Bounce Back Loan Scheme. Because the government guaranteed 100% of these loans, banks have processed them quickly. By 21 June, £28.1bn worth of bounce back loans had been approved, compared to £10.5bn under the CBILS: HM Treasury, ‘HM Treasury coronavirus (COVID-19) business loan scheme statistics’, 18 August 2020, retrieved 24 August, www.gov.uk/government/collections/hm-treasury-coronavirus-covid-19-business-loan-scheme-statistics

While real-time data is not a substitute for validated official statistics, it can supplement the latter, which come with significant time lags, by providing early, interim information.⁴²

A weakness in the government's approach to data was inadequate transparency about the performance of the CBILS. The government has published high-level information about claims for the various schemes, but, for the CBILS, not in the level of detail that would allow parliament and the public to gauge how easily different types of business have been able to access loans and how the scheme might be improved. UK Finance, a trade association, collects data from banks and shares it with the Treasury,⁴³ but only publishes high-level figures, such as the number of applications made and loans approved, rather than more granular information such as bank-by-bank breakdowns of loan inquiries, applications, approvals and rejections, or number of loans banded by firm turnover and sector.⁴⁴ While the chancellor has suggested bank-specific data could be commercially sensitive,⁴⁵ publishing more detailed information – as chair of the Treasury Committee Mel Stride has suggested – would make it easier for those outside government to suggest scheme improvements.⁴⁶

Conclusion

The design of the economic package shows that a good policy making process is both possible and useful under pressure if those leading the work adapt, rather than abandon, their processes to suit the circumstances. The government had a clear sense of what it wanted to achieve for both the package as a whole – to do “whatever it takes” in the early stages of the crisis – and for individual measures, prioritising speed over smoothing rough edges.

At a time of rapid change and mounting uncertainty, clear objectives helped the government prioritise and sequence its own work, and helped it explain and defend its choices to parliament and the public. Working directly with those responsible for implementation, and those standing to benefit from the schemes, was crucial for speed and effectiveness. Modifying the technical detail in response to on-the-ground feedback also worked well. Far from impeding quick and successful delivery, these steps helped ensure the government could deliver what it announced and led to better real-world outcomes.

3 Committing to 100,000 Covid-19 tests per day

The decision that is the focus of our second case study has received far more public criticism than the economic support package. Its early success is also much more contested.

By the start of April, when health secretary Matt Hancock committed to conduct 100,000 tests per day by the end of the month, the government needed to take decisive action to lift testing capacity. It was already aiming for 100,000 tests, but without a deadline and capacity it had failed to take off. A lack of tests had restricted its options when making earlier decisions about how to respond to the virus, particularly when it came to launching a viable 'test and trace' programme (abandoned on 12 March).¹ The decision to set the ambitious objective, backed by a 'five-pillar' strategy, did address criticism of the slow ramp-up of testing and certainly galvanised the government machine.

But the enormous emphasis on this numerical objective, and the 30 April deadline, became a distraction in government.² It created perverse incentives and moved attention away from other areas of the programme that needed improvement, such as the accessibility of testing sites and the timeliness of results.

The government started with a headline-grabbing commitment instead of an analysis of the problem it was trying to solve and its policy goals, and then setting specific objectives to serve those goals. Problems also arose from the government's failure to make the most of the expertise available to it: the decision was a "personal initiative" of the health secretary,³ set without the advice of the key scientific experts and senior civil servants advising government – including the testing co-ordinator. This led to the perception, never really shaken, that the 'need' to reach 100,000 tests a day was a response to media pressure rather than part of a coherent strategy.

Carrying out this number of tests also relied on harnessing a complex delivery chain, much of which was outside the direct control of central government – in contrast to the economic support measures discussed in our first case study. Mass testing relied on the efforts of many organisations across the health care system, as well as the private sector. These efforts were hampered because the government did not set out soon enough, or in enough detail, who was responsible for which parts of the delivery process, causing confusion and obscuring accountability.

In the end, the government claimed success, reporting more than 122,000 tests for 30 April. However, that number included around 27,000 testing kits that were mailed to people's homes – whether or not those kits were ever used or returned to laboratories.⁴ The government has since updated its approach to reporting testing figures and now reports testing capacity and the number of tests processed separately. On these measures, the government missed its target by around 15,000, with 84,215 tests actually being processed on 30 April, with capacity for 122,415.⁵

The path to 100,000 tests

Testing capacity was low before the objective was set

Public Health England (PHE),* an executive agency of the Department of Health and Social Care (DHSC), rolled out a coronavirus diagnostic test, initially to 12 laboratories, from 10 February. The government's initial approach was centralised and sequential: tests were first conducted in PHE and PHE-linked laboratories, before being rolled out to NHS laboratory networks.⁶ This was in contrast to the approach taken in some other countries, like South Korea, where testing capacity was distributed across a large number of laboratories. Sharon Peacock, director of the National Infection Service at PHE, described the UK's centralised approach as "more efficient" than the South Korean model, though did not explain why.⁷ At the time, South Korea had conducted more tests per million people than almost any other country, and had largely brought the virus under control.⁸

The UK government's early approach to collaboration with industry, universities and research institutes was instead to seek loans of equipment and supplies, rather than asking them to run tests themselves.⁹

By March, the government was being criticised for the UK's low testing capacity relative to other countries', and the slow rate at which capacity was increasing.¹⁰ By the middle of the month, the UK was conducting around 4,000 tests per day, while Germany and, again, South Korea had capacity to run 12,000 and 15,000 respectively.¹¹ Germany was reportedly already running 50,000 tests per day when Hancock announced his 30 April plan.¹² More serious than unflattering international comparisons was the fact that low testing capacity was closing down decision makers' options for responding to the pandemic, in particular forcing the government to abandon any attempt to 'test and trace' cases as early as 12 March.¹³

In response to criticism, the government made a series of commitments on testing capacity: Boris Johnson said on 18 March the UK would scale up testing to 25,000 per day,¹⁴ which DHSC expected to be reached within four weeks.¹⁵ By 25 March, with the lockdown now in force, he went further, saying that testing rates would "hopefully very soon [go] up to 250,000 per day".¹⁶ By late August, the UK was yet to process more than 200,000 tests a day on a seven-day average basis.¹⁷

To help achieve these objectives, the government announced on 27 March it would set up three new 'mega-labs' in partnership with industry and academia.¹⁸ Around the same time, it also set up the first of the 50 planned regional drive-in testing sites, where swabs were collected and sent to the mega-labs.

The test objective and a five-pillar plan were announced on 2 April

On 2 April Matt Hancock, who had shown symptoms of coronavirus and gone into self-isolation, returned to make a headline-grabbing pledge: the government would carry out 100,000 tests per day by the end of April, supported by a 'five-pillar plan' and a strategy document released on 4 April. The five pillars were: increase swab testing

* The health secretary announced on 18 August that PHE would be abolished and replaced with a National Institute for Health Protection.

in PHE labs and NHS hospitals; increase swab testing in commercial labs (including the three 'lighthouse' mega-labs);¹⁹ develop antibody testing; conduct surveillance testing to understand the rate of infection and spread around the country; and create a 'national effort' to build mass-testing capacity.^{20,*}

At the same time, Hancock announced the appointment of John Newton, PHE's director of health improvement, as testing co-ordinator to take charge of the new plan and convene industry, universities, the NHS and government bodies to deliver on the testing commitment.

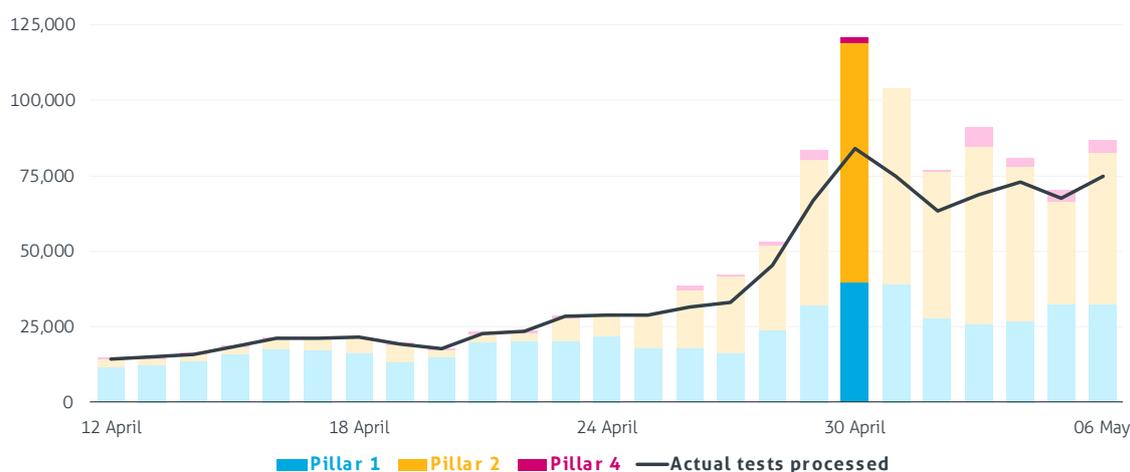
Testing was initially focused on patients and NHS staff but eligibility expanded as capacity grew. Towards the end of April, eligibility was extended to social care staff and symptomatic social care residents,²¹ front-line workers like police and firefighters,²² essential workers and symptomatic members of their households,²³ and any symptomatic people either aged over 65 or who had to leave home to go to work.²⁴

The expansion of laboratory capacity did not solve all the problems of those trying to get tested. Social care providers complained of difficulties obtaining testing kits, for both staff and residents.²⁵ Key workers, including NHS staff, making bookings for drive-in test centres were turned away owing to lack of tests,²⁶ while others had to drive long distances to get to testing sites.²⁷ In some cases, NHS and social care workers were unsure how to get tested owing to a lack of clear direction.²⁸

The government started publishing daily testing numbers on 6 April, at which point around 13,000 tests a day were being conducted.²⁹ Numbers grew steadily to around 29,000 by 25 April, after which they increased rapidly. The government reported on 1 May that testing hit 122,347 the previous day, but figures published later show this reflected total capacity, with only around 84,000 tests actually processed.³⁰

* This was similar to the four-pillar plan that pre-dated the 2 April announcements. The four pillars were: 25,000 tests for NHS patients; aim for 100,000 tests for key workers (though no date was specified); home/community based antibody testing; surveillance testing; House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 25 March 2020, Q141, retrieved 22 August 2020, <https://committees.parliament.uk/oralevidence/237/pdf/>

Figure 3 **Testing capacity (classed by type as reported in April/May 2020) and actual tests processed per day in the UK**



Source: Institute for Government analysis of Department of Health and Social Care, 'Coronavirus (COVID-19) in the UK', 13 April – 7 May 2020.*

Assessment of the decision to commit to 100,000 tests a day by 30 April and the early testing regime

Setting the testing objective drove a rapid and necessary increase in testing

The setting of the objective and subsequent strong focus on it did drive rapid growth in capacity. Despite the critique we offer below, this fact is important and should be recognised. Having more tests available broadened decision makers' options for limiting the spread of the virus and protecting vulnerable people, and would prove to be essential in building up the UK's capacity to respond to the disease.

