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The UK Government's COVID-19 policy: assessing evidence-informed policy analysis in real time

Abstract. In March 2020, COVID-19 prompted policy change in the UK at a speed and scale only seen during wartime. Throughout, UK government ministers emphasised their reliance on science and expertise to make the right choices at the right time, while their critics argued that ministers ignored key evidence and acted too little too late. Lessons from this debate should have a profound effect on future action, but only if based on a systematic analysis of policymaking as the problem emerged in real time. *We should not confuse hindsight with foresight*. To that end, I combine insights from policy analysis guides, policy theories, and critical policy analysis to frame this debate. The pandemic exposes the need to act despite high ambiguity and uncertainty and low government control, using trial-and-error strategies to adapt to new manifestations of the problem, and producing unequal consequences for social groups. Lessons will only have value if we incorporate these policymaking limitations and unequal socioeconomic effects and ask the right questions when holding the UK government to account.

Introduction: how should we characterise the UK government response?

On the 23rd March 2020, the UK Government's Prime Minister Boris Johnson declared: 'From this evening I must give the British people a very simple instruction – you must stay at home' (Johnson, 2020a). He announced measures to help limit the impact of COVID-19, including new regulations on behaviour, police powers to support public health, budgetary measures to support businesses and workers during their economic inactivity, the almost-complete closure of schools, and the major expansion of healthcare capacity via investment in technology, discharge to care homes, and a consolidation of national, private, and new health service capacity. Devolved governments, responsible for public health in Northern Ireland, Scotland, and Wales, introduced very similar measures as part of a coordinated approach (although this article focuses on UK government policy only; see Paun et al, 2020 on four-nation developments). Overall, COVID-19 prompted almost-unprecedented policy change, towards state intervention, at a speed and magnitude that seemed unimaginable before 2020.

Yet, many have criticised the UK government's response as *slow and insufficient*, suggesting that we explain policy 'blunders' (Gaskell et al, 2020), learn lessons from more successful governments (Powell-King and Hill, 2020), and criticise UK ministers playing the 'blame game' with their advisors and delivery bodies (Boin et al, 2020; Oliver, 2020). Initial criticisms include that UK ministers did not: take COVID-19 seriously enough in relation to existing evidence (when its devastating effect was apparent in China in January and Italy from February); act as quickly as other countries to test for infection to limit its spread, and/ or introduce swift measures to close schools, businesses, and major social events, and regulate social behaviour; or introduce strict-enough measures to stop people coming into contact with

each other at events and in public transport (Henley, 2020). Some suggest that the UK government was responding to the 'wrong pandemic', assuming that COVID-19 could be treated like influenza (Pegg, 2020). Subsequent criticisms highlight problems in securing personal protective equipment (PPE), testing capacity, and an effective test-trace-and-isolate system, contributing to a 'story of systematic failure' (Gaskell et al, 2020: 7).

Some critics blame UK ministers for pursuing a 'mitigation' strategy, allegedly based on reducing the rate of infection and impact of COVID-19 until the population developed 'herd immunity' (Kermani, 2020a), rather than an elimination strategy to minimise its spread until a vaccine could be developed (Sridhar, 2020; Cairney, 2021). Some criticise the over-reliance on models which underestimated the R (rate of transmission) and 'doubling time' of cases and contributed to a 2-week delay of lockdown (Yates, 2020; Taylor, 2020). Many describe this approach and delay, compounded by insufficient PPE in hospitals and fatal errors in the treatment of care homes, as the biggest contributor to the UK's high number of excess deaths (Campbell et al, 2020; Burn-Murdoch and Giles, 2020; Scally et al, 2020; Mason, 2020; Ball, 2020; compare with Freedman, 2020a; 2020b and Snowdon, 2020).

In contrast, scientific advisers to UK ministers have emphasised the need to gather evidence continuously to model the epidemic and identify key points at which to intervene, to reduce the size of the peak of population illness initially, then manage the spread of the virus over the longer term (e.g. Vallance on Sky News, 2020). Throughout, they emphasised the need for individual behavioural change (hand washing and social distancing), supplemented by government action, in a liberal democracy in which direct imposition is unusual and unsustainable (Johnson, 2020b).

We can relate these contemporary debates on UK government capacity and performance to established policy research on the general limits to policymaking (summarised in Cairney, 2016; 2020a; Cairney et al, 2019) which underpins the 'governance thesis' and academic study of British politics (Kerr and Kettell, 2006: 11; Jordan and Cairney, 2013: 234):

1. Policymakers must ignore almost all evidence.
2. Policymakers have a limited understanding, and even less control, of their policymaking environments.
3. Even though they lack full knowledge and control, governments must still make choices.
4. Their choices produce unequal impacts on different social groups.

These insights contradict the image of British politics associated with the 'Westminster model': the idea that policy is controlled by a small number of UK government ministers, with the power to solve major policy problems, remains popular in media and public debate but provides a wildly misleading way to assess policy outcomes (Cairney, 2020c).

To make better sense of current developments, we need to (a) understand how UK government policymakers address these limitations in practice, and (b) widen the scope of debate to consider the impact of policy on inequalities. A policy theory-informed and real-time account helps us avoid after-the-fact wisdom and bad-faith trials by social media. UK government action has been deficient in important ways, but we need careful and systematic analysis to help us separate (a) well-informed criticism to foster policy learning and hold ministers to

account, from (a) a naïve and partisan rush to judgement that undermines learning and lets ministers off the hook.

To that end, I combine insights from policy analysis guides, policy theories, and critical policy analysis to analyse the UK government's initial COVID-19 policy (*the first half of 2020*). I use the lens of 5-step policy analysis models to identify what analysts and policymakers need to do, the limits to their ability to do it, and the distributional consequences of their choices. I focus on sources in the public record, including oral evidence to the House of Commons Health and Social Care committee, and the minutes and meeting papers of the UK Government's Scientific Advisory Group for Emergencies (SAGE), transcripts of TV press conferences and radio interviews, and reports by professional bodies and think tanks. To address an overload of information, I summarise the argument here and link to a full account of these sources in online annexes (Cairney, 2020d-2020l, found here https://paulcairney.wordpress.com/covid-19/).

