

# Managing the First 230 Days

Critical findings and recommendations from the three Interim Operational Reviews

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Nottingham Trent  
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This review is an independent commission by Shaun West and completed by the C19 National Foresight Group. In the spirit of continuous learning and reflection, this document is to be shared widely with Local Resilience Forums, partners and government departments.

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# Foreword

This represents our debrief of all preceding C19 National Foresight Group Interim Operational Reviews, blending those which took place in April, June and September 2020. I commissioned these rapid reviews, mid crisis, to capture live learning and insight for partners and government; the opportunity to reimagine the emergency approach during the pandemic and save lives, relieve suffering and support our communities was a unique one. All of our reviews have been delivered by a collaboration between Professor Jonathan Crego M.B.E, Director of the Hydra Foundation, and Dr Rowena Hill and her dedicated team from Nottingham Trent University, free of charge. Supported by our lead subject matter expert namely Deputy Chief Fire Officer Andy Hopkinson, who kindly contributed practical expertise of civil contingencies, we were privileged to be joined by Andy Towler, Tracy Daszkiewicz, Ian Reed, Sue Whitton and Ian Thomas who brought their own response and broader recovery insights. All of our recommendations have been adopted. Thank you to the whole team for a truly national partnership effort, including the cross-government civil servants and partners at our daily meetings.

Whilst this represents the last of my commissions, all of our previous products, including rapid reviews, remain available publicly on our host website at Nottingham Trent University at <https://bit.ly/C19NFGOutputs>

Learning is of course not exclusive to these reviews. I will always be struck by the impromptu reply by Dr Mike Ryan, Executive Director of World Health Organisation Health Emergencies Programme, provided during a briefing on 13th March 2020, sharing his learning in respect of Ebola outbreaks:

*“...You need to react quickly, you need to go after the virus, you need to stop the chains of transmission. You need to engage with communities very deeply, community acceptance is hugely important. You need to be coordinated, you need to be coherent. You need to look at the other sectoral impacts, schools and security and economics....*

*Be fast. Have no regrets, you must be the first mover. The virus will always get you if you don't move quickly...If you need to be right before you move, you will never win. Perfection is the enemy of the good when it comes to emergency management. Speed trumps perfection. And the problem in society we have at the moment is everyone is afraid of making a mistake, everyone is afraid of the consequence of error but the greatest error is not to move. The greatest error is to be paralysed by the fear of failure...”*

As I write this foreword during the third national lockdown, the death toll surpasses 80,000, recording last week the highest daily report of deaths, 1325. This virus thrives on complacency whilst transparency dies in the darkness. Let speed, candour and subsidiarity prevail in the future leadership of this emergency, under the expert stewardship of partners from across Local Resilience Forums and their emergency planners.

I leave you with my sincere thanks for all you and your teams do. Here's to a peaceful, kinder year. Stay safe one and all.



Shaun West, Chairperson, C19 National Foresight Group

# Authorship

The authorship of this report includes:

Dr Rowena Hill

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This report is predicated on the authorship, creativity and contributions of the authors of the first, second and third interim operational reviews. The authorship of these is outlined below.

## **The Academic Team from Nottingham Trent University**

The NTU team acted as an intelligence cell during the 10kv session and analysed the data and co-authored the report.

Dr Rowena Hill\*

Dr Duncan Guest

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Professor Thom Baguley (Intelligence cell only)

Stephanie Blanco (Author of some of the intelligence briefings which were used to create aspects of the literature review)

## **The Subject Matter Experts**

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Tracy Daszkiewicz, Deputy Director of Population Health & Wellbeing, PHE

Sue Whitton, Senior Emergency Planning Officer, Lincolnshire Fire and Rescue Service

Ian Reed, Head of Emergency Planning and Business Continuity, Lincolnshire

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Andy Towler, The Resilience Group

Professor Jonathan Crego, MBE, Director of the Hydra Foundation. Designer and owner of Hydra, Minerva and 10,000 Volts debriefing methodologies.

\*Denotes corresponding lead author for all enquiries or questions

# Executive Summary

Reflecting on what has passed allows us to move forward and learn. Over the course of 2020 we have conducted three reviews to understand the Covid-19 pandemic's impact on the UK with the aim of continuously improving ways of working in order to tackle the virus. These reviews called Interim Operational Reviews (IORs) provide a platform to listen to the views and ideas of strategic stakeholders from the civil contingencies community and were conducted through 2020. This report brings together the learning from the three IORs, melding them together and sharing common themes and lessons to be taken forward for the remainder of this emergency and others in our future. This is a unique opportunity to review the crisis through the lens of the civil contingencies community by connecting and sharing learning detailed in this report.

The report is divided into three distinct parts each bringing depth and insight for those seeking to understand where we have been and what we need to do in the future. To ensure this report is not simply a summary of prior work, the team has re-analysed the data from all the reviews as an integrated whole which has produced nine findings which span across the year. These findings are new and some of which correspond with one or more IORs. These findings have been mapped against the 65 recommendations made in the reviews and a new analysis of these is also presented which highlights five key areas of work for those looking to improve the way we respond to largescale and widespread emergencies. Finally, we have situated the topics and issues raised within the academic and grey literature to build a full picture of how and why we need to revise and develop the way we respond to events like Covid-19, both now and in the future.

For the reader coming fresh to the IORs, they were conducted with delegates from Local Resilience Forums (LRFs), government departments, strategic responders and other key stakeholders. These reviews brought together between 150-250 people per review and in total generated over 140,000 anonymous words from delegates. They were conducted on:

- Wednesday 22 April – month one
- Wednesday 17 June – month three
- Wednesday 16 September – month six

These IORs provide a unique opportunity to explore the longitudinal nature of the pandemic from the perspectives of a critical group of individuals and organisations central to managing Covid-19 across the UK as the pandemic was unfolding/evolving. Whilst thematic analysis was used for each of the IORs, due to the unique perspective these reviews provide, a methodology was developed when bringing together the three reviews into one final report. This report builds on a fresh analysis of the three reviews in order to explore the common threads across the life of our/country's response to Covid-19. This new analysis generated nine main findings outlined here:

- 1) Structural Agility – the ability of structures to flex and bend with the changing demands
- 2) Integrity – the transparency of decision-makers and trust in the national approach

- 3) Strategy and Leadership – the absence of clarity and leadership in the strategic management of Covid-19
- 4) Integrity – the transparency of decision-makers and trust in the national approach
- 5) Intelligence Flow –the flow of data, information and intelligence is exchanged and moves between structures
- 6) Learning for the Future – capturing and sharing learning
- 7) Mid-term Resilience – resources, capacity and energy to manage the pandemic and other known risks alongside each other
- 8) Impacts of Covid-19 – the broad nature of the impacts on society from Covid-19
- 9) Recover to a New Future – what the future might be and how to move there

This report details each of these findings and the sub findings outlined in Figure One and provides insights on the opportunities and challenges that Covid-19 has brought over 2020. We hope the discussions in this report will support further debate and action to ensure we learn from the experiences of this global pandemic for the ongoing response and for future emergencies of this kind.

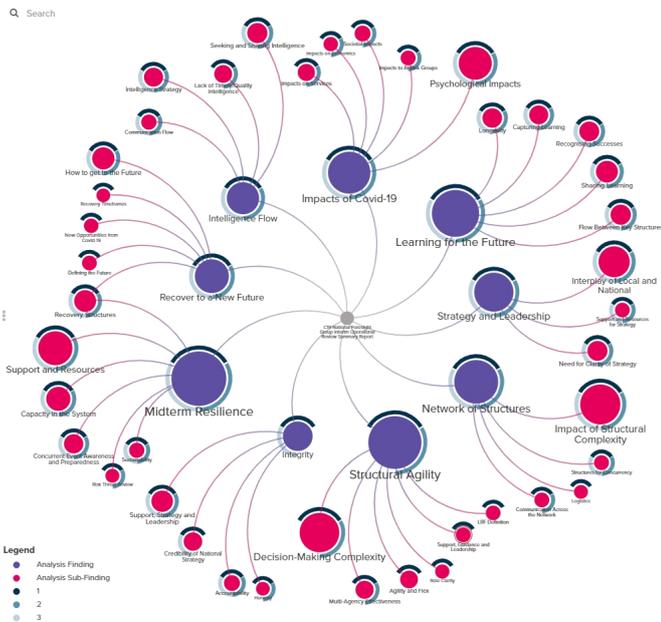


Figure 1: Summary of report findings and sub findings

To further support this learning process, we have also clustered the recommendations made across the three IOR reports by mapping recommendations to the original IOR findings and linking them to the new analysis. This produced a list of recommendations sorted by the nine report findings which were then reviewed and clustered by their content to create five key areas. This analysis highlighted five main recommendation clusters which focus on the need to develop stronger connectivity and learning across the system (Enhance Connectivity and Learning), providing clearer guidance and strategy to manage the pandemic and its connected impacts (Sharing Strategy and Guidance), developing a way to review the ways in which the UK manages largescale and widespread disasters and emergencies (Largescale Emergency and Disaster Review), understanding the resource needs of partners, agencies and communities as we move forward (Resource the Future Needs) and finally develop new models and approaches to help people deal with the impacts of emergencies such as the Covid-19 pandemic (Future Models and Approaches). A mapping of these clusters and report findings is shared in the appendix.

We would like to take this opportunity to recognise and thank those individuals

and organisations who have worked tirelessly to tackle the impacts of Covid-19 within our communities. These reviews offered an opportunity to hear their voices and to adapt our response. We hope this final report is used in the same way.

## Summary of Conclusions

The report findings and recommendation clusters highlight the areas of concern that we as a society and civil contingencies community must face. These serious and complex challenges highlighted by Covid-19 must be addressed. We must ensure that those who have the resource or legitimacy to address the areas of concern highlighted in this report (in communication, strategy, leadership, governance, resource etc) do so; in the following ways .

- We should continue to connect our abilities and learn from those who have experienced the management of this major national event to ensure organisational learning and memory is shared across teams and partnerships so these new ways of working become embedded and intuitive now and into the future.
- The power base of localism which used to exist at county level has been drawn upwards to national bodies and downwards to the public as they are the groups with the most amount of power or ability to change the pandemic and therefore, should be nurtured and empowered. The power shift from local to central within the system of emergency management has had many consequences and both the authors and delegates of the IORs remain unconvinced that this has helped.
- We must move to a networked approach that enhances the structure and develops future proofed systems to tackle smaller and localised emergencies, as well as widespread and long-term events, such as Covid-19.
- The need to support the current workforce both in terms of psychological wellbeing and by developing additional cohorts of trained staff to ease pressure and allow rest. This is imperative to the mid and long-term future resilience of the UK. This also includes ensuring learning within organisations and across partnerships is embedded learning at local and national level.
- Politics have become far too present in the management of this emergency at every layer and we are yet to be convinced that it has helped at either a local or national level .
- A lack of strategy and shared planning has reduced our ability to tackle the impacts of Covid-19 society. Moving forward, we would advise that the recommendations relating to strategy, guidance and reviewing become the primary focus and are worked through to effectively promote trust and communication which are quintessential aspects in achieving a success.
- The longevity and complexity of this emergency, combined with concurrent events, have restricted our ability to think into the future to predict 'what may come next'. Adaptation and stabilisation should be accepted and adopted during periods where recovery is not yet possible. We also recommend that communications sharing realistic view of the immediate, mid and longer-term future are used.
- The social, economic and health inequalities across the UK need to be addressed. Support must be given to those who have lost out on opportunities for learning, work, spiritual richness and memorialisation, emotional health, non-Covid medical attention, and community connection.
- Holistic policy development has brought an integrated and connected approach which should be learnt from and adapted into everyday policy development, as well as future resilience issues.

## Method, Approach and Analysis

The aim of this report is to bring together the insights from three independently analysed reviews across the pandemic lifecycle of Covid-19 in the UK. The three Interim Operational Reviews (IORs) were analysed and written up independently of each other, two to three months apart over a six-month period through the first wave of Covid-19, and into the second.

Producing these IORs, undertaken mid-crisis, was an innovative approach to capturing reflections in real-time that can feed back into policy and practice. Debriefs to inform future actions and learning, such as these, are typically conducted after an incident. Producing a synthesis of the learning across three interim reports did not have an established methodology. We adapted Qualitative Evidence Synthesis (QES) as the most appropriate method to synthesise longitudinal qualitative data across different groups of delegates, which complements our diverse stakeholder participants (Flemming, Booth, Garside, et al., 2019). This approach also provides a holistic understanding of a topic of concern or phenomena from those different delegate groups across a timespan. The QES method was combined with another method: meta-ethnography which was selected due to the opportunity this affords to exploring the systems within which the emergency management is operating/occurring of sits, as well as to integrate the findings from the three reports.

The relevant steps from the meta-ethnographic method were followed on all 4445 points of coded data from the three IORs and the findings were contextualised in the established literature. Using this approach, the original analysis has been revised and a new synthesised analysis across all of the integrated dataset has been completed for this report. This does not invalidate the original reports and analysis but allows for a thorough integration to assimilate across this dataset with integrity. The graphics shown here illustrate the connection between this report's findings and the original reviews highlighting how the findings and sub findings of this report link back to the original reports.

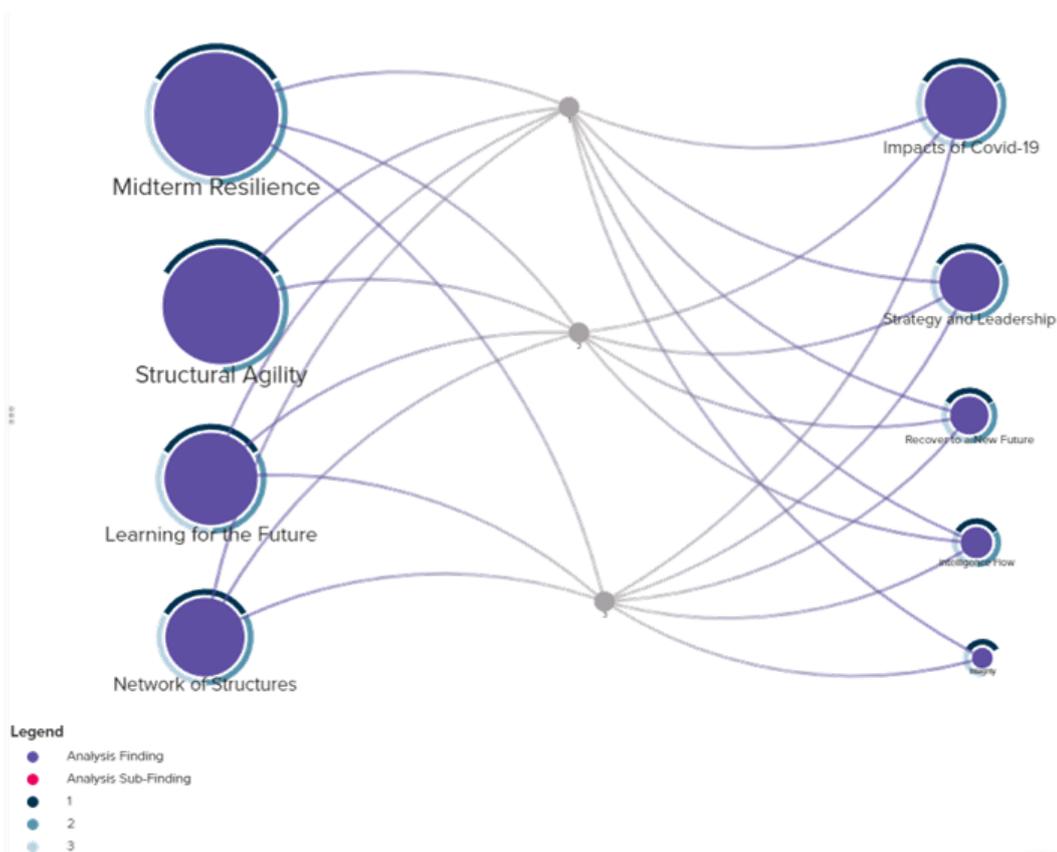


Figure 2: Summary of connections between report findings and IORs



Across all three reviews, 18 findings were developed which were underpinned by sub findings. The visual above highlights the three reviews and shows the connections between the findings and sub findings identifying the cross-cutting issues and ideas. When interpreting figure 2 above, it is important to note that the size of the clustering does not necessarily indicate its importance, only the scale. In the delegates data, a particular issue may only have been mentioned a few times, but it may have been discussed with high importance and sentiment. However, another topic may have been mentioned many times, by many delegates, but discussed in ways indicating it is of minimal importance. In this way, the scale of the code clustering is only indicative of the quantity of discussions it was included in, rather than the importance. Secondly, whilst the three IORs are all represented here, they were conducted at differing times in the lifecycle of the pandemic and generated by delegate groups with some similarities and some differences in membership, further details are outlined below.