The government failed to properly analyse the problem it wanted to solve or think through its broader goals before it committed to 100,000 tests a day

The 30 April objective was a response to a clear problem of lack of testing capacity, which had been picked up widely in an increasingly critical media. At the time Hancock made the commitment, testing numbers were too low to pursue a 'test and trace' strategy or even to test enough NHS staff to determine who did and did not need to self-isolate to prevent the spread of the virus.³¹ But the objective the government devised – 100,000 tests a day by 30 April – was reductive, focusing only on the number. As such it addressed only part of that problem – lack of laboratory capacity – rather than wider questions such as ease of access or the purposes for which tests would be used. Had the government conducted a more thorough problem diagnosis, this might have primed it to set a wider testing strategy which a specific capacity objective could have served. There is no evidence that such a wider strategy was in place at the time the capacity objective was set.

* Pillar 1: swab testing in Public Health England (PHE) labs and NHS hospitals for those with a clinical need, and health and care workers; Pillar 2: swab testing for the wider population, as set out in government guidance; Pillar 3: serology testing to show if people have antibodies from having had Covid-19 (Pillar 3 tests were not recorded until 1 June 2020); Pillar 4: serology and swab testing for national surveillance supported by PHE, ONS, Biobank, universities and other partners to learn more about the prevalence and spread of the virus: www.gov.uk/government/publications/coronavirus-covid-19-testing-data-methodology/covid-19-testing-data-methodology-note

The government would have made more effective decisions on testing capacity if it had set them within a broad policy framework. As chief medical officer Chris Whitty has pointed out, testing is “simply a tool to allow you to do other things”,³² so government needed to be clear about what those ‘other things’ were when making decisions about capacity. It was not. Specifically, before setting a specific objective for testing capacity, it would have helped to have set higher-level policy goals addressing:

- the purposes the government wanted testing to serve, for instance in a ‘test and trace’ strategy, to inform localised lockdowns or in another strategy for exiting lockdown
- the groups of people it wanted to prioritise for testing, beyond NHS and social care staff
- the total testing capacity the government wanted to reach in the longer term to support its wider strategy.³³

These goals were not adequately addressed in the 4 April testing strategy document or the five-pillar plan that were designed to support the 100,000 objective. Statements from ministers and senior officials around that time suggested they did not have answers to these points. Senior officials, including the testing co-ordinator John Newton, could not identify the testing capacity the UK would eventually need to reach.* Neither could they give firm answers about how they would be able to expand testing to cohorts beyond patients and NHS staff as capacity grew. Newton could not say whether care workers could access tests if the 100,000 capacity was reached.³⁴ And at the time the objective was set, the government said that it had not made basic decisions about a ‘test and trace’ programme, like whether it would run contact tracing at a local or national level.³⁵

The objective drove counter-productive gaming behaviour

The strong media focus on hitting 100,000 tests a day, and value ascribed to it by ministers, became a distraction and drove counterproductive ‘gaming’ behaviour. The government expanded testing eligibility in seemingly ad hoc ways in the lead up to the deadline.³⁶ The push to expand testing also became politicised: the Conservative Party emailed its members links to sign up for home testing.³⁷

Such moves appeared to serve the 30 April commitment more than any medical need: as Chris Whitty put it, “if you do a large amount of undirected testing, it will not particularly help at all”.³⁸ NHS trusts felt that ‘tactical’ changes were sprung on them regardless of the ‘significant operational impact’ and made it harder for them to plan their own activity.³⁹

* Testing co-ordinator John Newton said in early April that capacity would need to increase “dramatically”, but that it was “hard to say” what the overall goal for capacity should be. Asked about the desirable level of testing, he responded that “it would be great to have infinite access to testing”: House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 8 April 2020, Q142, retrieved 22 August 2020, <https://committees.parliament.uk/oralevidence/278/pdf>. Deputy chief medical officer Dr Jenny Harries said she “cannot give that answer at the moment” to the question of the capacity required to support contact tracing: House of Commons Health and Social Care Committee, Oral evidence: Management of the Coronavirus Outbreak, HC 36, 5 May 2020, Q443, <https://committees.parliament.uk/oralevidence/341/pdf>

The government also instructed NHS hospitals to run additional tests in the 48 hours leading up to the 30 April deadline. This led to some labs exhausting their supplies of the chemicals needed to test samples and being unable to run medically necessary tests in the days that followed.⁴⁰

The detail of the objective itself was unclear

Objectives need to be clear so parliament and the public can assess whether government has met them. But the precise terms of the testing objective were fudged. The original announcement said the government would “carry out 100,000 coronavirus tests a day”, but Hancock later said his aim was to have the capacity to run that number of tests. Government reporting at the time did not explain the basis on which figures were compiled and the picture was muddled by the inclusion of mailed-out testing kits, regardless of whether they were ever returned.^{41,*} The chair of the UK Statistics Authority felt it was not clear whether the 100,000 figure was intended to reflect capacity, results received or tests administered.⁴² With the objective open to interpretation, it was harder to hold government to account for meeting it.

The decision to set the objective did not appear to be based on advice from the government’s own experts

Ministers made much of ‘following the science’ in the early stage of the pandemic, but this does not appear to have been the case when setting the 100,000 tests per day target. The target was not set on the advice of SAGE,⁴³ and senior officials closely involved in the testing programme could not point to supporting evidence for it in anything more than vague terms.

Several appeared to distance themselves from the decision. Newton referred to it as “the secretary of state’s target”⁴⁴ and when asked about the advice drawn on to make the decision, told the Science and Technology Committee: “I think he has taken advice from the programme and from colleagues... you would have to ask the secretary of state himself exactly where he got his advice from”.⁴⁵ Deputy chief medical officer for England Jenny Harries told the Health and Social Care Committee that “it was not my 100,000 tests” and suggested questions about its genesis be directed to her “political colleagues”.⁴⁶ Both made reference to modelling of the number of tests needed but gave few details.**

The government did not consult the diagnostics industry or the NHS on whether the objective was appropriate or realistic

Representatives of the diagnostics and life sciences industry have said that, although they had discussions with Hancock, the 100,000 objective was set without their input.⁴⁷ Seeking their views about its feasibility would have given government a

* As at August 2020, government reporting of both historic testing capacity and tests processed does not appear to match up with daily figures reported during April. For instance, on 30 April, the government reported “81,611 tests on 29 April” (<https://web.archive.org/web/20200430183738/https://www.gov.uk/guidance/coronavirus-covid-19-information-for-the-public>) but as at 26 August 2020, its ‘coronavirus dashboard’ lists 66,793 tests processed and capacity for 86,565 for the same date (<https://coronavirus.data.gov.uk/testing>).

** Newton stated that “in the background there is... a lot of scientific work going on, including modelling, to give an idea of what the requirement is”, but did not expand; House of Commons Health and Social Care Committee, Oral evidence: Management of the Coronavirus Outbreak, HC 36, 5 May 2020, Q442, <https://committees.parliament.uk/oralevidence/341/pdf>

stronger basis on which to make a decision. The government knew there would be difficulty sourcing test kit components and specialist chemicals, given global demand, as noted in its 4 April strategy document.⁴⁸ Given the scale of this challenge, some industry figures felt the commitment was unrealistic and were unhappy that government had not spoken to them about how it could be delivered.⁴⁹

The 100,000 objective was also decided without input from the NHS, whose staff and patients were key users of testing capacity. Allan Wilson, president of the Institute of Biomedical Science, which represents NHS lab workers, said bluntly: “You’d think it would be nice to speak to the people who would be delivering that number before he went public with it.”⁵⁰ The same was true of subsequent decisions about testing eligibility, made in part to help the government conduct the requisite number of tests on 30 April. While decisions at the start of April did not change the contribution NHS trusts were expected to make to total capacity, they expressed frustration at having changes to testing eligibility criteria sprung on them. NHS Providers, which represents trusts, noted that its members were eager to help but needed to “know a lot more as soon as possible”, given the operational impact these changes had for them.*

The 100,000 commitment prompted some system improvements

To conduct 100,000 tests per day by the end of April, the government had two major implementation tasks: first, to build up lab capacity to test samples; and second, to develop a system to collect samples from test subjects and return results to them. In setting its narrow testing capacity objective, the government focused on how it would do the first, but thought less about the second. That made the additional capacity less useful than it would otherwise have been.

On the first of these tasks, Hancock had said the 100,000 tests was intended to “galvanise” the UK’s life sciences industry.⁵¹ But it also had a galvanising effect within government, which was critical: as part of the new strategy, the government dropped its centralised approach to building testing capacity, and focused on PHE and NHS labs and then the mega-labs, which had failed to deliver capacity as quickly as it was needed.