Three ways to think about evidence-informed policy advice

Policy analysis guidebooks identify what analysts and policymakers need to do (their *functional requirements*). Policy theories gauge their ability to do it (their *actual capacity*). Critical policy analysis reveals the contested nature of advisor-informed policy, in which there is unequal access to influence and policy has an unequal impact. Combined, these approaches help to assess how the UK government has: used evidence selectively, modified its approach, limited the scope of policy-relevant advice, and proposed solutions with unequal consequences on the UK population.

Policy analysis texts recommend pragmatic ways to 'do' analysis, based on the assumption that one organisation conducts all steps on behalf of a client:

1. Define a policy problem identified by your client.
2. Gather evidence efficiently to identify technically and politically feasible solutions.
3. Use value-based criteria and political goals to compare solutions.
4. Predict the outcome of each solution.
5. Make a concise recommendation to your client (Bardach and Patashnik, 2020; Dunn, 2017; Meltzer and Schwartz, 2019; Mintrom, 2012; Weimer and Vining, 2017).

Modern advice reflects a new story about policy analysis: it once resembled a club with elite analysts inside government giving technical advice about policy, but now there are many analysts inside and outside of government, competing to define problems and assign value to their evidence and solutions (Radin, 2019; Brans et al, 2017; Enserink et al, 2013). This story should go further to explain two key dynamics.

First, *policymakers must find ways to deal with their limited knowledge and control*. They use two cognitive shortcuts: 'rational' (using well-established rules to identify high quality sources of information) and 'irrational' (using gut instinct, emotion, and beliefs) (Cairney and Kwiatkowski, 2017). They define a problem, seek information that is available, understandable, and actionable, and identify credible sources of advice. Their choice of experts relates strongly to how they define the problem. These dynamics take place in a policymaking environment in which no single 'centre' has the power to turn advice into outcomes (Cairney et al, 2019). There are many policymakers and influencers spread across a political system, and

policy is made or delivered in many venues, with their own rules and networks, over which senior elected policymakers have limited knowledge and influence. Factors such as social and economic conditions and events are also largely out of their control.

Second, *policymakers must still act despite their limited knowledge and control, and each choice has an unequal impact on populations*. All policy analysis steps are subject to contestation, in which actors compete to determine: how to define problems in a way that assigns blame to some and support to others (Bacchi, 2009); whose evidence counts (Smith, 2012; Doucet, 2019); who should interpret and prioritise political values, (Stone, 2012), and if new solutions should challenge a status quo that harms marginalised populations (Michener, 2019; Schneider and Ingram, 1997).

Table 1 identifies the policy analysis steps associated with 'how to' guides, then uses policy process and critical approaches to widen discussion. This approach *provides different standards to assess the substance and direction of government policy*. It highlights the need to consider how (1) the expert analysis of policy problems relates to (2) the cognitive and environmental limits to policy analysis and action, and (3) whose knowledge counts as policy-relevant, and whose interests determine the final outcome.

Table 1 Three perspectives on 5-step policy analysis

	Policy analysis texts	**Policy process research**	**Critical policy analysis**
Step 1	Define a policy problem identified by your client	Incorporate a policymaker's willingness and ability to understand and solve the policy problem	Challenge dominant ways to frame issues
Step 2	Identify technically and politically feasible solutions	Identify the mix of policy instruments already being used, and why	Use inclusive ways to generate knowledge and perspectives on solutions
Step 3	Use values and political goals to compare solutions	Identify how actors cooperate or compete to define and rank values.	Co-produce the rules to produce and evaluate solutions
Step 4	Predict the outcome of each feasible solution	Emphasise uncertainty about the disproportionate effect of your solution on the existing policy mix	Identify the impact on marginalised groups, such as via gender and race analysis
Step 5	Make a recommendation to your client	Recommend how to adapt to policymaking systems. In the absence of certainty, how often do you act? In the absence of centralisation, how can you deliver this instrument?	Co-produce your recommendations with many stakeholders, to make sure that you anticipate and respect their reaction to your proposals

Source: adapted from Cairney (2020b).

Multiple perspectives on UK government COVID-19 policy

These perspectives are crucial to the analysis of UK government COVID-19 policy. First, they help reinterpret UK ministerial rhetoric on being 'guided by the science' (Cairney and Wellstead, 2020). This rhetoric conjures the idea of 'rational' policy analysis within a single centre of government, projecting authority and control and depoliticising choices about which

experts are relevant and how to save some people and let others die. Second, they highlight conflicting drivers of policy analysis from policy process research and critical perspectives. The former highlights the value of pragmatic policy analysis. The latter suggests that pragmatism reinforces the status quo and social inequalities (Cairney, 2020b). In that context, the following sections use the *three perspectives on 5-step policy analysis* structure (Table 1) to interpret COVID-19 policy.

Step 1. Define the problem, what is possible, and who is important

COVID-19 as a *physical* problem is not the same as a *policy* problem (Cairney, 2021). To define the former is to identify the physical impact on individuals and populations of a virus and disease (WHO, 2020). To define the latter, actors relate the physical problem to what they think a government can, and should, do about it.