The other point to note is that as the reviews progressed, the quantity of words decreased as the complexity of the discussions increased. This should be viewed as a positive reflection of familiarity with the method, and also of delegates having more to share in the reviews as their experience within the management of the pandemic became fuller and richer over time. Whilst the question set discussed below remained consistent there were a number of alterations to suit the time point, we discuss this in more detail below.

## Recommendations within the Interim Operational Reviews

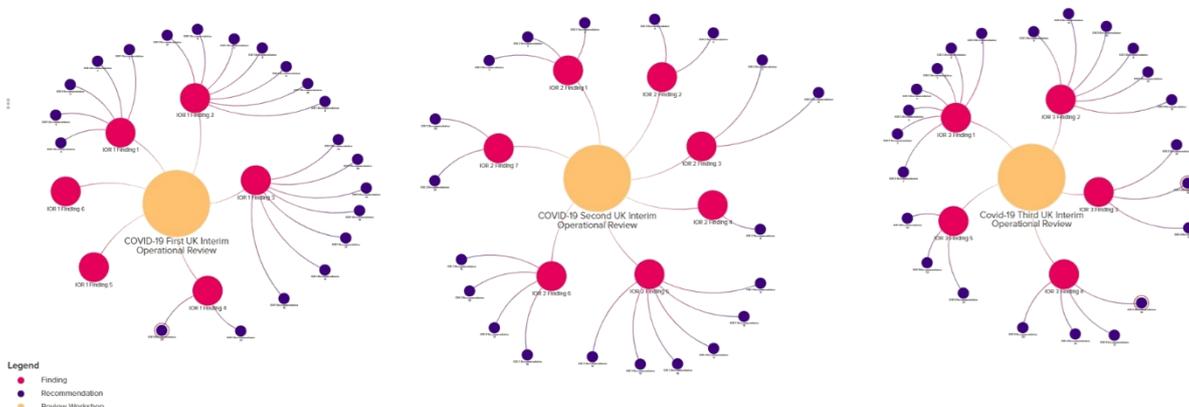


Figure 5: Recommendations map for IORs 1-3 and the linkage between findings and recommendations.

The academic team worked with a group of Subject Matter Experts in each report who provided practitioner expertise and contextual knowledge. This added to the depth and richness of the academic team's interpretation and supported the creation of recommendations developed from the main findings of the reviews, designed to support the local and national response to Covid-19. These were sub-divided into fast and medium-to-long-term recommendations. An actions tracker was developed to support the sponsors of the recommendations to deliver on them. A full list of recommendations is available to review as an appendix of this report. These 65 recommendations have been analysed again in light of this report to highlight clusters of recommendations across the three IORs.

## Delegate Representation across the Three Interim Operational Reviews

The IORs brought together strategic stakeholders from across the civil contingencies' community, the visuals below highlight the organisations who participated. Within each review we had between 150 and 250 delegates present online.

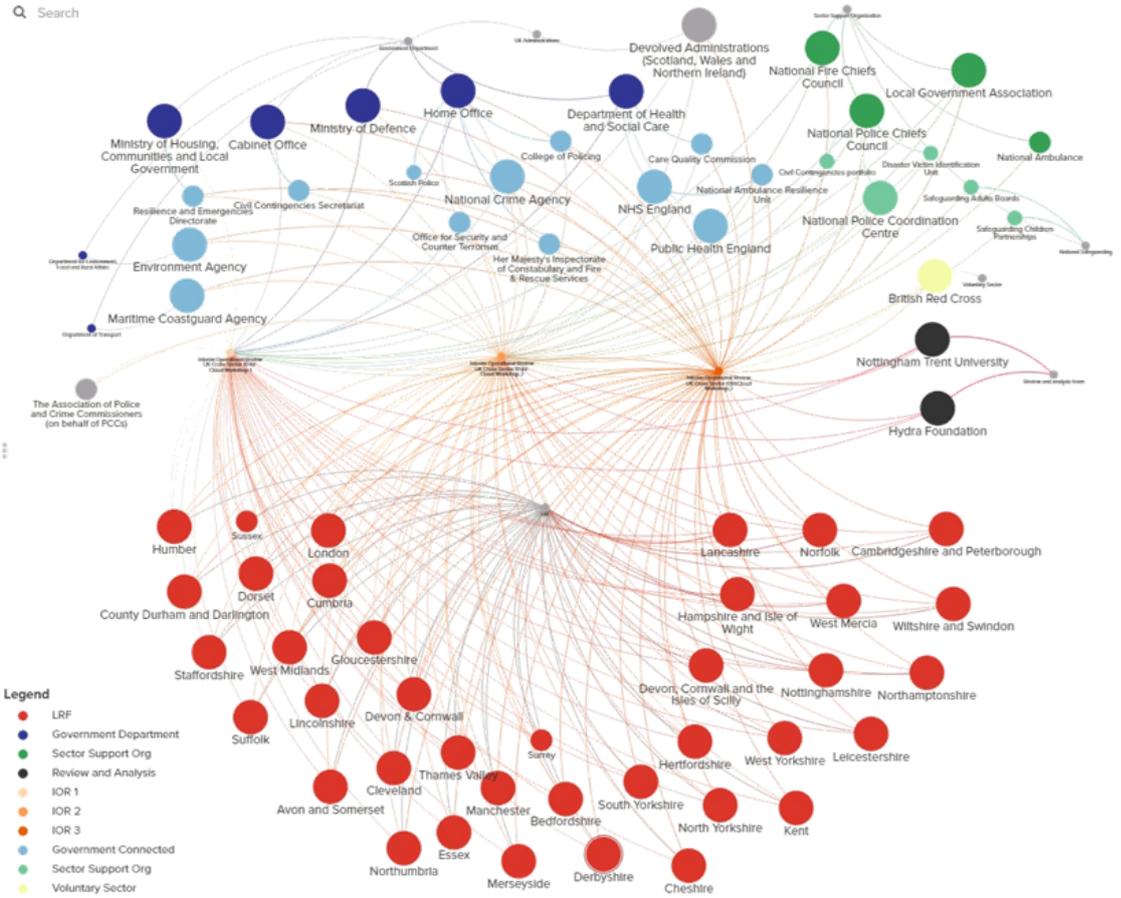


Figure 6. A graphical representation of the delegates and their affiliations across all three IORs.

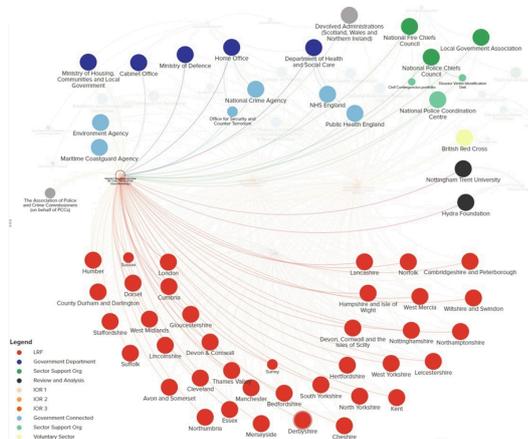


Figure 6a. A graphical representation of delegates from IOR 1.

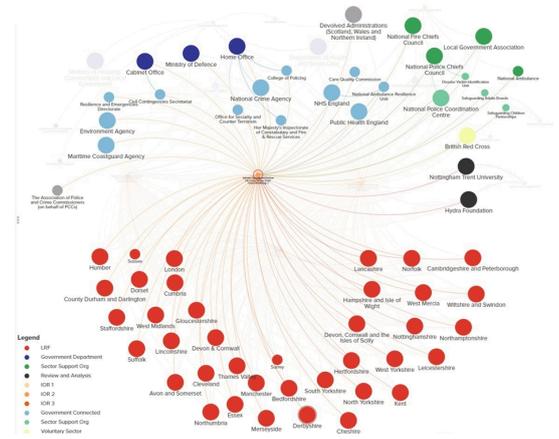


Figure 6b. A graphical representation of delegates from IOR 2.

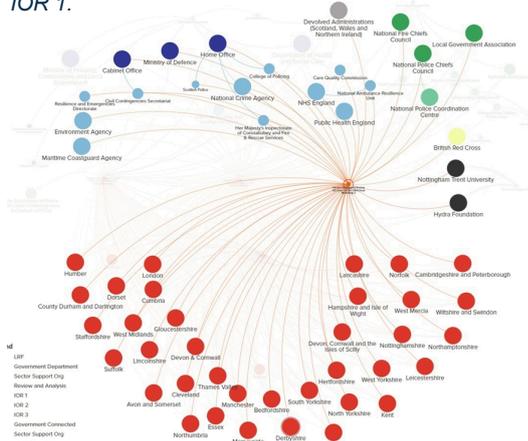


Figure 6c. A graphical representation of delegates from IOR 3.

## The Question Sets

Each review utilised a similar question set developed by the C19 National Foresight Group, NTU and the Hydra Foundation. We asked six standard questions which evolved alongside the pandemic. These focused on what was and was not working at a local, regional and national level, alongside a question on managing concurrent emergencies and one on the future and or legacy of Covid-19. We also hosted space for personal reflections during each review for delegates. Within the third IOR we also asked an additional question related to the government's Integrated Review consultation. A copy of our submission to the consultation which included reflections from delegates is included as an appendix in IOR 3. Each question set is shared for you in the appendix of this.

# Overview of Findings

There were three analytical activities which were undertaken to produce this report. The analysis of the integrated dataset, the theming of the recommendations and the review of the literature. The findings of each of these activities are then synthesised at the end of this report.

## Analysis of IOR Data

The analysis using the approach outlined above has identified nine main findings from across the three IORs and 41 sub findings. These findings will be explored one by one identifying the evidence within the IORs which supports them. The visual below offers the opportunity to review each of these findings and sub findings and their connections to each review. They are sized by the volume of codes associated to each area.

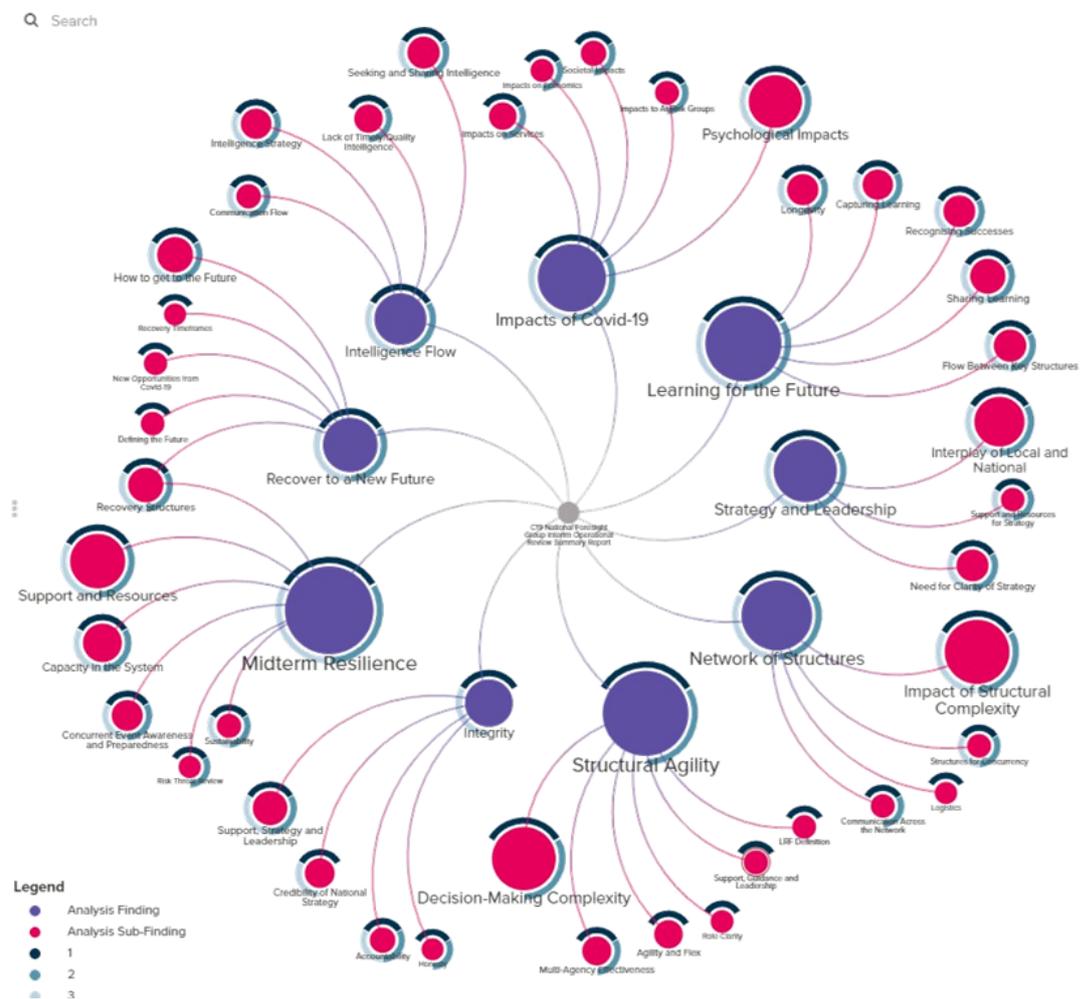


Figure 7. Visual representation of findings and subfindings from the reanalysis of all codes from the three Interim Operational Reviews. This visual is scaled by the volume of codes within each finding and subfinding and displays via coloured rings the link between IORs 1-3.

