# REFORM RESILIENT STATE

## A State of preparedness

How government can build resilience to civil emergencies

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#resilientstate

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## About

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## Recommendations

**Recommendation 1**: An Independent Civil Contingencies Advisory Group should be established, comprising academics and professionals working in the fields of risk management and resilience, and with expertise across sectors and risk categories. Its membership should not be confined to the UK, and a Chair should be responsible for drawing in a diverse range of national and international-subject matter experts. Members should feed into government's risk management process at several stages.

**Recommendation 2**: Independent Challenge Groups made up of members of the ICCAG should be created to run parallel with existing government-led Expert Challenge Groups. There should be no crossover between membership of Independent and Expert groups. Each group should consider the same issues using the same process. Their findings should first be shared with departments anonymously to avoid any attribution bias.

**Recommendation 3**: The Government should move from a presumption of 'Need to Know', to 'Need to Share'. To improve engagement with the National Risk Assessment, make it easier to consult as a risk assessment tool, and encourage external scrutiny, the government should pursue a policy of increased transparency. It should publish all parts of the Assessment that are not pertinent to national security in line with updates to the Assessment.

**Recommendation 4**: The Cabinet Office should conduct a review of the use of just-in-time procurements in emergency planning. This should determine whether an appropriate balance between stockpiling and 'just-in-time' procurements is being struck to ensure that essential goods can be delivered on time in an emergency. This review should consider whether UK surge manufacturing capacity can be developed to reduce reliance on global markets and unnecessary stockpiling.

**Recommendation 5**: The Government should appoint a Minister for Resilience and Recovery, to serve for the remainder of this Government. This should be a Cabinet-level position, explicitly backed by the Prime Minister, to ensure they have the necessary authority and access to drive change across government. The Minister should be responsible for overseeing cross-government lesson learning from COVID-19 and ensuring action is taken within departments, as well as in the Cabinet Office, to boost resilience to future crises. **Recommendation 6**: To drive resilience building at Cabinet level and create a forum for Cabinet members to discussed preparedness for risks shared across government, the Government should re-instate the National Security Council Threats, Hazards, Resilience and Contingencies Subcommittee.

**Recommendation 7**: The Civil Contingencies Secretariat should report on lessons identified from COVID-19 to the newly-reinstated National Security Council Threats, Hazards, Resilience and Contingencies Subcommittee. The Subcommittee, supported by the Deputy National Security Advisor with responsibility for resilience, should produce a cross-government action plan for acting on these lessons. The newly-created Minister for Resilience and Recovery should convene the Subcommittee monthly to review progress and hold the appropriate Cabinet ministers to account.

**Recommendation 8**: To address gaps in central Government's capabilities to respond to the risks identified in the National Risk Assessment, the Civil Contingencies Secretariat should produce an assessment for the National Security Council of where such gaps exist, and the time and resources required to address them. The Deputy National Security Advisor should then be responsible for coordinating action plans to address these gaps, driving this agenda through the Council. This process should be annual, to enable progress to be monitored.

**Recommendation 9**: The Government should ensure that every department has a minister below Secretary-of-State level whose brief specifically includes resilience and civil contingencies capabilities.

**Recommendation 10**: The Government should move a motion in Parliament to establish a Civil Contingencies Select Committee to strengthen parliamentary oversight of emergency planning and preparedness. This would improve coordination of parliamentary scrutiny of resilience capabilities and ensure that scrutiny is proactive, not just reactive to emergencies.

**Recommendation 11**: When a Scientific Advisory Group on Emergencies (SAGE) is assembled, the government should publish a list of members, research consulted and meeting minutes on a weekly basis to allow for ongoing scrutiny of the group's composition, evidence base and discussion processes.

## Introduction

A civil emergency<sup>1</sup> on any scale will be an extremely disruptive event, but the extent of that disruption will depend on how prepared government is to respond to it. It must anticipate the risks that the country faces and prevent them where possible, or plan for the day when a risk materialises and mitigate against it.

The COVID-19 pandemic is the most serious civil emergency this country has faced in peacetime; unprecedented in its scale, complexity, and duration. That said, a pandemic is not a 'black swan' event. An *influenza* pandemic has been government's highest priority risk for more than 15 years, and the consequences that government anticipated – across health, businesses, employment, public services, and wellbeing – have come to pass.

It is too soon to draw conclusions about many aspects to date of the Government's response to COVID-19. Questions have been raised about decisions made by individual politicians. Yet, however consequential some of these have been, any government's response to a crisis is bigger than the decisions made by any one person. An extensive central government machinery exists to anticipate, prepare for, and respond to civil emergencies.

The COVID-19 response raises questions about how central government makes informed judgements on risk; how it creates and stress tests emergency plans; how it flexes plans to respond to changing circumstances; and how it decides what risks to plan for in the first place. While most emergencies are resolved without central government, many would, like a pandemic, require a joined-up response from the centre across multiple departments.

These questions are the focus of this paper. Lessons from the response to COVID-19 can help government to build resilience not just to pandemics, but to civil emergencies of all kinds. The UK faces a number of non-malicious risks that could materialise at any time, and the next might not be a pandemic.

Emergency management is a devolved process, but central government controls the machinery and resources devoted to this: reform must, and can only, be led from the top. In a crisis, when weaknesses in capability are clearest to see, government has a responsibility to address these as one of the first steps to building back better. As the UK looks towards recovery, government must focus its efforts on building greater resilience to the next crisis.

<sup>&</sup>lt;sup>1</sup> As defined in HM Government, 'Civil Contingencies Act' (2004).

## 1. A time to build resilience

The aftermath of this pandemic – and any civil emergency – is an opportunity for government to improve its preparedness for future emergencies. Government has a responsibility to its citizens to ensure that past mistakes are learned from, and will not be repeated. A crisis can happen at any time, with devastating consequences; at this critical moment, when this fact has been reinforced at all levels of government and in communities, and when the mistakes that have been made are clearest in peoples' minds, there is strong buy-in for reform. This is the moment to build state resilience.

### 1.1 Building back better

Resilience (see Fig 1 below) is not just government's ability to "resist" the impact of a civil emergency, or to "preserve and restore" in its aftermath.<sup>2</sup> Crucially, it is also an ability to "adapt [and] transform" in response to one.<sup>3</sup> This is an important distinction: government should not aim simply to 'bounce back' from crises by restoring systems and emergency response capabilities to their pre-crisis state. Doing so risks repeating past mistakes, and reproducing the vulnerabilities that existed before.<sup>4</sup> Instead, government's aim should be to build back better: "[To use] the…reconstruction phas[e] after a disaster to increase…resilience… through integrating disaster risk reduction measures."<sup>5</sup>

### Figure 1: What does resilience mean?

**Resilience:** "The ability of a system, community, or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management."

Source: United Nations Office for Disaster Risk Reduction, 'Resilience', 'Webpage', 12th December 2020.

'Build back better' has become a common refrain, but it must apply just as much to fixing the gaps in the State's crisis planning and management as investing in better public services and 'levelling up'. Governments that have lived through a serious emergency,

<sup>&</sup>lt;sup>2</sup> United Nations Office for Disaster Risk Reduction, 'Resilience', Webpage, n.d., accessed 12 December 2020.

<sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> Siambabala Bernard Mamela, 'Disaster Resilience: A Bounce Back or Bounce Forward Ability?', Local Environment 16, no.

<sup>5 (</sup>May 2011): 417-24.

<sup>&</sup>lt;sup>5</sup> United Nations Office for Disaster Risk Reduction, 'Build Back Better', Webpage, 18 December 2020.

and which adapt and transform accordingly, become more adept at responding to similar emergencies in the future.

In some instances, this involves targeted policy change. Following the Hillsborough Stadium disaster, in which 96 people were killed, teams in the top two divisions of English football were required to have all-seater stadiums to reduce the risk of crushes.<sup>6</sup> Hong Kong hospitals, having endured the SARS outbreak in 2003, had three months of Personal Protective Equipment (PPE) stockpiled as part of their pandemic preparedness plan.<sup>7</sup>

In other instances, this means fundamental systemic and cultural reforms to how governments approach emergency management. The experience of the UK Government in the early 2000s, for example, led to a broader and more fundamental change in approach, including the establishment of a dedicated Civil Contingencies Secretariat (see Figure 2 below).

### Figure 2: The origins of the Civil Contingencies Secretariat

In the early 2000s, the country faced a series of major emergencies in quick succession. In the run up to the millennium, government gave significant attention to preparing for problems that would result from the 'Y2K bug'.<sup>8</sup> This was followed by three national emergencies. In the Summer of 2000, oil refineries were blockaded to protest rising fuel prices, causing widespread disruption and fuel shortages,<sup>9</sup> later that year severe flooding devastated communities in the wettest Autumn on record<sup>10</sup>, and the following year saw a major outbreak of Foot and Mouth Disease.<sup>11</sup>

In light of these events, Prime Minister Tony Blair's newly re-elected Government felt that existing civil defence capabilities – unchanged since the Cold War – had proved inadequate.<sup>12</sup> In response, in the Summer of 2001, the Civil Contingencies Secretariat (CCS) was established in the Cabinet Office, moving responsibility for crisis planning and management away from the Home Office and placing it at the heart of government.<sup>13</sup>

<sup>&</sup>lt;sup>6</sup> Home Office, *The Hillsborough Stadium Disaster 15 April 1989 Inquiry by the Rt Hon Lord Justice Taylor - Final Report*, 1990, 76.

<sup>&</sup>lt;sup>7</sup> Wai-Man Kwan et al., 'Bundled Interventions for Consumption Management and Monitoring of Personal Protective Equipment in COVID-19 Pandemic in Hong Kong Local Hospitals', *BMJ Open Quality* 9, no. 4 (1 November 2020).

<sup>&</sup>lt;sup>8</sup> Worst fears did not materialise but it caused significant anxiety globally; some impacts were serious, including possible errors in downs syndrome tests for 150 pregnant women in the UK, two of whom terminated their pregnancies following their results. See: John Leyden, 'Down's Syndrome Screening Failures Linked to Y2K Bug', *The Register*, 14 September 2001.
<sup>9</sup> Lord Macdonald of Tradeston, 'Fuel Blockade', n.d., HL Deb 28 September 2000, vol 616 cc944-45.

<sup>&</sup>lt;sup>10</sup> Met Office, *The Wet Autumn of 2000*, 2012.

<sup>&</sup>lt;sup>11</sup> National Audit Office, The 2001 Outbreak of Foot and Mouth Disease, 2002.

<sup>&</sup>lt;sup>12</sup> House of Commons Select Committee on Defence, 'Select Committee on Defence Sixth Report - Preparedness', Web Page, 24 July 2002.

<sup>13</sup> Ibid.

The CCS produced its first National Risk Assessment in 2004, an evidence-led assessment of major risks faced by the UK to inform Government planning. This would become a global template for best practice.

Next, in 2004 the Civil Defence Act (1948) was repealed and replaced by the Civil Contingencies Act,<sup>14</sup> which placed a legal duty on relevant agencies to assess risks, plan for them, and respond to emergencies, as well as a duty to collaborate with all relevant parties to achieve those ends.

These trailblazing structural and legal reforms established the UK as a leading example in civil protection. They were made possible because the Government of the day did not simply continue as before, but instead used the experience of a crisis to learn lessons and make fundamental changes.

As part of government's effort to build resilience, it should work collaboratively with all necessary parties to continuously assess what emergencies the country could face and what should be done to mitigate them, including emergencies that have no historical precedent. However, an actual emergency will test plans and assumptions, and expose weaknesses in a way that hypothetical scenarios and exercises never could. Given the scale of the crisis, this has been especially true of the pandemic. Yet civil emergencies are not infrequent (see Figure 3 below).

<sup>&</sup>lt;sup>14</sup> HM Government, Civil Contingencies Act.



#### **Civil Emergencies Government Action** October 2000 'Phillips Report' published The report into Britain's handling of 'Mad Cow Disease' exposes failings Autumn 2000 in the UK's scientific advisory system Severe UK-wide flooding and presses for more transparency in this area 10,000 homes and businesses flooded across 700 locations February 2001 **Emergency Planning Review** September 2000 2000 Government announces systematic Fuel protests Driver protests and blockade of review into national emergency planning and response refineries lead to severe fuel shortages July 2001 **Civil Contingencies Secretariat** 俞 Government establishes the CCS to February 2001 coordinate emergency planning at a Foot-and-mouth outbreak national level Foot-and-mouth disease spreads across British farms. 6 million head of cattle killed to halt spread. Crisis November 2002 \$ Strategy Unit Risk Report estimated to cost the UK £8 billion Cabinet Office Strategy Unit's report into managing risk published. Recommends firmly embedding risk in policy making in departments and November 2002 across government Firefighters' strike 50,000 British firefighters go on strike for 48 hours over pay 3 conditions. The army is called in to provide emergency cover November 2004 2 **Civil Contingencies Act passes** January 2005 CCA becomes the principal **Carlisle floods** legislation governing emergency Severe flooding breaks out in Cumbria, centred on Carlisle. 3 management. Covers protection across a range of emergencies and establishes Local Resilience Forums an people are killed and hundreds of homes and businesses are flooded July 2005 January-February 2007 7/7 bombings 2005 **Exercise Winter Willow** Coordinated suicide bombings on UK carries out biggest ever peace London's transport system during Ä time exercise on how to prepare for morning rush hour leaves 56 dead an influenza pandemic. Results in the and hundreds injured × strengthening of pandemic influenza planning and the publication of 'Pandemic Flu: a national framework' H5N1 (Avian Flu) Outbreak Government takes immediate preventive actions to stem outbreak (**\$** March 2008 of H5N1 after warnings of potential National Security Strategy human transmission.. Agriculture Government publishes first NSS, identifying major security threats to and food industry are severely affected by controls the UK. Pledges to publish a national risk register on a regular basis Summer 2007 June 2008 Major flooding event Pitt Review Flooding throughout the UK kills 13 The Pitt Review on Lessons learned from the 2007 floods is published. people. Property damage is -AR extensive, thousands of homes and businesses are left without water Identifies key failings on emergency plan exercising, public preparation and the largest peace time rescue and risk warning operation in British history is carried out July 2008 National Risk Register Government publishes the first publicly available NRR, providing an assessment of significant threats H1N1 (Swine Flu) Outbreak From April, swine flu spreads faced by the UK throughout the UK. Cases peak at **\$** 1110,000 a week in late July and 457 2010 First SAGE convened deaths are recorded (ප් Government makes use of the Scientific Advisory Group for Emergencies mechanism for the first time in response to the H1N1 pandemic



Each civil emergency is different, but none are incomparable: what the Government can learn from its handling of this pandemic has implications not just for future pandemics, but for its ability to respond to all types of emergencies, at all levels of government.