Policy analysis: define the problem

Policy analysis advice emphasises the need to combine rhetoric and data to frame a problem's severity, urgency, and cause, and the role of government in solving it (Cairney 2020b). This combination is reflected in descriptions in March by scientific advisors interviewed by TV and print media (e.g. BBC Newsnight, 2020), and in SAGE minutes and meeting papers and oral evidence to the Health and Social Care committee (Cairney, 2020d; 2020e). They describe the problem as follows: there will be an epidemic, then the problem will be endemic (perhaps like seasonal flu); in the absence of a vaccine, the only way to produce 'herd immunity' is for most people to be infected and recover; we need some way to shield the most vulnerable during its spread; the epidemic may only seem real to most people when people begin to die; and, the power of government to control spread is limited, and many actions could have unintended consequences. In that context, they relate possible solutions to reducing the initial peak of infection rather than eliminating the virus:

- Contain the virus enough to make sure it spreads at the right speed, to make sure that healthcare capacity is not overwhelmed (based on a 'reasonable worst case scenario': 11% of people with symptoms requiring hospital treatment of at least 8 days, and 1-2% requiring invasive ventilation treatment and intensive care – SAGE meeting 11, 27.2.20 in Cairney, 2020e: 6-7).
- Encourage people to change their behaviour, to look after themselves (e.g. by handwashing) and forsake their individual preferences for the sake of public health (e.g. by keeping a two-metre-minimum distance from people, and self-isolating if feeling symptoms).

Such accounts informed how the UK government defined the policy problem and timing of intervention. For example, the Imperial College COVID-19 Response Team (2020) engaged in framing to (a) predict the spread of the virus and its impact on population illness and mortality, (b) warn against insufficient intervention, (c) identify different forms of intervention, and (d) rule some options out (including *no action* and *elimination*):

1. Its *'unmitigated epidemic scenario'* describes 'the (unlikely) absence of any control measures or spontaneous changes in individual behaviour', and predicts 510,000 deaths in the UK in 2020 (2020: 7).
2. Its *'mitigation strategy scenarios'* highlight the relative effects of partly-voluntary measures on mortality and demand for 'critical care beds' in hospitals:

- voluntary 'case isolation in the home' (people with symptoms stay at home for 7 days)
- 'voluntary home quarantine' (all members of the household stay at home for 14 days if one member has symptoms)
- government enforced 'social distancing of those over 70' or 'social distancing of entire population' (*while still going to work, school or University*)
- closure of most schools and universities.
- It omits 'stopping mass gatherings' because 'the contact-time at such events is relatively small' (2020a: 8).
- Assuming 70-75% compliance, it describes the combination of 'case isolation, home quarantine and social distancing of those aged over 70' as the most impactful, but predicts that 'mitigation is unlikely to be a viable option without overwhelming healthcare systems' (2020a: 8-10). These measures would 'reduce peak critical care demand by two-thirds and halve the number of deaths' (to approximately 250,000).

3. Its *'suppression strategy scenarios'* describe what it would take to reduce the rate of transmission of infection (R) from the estimated 2.0-2.6 to 1 or below. A combination of 'case isolation', 'social distancing of the entire population' (the measure with the largest impact), 'household quarantine' and 'school and university closure' would reduce critical care demand from its peak 'approximately 3 weeks after the interventions are introduced', and contribute to a range of 5,600-48,000 deaths over two years (2020: 13-14).

It argues that 'epidemic suppression is the only viable strategy at the current time', and these measures may be required until an effective vaccine or treatment is found (2020: 16).

Policy process research: define what is possible

Policy research prompts us to incorporate, in problem definition, a policymaker's willingness and ability to understand and solve the problem. Put simply, policymakers (a) do not know exactly what is happening or what will be the impact of their actions, and (b) are unsure about how to regulate behaviour. For example, the amount of force necessary to change social behaviour radically would be too much for a government to consider in a liberal democracy. If so, the UK government's definition of the policy problem will incorporate this implicit question: what can we do if (a) we can only *influence* how people will behave, and (b) we can only *manage* the spread of disease?

There is some debate about the extent to which science advisors had to fit their advice into a narrative acceptable to ministers, or if their concerns were downplayed by ministers (Kermani, 2020b; Snowdon, 2020). Regardless, most accounts suggest that a shift from exhortation to direct regulation did not seem technically or politically feasible to ministers (Calvert et al, 2020) or many scientific advisors (Grey and MacAskill, 2020; Freedman, 2020a; 2020b). Ministers only accepted *in mid-March* the need to act more quickly and intensely. The COVID-19 Response Team (2020a: 16) describes conclusions 'reached in the last few days' based on the lockdown experience in Italy and information from the NHS on 'the limits to hospital surge capacity'. Before the UK lockdown of March 23rd, there is no mention in SAGE minutes that it is likely (Cairney, 2020e).

Rather, early ministerial and scientific adviser messages related to two beliefs (Cairney, 2021). First, *we can influence social behaviour somewhat by communicating effectively*. For example, SAGE describes: motivating people by relating behavioural change to their lives, stressing

'personal responsibility and responsibility to others', emphasizing transparency, honesty, clarity, and respect, to maintain high trust in government and promote a sense of community action ('we are all in this together') (Meeting paper 25.2.20 in Cairney, 2020e: 5). Second, *we can influence the distribution of the epidemic to avoid overwhelming health services* and *repeated waves of infection*. SAGE minutes and meeting papers stress the need to (a) introduce isolation and social distancing measures to reduce the rate of transmission, but (b) avoid excessive suppressive measures on the first peak that would contribute to a second.

Critical policy analysis: identify who is important

Critical accounts encourage us to challenge the dominant frames which discriminate against the powerless (Bacchi, 2009; Stone, 2012). They relate to: who receives disproportionately positive/ negative and high/low attention, and the distributional consequences, such as when rhetoric about coronavirus being a 'great leveller' reduced attention to inequalities (Aiken, 2020).

This approach connects to studies of health equity which treat health as a human right and oppose the unfair distribution of health inequalities (Helsinki Statement on Health in All Policies, 2013). The WHO (2020) defines the 'social determinants of health' as 'the unfair and avoidable differences in health status … shaped by the distribution of money, power and resources [and] the conditions in which people are born, grow, live, work and age'. Whitehead and Dahlgren (2006: 4) argue that 'all systematic differences in health between different socioeconomic groups within a country' are unfair and avoidable, relating to environments rather than individual choices. This approach challenges a tendency to relate health inequalities to 'lifestyles'. The biggest impacts on population health come from (a) environments outside of an individual's control (e.g. threats from others, such as pollution or violence), (b) education and employment, and (c) economic inequality, influencing access to warm and safe housing, high quality water and nutrition, transport, and safe and healthy environments (Solar and Urwin, 2010: 6; Bhala et al, 2020). In that context, COVID-19 highlights stark examples of inequalities in relation to:

Income and wealth. Some people can stockpile food and medicine, own homes to self-isolate and work, and access places to exercise. Many have insufficient access to food and medical supplies, few places to go outside, juggle caring and work responsibilities at home, or risk travelling to work to maintain low paid jobs.