The 30 April deadline spurred government to improve its approach to working with industry, and private and university labs. Some of these labs had set up partnerships with local NHS trusts,⁵² but communication from central government had been lacking. Equipment had been sought from some of these labs at short notice,⁵³ but in at least some cases, offers to run tests themselves went unacknowledged.⁵⁴ This changed with Hancock’s 2 April announcement. Steve Bates, chief executive of the BioIndustry Association, noted on 8 April that there had been a ramping up of “desire” to engage over the “last week”. He said that in the previous couple of days the government had shared specific details about testing requirements and signalled priority testing components to the market.⁵⁵ Sir Paul Nurse of the Francis Crick Institute also noted an improved commitment to working with external organisations in early April.⁵⁶

* For instance, trusts were asked on 24 April to test all admitted patients who required an overnight bed, irrespective of whether they showed symptoms: NHS Providers, *Testing questions in testing times*, 30 April 2020, p. 11, retrieved 22 August 2020, <https://nhsproviders.org/media/689496/spotlight-on-testing-questions-in-testing-times.pdf>.

Doing so increased capacity while the mega-labs, which would each eventually be able to run tens of thousands tests per day,⁵⁷ worked through logistical processes necessary to operate at peak capacity, like systems for collecting samples and sending out results.⁵⁸ In some cases, smaller, more nimble labs could clear these hurdles faster than larger ones, for example trying different approaches to see what worked, and supplement total testing capacity while larger labs got up to speed.⁵⁹

But the focus on building lab capacity distracted attention from other important factors

Planning for the delivery of the testing objective, and the supporting strategy document, did not put the same emphasis on making sure key workers could access tests as it did on efforts to build up lab capacity. The strategy document pointed to home test kits and the 50 planned drive-in test centres as the main ways of making testing available to key workers, but these were inadequate. Even though the total number of tests available in early April was likely to be enough for NHS workers' requirements,* the testing programme to deliver those tests did not meet their needs: regional test sites were inaccessible for many, there were shortages of home test kits and in some cases people were unsure how to get tested.⁶⁰ This meant that even as the government was coming close to reaching 100,000 daily tests, significant numbers of NHS staff were self-isolating having been unable to access tests.⁶¹

Some of these early problems were down to a lack of local input, for instance from regional public health directors, on key decisions. The bursar of a care home in Portsmouth, whose closest test site was at Gatwick, said: "It just feels like the whole system has been set up by someone who has absolutely no understanding of the world of social care... the majority of our staff don't drive."⁶²

The gap on local input to key decisions was addressed – but only after Hancock's announcement. Local Resilience Forums (LRFs), which bring together representatives of local public services, were then asked to help guide DHSC and the Ministry of Defence (the Army assisted at testing units) choose circuits for mobile testing units to improve accessibility for care workers.⁶³ In early May, a month on from Hancock's commitment, care minister Helen Whately asked regional public health directors to co-ordinate testing for the social care sector and decide which homes should be prioritised, in partnership with directors of adult social services, local NHS providers and PHE regional directors.^{64,**}

* Newton told the Science and Technology Committee on 8 April that need within the NHS was not much greater than the availability of tests: House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 8 April, Q196, retrieved 22 August 2020, <https://committees.parliament.uk/oralevidence/278/pdf>

** A frequent critique of the post-Lansley reform health landscape is that different bodies and agencies are not well joined up. A telling example from this case is that Whately's letter was reportedly not sent to all directors of public health, because DHSC did not have a full list of their email addresses: Calkin S, 'New DPH-led care home testing system goes live', *Local Government Chronicle*, 12 May 2020, retrieved 22 August 2020, www.lgcplus.com/services/health-and-care/new-dph-led-care-home-testing-system-goes-live-12-05-2020

Responsibility for carrying out the decision was unclear, which reduced accountability

A long list of government departments and bodies, and non-government organisations, was involved in carrying out the decision to conduct 100,000 tests per day. It was not always clear who was responsible for key parts of the objective – from setting overall strategy to making decisions about who was prioritised for testing, and allocating capacity to each laboratory. These matters were not settled by the testing commitment, or by the 4 April strategy document that supported it. This further hampered early efforts to step up testing and made it harder to hold departments and bodies to account.

Responsibility for overall strategy was especially unclear, in particular the division between DHSC and PHE, in spite of the appointment of a dedicated testing co-ordinator in John Newton. The 4 April strategy document was released by DHSC, but it did not clarify the boundaries of responsibility and the statements of senior officials present a confused picture. The medical director of NHS England, Stephen Powis, told the Health and Social Care Committee on 8 April that the chief medical officer, Chris Whitty, was responsible for setting overall strategy;⁶⁵ at the same time, PHE's Newton had been charged with advising ministers on "how best to drive forward the government's strategy".⁶⁶ Newton in turn said testing strategy was the responsibility of DHSC.⁶⁷ Patrick Vallance, the chief scientific adviser, later stepped in to declare it was the responsibility of both PHE and DHSC.⁶⁸

The five-pillar plan charged multiple organisations with testing samples: 'lighthouse' mega-labs (run by non-government partners); PHE labs; labs run by NHS trusts; and private sector, university and research institute labs. But the plan did not spell out how much capacity each of these groups were responsible for contributing to overall capacity, beyond the target for NHS and PHE labs to reach 25,000 tests per day by mid to late April.⁶⁹

There were also mixed messages over who was responsible for decisions on testing eligibility – an important aspect of ensuring the government could conduct 100,000 tests on 30 April. Newton said that it would be for local leaders in NHS trusts and LRFs to decide who would be prioritised for testing.⁷⁰ But changes to testing eligibility throughout April were made centrally without the input of trust leaders.⁷¹ When asked about priorities for testing beyond NHS staff, Powis said this was a question of strategy for government, DHSC and PHE.⁷²

Confusion about responsibility for arranging testing contributed to social care workers' difficulties, even though they were a target group in the 4 April strategy document. Responsibility was not spelled out by that document, but a separate adult social care action plan published in mid-April identified the Care Quality Commission (CQC) as the co-ordinator of testing for care facilities.⁷³ This does not seem to have settled the issue: the director of one care provider attempting to obtain tests in late April was told by CQC that PHE was in charge, while PHE referred the director back to CQC.⁷⁴

Another reported being told local GPs would arrange testing.⁷⁵ Local directors of public health were assigned responsibility for this in early May,⁷⁶ but even in mid-June, the adult social care action plan had not been updated to reflect this change.

The result was confusion for both those delivering testing and those trying to access it. Manchester mayor Andy Burnham argued that at the local level, testing arrangements under the five-pillar plan were a “confused picture” with overlapping schemes and lack of reference to local authorities.⁷⁷ The unclear split of testing capacity between different organisations also contributed to the early difficulties for community, mental health and ambulance trusts accessing tests, when tests were concentrated on the hospital staff whose trusts also managed laboratories.⁷⁸

Lack of clarity over responsibility also made it harder to hold officials and ministers to account for the performance of the testing regime. Science and Technology Committee chair Greg Clark criticised PHE’s centralised approach to testing that pre-dated the 2 April announcement, having been under the impression that PHE was responsible for overall strategy.⁷⁹ PHE denied responsibility and pointed instead to DHSC.⁸⁰

Data reporting was also too narrow in focus

Decision makers should make plans for collecting performance information and data while designing a policy, so they know how well it is working once it is implemented.⁸¹ In this case, the government’s data collection and publication focused on progress towards the health secretary’s public commitment. But it did not provide more granular information about testing capacity, like regional distribution of capacity, that would have indicated how well the testing programme was actually working.

The government was able to capture and report daily totals of tests – albeit with some ambiguity around the numbers – and thus gauge progress towards 100,000, reflecting the sharp media focus on that objective. The government began to publish daily UK totals from 6 April and shortly after started reporting figures for each of the three relevant pillars: NHS/PHE testing (pillar one), testing run by commercial partners, for instance the regional drive-in sites (pillar two), and surveillance testing (pillar four).⁸²

But the way the government reported testing data focused on demonstrating that it had met the health secretary’s commitment, rather than addressing broader purposes, like understanding the spread of the epidemic or whether testing capacity was meeting demand in different regions.⁸³ As well as including home testing kits posted out, rather than more accurately including those that had actually been returned, in the headline total, the public reporting omitted important operational detail, like capacity levels and number of tests by region, as well as the waiting time for results. The government also failed to link test results to patient records from the outset: over a month after the first drive-in sites were set up, GPs and local authorities reported they were unable to get the results of those tests (or the results from home kits), or could get only headline figures.⁸⁴ This denied directors of public health sufficiently detailed information that would have helped them identify case clusters and understand the spread of the virus in their local areas.

Publishing more detailed information and sharing it with GPs and local authorities – rather than focusing solely on a narrow numerical target – could have helped address bottlenecks in the system, identify areas of unmet demand and gauge whether the government was aiming for the right level of capacity.⁸⁵

Conclusion

This case study shows the importance of decision makers taking the time to properly diagnose the problems they are trying to solve and setting policy goals accordingly, before defining more detailed objectives like testing targets – even in urgent circumstances.⁸⁶ The government’s commitment on testing capacity did lead to an increase in the number of tests, but by setting an arbitrary daily target – without proper consultation with key parties – it distracted organisations working on testing from other vital work.