Just as was done in 2001, this means quickly identifying not just failures and systemic vulnerabilities in specific policy areas such as health, but in emergency planning and management capabilities more broadly. Doing so cannot depend on public inquires that follow major emergencies, which can take years to conclude and publish recommendations. Since 1990, public inquiries in the UK have on average taken two and a half years to publish their final reports, and nine inquiries have taken more than five years to publish their findings.<sup>15</sup> Given the complexity and scope of the COVID-19 pandemic, a full inquiry cannot be expected to come quickly, and the country cannot afford to wait that long to start putting in place the reforms required to ensure government is better place to respond to future crises.

For this reason, identifying lessons learnt and areas to improve on must be an ongoing and continuous process. Throughout the pandemic, Parliament, select committees, the media, and a wider community of experts have been scrutinising the pandemic response and have already begun to identify points for action.

### 1.2 Acting on lessons from emergencies

There are well-established processes for learning lessons from emergencies and exercises at all levels of government. Government departments and agencies are responsible for the "maintenance, review, and revision" of policy "in response to lessons identified."<sup>16</sup> In addition, the Civil Contingencies Secretariat (CCS) is responsible for "bring[ing] together those lessons learned that have implications for the multi-agency response at central, regional or local levels, and for the functioning of key cross-governmental capabilities."<sup>17</sup>

Despite this, the substantial changes in policy, culture, and leadership that are required to deliver change after a lesson is identified are not always delivered in practice.<sup>18</sup> A 2013 investigation into "persistent lessons identified relating to interoperability" in reviews of 32 emergency incidents, commissioned by the CCS, concluded that "lessons identified from the events are not being learned to the extent that there is sufficient change in both policy

<sup>&</sup>lt;sup>15</sup> Emma Norris and Marcus Shepheard, How Public Inquiries Can Lead to Change (Institue for Government, 2017).

<sup>&</sup>lt;sup>16</sup> Cabinet Office, *Lessons Identified from UK Exercises and Operations*, 2011.

<sup>&</sup>lt;sup>17</sup> Ibid.

<sup>&</sup>lt;sup>18</sup> Kevin Pollock, *Review of Persistent Lessons Identified Relating to Interoperability from Emergencies and Major Incidents since 1986* (Emergency Planning College, 2013), 8.

and practice to prevent their repetition."<sup>19</sup> Lord Taylor, who led the public inquiry into the Hillsborough Stadium Disaster, said this:

"That it was allowed to happen, despite all the accumulated wisdom of so many previous reports and guidelines must indicate that the lessons of past disasters and the recommendations following them had not been taken sufficiently to heart...there is no point in holding inquiries or publishing guidance unless the recommendations are followed diligently. That must be the first lesson."<sup>20</sup>

Identifying and acting on lessons from crises is always a complex process. In the case of COVID-19, this will prove especially true for two reasons. The first is the unprecedented scale and complexity of the pandemic. It has, with few exceptions, significantly affected every community, local authority, and government department. Internally reviewing how well Local Resilience Forums, departments, and the Cabinet Office have responded will be challenging. This job falls to the CCS, who have responsibility for identifying lessons that are shared across government, collating wisdom from a local level, and reviewing the coordination of the cross-government response. With a secretariat of fewer than 100 people, this will be a massive undertaking.

The second reason is the duration of COVID-19. The complex and multi-staged response to the pandemic has already lasted more than a year. Both central and local government will be responding to the impacts of COVID-19 for months, if not years, to come. This will make it difficult to examine such a protracted period. In many emergencies there is not a clear or linear progression from 'response' to 'recovery' that could trigger a review progress – and if an emergency is understood by government to have 'moved on' to the recovery phase, this may not reflect the experiences of the victims of a disaster.<sup>21</sup> An ongoing effort to identify lessons is therefore needed, which must run alongside a continuous effort by government to address the impacts of the pandemic.

The CCS should lead a far-reaching internal review to identify lessons for civil emergency planning and response capabilities from the pandemic, at all levels of government, share lessons with local resilience forums and between departments, and identify lessons relevant to the coordination of the cross-government response. These should consider weaknesses in emergency management structures and processes, in addition to decision making by individuals. Once this has been done, acting on lessons identified from COVID-19 must be driven from the very highest levels of Government. Measures to ensure this happens, and to resource the CCS to undertake this work, will be discussed in Section 3.4 of this paper.

<sup>&</sup>lt;sup>19</sup> Pollock, Review of Persistent Lessons Identified Relating to Interoperability from Emergencies and Major Incidents since 1986.

<sup>&</sup>lt;sup>20</sup> Lord Taylor of Gosforth, quoted in ibid., 16.

<sup>&</sup>lt;sup>21</sup> Lucy Easthope, *The Recovery Myth: Plans and Situated Realities of Post-Disaster Response* (London: Palgrave Macmillan, 2018), 35–36.

## 2. The risks we face

Poor emergency preparedness does not always result from a failure to plan, or to plan in enough depth. It can also be the consequence of failing to anticipate risks in the first place or assess their consequences thoroughly.

Building resilience means accurately identifying and then assessing the risks that could affect government and citizens: what they are, how likely they might be to occur, and the full range and severity of impacts they could have. It is critical that this process is robust. The risk horizon is always changing, so government must not 'plan for the last war'. It must continually assess and reassess risks and its capability to manage them.

### 2.1 Scanning the horizon

The CCS conducts a National Risk Assessment (NRA) that considers (as of the most recent Assessment) malicious and non-malicious risks, their likelihood of occurring and their possible impacts. The Assessment is classified, but a de-classified National Risk Register, based on information in the Assessment, is published around once every two years.<sup>22</sup> This risk assessment process informs emergency planning by designated Lead Government Departments, which are appointed to plan for particular emergencies. Local Resilience Forums, consisting of organisations that have a legal duty to plan, prepare, and respond under the Civil Contingencies Act, are given guidance on the conclusions in the NRA to consider when planning for risks that could arise within a local area.

The UK is internationally recognised for having a best-practice risk assessment process.<sup>23</sup> The Director of the CCS, Roger Hargreaves, has said it is "genuinely rigorous and objective ...[and] pleasingly free of any sense of political interference."<sup>24</sup> It is an iterative process, updated biannually to reflect changing understandings of risk, new and emerging risks, and the experience of emergencies in the interim months.

No risk assessment can predict the future, but the scenarios in the NRA must enable Government to plan and prepare for a wide range of emergencies that could happen. This means the scenarios must represent the upper limits of potential impact – it is better to be overprepared than underprepared. By establishing the highest benchmark for planning, the risk of underpreparing is, in theory, minimised.

The Assessment therefore presents "reasonable **worst-case** scenarios" (emphasis added). These are created by a Lead Government Department responsible for a particular

<sup>&</sup>lt;sup>22</sup> Cabinet Office, National Risk Register, 2020.

<sup>&</sup>lt;sup>23</sup> United Nations International Strategy for Disaster Reduction, Peer Review Report: United Kingdom, 2013.

<sup>&</sup>lt;sup>24</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Roger Hargreaves', 25 November 2020, 2.

emergency, in consultation with the CCS, other departments, and with external consultation.<sup>25</sup> These establish what the impacts of a risk could be, which forms the basis for planning and preparedness.

However, these are still estimates. A real emergency is likely to create challenges that were not included in the relevant scenario (see Figure 4 below). COVID-19 illustrates how critical it is that the assessment of risks accurately covers the full breadth and scale of their reasonable worst-case consequences.

### Figure 4: Case study – how far did government plan for a pandemic?

Before COVID-19 an *influenza* pandemic was the basis of both pandemic planning<sup>26</sup> and simulations including in exercise 'Cygnus' in 2017. This was assessed to be the risk with the highest potential impact, and one of the most likely to materialise.<sup>27</sup> The Department for Health and Social Care has been explicit that: "exercise Cygnus was not designed to consider other potential pandemics."<sup>28</sup>

Assessments over several years severely underestimated the impact that a novel infectious disease – such as COVID-19 – could have.<sup>29</sup> The most recent pre-COVID-19 National Risk Register said that the "consequences may include several thousand people experiencing symptoms, potentially leading to up to 100 fatalities."<sup>30</sup> That is, a novel infectious disease outbreak did not have pandemic potential and would be confined to a managed outbreak.

COVID-19 was neither an influenza pandemic nor a novel infectious disease: it was a novel infectious disease pandemic. Government was not prepared for this. The increased incidence of hospital admissions recorded for COVID-19, compared with previous influenza infections, undermined existing planning assumptions on acute sector capacity.<sup>31</sup> Government stockpiles of vaccines and anti-viral medication such as Tamiflu and Relenza, maintained for pandemic influenza, were of little use in responding to a novel coronavirus.<sup>32</sup> Existing supplies of PPE, suitable for safe working in the event of an influenza outbreak, provided insufficient protection for health practitioners in contact with COVID-19 patients.<sup>33</sup>

<sup>&</sup>lt;sup>25</sup> Cabinet Office, National Risk Register, 2020, 11.

<sup>&</sup>lt;sup>26</sup> Department of Health and Social Care, UK Influenza Pandemic Preparedness Strategy 2011, 2011.

<sup>&</sup>lt;sup>27</sup> Cabinet Office, *National Risk Register*, 2017.

<sup>&</sup>lt;sup>28</sup> Department of Health and Social Care, UK Pandemic Preparedness, 2020.

<sup>&</sup>lt;sup>29</sup> Cabinet Office, *National Risk Register*, 2013, 13; Cabinet Office, *National Risk Register*, 2015, 20; Cabinet Office, *National Risk Register*, 2017, 34.

<sup>&</sup>lt;sup>30</sup> Cabinet Office, National Risk Register, 2017, 34.

<sup>31 {</sup>Citation}

<sup>&</sup>lt;sup>32</sup> Qi Tan et al., 'Is Oseltamivir Suitable for Fighting against COVID-19: In Silico Assessment, in Vitro and Retrospective Study', *Bioorganic Chemistry* 104 (November 2020).

<sup>&</sup>lt;sup>33</sup> National Audit Office, The Supply of Personal Protective Equipment (PPE) during the COVID-19 Pandemic, 2020.

Several interviewees for this paper argued that the omission of non-influenza pandemics from the government risk assessment constituted a failure of assessment, which in turn led to a failure of planning and preparedness. This is particularly the case given the significant consequences that other non-influenza outbreaks, and particularly coronaviruses such as SARS and MERS, have had globally in recent decades. As a number of interviewees noted, global interconnectedness makes Britain vulnerable to an increasing range of public health threats, and government's risk identification and planning efforts must reflect this.

The newest iteration of the National Risk Register, published in December 2020, states that influenza pandemics have historically been the most common, but it now lists 'pandemics', rather than influenza pandemics exclusively, on its risk matrix.<sup>34</sup>

Some risks have been included in the Assessment for a long time, but others are newer. The latter pose an additional challenge as, if there is less of a historical precedent, their potential impacts may be less well understood and harder to anticipate. 'Disinformation', for example, was added to the 2020 Assessment, with potential impacts including disorder and violence.<sup>35</sup> On 6<sup>th</sup> January 2021, violence at the US Capitol building to protest the certification of the 2020 US Presidential Election left five dead, including a police officer. Many of those who participated were inspired by false allegations of voter fraud and fringe conspiracy theories such as 'QAnon', which are increasingly gaining traction online.<sup>36</sup>

This illustrates that, while some risks are long-established, the risk landscape is constantly evolving. Risks associated with disruption to satellite systems are another example of an evolving risk that government must keep pace with (see Fig 5 below).

### Figure 5: Case study – new risks in space

Space weather events, such as solar flares, could seriously disrupt a range of services that rely on satellite-enabled technologies. Vulnerable assets include 6 billion Global Navigation Satellite System (GNSS)-dependent devices worldwide – including those used by cargo ships, aeroplanes, and various forms of transport – and meteorological monitoring systems.<sup>37</sup> Though this risk is low, the potential impact could be severe on a global scale.<sup>38</sup>

<sup>&</sup>lt;sup>34</sup> Cabinet Office, National Risk Register, 2020.

<sup>35</sup> Ibid., 131.

<sup>&</sup>lt;sup>36</sup> Ben Collins and Brandy Zadrozny, 'Extremists Made Little Secret of Ambitions to "occupy" Capitol in Weeks before Attack', *NBC Online*, 8 January 2021.

<sup>&</sup>lt;sup>37</sup> Athena, A New Approach to Space, 2020, 16.

<sup>&</sup>lt;sup>38</sup> Government Office for Science, Satellite-Derived Time and Position: A Study of Critical Dependencies, 2018.

Severe space weather has been included in the NRA since 2013, and the reasonable worst-case scenario is based on historic extreme space weather events.<sup>39</sup> However, satellites are also vulnerable to malicious attacks, including cyber-attacks by hostile state actors, and from accidents that could result from collisions or space debris in an increasingly crowded orbit.<sup>40</sup>

Concerns have been raised over the last decade that the growing number of active and decommissioned satellites in orbit increases the chance of collisions.<sup>41</sup> GNSS satellites orbit in Medium-Earth Orbit, which is less crowded than Lower-Earth Orbit (LEO), and so Government assesses that a collision is currently unlikely.<sup>42</sup> Yet, the number of satellites being launched each year could increase fivefold by 2025,<sup>43</sup> and congestion in LEO is pushing more companies to launch into MEO.<sup>44</sup> This increases the chance of a GNSS satellite collision or even a 'Kessler Event', a hypothetical event in which a collision in LEO has a cascading effect due to the density of debris and satellites there, leading to exponentially more collisions which could migrate into upper orbits.<sup>45</sup>

Failure of GNSS, even for a short time, could have severe global consequences across civilian and military fields.<sup>46</sup>

### 2.1.1 Understanding impact

Identifying risks is only the first step. Assessing their potential severity and thereby enabling effective planning and capability building requires government to consider the full range of impacts a risk could have across a range of fronts. These must go beyond risk to life. The NRA presents a holistic view of impact across seven dimensions: human welfare (including fatalities), behaviour, essential services, economic damage, environmental damage, security (including the justice system), and international impacts (including reputational damage and damage to relationships with UK partners).<sup>47</sup>

While the impacts of some emergencies might be relatively straightforward to predict – for instance, a train derailing – it is increasingly recognised that "an initial impact can trigger

next Decade', MIT Technology Review, 26 June 2019.

<sup>&</sup>lt;sup>39</sup> Cabinet Office, National Risk Register, 2012, 7,20.

<sup>&</sup>lt;sup>40</sup> Government Office for Science, Satellite-Derived Time and Position: A Study of Critical Dependencies, 25–32.