Gender. The lockdown and school closures exacerbate inequalities, in which women and girls are relatively vulnerable to domestic abuse (Home Affairs Select Committee, 2020; Moreira, 2020), and caring responsibilities are skewed towards women (Close the Gap, 2020). Access to abortion services is more difficult (McDonald, 2020). Women in sex work are vulnerable to illness and assault (BBC News, 2020b).

Race and ethnicity. Black, Asian, and Minority Ethnic (BAME) populations are more vulnerable to COVID-19 related illness and death (Public Health England, 2020), particularly among NHS staff (Taiwo Owatemi MP 14.5.20: q99 in Cairney, 2020h).

Age. Older people are more vulnerable to COVID-19 related death, more affected by limited access to hospital care, and people living with dementia in care homes are isolated (Office for National Statistics, 2020a).

Disability. Tidball et al (2020) describe the unusually high vulnerability to COVID-19 illness and death among people with disabilities *and* a reduction of social services.

Mental health. 'Mental ill health is a major cause *and* indicator of health inequality' (Cairney and St Denny, 2020: 156), since social determinants contribute to inequalities of mental illness, and 'people with mental illness die on average fifteen to twenty years earlier than those without' (Chief Medical Officer, 2014: 12, 217). 'Social distancing' can exacerbate mental health problems while access to services is diminished (Cairney, 2020i).

These inequalities intersect with each other, such as when:

- BAME populations are more likely to be in housing not conducive to self-isolation, use public transport, work outside the home, and perform key worker jobs without sufficient protection (Keval, 2020).
- Men account for 2/3 of COVID-19 deaths (Office for National Statistics, 2020b). Of the 17 occupations with higher death rates in men, 11 have high 'proportions of workers from Black and Asian ethnic backgrounds' (2020b).
- Women are more likely to combine work and caring responsibilities, fulfil many key worker roles that make people more vulnerable to infection (such as supermarket and cleaning work, nursing and social care) and less able to find suitable PPE, while 'financial dependence and poverty' exacerbate their vulnerability to domestic violence (Close the Gap, 2020).
- The economic crisis exacerbates poverty which contributes to housing precarity and long-term problems with mental and physical health (Banks et al, 2020). Migrant workers often have 'no recourse to public funds' and face low wages, unsafe working conditions, and low ability to isolate safely (Clark et al, 2020). Disabled BAME women are relatively unable to secure support (Women's Budget Group, 2020).

So, what exactly is the policy problem?

These three perspectives help us develop a detailed picture of the UK Government's problem definition by mid-March 2020:

1. We are responding to an epidemic that cannot be eradicated.
2. We need to use a suppression strategy to reduce infection enough to avoid overwhelming health service capacity, and shield the most vulnerable people, to minimize deaths during at least one peak of infection.
3. We need to maintain suppression for a duration that is difficult to predict, subject to compliance levels that are difficult to monitor.
4. We need to avoid panicking the public in the lead up to suppression, and maintain wide public trust in the government.
5. We need to avoid (a) excessive *and* (b) insufficient suppression measures, which could contribute to a second wave of the epidemic (Vallance, 2020).
6. We need to transition from suppression measures without allowing a major rise in R (the 'exit strategy'), to 'keep the economy growing' (Johnson, 2020b), find safe ways for people to return to work and education, and reinstate NHS capacity. This strategy involves social distancing and (voluntary) track-and-trace measures to isolate people.
7. Any action *or inaction* has a profoundly unequal impact on social groups.

It is almost impossible to sum up the problem concisely and comprehensively, and its ambiguity undermines a single coherent response.

Step 2. Identify feasible solutions and their impact on existing policy and marginalized populations

Policy 'solutions' are better described as 'tools' or 'instruments' because (a) they do not solve a problem, and (b) governments combine many instruments (Cairney, 2020a: 20-22; Hood and Margetts, 2007). Analysing their use help us provide a narrative of: *economic models*, including choices on public expenditure, tax, economic incentives, and the balance between the state and market; *models of public service provision*; and *ways to influence individual and social behaviour*, including formal regulations and legal sanctions versus spending, public education, exhortation, voluntary agreements, and behavioural public policies (John, 2011). They help us gauge *commitment to policy change*, from a minimalist focus on exhortation, to a maximalist focus on the redistribution of resources, provision of state services, and direct regulation of behaviour. In that context, we can identify two phases of intervention, from:

1. exhortation to modify behaviour, coupled with the desire to maintain existing ways of social and economic life, to
2. direct regulation and imposition, coupled with an unprecedented collection of measures to address the social and economic consequences.

Policy analysis: identify technically and politically feasible solutions

Policy analysis advice emphasises the need to identify only the solutions that your audience or client might consider (Cairney 2020b). There is a gap between technical and political feasibility: popular solutions may not work as intended if implemented, and technically feasible solutions often receive the least support (Lowi, 1964).