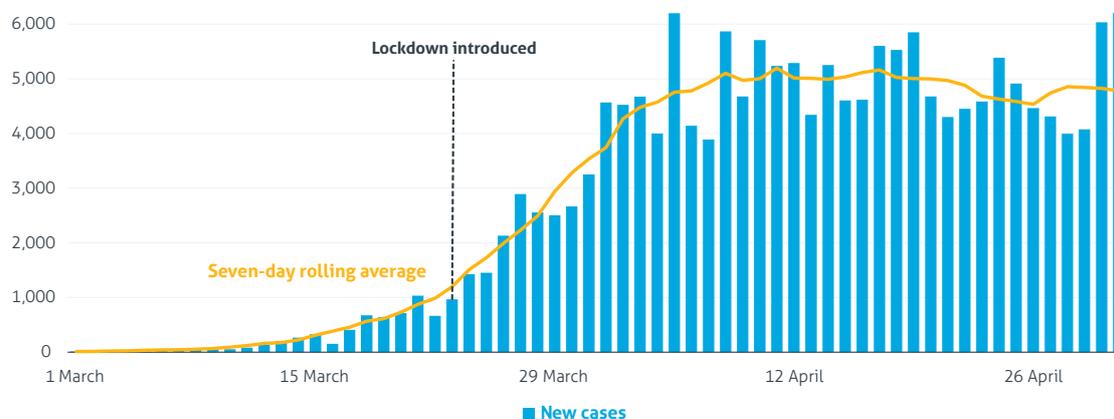
The government resorted to ambiguities in its testing terminology to claim victory against its target and did not actually process 100,000 tests on 30 April. But the more significant problems with the government’s decision making process were: limited consultation with the government’s own experts, the NHS or the diagnostic industry; a failure to clearly allocate responsibility; and disproportionate emphasis on testing numbers on a single day, which drove counterproductive ‘gaming’ behaviour.

4 Lockdown and school closures

Of the decisions examined in this report, those on school closures and lockdown,^{*} announced on 18 and 23 March respectively, would have been the most difficult. This not only reflects the economic and social costs associated with the lockdown, but also the circumstances in which they were made. The atmosphere around decision making at that time was described to us as “crazy” and “intense”. The scientific evidence on which the government relied was far from settled. Many of the key figures in the UK’s response also fell ill: the prime minister, health secretary, cabinet secretary and the chief medical officer all contracted or had symptoms of Covid-19 around this time.

As a consequence of the decisions to introduce the lockdown and close schools, and of others like the creation of Nightingale hospitals and the deferral of other medical treatment, the government did achieve its primary and immediate objective: avoiding a wave of cases overwhelming intensive care units (ICU) as had happened in Italy.¹ Case numbers began to plateau in early April, around two weeks after the lockdown was imposed. Similarly, excess deaths, that is the number of deaths in a given period over and above the number expected, peaked in the week beginning 17 April before tailing off.^{2,**}

Figure 4 **Daily number of new coronavirus cases, March and April 2020**



Source: Institute for Government analysis of Department for Health and Social Care, Coronavirus (COVID-19) in the UK statistics, 1 March 2020–30 April.

* 'School closures' refers to the period in which children were told not to attend school: most schools however stayed open throughout to provide for children of key workers and for vulnerable children.

** Excess deaths refers to the number of deaths in a given period over and above the number expected. The Health Foundation has argued that the number of deaths from Covid-19 is an unreliable metric for making meaningful comparisons because of differences in counting methods between different countries: The Health Foundation, 'Understanding excess deaths: variation in the impact of COVID-19 between countries, regions and localities', 4 June 2020, retrieved 22 August 2020, www.health.org.uk/news-and-comment/charts-and-infographics/understanding-excess-deaths-countries-regions-localities

But the UK still suffered a high rate of excess deaths by international standards – 60,000 in the period to early June.³ Even if Covid-19-related deaths were not the primary driver of the decision to lock down – the emphasis being on protecting NHS capacity – this was not the outcome the government wanted. The relatively high rate of excess deaths in the UK has been linked, including by the government’s own advisers, to delays in introducing a lockdown.*

As we argue in this chapter, aspects of the decision making process contributed to this delay, like ministers’ approach to commissioning and using scientific advice from the Scientific Advisory Group for Emergencies (SAGE). But a lack of timeliness is not the only marker of poor decision making. We also argue that insufficient thinking about implementation had taken place at the time that the decision to close schools was made.

The journey to lockdown

As cases of coronavirus emerged outside China, the government convened COBR (the crisis response co-ordination meeting held in the Cabinet Office Briefing Rooms) on 24 January. COBR assembles those responsible for making and carrying out decisions in a crisis. Its membership is often wider than more tightly controlled cabinet committees, and over the period covered by this report, its attendees have included leaders of the devolved nations and the London mayor. This broader cast list means that some major policy decisions – including on lockdown – have been taken outside the meeting by a handful of ministers.

Two days before the first COBR meeting, SAGE, a subcommittee that provides advice to COBR, had its first meeting of the coronavirus crisis. During the pandemic, SAGE has been chaired by the government’s chief scientific adviser, Patrick Vallance, along with the chief medical officer, Chris Whitty.⁴ Both were part of the prime minister’s inner circle of advisers.

SAGE draws on the input of a number of other groups, including the Scientific Pandemic Influenza Group on Modelling (SPI-M) in the Department of Health and Social Care (DHSC), and the independent Scientific Pandemic Influenza Group on Behaviours (SPI-B).

* For instance, Neil Ferguson has argued that the death toll could have been halved if lockdown had been introduced a week earlier: Reuters, 'UK lockdown a week earlier could have halved COVID-19 death toll, scientist says', 10 June 2020, retrieved 22 August 2020, www.reuters.com/article/health-coronavirus-britain-epidemiologis/uk-lockdown-a-week-earlier-could-have-halved-covid-19-death-toll-scientist-says-idUSL8N2DN58X

SAGE began to consider behavioural interventions at the end of February

Table 1 **Timeline of SAGE advice given to government in lead up to lockdown**

Date	SAGE advice	Relevant government decision	Cumulative cases reported
22 January	First SAGE meeting		0
4 February	SAGE agrees restricting public gatherings and public transport would probably not delay the virus' spread. SAGE asks SPI-M for advice on closing schools.		2
20 February	SAGE notes it is 'possible that school closures could have a modest impact on delaying the peak'. Differing views in SPI-M on whether there is sustained transmission in the UK.		11
25 February	SAGE considers advice on school closures and social distancing. Concludes any combination would need to be in place for 'significant duration' and would slow but not halt an epidemic.		19
26 February	SPI-M-O models social distancing for all households for 13 weeks among other interventions.		23
27 February	SAGE notes SPI-M advice that earlier interventions will have more significant impact.		31
2 March	SPI-M-O says it is highly likely there is sustained transmission of CV-19 in the UK present.		112
3 March	SAGE first considers social distancing for over 65s. Further notes the importance of 'optimal timing' for interventions.	Government releases its Coronavirus Action Plan with information on plans to limit the spread of the virus, including the possibility of school closures.	167
5 March	SAGE recommends home isolation for suspected cases and their households be introduced in the next one to two weeks. Suggests this, along with shielding the vulnerable, would most effectively delay and modify the peak. Notes preventing all social interaction in public spaces would have 'an effect', but difficult to implement.		272

Date	SAGE advice	Relevant government decision	Cumulative cases reported
12 March		Suspected cases told to self-isolate for seven days.	1,746
13 March	SAGE now believes UK may be further ahead on the epidemic curve than previously thought, and more intensive actions may be needed to enable the NHS to cope. Thinks suppression measures will cause a second peak.		2,214
14 March		PM and closest advisers agree in principle to a lockdown.	2,568
15 March		Health secretary says the elderly will be asked to shield themselves in 'the coming weeks'.	3,008
16 March	SAGE calls for additional social distancing measures to be introduced 'as soon as possible'. Thinks cases may be doubling every five to six days.	Public told to avoid mass gatherings, restrict use of public transport and to work from home if possible. Households of suspected cases told to self-isolate for 14 days.	3,611
18 March	SAGE says evidence supports school closures as soon as practicable.	School closures announced.	5,357
20 March		Pubs, restaurants, gyms and other social venues ordered to close.	7,634
23 March	SAGE thinks R number is higher than previously thought; estimates doubling time of three to four days. London could exceed NHS capacity within the next 10 days.	Lockdown announced.	12,468

During February and early March, SAGE began to examine the potential for 'behavioural interventions' – regulation of people's behaviour and pattern of interactions – to manage the spread of the virus and its impact on the NHS.⁵ The prime minister indicated to the public the direction of travel when he said on 9 March that the government was "preparing various actions to slow the spread of this disease in order to reduce the strain it places on the NHS".⁶

This first set of targeted social distancing measures was announced in the days that followed: people with possible Covid-19 infection were told to stay at home for seven days on 12 March (extended to members of their households and for 14 days, from 16 March),⁷ and the health secretary, Matt Hancock, said on 15 March that the elderly would be asked to "shield themselves" in "the coming weeks".⁸

The government introduced the lockdown and closed schools in late March

New research papers around 11 and 12 March revised up projections of ICU demand and showed the UK was further along the epidemic curve than previously understood.* The conclusions of these studies were daunting: continuing with the existing mitigation strategy could lead to more than 200,000 excess deaths and surge limits for both general and ICU beds would be exceeded by at least eight-fold. It was projected that stricter social distancing measures could keep this to 20,000 to 50,000 deaths and manage NHS demand.⁹

Changes in SAGE advice – and ministerial thinking – soon followed. On 13 March, SAGE began to consider “additional social distancing measures” to reduce demand below NHS capacity and three days later called for their introduction as soon as possible.¹⁰ On 18 March, SAGE recommended school closures to avoid the NHS being overwhelmed, despite having shied away from them for lack of evidence in the days prior. In the meantime, on 14 March, with the number of confirmed cases having reached triple figures, the prime minister and his closest advisers agreed ‘in principle’ to lockdown measures.¹¹

By 23 March, the scientific advice was increasingly grave. In a paper prepared for a SAGE meeting that day, SPI-M suggested the reproduction (R) rate was likely to be higher than previously thought and that London’s ICU capacity was “very likely” to be breached by the end of the month.¹²

The government gave effect to SAGE’s new advice with the following decisions, which are the focus of this chapter:

