The “wicked problems” of governing UK health security disaster prevention

UK health
security

The case of pandemic influenza

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Abstract

Purpose – The purpose of this paper is to examine the governance and policy-making challenges in the context of “wicked problems” based on the case of pandemic influenza.

Design/methodology/approach – The case study research is based on an analysis of official documentation and interviews with policy elites at multiple levels of UK governance.

Findings – Results of this study show that policy actors regard risk communication, the dynamics of international public policy and UK territorial governance as the main governance challenges in the management of influenza at a macro-level. The paper also serves to identify that although contingencies management for epidemiological issues require technical and scientific considerations to feature in governance arrangements, equally there are key “wicked problems” in the context public policy that pervade the health security sector.

Practical implications – The study indicates the need to build in resources at a national level to plan for policy coordination challenges in areas that might at first be seen as devoid of political machinations (such as technical areas of public policy that might be underpinned by epidemiological processes). The identification of the major governance challenges that emerge from the pandemic influenza case study is a springboard for a research agenda in relation to the analysis of the parallels and paradoxes of governance challenges for health security across EU member states.

Originality/value – This paper provides a novel interrogation of the pandemic influenza case study in the context of UK governance and public policy by providing a strategic policy lens from perspective of elites.

Keywords Governance, Disasters, Contingencies, Health security, Pandemic influenza, Wicked problems

Paper type Research paper

Introduction

In April 2014 the British public were reminded that pandemic influenza (flu), in the context of health security, continues to be a major concern for UK policy-makers. There is recognition by the UK government that a pandemic remains the top health risk for the population (NHS England, 2014). The risk of pandemic flu has come into the spotlight recently due to the fact that key measures to prevent such a disease-induced disaster may not be effective. A review of the effectiveness of Tamiflu[1] (the main contingencies measure to manage a pandemic) produced by the Cochrane Collaboration (Jefferson *et al.*, 2014), referred to in the rest of this paper as “Cochrane review”, in the UK concluded that Tamiflu had no significant impact on reducing

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hospital admissions and does not serve to prevent the person to person spread of influenza. This led to pharmaceutical companies retorting by questioning the reliability and validity of the review. UK health authorities responded by insisting that investing in Tamiflu remained “a good insurance policy for the population” (Heymann, 2014). The debates around the Cochrane review (which are often scientific and epidemiological in nature) also served to highlight the public policy-orientated challenges to managing health security threats such as a pandemic.

This paper seeks to delve into the public policy aspects of contingencies management for disease threats from the perspective of policy elites based on the case study of the 2009 influenza pandemic in the UK. The paper addresses a lacuna in UK disaster and crisis management literature by contributing to the “governance” aspects managing health security. There are studies which consider crisis management, resilience and risk in the context of UK public policy (e.g. McConnell, 2003; Drennan and McConnell, 2006; Brassett *et al.*, 2013), however, there are very few case-based research studies which illustrate crisis and disaster governance challenges from the perspective of those institutions and policy actors that are responsible for managing such “wicked problems” from a macro-level policy position. From a public policy point of view, pandemics represent challenges that are unstructured, relentless and cross-cutting – all hallmarks of a wicked problem (Weber and Khademian, 2008, p. 336). First, as Weber and Khademian (2008, p. 336) note, issues that can be viewed in this way are unstructured given that there are high informational demands, there is not always a clear solution to the problem and they have multiple ripple effects. Second, the relentlessness of such problems emerges as a result of the fact that the fight is never over and a line cannot be drawn under them – there is no finality. Third, cross-cutting refers to the fact that wicked problems involve multiple stakeholders who have a range of views and knowledge within a complex political and economic context. The complexities of disease threats and their transcendence of systems elucidates the fact that health security and pandemic prevention involves trade-offs, require flexibility, resource sharing and collaboration to ensure policy success (Durant and Legge, 2006). Other examples of wicked problems include responding and managing climate change, social justice, drug trafficking, immigration, and epidemics. Pandemic influenza fits with the notion of a wicked problem given that they call for multi-level and multi-actor responses across territories requiring a high degree of resilience to deal with the contours of the disease (unstructured and cross-cutting). At a population level the risk of a pandemic endures over time as a result of the mutation of disease strains and the impact of pandemics can traced over many years (relentless). Indeed, policy-makers are well aware that in the last century alone the 1918, 1957 and 1968 influenza pandemics have contributed to millions of fatalities as well as vast economic and social disruption (Kamradt-Scott and McInnes, 2012, pp. 95-96).

The case of pandemic influenza is a “way in” to understanding the policy dynamics of the health security sector in the context of disaster research. The issues to emerge from pandemic influenza are likely to have consequences for the governance of other diseases (and, naturally, reference to other diseases will be made in this paper given policy responses to specific diseases do not exist in a vacuum). The question that underpins the paper, therefore, is: what does the case study of pandemic influenza tell us about what policy elites regard as the key “wicked problems” of contingencies management in the context of UK governance?