This insight helps explain the initial UK approach, based on the putative benefits of exhortation and the gradual introduction of more ambitious measures. Initially, it focused on ensuring that the greatest action took place at the right time in relation to the peak of infection. It began with exhortation, emphasising effective handwashing, to stay a safe distance from other people, and to stay at home if experiencing COVID-19 symptoms. On the 13th March, the UK Government's Chief Scientific Advisor, Sir Patrick Vallance, described voluntary self-isolation measures as 'a big change … with the biggest impact at the moment', then signalled the future need for whole household isolation, and emphasised that more stringent measures (such as to protect older and more vulnerable people) would 'go on for weeks' to coincide with the peak of infection. Forthcoming measures such as schools closures would have to last for months to be effective, and halting mass gatherings would have a relatively small impact (and unintended consequences) in the absence of a major suppression strategy (BBC News 2020a; Vallance, 2020). On the 16th March, the Prime Minister announced the need for: (1) all members of the household to stay at home for 14 days if one member has symptoms, (2) 'people to start working from home where they possibly can', and 'avoid pubs, clubs, theatres and other such social venues', (3) 'those with the most serious health conditions' to be 'largely shielded from social contact for around 12 weeks', and (4) the removal of emergency service support for large social gatherings (Johnson, 2020b). Further, SAGE ruled out many solutions as low impact, such as the routine screening of people flying into the UK (SAGE meetings 1-4, 22.1.20-4.2.20 in Cairney 2020e: 1-2).

The Prime Minister's speech on the 23rd March signals a major shift in policy. Johnson (2020a) combines:

1. *A statement on allowable behaviour*. 'People will only be allowed to leave their home for the following very limited purposes: shopping for basic necessities, as infrequently as possible; one form of exercise a day - for example a run, walk, or cycle - alone or with members of your household; any medical need, to provide care or to help a vulnerable person; and travelling to and from work, but only where this is absolutely necessary and cannot be done from home'.
2. *A signal of enforcement*. 'If you don't follow the rules the police will have the powers to enforce them'.

The UK government related such action to the general public good and vulnerable people, before stressing the impact of COVID-19 on NHS capacity and staffing: 'Stay Home, Protect the NHS, Save Lives' (Hope and Dixon, 2020).

It introduced an unprecedented amount of measures to support radical policy change. Table 2 summarises initial measures, focusing on UK Government *public health* action for England (devolved governments in Northern Ireland, Scotland, and Wales are responsible for most aspects of public health - Paun et al, 2020) and *economic policy* for the UK.

Table 2: Examples of initial UK policy changes, by category of policy instrument

Policy instrument	**COVID-19 policies**
Regulations and legal sanctions	Obliging people to stay at home, prohibiting social gathering, and closing most indoor public places (backed by police powers to disperse crowds and close premises, but focusing on warnings and fines)
Formal regulations versus voluntary agreements	A shift from encouraging to making indoor businesses close
Public expenditure and borrowing	Unprecedented employment 'furlough' schemes, plus increases in social security and business support
Tax expenditure	Deferred VAT payments by business and self-assessed income tax. Continued tax credits without further assessment
Linking benefit entitlement to behaviour	Postponed assessments (fitness to work, and proof of job-seeking) and job centre appointments (which determine eligibility to social security payments) and benefit recovery
Public services provision	Major additional spending on public services such as the NHS, coupled with emergency measures to boost recruitment. Closure of childcare, school, and further and higher education (or shift to online provision)
Public education	To publicise messages on hand-washing and social distancing
Behavioural public policy	To encourage behaviour, such as handwashing, and support the introduction then relaxation of regulations on social distancing
Organisational change, and additional resources to help change behaviour	The establishment (from June) of a new Test and Trace system (contact tracing and isolation, manually and via a proposed new app), and the Joint Biosecurity Centre (JBC) to coordinate data, respond to local outbreaks (clusters/ super-spreaders), and develop Alert Levels. Both measures are described as supporting the easing of lockdown measures, when the R in the community is low, and the focus is on local outbreaks.

Funding scientific research and commissioning reviews	£250m announced to fund vaccine research
	Public Health England (PHE) research on the disproportionate impact of COVID-19 on BAME populations.

The most radical temporary policy change relates to legislation - the *Coronavirus Act 2020* (25.3.20) and additional statutory instruments - to regulate behaviour. Every entry in the following list would normally qualify as a major policy change in its own right, to:

1. Regulate social and business behaviour
- Oblige people to stay at home in the absence of a reasonable excuse or exceptions (to work if you cannot work at home, pick up essential food or medicine, access essential public services, and/ or exercise outdoors).
- Prohibit almost all gatherings of more than two people.
- Oblige the closure of businesses - including bars, cinemas, theatres, bingo and concert halls, fitness centres, and museums – and reserve the right to close childcare services (schools had closed on 20.3.20).
- Enable police powers to enforce the measures through fines (or arrests) for non-compliance.
2. Boost public service recruitment by changing the rules to register many NHS and social work staff (Department of Health and Social Care, 2020).
3. Reduce the safeguards on detaining someone with reference to their mental health or capacity.
4. Modify rules on medical negligence, discharge, the registration of deaths, the disposal of bodies, inquests, and who can provide vaccinations to patients.
5. Modify rules on judicial commission appointments, the retention of fingerprint and DNA data, online court proceedings, postpone the completion of community service, and provide more scope for early prison release.
6. Give the UK government powers to compel private companies to provide information on the food supply.
7. Postpone national and local elections.
8. Protect people from eviction, and businesses from lease forfeiture (Ministry of Housing, Communities & Local Government, 2020).

The most radical long-term change relates to public spending and borrowing. The Office for Budget Responsibility (OBR, 2020a) estimated spending at £123 billion, revised upwards to £132.6 (2020b). It includes spending on public services, charities, and local authority schemes (£17.3bn), additional social security payments (£8bn), a 'coronavirus job retention scheme' in which the government pays 80% of the salary of 'furloughed' staff in the public and private sector (net £54bn) for 8 months, the equivalent scheme for the self-employed (£15bn), tax reliefs, grants, and loans to businesses (£33bn), and deferred Value Added Tax and self-assessed income tax (£3.1bn). These changes grew as the size of the economic problem grew, in relation to public pressure (for example, to extend free school meal provision over summer), and to address a longer-term problem than expected (HM Treasury and Sunak, 2020).

These changes were supported by the ability to borrow over the long term at low interest rates. The UK 'government gross debt was '£1,891.8 billion at the end of 2019, equivalent to 85.4% of gross domestic product (Office for National Statistics, 2020c) and it rose to 100% by June.