<sup>&</sup>lt;sup>41</sup> Glen Gibbons, 'Satellite Collision Raises Issue of Similar GNSS Risks', *Inside GNSS*, 13 February 2009; Loren Grush, 'As Satellite Constellations Grow Larger, NASA Is Worried about Orbital Debris', Resilient Navigation and Timing Foundation, 16 October 2018.

 <sup>&</sup>lt;sup>42</sup> Government Office for Science, *Satellite-Derived Time and Position: A Study of Critical Dependencies*, 32.
 <sup>43</sup> Tate Ryan Mosley, Erin Winick, and Konstantin Kakaes, 'The Number of Satellites Orbiting Earth Could Quintuple in the

<sup>&</sup>lt;sup>44</sup> Grush, 'As Satellite Constellations Grow Larger, NASA Is Worried about Orbital Debris'.

<sup>45</sup> Ibid.

<sup>&</sup>lt;sup>46</sup> Government Office for Science, *Satellite-Derived Time and Position: A Study of Critical Dependencies*.

<sup>&</sup>lt;sup>47</sup> Cabinet Office, National Risk Register, 2020, 12.

other phenomena that lead to consequences with significant magnitudes."<sup>48</sup> In complex systems with linked dependencies and vulnerabilities, an emergency can escalate as the primary impacts of the emergency itself results in further, secondary and tertiary impacts.

These 'cascading risks' can be several steps removed from the initial risk and so may be harder to predict. The Tōhoku earthquake in March 2011 is a prime example of cascading risk; it only killed around 100 people, but the tsunami it caused killed 18,000, and the consequent tsunami damage to Fukushima-Daichi nuclear power plant displaced 200,000. In this example, secondary and tertiary impacts of the initial emergency created one of a far bigger scale.





Source: Adapted version of linear vs cascading risk development diagram, from Gianluca Pescaroli and David Alexander, 'A definition of cascading disasters and cascading effects: going beyond the "toppling dominos" metaphor', *Planet@Risk*, 3:1 (2014),

Cascading risk does not only affect infrastructure. "Increasing interdependencies between energy, food and water systems, global supply chains, communication and financial systems, ecosystems and climate", as well as shared reliance on technologies, mean that society is increasingly vulnerable to cascading risk.<sup>49</sup> As Figure 6 shows, several impacts of a pandemic are both consequences of the initial emergency *and* causes of further, secondary impacts. Other malicious and non-malicious risks – for instance, a major cyber-

<sup>&</sup>lt;sup>48</sup> David Alexander and Gianluca Perscaroli, *A Definition of Cascading Disasters and Cascading Effects: Going beyond the "Toppling Dominos" Metaphor*, vol. 3, 1 (Planet@Risk, 2015), 65.

<sup>&</sup>lt;sup>49</sup> Dirk Helbing, 'Globally networked risks and how to respond' Nature, 497 (2013), 51, cited in: Alexander and Pescaroli, A Definition of Cascading Disasters and Cascading Effects: Going beyond the "Toppling Dominos" Metaphor.

attack on several NHS Trusts or banks, or another pandemic – are likely to result in cascading risks in the future.

The interaction of different vulnerabilities that trigger cascading risks can create problems for risk assessment. Interdependencies within complex systems mean that even if constituent elements of a system are well prepared, such as an individual government department, vulnerability in another area of the system exposes that element to risk all the same.

This makes is critical that not only planning, but risk assessment too, is not siloed. To detect risks and accurately assess exposure and vulnerability to them, government must work collaboratively. This should involve consultation with relevant stakeholders at national and local levels, within the public sector, and more widely. As SARS, MERS and COVID-19 have shown, for risks that emerge outside the UK, the Government should engage internationally with relevant countries and organisations to learn from their experiences.

### 2.2 Combatting groupthink

For Government to identify risks, frame them in a way that enables the most effective planning, and, as far as possible, understand their impacts, it must consult widely in its risk assessment processes and scenario design. A wealth of research has identified the many biases that can affect research findings, such as selection bias – a research sample doesn't represent the wider population – and confirmation bias – contradictory evidence is not incorporated.<sup>50</sup> These biases can be unconscious and could distort risk assessments. It is therefore crucial that steps are taken to remove biases from the risk assessment process.

Introducing a variety of perspectives and creating an open forum to voice opinions can help to combat groupthink tendencies (where an unfounded consensus prevails, which avoids asking difficult questions and fails to consider alternative points of view). Irving Janis, who introduced the concept, argued that high-stress situations could make people especially vulnerable to groupthink.<sup>51</sup> In addition, the risks covered in the Assessment are extremely varied and complex. Without the input of the most relevant national or international subject-matter experts, inaccurate judgements may go unchallenged.

Unsurprisingly, the CCS has measures at each stage of their risk assessment analysis designed to guard against groupthink (see Figure 7 below).<sup>52</sup> These are intended to involve experts from across and outside government, bringing a range of perspectives and making sure those overseeing the process are not all grouped together in a way that could promote conformity of opinions. Roger Hargreaves, Director of the CCS, has said that the

<sup>&</sup>lt;sup>50</sup> Catalogue of Bias, 'Biases', Web Page, 8 February 2020.

<sup>&</sup>lt;sup>51</sup> Irving Janis, Groupthink, in: Emery A. Griffin, *A First Look at Communication Theory* (New York: McGraw-Hill, 1991), 240. <sup>52</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Roger Hargreaves',

<sup>9–11.</sup> 

CCS feels "that [this] injects enough challenge and firebreaks within the process to stop one particular voice dominating."53

First, the methodology for identifying risks that should be included in the NRA is informed by consultation with academics, and a steering group chaired by the CCS and made up of representatives from across departments reviews the impact and likelihood scores assigned to different risks.<sup>54</sup> Lead Government Departments responsible for then developing a reasonable worst-case scenario for their assigned risk(s) are expected to consult with relevant experts and other departments.<sup>55</sup> To scrutinise the scenario, an Expert Challenge Group is convened by the CCS. Once any problems this identifies have been addressed by a department, its Chief Scientific Advisor and their network reviews the model. Finally, a central assurance process involving the Government Chief Scientific Advisor and relevant senior civil servants examines the scenarios, before sign off by the relevant minister and the Prime Minister.

### Figure 7: Assurance processes for risk assessment within CCS

<b>Risk identification – Civil Contingencies Secretariat</b>
Consultation with academics around the overall risk methodology
CCS Risk Assessment Steering Group reviews impact/likelihood ratings for risks
Scenario design – Lead Government Department
Lead Government Department designs reasonable worst case scenario, consulting with experts and other relevant departments
RWCS reviewed by Expert Challenge Groups convened by the CCS
Review by Chief Scientific Advisor and their network in relevant department
Central assurance process involving relevant committees, the Government CSA, Senior Civil Servants
Sign off by Minister and Prime Minister
Source: House of Lords Committee on Risk Planning and Management, <i>Uncorrected oral evidence: Roger</i> Hargreaves (2020), 9-11; Michael Stock and Jonathan Wentworth, 'Evaluating UK National Hazards: The National

Risk Assessment', Parliament Post, POSTBrief 31 (2019), 14.

<sup>53</sup> Ibid., 11.

<sup>&</sup>lt;sup>54</sup> Michael Stock and Jonathan Wentworth, 'Evaluating UK Natural Hazards: The National Risk Assessment', *Parliament Post* POSTbrief 31 (2019): 14; House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Roger Hargreaves', 9.

<sup>&</sup>lt;sup>55</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Roger Hargreaves', 10.

However, because this scrutiny is led by people either within government or their networks, or who have been invited into the process, this raises the risk of selection bias. Relying on those known to government to provide scrutiny creates the risk that dissenting points of view will not be heard. Two academics interviewed for this paper suggested that this problem is driven from the other side, too, with academics failing to engage government in their work: one said, "academics need to come out of the ivory tower and push their agenda more firmly within government."

The CCS are conscious of these problems and want to create a process that "allows people to choose to engage" with "genuine challenge and fresh thought", but does not overwhelm the process with contributions.<sup>56</sup> An open consultation process risks the latter happening, especially when the process runs so regularly, leaving a limited time window for revisions to be consulted on, and changes to be implemented.

One way of overcoming this problem could be to adapt a solution proposed by Irving Jarvis: that several groups with separate leaders should consider the same questions at the same time.<sup>57</sup> Government should consider establishing an Independent Civil Contingencies Advisory Group (ICCAG), an independent, standing membership body for academics and professionals working in the fields of risk management and resilience, with expertise across sectors and categories of risk in the NRA.<sup>58</sup> A Chair should have responsibility for ensuring its membership comprises a diverse range of national and international-subject matter experts. Members could feed into government's risk management process at several stages, which is discussed in Chapter 4.

Recommendation 1: An Independent Civil Contingencies Advisory Group should be established, comprising academics and professionals working in the fields of risk management and resilience, and with expertise across sectors and risk categories. Its membership should not be confined to the UK, and a Chair should be responsible for drawing in a diverse range of national and international-subject matter experts. Members should feed into government's risk management process at several stages.

In the risk assessment stage, ICCAG could assemble an Independent Challenge Group to run alongside government-led Expert Challenge Groups. Of a pool of ICCAG members, up to half could be selected by government, and an equivalent number of the remaining members could be appointed by the Chair of ICCAG to the Independent Challenge Group. (Members of this body could not participate in both a government-run group and an independent group that were considering the same scenario.)

Each challenge group would follow the same process, with their findings presented in the same format. These could at first be presented to departments anonymously to avoid any

<sup>56</sup> lbid., 2, 11.

<sup>&</sup>lt;sup>57</sup> James D Rose, *Diverse Perspectives on the Groupthink Theory – A Literary Review*, 2011, 39.

<sup>58</sup> Cabinet Office, National Risk Register, 2020, 9.

attribution bias based on preconceptions about group composition. The findings could then be compared by departments to identify areas of disagreement that should be explored further.

Processes could be put in place to ensure that new perspectives are cycled into both groups to inject challenge. For instance, government could aim for at least a third of participants to rotate between the Independent and Expert Groups each time the same issue is considered, and for no member of either group to be rotated twice in a row, to ensure the same members are not simply moved back and forth between groups. There could be exceptions to these, to ensure that those with a unique expertise are always represented in the Expert Challenge Group.

Recommendation 2: Independent Challenge Groups made up of members of the ICCAG should be created to run parallel with existing government-led Expert Challenge Groups. There should be no crossover between membership of Independent and Expert groups. Each group should consider the same issues using the same process. Their findings should first be shared with departments anonymously to avoid any attribution bias.

### 2.2.1 Creating a culture of openness

In order to allow for risk assessments to be fully engaged with and scrutinised, there should be a presumption towards transparency. Material related to non-malicious risks should be made publicly available. Material related to the assessment and mitigation of malicious threats, such as terrorism, must remain classified to protect national security.

Currently, however, this is not how risk assessment operates. The NRA is a classified document because it contains material sensitive to national security.<sup>59</sup> Outside of departments, in local resilience forums, only those designated responders under the Civil Contingencies Act can view it, in paper form and under supervision. The publicly-available National Risk *Register* contains a summary discussion of both malicious threats and non-malicious hazards that are considered in the full NRA.

This presumption of secrecy creates a barrier to the scrutiny of live risk-assessments. In evidence to the House of Lords Committee on Risk Assessment and Risk Planning, David Alexander, Professor of Risk and Disaster Reduction at University College London, argued that secrecy surrounding the NRA was harmful for efforts to improve resilience, and that "a great deal more transparency and…open discussion of what the risks actually are" is needed.<sup>60</sup> A local emergency planner interviewed for this paper, while accepting that some areas of the NRA "cannot be made public", explained that even Category 1 and

<sup>59</sup> Ibid., 5

<sup>&</sup>lt;sup>60</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Professor David Alexander, Dr. Piers Millet, Professor Ortwin Renn', 2 December 2020, 6.

2 responders found it difficult to access and refer to due to the tight controls. This will have a direct, and deleterious, impact on the usefulness of the Assessment as a reference tool for planning.

A risk assessment only serves its purpose if the relevant people can engage with it. This was a key recommendation of the Pitt Review into flooding fourteen years ago, seen at the time as "the largest peacetime emergency we've seen" in its "scale, duration, and complexity"<sup>61</sup>;

"We must be willing to work together and share information. We recognise there are issues of commercial confidentiality and security, but we firmly believe that the public interest is best served by closer cooperation and a presumption that information will be shared. We must be open, honest and direct about risk, including with the public. We must move from a culture of 'need to know' to one of 'need to share'"

To enable better preparedness, greater transparency is needed. Greater openness about the non-malicious hazards aspects of the Assessment could improve awareness of its conclusions and allow for further engagement from experts outside government and the formal process. This is the model followed by the Dutch Government, which has made publicly available a 200-page version of their National Risk Assessment. <sup>62</sup> This is far more comprehensive than the UK's National Risk Register, normally 50-70 pages long.

Sir Michael Pitt highlighted that some LRFs had put their members through the necessary vetting to allow them easy access to 'SECRET' material. However, LRFs have no financial backing, so this would be prohibitively expensive for some, and staff turnover would create further complications.

Instead, Government should declassify and publish all material in the National Risk Assessment that is not national-security sensitive, in line with updates to the NRA. This is a far cheaper solution, and one that would allow far greater scrutiny.

Recommendation 3: The Government should move from a presumption of 'Need to Know', to 'Need to Share'. To improve engagement with the National Risk Assessment, make it easier to consult as a risk assessment tool, and encourage external scrutiny, the government should pursue a policy of increased transparency. It should publish all parts of the Assessment that are not pertinent to national security in line with updates to the Assessment.

<sup>&</sup>lt;sup>61</sup> Tim Brain, in Sir Michael Pitt, Lessons Learned from the 2007 Floods, 2012, X.

<sup>&</sup>lt;sup>62</sup> National Institute for Public Health and the Environment - Government of the Netherlands, National Risk Profile 2016, 2016.

## 3. Plan and practice

"Plans are worthless, but planning is everything." 63

Though no plan could ever fully prepare government for an emergency, planning is essential to laying the foundations for a more effective central response. It allows government to establish what measures need to be put in place in case of an emergency, what capabilities would be required, and the steps that would need to be taken in the event that emergency occurs. Planning should be understood as a process, not a product.<sup>64</sup>

Each kind of emergency has a designated Lead Government Department that is responsible for leading multi-agency emergency planning activity.<sup>65</sup> Emergency management in the UK follows the 'subsidiarity principle', which is that "decisions should be taken at the lowest appropriate level".<sup>66</sup> This means departments will not necessarily be playing a commanding role, but they must consider how they can best support the wider response.

Though all emergencies will be managed by one lead department, many will have wholeof-government impacts. In a pandemic, for which the Department for Health and Social Care is lead, as David Alexander put it: "the behavioural, social and economic consequences are as serious as the medical ones in many respects."<sup>67</sup> Planning for these kinds of shared risks must therefore be the shared responsibility of several departments at once.