Methodology

The case study has been interrogated by deploying mixed qualitative methods. The case study method is effective in public policy research for exploring, assessing, conceptualising, and refining explanations for the characteristics and dynamics of social realities or events (Lowi, 1964, p. 677; Eckstein, 1975, pp. 04-108; Flyvbjerg, 2006, p. 219). The approach included a thematic analysis of secondary sources and official government documentation – including the 2005 and 2009 House of Lords reports into pandemic influenza (HL-88, 2005; HL-155, 2009), the Department of Health (DoH) national framework for responding to an influenza pandemic (DoH, 2007), the independent review of the 2009 influenza pandemic (Cabinet Office, 2010), the UK Influenza Pandemic Preparedness Strategy (DoH, 2011) and reports of the European Commission. The research also involved undertaking in-depth semi-structured elite interviews with policy actors who occupy strategic-level governmental positions in Scotland, the UK and in the European Commission (the Commission being the main policy initiator at the EU level). The analysis of documentation served to support the identification of interviewees and contributed to the themes that structured interview schedules.

The interviewees were purposely sampled due to their positions at different tiers of government in the health security policy area. The interview breakdown is as follows: Scottish Government = 3 interviews (subnational/devolved level); UK Government (national) level: Public Health England (PHE) (agency of the UK civil service) = 2; Westminster/UK Parliament = 1; UK Cabinet Office (central ministerial department/headquarters for government) = 2; and European Commission (Health Threats Unit: 2). Interviews lasted on average 1.5 to 2 hours in length. The Scottish and UK level interviews were face-to-face in governmental or parliamentary premises and the interviews with European Commission officials took place via teleconference facilities (with the interviewer being present on university premises). There were inconsistencies in terms of the medium by which the interviews were conducted and the necessity for teleconference interviewing was borne out of resource limitations for travel (particularly the high costs for travel between Scotland and Luxembourg – where the officials were based in the Commission). However, these inconsistencies should not necessarily be seen as limitations given that the interviews conducted via teleconference were equally rich in depth and exploratory. Interviews were also sought from individuals who work in the area of public health and disease risk management in the DoH, however, there was a lack of preparation by such individuals to engage with this research via an interview. The position of the department was that their institutional approach had been detailed sufficiently in strategy documentation (cited earlier in this paper).

Digital recordings of all the interviews were fully transcribed within 48 hours of the interviews taking place. The interview data was thematically coded around the most significant strategic policy challenges to emerge from the data. It should be noted that the majority of the interviewees felt it to be impossible to “rank” the extent of whether one challenge outweighs another but regarded these challenges to be equally placed on a continuum of policy challenges that were present in the case of pandemic influenza. The quality of the interviews is borne out of the fact that the individuals are situated in strategic-level positions within the institutional environment under investigation (less senior officials, of which there would likely be higher numbers, would be less able to discuss strategic relations across territories). In this respect the quality of the interviews outweighs the need for quantity given the low number of individuals that are in such senior positions in this policy sector (i.e. ten interviews represents a strong sample from a small pool of available data). This approach also serves to highlight the

contribution that emerges from the study in that the interviewees were able to discuss matters of macro, strategic level concern from their perspectives. The interviewees were made up of a senior UK parliamentarian (with a remit for health security) and senior officials working within the areas of contingencies and crisis management for public health at multiple levels of governance (the European Commission, UK government departments/agencies and in the Scottish Government). In short, the paper seeks to identify where the “politics” fits in the area of contingencies and crises management from the perspective of elites in relation to health security within a multi-level governance context. The study accommodates all study protocols which were approved by the author’s university ethics committee and by the funding body for the research (Carnegie Trust, Scotland).

Viewing health security in the context of “disaster”

In a similar vein to “crisis”, no definition of disaster has been agreed upon in the literature (Hood and Jackson, 1992; Perry and Quarantelli, 2005). Alexander (2005, p. 26) has described disaster research as being embedded in a “definitional minefield”. Analyses have ranged from explaining disasters as the collapse of cultural protections (Carr, 1932), unique events (Rubin and Popkin, 1990), a form of collective stress (Barton, 1969), systemic events, and a form of a social catalyst (Kreps, 1998). Disasters tend to be events which lead to large-scale damage to human life, damage to the physical environment and have vast economic and social costs. There is a considerable body of literature that has focused on the impact that physical (sometimes expressed as environmental) disasters have had on human activities (Alexander, 2000; Steinberg, 2000). Indeed, human vulnerabilities have been an important defining factor in the classification of an event as a disaster (Smith, 2005). Again, however, there is an analytical grey area between what constitutes a crisis or disaster due to shifting identities and contextual change. For example, analyses have described a shift from threats to disasters (Rijpsma and van Duin, 2001) and from crises to disasters (Davies and Walters, 1998). The definition(s) applied to analyses seem to be dependent on the discipline using the term and the aims of the researcher because “actors create a definition with different ends in mind” (Perry, 1998, p. 214). In this respect, the “securitisation” of health, particularly around pandemic disaster prevention and management in the context of global governance, is now generally accepted by key supranational authorities (WHO, 2015; European Commission, 2015) and in the academic literature in the context of global governance (Kay and Williams, 2009; Connolly, 2014). It is argued that health security can be studied and framed in the context of disaster research given that if threats of disease pandemics are not managed effectively, and safeguards are weakened, then a pandemic, and thus pandemonium, will ensue – leading to far-reaching damage to human life and produce vast economic social and environmental costs on a global scale.