## Recommendation Clusters

To enhance the synthesis across the reviews, we have also returned to the recommendations that were made within each report. To ensure cross-cutting themes were captured between the recommendations each finding was reviewed and clustered. In the first stage this was done within the report findings structure and then these were combined where obvious synergies were found. A table of report recommendations and the clustering is available below. The initial theming

created 17 clusters which were subsequently combined into the five main recommendation clusters discussed in this report. These recommendation clusters are discussed in detail below and are examined according to their linkages with the short and long-term requests, report findings and IORs linkages. These clusters highlight the main areas of discussion for the reader/stakeholders to consider. They show the areas of need over the next few months and into the term for the UK civil contingencies community.

Recommendation Clustering and Findings	Number and % across findings	Description of Cluster
<b>Enhance Connectivity and Learning</b>	23	Recommendations under this finding focus on the need to provide better connectivity and learning opportunities within and across organisations, partnerships and government departments. Most of the recommendations through the reviews focus on resolving or improving the communications between organisations in order to share learning and increase effectiveness of future emergency responses.
Network of Structures	43.5%	
Learning for the Future	21.7%	
Intelligence Flow	13.0%	
Integrity	8.7%	
Strategy and Leadership	8.7%	
Structural Agility	4.3%	
<b>Future Models and Approaches</b>	5	A small number of recommendations (5) highlighted the need to explore and implement new approaches to emergencies, such as the Covid-19 pandemic, which ensure we lead the way to be in the best possible place to tackle similar emergencies in the future.
Strategy and Leadership	60.0%	
Network of Structures	40.0%	
<b>Large-scale Emergency and Disaster Review</b>	11	Whether relating directly to the Civil Contingencies Act (CCA) or more broadly about reviewing the UKs response and recovery from Covid-19 we see a significant clustering of recommendations that highlight the need to learn the lessons (positive and negative) from this extended and widespread emergency.
Learning for the Future	45.5%	
Midterm Resilience	27.3%	
Impacts of Covid-19	27.3%	
<b>Resource the Future Needs</b>	6	To ensure the longer-term impacts of Covid-19 and related incidents are managed the recommendations stress the need to effectively resource the delivery of support across the UK. The central finding requires a step change in the support capability to ensure we support our key and frontline workers into the future to manage the long tail of Covid-19 effects and any emergencies thereafter such as a flu-pandemic or other National Risk Register threat.
Impacts of Covid-19	83.3%	
Midterm Resilience	16.7%	
<b>Sharing the Strategy and Guidance</b>	20	Through the reviews twenty recommendations focus on the need to develop and share strategy and guidance documents, policies and approaches that delegates felt needed upgrading or creating. On the whole these recommendations focused on asks to the UK government, but a small number also discuss requirements of LRFs and Multi-Agency Information Cells (MAICs) on strategy and guidance.
Intelligence Flow	40.0%	
Network of Structures	35.0%	
Strategy and Leadership	25.0%	

## **Academic Literature Review**

To contextualise the findings of the above process, relevant academic literature was consulted and integrated with the findings. This broad span of literature predominantly based on systematic literature reviews and rapid reviews alongside the empirical data contributes to our existing knowledge on these topics and the management of Covid-19. The relevant academic literature adds to the richness and depth of the analytical findings. This can be found in the appendix of this report.

# Synthesis of the Analysis, Findings and Literature Review

## Structural Agility

The evidence presented within this report suggests that whilst centralised communication and coordination are necessary for an effective and timely response to emergencies and disasters, they are also slow and ineffective at processing large amounts of information, leading to miscommunication, and lack situational awareness and a lack of the flexibility required to respond to fast-changing situations. The recommendations across the reviews highlight the need to develop an ability to create effective strategic management of multi-agency major incidents (Recommendation 1.3 from IOR 1) Whilst only one recommendation mapped to Structural Agility the broader cluster of recommendations that this was attached to highlighted the need for enhanced connectivity and learning to ensure we can manage this and future national emergencies. The literature warns that this may consequently lead to significant delays in decision-making and provision of support which has been reflected in the delegates reports that they are left in an information 'vacuum', lacking clear guidance and warning of central decisions.

Decentralised networks of local bodies closer to the situation on the ground such as an LRF have a higher degree of situational awareness, and the flexibility to respond to uncertain and variable situations. The challenge to the effectiveness of decentralised networks is when there is a lack of clarity of roles, lack of clarity of guidelines for communication and response, or when networks rely on informal relationships between key individuals that may not be available everywhere (such as when key organisational relationships are conducted outside of the LRF or hinge on individual contacts rather than organisation to organisational relationships). These first two of these conditions were reported in the IOR findings, where delegates reported a lack of structure, protocols and guidance for horizontal communication and collaboration (such as structures to share good practice, guidelines of how to arrange new structures and the need to increase the effectiveness of communication between LRFs and central government).

The literature indicates that the role of a central government disaster management layer should therefore be two-fold:

- 1) timely and accurate collection, synthesis and communication of information
- 2) to incentivise and facilitate effective networks of communication and coordination by creating communication guidelines, clarifying roles, identifying potentially key bodies to include in the network, and encouraging formalisation of networks

These findings from the academic literature support the findings from the IOR delegate data that significant work still needs to be completed so that documents, guidelines and protocols can be developed to facilitate timely, ethical, accurate, transparent and actionable sharing, both horizontally and vertically, of data and intelligence. The challenge for a central government layer is to collect, synthesise and communicate correct information which requires a high degree of situational awareness whilst being geographically remote.

A centralised, hierarchical structure, where central government make the decisions, was likely not flexible or fast-acting enough to

adequately respond to the Covid-19 crisis. Decentralisation of decision-making to LRFs who have more timely situational awareness of rapidly evolving situations, in addition to the facilitation of effective horizontal and vertical communication, is likely to improve the speed and effectiveness of the Covid-19 response. A central government layer facilitating this communication and coordination may be more useful than a central command and control structure. This concept of operations also includes data flow as well as communication flow, could act as a key facilitating stakeholder in enabling vertical and horizontal data sharing.

Having an independent central body that does not use a hierarchical command and control system may speed up disaster response by preventing disputes over authority. This may complement a decentralised system whereby LRFs do not have to wait for the results of command and control decisions at the national level.

The ability of local strategic decision-makers to provide solutions to this complex and system-wide issue is an important activity within the wider response that should be acknowledged. This is echoed across society's response to Covid-19. Our ability to think ourselves out of a complex systems problem is a uniquely human ability.

## **Network of Structures**

This topic clearly shows that command and control from a variety of structures above the local level has made decision making, allocation of resources and coordination of response difficult for LRFs. This is both because the decision-making flows down vertically from above, rather than horizontally at the local level, and because there is a large amount of confusion around the complex network of systems that has formed. However, as discussed in the review of Finding One, a network approach can in fact be effective and fast-responding, but only when:

- 1) it develops more organically and horizontally at a local level, rather than being enforced or imposed from above
- 2) there is clarity of roles and structure.

These two points are discussed in the literature review in the appendix in more detail, but the key summary points when synthesised with finding two is that informal and formal networks are key but they are vulnerable to disruption if key individuals become unavailable.

Networks allow leadership to emerge across boundaries such as organisations and regional geographies. Similar to the finding two, the literature highlights that networks pose a risk to the clarity of roles, a lack of guidelines for communication and response, and fallibility of informal relationships between key individuals. Therefore, it may be the case that a central government layer should exist to incentivise and facilitate effective networks between LRFs and other local level bodies by creating (flexible) communication guidelines, clarifying roles, identifying potential key bodies to include in the network, and encouraging formalisation of networks. This central body should not dictate a single 'harmonious' response, but rather create the communication structure that facilitates the emergence of this harmony through coordination across the network.

The structures currently in place for the management of Covid-19 are threatening subsidiarity. They have changed the location of the power fulcrums in the emergency management system in the UK, from the local strategic decision-makers to the national structures and to the general public who are essential in successfully managing the pandemic through their collective action.

## Strategy and Leadership

Delegates identified that there is a need for an overall strategy to provide clarity over whether the aim is to suppress, mitigate or apply zero tolerance to the transmission of Covid-19. Within this, portfolio holders and national leads should provide clear leadership about the priorities and strategy for the mid term (the next 3-4 months) and the longer term (the next 2-30 years) to manage the impacts from Covid-19. This also includes the legal frameworks and policy under which the emergency management structures are operating during Covid-19. In the academic literature these are defined as important determinants of success. Clear mandates at local and national levels give legitimate grounds for different sectors to collaborate and align their activities. There is also a need to increase the holistic nature of the multi-agency partnerships, including those not typically included in the LRF partnership, such as schools, colleges, universities and training facilities. The absence of these establishments from being included in the management of Covid-19, and the lack of clarity from the national leadership in this sector has caused significant unnecessary impacts.

The sharing of an overall strategy, and plans aligned to portfolios within that strategy, facilitates the many multiple activities across the UK to align and pull in the same direction. This could be a four-nation approach where the four plans are clear as to how they integrate together and the overarching principles they all follow. If local decision-makers cannot access a strategy, their decision-making power is restricted and they have instead had to react to an absence of leadership or delayed/hastily implemented decisions come from the centre. This disempowers the decision-makers at local level and threatens the principles of subsidiarity, which has been significantly eroded. This severely limits the ability of local decision-makers to protect the health and economy of their communities.

This finding gathered the largest number of recommendations (almost 30%) which highlights its importance. These recommendations highlight the need to learn and connect now and into the future. They also point to the way forward that provides more structure strategy and guidance for all stakeholders. Siloed and isolated action has been proven to fail again and again during 2020, we must learn from this emergency to create models and approaches that are resilient, flexible and adaptive which operate through a clear and well communicated strategy.

## Integrity

Across the IORs, local strategic decision-makers reported the need to increase clarity of communications by developing a common approach between the local and national communication strategies. Recommendations called for a fresh approach to the Government's Covid-19 Action Plan, the development of a clear communications strategy and the introduction of a strategic stakeholder forum to strengthen the links and flow between local, sub-national and national.

The literature supports a more unified communications strategy, reporting that inconsistent and misleading messages from governmental authorities during Covid-19 have led to confusion and frustration. Communications must be highly coordinated within and between different government agencies and the media to provide clear, frequent communications, to increase and recognise positive public behaviour.

The findings and literature both highlight that trust in government is vital in determining whether the public engage with a communications strategy, and whether they comply with recommended health behaviours. Consistent, clear and reliable communications are likely to foster this trust in government and reduce information overload.

Integrity and trust in the government and other public bodies is imperative in the effort to encourage the public to comply with the public health advice and behaviours to reduce Covid-19. Facilitating more transparency in the decision-making processes, clarity of decisions about risk and openly debating possible options would go some way to increase integrity and trust in the government and

public bodies. National and local decisions about society as a whole are being made by politicians in the management of this pandemic, which has not been seen since the introduction of the Civil Contingencies Act. Decisions have previously been made by those organisational partnerships with statutory duties to manage emergencies, who are, by design and role, without explicit political allegiance. This has implications on the decision flow, the location of the power to make decisions, as well as the levels of trust from the public. When decisions about an emergency are taken at national level, by the design of any political system across the globe, those decisions then get taken in a political and ideological context, impacting on the perceived legitimacy of the decision, the purity of influences which played a part in that decision, and the integrity of the decision-maker.

## **Intelligence Flow**

An intelligence ecology for all risks, threats and incidents in the future should be developed to improve situational awareness and evidence-based decision-making. This needs to facilitate both local and national situational awareness across a range of structures (ministerial, Strategic Coordination Group (SCGs), Recovery Coordinating Groups (RCGs) to name just a few). This should be trained and exercised alongside other LRF structures against a range of National Strategic Risk Assessment (NSRA) risks as part of local civil contingency preparedness and planning.

It has been clear from the data and literature that there was no structure or means to establish a current, integrated, single source providing situational awareness across portfolios, departments and sectors to provide a common picture of the changing impacts on society throughout the lifecycle of the Covid-19 pandemic. This is challenging to establish and create, but the paucity of intelligence flow, the lack of situational awareness, and the ability to create a common operating picture across different geographical areas between departments and sectors has been limiting in our ability to detect and triage evolving impacts (both health, e.g. transmission rates, and other impacts of equivalent importance such as psychological and economic impacts). Being able to access a common operating picture, to determine pre-Covid-19 contexts through intelligence, and to use intelligence to suggest possible future outcomes based on different actions, would significantly support our decision-makers to achieve informed, contextualised decisions.

Our lack of coordinated data management and the absence of investment and prioritisation of our ability to access knowledge and understanding about our society has significantly challenged our evidence-based decision-making. This has repeatedly been a feature of the recommendations across all three reviews which aimed to provide routes forward through Multi-Agency Information Cell (MAICs), Knowledge Centres, reviews and evaluations of process and enhanced connection and training. Whilst we have seen an improvement over time through the reviews more must be done to support the flow of intelligence across the system.

## **Learning for the Future**

Evidence from the IORs and the literature suggest that effective intelligence sharing facilitates both an effective, flexible crisis response and also the sharing of and learning from good practice and innovation in real time. Delegates highlighted that commitment and trust between multi-agency partners allowed

them to effectively collaborate and innovate. This is reflected in published literature where the identification and building of trusted social networks is a fundamental stage of exchanging information. Building trusted relationships between organisations based on a mutual understanding of needs and concerns and shared responsibility. The trust enhances the accuracy and efficiency of inter-organisational information sharing. Crucially the sharing of learning increases the evidence-base within which to make decisions.

The IOR reports also highlighted that strong leadership was essential in facilitating information sharing and innovation, something that is supported by literature which suggests that having a formally assigned project manager is vital for successful sharing between organisations information sharing initiatives as it increases the efficiency of information sharing. Such a role requires significant resources and time, often not available for public managers who need to spend 80–85% of their total work time in their routine organisational tasks. However, it is also important to avoid a control-oriented style of leadership, and to ensure there are clear shared goals for information sharing.

Delegates clearly stated that horizontal information sharing was vital in the response to Covid-19, through coordinating the response, facilitating innovation, and the sharing in real time of good practice. They identified that establishing trust and commitment, as well as strong leadership within the LRFs, allowed them to effectively collaborate in this way. However, they also asked for more support and direction from central government, in terms of resources and a legal framework in which to work. The literature reviewed confirmed the importance of horizontal information sharing, corroborated and elaborated the importance of establishing trusted relationships and strong leadership, and echoed the importance of central government facilitation and the need for a clear legal framework within which to share (see Strategy and Leadership, Finding Three).

Delegates reported the vital importance of cross-partnership working, to coordinate the response, innovate new ways of working, and share good practice in real time. A key theme throughout the IORs was the need for central government to drive, coordinate and fund horizontal information sharing. Research has found that central governments need to facilitate information sharing between local government agencies by providing them with suitable funding, improving their IT infrastructure and enhancing the level of IT skills and knowledge among the employees.

We need a learning strategy and structure where we can capture, share and learn the lessons from the many facets of change Covid-19 has impacted on our civil contingencies and resilience systems. Information and intelligence sharing needs to increase from central government to local government agencies and between local government agencies by providing them with suitable funding, improving their data management infrastructure and enhancing the level of skills and knowledge among the employees. Recommendations linked to this finding highlight the desire to share learning, to formalise innovative ways of working and to ensure all partners are working together to achieve common objectives without hindrance caused by issues relating to policy, procedure, guidance and legislation that underpins the response to this pandemic and future emergencies.