Emmerson and Stockton (2020) describe the £123bn package as 'unprecedented' and borrowing as 'the largest share of national income in peacetime'.

Policy process research: identify the impact of new instruments on the policy mix

It is difficult to define 'COVID-19 policy' because: each new instrument adds to a pile of measures and intersects with others; a commitment to policy change does not ensure its delivery; its implementation does not ensure its intended outcome; policy often made as it is delivered; and, there are always unintended consequences (Cairney, 2020a). Rapid policy change on paper lacks meaning without evidence of outcomes.

First, legislation on social regulation relates imperfectly to (a) outputs such as police capacity devoted to encouraging compliance and (b) outcomes such as infection rates. The amount of time that the UK government is willing and able to maintain its regulations is uncertain, and there is no reliable knowledge of compliance. For example, SAGE minutes and meeting papers describe:

1. Their inability to measure the impact (on R) of each measure, because their data is limited and lockdown measures were introduced at the same time (meeting 25, 14.4.20 in Cairney, 2020d: 50).
2. Their inability to estimate the impact of relaxing each measure (meeting 31, 1.5.20 in Cairney, 2020d: 57).
3. Uncertainty about the transition from national lockdown to location-specific measures (meeting 28 minutes/papers, 23.4.20 in Cairney, 2020d: 53-4).
4. Minimal knowledge on virus transmission in 'forgotten institutional settings' and behaviour among vulnerable 'hard to reach groups' (meeting 39 minutes/papers, 28.5.20 in Cairney, 2020d: 67-8).
5. Continuous uncertainty about issues such as 'the general public wearing facemasks as a preventative measure' (4.2.20: 3; 14.4.20: 2; 21.4.20 in Cairney, 2020d: 49-52; compare with Greenhalgh et al, 2020). This uncertainty informed weak UK government advice on their public use (Cabinet Office, 2020).

Second, while the economic package is large, its impact is unclear. The OBR's (2020b) revised estimate highlights uncertainty about who would need help. The 'job retention scheme' cost a lot less than expected, 'reflecting the apparent concentration of furloughing among part-time and lower-paid jobs', and was a stopgap without a clear 'exit strategy' (Portes and Wilson, 2020). There are similar examples of action-without-known-consequences in other sectors (e.g. Home Office, 2020a; 2020b action on domestic violence or modern slavery).

Third, the limitations to, and unintended consequences of, policy have contributed to many deaths in health and social care. The inadequate stockpile and supply of PPE, for NHS and other staff, is a constant feature of oral evidence to the Health and Social Care committee (Cairney, 2020j), and worryingly-high levels of hospital infection is a regular feature of SAGE meetings (Cairney, 2020e). Inadequate testing capacity is a routine feature in both venues, suggesting that more data would have informed more accurate modelling, and more diagnostic capacity outside of hospital settings would have aided early containment and contact tracing (Cairney, 2020k; 2020e). The UK government responded by setting a target on COVID-19 testing of 100,000 tests per day by the end of April (Full Fact, 2020).

In the meantime, the lack of testing and PPE combined with other policies to contribute to a crisis of deaths in care homes. A high priority for NHS England was to maximise hospital capacity in the run up to a peak of infection. It pursued an initial target of 15000 discharges from hospital beds, primarily to care homes, without routine testing or quarantine measures, and redeployed medical and nursing care from care homes. The National Audit Office (2020) reports 25000 discharges, with testing limited to people with symptoms (17 March to 15 April), and a 30000 testing cap in care homes at the end of April. The Office for National Statistics (2020a; 2020d; 2020e) estimates (in different ways): at least one confirmed COVID-19 test in 56% of care homes in England; 17,478 COVID-19-related deaths (in a care home or hospital) of all care home residents in England (27% of relevant deaths recorded up to 12th June); and, 12,327 deaths *in* care homes in England, or a quarter of the 47,705 overall deaths recorded in England (up to 3rd July).

Fourth, the UK government oversees, but does not seek to control precisely, health 'quangos' such as NHS England and agencies such as Public Health England (Ham, 2018; Boswell et al, 2019). This relationship is double-edged, undermining direct control of policy delivery but allowing some blame deflection (symbolised by Health Secretary's proposed abolition of PHE in August – Dixon, 2020).

Critical policy analysis: use inclusive ways to generate solutions

Policy requires a combination of evidence and values, to determine whose knowledge is valuable and who should benefit from policy. Yet, during crises such as pandemics, policymakers argue that they are primarily engaged in 'evidence-based policymaking', to assure the public that the government is in control (Cairney, 2016; Weible et al, 2020). Phrases such as 'following the science' are misleading (Stevens, A, 2020) and *exclusionary*. They symbolise a style of policymaking designed to be *centralised* (to project ministerial control) and *insulated* (to limit participation to a small number of experts), which undermines the wider 'co-production' of policy (Durose et al, 2017). Consequently, *many changes to policy in practice are only visible when people raise concerns*, including:

- *Reinforcing economic inequalities*. Alves and Sial (2020) note that the UK budget package reinforces economic inequalities. It supports businesses via direct support and wage schemes rather than households, while maintaining 'unequal distribution' and failing to protect the most vulnerable.
- *Reinforcing inequalities relating to disability*. Disability Rights UK and Liberty (2020) criticise the loss of rights to care that are ostensibly guaranteed in the Care Act.
- *Reinforcing inequalities in relation to migration status*. The unequal impact of new and existing policies includes: NHS workers without UK citizenship paying for visas and to access health services (waived *temporarily* - Health and Social Care & Home Office, 2020); and, 'no recourse to public funds' for people granted indefinite leave to remain in the UK (Home Office News Team, 2020; Step-Up Migrant Women Coalition, 2020).
- *The impact of public service discretion on racialised outcomes*. The Runnymede Trust describes a vulnerability to under-estimated grades by teachers (in the absence of exams in 2020) among 'higher attaining working-class students - but also particular ethnic minority students and specifically black Caribbean boys, as well as Gypsy Roma and Irish Traveller students' (House of Commons Education Committee, 2020).
- *The alienation of target populations* (Schneider and Ingram, 1997). Issues include the spread of disease among prisons (House of Commons Library, 2020), movement of

asylum seekers to hotels (Goodwin, 2020), and limited provision of controlled drugs and support to treat addictions (Advisory Council on the Misuse of Drugs, 2020).