The case of pandemic influenza in the UK

The implications of pandemic influenza are “feared by politicians, health practitioners and security experts alike” (Kamradt-Scott and McInnes, 2012, p. 95). Significant concern of a pandemic occurring was heightened as a result of the threat of the avian flu virus in Asian countries (H5N1 virus) in 2003 and 2004. More recently, fear about human to human transmission of influenza was particularly acute as a result of the 2009 H1N1 “swine flu” virus. The threat emerged when the World Health Organisation (WHO) declared that there was an outbreak of swine flu following confirmation of

human cases in the USA and Mexico in April 2009. Two confirmed cases of pandemic influenza subsequently emerged which involved a couple who had returned to Scotland from Mexico (Connolly, 2014). This led the UK government to increase their stockpile of antivirals (Tamiflu) to 50 million (from 35 million). The government's approach was to maintain the policy of containment e.g. through contract tracing and antiviral treatment (Cabinet Office, 2010, pp. 27-28). By June/July 2009 the cases of swine flu has reached almost 35,000 in 74 countries. The cases of swine flu in the UK reached 1,582 and there were pockets of concentration of the disease in Birmingham and Greater Glasgow (Cabinet Office, 2010, p. 40). The WHO declared the outbreak had moved to pandemic levels which triggered the UK Government to procure vaccines to cover 100 per cent of the population. In late November 2009 modellers concluded that the pandemic had peaked and a gradual reduction in cases followed (Cabinet Office, 2010, p. 39). The pandemic led to 457[2] deaths during the pandemic in the UK (Cabinet Office, 2010, p. 3). The UK response to the pandemic relied on cooperation between supranational, national and subnational jurisdictions (with UK state level being the "core" crisis management actor through the Department of Health PHE and the UK Cabinet Office).

Following the 2009 pandemic the government produced a UK Influenza Pandemic Preparedness Strategy (DoH, 2011) which, building on the "national framework" for responding to an influenza pandemic (DoH, 2007), sets out in some detail the key planning assumptions and presumptions for planning for a pandemic – including a summary of the key roles of government departments and agencies as well as the control strategies in order to mitigate against the impact of a pandemic influenza crisis. An important point, made rather passively in the strategy, is that preparedness and response to the threat is coordinated at local, national and international levels (DoH, 2011, pp. 32-33; Connolly, 2014).

The wicked governance problem

The case of pandemic influenza in 2009 highlighted that disease threats, such as pandemic influenza are trans-boundary which can penetrate integrated political and economic systems (such as the European Union) and, therefore, call for a large number of organisational actors, at different governance levels, to be engaged in crisis management processes (Allison, 1971; 't Hart *et al.*, 1993). The resilience literature recognises the importance of considering the implications of when crises outweigh local capacity and there is a need for a multi-level response across borders and tiers of governance (see, e.g. Brassett *et al.*, 2013). There is general agreement in the literature that local- or state-centric studies of crisis, emergency management, security and risk ('t Hart *et al.*, 1993) need to adapt their analytical frames to consider multi-level systems (Coaffee, 2013, p. 245). The study "resilience" is characterised by its inexactitude given that, as Anderson (2015, p. 60), notes it has been referred to in academic circles, amongst other things, as "ethos", "programme", "ideology", "concept", "term", "governing rationality", "doctrine", "discourse", "epistemic field", "logic", "buzzword", "normative or ideal concept", and "strategy of power". However, in the context of health security, we are reminded by the 2014-2015 global Ebola outbreaks of the need for international systems to be resilient in terms of being flexible and multi-partnership focused whilst, at the same time, having clarity over institutional roles and responsibilities. This is in order to avoid disorganised and belated responses (as demonstrated by the global response to Ebola). In this regard, successful resilience is dependent on being able to navigate complexity given the context of interdependences between governmental and non-state actors across multi-level

and cross-cutting jurisdictional boundaries (Bevir, 2009, p. 134) which necessitate inter-organisational coordination (Perry and Lindell, 2003). As a result, this warrants the need for contingency planning needs to take place at multiple levels of governance given that internal failures can have implications for the integrated system and have disastrous consequences (see Turner and Pidgeon, 1997; Boin and McConnell, 2007). These requirements are not always matched by the characteristics of bureaucratic contexts which are known for their conservatism when it comes to institutional change. What is more, conflictual and political behaviours can manifest at different levels of governance and, as a result, a lack of contestation between political and bureaucratic actors cannot be assumed (Rosenthal *et al.*, 1991, pp. 225-227). Yet evidence of this is often masked by the tendency of official governmental documents (such as strategies and contingency planning documents) to be read as if contingency processes (particularly for scientific or epidemiological issues) are in some way non-political in that such documents tend to focus on a range of “manual-like” sequential steps that should be taken in the event of an incident. Clarke (1999) discusses the symbolic and political nature of such crisis contingency planning by the use of “fantasy documents”. It is the contention that governmental documents that attempt to tame crises or disasters are “little more than vague hopes for remote futures and have virtually no known connection with human capacity or will” (Clarke, 1999, p. 16).