# 3.1 Poor planning, poor capabilities, poor preparedness

The principles of how Lead Government Departments should plan for any emergency are straightforward: plans need to make clear what steps the department would need to take and in what order, taking full account of all the potential impacts identified in risk assessment, and being realistic about capability. They need to identify the roles required, who would fill them; who would be responsible for making critical decisions; and who else

<sup>63</sup> Attributed to anon. soldier by Dwight D. Eisenhower. See: Quote Investigator, 'Dwight D. Eisenhower', Web Page, 20 January 2021.

<sup>&</sup>lt;sup>64</sup> David Alexander, *How to Write an Emergency Plan* (Edinburgh: Dunedin, 2016).

<sup>&</sup>lt;sup>65</sup> Cabinet Office, 'List of Lead Government Departments' Responsibilities for Planning, Response, and Recovery from Emergencies', Web Page, 17 January 2011.

<sup>&</sup>lt;sup>66</sup> Cabinet Office, Responding to Emergencies, the UK Central Government Response - Concept of Operations, 2010.

<sup>&</sup>lt;sup>67</sup> Professor David Alexander, House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Professor David Alexander, Dr. Piers Millet, Professor Ortwin Renn', 4.

the department would need to work with, and how.<sup>68</sup> As one interviewee put it, these principles are "codified common sense".

But these principles do not always translate into practice, which leads to plans that are shallow or unrealistic. As David Alexander explains, "the plan exists, and it may even contain useful material, but it...cannot be implemented".<sup>69</sup>

One way that planning can be undermined is by underdeveloped infrastructure and supply capabilities. In the pandemic, one of the clearest examples of this has been PPE procurement, which was too reliant on last-minute purchasing plans to supplement influenza pandemic stockpiles that were insufficient for COVID-19 (see Fig 8 below).

### Figure 8: Unrealistic assumptions in PPE procurement

The Government's Pandemic Influenza Response Plan depended on "just-in-time" procurements to supplement PPE stockpiles if needed. This assumes that PPE supply chains will either be unaffected by, or resilient to, a pandemic, meaning suppliers will be able to deliver on request.<sup>70</sup>

In reality, these plans constituted "preparedness on paper only".<sup>71</sup> Unsurprisingly, the Government struggled to source just-in-time PPE in an "overheated" global market, where every country was trying to source it at the same time.<sup>72</sup> This meant that frontline health and social care workers were at times unable to obtain PPE, and the Government paid a premium on PPE secured at the last minute.<sup>73</sup> PPE spend between February and July 2020 was £10 billion higher than it would have been if purchased at 2019 prices.<sup>74</sup>

These failures were rooted in optimistic planning assumptions. Eventually, the Government was able to secure large volumes of PPE.<sup>75</sup> Domestic manufacturing capacity increased, and the UK is now able to produce 70 per cent of its required PPE (some items, such as gloves, are unable to be produced in the UK due to a lack of raw materials), but the question remains how to sustain that manufacturing base in the future.<sup>76</sup>

This example highlights the potential for tension between emergency preparedness – which can require government to spend money on perishable resources that might never

<sup>&</sup>lt;sup>68</sup> Cabinet Office, The Lead Government Department and Its Role - Guidance and Best Practice, 2004, 23–25.

<sup>69</sup> David Alexander, Principles of Emergency Planning and Management (Edinburgh: Terra, 2002), 109.

<sup>&</sup>lt;sup>70</sup> NHS England, Operating Framework for Managing the Response to Pandemic Influenza, 2017, 21.

<sup>&</sup>lt;sup>71</sup> C. Bryce et al., 'Resilience in the Face of Uncertainty: Early Lessons from the COVID-19 Pandemic', *Journal of Risk Research* 23, no. 7 (3 May 2020): 5.

<sup>&</sup>lt;sup>72</sup> National Audit Office, The Supply of Personal Protective Equipment (PPE) during the COVID-19 Pandemic, 5.

<sup>&</sup>lt;sup>73</sup> Ibid., 10. <sup>74</sup> Ibid., 9.

<sup>&</sup>lt;sup>74</sup> IDIO., 9.

<sup>&</sup>lt;sup>75</sup> Ibid., 11–12.

<sup>&</sup>lt;sup>76</sup> Ibid.; Department of Health and Social Care, 'Huge Increase in UK Personal Protective Equipment Production', Web Page, 28 September 2020.

be needed – and 'just-in-time' efficiency. The pandemic has reaffirmed that the consequences of underpreparing are grave. However, there does not necessarily have to be a black-and-white trade-off between resilience and efficiency, or cost-effectiveness. When goods cannot be reliably procured just-in-time, such as medical gloves that cannot be manufactured in the UK (and so can only be purchased from the global market) they should be stockpiled. Yet for goods that can be made in the UK, another option is for Government to develop better surge manufacturing capacity so that goods can be produced domestically at short notice, as has been the case with PPE. This approach strikes an appropriate balance between 'just-in-time' and 'just-in-case', whilst also making the UK's 'just-in-time' arrangements more self-sufficient and going some way to insulate them from global market squeezes.

Just-in-time procurements are used widely in the public and private sectors, and COVID-19 has revealed that this could make the UK vulnerable again in the future. The Cabinet Office should therefore conduct a review of the use of just-in-time procurements in public sector emergency planning, to determine whether an appropriate balance between stockpiling and 'just-in-time' procurements is being struck, and whether there is scope to develop UK manufacturing capabilities to reduce reliance on global markets.

Recommendation 4: The Cabinet Office should conduct a review of the use of just-in-time procurements in emergency planning. This should determine whether an appropriate balance between stockpiling and 'just-in-time' procurements is being struck to ensure that essential goods can be delivered on time in an emergency. This review should consider whether UK surge manufacturing capacity can be developed to reduce reliance on global markets and unnecessary stockpiling.

The deficiencies exposed by COVID-19 also raise questions relating to long-term infrastructure. Only last month, to take one example, the Environment, Food, and Rural Affairs Committee reported concerns about the budget allocated to the maintenance of flood risk assets in the face of an increase in severe weather events.<sup>77</sup>

It is clear that identifying a risk, and even planning for it, is not guaranteed to translate into preparedness.<sup>78</sup> In Section 3.4, this paper will make recommendations for how the Government could strengthen oversight of emergency planning and capabilities.

<sup>&</sup>lt;sup>77</sup> House of Commons Environment, Food and Rural Affairs Committee, *Flooding: Fourth Report of Session 2019 - 21*, HC 170 (London: The Stationery Office, 2021).

<sup>&</sup>lt;sup>78</sup> Suzanne Raine, 'Half of the National Risk Register Is Missing', RUSI Newsbrief 41, no. 1 (2021): 1.

### 3.2 Failing to plan, planning to fail

A more fundamental problem with the central response to the pandemic has been a failure by departments to plan for impacts that had been anticipated, and which should have been mitigated. All departments have a responsibility to consider, and plan for, how risks in the National Risk Assessment might affect them, even if they are not the designated Lead Government Department.<sup>79</sup> Further, CCS guidance says that "exercises must be a co-operative venture (sometimes between Departments) with real confirmation and learning outcomes, leading to substantive revision and re-thinking where appropriate."<sup>80</sup>

Assessments of the possible non-health impacts of an influenza pandemic had changed little in almost two decades, and recent exercises had highlighted potential non-health impacts.<sup>81</sup> One participant in the most recent pandemic exercise, Cygnus, said that it had, "[o]pened eyes to non-health [participants] that pan flu is everyone's problem".<sup>82</sup> The then Director of the CCS, Katherine Hammond, reiterated this in 2018, saying publicly that this was a "key learning point" from Cygnus, and that consequently a follow up exercise had been launched by the Department for Health and Social Care and Cabinet Office "involving all Government Departments".<sup>83</sup>

And yet, when the time came, there were inexplicable and unbridgeable gaps in planning. The Public Accounts Committee found that before COVID-19, HM Treasury and the Department for Business, Energy and Industrial Strategy (BEIS) had not made plans for dealing with economic impacts.<sup>84</sup> The then-Permanent Secretary of BEIS had not even been aware that exercise Cygnus had happened.<sup>85</sup> This lack of planning created delays designing essential interventions and support schemes, such as the Coronavirus Jobs Retention Scheme.<sup>86</sup>

Another example of a planning gap was the Department for Education's (DfE) failure to plan for exam cancellations. In this instance, failure to plan for a non-health impact quickly became one of the most embarrassing and consequential failures of the Government's pandemic response (see Figure 9 below).

These examples demonstrate a failure to implement the most basic principles of emergency planning. To address these short-comings, stronger oversight of emergency

<sup>&</sup>lt;sup>79</sup> Cabinet Office, *The Lead Government Department and Its Role - Guidance and Best Practice*, 8, 22. <sup>80</sup> Ibid., 22.

<sup>&</sup>lt;sup>81</sup> Department of Health and Social Care, UK Influenza Pandemic Preparedness Strategy 2011, 21–25.

<sup>&</sup>lt;sup>82</sup> Public Health England, 'Exercise Cygnus Report Tier One Command Post Exercise Pandemic Influenza 18 to 20 October 2016', Web Page, 2017, 11.

<sup>&</sup>lt;sup>83</sup> The Royal Society, The Foundation for Science and Technology Debate Record Note: Is the UK Well Prepared for a Repeat of the 1918 Influenza Pandemic?, 2018, 3.

<sup>&</sup>lt;sup>84</sup> House of Commons Public Accounts Committee, *Whole of Government Response to COVID-19: Thirteenth Report of Session 2019 - 21*, HC 404 (London: The Stationery Office, 2020).

<sup>&</sup>lt;sup>85</sup> Ibid., 5.

<sup>86</sup> Ibid.

planning across government is needed. Measures to achieve this will be discussed in Section 3.4.

### Figure 9: Failing to plan, planning to fail – the DfE exam fiasco

It had long been known that a pandemic could require schools to close in order to reduce infection.<sup>87</sup> Schools and educational settings are responsible for making their own generic emergency plans, and before COVID-19, DfE guidance said that these should be written to cover "public health incidents (e.g. [a] flu pandemic)."<sup>88</sup>

Further, England's exam regulator, Ofqual, had issued guidance to assessment centres on dealing with disruption to examinations, which stated that "In the event of **(unspecified)** widespread sustained national disruption...Regulators will provide advice to government departments on implications for exam timetables" (emphasis added).<sup>89</sup>

Finally, the Joint Council for Qualifications, which represents awarding organisations, had developed contingency plans for various types of disruption to examinations due to "major disruption to the system, such as widespread illness, travel disruption, bad weather or power failures."<sup>90</sup>

While these plans would be appropriate for significant localised disruption, no consideration had been given to how students would be assessed if, nationally, exams were not just delayed, but could not be sat at all.

In response to a Freedom of Information request, the DfE told *Reform* that "the Department itself has developed no such plans" for how GCSE, AS, and A-Level students would be assessed if, for any reason, it would not be possible to proceed with exams at all.

Further, despite the known risk that a pandemic could disrupt education and examinations, the DfE told *Reform* that "As of and before November 2019, **there was no specific DfE policy with regards to responding to a pandemic** and, as such [the DfE could not share any] documents in relation to any internal planning" (emphasis added).

This was a gaping hole in the Government's preparedness for a pandemic.

On 20<sup>th</sup> March schools in England and Wales were closed indefinitely and GCSE, AS-Level, and A-Level exams were cancelled. On 31<sup>st</sup> March, the Secretary of State for Education, the Rt. Hon Gavin Williamson MP, instructed Ofqual that grades would be "based on...exam centres' judgements of their ability in the relevant subjects, supplemented by a range of other evidence."<sup>91</sup> To prevent grade inflation, the Secretary of State instructed Ofqual to "ensure, as far as is possible, that qualification standards

<sup>88</sup> Department for Education, 'Guidance: Emergency Planning and Response', Web Page, 5 February 2021.

<sup>&</sup>lt;sup>87</sup> Department for Education, Impact of School Closures on an Influenza Pandemic: Scientific Evidence Base Review, 2014.

<sup>&</sup>lt;sup>89</sup> Ofqual, 'What Schools and Colleges and Other Centres Should Do If Exams or Other Assessments Are Seriously Disrupted', Web Page, 25 July 2020, guidance as of 25th July 2020, as available on web.archive.org.

<sup>&</sup>lt;sup>90</sup> Joint Council for Qualifications CIC, *Joint Contingency Plan for the Examination System in England, Wales and Northern Ireland*, 2019, 3.

<sup>&</sup>lt;sup>91</sup> The Rt Hon Gavin Williamson MP, 'Letter from Secretary of State for Education to Sally Collier', 31 March 2020.

are maintained and the distribution of grades follows a similar profile to...previous years."92

On 3<sup>rd</sup> April, Ofqual announced that Centre Assessed Grades would be subject to a standardisation process designed to mitigate against grade inflation, which would take account of students' rankings within their cohort and schools' historic performances.<sup>93</sup> Concerns were raised that this would be prejudiced against high-performing pupils from poor-performing schools, and in favour of private schools with small class sizes.<sup>94</sup>

On 13<sup>th</sup> August, 40 per cent of A-Level predictions were downgraded by a standardisation process, causing a public outcry. Despite it being known that a significant minority of students would be unfairly downgraded, and that an appeals process would be required, Ofqual only published guidance for appeals after exam results were release, on the 16<sup>th</sup> August. It then withdrew it hours later.<sup>95</sup>

In evidence to the Education Select Committee, the Head of Ofqual later revealed that the appeals process was significantly altered at the last minute on the 16<sup>th</sup> at the request of the Secretary of State, and that the Secretary of State and Ofqual did not agree on the revised approach. This revised policy was published on the 16<sup>th</sup>, but the Head of Ofqual said that the DfE then told them this was not in fact aligned with government policy, leading to its withdrawal.<sup>96</sup>

On the 17<sup>th,</sup> the Government U-turned, saying students would be awarded their Centre Assessed Grades.

This episode demonstrates the dangers of failing to plan for exceptional – but entirely predictable – circumstances. The DfE failed to win public confidence with its approach, and missed an opportunity to allay fears by agreeing and publishing appeals guidance

before grades were released. Instead, chaotic, last-minute decision making at the highest level created further uncertainty. This episode damaged trust in the Government, was distressing for students across the country, and created chaos for university admissions.

<sup>92</sup> Ibid.

<sup>&</sup>lt;sup>93</sup> Ofqual, Summer 2020 Grades for GCSE, AS and A Level, Extended Project Qualification and Advanced Extension Award in Maths, 2020.