Further, high attention by UK policymakers to race and health inequalities relates to protests led by the Black Lives Matter movement (BBC News, 2020c), not routine attention within public sector practices.

Steps 3 and 4. Identify your values, predict the outcome of feasible solutions, and confront their trade-offs

Steps 3 (identifying values) and 4 (predicting outcomes) are worth considering together because both contribute to the comparison of solutions. Step 3 introduces the need to make value-based choices to inform Step 4's prediction and comparison of solutions.

Policy analysis: use values and political goals to predict and compare the outcome of each feasible solution

Prospective evaluation is primarily the political choice between normative criteria:

1. *Effectiveness*. The size of a policy's intended impact (Meltzer and Schwarz, 2019: 117).
2. *Equity (fairness)*. The impact in terms of 'vertical equity' (e.g. the better off should pay more), 'horizontal equity' (e.g. couples should not pay more tax if unmarried), 'intergenerational' equity (e.g. don't impose higher costs on future populations), or in relation to fair processes and outcomes (2019: 118-19).
3. *Feasibility (administrative, technical)*. The likelihood of policy being adopted and implemented well (2019: 119-21).
4. *Cost (or financial feasibility)*. Who would bear the cost, and their willingness and ability to pay (2019: 122).
5. *Efficiency*. To maximise the benefit while minimizing costs (2019: 122-3).
6. The protection of human rights, human dignity, or 'human flourishing' (Mintrom, 2012: 52-7).

These values inform step 4, to 'Assess the outcomes of the policy options in light of the criteria and weigh trade-offs between the advantages and disadvantages of the options' (Meltzer and Schwarz, 2019: 21). Some methods – such as cost benefit analysis (CBA) – seem to dominate. CBA identifies the most efficient solutions by translating their predicted costs and benefits into a single measure, on the assumption that we can compare the experiences of individuals well, and that the winners from policy can compensate the losers (Weimer and Vining, 2017: 352-5, 398-434).

Policy process research: identify how actors cooperate or compete to define and rank values, and anticipate the disproportionate effect of your solution

This process might be manageable if one policy analyst and client were involved. However, many analysts compete to interpret facts and predictions, find an audience, and give advice to different clients (Radin, 2019: 2; Brans et al, 2017). Values and goals are ambiguous and contested (Stone, 2012: 14). Examples include definitions of: *equity*, based on competing notions of merit and the balance between individual, communal, and state-based interventions (2012: 39-62), *efficiency*, based on who decides the main goal and if public spending is a social investment (2012: 63-84), *need*, according to measures of poverty or inequality (2012: 85-106), *liberty*, defined as *freedom from state coercion* versus *freedom from the harm caused by others*

(2012: 107-28), and *security*, according to perceptions of threat versus experiences of harm, and how much risk to tolerate before state surveillance and intervention (2012: 129-53). Further, the connection between these abstract debates on values (step 3) and concrete predictions of outcomes (step 4) is not strong, because it is difficult to separate the consideration of one new instrument from the policy mix.

Critical policy analysis: co-produce the rules to produce and evaluate solutions, and identify the impact on marginalised groups

A common theme is to encourage forms of co-production, to produce the knowledge to inform debates on competing meanings and values (Bacchi, 2009; Doucet, 2019; Smith, 2012). Public and stakeholder involvement fosters deliberation, the 'ownership' of policy, public support, and knowledge to anticipate the consequences of policy.

Steps 3 and 4 in practice: minimal deliberation, implicit choices

UK policy is marked by the *absence* of widespread deliberation about values and trade-offs. Initially, the most visible trade-off related to pre-lockdown visions of freedom and security in relation to the risk of harm, comparing (a) freedom from state coercion versus (b) freedom from the harm caused by others when spreading disease. In comparison with many countries, UK government ministers seemed reluctant to enforce state quarantine measures (Cairney and Wellstead, 2020), and they were often supported by advisors (Vallance, 2020) and SAGE papers that warned against (a) the loss of benefits caused by school closures, and (b) the impact of social isolation on mental health and poverty (SPI-B meeting paper 4.3.20b: 1-4 and meeting 14 10.3.20 in Cairney, 2020e: 9).

Comparing the costs and benefits of lockdown

A lockdown, and support measures, produce unequal effects (Paul Johnson. 2020a; 2020b). Giving priority to the lives of COVID-19 patients contributes to the deaths of others, when people avoid hospital for other conditions, and when the lockdown exacerbates deaths and chronic health problems associated with 'poverty, unemployment and mental health problems'. The lockdown highlights 'distributional choices' since the effect of gaps in education is starker in state than private schools, while loss in employment is more likely among the under-25s and lowest-earning workers (2020a; 2020b). Further, the furlough scheme prompted more women than men to stop work to look after children (2020b).

Layard et al (2020: 1) attempt to translate this impact of policy on COVID-19 deaths, other deaths, and 'incomes, unemployment, mental health, public confidence and many other factors' into a single metric: 'the number of Wellbeing-Years resulting from each date of ending the lockdown'. They describe a 'time to release the lockdown' (while maintaining social distancing and isolating vulnerable people) when the 'net benefits of doing so become positive'. This calculation is based on comparing positive and negative effects, when the lockdown release: 'increases people's incomes', 'reduces unemployment', 'improves mental health, suicide, domestic violence, addiction, and loneliness', 'maintains confidence in the government', and 'restores schooling'; but also 'increases the final number of deaths' from COVID-19 and the illnesses not treated by an overstretched NHS, and 'increases road deaths, commuting, CO2 emissions, and air pollution' (2020:2). Based on their assumptions, a lockdown release on June 1st would have a net, and growing, benefit to the entire population.