- On Thursday 18 March, school closures were announced, taking effect from the following Monday.¹³
- On Monday 23 March, the prime minister announced the lockdown: the public would be allowed to leave their homes only for essential purposes: shopping for basic necessities, one form of exercise a day, medical need or to help a vulnerable person, and travelling to and from work where work could not be done from home. This was backed by powers given to the police to disperse gatherings and issue fines.¹⁴ Regulations giving effect to these restrictions came into force on 26 March.¹⁵

* These papers were produced by teams at Imperial College London and the London School of Hygiene and Tropical Medicine (LSHTM). SAGE discussed the results of the Imperial modelling on 12 March. The results were published on 16 March: Freedman L, ‘Strategy for a pandemic: the UK and COVID-19’, *Survival*, vol. 62, no. 3, June-July 2020, pp. 25-76, p. 52. The LSHTM paper was sent to SPI-M on 11 March: Grey S and MacAskill A, ‘Special Report: Johnson listened to his scientists about coronavirus – but they were slow to sound the alarm’, *Reuters*, 7 April 2020, retrieved 22 August 2020, www.reuters.com/article/us-health-coronavirus-britain-path-speci/special-report-johnson-listened-to-his-scientists-about-coronavirus-but-they-were-slow-to-sound-the-alarm-idUSKBN21P1VF

Assessment of the decisions to lock down

The main reason for bringing in the lockdown and closing schools was to avoid overwhelming NHS intensive care capacity

Decisions on the lockdown were designed to preserve NHS capacity. The clarity of this framing helped bring the decision on lockdown to a head in the middle of March. If the government's measure of success for that decision was to avoid hospitals becoming overwhelmed, then that task was accomplished. A single, clear objective also helped guide scientific advisers to prepare tailored information for COBR and it gave ministers the focus they needed to weigh difficult policy options.

NHS capacity was a major theme of the statements of the prime minister and other ministers from the beginning of the month through to the announcement of lockdown on 23 March.¹⁶ Ministers did talk about a broad sweep of goals, including saving lives, saving the NHS and minimising economic and social costs. But by the beginning of March, the desire to avoid a repeat of the images reported by UK media from Italian hospitals was driving the major decisions.¹⁷

It was clear to SAGE members that this was the top priority. Several SAGE and SPI-M members told parliamentary committees that they understood the aim behind lockdown decisions and school closures to be keeping transmission below a level that would overwhelm the NHS.* The same point is reflected in SAGE documents. Its advice from as early as 26 February focuses on how to avoid this and considers the decisions eventually taken mainly in relation to their capacity to limit ICU demand.¹⁸ Because key SAGE advisers understood ministers' objectives, this meant they could seek the evidence from SAGE sub-groups and deliver advice that would be most helpful for decision making.

However, preserving NHS capacity was a necessary but not sufficient objective for the government to achieve the policy goal of 'saving lives'. The government undoubtedly needed to make sure demand did not overwhelm ICUs, and ministers were right to make this a priority. 'Saving lives' and 'saving the NHS' were discussed in tandem many times by the prime minister.¹⁹ But achieving the objective of 'saving' the NHS did not stop the UK suffering a high death rate relative to its European neighbours, because even intensive medical treatment could not prevent loss of life in many thousands

* For instance, Patrick Vallance noted that "what we are trying to do is to get the numbers below the ICU capacity and keep them there... the reason why it became necessary to have measures to enforce more compliance is that, without good compliance, it did not look like we were on track for getting the numbers down below the ICU capacity": House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 25 March 2020, Q105, Q108. Neil Ferguson said that "policy was determined in some sense less by [projections about excess deaths]... and more by the evidence that the NHS could not cope at all with the level of demand that was going to be seen": House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 25 March 2020, Q28. Matt Keeling, a member of SPI-M, noted: "We were all focused on one area [ICU and ITU units becoming full]": House of Commons Science and Technology Committee, Oral evidence: UK Science, Research and Technology Capability and Influence in Global Disease Outbreaks, HC 136, 10 June 2020, Q910.

of cases.* Further, the sharp focus on the NHS distracted attention from stopping the spread of the virus in care homes.²⁰

Knowledge about the virus was only beginning to emerge at the time and this hampered the government's ability to set the most useful objectives. With hindsight, it is clear that containing the spread of coronavirus was the only feasible way of limiting the number of deaths, in the absence of more effective medical treatment. But influenced by influenza pandemic planning,²¹ the government's published strategy treated containment as a temporary phase of the response that would not be able to be sustained, rather than an objective. Had the government set clear, prominent objectives directed to containing the spread of the virus in the general community and in care homes, rather than primarily focusing on capacity to treat acutely ill patients, this might have encouraged a more intensive response, earlier on.

Clear framing of this objective helped bring decisions to a head

While the objective of preserving NHS capacity was not on its own enough to achieve all the government's goals, it did provide a sharp, measurable trigger for action. NHS capacity served as a yardstick against which different social distancing options could be – and were – tested, drawing on evidence from SAGE like epidemiological modelling and modelling of NHS capacity, even though there were problems getting NHS data in a timely manner.²² As Neil Ferguson of Imperial College London put it, evidence that the NHS was going to be overwhelmed brought “intensive strategies” into view.²³ It also provided a clear barometer of success. Given the reluctance to impose a lockdown, a more amorphous goal, like minimising loss of life, might not have had the same sharp trigger point to bring the decision to a head – unless the government was prepared to put a figure on the number of deaths it considered unacceptable.

Setting a lofty and broad policy goal – to ‘save the economy’ by doing ‘whatever it takes’ – did work well for the economic decisions: it was matched by ministerial willingness to deliver a generous package and so gave licence to civil servants designing it. But analysing policy options and framing decisions around the need to ‘save lives’ might not have worked so well here, given ministers’ reluctance to impose a lockdown. The clarity and specificity of the need to preserve NHS capacity ultimately got decisions made.

Concerns over social and economic impacts contributed to delayed decision making

Preserving NHS capacity was not the only objective being considered by ministers and their scientific and policy advisers: minimising the social and economic cost of any intervention also influenced decisions. Clearly, failing to deal with the immediate health consequences of the pandemic would bring its own social and economic costs, as people chose to avoid public places and possible exposure. But at the time key

* The Health Foundation has argued excess mortality is the best way to compare Covid-19 deaths in different countries. By this measure, at its peak in the week ending 17 April, there were 113% more deaths than normal in England and Wales. This figure was matched by Spain at its peak, but exceeded those of other countries, including Italy (103% – from incomplete data), France (55%), Sweden (46%) and Germany (12%): The Health Foundation, ‘Understanding excess mortality: international comparisons’, 3 June 2020, retrieved 22 August 2020, www.health.org.uk/news-and-comment/charts-and-infographics/understanding-excess-mortality-international-comparisons

measures were being considered, decision makers did not know the full extent of voluntary changes in behaviour and their economic and social consequences. It was not until its 13 March meeting that SAGE noted the Office for National Statistics (ONS) was gathering data on business behaviour and home working and the first mention of “footfall” data in the SAGE minutes came on 23 March, the same day the lockdown was announced.²⁴

In the lead up to key decisions, ministers were concerned about the social and economic costs of government-ordered restrictions that went beyond what was thought to be the minimum necessary to avoid a health catastrophe. This led to attempts to carry on with ‘normal life’ for as long as possible: mass gatherings, including football matches and the Cheltenham Festival, were held as late as 13 March.²⁵ The prime minister had been concerned about the civil liberties implications of ‘draconian’ social distancing policies.²⁶ Other ministers are said to have resisted lockdown measures because of the economic impact.²⁷

The objective of avoiding these costs was less well defined than the imperative of maintaining NHS intensive care capacity, and when the latter objective was under threat at the end of March, as the death toll rose to the hundreds, ministers were forced to set aside their reservations about school closures and lockdown.

According to key advisers, an acute awareness of the economic costs of a lockdown and school closures contributed to decisions being deferred until it became clear from the scientific advice that the NHS was at genuine risk of being overwhelmed. This was not lost on those involved: Neil Ferguson suggested the balance between health, economic and social considerations influenced the timing of decisions,²⁸ while fellow SAGE member Graham Medley went further, describing the timing of lockdown decisions as “entirely political” as opposed to scientific.²⁹

At the same time, scientific advisers shared some of these concerns about economic and social costs, partly in their own right and partly because of the potential for the economic and social impacts of lockdown to undermine its effectiveness in stopping the spread of the virus. Even if several scientists have stressed that weighing scientific and non-scientific considerations is the domain of ministers,³⁰ it still entered their thinking. At the start of March, Chris Whitty told a parliamentary committee of the scientists’ wish to avoid imposing restrictions “until the point when we absolutely have to, so as to minimise the economic and social disruption”.³¹ Neil Ferguson noted they had moved “reluctantly” to looking at more intensive measures because of their economic impact.³² Early discussions of school closures in SAGE minutes also noted the impact on the wider economy.³³

Scientific evidence had a decisive influence on decisions – but the uncertainty in the evidence base contributed to the delays in the decision to impose a lockdown

Decision making should be informed by evidence that is high quality and up to date and the decisions examined here did well against that standard. Ministers were consistently at pains to point out that they were ‘following the science’,³⁴ and their scientific advisers have generally agreed that ministers made decisions in line with their advice over the period considered by this report.* Interviewees inside government agreed that scientific advice had a significant bearing on decisions made during the early phase of the crisis. But they also said that science was seen as a source of “answers” to the questions with which the government was grappling, rather than an input into wider policy discussions. One problem with that approach was that the scientific evidence base was not in a position to offer answers – at least not soon enough or with enough certainty.