<sup>&</sup>lt;sup>94</sup> For example, see: Dr Huy Duong, 'Written Evidence to the Education Select Committee Submitted by Dr Huy Duong (IT Consultant at Private Sector IT Company)', Web Page, July 2020.

<sup>&</sup>lt;sup>95</sup> Richard Adams and Heather Stewart, 'Ofqual "blindsided" Government by Revoking A-Level Appeals Process', *The Guardian*, 16 August 2020.

<sup>&</sup>lt;sup>96</sup> House of Commons Education Committee, 'Oral Evidence: The Impact of Covid-19 on Education and Children's Services, HC 254', 2 September 2020, 4–6.

### 3.3 Training and exercising

Once plans are in place, they must be well practiced. Ensuring that people are trained in emergency plans and understand their roles in delivering them will enable a smoother response if those plans need to be put into action. Exercising plans in a controlled environment is a way to further familiarise people with procedures and their responsibilities, and to test the strength of the plans themselves.<sup>97</sup>

It is essential that this is done regularly both to ensure that plans remain relevant and upto-date, but also as staff turnover may impact on institutional memory and readiness. This will ensure that emergency plans are not just theoretical, static documents, but living ones needing constant refinement.

Exercising is central government's last chance to make, and learn from, avoidable mistakes without real-world consequences. In order to achieve this, exercises need to be frequent, comprehensive and as realistic as possible, involving all those people and organisations that might be impacted by a risk and simulating real-time information flows and developments.

Individual departments should conduct in-house exercises to test their preparedness to deal with those aspects of an emergency that are their responsibility. Further, cross-departmental exercising is also needed to prevent siloed planning and poor coordination. For risks with the potential for whole-of-government impacts, exercises should involve several government departments, and simulate the problems each of them could face.

Afterwards, government needs to act on lessons identified as if the exercise had been the real thing. Exercising can be expensive – but the real-life fall out from failing to test plans is far more costly, as COVID-19 has shown.

Cabinet Office runs an exercise programme incorporating both table-top and immersive, real-world exercises ('Command Post Exercises') that test the central response to known civil risks. In the last decade these have included exercises based on space risk, volcanic eruption, a flu pandemic, and power disruption.<sup>98</sup>

Exercises need to involve senior decision-makers and, for exercises to test cross-Government planning, involve as many different organisations as possible. For more complex emergencies with wider impacts, this may mean multiple different departments – Cygnus involved over 950 individuals from 12 Departments, and, as the Public Accounts Committee found, even this did not involve all relevant actors.<sup>99</sup>

<sup>97</sup> Cabinet Office, Emergency Preparedness, 2012, chap. 5, 54.

<sup>&</sup>lt;sup>98</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Professor Sir John Beddington, Professor Sir Mark Walport', 9 December 2020, 16; Christine McDougall, 'Specification for DECC Exercise Tenders' (Department for Energy and Climate Change, May 2013).

<sup>&</sup>lt;sup>99</sup> Public Health England, 'Exercise Cygnus Report Tier One Command Post Exercise Pandemic Influenza 18 to 20 October 2016', 5; House of Commons Public Accounts Committee, *Whole of Government Response to COVID-19: Thirteenth Report of Session 2019 - 21.* 

While government guidance states that exercising "tests procedures, not people" and "is not designed to catch people out",<sup>100</sup> people have different decision-making styles that could affect outcomes in an emergency.<sup>101</sup> This makes it important to understand how participants will react differently under the same pressures. An interviewee involved in designing and delivering exercises argued that tests of how different individuals make decisions should therefore be built into the exercise process.

Exercising can be expensive and time-consuming, so a blended programme of table-top and more immersive command-post exercises is used. It can be challenging to deliver table-top exercises that are realistic and that involve a wider range of people, and remote working may have made this more challenging – one interviewee for this paper was aware of a government department delivering table-top exercises via email. Conversely, however, virtual table-top exercises may also lower barriers to participation by enabling interactive, wide-reaching, and cost-effective exercises across government (see Figure 10 below). These should not replace in-person exercising, as observing participants in person is important, but they can be used in conjunction with in-person exercises.

### Figure 10: Virtual exercises

Virtual table-top exercises can allow people to participate in interactive exercises remotely. As well as being more engaging and immersive than some table-top exercises, which may rely on written descriptions of a scenario, enabling remote participation makes it easier to involve a wider range of people. This is achieved by simulating how new information about a developing emergency would be received in real life, by enabling participants to receive different types of 'injects'.

One of the services that can support the delivery of virtual exercises is the web-based platform *4D Insight*. The platform feeds participants injects, which could include social media feeds, text messages, and photos and videos, and different participants can be fed different injects, Then, the platform can ask participants to answer questions about how they should respond to the developing situation. After the exercise a findings report can be generated, capturing participants' responses at each stage of the exercise, making it easy to review the exercise and identify lessons. Previous remote exercises run via 4D Insight have involved over 100 participants at once, including several Government departments, permanent secretaries, and over 80 local authorities from all over the country. In theory, there is no limit to how many could be involved.

Source: Brochure available on request from 4D Insight; 4D Insight, *The 4D Insight Platform,* Webpage (accessed 10<sup>th</sup> February 2021).

 <sup>&</sup>lt;sup>100</sup> Cabinet Office, 'Emergency Planning and Preparedness: Exercises and Training', Web Page, 11 November 2014.
 <sup>101</sup> Susanne G. Scott and Reginald A. Bruce, 'Decision-Making Style: The Development and Assessment of a New Measure', *Educational and Psychological Measurement* 55, no. 5 (October 1995).

The findings of an exercise like Cygnus, which were published only after it was leaked, reveal how important exercising can be. Exercise Cygnus found: <sup>102</sup>

- "Evidence of silo planning between and within some organisations and a lack of understanding about the potential impact of a pandemic..."
- "In some organisations there are no plans but rather agreements, procedures, or practices which are not documented and which rely on corporate memory"
- Some participants took part in Exercise Cygnus with plans...that they had not been trained to [use]"
- Scenario demand for services outstripped the capacity of local responders, in the areas of excess deaths, social care and the NHS."

These identified lessons represent *potential* value, but that value will only materialise if those lessons are acted on. Though the Government says that "all the recommendations from Exercise Cygnus were accepted and taken on board [and] many of these proved invaluable for informing the response to Covid", it is undeniable that many of the problems first highlighted by Cygnus emerged again during COVID-19 (albeit in a different kind of pandemic to the one Cygnus tested against).

Debate in the Lords and Commons makes clear that before a leak forced the Government to publish the findings of Exercise Cygnus – after the pandemic hit, and too late for Parliament to scrutinise whether lessons had been acted on – there was a lack of clarity in Parliament about what lessons had been identified and what action was being taken, even if findings had been shared with those directly involved in the exercise.<sup>103</sup> Problems highlighted by exercising demand as much scrutiny as lessons learned from a real emergency, so there should be a presumption of transparency with Parliament and the public.

### 3.4 Strengthening accountability

The deficiencies in emergency planning and capabilities that have been exposed by the pandemic make the case for a stronger, more proactive approach to scrutiny of civil contingency efforts across government. COVID-19 has shown just how high the stakes are, yet oversight of emergency preparedness has too often been hands-off and inconsistent.

A new approach to assuring emergency preparedness will require strengthened oversight on several fronts: continuous engagement by the Cabinet Office, by the Cabinet itself, by individual departments and their ministers, and by Parliament.

<sup>&</sup>lt;sup>102</sup> Public Health England, 'Exercise Cygnus Report Tier One Command Post Exercise Pandemic Influenza 18 to 20 October 2016', 6–9.

<sup>&</sup>lt;sup>103</sup> Lord Richard Harries, 'Lords Debate on Exercise Cygnus', n.d., HL Deb 9 June 2020 Vol 803; Joe Churchill, 'Exercise Cygnus: Answer to Written Question' (HC47395, 15 May 2020).

### 3.4.1 Driving resilience from the centre

Stronger oversight must start with a stronger role for central government.

Currently, the CCS takes only a 'light touch' approach to overseeing the civil contingency efforts of government departments. The Lead Government Department principle dictates that one department is responsible both for managing their own risk, and for coordinating with other departments as appropriate. The Director of the CCS, Roger Hargreaves, has said that the CCS should play a "refereeing" role in guiding this process:<sup>104</sup>

It is probably fair to say that we do not carry out some formal audit process. We are not there to call in every department's plans every year and assess them all for their completeness in a formal assurance model. We bring pressure to bear on departments if we think that there are risks that are not being dealt with properly. We would use our convening power in the Cabinet Office, the authority of the Prime Minister and so forth to be clear about the expectations on departments to manage their risks well... so that they do not feel like they can sit idle, not that they are, or sit quietly in the corner and have no one looking at what they are doing (emphasis added).<sup>105</sup>

While it is important that Lead Government Departments can independently manage emergency planning, the clear and consequential gaps in preparedness for the pandemic suggest that a light-touch approach to oversight has not been enough to drive effective cross-government planning. As Suzanne Raine, former head of the Joint Terrorism Analysis Centre, has recently argued, "however capable the Civil Contingencies Secretariat, it cannot possibly manage these risks effectively if the means by which it relates to the risk owners is opaque."<sup>106</sup>

The CCS must not just detect and assess risks, it must also monitor Lead Government Departments' plans to ensure they are comprehensive, and assess departments' capabilities to respond to risks.<sup>107</sup>

Given the breadth of risks the country faces, the need to ensure that they are being properly mitigated across central and local government, and the huge challenges presented by lesson learning and implementation exercises for an emergency on the scale of COVID-19, it is important that the CCS is properly resourced.

As a point of comparison, the Office for Security and Counter Terrorism, an Executive Function in the Home Office responsible for implementing counter-terrorism strategy across government, employs around 850 staff and had a budget of over £1 billion in 2018-

 <sup>&</sup>lt;sup>104</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Roger Hargreaves',
 10.

<sup>&</sup>lt;sup>105</sup> Ibid., 10–13.

<sup>&</sup>lt;sup>106</sup> Suzanne Raine, 'Half of the National Risk Register Is Missing', 3.

<sup>&</sup>lt;sup>107</sup> The CCS already requires lead departments for the UK's 13 critical infrastructure sectors to produce annual Sector Security Resilience Plans, which report on departments' efforts to respond to sectoral risks. See: Cabinet Office, *Public Summary of Sector Security and Resilience Plans*, 2018.

19.<sup>108</sup> The CCS, by contrast, employs around 90 staff and had a budget of £16.9 million during the same period.<sup>109</sup> Both of these functions work to mitigate risks to life and the prosperity of the country that could have similarly devastating consequences. Greater resourcing for the CCS to enable it to better carry out its work is both necessary and proportionate.

### 3.4.1.1 Engaging the Cabinet

Efforts to improve emergency preparedness, and act on lessons identified from COVID-19, must be continuously driven from Cabinet level. In the long-term this will help to drive improvements in emergency preparedness in departments, as well as helping to coordinate whole-of-government planning. In the shorter term, Cabinet engagement will be necessary to ensure that lessons from COVID-19 are identified and acted on across government as soon as possible.

The need to act on lessons from COVID-19 is the short-term priority. The Government cannot wait for a public inquiry for this work to begin – pandemics, nor any other risks, do not wait for public inquiries. While weaknesses are not addressed, the country is vulnerable to being put in this same position again.

To drive this agenda forwards, a Minister for Resilience and Recovery should be appointed at Cabinet level, to serve for the remainder of this Government. This should be a time-limited role, filled by a senior politician, with the full and active backing of the Prime Minister. It is essential that they have the access and authority to drive change across government. As the CCS works to identify lessons from the pandemic, this Minister should be responsible for ensuring that these lessons are acted on.

While the Minister for the Cabinet Office has the overall responsibility for overseeing resilience and the work of the CCS,<sup>110</sup> this Minister has a wider brief. The scale of the challenge presented by building back better from COVID-19 will require a senior Minister who can be entirely focussed on this task.

This would also signify that the Government is taking seriously the need to review the pandemic response and the fitness of current government machinery to meet the challenges of such a major crisis. It would put them on the front foot, and provide an opportunity to take control of the process, rather than leaving it to external reviews which may seek to place blame.

<sup>&</sup>lt;sup>108</sup> Great Britain and Home Office, *Home Office Annual Report and Accounts 2019-20 (for the Year Ended 31 March 2020)*, 2020, 94, 147.

<sup>&</sup>lt;sup>109</sup> Rt Hon Sir David Lidington, 'Written Answer: Civil Contingencies Secretariat - Finance' (HC 207216, 17 January 2019).

<sup>&</sup>lt;sup>110</sup> Cabinet Office, 'The Rt Hon Michael Gove MP', Webpage, 3 March 2021.

Recommendation 5: The Government should appoint a Minister for Resilience and Recovery, to serve for the remainder of this Government. This should be a cabinet-level position, explicitly backed by the Prime Minister, to ensure they have the necessary authority and access to drive change across government. The Minister should be responsible for overseeing cross-government lesson learning from COVID-19 and ensuring action is taken within departments, as well as in the Cabinet Office, to boost resilience to future crises.

This new Minister should work through National Security Council to coordinate acting on lessons from COVID-19 and hold Ministers to account for progress. In the longer-term, the National Security Council should be used to encourage shared responsibility for resilience at the highest level, focusing Cabinet ministers across government on resilience building, especially for shared, cross-government risks.

To enable this, resilience needs to be given a far greater focus in the National Security Council. the Threats, Hazards, Resilience and Contingencies Subcommittee that existed previously has been disbanded. While Government has said that this was simply an "administrative…consolidation of Cabinet sub-committees"<sup>111</sup>, the main National Security Council already covers a range of subjects and, crucially, has a narrow membership. This may prevent resilience from being given proper attention in the main Council, and limit engagement by wider Secretaries of State for risk-owning departments, such as health. For these reasons, the resilience subcommittee should be reinstated.

Recommendation 6: To drive resilience building at Cabinet level and create a forum for Cabinet members to discussed preparedness for risks shared across government, the Government should re-instate the National Security Council Threats, Hazards, Resilience and Contingencies Subcommittee.

The Threats, Hazards, Resilience and Contingencies Subcommittee should become the vehicle for the newly-created Minister for Resilience and Recovery to drive action on learning lessons from COVID-19. The Minister should chair the Subcommittee, supported by the Deputy National Security Advisor with responsibility for resilience. The Advisor must ensure that the Minister, Prime Minister and other Cabinet members are well-informed on the risk landscape and government's capabilities.<sup>112</sup>

<sup>111</sup> Rt Hon Penny Mordaunt MP, 'Written Answer: National Security Council' (HC 59366, 23 June 2020).

<sup>&</sup>lt;sup>112</sup> Cabinet Office, 'FOI Response to Jason Lai', 23 October 2020, FOI2020/13631.