It is within this context that questions about the “politics” of contingencies and crisis management functions across multiple levels of governance are pursued and, specifically, how this relates to the issue of health security.

The wicked problem of the politics of risk communication and the role of pharmaceuticals

The case study data indicates that balancing the activities of risk communication with pharmaceutical interests is a major governance challenge in policy-making for pandemic flu (and, arguably, for other diseases). The conclusions of the aforementioned Cochrane review questioned whether government investment in a stockpile of “Tamiflu” as a contingency measure to safeguard the population matched any potential benefits of taking the medication. The evidence presented by Jefferson *et al.* (2014) suggested that Tamiflu moderately reduced the period that individuals would have flu symptoms. This led to pointed media reporting of the issue which included headlines such as “Drugs given for swine flu were waste of £500 million” (Knapton, 2014) and “What the Tamiflu saga tells us about drug trials and big pharmaceuticals” (Goldacre, 2014). The response from the industry was that the review underestimated the benefits of Tamiflu and that they disagreed with the statistical analyses and therefore disagreed with all of the conclusions (Gallagher, 2014). The UK Department of Health confirmed that they would not change their public health advice in relation to the use of Tamiflu as part of its preparedness planning despite the findings of the Cochrane Review. It is with key reference to the issue of Tamiflu that elite actors suggest that there are challenges with regards to risk communication and, revealingly, the Chief Medical Officer (CMO) for Scotland pointed out that “we are not very good in government at conveying the full arguments and why we have decided to continue with the current policy” (Keel, 2014). For policy-makers the former Secretary of State for Health, and latterly the chair of the UK parliamentary committee for health, highlighted the difficulties in “communicating the subtleties” of scientific evidence (Dorrell, 2014). This chimes with the perspectives of the CMO for Scotland and the chair of PHE who considered that the challenges of “coordinating and

digesting advice” (Keel, 2014) that is “unadulterated, clear, properly analysed and packaged for the policy-makers” (Heymann, 2014) are significant. The wider point here is that scientific evidence is just one consideration by policy-makers and it would almost be impossible for this to not be the case in a politically driven society (Heymann, 2014).

A further challenge in terms of risk communication is getting across the message that it will take at least four to six months after a novel virus has been identified and isolated before pharmaceutical manufacturers can make an effective vaccine available (DoH, 2011, p. 11). Although it could be said that the provision of scientific products by pharmaceutical companies are essential, because they are the only place where new drugs and vaccines and biotechnologies are being developed, the risk for many politicians is that because they are profit-making organisations “it is easy to be accused of favouring a pharmaceutical company because of vested interests” (Heymann, 2014). However, contingency planning for health security requires the need for a stockpile of drugs and vaccines but this undoubtedly remains a political decision because the opportunity cost would be that policy-makers could be accused, in the event of a crisis, of not having appropriate measures in place thus endangering the health of the public (Dorrell, 2014). Pandemic flu served to highlight that risk communication, coupled with industry interests, need to be taken into account when it comes to the management of science- or medical-based areas of public policy. Political leaders can have their fate determined by how they respond to crises (Boin *et al.*, 2005), and investing in a stockpile (even if they are never used), symbolises government readiness (t Hart, 1993).

The wicked problem of managing international public policy

The UK Department of Health has highlighted that in a globalised world it is not possible to prevent, manage and eradicate a new virus in neither the country of origin nor when it penetrates UK borders (DoH, 2011, p. 11). It is for this reason that the current chair of OHE, writing back in 2006, noted that reporting and responding to infectious diseases requires collaboration across territories (Heymann, 2006, p. 350). Heymann (2006, p. 350) suggested that “[t]his phenomenon is a potential infringement on national sovereignty that compromises the concept that states reign supreme over their territories and peoples”. The twin threats of SARS and avian influenza served to seal a new approach to health security for disease threats within a globalised world whereby the norms to responding to public health threats are such that reporting is much more the norm in order to eradicate diseases as efficiently and effectively as possible. The rise of surveillance using the internet and international standards and agreements, such as the Global Influenza Surveillance Network (of which there are 105 member states), overseen organisations such as the WHO, has now replaced a situation whereby individual states provide information on disease threats and outbreaks on a voluntary basis (Heymann, 2006, p. 350). The relationship between state actors and international policy regimes in the process of contingencies management for health security becomes ever more apparent in the context of EU public policy. The legislative competence of the EU in coordinating contingencies and crisis management arrangements for public health threats has increased after a series of serious disease episodes, such as SARS, avian flu and pandemic influenza, which have presented opportunities for closer policy integration and Europeanisation (Ryan, 2014).