The government took its advice from eminent scientists, but with Covid-19 being a novel illness, scientists could not offer ministers a manual for its management in the way ‘following the science’ implies. The minutes of SAGE and the written advice of its sub-groups frequently pointed out the limits of their knowledge. This was compounded by a lack of timely data in February and early March about the prevalence of the virus in the UK and the speed of its spread, and difficulty accessing basic information from the NHS during the early phase of the crisis, like rates of hospital admission and death rates.³⁵ SAGE looked to the experience of other countries further ahead in the epidemic,** but it was still difficult to give clear and accurate answers to questions that would have been central to the decisions taken in mid-March, such as the likely levels of adherence to social distancing measures,³⁶ the degree to which children transmit the virus,³⁷ the contribution of individual policies to transmission levels³⁸ and the appropriate time for interventions to be introduced.³⁹

Timing featured regularly in the record of SAGE discussions. Noting the economic and social harms that would be caused by a lockdown, the scientists worked on the assumption it would not be a long-term measure. SAGE noted the need for “balance” between interventions that would “theoretically” have significant impacts and those which the public could sustain, given their economic, social and indirect health costs.⁴⁰ Some SAGE members suggested they thought it was not sustainable for more than four or five weeks, although others prepared papers that assumed a two- to four-month lockdown.⁴¹

* For instance, Mark Woolhouse, a member of SPI-M, noted the government had been consistently responsive to changing facts: Grey S and MacAskill A, ‘Special Report: Johnson listened to his scientists about coronavirus - but they were slow to sound the alarm’ *op. cit.* Patrick Vallance told a parliamentary committee that SAGE’s advice “has been carefully listened to and has not been in any way, from our perspective, overlain with economic considerations as a reason to change the advice”: House of Commons Health and Social Care Committee, Oral evidence: Coronavirus - NHS Preparedness, HC 36, 17 March 2020, Q97, retrieved 22 August 2020, <https://committees.parliament.uk/oralevidence/208/pdf>

** SAGE minutes throughout February and March consider the interventions and data coming from other countries, including east Asia and elsewhere in Europe.

This meant they were concerned that temporary measures be timed precisely for maximum effect.* As Medley put it: “If you have a fixed duration... the best time to do it is just before the peak of the epidemic, if you know when that peak is.”⁴²

The problem with this emphasis on getting the timing right was that in early March, the data available to SAGE did not provide an up-to-date picture of where the UK was on the epidemic curve. Once this picture became clearer, SAGE’s advice on the speed of implementation changed: at its meeting on 16 March, it advised that “accumulating data” supported “additional social distancing measures [being] introduced as soon as possible”.⁴³ The same meeting recorded agreement that “advice on interventions should be based on what the NHS needs... not on the (limited) evidence on whether the public will comply... in sufficient numbers and over time”.⁴⁴

The limits of scientific understanding of the disease and lack of good data on its spread made it difficult to model the likely impact of different policy options in a reliable and timely way. As Medley put it, “it is very hard to model something that has never been done before”, and so some of the modelling was “pure conjecture” and not backed by evidence.⁴⁵ A SPI-M paper dated 20 March noted it was not possible to “meaningfully model” the impact of lockdown.

The structure and working methods of SAGE meant the government should not have relied on it alone to inform timely decisions

Scientific uncertainty is not the only explanation for delays in decision making. Because ministers relied so heavily on SAGE, its way of working, combined with this uncertainty, also contributed to the timing of advice to ministers to close schools and introduce a lockdown.

First, SAGE – whose remit is to provide advice based on scientific *evidence*⁴⁶ – appears to have taken a presumption against recommending specific interventions until it had evidence of their effectiveness in limiting transmission of the virus, rather than taking a more pre-emptive approach. Until it became apparent to SAGE that the UK was further along the epidemic curve than previously thought and the urgency of acting became clear, it dismissed school closures and other social distancing measures (such as bans on mass public gatherings) for lack of evidence of their effectiveness. If ministers were waiting for certainty or firm evidence from SAGE before acting, that was always likely to delay decisions.

A further constraint embedded in the SAGE model is that it strives to provide advice to ministers on the basis of consensus among its attendees, who numbered up to 25 in the relevant period, with around another 80 listed as members of SPI-M and SPI-B (in addition to members of other sub-groups).⁴⁷ This way of working has benefits: it offers a form of ‘peer review’ and ministers who are not themselves experts do not need to judge the relative merits of the advice from different scientists where they present conflicting opinions.

* At the daily press conference on 12 March 2020, Chris Whitty argued that beginning social distancing measures “too early” would risk people becoming tired of them and public compliance waning: Titheradge N and Kirkland F, ‘Coronavirus: Did ‘herd immunity’ change the course of the outbreak?’, BBC News, 20 July 2020, retrieved 23 August 2020, www.bbc.com/news/uk-53433824

But it does mean that any delays in gathering evidence and then reaching consensus on the likely impact of different measures hold up advice to ministers.

SAGE members did have significant disagreements: for instance, around 11 March, some reportedly argued for an immediate start to social distancing, while others were concerned about a second wave of infections if this path was followed.⁴⁸ This strengthened the status quo – inaction – and put higher hurdles in place for action to happen. Neil Ferguson has emphasised that this way of working provides checks and balances to ensure high-quality advice, but acknowledged this made it less nimble than some European countries, where smaller groups of scientists spoke directly to ministers.⁴⁹

While, as we have explained above, non-scientific considerations did enter the scientists' thinking, it remains that SAGE aims to give scientific advice based on evidence, not personal opinion, and is not intended to offer holistic policy recommendations. This meant its advice was constrained by the delays in accessing data and gaps in knowledge about the virus noted above. The problem was that ministers – who must weigh different bodies of evidence, risk and competing interests – were not prepared to act until the science told them to do so. Ultimately, this combination of factors contributed to the delay in imposing the lockdown.

The way the government commissioned and used scientific evidence also slowed decision making

Making good use of evidence when making decisions is not just about the quality of the evidence on offer, but how decision makers commission and then use it. In this case, the approach to commissioning did not encourage early consideration of a lockdown, which was reinforced by the consensus views agreed by SAGE. When updated data and modelling showing the need for more intensive measures was available, it took ministers several days to act on it, even at a time when cases were growing rapidly.

On the commissioning side, ministers and civil servants – entirely properly – frame the questions put to scientists and the political context in which they sit, so it is inaccurate to say that ministers merely 'follow' the science. SAGE is set up to provide tailored scientific advice based on the available evidence, but is not responsible for formulating government policy: that is the domain of ministers and their departments.⁵⁰ The group's primary purpose is to respond to questions put to it by ministers and by COBR, although it also develops advice on its own initiative and identifies areas of science that warrant further investigation.^{51,*} At the outset, SAGE tasked SPI-M with examining actions the UK could take to slow down the virus's spread and decided to review "all potential methods to limit spread" at its meeting on 20 February.⁵²

* Patrick Vallance has indicated that SAGE does have a role in refining the questions asked of it, at least from a practical point of view. He noted that 'we go through an iteration with the Cabinet Office to make sure that we get questions that are answerable and not overly precise. We reject things where somebody is looking for a point-specific answer on something where we simply do not believe there is a point-specific answer': House of Lords Science and Technology Committee, Corrected oral evidence: The science of Covid-19, 17 July, Q141, retrieved 22 August 2020, <https://committees.parliament.uk/oralevidence/741/pdf>.

But ministers and civil servants remain responsible for the direction they give to SAGE – whether overt or implied – and for framing instructions in such a way that makes the most of its expertise.

In this case, ministers' desire to avoid a lockdown (and its attendant social and economic costs) framed the advice commissioned from SAGE, and contributed to the delay in considering these measures and, in turn, the decision to implement them. Neil Ferguson told the Science and Technology Committee that SAGE was "asked to look at interventions that would not have this country locked down for a year or more".⁵³ Any explicit instructions can be reinforced by the scientists' understanding of ministers' attitude and the broader political context, which in this case also worked against earlier consideration of a lockdown. SAGE member John Edmunds noted they had not even modelled a lockdown until mid-March because "it didn't seem to be on the agenda", but that this changed when Italy's lockdown opened the "policy space".⁵⁴ We heard separately from one interviewee that the arrival and spread of the virus in Italy had triggered an appreciation that it was not a crisis that would be confined to China and that the UK would need to deal with it too.

This is not to suggest scientific advice can or should be sealed off from the broader political context: previous scientific advisers to government have discussed picking their battles and framing advice in a way that has most influence with ministers.⁵⁵ In this case, some interviewees stressed to us the importance of making sure scientific advice has credibility with ministers and is grounded in what is practically possible so it is useful for officials developing policy. But it is important to get the balance right.

To that end, SAGE would have benefited from clearer instructions from ministers and civil servants as to its remit, particularly the extent to which they expected the scientists to take non-scientific considerations into account in their advice and how the body's advice would be combined with advice from other government bodies like PHE or DHSC. At a high level, SAGE's role is clear: to provide "unified scientific advice... based on the body of scientific evidence presented by its expert participants".⁵⁶ But its members and those of its sub-groups have expressed differing views about whether and how it should have weighed considerations beyond the science of the virus itself.

As noted above, several members argued that weighing the scientific evidence for different interventions against their economic and social impacts should be – and was – the domain of ministers, even though the SAGE minutes indicate that similar considerations entered scientists' own thinking. By contrast, Mark Woolhouse, a member of SPI-M, argued that SAGE should have given more attention to the harms, such as to mental health and to the economy, induced by the lockdown.⁵⁷ Patrick Vallance disagreed that examining those types of questions was the purpose of SAGE, but did point to the presence on SAGE of a Treasury economist and "several other people who have a background in that area".⁵⁸

This confused picture is not entirely surprising: as SAGE itself implicitly recognised, it can be difficult to fully separate scientific considerations from non-scientific ones, particularly where economic or social factors affect the effectiveness of a proposed policy.