As the CCS works to identify lessons from COVID-19, it should report its findings to the Subcommittee, which should, with the support of the Deputy National Security Advisor, produce a cross-government action plan for acting on lessons from COVID-19. The Minister should convene the Subcommittee monthly to review progress against this plan, and hold the appropriate Cabinet ministers responsible for progress.

Recommendation 7: The Civil Contingencies Secretariat should report on lessons identified from COVID-19 to the newly-reinstated National Security Council Threats, Hazards, Resilience and Contingencies Subcommittee. The Subcommittee, supported by the Deputy National Security Advisor with responsibility for resilience, should produce a cross-government action plan for acting on these lessons. The newly-created Minister for Resilience and Recovery should convene the Subcommittee monthly to review progress and hold the appropriate Cabinet ministers to account.

Looking further ahead, the National Security Council should continue to drive central government's efforts to address gaps in cross-government planning and capabilities in the long-term. After the post of Minister for Resilience and Recovery is removed, it can be chaired by the Minister of State for the Cabinet Office. This Subcommittee, with the continuous endorsement of the Prime Minister, should create a mechanism for central government to review its capabilities to respond to risks in the NRA, and to hold itself to account for progress.

While the CCS should identify gaps in preparedness for risks – through its assessments of departments' planning and capabilities, exercises, and lessons from real-life emergencies – it will not always be possible for a Lead Government Department to address these on their own. Inadequate planning should be able to be addressed by departments quickly, but weaknesses of capability will mean questions of adequate resourcing, which will require additional funding for departments. Also, for the number of risks that have whole-of-government impacts, a wider assessment of central government planning and capabilities will be required beyond lead government departments. This creates a need not just for the assessment of individual lead departments, but for central government to routinely assess its own efforts to address gaps in cross-government preparedness.

To deliver this, the CCS should produce a regular assessment for the reinstated Subcommittee of UK capabilities to respond to the risks in the NRA. This should detail where capabilities are insufficient for each risk, and estimating how much time and money would be required to address gaps. The Subcommittee, supported by the Deputy National Security Advisor, should then be responsible for producing action plans to address the gaps identified. The assessment and accompanying plans should be reviewed annually to monitor progress.

Recommendation 8: To address gaps in the central government's capabilities to respond to the risks identified in the National Risk Assessment, the Civil Contingencies Secretariat should produce an assessment for the National Security Council of where such gaps exist, and the time and resources required to address them. The Deputy National Security Advisor should then be responsible for coordinating action plans to address these gaps, driving this agenda through the Council. This process should be annual, to enable progress to be monitored.

### 3.4.2 The role of departments

Emergency planning needs to be driven from the highest level within departments. CCS guidance makes clear that planning should have "clear direction (and support, e.g. from Permanent Secretaries) ...at the outset from the top."<sup>113</sup> One interviewee for this paper involved in exercise design claimed that it could be difficult to get senior civil servants to participate in exercises, but that their involvement could drive buy in for improvement.

As well as permanent secretaries giving ongoing attention to planning, there should also be greater oversight by departmental Ministers. A specific Minister should be responsible for emergency preparedness and resource allocation, and ensuring that the right relationships and processes are in place with other departments to manage shared risks. Currently, CCS guidance makes minimal commitments about the accountability of Ministers for civil contingencies;

*"All Secretaries of State are accountable to Parliament for the performance of their department and may be called to account by the relevant Select Committees. There is a constitutional expectation that ministers will co-operate across Government."*<sup>114</sup>

<sup>&</sup>lt;sup>113</sup> Cabinet Office, The Lead Government Department and Its Role - Guidance and Best Practice, 21.

<sup>&</sup>lt;sup>114</sup> Cabinet Office, *Emergency Preparedness*, chap. 13, 17.

Though Secretaries of State are ultimately accountable for their department, resilience building and civil contingencies preparedness should be delegated to a named minister. This is a critical function, and it is unrealistic to expect that a Secretary of State can give it the ongoing, detailed focus it needs. Government should therefore see that every department has a minister whose brief includes this vital area.

Recommendation 9: The Government should ensure that every department has a minister, below Secretary of State level, whose brief specifically includes resilience and civil contingencies capabilities.

### 3.4.3 The role of Parliament

Another critical accountability mechanism is Parliament. As the CCS guidance states, Departments "may be called to account by the relevant Select Committees".<sup>115</sup> Yet while Select Committees have been engaged in intense scrutiny of all aspects of the Government's pandemic *response*, ongoing scrutiny of emergency *preparedness* is more sporadic. The last report on pandemic influenza that was not written in response to a pandemic, for example, was published by the House of Lords Science and Technology Committee in 2005<sup>116</sup> (a follow up to this report was published in 2009 during the H1N1 pandemic).<sup>117</sup>

Select Committees have engaged in proactive scrutiny of UK preparedness – for instance, the Environment, Food and Rural Affairs Committee reported on weaknesses in flood prevention in 2016, and have again this year<sup>118</sup> – but this kind of scrutiny is infrequent and inconsistent across government and across different risks.

Further, subject-specific select committees create the risk of replicating the siloes seen in emergency planning, where only the narrow impacts of an emergency that fall under the remit of a Lead Government Department are considered. By their own admission, the Lords Science and Technology Committee "[did not have] time to produce a comprehensive report on [pandemic contingency planning]" and so did not "conside[r] [impacts on] boarding schools, university halls of residence or prisons [or] preparedness in business and industry."<sup>119</sup> These are some of the areas where planning failures have been clearest during COVID-19.

The Public Administration Select Committee, recognising the inconsistent scrutiny of emergency preparedness by select committees, recommended each committee report on

<sup>115</sup> Ibid., 17.

<sup>&</sup>lt;sup>116</sup> House of Lords Science and Technology Select Committee, *Pandemic Influenza*, HL Paper 88 (London: The Stationery Office, 2005).

<sup>&</sup>lt;sup>117</sup> House of Lords Science and Technology Select Committee, *Pandemic Influenza: Follow-Up*, HL Paper 155 (London: The Stationery Office, 2009).

<sup>&</sup>lt;sup>118</sup> So

<sup>&</sup>lt;sup>119</sup> House of Lords Science and Technology Select Committee, *Pandemic Influenza*, 8.

"risks and future challenges relevant to their remit" once every Parliament, and suggested it could take a "coordinating role" in bringing together the work of the various committees.<sup>120</sup> Though more frequent reporting would help this may still not be frequent enough to keep pace with new or developing risks, would not be without capacity issues, and would not necessarily reduce the risk of siloed thinking.

Instead, the Government should move a motion in parliament to establish a permanent Civil Contingencies Select Committee to give continuous oversight of central and local government preparedness for the risks identified in the National Risk Assessment. As well as scrutinising Lead Government Departments, the committee would hold inquiries to scrutinise cross-government planning and preparedness for risks with whole-ofgovernment impacts.

To do this, they should hold accountability sessions with Secretaries of State, Ministers with the relevant brief, and Permanent Secretaries. The Committee would enable parliamentary scrutiny of civil contingencies to be ongoing and far more consistent. Further, to encourage cross-Government coordination, consideration could be given to members of the Civil Contingencies Select Committee being drawn from the chairs, or members, of the other select committees which have a departmental focus.

Recommendation 10: The Government should move a motion in Parliament to establish a Civil Contingencies Select Committee, to strengthen parliamentary oversight of emergency planning and preparedness. This would improve coordination of parliamentary scrutiny of resilience capabilities and ensure that scrutiny is proactive, not just reactive to emergencies.

<sup>&</sup>lt;sup>120</sup> House of Commons Public Administration Select Committee, *Leadership for the Long Term: Whitehall's Capacity to Address Future Challenges. Third Report of Session 2014-15. HC 669.* (London: House of Commons, 2015), 53.

## 4. The emergency response

Accurate risk assessments and thorough planning can reduce the need for improvisation to a "necessary minimum" when crises hit,<sup>121</sup> but as a number of interviewees noted, the crisis you plan for is rarely the crisis you get. An emergency will likely deviate from the planning scenario and assumptions, so government must be responsive and nimble enough to do the same with its emergency response. Professor Lucy Easthope, a researcher and advisor on disaster recovery, writes that "so much in emergency planning is turned into a calculable risk, a technical and scientific simplification"<sup>122</sup> – the realities of an emergency will be different.

In some instances, such as the disruption caused by the eruption of the Icelandic Volcano Eyjafjallajökull, risks have not been anticipated, and emergency managers are unable to draw on existing plans.<sup>123</sup> In others, existing plans may appear to offer guidance, yet as new information emerges, the inadequacy of these arrangements is revealed.<sup>124</sup> Good emergency management relies on striking a balance between drawing on existing plans and exercising flexibility to meet the demands of a unique crisis situation.

New forms of fragility are exposed as plans meet reality: responders are placed under immense pressure as events change rapidly and there is often a shortage of vital information on which to base decisions. Responding to the crisis at hand requires complementary skills and structures to preparing for emergencies. Central government needs to be able to take on new information rapidly to ensure an effective response, coordinate with responders on the ground, and communicate with the public in a context of great uncertainty.

### 4.1 Responding to a developing situation

While most emergencies are managed locally without any central response, some will require central government coordination and support.<sup>125</sup> The Lead Government Department will coordinate the central response and Cabinet Office Briefing Rooms (COBR) is activated.<sup>126</sup> As Figure 11 sets out, the structures of COBR support the Department to rapidly assess and respond to developing circumstances.

<sup>&</sup>lt;sup>121</sup> Alexander, *Principles of Emergency Planning and Management.*, p. 134.

<sup>&</sup>lt;sup>122</sup> Lucy Easthope, *The Recovery Myth: Plans and Situated Realities of Post-Disaster Response*, 34.

<sup>&</sup>lt;sup>123</sup> Cabinet Office, 'Memorandum Submitted by the Government Office for Science and the Cabinet Office', 14 September 2010.

<sup>&</sup>lt;sup>124</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Professor David Alexander, Dr. Piers Millet, Professor Ortwin Renn'.

<sup>&</sup>lt;sup>125</sup> Cabinet Office, The Lead Government Department and Its Role - Guidance and Best Practice, 4.

<sup>&</sup>lt;sup>126</sup> Cabinet Office, *Responding to Emergencies, the UK Central Government Response - Concept of Operations.* 



Figure 11: The structure of central government's emergency response

Source: Cabinet Office, *Responding to emergencies: the UK central government response – concept of operations,* (2013).

Government must have excellent situational awareness and be able to draw in advice and information quickly to inform decision making and, ideally, to get ahead of an emergency as it develops. COBR can establish a Scientific Advisory Group for Emergencies (SAGE) to facilitate this.<sup>127</sup> A SAGE has been convened on nine occasions since the mechanism was established in 2009.

The primary duty of SAGE is to provide specific information on questions submitted by COBR – for example, 'How toxic is Novichok?', 'What would be the effect on an infection's "R Rate" of an immediate national lockdown?', 'What is the risk of Ebola transmitting in the

<sup>127</sup> Cabinet Office, Enhanced SAGE Guidance, 2012.

UK?'.<sup>128</sup> SAGE assesses evidence and comes to a consensus view before feeding back information to COBR via its Chair, usually the Government's Chief Scientific Adviser.<sup>129</sup>

Meetings of SAGE are crisis specific and are composed of experts relevant to the crisis at hand. For instance, in the case of the COVID-19 pandemic, SAGE has drawn on the expertise of epidemiologists, modellers, and virologists. In the case of the eruption of Eyjafjallajökull, SAGE was composed of volcanologists, geologists, and aviation experts.<sup>130</sup> In order to draw on a wide range of expertise, SAGE can also take input from expert sub-committees, as it did from the Scientific Pandemic Influenza Group on Modelling (SPI-M), the Scientific Pandemic Influenza Group on Behaviour (SPI-B) and the New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG) during the pandemic.

As well as SAGE, government can draw on the expertise of the Chief Scientific Adviser and Chief Medical Officer. At a departmental level, Chief Scientific Advisers, and over 70 standing scientific advisory committees and councils help to interpret and make judgements about scientific information and play a particularly prominent role in emergencies.<sup>131</sup>

### 4.1.1 Taking on advice in a crisis

These structures allow government to draw on relevant expertise to respond to crises as they happen. Yet Ministers must be clear on the purpose of taking scientific and technical advice in emergencies. Throughout the pandemic, and in earlier crises, the Government has claimed to be 'following the science' when making decisions on key emergency response issues.<sup>132</sup>

However, given the uncertainties inherent in the process of developing scientific knowledge, the contestability of scientific evidence, and the multiple inputs that inform government decision making, it is misleading to suggest that government can, or even should, simply follow 'the science'.<sup>133</sup> Government must acknowledge the limitations of scientific advice in a crisis. Even when there is consensus, science does not make the decisions, Ministers do.

<sup>&</sup>lt;sup>128</sup> Institute for Government, Catherine Haddon, and Alex Nice, *Science Advice in a Crisis*, 2020.

<sup>&</sup>lt;sup>129</sup> SAGE, 'About Us', Web Page, 2019.

 <sup>&</sup>lt;sup>130</sup> Kieron Flanagan and Brian Collins, "Giving Scientific Advice to Government during a Crisis", *WonkHE*, 28 April 2020.
 <sup>131</sup> House of Commons Science and Technology Committee, *Science in Emergencies: UK Lessons from Ebola*, HC 469 (London: The Stationery Office, 2016).

<sup>&</sup>lt;sup>132</sup> House of Commons Science and Technology Committee, *The UK Response to Covid-19: Use of Scientific Advice*, HC 136 (London: The Stationery Office, 2021).

<sup>&</sup>lt;sup>133</sup> Alex Stevens, 'Governments Cannot Just "follow the Science" on Covid-19', *Nature Human Behaviour* 4, no. 560 (14 May 2020).

Where government does make significant use of scientific and technical advice, it must ensure that that advice is subject to challenge and scrutiny. This must occur both within and outside of government and draw on a range of relevant expertise.

During the pandemic, concerns have been raised over SAGE's structure and operating practices. Alarmingly, several of these criticisms predate COVID-19 and some have been raised in successive government inquiries. As Figure 10 shows, since the SAGE structure was first used in response to the H1N1 pandemic in 2009, a litany of familiar criticisms have been levelled at it over its lack of transparency and its unrepresentative composition. More than a decade later, too little has been done to address these.