Health security within the EU is coordinated by the Directorate General for Health and Consumer Protection of the European Commission. The role of the Commission has become legally enshrined since the 1998 SARS outbreak which ended the voluntary arrangement in place for member states to provide data to supranational institutions

(as was the case in terms of providing national level information to the WHO). There is now a system in place for EU level surveillance in that member states are legally required to statistically report on cases of communicable diseases through the EU Health Security Committee on an annual basis and second, states are obliged to inform each other using an electronic system of outbreaks of one of these communicable disease which could have effects on other member states. Yet, enthusiasm for closer integration between states cannot be taken for granted given that given that larger member states (such as the UK, France and Germany) have their own systems of contingencies management that have strengthened over time and, therefore, “carrying smaller member states” can be a distraction (PHE official, 2014). There have also been difficult tensions (which is a key hallmark of “wicked problem”) when it comes of the sharing of what some member states would describe as “sensitive data” with each other through the route of the Health Security Committee when it comes to contingency planning. The reason for this is articulated by a senior European Commission official:

We have member states that plan to vaccinate 2 percent of their population in the event of a pandemic. In other words, 98 percent will not be vaccinated and then you have countries that are providing for 100 percent. Clearly if this information becomes public the citizens of the concerned countries - the 98 percent who won't get the vaccine might have some questions to ask of their politicians. The Health Security Committee does not oblige member states to vaccinate everybody - that's not the purpose of the exercise - this is a national decision for how many people they consider suitable or requiring a vaccination. For example it could be public service workers, it could be medical personnel, the armed services, it could be the security services. In Germany it was the politicians for some reason. So this is a very political and national decision. What we have done is to take the figures from each member state and formulate a joint tender. So we now have the figures for the different member states which are quite confidential I can tell you and we will make a tender to industry and the industry will be able to apply to supply this vaccine.

For senior policy-makers, the governance challenges are grouped around managing public policy dynamics around ensuring closer integration and Europeanisation in the knowledge that diseases transcend borders and therefore requires collaboration across territories. However, the complexities come from the politics of using resources to support “weaker” member states and the sensitivities around sharing classified information about who will be prioritised when it comes to implementing a vaccination programme in the event of a pandemic.

The wicked problem of UK territorial governance

UK policy actors (i.e. in Scottish and UK governments) in the area of health security have highlighted the domestic state-level challenges of managing planning for pandemic disease within UK borders and the political dimensions to this process. The UK constitutional arrangements are such that we have devolved governments (with limited powers) in Scotland, Wales and Northern Ireland. The governance challenges are complex and this is partly due to the fact that control over health policy in the UK is not straightforward. For example, in the case of Scotland public health (i.e. NHS and wider healthcare) is a devolved matter, however, matters of health security that have public health implications (such as bio-terrorism) are reserved matters for the UK government. Such challenges are exacerbated when administrations are headed by different political parties at different tiers of governance. For example, the Scottish Government is headed up by a different political administration to the UK

level (the Scottish Nationalist Party) and the case study data has shown there to be evidence that nationalist politics has impacted on approaches to multi-level contingencies management for health security (although, for pandemic influenza specifically, both UK and Scottish level elites highlighted that there were strong relationships between public health officials). A Scottish Government official indicated how the nationalist Public Health Minister, Michael Matheson, was concerned that documentation on cross-border contingencies management pertaining to health (such as radiation protection and nuclear monitoring) had the word “England” in the title as a result of the creation of “PHE” as an executive agency of the UK Department of Health at UK level in April 2013. This had serious implications for civil servants in Scotland in that they had to research and scope out the reasons why there is not the capacity to undertake this type of work at the subnational level in Scotland:

The Minister was questioning Public Health England because the title changed and we tried to advise that it is the same as what we had before but the documents now have Public Health England on it. The Minister here said that that wasn’t good politically so he then said shouldn’t we just develop this capacity in Scotland? So we spent a lot of time persuading the Minister that the fact we have the memorandum of understanding is because we don’t have the capacity here and can’t develop the capacity. It’s expertise beyond what we have therefore we have to buy it from England. That was a politically motivated pile of nonsense really [...] It only became an issue because of the new name of the organisation and it took a lot of time persuading the Minister (Scottish Government official, 2014).

The current policy arrangements are such that the devolved administrations in the UK contribute to national strategies for preparedness planning and crisis simulations, however, as one senior Scottish Government official noted, “it is not always the case that the devolved administrations are there and creating plans with the UK government” (Scottish Government official, 2014). Interviewees from different tiers of UK governance agreed that there is mutual interest in maintaining strong relationships across levels of governance both in terms of managing the spread of diseases and ensuring that clear communication channels are in place. This is not to say, however, that there are no political tensions when it comes to multi-level contingencies management for national health and security. A senior official in Scottish Government gives the example of counter-terrorism efforts as part of the operations of the Commonwealth Games in Glasgow 2014. As noted above although counter-terrorism measures have implications for public health, contingencies management arrangements for terrorism are a reserved issue for Westminster. This leads to multi-level tensions in terms of information sharing (even to the officials of the host country of the Games) given the sensitivities around responses to terrorism:

We had an exercise for the Commonwealth Games and Cobra [of the UK Cabinet Office] was involved. One of the issues that people mentioned quite a lot was the counter-terrorism aspect as that is a big issue. There is an issue in terms of sharing information between parts of the administration. So I think that DoH and Cobra feel that because some things [policy areas] are not devolved then they feel totally responsible for that or feel reluctant to share information as much as Scottish colleagues would always like [...] There can be some tensions around that [...] We would always want more control (Scottish Government official, 2014).