## **Midterm Resilience**

We need to get our resources allocated to ensure we move forward to meet other risks and maintain resilience. The impact of D20 (winter health pressures, adverse weather events and the EU Transition) and other potential concurrent emergency and disaster incidents have the potential to stretch our capacity,

particularly structures and people, to a fragility.

Delegates stated clearly that LRF staff are exhausted, and express concerns about burnout and staff shortage issues. Although much of the research into the wellbeing of emergency responders focuses on 'frontline' staff such as emergency or healthcare workers, the findings may shed light on the potential challenges and support needs of LRF staff. The results from the IORs indicate that, although not necessarily 'on the front line', LRF staff are bearing a large burden during the Covid-19 response and may suffer from similar difficulties and benefit from some of the same support measures as frontline workers. With this in mind a more inclusive understanding of the organisations included in the term 'keyworker' should be developed.

In the context of healthcare workers, research suggests that leadership and work culture are important for protecting against burnout, including good communication and supportive professional relationships. With direct management support, including resources to promote resilience, self-care and staff engagement all decrease the risk of burnout. Literature on other major incidents suggest that the psychological impacts may not be presented by keyworkers until some years after the event (3-5 years). The literature also identifies that keyworkers responding to an event in their own community, when they perceive the risk of harm to be higher to their safety or the safety of their colleagues, and when their other wider support networks are depleted or compromised, that is when they can be at higher risk of developing complex reactions such as moral injury, traumatic reactions, burnout, depression and anxiety.

The IOR reports also recommend that more direct support structures such as Our Frontline, Mind, Mind for Emergency Responders NHS crisis lines should be publicised by all partnership organisations to their staff. This should be alongside a comprehensive well informed, high priority ecology of support that should include educational material, ethically designed screening, peer support accredited frameworks, support phonelines, individual and group support, and appropriately specialised mental health services to individuals and their immediate family members. The priority would be to try and rest this staff as much as possible, by securing the resources and expertise to build a wider cadre of trained people who can take up these roles and start gaining the appropriate experience.

The recommendations highlight the need to identify and bring forward individuals to support our current workforce into the future. The skills and experiences need to be recorded, distributed and valued so that new cohorts can learn from them and share the responsibility. If we fail to prepare staff into the future the lessons and skills of our current workforce will not be built upon and we will have missed an opportunity to be ahead of the curve during the next disaster or emergency incident.

## **Impacts of Covid-19**

An integrated holistic approach is needed to understand and respond to the many impacts of Covid-19 which are present across society. These include the impacts on the public including the economic impacts such as economic insecurity of families and economic impacts on a region, societal impacts such as benefits of working from home and negative impacts such as threats to community cohesion and social integration, and the exacerbation of existing social and health inequalities. There is also a risk on the critical infrastructure of society, such as

the risk of further impacts on service provision based on the attention and energy that the management of Covid-19 takes up. As long as there is sufficient coordination and strategy that are clearly communicated, the power to manage Covid-19 rests with the public. The public are the collective action (Reicher and Drury, 2020) who are the only group who can act to reduce transmission rates, and to take up a vaccine to control the virus. However, they are also those who are suffering the consequences of Covid-19's impacts. Support and structures must be put in place to create the environment that allows people to focus on making the best decisions to reduce transmission and keep others safe.

Covid-19 has brought together a vast array of partners within government, the civil and third sector and private sector. The reviews recognised the need to create more coordinated and consistent approaches to these wider groups and to ensure we have properly considered and supported them in the longer term. This pandemic has highlighted the incredible work many across society have contributed and we believe this must be recognised and integrated into future civil contingencies planning to fully adapt and create a whole society approach.

## **Recover to a New Future**

Delegates highlighted that management of Covid-19 has required a shifting and re-organising of portfolios and responsibility, with local and community engagement vital to the success of the response. This collective readiness and engagement at a more individual and community level may indicate or motivate the development of a whole of society approach. The World Health Organisation (WHO) defined a whole of society approach as one that recognises and emphasises the role played by:

“all relevant stakeholders, including individuals, families and communities, intergovernmental organizations and religious institutions, civil society, academia, the media, voluntary associations and, where and as appropriate, the private sector and industry” (WHO, 2011).

Although this approach empowers and depends on the actions of individuals and non-governmental bodies, research stresses that these efforts do not replace government's own roles and responsibilities. Instead, the emphasis should be that resilience requires broadly connected institutions and groups to do more together, not less. As with the previous findings within this report, the success of a whole society approach relies on sufficient support and resourcing from central government, facilitating the coordination and organisation of a collective approach within locally meaningful boundaries, rather than rigid and potentially inappropriate administrative or jurisdictional boundaries. This need to organise these cross-boundary organisations may be facilitated by the decentralised, networked approach.

The academic literature reminds us that communities are highly diverse and complex, and we have seen that Covid-19's impacts fall unevenly across society affecting individuals and groups differently due to their social, economic and spatial characteristics. Communities are built from a variety of social clusters with differing interests who have differing capabilities, capacities and asserts. To deal with this we need locally agreed and delivered responses which are difficult to do without established and trusted two-way engagement between groups. A collaborative approach is recommended.

The delegates would like society to address the social and health inequalities which currently exist across society that enable the disproportion of risk of various harms and disable social mobility. The management of Covid-19 has forced local

and national strategic decision-makers to integrate portfolios and develop holistic policies, those which do not take this approach are at risk of failure. In this way Covid-19 could be the biggest lesson in holistic policy development to date for policy makers. Societies engagement with systemic elongated emergencies, such as climate emergency, and the response, could make use of collective action through the whole of society approach.

# Summary of Main Findings and Conclusions

This report has provided conclusions from the analysis of the integrated datasets, the interim operational reviews recommendations and the broader literature to highlight some of the key issues and ways forward. This report aimed to draw conclusions from the longitudinal dataset, providing a narrative and commentary to the first 230 days of the management of Covid-19 in the United Kingdom.

The report findings and recommendation clusters highlighted the areas of concern that we as a society and civil contingencies community must face. These serious and complex challenges highlighted by Covid-19 must be addressed. We have shown we can be creative and agile to mitigate risks, but there are steps, processes and structures that we need to enhance and create which will address the challenges and gaps in leadership or flow of the management of Covid-19. We must ensure that those who have the resource or legitimacy to fill these gaps in communication, strategy, leadership, governance etc do, and that we continue to connect our abilities and learn from those who have experienced the management of this major national event.

Despite successes we remain convinced that the way we manage major and all-encompassing emergencies is not working as well as it could. The power base of localism which used to exist at county level has been drawn upwards to national bodies and downwards to the public, as they are the only group with the ability to change the pandemic. The power shift from local to central within the system of emergency management has had many consequences and both the authors and delegates of the IORs remain to be convinced that this has helped. The structures, the network and decision-flow between these constructs have changed the way communities manage emergencies which has reduced the ability of the local decision-makers to nuance its approach. We must move to a networked approach that enhances the structure and develops future proofed systems to tackle smaller and localised emergencies as well as widespread and long-term events such as Covid-19.

The need to support the current workforce both in terms of psychological support and creating additional cohorts of trained additional staff to ease the pressure and allow rest and leave, is imperative to the mid and long-term future resilience of the UK. The skills and experiences of those staff across the UK who have managed Covid-19 at all levels across all keyworker sectors, need to be recorded, distributed and valued so that new cohorts can learn from them and share the responsibility. If we fail to prepare staff into the future the lessons and skills of our current workforce, we will have missed an opportunity for current and future staff and incident management. This also includes ensuring the capturing and learning from organisational memory within organisations and across partnerships.

Politics have become far too present in the management of this emergency at every layer and we are yet to be convinced that it has helped at either a local or national level. A lack of strategy and shared plan, which reduced our ability to tackle Covid-19s impact on our society, has been a strong and persistent theme. Moving forward we would advise that the recommendations focused on strategy and guidance and reviewing are taken up and worked through.

The longevity and complexity of this emergency has not only stressed and strained workers and society but this has restricted our ability to think into the future. The C19 National Foresight Groups mission was to ensure the future was always considered. Our position paper discussing the four stages of a disaster highlighted the need to be

agile. 2020 has taught us that disasters do not occur in a traditional response recovery model. Adaptation and stabilisation should be accepted and aimed for and these periods of managing but not recovering, alongside honest communications without hyperbole should be avoided to ensure everyone has a realistic view of the future. A midterm future with Covid-19 that allows us to live more normal lives should be discussed and planned for. We hope this future can be imagined again soon.

This future needs to address the social and health inequalities across the UK. Our work has highlighted their ever-present impact. Covid-19 has highlighted and exacerbated these inequalities. Work must be done to support those who have lost out on opportunities for learning, work, spiritual richness, emotional health, non-Covid medical attention, and community connection.

With societal wide impacts and a whole of society approach needed to control transmission and mitigate the impacts of the management as much as possible, the management of Covid-19 offers the biggest lesson in holistic policy development we have seen. We hope that an integrated and connected approach can be further developed, and lessons of a holistic policy approach are adapted into everyday policy development, as well as future resilience challenges we face here in the UK and across the globe.

## **Conclusions of the Review Process**

In summary, having reviewed this method and its effectiveness in synthesising the three separate reports together, the authors commend this method to others completing a similar integration of learning from a broad range of sources, or for authors who have access to integrate qualitative datasets and recommendations together.

To compliment this and support the analysis of this report we also mapped the recommendations to the new findings and then clustered these into groups to help explore the comment requirements across the three reviews and into the future. This has allowed us to highlight the areas that require further attention by stakeholders to ensure we tackle current issues and future challenges.

## **What Next**

The C19 National Foresight Group has been stood up since March 2020. This report, whilst not the last of our outputs, comes as we draw the group to a close with the potential of a new future coming into focus through the development of highly promising vaccines. We are not looking back at Covid-19 as a historic event, but we hope this report will support further reflection and action. The Interim Operational Reviews have engaged hundreds of delegates who shared over 140,000 words with us that has created a powerful voice through the Covid-19 pandemic response. It has been shared widely across central government and the disaster and emergency management community.

We hope the lessons from these reports can be taken forward and acted upon, the deeds of our colleagues can be recognised and celebrated despite the significant challenges and costs to so many individuals.

This report has highlighted the common threads across each of our reports and recommendations which sit with central government and the disaster and emergency management community. A full list of these recommendations is available for review in the appendix and we hope the five key recommendation clusters can be tackled collectively to make a difference here in the UK and further afield. As authors of these reports, we thank all those who have taken part in these reviews but more broadly everyone who has made sacrifices to ensure we protect life, relieve harm and protect communities.

# Appendix

## Appendix One: Analysis of IOR Data

### Structural Agility – Finding One

The first finding across all the IORs is the agility with which the emergency management structure across the UK has responded to the pandemic. This finding accounted for 15 percent of this report. The largest sub-finding was Decision-Making Complexity, which represented over 60 percent of all codes of Finding One. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 18-26 in the first IOR, 27-32 in the second IOR and 46-49 in the third IOR.

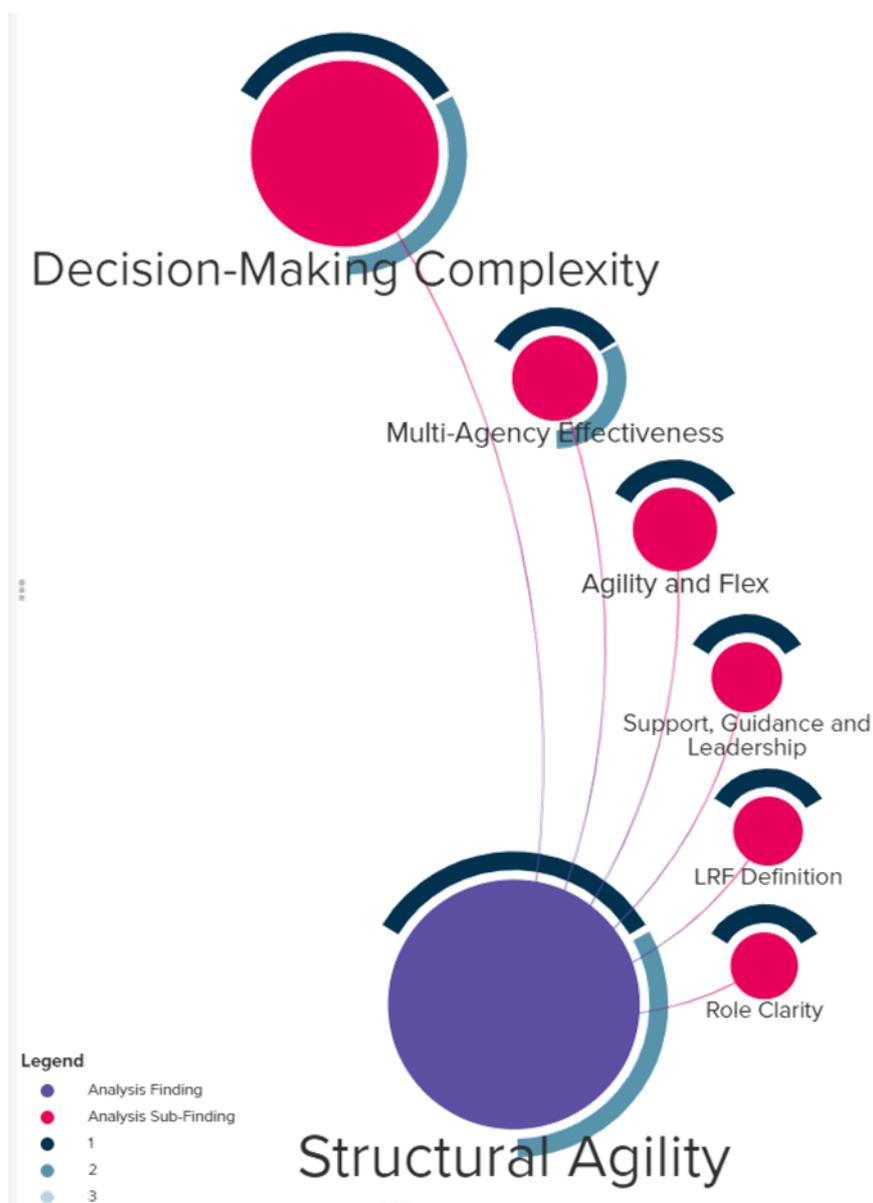


Figure 8. Visual representation of Finding One

Covid-19 pandemic brought unique demands that required an effective and wide-ranging response across civic mechanisms, most of which are organisations and partnerships, which had to coordinate and pivot to cover these demands. The LRFs are the main body who have adapted and flexed to accommodate this request in the evidence from the IORs. Within IOR 1, 2 and 3 the evidence highlighted that activities needed coordination and oversight, and the Local

Resilience Forums (LRFs) filled these roles, assuming these new roles and responsibilities within the context of both existing and new structures throughout the pandemic. The agility and flexibility of organisations and partnerships to adapt and flex, extending their remit to respond to these demands, were mostly met through the local coordination, support and effective operations of LRFs.