Source	Transparency	Composition	
Dame Hine, <i>An</i> Independent Review of the UK response to the 2009 Influenza Pandemic, 2010	"Any future SAGE should adhere as closely as possible to the established principles of scientific advice to Government and should release its descriptive papers and forecasts at regular intervals" (75) "The transparency of scientific advice should be maximised to build confidence and trust" (75)	Government Chief Scientific Advisor and Department of Health "should ensure that there is an appropriate balance of contribution in the Scientific Advisory Group for Emergencies for future pandemic outbreaks" (69) "SAGE advice focused on the academic scientific viewpoint – the modelling activity – to the exclusion of views from those involved in operational epidemiology there was therefore a lack of public health challenge to the numbers being provided by modellers" (69-70)	
Science and Technology Select Committee, <i>Scientific Advice and</i> <i>Evidence in</i> <i>Emergencies</i> , February 2011	"A SAGEshould not be given a carte blanche to operate however it pleases simply because an emergency is occurring" (3) "We are concerned that the SAGE mechanism operates under a presumption of secrecy rather than transparency and openness" (55)	<i>"While an initial lack of balance on SAGE can be later addressed through the addition of members or formation of sub-groups, we consider that it would be desirable to strike a suitable balance of expertise from the start" (52)</i>	
Science and Technology Select Committee, <i>Government Response</i> <i>to the Committee's Third</i> <i>Report of Session 2010-</i> <i>12</i> , 2011	"The Government strongly agrees that SAGE should operate from a presumption of openness and agrees that SAGE membership and their declarations of interest should be published, with the permission of members" (15)	Government commits <i>to "ensuring that there is an appropriate balance of expertise on SAGE for any future influenza pandemic outbreaks"</i> (14)	
House of Commons, Science and Technology Committee, 'Science in Emergencies: UK lessons from Ebola', January 2016	"A lack of clarity existed about how those with valuable expertise, but without a seat on SAGE, could communicate evidence to the Government" (19)	Witnesses point to "a lack of front-line clinicians represented on SAGE" (18)	

### Figure 12: Criticisms of SAGE's transparency and composition since 2010

These long-standing issues have been highlighted once more during the pandemic. A recent Science and Technology Select Committee report criticises "the initial lack of transparency of the science advice being utilised by Government and those individuals and bodies responsible for giving it" and notes "a perceived lack of representation across relevant Science, Technology, Engineering, Maths and Medicine fields of study" on SAGE.<sup>134</sup>

Figure 12 shows that a prioritisation of theoretical knowledge on SAGE, particularly in the form of mathematical modelling, over clinical and public health experience has long been seen as problematic. During COVID-19, SAGE has again been criticised for its overrepresentation of mathematical modellers and marginalisation of clinical virologists and public health experts.<sup>135</sup>

Epidemiological modelling is, of course, essential in tracking viral transmission and informing pandemic responses. However, all models are limited by the assumptions they make. In the case of COVID-19 modelling, mathematical experts tended to treat variables such as health system and diagnostic capacity as relatively fixed.<sup>136</sup> Assumptions about where Britain was on the 'epidemic curve' were based on theoretical estimates supplied by modellers not up-to-date information provided by clinical experts.<sup>137</sup>

Challenges to modelling assumptions by clinicians and public health experts are crucial to generating more accurate models, and in turn, informing the pandemic response. Due to the early composition of SAGE, this challenge function was limited in its scope.<sup>138</sup>

Given the significant non-health impacts of the pandemic, SAGE has also been criticised for its failure to incorporate expertise in economics and social sciences.<sup>139</sup> Previous SAGEs have drawn on a wider range of expertise. For instance, in the case of the SAGE convened to respond to the Ebola Outbreak in 2014, Chris Whitty, then CSA at the Department for International Development, argued that "social scientists were extremely important in almost every aspect of what we did."<sup>140</sup>

The advice of social scientists and economists on the trade-offs at stake between different courses of action, the non-health implications of the pandemic response and the social and economic underpinnings of viral transmission may have both complemented and provided an important challenge function in SAGE discussions.<sup>141</sup>

 <sup>&</sup>lt;sup>134</sup> House of Commons Science and Technology Committee, *The UK Response to Covid-19: Use of Scientific Advice.*, p. 38.
 <sup>135</sup> Jangu Banatvala, Deenan Pillay, and Will Irving, 'Clinical Virologists Have Been Sidelined in UK Covid-19 Pandemic Response', *BMJ Opinion*, 15 October 2020.;

<sup>&</sup>lt;sup>136</sup> Devi Sridhar, 'Modelling the Pandemic', *The BMJ* 369, no. 1567 (21 April 2020).

 <sup>&</sup>lt;sup>137</sup> House of Commons Science and Technology Committee, *The UK Response to Covid-19: Use of Scientific Advice*.
 <sup>138</sup> Ibid.

<sup>&</sup>lt;sup>139</sup> House of Lords Select Committee on Risk Assessment and Risk Planning, 'Uncorrected Oral Evidence: Professor David Alexander, Dr. Piers Millet, Professor Ortwin Renn', p. 7.

<sup>&</sup>lt;sup>140</sup> House of Commons Science and Technology Committee, *Science in Emergencies: UK Lessons from Ebola.* 

<sup>&</sup>lt;sup>141</sup> Susan Michie and Robert West, 'Behavioural, Environmental, Social and Systems Interventions against Covid-19', *The BMJ* 370, no. 8256 (28 July 2020).

Figure 13: Advice given by SAGE, UK Government response and international comparisons, January – May 2020

Policy area	SAGE advice	UK Government response	International comparison
Entering lockdown	Meeting 9 (20 February): "Mitigations can be expected to change the shape of the epidemic curve or the timing of a first or second peak, but are not likely to meduce the overall number of total infections" meeting 14 (10 March): "a balance needs to be struck between interventions that theoretically have significant impacts and interventions which the public can feasibly and safely adopt in sufficient numbers over long periods" Meeting 15 (13 March): "SAGE was unanimous that measures seeking to completely suppress the spread of COVID-19 will cause a second peak. SAGE advises that its a near certainty that countries such as China, where heavy suppression is underway, will experience a second peak once measures are relaxed" Meeting 16 (16 March): "On the basis of accumulating datathe advice from SAGE has changed regarding the speed of implementation of additional interventions "SAGE advises that there is clear evidence to support additional social distancing measures be introduced as soon as possible"	16 March: Health Secretary tells the House of Commons that all unnecessary social contact should cease 23 March: PMissues 'stay at home' order	23 January: Chinese Government imposes a lockdown in Wuthan and other cities in Hubei province <b>March:</b> Italy declares a national lockdown 14 March: France declares a national lockdown 17 March: France declares a national lockdown
Travel restrictions	Meeting 7 (13 February): "SAGE concluded that travel restrictions within the UK, unless draconian and fully adhered to, would not be effective in limiting unless draconian and fully adhered to, would have a negligible effect on Reeting 18 (23 March): "Closing UK borders 'would have a negligible effect on spread" March to 28 April). "A solution of the border measures that could be taken at the border measures that could be taken at the border measures that could be taken at the border Meeting 28 (28 April). "As the number of cases in the UK decreases, the potential proportion of imported cases may increase. It is impossible to estimate the number of cases which may be imported and their proportion of the total. Determining a tolerable level of risk from imported case requires consideration of a number of non-science factors and is a policy question"	<ol> <li>27 January: Government advises that anyone arriving from Wuhan should self- isolate for 14 days</li> <li>14 February: Isolation guidance extended to travellers arriving from other East Asian countries and Northern Italy</li> <li>13 March: Government uithdraws self- isolation guidance for arrivals from specific countries</li> <li>22 May: Government unveils new quarantine rules for travellers to the UK, requiring them to self-isolate for fourteen days from 8 June</li> </ol>	<ul> <li>23 February: South Korea imposes mandatory testing and quarantining on all international arrivals</li> <li>and quarantining on all international arrivals</li> <li>and match array and array and array and array and array and array array and array arra</li></ul>
Mass gatherings	Meeting 7 (13 February): "Banning mass gatherings is deemed ineffective 'in limiting transmission" Meeting 13 (5 March): "There is no evidence to suggest that banning very large gatherings would reduce transmission" Meeting 14 (10 March): SAGE believes 'public gatherings pose a relatively low but not zero public risk"	13 March: Government announces mass gatherings are to be banned starting 21 March	<ul> <li>21 February: South Korea bans mass gatherings in cities with Covid-19 cases</li> <li>B March: German Health Minister calls on German states to ban mass public gatherings</li> <li>12 March: Ireland announces the cancellation of all mass gatherings</li> <li>13 March: Australia bans mass gatherings</li> </ul>
Testing and contact tracing	Meeting 4 (4 February): Testing capacity is "limited" and "cannot be substantially increased during this winter influenza season" Meeting 6 (11 February): "It is not possible for the UK to accelerate diagnostic apacity to include COVID-19 in time for the onset of winter flu season 2020-1" meeting 8 (18 February): SAGE notes PHE can only trace contacts for five new cases a week: "when there is sustained transmission in the UK, contact tracing will no longer be useful" Meeting 16 (16 March): SAGE highlights "the critical importance of scaling up antibody serology and diagnostic testing to managing the epidemic" Meeting 31 (1 May): SAGE agrees that "at least 80 per cent of contacts of an index case would need to be contacted for a system to be effective"	<ol> <li>March: PHE stops performing contact tracing as infection rate overwhelms capacity</li> <li>capacity</li> <li>capacity</li> <li>capacity</li> <li>capacity</li> <li>care publishes its testing strategy</li> <li><i>Coronavirus: scaling up our lesting</i></li> <li><i>programmes</i></li> <li>T April: Health Secretary announces</li> <li>programmes</li> <li>T April: Health Secretary announces</li> <li>programmes</li> <li>T setting expanded to include all newsr: Testing symptoms</li> <li>28 May: NHS Test and Trace is launched in England</li> </ol>	<ul> <li>6 January: China begins tracing all known cases of Covid-19</li> <li>2 January: Germany begins tracing all known cases of Covid-19</li> <li>2 5 January: Australia begins tracing all known cases of Covid-19</li> <li>7 February: South Korea becomes first country to make testing available for all, including asymptomatic people</li> <li>2 6 February: Italy makes testing available to all people showing symptoms</li> </ul>

### A State of preparedness

SAGE's compositional deficiencies evaded scrutiny due to a lack of transparency over the body's membership and the evidence on which it drew.<sup>142</sup> Although SAGE first met on 22 January to discuss the potential threat posed by COVID-19 to Britain, a list of members and index of evidence discussed was only released in early May, with meeting minutes published at the end of that month.<sup>143</sup>

When SAGE's minutes and evidence were published, alarm was expressed at the failure of the group to draw on relevant evidence, particularly regarding the epidemic curves in neighbouring states and international public health responses to the unfolding emergency.<sup>144</sup> Figure 13 shows the ways in which SAGE advice and the subsequent governmental responses differed in both their timing and scope to those of international counterparts, a phenomenon that may partially be explained by a failure to scrutinise the group's evidence base early in the pandemic.

As Figure 13 highlights, in mid-March, SAGE continued to argue that closing UK borders would have a 'negligible effect' on viral transmission as countries around the world moved to restrict international movement and imposed strict quarantining requirements on international travellers. Though the Government had previously advised travellers from affected regions to self-isolate for 14 days on arriving in the UK, from March 13- June 8 no specific border measures were put in place, a decision that the Home Affairs Committee argued was "a serious mistake that significantly increased both the pace and the scale of the epidemic in the UK."<sup>145</sup>

In a similar vein, while neighbouring states moved between January and March to drastically ramp up contact tracing programmes, Public Health England stopped tracing contacts of known cases on March 12. Though this decision was partially the consequence of limited capacity, it also reflected SAGE's advice that "when there is sustained transmission in the UK, contact tracing will no longer be useful" (18 February). In the early months of the pandemic, the UK therefore deviated from the World Health Organisation's advice, which stressed the centrality of contact tracing to the pandemic response, a decision strongly rebuked by public health experts.<sup>146</sup>

The divergence of the UK's pandemic response compared with those of its neighbours, explained at the time as a product of 'following the science', should have been subject to a greater degree of scrutiny. SAGE's lack of transparency early in the pandemic made processes of evidential examination and expert challenge far more difficult than was necessary. The absence of appropriate accountability mechanisms risked consolidating groupthink among government scientific advisers and filtering out credible, alternative

<sup>&</sup>lt;sup>142</sup> House of Commons Science and Technology Committee, *Scientific Advice and Evidence in Emergencies*, HC 498 (London: The Stationery Office, 2011).

<sup>&</sup>lt;sup>143</sup> Government Office for Science, 'Government Publishes SAGE Minutes', Web Page, 29 May 2020.; House of Commons Science and Technology Committee, *Science in Emergencies: UK Lessons from Ebola.* 

 <sup>&</sup>lt;sup>144</sup> House of Commons Science and Technology Committee, *The UK Response to Covid-19: Use of Scientific Advice*.
 <sup>145</sup> House of Commons Home Affairs Committee, *Home Office Preparedness for COVID-19 (Coronavirus): Management of Borders, Fifth Report of Session 2019-21*, HC 563 (London: The Stationery Office, 2020).

<sup>&</sup>lt;sup>146</sup> Allyson M Pollock et al., 'Covid-19: Why Is the UK Government Ignoring WHO's Advice', *The British Medical Journal* 368, no. m1284 (30 March 2020).

scientific views which may have productively added to the debate.147

For more than a decade, SAGE has been criticised for a lack of transparency and compositional deficiencies, particularly in the early stages of emergencies. Failure to take on criticism and reform in response to it has weakened SAGE as a vehicle for advice in the pandemic. Ensuring that long-standing weaknesses are addressed early must be a priority in future.

Recommendation 11: When a Scientific Advisory Group on Emergencies (SAGE) is assembled, government should publish a list of members, research consulted and meeting minutes on a weekly basis to allow for ongoing scrutiny of the group's composition, evidence base and discussion processes.

### 4.2 Coordinating from the centre

If an emergency requires that a Lead Government Department is appointed, Cabinet Office's *Concept of Operations* states that the Department becomes the "focal point for communication between central Government and the multi-agency, Regional and/or Strategic Co-ordination Groups on the ground", and will likely have to coordinate across other departments to "draw upon and apply relevant capabilities applicable to the emergency at hand".<sup>148</sup> The more complex an emergency, or the greater the geographical area it affects, the bigger the demands this can place on a department.

The speed and agility of a department's response will depend on the quality of relationships with other departments and with local responders, which is facilitated via the Resilience and Emergencies Division in the Ministry of Housing, Communities and Local Government – the main point-of-contact between central government and local responders.<sup>149</sup> This must be a responsive, two-way relationship. The centre should trust, inform, and resource Local Resilience Forums to operationalise national policy, making decisions in consultation where this is appropriate. On the other side, Local Resilience Forums should feed information back to the centre to inform the development of national policy.