It is clear from such insider perspectives that there are political interests that infiltrate the approach of policy-makers even when it comes to so-called “technical” areas of contingencies and crisis management. The CMO was clear about the fact that there are interests on both sides of the border between Scotland and England in terms of

maintaining the current arrangements even if the devolution of more powers continues given that diseases and organisms do not stop at the border (Keel, 2014). In terms of the experience of managing the 2009 influenza pandemic the independent review of crisis noted that strong sub-national and national relations were not taken for granted given that “the H1N1 pandemic was the first UK-wide crisis in a devolved policy area, and therefore there could have been inconsistencies and disagreements between the four UK nations during the response” (Cabinet Office, 2010, p. 5). Yet the report concluded that “the willingness of the devolved administrations and the Department of Health to work closely together within a common UK framework was fundamental to the overall success of the response” (Cabinet Office, 2010, p. 4). Notwithstanding this encouraging narrative, as noted above, there have been examples of nationalist fervour impacting on the public policy process in Scotland which have placed demands on civil servants north of the border. There are also intriguing inter-institutional dynamics here if one considers the fact that reserved areas of public policy (which have health security implications) are legislated for in England (such as counter-terrorism policy which include measures to manage biosecurity) and the UK government can become protectionist when it comes to sharing information with subnational government despite public health being fully devolved to Scotland. This serves to demonstrate that the case of public health threats fit with the perspectives of those who consider there to be an “unequal plurality” and a “predominantly asymmetric imbalance” (Marsh *et al.*, 2003, p. 332) in UK governance. This is certainly the case for the context of contingencies management processes for UK health security.

Conclusion

The paper has provided key insights into strategic-level relationships across multiple levels of governance in relation to contingencies management policy-making for health security. It has sought to unpack some of the political multi-level policy complexities associated with managing pandemic influenza as a “wicked problem”. Contingency management processes in relation to this case study highlights the considerable public policy and political challenges, articulated by for policy elites, in terms of risk communication, the internationalisation and Europeanisation of national contingencies management processes and UK national-subnational relations. The lens adopted by this paper, in terms of identifying the perspectives of policy elites, has emerged out of the desire to address a lacuna in UK disaster and crisis research in that there is a dearth of case-based analyses of the challenges and paradoxes of contingencies management processes from a “macro” governance position. By interrogating the case of pandemic influenza the paper highlights that the recent high profile debates over the efficacy of Tamiflu instigated by the Cochrane review is but one example of the governance challenges that face policy elites. From a practical point of view it is important that risk management registers (i.e. organisational systems for identifying levels of risks and countermeasures) at different tiers of governance address the management of policy and political relations across such levels and that this is continually evaluated as a result of bureaucratic coordination and conflict challenges (which are likely to emerge, in part, by constitutional reforms). This research also presents opportunities for comparative research in terms of the multi-level governance processes for contingencies management in the context of health security. This includes whether the findings of the UK experience are translatable to other state contexts with regards to the management of “wicked problems” from an elite perspective.

Notes

1. Tamiflu is the antiviral drug stockpiled by UK government to be taken in the event of a pandemic in order to alleviate symptoms and complications of influenza such as pneumonia.
2. In total, 342 deaths in England related to H1N1 had been recorded, 69 in Scotland, 28 in Wales and 18 in Northern Ireland (Cabinet Office, 2010, p. 40).