Although providing only 'rough valuations', to prompt the UK government into performing a more sophisticated analysis (2020: 8), this report also highlights three challenges to cost-benefit

analysis under uncertainty. First, Layard et al (2020) do not identify their values or relate them to the unequal distribution of positive and negative effects among the UK population. Second, they highlight a tendency for people to avoid: putting a price on a life, confronting the trade-offs regarding whose lives to save, and comparing the efficiency of different measures. Third, one key assumption underpinning Layard et al's (2020: 18) initial calculations proved to be wrong: the release of lockdown did not 'maintain confidence in the government'. High confidence in policy related to the perceived threat of COVID-19 and a sense of social solidarity, which diminished during a confusing lockdown-release with visible winners and losers, exacerbated by the non-resignation of Boris Johnson's special adviser Dominic Cummings when found to be flouting the regulations he helped devise (Devine et al, 2020; Jackson et al, 2020; The Policy Institute, 2020; Cairney and Wellstead, 2020).

Step 5. Recommend policy, taking into account what is possible, and who should be involved

Policy analysis texts emphasise practical elements to recommendations: keep them simple and concise, tailor them to the beliefs of your audience, make a preliminary recommendation to inform an iterative process with clients (Meltzer and Schwartz, 2019: 212), and 'recommend one policy' (Weimer and Vining, 2017: 28). Policy process research suggests that you take into account the inability of governments to predict the outcomes of each instrument. Critical accounts emphasise the need to extend inclusive policymaking to the recommendations process, to anticipate the reaction of many different social groups to your proposals. However, the scope of COVID-19 policy is unusually wide, rendering useless the idea of a single recommendation. Governments necessarily use *trial-and-error policymaking* to adapt to changing circumstances.

Trial-and-error is necessary but problematic in the UK. Studies of 'multi-centric' policymaking recommend adapting to a lack of central government control (Cairney et al, 2019). They criticise governments who deal with their lack of control by trying to reassert it. Policymakers in the UK are too driven by the idea of order: maintaining hierarchies, and producing top-down strategies and performance indicators to monitor and control the public sector, resulting in demoralising policy failure (Geyer, 2012). The alternative is to delegate decision-making, to rely less on targets, in favour of giving people more freedom to learn from experience.

It is difficult to imagine the UK Government taking that advice, because Westminster systems encourage stories of accountability based on central government control (Cairney, 2020c). It pursues a *different* trial-and-error approach: *centralising* the adaptive process, while projecting the sense that it is in control and that policy modification is part of a consistent approach. Meanwhile, its critics exacerbate the problem by focusing on the actions of a small number of people ostensibly in power, using the language of poor judgement, incompetence, or U-turns.

Discussion and conclusion: questions to aid future reflection

Clearly there should be a sustained and intense period of reflection on the UK government's COVID-19 policies and policymaking. It will be crucial to informing new policies to anticipate rather than react to pandemics. It requires us to do the following. First, hold policymakers to account in a systematic way that does not mislead the public. Second, recognise that 'policy learning' is a political exercise (Dunlop, 2017). Third, set realistic expectations, to recognise that policymakers have limited knowledge and control. Finally, note the trade-offs between

attention to (a) the competence and motivations of individual policymakers, or (b) the unequal impact of policies on populations already marginalised by policy and society. With these requirements in mind:

1. Was the government's overall definition of the problem appropriate?

Much analysis of its competence relates to its focus on intervening in late March to protect healthcare capacity during a peak of infection, rather than taking a quicker and more precautionary approach. This judgement relates partly to forecasting errors, but also its definition of the policy problem (Cairney, 2021). Note that SAGE evidence and advice played an important role in UK ministerial deliberation and action. From their perspective, many elements of the response should only be judged while reflecting on its long-term consequences. This evaluation is of a different order to specific deficiencies in preparation (such as shortages in PPE), immediate action (such as to discharge people from hospitals to care homes without testing them for COVID-19), and implementation (such as an imperfect test-trace-and-isolate system).

2. Did the government select the right policy mix at the right time?

In March, the urgency of the epidemic helped change radically the political feasibility of new measures. The UK government initially relied on exhortation, based on voluntarism and an appeal to social responsibility (in a liberal democracy). Then, the 'stay at home' requirement had a major unequal impact, in relation to the income, employment, and wellbeing of different groups. The economic measures reinforced many income and wealth inequalities. Initial policy inaction had unequal consequences on social groups, including people with underlying health conditions, BAME populations more susceptible to mortality at work or discrimination by public services, care home residents, disabled people unable to receive services, non-UK citizens obliged to pay more to live and work while less able to access public funds, and populations (such as prisoners and drug users) that receive minimal public sympathy.

3. Did the UK government make the right choices on the trade-offs between values, and what impacts could the government have reasonably predicted?

Initially, the most high profile value judgement related to (a) freedom from state coercion to reduce infection versus freedom from the harm of infection caused by others, followed by (b) choices on the equitable distribution of measures to mitigate the economic and wellbeing consequences of lockdown, interspersed with (c) debates on fairness in relation to who is most willing and able to follow social distancing rules. A tendency for the UK government to project centralised and 'guided by the science' policymaking has undermined public deliberation on these trade-offs between policies. The latter will be crucial to debates on the trade-offs associated with (national, regional, and local) lockdowns and measures to anticipate and address pandemics in the absence of lockdown.

4. Did the UK government combine good policy with good policymaking?

A problem like COVID-19 requires trial-and-error policymaking on a scale that seems incomparable to previous experiences. It requires further reflection on how to foster transparent and adaptive policymaking and widespread public ownership for unprecedented policy measures, in a political system characterised by (a) accountability focused incorrectly on strong

central government control and (b) adversarial politics that is not conducive to consensus seeking and cooperation.

These additional perspectives and questions show that too-narrow questions – such as was the UK government 'following the science'? - do not help us understand the longer term development and wider consequences of UK COVID-19 policy.

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