Initial evidence suggests that this relationship is not always working as intended, with Local Resilience Forums reportedly feeling "isolated from national decision-making and unable to effectively plan and strategise response".<sup>150</sup> In a leaked internal Government review, which received 1,500 responses from over 200 people involved in Local Resilience Forums, responders suggest a one-way relationship characterised by "unidirectional…requests and information", a lack of data sharing, and "surprise

149 Ibid., 51-52.

<sup>&</sup>lt;sup>147</sup> Andrew McDonald, 'Former UK Health Secretary: "Groupthink" Slowed Coronavirus Response', *Politico*, 25 June 2020. <sup>148</sup> Cabinet Office, *Responding to Emergencies, the UK Central Government Response - Concept of Operations*, 15.

<sup>&</sup>lt;sup>150</sup> Patrick Butler, 'Emergency Teams Condemn Government's "controlling" Approach to Crisis', *The Guardian*, 15 May 2020.

announcements" at short notice that put "partners...on the back foot".151

These views were echoed by several interviews for this paper. A representative of a local resilience forum said they had struggled to get timely information from MHCLG and claimed that policy had been made unilaterally: "we were told a lot of things when we should have been asked a lot of things". It was suggested that this had affected their ability to respond to the pandemic; the interviewee claimed that government refused repeated requests by the LRF at several meetings to share who would be on the national shielding list, meaning that efforts to support vulnerable people were being duplicated. However, they said that after a difficult start, the relationship and the flow of information had improved as the pandemic had gone on.

These behaviours conflict with the subsidiarity principle, and instead suggest a tendency towards a 'command and control' approach that is not supported by government's vision for emergency management. A one-sided relationship between central government and local responders will mean the local response is less effective, policy is less suited to local needs, and the centre is less well informed.

### 4.3 Encouraging Compliance

Even if government does everything right – a risk assessment that proves to be accurate, thorough planning, quick and effective plan activation, and an agile response to a developing situation – it can sabotage its own efforts by losing the public's trust. Government not only has a duty to keep the public informed so it can take steps to ensure their safety; the success of an emergency response may depend on public compliance with instructions. This is nowhere more true than in a pandemic, when public health outcomes depend on adherence to government messaging.

This requires the Government to be a reliable and trusted communicator. As far as is possible in an emergency, government communication with the public must be clear, consistent, and precise.<sup>152</sup> The uncertainty of fast-developing situations – that may not have been planned for – and the immediate and rapid spread of information via social media make this inherently difficult. Maintaining consistent messaging in the pandemic has been further complicated by the changing understanding of the disease over time, and the need to have different messages in different places. To take one example, coronavirus regulations have changed 64 times since March last year.<sup>153</sup>

It is still possible to be a trusted and reliable communicator in these difficult circumstances. Professor Karen Sanders, professor of politics and communications at St

<sup>&</sup>lt;sup>151</sup> Dan Peters, 'EXCLUSIVE: Local Areas Left in the Dark by Government', *The Municipal Journal*, 13 May 2020; Butler, 'Emergency Teams Condemn Government's "controlling" Approach to Crisis'.

<sup>&</sup>lt;sup>152</sup> Cabinet Office, Responding to Emergencies, the UK Central Government Response - Concept of Operations.

<sup>&</sup>lt;sup>153</sup> Rajeev Syal, 'English Covid Rules Have Changed 64 Times since March, Says Barrister', The Guardian, 12 January 2021.

Mary's University, argues that lessons can be drawn from the communication practices of High Reliability Organisations – those organisations that "manage and sustain almost error-free performance despite operating in hazardous conditions where the consequences of errors could be catastrophic."<sup>154</sup> Examples of HROs could include nuclear power stations or airlines where, as is the case in a pandemic, failure will result in the loss of many lives.<sup>155</sup>

High Relia	bility Communication	Low Reliability Communication	
Organising Principles	Communication characteristics	Organising Principles	Communication Characteristics
Commitment to resilience	Reaction and response capacity evidenced by rapid response to early warning signs of errors/incidents "Living" crisis communications plan	Complacency (satisfaction with existing situation and inattention to risk)	Reject or excuse early warning signs of errors/incidents Dominant or inexistent crisis communication plan
Situational awareness	Appropriate explanatory communication to stakeholders	Focus on narrow interests	Knowledge gaps producing inadequate communication to stakeholders about the existing solution
Deference to Experience	Communication migrates to those with expertise to enrich leadership decision-making Active organisational listening	Primacy of hierarchical leadership	Top-down communication without listening to those with expertise
Collective and individual consciousness of risk and failure	Honesty, authenticity and candour about mistakes	Lack of awareness and risk failure	Lack of appropriate transparency Absence of culture and protocols to capture and respond to errors
Resistance to oversimplification	Deep analysis of incidents and errors resulting in effective learning and appropriate communication	Oversimplification	Ineffective learning and inappropriate communication as a result of superficial analysis of incidents and errors

### Figure 14: a model for effective crisis communication

 <sup>&</sup>lt;sup>154</sup> Chrysanthi Lekka (2011), cited in Karen B. Sanders, 'British Government Communication during the 2020 COVID-19
 Pandemic: Learning from High Reliability Organizations', *Church, Communication and Culture* 5, no. 3 (September 2020): 357.
 <sup>155</sup> Ibid.

Mindful leadership	Leads by example Listens, is responsive and acknowledges errors	Superman leadership	Leadership is remote and non-communicative Does not recognise errors and avoids bad news
Just culture	Errors are learning opportunities to organisations and individuals Communication enhances learning outcomes	Blame culture	Punitive environment in which individual errors are punished Communication castigates individuals

Source: Reproduced from Karen B. Sanders, "British government communication during the 2020 COVID-19 pandemic: learning from high reliability organizations", *Church, Communication. Culture*, 5, 3 (2011), 360.

As Figure 14 shows, HRO communication principles are instructive for what government should and – as importantly – should *not* do to keep the public on side in an emergency.<sup>156</sup> Government has been successful in modelling some of these. Using experts in communications, as is a characteristic of HROs, has been crucial to building public trust – surveys have suggested that despite trust in government and news organisations declining to 45 per cent between April and late-August, trust in the NHS and other experts declined less and remained above 75 per cent.<sup>157</sup>

In other ways, though, the Government's approach has at best been inconsistent with 'high-reliability communication', and at worst, symptomatic of 'low-reliability' practices.<sup>158</sup> There were two central mistakes the Government made in this emergency that undermined public trust and compliance, which must act as lessons for future emergencies.

### 4.3.1 Lead by example

It is critical that leaders tasked with communicating in a crisis have integrity, and act in a way that is consistent with public messaging.<sup>159</sup> If they do not do so, they undermine the idea that the messaging is correct and that the Government is competent, or both. Either will undermine trust and therefore compliance.

The behaviour of some government advisors in the pandemic undermined public health messaging. Neil Ferguson, a prominent epidemiologist and member of SAGE, had to resign in early May 2020 following reports that he had breached lockdown to visit his girlfriend.<sup>160</sup> The most damaging episode, however, was when Dominic Cummings, then

<sup>&</sup>lt;sup>156</sup> Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations'.

<sup>&</sup>lt;sup>157</sup> Karen B. Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations', *Church, Communication and Culture* 5, no. 3 (September 2020).

<sup>&</sup>lt;sup>158</sup> Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations'.

<sup>159</sup> Ibid., 359-60.

<sup>&</sup>lt;sup>160</sup> 'Coronavirus: Prof Neil Ferguson Quits Government Role after "undermining" Lockdown', BBC News, 6 May 2020.

Special Advisor to the Prime Minister, was accused of breaking lockdown rules over two weeks from late-March to early April, which was reported publicly on 22<sup>nd</sup> May.

In a press conference at Downing Street, Cummings said he had been forced to travel to Durham as he and his wife feared they would become unable to look after their child and so needed to seek childcare. He then claimed that a further 52-mile round trip to Barnard Castle had been to test his eyesight before embarking on the journey back to London.<sup>161</sup> The Prime Minister defended his actions, saying Cummings had "follow[ed] the instincts of any father."<sup>162</sup>

Polling in late-May showed that 70 per cent of the public believed the breach "[would] make life harder for the Government to get across any future lockdown messaging."<sup>163</sup> In further polling in June, a third of those who said they were not strictly complying with lockdown cited Cummings' breach as a reason.<sup>164</sup>

The UK was not the only country in which high profile breaches of restrictions occurred. However, the consequences of this behaviour in the UK, and of the Government's response to it, are now clear: it undermined public trust and the integrity of public health messaging.

### 4.3.2 Be honest with the public

Government should be frank and honest with the public about the severity of risk, what it does and does not know, and its capability to respond to the emergency. If government makes commitments it cannot keep, this will again undermine perceptions of the Government's competence, and trust in its handling of the emergency.

Messaging during the pandemic has not always followed this principle, with Government overstating its capability to tackle the pandemic, and making commitments that it was not in a position to make.

On 3<sup>rd</sup> March, the Prime Minister said that the country was "extremely well prepared" to handle a pandemic, with "fantastic testing systems and fantastic surveillance systems for the spread of the disease."<sup>165</sup> In fact, in late March the UK had capacity for only 6,000 tests a day, and constraints on testing capacity was limiting surveillance capabilities.<sup>166</sup>

<sup>&</sup>lt;sup>161</sup> The Independent, 'Dominic Cummings: Full Transcript of Boris Johnson Aide's Statement from Downing Street', Web Page, 25 May 2020.

<sup>&</sup>lt;sup>162</sup> 'Boris Johnson: Dominic Cummings Followed "instincts of Every Father" in Lockdown – Video', *The Guardian*, 24 May 2020.

<sup>&</sup>lt;sup>163</sup> YouGov, 'How Dominic Cummings' Lockdown Travels Changed Public Opinion', Web Page, 29 May 2020.

 <sup>&</sup>lt;sup>164</sup> YouGov, 'One in Five Have Started Breaking Lockdown Rules More Following Cummings Saga', Web Page, 3 June 2020.
 <sup>165</sup> The Prime Minister, 3rd of March, quoted in Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations', 372.

<sup>&</sup>lt;sup>166</sup> Department of Health and Social Care, 'Daily Tests Processed and Testing Capacity (UK): 20 March to 22 September 2020', Web Page, 24 September 2020; Cabinet Office, 'No. 10 Comms Slides', 1 April 2020.

On 5<sup>th</sup> March the Prime Minister then said that health and care staff "have all preparations, all the kit that they need for us to get through".<sup>167</sup> Then on the 19<sup>th</sup> March, the Prime Minister claimed that the UK could "turn the tide within the next 12 weeks…I'm absolutely confident that we can send coronavirus packing in this country".<sup>168</sup> This assessment was not aligned with the consensus view given by SAGE only three days prior, that behavioural and social interventions "would need to be in place for at least most of a year."<sup>169</sup>

Interviewees for this paper were critical of this pattern of "overpromising and underdelivering". One communications expert said the Government's priority should be to "tell the public what [it is] doing to keep them safe", rather than making claims about 'World-beating' systems – "[this] feels reputational, rather than prioritising messaging around effective response." By setting the public up to be let down, the credibility of the Government's response to the pandemic has been damaged.

The Government appears to have learnt this lesson, deploying more cautious messaging in its commitments on the vaccine programme.<sup>170</sup> As the rollout began, the Prime Minister urged people to be measured in their hope for vaccination to return life to normal, saying "it is very, very important that people do not get their hopes up too soon about the speed with which we will be able to roll out this vaccine."<sup>171</sup> The Government are now far exceeding their schedule for rollout.

This should be the standard approach to communicating with the public in an emergency. At several stages, Government communication during the pandemic has significantly departed from the principles of "honesty, authenticity, and candour" modelled by high reliability organisations.<sup>172</sup> The weaknesses of 'overpromising and underdelivering' are clear to see, and this cannot be allowed to happen again.

<sup>&</sup>lt;sup>167</sup> The Prime Minister, 5th March, quoted in Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations', 369.

<sup>&</sup>lt;sup>168</sup> Peter Walker, 'Boris Johnson: UK Can Turn Tide of Coronavirus in 12 Weeks I World News I The Guardian', *The Guardian*, 19 March 2020.

<sup>&</sup>lt;sup>169</sup> SPI-M-O, Consensus View on Behavioral and Social Interventions, 16th March 2020, 2020.

<sup>&</sup>lt;sup>170</sup> Laura Donnelly and Jack Leather, 'Watch: Why the Government Might Be Trying to Hide Progress on Vaccine Rollout', *The Telegraph*, 22 January 2021.

<sup>&</sup>lt;sup>171</sup> Johnson MP Rt Hon Boris, 'Prime Minister's Questions', n.d., HC Deb 2 December 2020 Vol. 685.

<sup>&</sup>lt;sup>172</sup> Sanders, 'British Government Communication during the 2020 COVID-19 Pandemic: Learning from High Reliability Organizations', 360.

## Conclusion

The pandemic has brought home the fact that the worst does happen, and that it could again. A pandemic was far from an unthinkable event before COVID-19 – government knew it was a matter of if, not when. The same is true of many of other risks the country faces that are included in the National Risk Register and that could have severe impacts.

Government assesses that 13 other risks are as likely as a pandemic to materialise. These vary wildly, but in many ways require similar capabilities from government: accurate risk identification and assessment, the ability to plan for different scenarios, and to execute plans and flex them to changing circumstances. In many cases, the same departments and people will be tasked with these responsibilities in different emergencies.

It is therefore essential to ask broader questions than just what COVID-19 can teach government about pandemics. Government must learn lessons for risk assessment, emergency planning, and crisis management more broadly.

COVID-19 has reaffirmed how much emergency preparedness depends on how risks are framed in the scenarios and planning assumptions that form the basis for planning. New and emerging risks present new challenges, and vulnerabilities shared across geography, the economy, and different areas of government, mean that risks can cascade beyond the point where plans have been laid. Government needs to consult widely and be as transparent and open to scrutiny as it can be in its assessments of the risks the UK faces.

Even when risks and their potential impacts are well understood, planning doesn't always follow, or is too shallow to be useful. First Cygnus, then COVID-19, exposed significant gaps in pandemic planning. Planning for emergencies cannot be neglected even when risk seems distant, and it needs continuous engagement and buy in at the highest level.

Too often it has been the case that scrutiny of civil contingencies has followed a crisis, rather than pre-empted one. This must change. The serving Government, the Civil Contingencies Secretariat, and Parliament must play a greater role in guarding against these risks with stronger oversight of risk assessment, planning, and capability building.

No risk assessment can predict the future, and government will always have to be responsive to the emergency it gets, rather than the one it planned for. Government must be able to rapidly draw on broad and diverse advice to inform real-time decision making, and when communicating with the public, be clear and precise about what is and is not known, as well as the trade-offs.

When the next national emergency happens government's resilience will depend in large part on how it learns lessons from COVID-19. This work cannot wait for a public inquiry: it must begin now.

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