References

- Alexander, D. (2000), *Confronting Catastrophe: New Perspectives on Natural Disaster*, Terra Publishing, Harpenden, and Oxford University Press, New York, NY.
- Alexander, D. (2005), "Towards the development of a standard in emergency planning", *Disaster Prevention and Management*, Vol. 14 No. 2, pp. 158-175.
- Allison, G.T. (1971), *Essence of Decision: Explaining the Cuban Missile Crisis*, Little, Brown, and Co, Boston, MA.
- Anderson, B. (2015), "What kind of thing is resilience?" *Politics*, Vol. 35 No. 1, pp. 60-66.
- Barton, A. (1969), *Communities in Disaster*, Doubleday Co., New York, NY.
- Bevir, M. (2009), *Key Concepts in Governance*, Sage publications, London.
- Boin, A. and McConnell, A. (2007), "Preparing for critical infrastructure breakdowns: the limits of crisis management and the need for resilience", *Journal of Contingencies and Crisis Management*, Vol. 15 No. 1, pp. 50-59.
- Boin, A., 't Hart, P., Stern, E. and Sundelius, B. (2005), *The Politics of Crisis Management: Public Leadership under Pressure*, Cambridge University Press, Cambridge.
- Brassett, J., Croft, S. and Vaughan-Williams, N. (2013), "Introduction: an agenda for resilience research in politics and international relations", *Politics*, Vol. 33 No. 4, pp. 221-228.
- Cabinet Office (2010), "The 2009 Influenza Pandemic – an independent review of the UK response to the 2009 influenza pandemic", available at: www.gov.uk/government/publications/independent-review-into-the-response-to-the-2009-swine-flu-pandemic (accessed 1 June 2014).
- Carr, L.J. (1932), "Disasters and the sequence-pattern concept of social change", *American Journal of Sociology*, Vol. 38 No. 2, pp. 207-218.
- Clarke, L.B. (1999), *Mission Improbable: Using Fantasy Documents to Tame Disasters*, University of Chicago Press, Chicago, IL.
- Coaffee, J. (2013), "Rescaling and responsabilising the politics of urban resilience: from national security to local place-making", *Politics*, Vol. 33 No. 4, pp. 240-252.
- Connolly, J. (2014), "Pandemic influenza in the UK and EU competence in health security policy", *Eurohealth*, Vol. 20 No. 4, pp. 23-26.
- Davies, H. and Walters, M. (1998), "Do all crises have to become disasters? Risk and risk mitigation", *Disaster Prevention and Management*, Vol. 7 No. 5, pp. 396-400.
- Department of Health (2007), "National framework for responding to an influenza pandemic and supporting guidance", available at: <http://webarchive.nationalarchives.gov.uk/+http://dh.gov.uk/en/publichealth/flu/pandemicflu/index.htm> (accessed 1 March 2014).
- Department of Health (2011), "UK Pandemic preparedness strategy", available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/213717/dh_131040.pdf (accessed 1 March 2014).
- Dorrell, S. (2014), "Interview with the author", 29 April.
- Drennan, L. and McConnell, A. (2006), "Mission impossible? Planning and preparing for crisis", *Journal of Contingencies and Crisis Management*, Vol. 14 No. 2, pp. 59-70.

- Durant, R.F. and Legge, J. (2006), "Wicked problems,' public policy, and administrative theory: lessons from the GM food regulatory arena", *Administration & Society*, Vol. 38 No. 3, pp. 309-334.
- Eckstein, H. (1975), "Case study and theory in political science", in Greenstein, F. and Polsby, N. (Eds), *The Handbook of Political Science: Strategies of Inquiry*, Addison-Wesley, London, pp. 79-137.
- European Commission (2015), "Global health security initiative", available at: http://ec.europa.eu/health/preparedness_response/cbrn_threats/ghsi/index_en.htm (accessed 28 January 2015).
- Flyvbjerg, B. (2006), "Five misunderstandings about case study research", *Qualitative Inquiry*, Vol. 12 No. 2, pp. 219-245.
- Gallagher, J. (2014), "Tamiflu: millions wasted on flu drug, claims major report", available at: www.bbc.co.uk/news/health-26954482 (accessed 29 May 2014).
- Goldacre, B. (2014), "What Tamiflu tells us about drug trials and big pharma", available at: www.theguardian.com/business/2014/apr/10/tamiflu-saga-drug-trials-big-pharma (accessed 29 May 2014).
- † Hart, P. (1993), "Symbols, rituals and power: the lost dimensions of crisis management", *Journal of Contingencies and Crisis Management*, Vol. 1 No. 1, pp. 36-50.
- † Hart, P., Rosenthal, U. and Kouzmin, A. (1993), "Crisis decision making: the centralization thesis revisited", *Administration & Society*, Vol. 25 No. 1, pp. 12-45.
- Heymann, D. (2006), "SARS and emerging infectious diseases: a challenge to place global solidarity above national sovereignty", available at: www.annals.edu.sg/pdf/35volno5200606/v35n5p350.pdf (accessed 1 April 2014).
- Heymann, D. (2014), "Interview with the author", 25 March.
- Hood, C. and Jackson, M. (1992), "The new public management: a recipe for disaster?", in Parker, D.J. and Handmer, J. (Eds), *Hazard Management and Emergency Planning*, James and James Science, pp. 109-125.
- Jefferson, T., Jones, M.A. and Doshi, P. (2014), "Neuraminidase inhibitors for preventing and treating influenza in healthy adults and children (review)", *Cochrane Database Systematic Review*, Vol. 4, available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008965.pub4/citedby> (accessed 3 June 2014).
- Kamradt-Scott, A. and McInnes, C. (2012), "The securitisation of pandemic influenza: framing, security and public policy", *Global Public Health*, Vol. 7 No. 2, pp. 95-110.
- Kay, A. and Williams, O.D. (2009), *Global Health Governance: Crisis, Institutions and Political Economy*, Palgrave Macmillan, Houndmills.
- Keel, A. (2014), "Interview with the author", 27 May.
- Knapton, S. (2014), "Drugs given for swine flu were waste of £500m", available at: www.telegraph.co.uk/health/swine-flu/10756200/Tamiflu-drugs-given-for-swine-flu-were-waste-of-500m.html (accessed 29 May 2014).
- Kreps, G.A. (1998), "Disaster as systemic event and social catalyst", in Quarantelli, E. (Ed.), *What is a Disaster? Perspectives on the Question*, 2nd ed., Routledge, London, pp. 31-56.
- Lowi, T.J. (1964), "American business, public policy, case studies, and political theory", *World Politics*, Vol. 16 No. 1, pp. 671-715.
- McConnell, A. (2003), "Overview: crisis management, influences, responses and evaluation", *Parliamentary Affairs*, Vol. 56 No. 3, pp. 363-409.
- Marsh, D., Richards, D. and Smith, D. (2003), "Unequal plurality: towards an asymmetric power model of British politics", *Government and Opposition*, Vol. 38 No. 3, pp. 306-332.