Through the pandemic so far, as ministerial and government department expectations grew of what the LRFs could deliver, so the LRF role changed in its scope, breadth and definition. The LRF partnerships responded, in their view, quickly and innovatively, changing how they operated and how their structures were paced. They adapted their remits and obligations to absorb and address these new demands. This agility with which they manipulated their systems and processes to respond to the new and unique demands of managing the Covid-19 pandemic is something that delegates noted as a very strong positive of the Covid-19 response.

In some respects, this was in the absence of national thought leadership, strategy, or support or resource from central government as the changes needed were too nuanced and detailed for government to diagnose and track from afar. This includes national thought leadership to conceptualise and provide guidance on the stages of response and recovery within the pandemic, as Covid-19 does not fit the typical bounds of the civil contingencies' geographically or community bound major incident. For example, the societal wide impacts and approach needed to manage Covid-19 was identified as unique and unprecedented early on in the IORs, as was the need to be agile and innovative to respond to the increasing tasks, but there was limited leadership or guidance informing how to do this. In this way. The innovation and agility was developed within each LRF independently increasing workload, increasing stress on groups and individuals, and contributing to a lack of confidence in the central government approach.

Partly due to the agility needed as described in this finding, and partly due to the nature of Covid-19 and the pandemic, the complexity of how the structures map on to and meet the demands of Covid-19 has been particularly challenging. The nature of the waves of the pandemic means that typical response and recovery patterns of incident management are not applied in typical ways. The standing up and standing down of response structures alongside recovery structures is not something that has been experienced by many. The complexities of how these LRF structures operate in the elongated nature of the incident brings additional complexity and challenge.

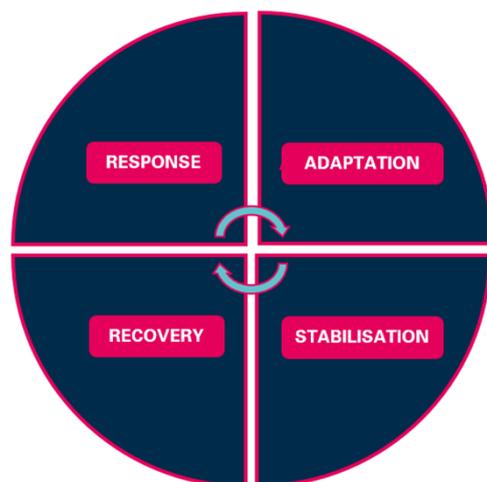


Figure 9. Foresight Framework Recovery Framework for Complex and Long-term Emergencies taken from working paper written by Hill and Towler (2020) - <https://bit.ly/ForesightFramework>

Delegates reported being frustrated by a centralised system of decision-making, with delays in provision of information and resources, and a hierarchical command and control structure whereby LRFs did not feel that key information and decision-making was shared with them in a timely and supportive manner. The analysis suggests that successes were mainly had when there was clear communication and coordination between local bodies, allowing for a flexible, agile and innovative response. However, they also felt that they needed more central government involvement in facilitating this and clarifications around roles and responsibilities.

## Network of Structures – Finding Two

The network of structures that have evolved in response to the management of Covid-19 is complex, they have had to bend and flex to respond to the evolving situation as outlined in the main finding above. The new structures introduced to manage Covid-19 have confused or complicated the flow of decisions between structures. This disruption of decision-making points and clarity of which bodies have primacy over which decisions and which remits is threatening the local decision-making picture. This finding accounted for almost 12 percent of this report. The largest sub-finding was Impact of Structural Complexity which represented over 87 percent of all codes of Finding Two. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 27-35 and 44-49 in the first IOR, pages 20-25 and 33-42 in the second IOR and pages 27-53 in the third IOR.

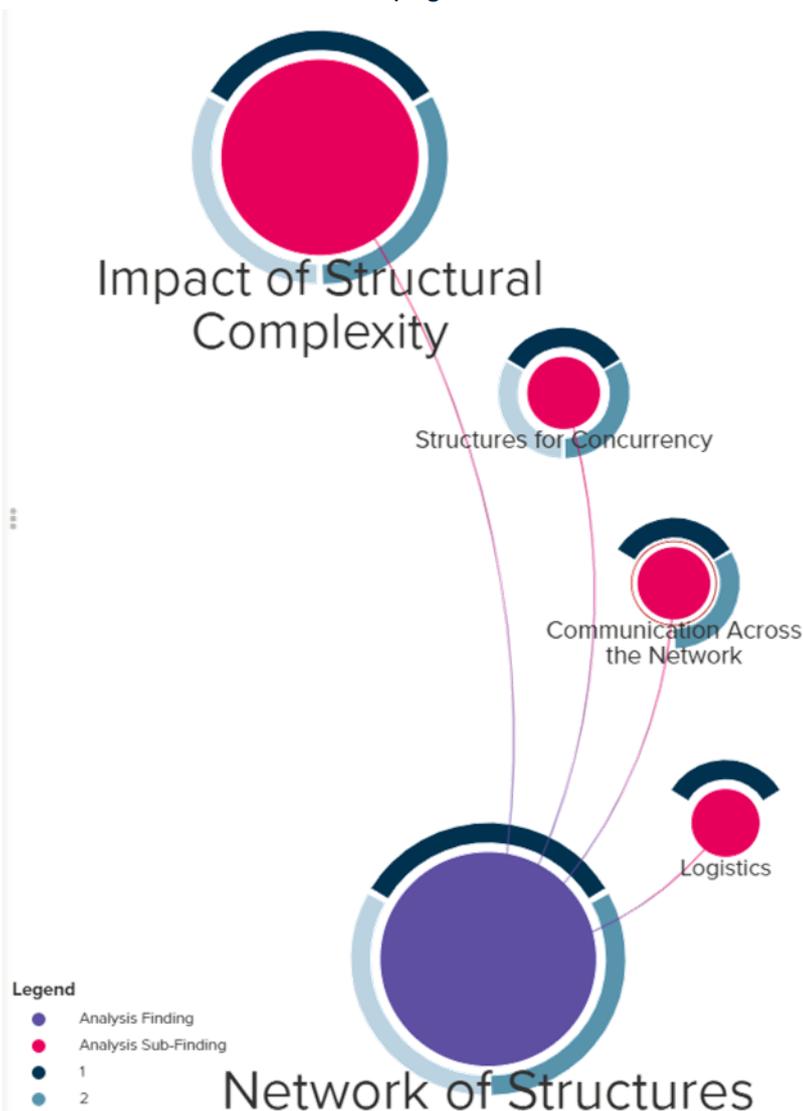


Figure 10. Visual representation of Finding Two

The different geographical footprints of structures has been a consistent challenge throughout the three IORs. The structures within health which typically coordinate a local response to an emergency is geographically larger than a Local Authority or the LRF, and the newer structures aligned to the Directors of Public Health also have a different geographical footprint, these are typically smaller than a Local Authority or LRF. In some areas there is only one DPH within the LRF geography, whereas in other areas there are multiple DPHs. Aligning the new and old structures together at local, regional sub-national and national level has also been challenging. These include Incident Management Teams, Joint Biosecurity Centre and the national health gold structures. Within the local context there is also a differing footprint of local political structures such as constituencies, Local Authorities, Districts, and County or metropolitan areas.

How these structures fit together at a local level upwards to a central level is currently unclear for most areas. As a solution most delegates reported that they have developed their own structural wiring diagram or are in the process of negotiating them across the structures. The geographical boundaries explored above, and the boundaries of different structures, remits and responsibilities are currently in flux at the time of writing. The second wave and second national lockdown measures, and the prospect of how communities transition out of the lockdown measures and into local risk mitigation tiers/levels are a further complexity (although the broad approach of the highest local authority designation for the new tiers has simplified this to some degree).

The structures making these decisions are not always those identified in the Civil Contingencies Act of 2004, and if they are, the sequence and time frame of decision-making is also outside of the well-rehearsed framework. The connectivity and flow of decisions between these structures has been constantly evolving from area to area depending on the governance structure, the level of risk mitigation and the lifecycle of the pandemic. The elongated nature of the pandemic means that structures designed to be active for days have been active for months (approaching a year at the time of writing). These have then been stood down and stood back up again in some areas. This unique pattern of moving between Response -> Adaptation -> Stabilisation -> Recovery activities has impacted on how these structures are supported, staffed and how they connect together.

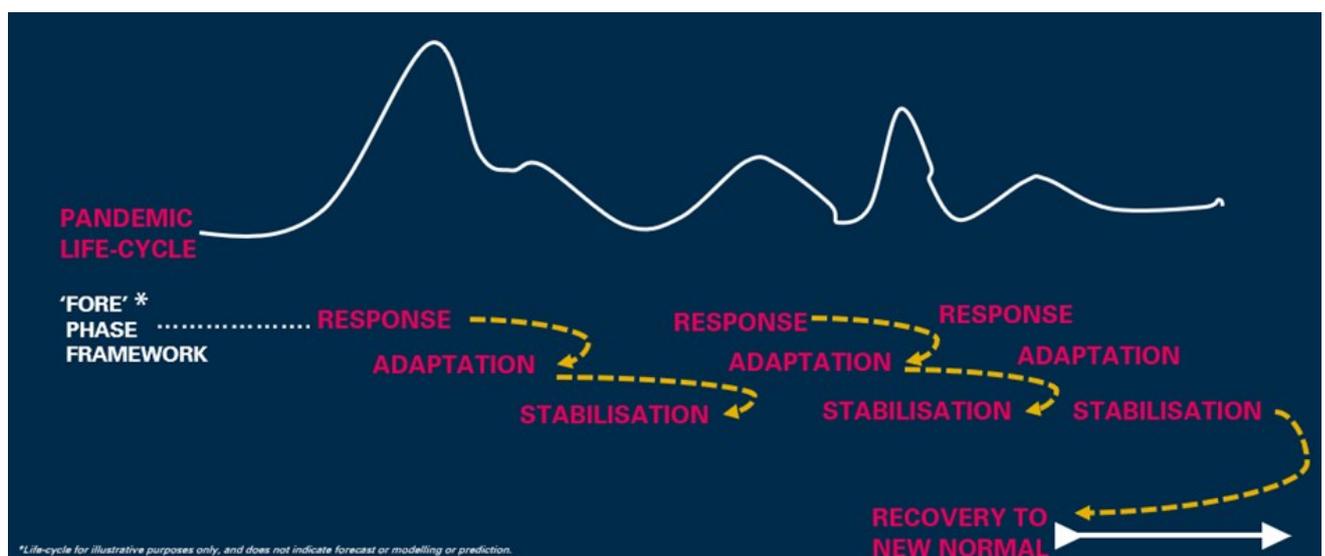


Figure 11. Visual representation of recovery cycle taken from Hill and Towler 2020

In this densely populated space of local decision-making, the number, connectivity and remit of these structures within the pandemic lifecycle increases the complexity of maintaining local partnerships. This includes the political

engagement which is relatively new within the frameworks of emergency management, and it has been reported across IOR 2 and 3 that the political context has been present in a broader range of structures, not just the Local Outbreak Engagement Boards where local political representation is designed to be focussed. This is also impacted by their relationship to the national activities. In England, the national and subnational structures are key fulcrums of decision-making power. This is contrary to the placement of decision-making power within the Civil Contingencies Act of 2004 where the premise of subsidiarity states that decision-making should be at the lowest level, and coordination should be at the highest level. With this in mind, the new structures above the local level of decision-making (JBC, IMTs, national health gold structures) have assumed decision-making power for the local. Whilst there is an argument that national level is the lowest level of decision-making which could be functional during Covid-19, there needs to be a recognition that this misaligns the structural network and systems at the local level. The structures which typically make the decisions no longer do so, and instead have taken a large workload of coordination instead, which should ordinarily take place at the highest level possible (national). This explains to some degree why the flow of decision-making is disorientated at the local level, and why the national coordination of resources is so missed (such as the lack of coordination of PPE, testing, mortuary surge capacity). The placement of power for making decisions usually sits at the local level and the reach for coordination of resources usually sits at the national level. Meaning the placement of power for decision-making and coordination activities within that system are inverted.

With these complexities, the ability of local decision-makers to prepare for and respond to a concurrent event is challenged. The staffing of emergency management structures is already stretched, as are the resources at local to national level. The ability to manage a concurrent event would be demanding on already stretched resources, energy and staff.

### **Strategy and Leadership – Finding Three**

Analysis of the integrated dataset revealed a growing need for clarity and strategy in the national leadership. This finding accounted for ten percent of the codes within this report. The largest sub-finding was Interplay of Local and National which represented almost 70 percent of all codes of Finding Three. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 18-43 in the first IOR, pages 20-32 in the second IOR and pages 20-34 in the third IOR.

The first IOR contains discussion surrounding the need for the central government to share situational awareness, so that across the country and devolved administrations there could be one common operating picture of the impacts of Covid-19. In the second IOR, the calls were for up-to-date information and pre-briefing of key decisions which impact on the local level and a move away from an announcement led approach, to one where strategy and decisions are communicated ahead of time. In the third IOR the calls were for the development of an overarching strategy and approach to the management of Covid-19, which needs to be shared with local strategic decision-makers. Across all three IORs this demonstrable gap in strategy and leadership in the response to Covid-19 was a continual source of frustration to the delegates.

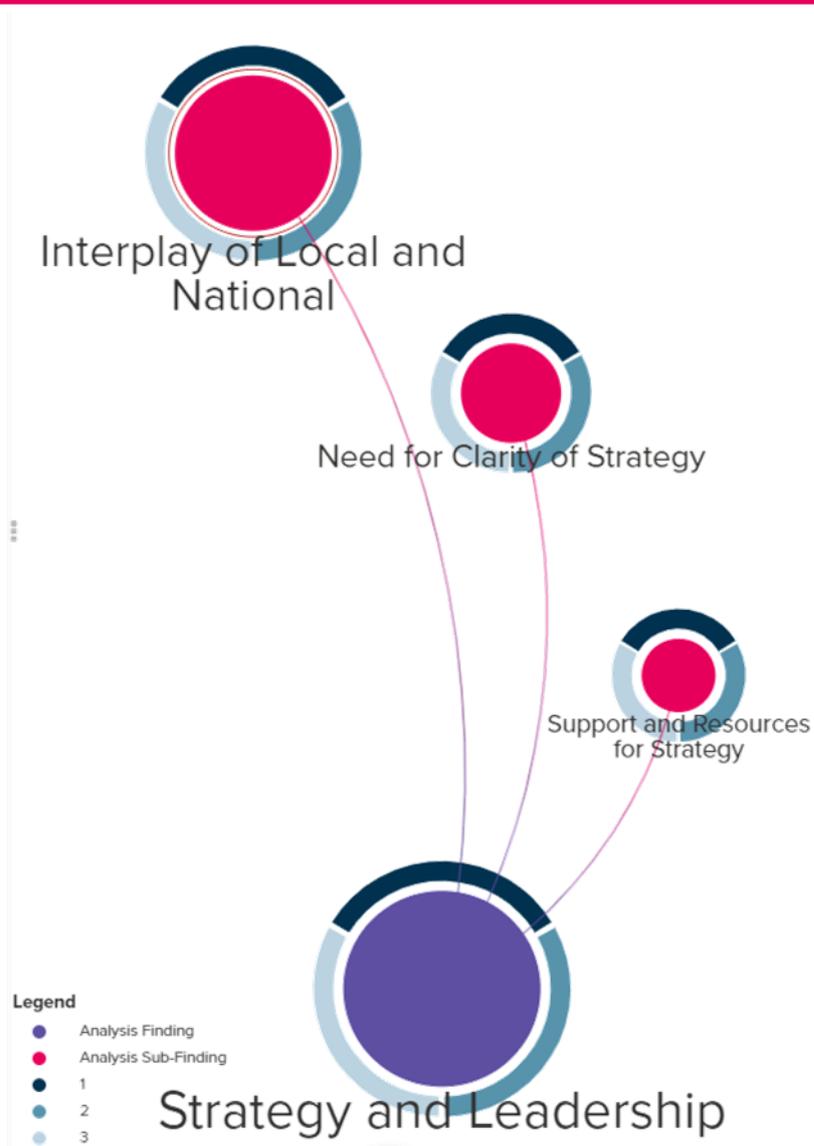


Figure 12. Visual representation of Finding Three

As well as the frustration of the lack of situational awareness and communication of a policy or strategy, there was frustration at the inability of local decision-makers to communicate their concerns and queries into government. Across all three IORs was the consistent ask for a bi-directional relationship with central government, where the local and central could have a two-way dialogue. This has been addressed, in part, through improvements to the LRF Chair's Call, but this has not been accompanied with an improved ability to influence strategy and policy. Partnership working (both vertical and horizontal) are broadly reported as functioning well and delegates are proud of this across the IORs. However, the interplay between the local and national has consistently been a source of frustration throughout the IORs describing the relationship with central government as the only ineffectual relationship of their partnership working.