Further, the risk of the line between scientific and broader policy advice being blurred can be greater where ministers are making decisions that deal with emerging science, as happened with mad cow disease, or bovine spongiform encephalopathy (BSE). In that case, the relevant scientific advisory committee in effect became the policy maker when ministers relied on it to answer questions that should have been based on a range of non-scientific factors, as well as the risk of transmission of BSE to humans or to animals.^{59,*}

The potential ambiguity means that ministers should be clear about what they expect of the scientists advising them and ensure advice bodies such as SAGE have the right expertise to answer the questions being asked of them.⁶⁰ For their part, scientific advisers should be clear about the weight considerations like the feasibility of certain policies play in their advice.

Aside from asking the right questions of experts, good decision making depends on using scientific evidence, once gathered, in an effective way. As with the commissioning of advice, the question of delay sometimes arose again once the scientific advice was in ministers' hands. SAGE's advice did have a decisive impact on the government's decision making, particularly the modelling produced in mid-March by teams from Imperial College and the London School of Hygiene and Tropical Medicine. But more than a week passed between that advice convincing the prime minister and his closest advisers on 14 March that a lockdown would be necessary, and the announcement of the 'stay at home' measures on 23 March.⁶¹

We were told by an interviewee inside government that the unprecedented nature of the measures being contemplated meant there was a "cognitive barrier" to get past, and that this had contributed to the nature of decision making. Another involved in the SAGE process described a similar phenomenon, reinforced by the "crazy" and "intense" atmosphere that characterised decision making during March.

Ministers did, however, act promptly on school closures, once they had advice from SAGE suggesting they do so. SAGE noted that the evidence "now supports implementing school closures" to stop NHS capacity being breached on 18 March, the same day the closures were announced.⁶²

* In echoes of ministers' claims here to be following the science, the inquiry that followed the BSE episode noted: "We can see the attraction of asking SEAC [Spongiform Encephalopathy Advisory Committee] to provide the policy answer. It enabled the government to say that they were following the best scientific advice. But this disguised the fact that the scientists were being asked to evaluate considerations which were not questions of science.": The BSE inquiry: the report, vol. 11, 4.746, retrieved 22 August 2020, <https://webarchive.nationalarchives.gov.uk/20060525120000/http://www.bseinquiry.gov.uk/report/index.htm>

SAGE considered implementation when advising on social distancing measures

Decision makers need to think through how – and whether – their plans will work on the ground as well as on paper. One strength of the scientific advice process was that SAGE explicitly used SPI-B – whose members included behavioural scientists and the National Police Chiefs’ Council lead for civil contingencies – to advise ministers how social distancing and school closures might be designed and implemented, by drawing on SPI-B’s view about the public’s likely adherence to these measures and the factors that might improve willingness and ability to comply.⁶³ For instance, SPI-B urged “definitive” rather than voluntary or optional measures and stressed the importance of their perceived efficacy for the public’s willingness to comply.⁶⁴

As with the science of the disease itself, there was little data SPI-B could draw on to judge exactly how the public might react.⁶⁵ SPI-B noted there was limited evidence on the impact of social distancing measures on people’s behaviour and their compliance with those measures, and so based its advice on its members’ “expert opinions”.⁶⁶ At the beginning of March, SPI-B assumed compliance would be “likely high, initially, for many social activities”.⁶⁷ Advice prepared by modelling teams assumed that under population-wide social distancing, all households would reduce contacts outside their homes, schools and workplaces by 75%,⁶⁸ though one member referred to this figure as “something of a guess”.⁶⁹ In the end, ONS surveys during April show self-reported rates of compliance with lockdown restrictions at between 80% and 85%.⁷⁰

Much of SPI-B’s advice also appears to be intuitive (or as one psychologist put it, “banal and common-sensical”),⁷¹ such as the statement that “many of the proposed measures will be easier to implement for those on higher incomes. Government should address this...”⁷² But the presence of these structures meant that thinking about some aspects of implementation was built into decision making.

Not all of SAGE’s advice about the feasibility of social distancing measures, including lockdown, was grounded in behavioural science. At times, its views about what was feasible seemed to be based more on what its members thought was politically possible than what might have been technically possible. The view that a legally enforced lockdown would be unrealistic is implied in its view that stopping “all social interaction in public spaces, including restaurants and bars, would have an effect [on transmission], but would be very difficult to implement”.⁷³ SAGE minutes elsewhere express concern that other social distancing measures that fell short of lockdown, like a ban on public gatherings or pub closures, would not be effective because people would simply congregate elsewhere.⁷⁴ Rather than sparking consideration of more sweeping measures that would stop other gatherings, like a full lockdown, this view justified the rejection of those lower-level measures. Some SAGE members have made public comments indicating these views: for instance, Graham Medley thought it was “not clear that a lockdown... would be possible in the UK”.⁷⁵

Consultation with the public services enforcing lockdown came only after key announcements

The decisions on lockdown and school closures were taken and introduced swiftly, and with little consultation and planning for how they would work in practice. For two key services – police and schools – thinking about implementation lagged rather than informed the policy decisions, which meant those services were less prepared than they might have been. We heard from senior government officials that, in some cases, they were taking their instructions directly from the prime minister’s daily press conference – with limited or no opportunity to feed in advice before decisions were made. The government did conduct some limited consultation, but this was not sufficient to head off some of the problems that occurred once the lockdown and school closures were introduced.

Consultation with police representatives happened quickly, but only after the measures were announced.⁷⁶ The Home Office spoke to police groups on draft legislation and translating policy intent into implementation in the 48 hours before the regulations came into force on 26 March.⁷⁷ This meant guidance was drawn up quickly, but not in time for the commencement of the legislation.* As Sergeant Simon Kempton, the Police Federation’s coronavirus lead, put it, normally guidance and training would be delivered before the legislation was introduced – not afterwards.⁷⁸ Police groups were not overly critical of the government for its failure to consult before the decision. But the time lag between the prime minister’s announcement and the issue of guidance did lead to problems in implementation, like inconsistent application of the regulations across different forces.⁷⁹

Nine days passed between key ministers agreeing in principle that a lockdown would be implemented and the announcement on 23 March; that time could have been used to plan the details for enforcing it. That said, when guidance finally did arrive, Kempton described it as “fairly clear, relatively concise and easy to follow”.⁸⁰

Similarly, given the pace with which government judged it needed to act and SAGE’s urging of unambiguous messaging,⁸¹ it is understandable that the prime minister’s announcement did not match the much more nuanced regulations that followed. But this meant the message announced by the prime minister – that there were only four permissible reasons for leaving home – was more “aspirational”⁸² than enforceable, with the regulations allowing “reasonable excuses” beyond the four announced on 23 March. The gap between law and government messaging contributed to inconsistent application of the regulations, as noted above.⁸³

* Guidance for the public health regulations in England was issued on 31 March 2020 and for the Coronavirus Act 2020 on 3 April 2020.

School closures were considered early on, but without enough detail about how they might work

The government also played catch-up on the implementation of school closures, even though the possibility had been flagged earlier on in the crisis. SAGE had discussed the potential for closures at some point in the pandemic at its meetings on 4 and 20 February,⁸⁴ and the government had publicly flagged the possibility in its coronavirus action plan at the start of March.⁸⁵

The Department for Education (DfE) knew that schools might have to close and had undertaken some planning before the decision was seriously contemplated in the week beginning 16 March. The action plan noted closures to reduce the spread of infection formed part of the government's planning assumptions,⁸⁶ and DfE had conducted targeted consultation with parts of the education sector before the announcement. DfE would also have had some visibility of SAGE's early discussions, having been represented at the 4 and 20 February meetings, and its policy officials had access to advice from SAGE (and papers prepared for its meetings) via the chief scientific adviser's team.⁸⁷

Even so, central government did not begin to plan for key aspects of school closures until after the decision was announced and, in some cases, it was relatively slow to recognise the difficulties schools faced. As decisions on the economic support package show, not every fine detail needs to be worked out before a decision, but the government does need to anticipate major stumbling blocks. Schools were left to work out many of the key details for themselves, well after the decision. They felt uncertain over the definition of key workers.⁸⁸ While schools were able to use their free school meals budgets to provide for students throughout this period, DfE did not begin to develop a voucher scheme until after 18 March, when the decision was announced. Nearly two weeks passed before details of the voucher scheme were confirmed.⁸⁹

It was largely left to individual schools to work through the challenges of delivering online learning: the government did not initially offer a framework setting out the learning experience it expected schools to provide for students.⁹⁰ It took the government nearly a month to start to respond to the need for technology to support disadvantaged students' remote learning and to issue guidance to schools on conducting remote learning.⁹¹ This contributed to large differences between schools in the quality of education provided during lockdown.⁹² For instance, students in private schools and state schools in more affluent areas had greater access to live-streamed lessons compared to state schools in deprived areas.*

The centre of government adopted new approaches to data to inform and monitor decisions

The government was well aware of the need to monitor the success of social distancing measures – something repeatedly urged by SAGE – and drew on existing and new datasets to adjust measures and inform further decisions.⁹³ From the centre of government, the cabinet secretary, Sir Mark Sedwill, established a team in the Cabinet

* One survey found 6% of state school teachers had hosted live streamed lessons compared to 74% of private school teachers: Foster P and Staton B, 'How coronavirus is widening the gap in schools', *Financial Times*, 19 May 2020, retrieved 23 August 2020, www.ft.com/content/50fcc605-674d-4630-9718-d3890eccffbf

Office to offer a centralised source of joined-up cross-government data, bringing in officials who had previously worked on no-deal Brexit planning.⁹⁴ Number 10 also convened a digital summit on 11 March to seek technical assistance and resources from major technology and data firms.⁹⁵

In some cases, existing datasets were adapted or repurposed to provide feedback on compliance. One example is the Department for Transport publishing road and public transport use statistics each day from mid-March, rather than on the normal quarterly basis.⁹⁶ In other cases, government commissioned new data or sought new access to data from the private sector. DHSC and YouGov conducted polling to test public attitudes to different social distancing measures,⁹⁷ and mobile network O2 granted government access to anonymised, aggregated data to gauge compliance with social distancing measures, and the need for additional enforcement.⁹⁸

This information has been used to adjust the government's approach to implementing the lockdown and to inform subsequent decisions. For instance, a spike in car use between 29 March and 1 April was followed up with the PHE medical director, reiterating the 'stay at home' message at the daily coronavirus press conference on 1 April.⁹⁹ SPI-B used data from YouGov and DHSC polling following the announcement of pub and restaurant closures and advice to avoid social gatherings to advise ministers on compliance with existing measures and how the public might react to further measures.