- NHS England (2014), "Pandemic influenza remains the top risk for England and the UK", available at: www.england.nhs.uk/ourwork/eprp/pi/ (accessed 1 February 2014).
- Perry, R.W. (1998), "Definitions and the development of a theoretical superstructure for disaster research", in Quarantelli, E.L. (Ed.), *What is a Disaster? Perspectives on the Question*, Routledge, London, pp. 197-217.
- Perry, R. and Lindell, M. (2003), "Preparedness for emergency response: guidelines for the emergency planning process", *Disasters*, Vol. 27 No. 4, pp. 336-350.
- Perry, R. and Quarantelli, E.L. (Eds) (2005), *What Is a Disaster? New Answers to Old Questions*, 2nd ed., Xlibris Books, Philadelphia, PA.
- Rijpma, J.A. and van Duin, M.J. (2001), "From accident to disaster: the response to the Hercules crash", in Rosenthal, C., Boin, A. and Comfort, L. (Eds), *Managing Crises: Threats, Dilemmas and Opportunities*, Charles C Thomas, Springfield, pp. 143-154.
- Rosenthal, U., 't Hart, P. and Kouzmin, A. (1991), "The bureau-politics of crisis management", *Public Administration*, Vol. 69 No. 2, pp. 211-233.
- Rubin, C.B. and Popkin, K. (1990), *Disaster recovery after hurricane Hugo in South Carolina*, Natural Hazards Research and Applications Information Center, Institute of Behavioral Science, University of Colorado.
- Ryan, J. (2014), "Interview with the author", 23 May 2014.
- Scottish Government official (2014), "Interview with the author", 2 May.
- Smith, D. (2005), "In the eyes of the beholder? Making sense of the systems(s) of disaster(s)", in Perry, R.W. and Quarantelli, E.L. (Eds), *What is a Disaster? New Answers to old Questions*, Xlibris Press, Philadelphia, PA, pp. 201-236.
- Steinberg, T. (2000), *Acts of God: The Unusual History of Natural Disasters in America*, Oxford University Press, Oxford.
- Turner, B.A. and Pidgeon, N.F. (1997), *Man-Made Disasters*, 2nd ed., Butterworth-Heinemann, Oxford.
- Weber, E.P. and Khademian, A.M. (2008), "Wicked problems, knowledge challenges, and collaborative capacity builders in network settings", *Public Administration Review*, Vol. 68 No. 2, pp. 334-349.
- WHO (2015), "Foreign policy and health security", available at: www.who.int/trade/glossary/story030/en/ (accessed 28 January 2015).

Further reading

- Downs, A. (1957), *An Economic Theory of Democracy*, Harper and Brothers, New York, NY.
- Boin, A., Ekengren, M., Rhinard, M. (2013), *The European Union as Crisis Manager: Problems and Prospects*, Cambridge University Press, Cambridge.
- Burch, M., Bulmer, S., Hogwood, P., Scott, A., Carter, C. and Gomez, R. (2006), "UK devolution and the European Union: a tale of cooperative asymmetry", *Publius: The Journal of Federalism*, Vol. 36 No. 1, pp. 75-93.
- Coker, R. and Mounier-Jack, S. (2006), "Pandemic influenza preparedness in the Asia-Pacific region", *The Lancet*, Vol. 368 No. 9538, pp. 886-889.
- Commission Decision 1082/2013/EU (2013), "Serious cross-border threats to health", 22 October.
- Drennan, L.T. and McConnell, A. (2007), *Risk and Crisis Management in the Public Sector*, Routledge, Abingdon.
- Rosenthal, U. and Kouzmin, A. (1997), "Crises and crisis management: toward comprehensive government decision making", *Journal of Public Administration Research and Theory*, Vol. 7 No. 2, pp. 277-304.

Rosenthal, U., Boin, A. and Comfort, L.K. (2001), "The changing world of crises and crisis management", in Rosenthal, R., Boin, A., and Comfort, L.K. (Eds), *Managing Crises: Threats Opportunities, Dilemmas and Opportunities*, Charles C Thomas Press, Springfield, pp. 5-27.

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