Throughout the IORs, as time passed, the IOR integrated dataset describes an ongoing call for resources and non-financial support. The requirement is not just about monetary spend, but also about expertise and other resources needed to implement the requests from central government policy.

### **Integrity – Finding Four**

Clarity of messaging to the public from central government needs to be improved. This is in association with the publication of a national strategy to manage Covid-19 as mentioned in the main finding of 'Strategy and Leadership'. This finding accounted for just over six percent, it was the smallest section within the report. The largest sub-finding was Support, Strategy and Leadership which represented



Figure 13. Visual representation of Finding Four

almost 50 percent of all codes of Finding Four. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 42, 46-48 in the first IOR, pages 20-32 in the second IOR and pages 20-26 in the third IOR.

The clarity of messaging and information for public action should be accessible, transparent and be cognisant of differences across devolved administrations. Across the IORs, there was clear evidence that central government communication flow and timing consistently needed more clarity, of content or strategy. The absence of this clarity continues to undermine the credibility of the management of the pandemic. This lack of credibility impacts negatively on public trust and action.

The increase in the clarity of message was also accompanied by a call for transparency and integrity in decision-making alongside an increase in coordination between government departments. Delegates were clear that honesty and transparent conversations within the public domain outlining how hard the management of Covid-19 is are important factors. The challenge of discussing the tension and interconnectivity between different portfolios (health, economy, education) and how these decisions are being considered, is essential for the public to trust in the central and local decision-making processes. Across the IORs an increase in public compliance to the Covid-19 advice was suggested by delegates to be determined in part by the honesty of the process of decision-making.

Delegates across the first, second and third IORs suggest that when political influences and motivations are not honestly recognised and acknowledged, or

decisions and actions are not transparent, or there is a lack of open debate about possible solutions, then trust in the process of managing Covid-19 erodes. This is acknowledged as a challenge at both central and local level as erosion of public trust at the central level erodes trust in the local level decisions and this threatens the perceived integrity of the local level activities and decisions.

There is a request for more support, leadership and guidance to navigate the unique challenges caused by the impacts of Covid-19 (such as recovery not being as per previous incidents, guidance around an exit strategy, guidance around the complex network of structures), which would significantly improve the local strategic decision-making process and management of the pandemic by providing a structured, transparent approach.

## Intelligence Flow – Finding Five

The ability to aggregate information, data, strategy and decisions to achieve situational awareness and build a common operating picture has been a consistent struggle throughout the pandemic to date. This finding accounted for seven percent of this report. The largest sub-finding was Seeking and Sharing Intelligence which represented 35 percent of all codes of Finding Five. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 36-43 in the first IOR, pages 20-25 in the second IOR and pages 20-34, 43-45 in the third IOR.

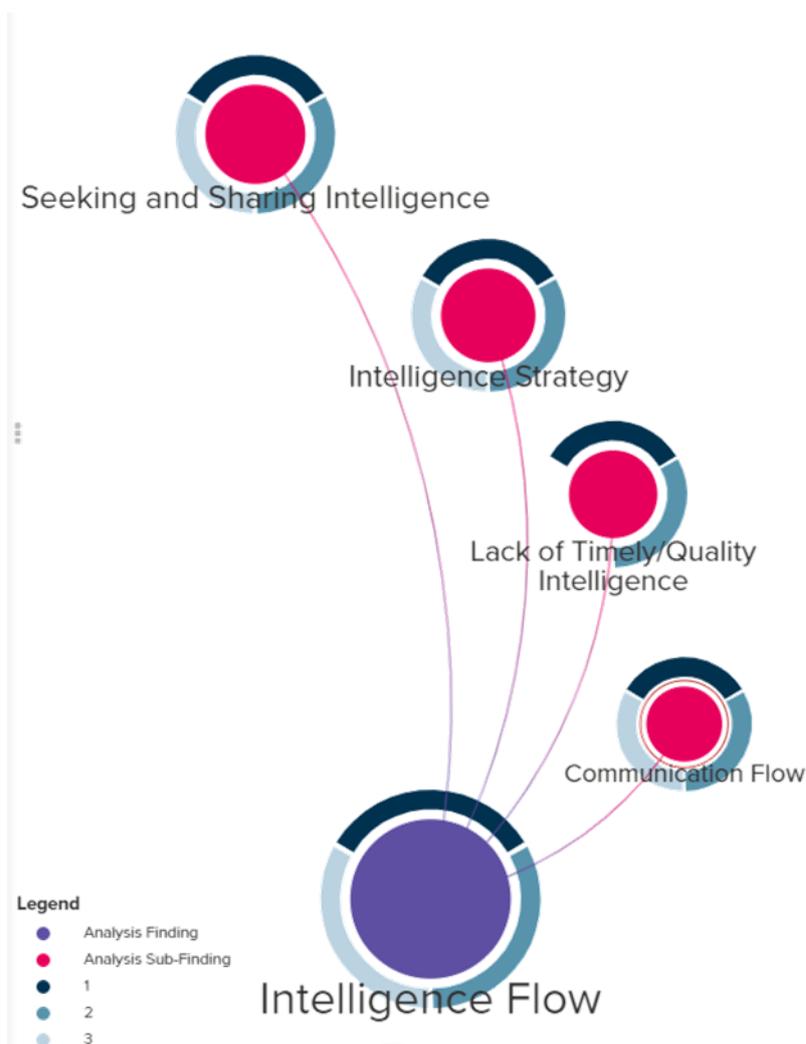


Figure 14. Visual representation of Finding Five

The lack of an intelligence strategy to connect the local information flows to the national to be able to seek and share data, information and intelligence both vertically and horizontally was seen as challenging situational awareness and the

ability to provide context and foresight throughout the pandemic. Alongside this, health data being shared outside of the health structures appears to have been a continual challenge. Health is reported as having quite an insular approach which translates as exclusive to partners, leaving them with the perception that health intelligence is seen by health as only relevant to their people and irrelevant to others. However, the intelligence within health in any major incident, particularly a health emergency, is highly relevant to those other partners, partnerships and organisations.

The other stakeholder to have generated much frustration across the IORs is central government and the perception of lack of sharing, including the need to access central governments Reasonable Worst Case Scenarios (RWCS) by local level decision-makers. This is important to inform planning and preparedness at the local level as well as being used to inform the local situational awareness. These are used in emergency planning to ensure the needs for resources, people and assets are identified, and secured by mapping the capability and capacity against the RWCS.

The ability to exchange information in a timely manner and with appropriate access has been a challenge through the first IOR at local level. This was less prevalent in the second IOR, presumably because the local data sharing challenges had been worked through and solutions generated, or the challenges had been accepted. In the third IOR the local intelligence sharing challenges shifted as local partnerships overcame issues. The timely sharing of quality data, information, intelligence, strategy and decision-options was seen as imperative to support the local decision-makers as early and as fully as possible.

Delegates reflected in the third IOR a need for longevity in planning the sharing, flow and integration of intelligence. This includes the need to continue to share both locally and nationally up and down and to ensure that in the mid to longer term the requisite skills, training and staff are able to be dedicated to establish local intelligence, situational awareness and foresight.

## **Learning for the Future – Finding Six**

The ability to learn within the crisis, share those lessons and also apply the learning for the future was a clear desire throughout the integrated dataset at all three time points. This finding accounted for 13 percent of this report. The largest sub-finding was Sharing Learning which represented 50 percent of all codes of Finding Six. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found on page 59 in the first IOR, and pages 52-62 in the second IOR and pages 43-48 in the third IOR.

Given the agility, innovation and successful ways of working that the delegates have witnessed across the UK, they prioritise across the three IORs the capture of how that innovation was developed as well as the outcomes of that innovation. If the key points or process of successful innovation are identified and shared, then in the future, these principles could be used in order to improve responses to emergencies.

Across the IORs the need to share the learning was consistent and requires the development of a civil contingencies network across the UK. This includes devolved administrations and the different functions of the local management. For example, a network of Multi Agency Information Cell leads, a network of SCG Chairs, a network of strategic recovery leads and other points of connection where function and role align. There is also a need to network those localities with similar challenges to exchange policy and guidance (an example of this is the bespoke purpose built [C19 LRF Similarity App for LRFs](#) to find similar neighbours to themselves with similar challenges and share practice and solutions).

Connecting those with similar portfolios, clusters of regions across a geography, similar community challenges or similar 'types' of demands within their future (EU Transition, severe weather likelihood, port allocation for example) would allow the exchange of approaches and reduce workload across already stretched

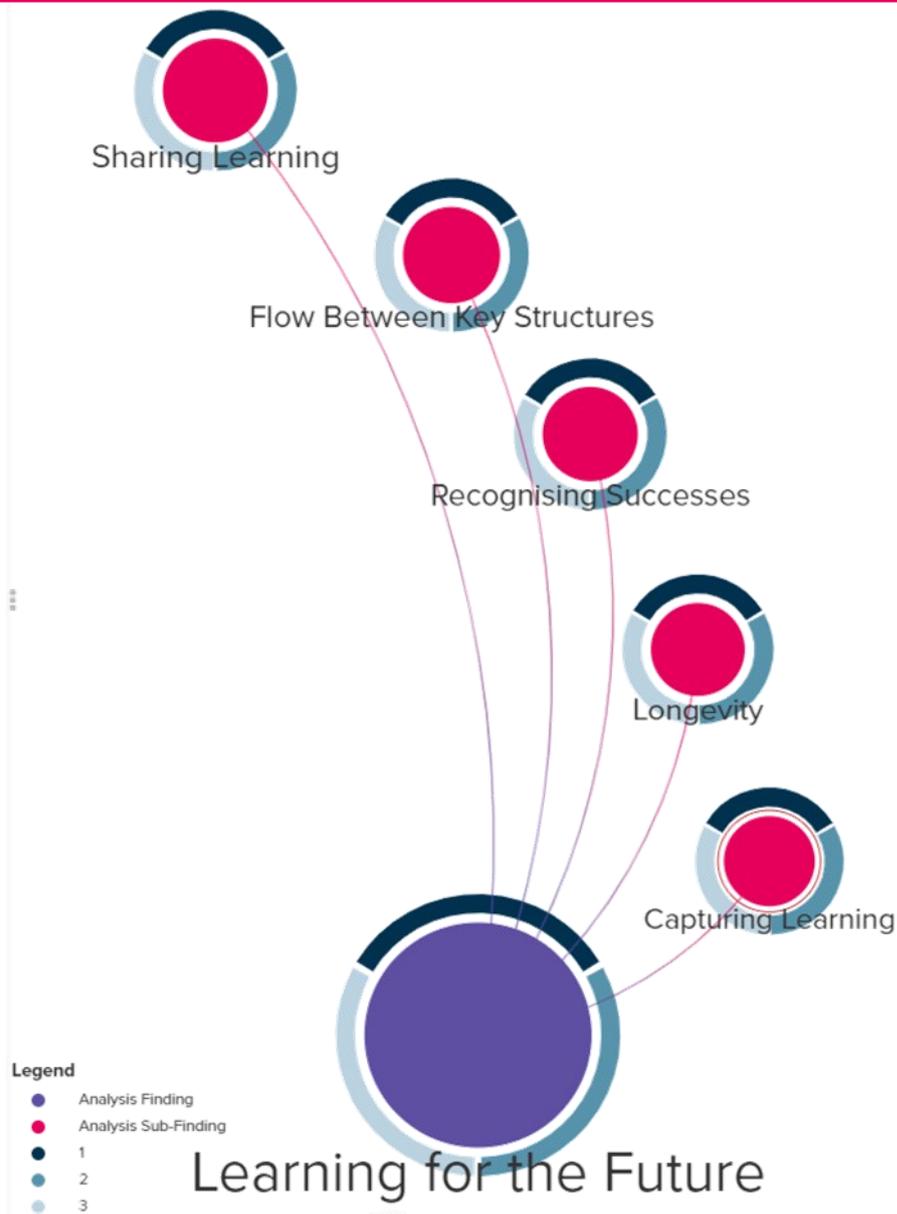


Figure 15. Visual representation of Finding Six

structures. The value of partnerships and professional networks was highlighted throughout the dataset as facilitating the exchange of knowledge and support. The capturing and acknowledgement of success (and failure) is part of the ability to learn. Highlighting successful approaches expressed and identified throughout the management of Covid-19, was seen to be critical to the sector.

### Find Similar LRFs

The screenshot displays the 'Find Similar LRFs' interface. On the left, there is a 'Select your LRF' dropdown menu currently set to 'Lincolnshire'. Below this, a section titled 'Which parameters would you like to filter by?' contains a list of checkboxes: '% Over 65s', '% Under 18s', '% BAME', '% Urban' (which is checked), '% Economically Activity', '% Employed', 'Area', 'Density', 'IMD', and 'District Type'. On the right side of the interface, there are navigation tabs: 'Similarity Map', 'Similarity Table', 'Summary Info', 'Summary Distributions', and 'About'. The 'Similarity Map' tab is active, showing a map of the United Kingdom with several regions highlighted in blue, indicating similar LRFs to Lincolnshire.

Figure 16. Screenshot from NTU Similarity App—<https://bit.ly/LRFsimilarity>

## Midterm Resilience – Finding Seven

The need to move away from the immediate challenges and focus and prepare for the longer or midterm timeframes grew in the discussions over the three time points. This finding accounted for 16 percent of this report, the largest finding. The largest sub-finding within this was Support and Resources which represented just over 50 percent of all codes of Finding Seven. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 44-59 in the first IOR, pages 33-51 in the second IOR and pages 19-26, 43-53 in the third IOR.