Conclusion

This case study, as with the others we have examined, demonstrates the power of setting a clear objective against which policy options can be tested. Decision makers and their scientific advisers were focused on the threat posed by the spread of the virus to NHS intensive care capacity, and SAGE modelled the ability of different interventions to stop the NHS being overwhelmed. This gave decision makers the trigger needed to intervene with measures they had hoped to avoid. Ministers did consider the economic and social consequences of lockdown, but in the end treated them as secondary to 'protecting the NHS'. The decision to close schools in particular was taken rapidly, which meant that some of the most important aspects of implementation, and the associated guidance for people and organisations on the ground, were not worked out until after decisions were made. This had significant impacts, like contributing to disparity in the quality of remote learning.

Ministers made much of 'following the science'. But it is not enough to use evidence: ministers and civil servants also need to understand the limitations of both the evidence base and the forums through which it is channelled; and, difficult as it might be, ministers must be prepared to act in the absence of scientific certainty. Failure to do so now seems likely to have cost a significant number of additional lives, and contributed to the UK suffering the highest excess death rate in Europe over the period to the end of May.¹⁰⁰

5 Conclusion

Over the course of a few weeks, ministers were forced to take big decisions at high speed, with limited information, and with the global picture constantly changing. The analysis in this report focuses on three core areas of decision making: the economic support package, the commitment to conducting 100,000 tests per day by 30 April, and imposing a lockdown. It identifies where good decisions were made and what it was about them that made them successful, and finds common causes of poor decision making.

Clear objectives are powerful in a crisis, but without a wider strategy they can be counterproductive

Goals and objectives shape what gets done in government. Across the three areas we examined, policy development and decision making worked best when ministers had a clear idea of what they wanted to achieve in the short term and could identify how their objectives flowed from the government's overall policy goals.

Developing an approach for the longer term is not easy when ministers and officials need to move fast and have little sense of how a crisis will develop. But the decisions we have examined demonstrate that first outlining an overall strategy – as the chancellor did with the economic support package – is important for civil servants and advisers, reassuring for stakeholders and promotes public confidence. Having clear objectives from the start on the economic package set a direction and bought the government time. It enabled rapid decision making when necessary, made it easier to explain decisions made to parliament and the public, and gave officials a means of prioritising and sequencing activity.

Decisions were less effective when the government started with a specific objective that did not flow from a clear sense of bigger picture goals. The lack of an overall strategy for testing undermined the credibility of the health secretary's commitment and was confusing for those involved in its delivery. The government may not have had time to think through a detailed strategy, but even an outline of direction would have helped support the effective delivery of its objectives.

All three case studies demonstrate how powerful objectives can be in bringing discipline to decision making. That is particularly so during a crisis. On testing and on lockdown, there was a sharp focus on a single, measurable objective. In all cases, it was galvanising: the government machine responded to the need to put together the economic support measures rapidly and to increase testing capacity, while the objective of 'saving' the NHS brought internal clarity to the difficult choice to close schools and impose a lockdown. But government needs to encourage the right activity. The increase in laboratory capacity was a positive result of Hancock's 30 April target, but the target became a distraction and in some areas was actively damaging: it led to inefficient testing practices and cynical 'gaming' behaviour that was counterproductive.

Government needs to plan ahead even during an emergency response

It is understandable when a major crisis hits for a government to prioritise the initial response. But even in the early hours of an emergency ministers and senior civil servants must ensure that their departments have the capacity to assess the next phase of the response, and the phase after that. Senior officials should be given explicit responsibility, and the necessary resources, to analyse how current scenarios will play out and to embed that thinking in decisions about the early stages of a response. Somebody needs to be responsible for advising decision makers about the exit strategy from the very start of the crisis – even if a conscious decision is then taken to act regardless.

The decision to set an objective of 100,000 Covid-19 tests per day had much to recommend it. The UK's testing capacity was galvanised, ministers and officials coalesced around a common goal, and the increased capacity was undoubtedly needed for the future test, trace and isolate strategy. But the decision was evidently taken to defuse immediate public pressures, without a clearly expressed explanation of how it would support future phases of the pandemic response.

Planning implementation is always essential

Even in less pressured scenarios, developing a plan for how a policy will be realised on the ground before decisions are made can be overlooked. The speed of crisis decision making means that for the decisions examined by this report, it would have been more damaging to wait than to act. But even then, announcing a measure in order to reduce media pressure and worrying about how it will be implemented later risks creating significant problems in the future – in the case of a health crisis, it can have the very gravest of consequences. To avoid this, ministers and civil servants need to find decision making and policy development structures that quickly bring information and perspectives from the front line into the room.

This worked well on the economic package, where HMRC and the Treasury worked closely together and – importantly – directly with ministers. This enabled the successful roll-out of the CJRS and the SEISS, because HMRC officials could tell ministers and Treasury counterparts which designs could be implemented quickly.

In the decisions on lockdown, SAGE and its behavioural science sub-groups could give advice on how it might work in practice. Even so, many matters were left to be worked out afterwards. For the lockdown, this meant there was a harmful gap between the law, the behaviour of some police authorities, and government guidance and communications, while schools were left to work out for themselves how they would deliver home learning. SAGE is not responsible for planning implementation, which rests with departments and ministers. But given SAGE's closeness to decision making, the government could improve delivery by strengthening existing links between SAGE and departments, so departments can be prepared for implementation and raise any concerns in a timely manner.

Bringing representatives of those affected by a decision into the room compensates for imperfect information

It is inevitable in a crisis that decision making is centralised to some degree, as ministers want to act quickly and take control. But bringing non-government partners inside the tent helps compensate for the uncertainty created by imperfect information in a crisis, as well as building trust and creating allies to explain and defend policy decisions. This is particularly true where these other groups share broadly similar goals with the government itself, as was the case when decisions were made about economic support measures.

On the lockdown, ministers used SAGE, an established structure, to seek expert scientific advice from outside the government. Bringing business groups and unions into decisions about key economic support measures gave the government on-the-ground intelligence about what would and would not work. It also built goodwill and trust, creating space to work out the fine details.

Bringing external perspectives into decision making is particularly important when the task is most challenging and levers for delivery are outside central government's control. The government initially ignored offers of help from private labs. Then, in an effort to boost testing capacity, a patchwork of central, local and non-government players were brought together. The 30 April deadline helped spur a break with the previous, centralised approach to implementation. But even then it was set without input from local public health officials, the diagnostics industry – or the testing co-ordinator himself. This led to problems with the roll-out, including confusing, overlapping schemes and poorly located test sites. It also alienated some non-government figures who might otherwise have been allies.

Government needs to find ways to get fast feedback, especially when acting under time pressure or in unprecedented circumstances

High-quality evidence can help decision makers work out whether different policy options will achieve their goals. Supplementing this with feedback loops and a good grip on data can also tell decision makers if existing approaches are working or whether they need to change course. But at the same time, ministers need to recognise the limits of the evidence base and accept that they cannot outsource responsibility for their decisions.

The government rightly drew on the expertise of highly qualified scientists and real-time data and feedback, which helped it make decisions on lockdown. On testing, while there has been much focus on the testing numbers, it was not clear in the early weeks of the pandemic that the government was collecting and publishing the right type of data that would tell it how well the testing programme was working. That meant that feedback loops were less effective than they could have been.

For the economic support measures, government used information from business groups and unions to gauge how the package was being implemented on the ground. It will need to continue to gather this evidence to get ahead of decisions about withdrawing support, but it will also need its own, robust information to make informed decisions if its goals diverge from those of business groups and unions.

The government should understand and challenge its own internal biases

Until SAGE had the data to be confident that intensive care capacity was likely to be overwhelmed, the government weighed arguments that supported its own biases more heavily than those which challenged them. Concerns about the economic, social and psychological sustainability of lockdown, however well founded, weighed heavily on decision makers in mid-March.

It took the starkness of predicted six-figure death tolls, and the fear of an overwhelmed NHS, to shock ministers into authorising a full lockdown. Ministers and officials should be conscious of their instinctive preferences – ideological or political – and use the evidence available to challenge and test them.

The crisis exposed gaps and overlaps in accountability

Our case studies show that thinking through who should deliver a policy before decisions are made – and making sure everyone is clear about who is responsible for what – is as important as decisions about what the policy itself should look like.

For the economic support measures, HMRC and the Treasury worked well together and were clear about the strengths each brought to the table.

On testing, failure to be clear about who was responsible for different aspects of delivering planned capacity meant that important aspects of the testing programme, such as access for social care workers, were not given enough attention. Senior officials distanced themselves from the decision and it was difficult to assign responsibility for remedying gaps or failures. The centre of government was late to consider how local government could help. But the pressure to deliver 100,000 tests a day did force it to rethink its previously centralised approach to test processing capacity and make use of a wider variety of non-government labs.

Claims about 'following the science' cannot deflect accountability for ministers' choices about lives and livelihoods. The government needed to be clearer about both the appropriate role for and the limitations of the scientific advice it uses to inform its decisions.

The decisions the government made during this early phase of the pandemic were enormously consequential. The economic, social and health consequences of the lockdown and the economic support package in particular will play out over years and will, for better or worse, show the importance of effective decision making. This report helps provide an insight into why some decisions worked well and others did not, and can serve as a useful guide for policy makers facing future crises.

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