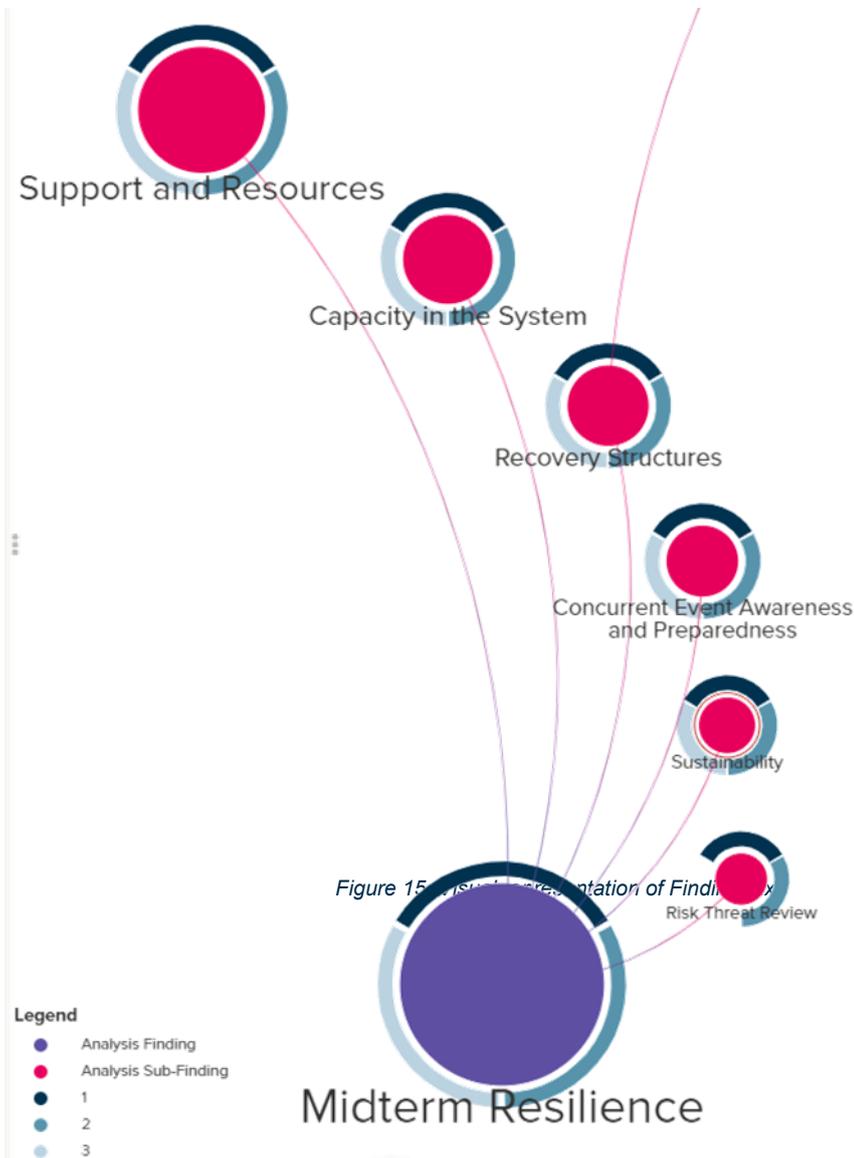


Figure 17. Visual Representation of Finding Seven

The sustainability challenges caused by the elongated nature of Covid-19 was developed throughout the time points within the dataset. Initially in the first IOR delegates identified few sustainability issues other than the immediate issues. By the time the data was gathered for the second IOR delegates were discussing in significant detail the resource and sustainability challenges generated from being stood up and active for so long. In the third IOR delegates were looking to the resources and support needed for mid-to-longer-term sustainability, including the support needed in terms of governance, legitimacy and legal standing, as well as the capacity in the system to plan, prepare and train for other concurrent and future events. This includes funding, staffing, and solutions to address the stretch of structures.

The biggest challenge to the mid-to-long-term resilience is little or no capacity in the system. This is particularly pertinent for the staffing of structures and role

allocation at local level. The staff are exhausted and designated resources for staffing emergency management structures are already at capacity with organisations starting to look to reduce the allocation of staff to these partnership structures. The solution to this is not simply a funding solution, but also a resource and capacity issue of recruitment, professional support and training, and embedding/maintaining organisational memory.

This impacts on the ability of the local structures to be prepared and plan for a concurrent event. The nature of the risks and threats are perceived as becoming more complex in nature and in their impacts, but also the current resource requirement would significantly impact on the ability to respond and manage concurrent events. The awareness of the nature of predicted events drives the judgement of being able to draw capacity from the already depleted system to manage it. Planning and preparedness of other concurrent events is being prioritised, second to the management of the pandemic. The nature and scale of any concurrent event is also reported as being influential in the ability to manage an event. The bigger or more complex the event, the less capacity there is in the system to manage it. This is also additionally challenging by the further resources drawn for the recovery activities as well as the pulsing response structures, having those operating side by side for such a long period of time (as demonstrated previously in this report) is unique to Covid-19 and consequently is a significant resource requirement. The discussions to try and manage Covid-19 as business as usual was seen in the first IOR but is not seen in the second and third IORs. This report infers that either this strategy was not present when the second national wave started in the UK, or it was accepted and implemented by then.

The request for resources to enable a sustainable midterm future for the LRFs include the need for:

- clarity of funding,
- legal clarity,
- clarity on lines of accountability,
- increased physical resources,
- plans and procedures,
- more trained staff with expertise and experience,
- and the integration of new structures to share some strain of the local existing structures.

All these requests for support and resources mean that the local structures and the LRF would be sustained and facilitated to manage effectively in to the immediate to midterm future.

## **Impacts of Covid-19 – Finding Eight**

Throughout the integrated dataset, five broad categories of impacts of Covid-19 have been identified. These include:

- the impact of psychological impacts on both keyworkers and society
- economic impacts
- wider (non-Covid) impacts on provision of public services
- societal impacts (such as changes like working from home on a large scale and threats to community cohesion)
- the impacts on ‘at risk’ groups (social care and older adults, young people, groups of specific ethnicities)

This finding accounted for eleven percent of this report. The largest sub finding

was Psychological Impacts which represented almost 68 percent of all codes of Finding Eight. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 56-59 in the first IOR, pages 64-73 in the second IOR and pages 54-57 in the third IOR.

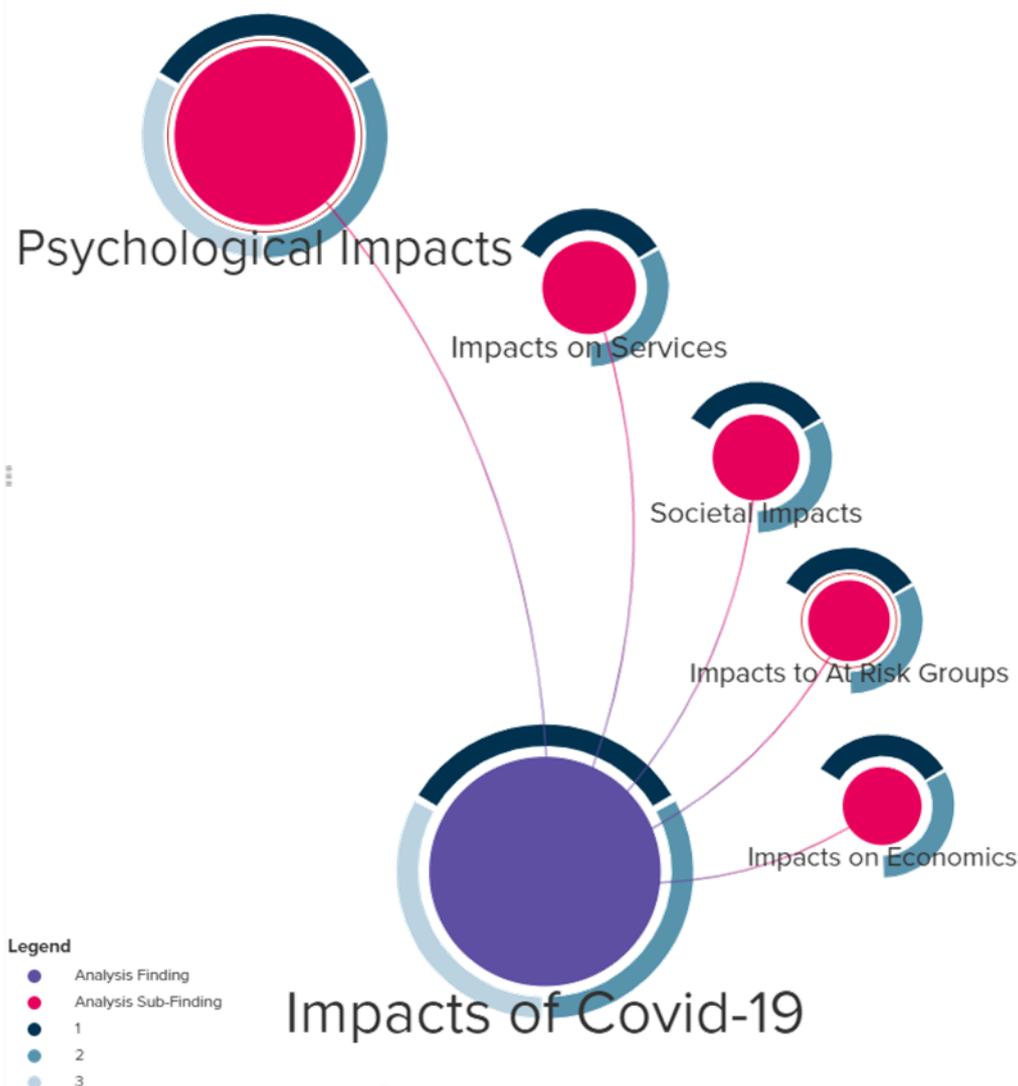


Figure 18. Visual Representation of Finding Eight

Across all the discussion of the impacts of Covid-19 the psychological impacts account for the most discussed across the integrated data set. The psychological impacts on both keyworkers and the community are clearly a high priority concern. This is both of the emotional impacts such as bereavement, isolation and denial of opportunity and the emotional impacts from the psychological consequences of societal and economic impacts from Covid-19, but also a concern of the support in place to respond to this growing need. Particularly a concern that provision of mental health support is fragmented and lacks coordination across the many agencies in this space (including health, voluntary and third sector and private provision) for community level care. Regarding the concern for keyworkers, the experience of managing Covid-19 across their communities has left them exhausted with high rates of fatigue and burnout reported within the delegate discussions. This was an urgent requirement from IOR 1 and this increased as the delegate discussions in IOR 2 and 3 reflected a body of keyworkers across the emergency management structures who were emotionally and physically exhausted, without opportunity to rest and recuperate due to the narrow window for leave and the challenge of cover whilst the leave was taken, the issue of not being able to leave work challenges at work as Covid-19 was across the community and within their personal lives as well, and these impacts were felt at every level of the responding organisations across the roles. The concern for the keyworker staff has been reported through every IOR with

increasing evidence and increasing urgency.

Economic impacts are discussed as the economic insecurity of some families, and also the economic impacts on a region, which were then linked to the economic insecurity of families. To clarify this is separate to the financial resource requests relating to the LRF functions which are reported and explored in other sections. The economic impacts of Covid-19 are discussed throughout the IORs, with IOR 1 discussing them directly and then 2 and 3 detailing the impacts on emotional wellbeing which are included in the sub finding above on psychological impacts of Covid-19.

The degradation of wider (non-Covid) health and other public service provision is also referred to within the integrated dataset. This is the reduction in quality of service provision across other public services due to resource, capacity and focus on the Covid-19 response, leaving other services neglected by necessity. In the time period of the first national lockdown measures, this included suspension of service provision. Within IOR 2 the discussion focussed around restarting and recovering the pause in service provision, to address unmet latent need and to ready for emergent need which had possibly developed as a consequence of Covid-19 or the actions needed to manage it (such as isolation or denial of other health services due to lockdown measures). In IOR 3 the discussion echoes discussions in IOR 1 regarding the possibility of not being able to provide public services, or recover the demand in unmet need, to pre-Covid times. In IOR 3 delegates reported the forecasted increase of pressure on these services as winter influenza, seasonal winter weather and EU Transition all impact on individual services, the community, and the critical infrastructure.

Societal impacts include both positive opportunities presented by Covid-19, such as benefits of working from home on a large scale, but also negative impacts on society such as threats to community cohesion and social integration. This also includes the links to the sub finding above where service provision may need to change or augment to meet the developing needs within society. This also links to the next sub finding of the increased concern that Covid-19 is exacerbating the existing social and health inequalities, increasing the risk within at-risk groups. These include those in social care, older adults, young people and specific ethnicities. The challenges of the health and social needs within these groups and communities are understood to be complex, but the impacts of Covid-19 have loaded on these at-risk groups disproportionately.

The delegates discuss throughout all three IORs the latent and emergent demand from the impacts of Covid-19. One of the aspects raised in both categories and in regard to barriers to help seeking and safeguarding.

## **Recover to a New Future – Finding Nine**

Over the three reviews the language has changed regarding recovery. This finding explores the discussions of recovery and was split between five sub findings. This finding accounted for eight percent of this report. The largest sub-finding was How to get to the Future which represented just over 50 percent of all codes of Finding Nine. Two visual representations of this are shared here. Relevant evidence associated with this finding can be found in pages 53-59 in the first IOR, pages 33-62 in the second IOR and pages 27-57 in the third IOR.

The recovery discussions within the first IOR talked about what could be done to recover to a pre-Covid society. There was strong representation that this would not be possible, due to the significant impacts that would be seen through the pandemic and its management. However, in the second and third IORs recovery was almost absent from the discussions. Not only had the discussion changed to the longevity of Covid-19 but the discussion of recovering to a pre-Covid society had disappeared. The discussion was instead focused on getting through the waves of increased transmission rates until a pharmaceutical intervention was

developed and the reality of resources and energy required to deliver that. In previous papers this has been described as the duality of response and recovery (as discussed in the C19 NFG strategic roundtable on 6 June) and the stabilisation and adaptation stage (as discussed on the Foresight Framework working paper from C19 NFG).

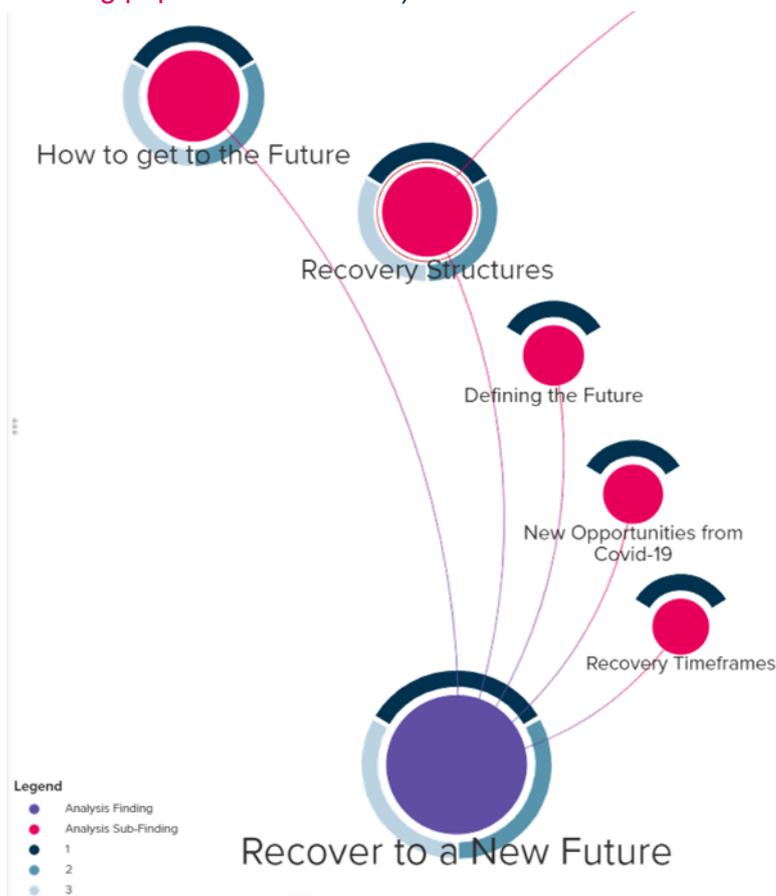


Figure 19. Visual Representation of Finding Nine

The longer-term discussions were not focused on going back to pre-Covid, but instead were focused on designing new societal norms and expectations in a new future. This describes the process of collectively agreeing what society would like to move to considering such things as; the way work is typically organised; the societal values to prioritise; the level of priority given to the environment and climate emergency; and the prioritisation of addressing social and health inequalities. Designing a new future also includes the alteration or re-design of current systems, processes and structures to reflect possible changes to the things society chooses to value moving into the future.

In the findings from the second IOR the discussion focusses on laying out a process of stabilisation between waves and lockdown measures. In the third IOR the midterm discussion is about developing a strategy to address the needs of managing Covid-19 and the resource allocation to deliver that strategy. Then in the longer-term discussions within the third IOR the discussion moves to designing the future that society wants to move to.

In this way there is discussion in the midterm of how to get to that future, what the process of negotiating what that future looks like. These are mostly focussed on what society might choose to not re-engage with (commuting, long distance travel, social and health inequalities) and what society might choose to adapt to (flexible, technology dependent working, community hub and mutual aid activity). These are mostly opportunities driven by the measures imposed to manage the transmission of Covid-19.

There was also discussion about what the remit of the recovery structures and approach needs to be to move to that new future. With the elongated nature of the impacts of Covid-19, the structures need to match that time frame of being

stood up for longer, and their remit needs to engage with a much broader range of societal issues than traditionally would have been the case in a recovery group.

## Appendix Two: Recommendations Clustering

In total 65 recommendations were made that linked to each report's findings. These recommendations were split equally across the reviews and were divided between recommendations to be enacted in fast and slow time (denoted by a priority mark for the fast time recommendations).

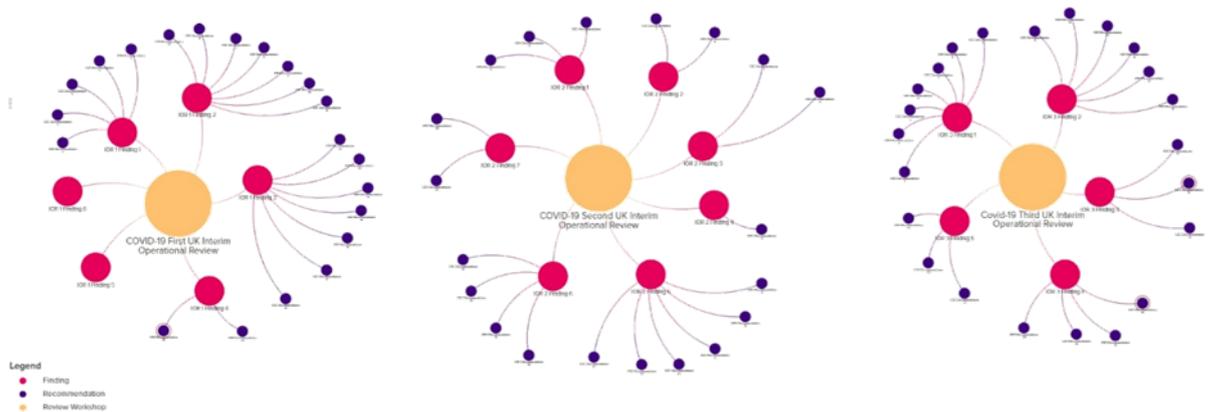


Figure 20. Visual Representation of IORs and Related Recommendations

As the graphic above shows the division of recommendations was based unevenly between findings. This reflected the needs expressed by delegates with some findings attracting a greater volume of recommendations. The recommendations were developed between the report writing team at NTU and a selection of Subject Matter Experts who provided a practitioner and policy perspective to ensure these recommendations were realistic but stretching so that they provided pathways to respond to delegates views and moved us forward in our mission to tackle Covid-19 and future large and widespread emergencies.

To ensure these recommendations did not simply sit on the pages of these reviews we created a recommendations tracker. Individual recommendations were then tasked to specific agencies, government teams and individuals to take forward. It is not the intention of this report to share this tracker as it remains a working document. As those with knowledge of the recommendations (shared in full in the appendix) will know there are many longer-term suggestions which need to be developed in consultation and would require legislative and cultural change to achieve. The C19 National Foresight Group has already shared evidence with the Civil Contingencies Secretariat to support the development of legislative updates to the Civil Contingencies Act 2004.

The aim of this section of the report is to map these recommendations to the newly analysed cross cutting findings and to highlight where recommendations cluster in this analysis. We do not intend to develop new recommendations but expect that this mapping will show where there is still work to be done by the civil contingencies community, agencies and government departments to enhance the response to the Covid-19 pandemic.

### Recommendations to Finding Mapping

#### Location of Recommendations by Finding

Of the 65 recommendations just under 30% are allocated to the Network of Structures finding whilst three findings Midterm Resilience, Integrity and Structural Agility contained just over 10% of all the recommendations. A table of this mapping is shown on the next page.

Finding	Recommendation Count	Percentage
Network of Structures	19	29.2%
Intelligence Flow	11	16.9%
Strategy and Leadership	10	15.4%
Learning for the Future	10	15.4%
Impacts of Covid-19	8	12.3%
Midterm Resilience	4	6.2%
Integrity	2	3.1%
Structural Agility	1	1.5%

### **Distribution by IOR**

When we match the recommendations by individual IOR it is clear that the third review’s recommendations reach across all but one finding (Structural Agility), the others IOR’s recommendations are absent across three findings (intelligence flow, integrity and structural agility for IOR 2 and Impacts of Covid-19, Midterm Resilience and Integrity for IOR 1).

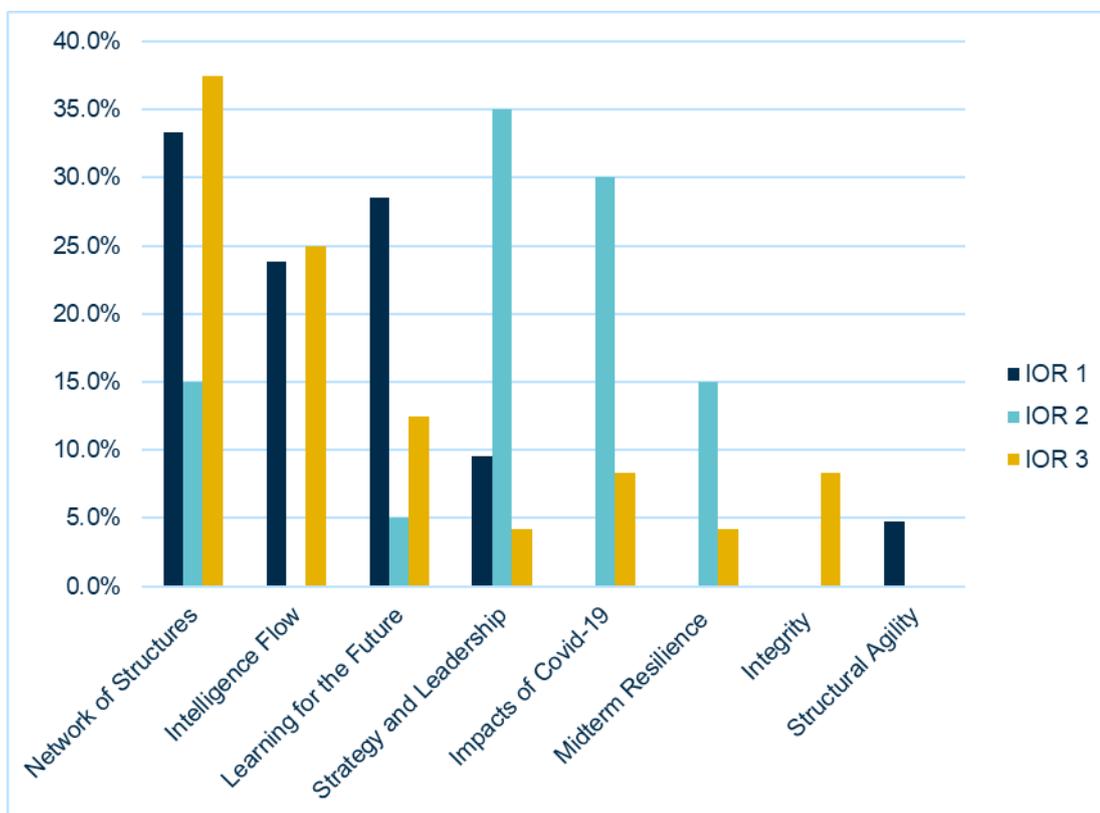


Figure 21. Visual representation of the finding distribution between IORs

### **Priority Recommendation Distribution**

Across all three reports the recommendations were sub divided to outline to the reader if they needed to be considered in fast or slow time. Those marked for immediate attention were called priority themes and were highlighted as such in the reports. The tables below indicate the distribution of recommendations across this report and for reference against the IORs. Across these findings we see the recommendations are evenly distributed in two of the findings (Impacts of Covid-19 and Integrity) and focused on longer term change in two others (Learning for the Future and Structural Integrity). The two largest findings by recommendation links were predominantly focused on priority recommendations (Network of Structures and Intelligence Flow) which highlights the desire to improve the structures and information mechanisms through 2020.

These tables also highlight the variation across the report findings and clearly display the difference in thinking between IORs 1 and 3 which focussed on the immediate need to respond to the current challenges and in IOR 2 when delegates were looking to the future as the first wave had begun to flatten/tail off.

Finding	Priority Theme	Slow Time Theme
Network of Structures	63.2%	36.8%
Intelligence Flow	81.8%	18.2%
Strategy and Leadership	60.0%	40.0%
Learning for the Future	30.0%	70.0%
Impacts of Covid-19	50.0%	50.0%
Midterm Resilience	75.0%	25.0%
Integrity	50.0%	50.0%
Structural Agility	0.0%	100.0%

	Priority	Slow Time
IOR 1	66.7%	33.3%
IOR 2	35.0%	65.0%
IOR 3	71.4%	28.6%
Total	58.5%	41.5%

## Recommendation Clusters

The recommendation clusters have been described in the report above, this section provides further detail of the process and linkages and offers some basic connective analysis to highlight how the recommendations sit across this report.

### *Enhance Connectivity and Learning*

Recommendations under this finding focus on the need to provide better connectivity and learning opportunities within and across organisations, partnerships and Government Departments. This recommendation can be further broken down into six subfindings which can be viewed in the main table of recommendations shared in this report. Recommendations within this cluster were split almost 50/50 between slow time and priority recommendations highlighting the need to learn and adapt to the situation across LRFs and Agencies in both the near and medium term.

The Covid-19 pandemic has required the stepping up of a large number of structures, both pre-existing and novel, and the expansion of boundaries and responsibilities. This has created a sometimes confusing and overlapping web of structures and unclear role responsibilities, reducing effective communication and leading to duplications in effort. As such, the recommendations in this finding call for a clarification of both the network of structures that has emerged, and a clear demarcation of roles and responsibilities for each element of that network. This clarification should occur alongside an increase in consistency and coordination between all local and national structures, as well as a national lead to provide a coherent direction of development across the UK.

The recommendations in this cluster suggest that these roles, responsibilities and development should be supported and facilitated by effective multi-agency training and development at both the national and local levels. Staff should be trained in disaster management, and be inducted formally to ensure knowledge of roles, responsibilities and structures. Government should consider funding and fast-tracking disaster management training and professional development to alleviate the pressure on current staff and increase capacity for future responses.

The recommendations within this finding also centre on improving the connectivity, communication and collaboration between different aspects of this network of structures and partners. The recommendations include several

suggestions for achieving this. At the national level, a number of bodies should be convened to improve communication and coordination:

- 1) an LRF advisory Group to improve consultation and engagement between local and national, as well as improving vertical and horizontal communication
- 2) a flu/pandemic preparedness committee/group to learn from collaborative processes and effective systems
- 3) A National Multi Agency Cell to collate, synthesise and disseminate intelligence and the national and subnational picture in a timely and accessible way

In addition to this, National Government should provide each LRF with a dedicated and consistent Government Liaison Officer, appropriately trained to ensure effective and consistent communication. Similarly, government should increase the reach of current representatives that connect the local to the national (GLOs, MHCLG reps) to increase bidirectional information flow and communication and facilitate advocacy of the local context.

These recommendations also suggest that National Government should work with LRFs to establish commonly understood and agreed protocols/frameworks to facilitate timely, ethical, accurate, transparent and actionable sharing, both horizontally and vertically, of data and intelligence. Connectivity at the local level should also be facilitated and encouraged by improving Resilience Direct to increase horizontal visibility, situational awareness and good practice sharing, as well as encouraging shared naming conventions and report templates. LRFs should agree to a policy of information sharing (of data, intelligence, strategy, decision-making and forward look), formalising this as a responsibility to share good practice.

All of the recommendations within this finding should enable real-time sharing and implementation of learning and good practice. This should be supported by a national level debriefing, with rapid turnaround and sharing of national and subnational intelligence. Recommendation 3.7 from IOR 1 highlights the need for rapid learning and linking.

Recommendation 3.7: (PRIORITY) The communication forums between local LRFs and the national level need to be further improved to ensure they are effective, timely and bi-directional and discussions, requests, actions and decisions are logged and shared with participants.

Whilst Recommendation 1.3 from IOR 2 showcases the need to reflect and adapt current structures to ensure that they are in place to connect and learn now and into the future.

Recommendation 1.3: The UK Government should establish a LRF Advisory Group, drawn from and representative of the existing LRFs across the country, to promote more effective consultation and engagement between the local and national levels in areas such as the development and implementation of policy and guidance, data/intelligence sharing, training, debriefing and learning, improving vertical and horizontal communication between partner agencies and Government departments and with our local communities.

This cluster of recommendations was the largest set bringing together 23 recommendations. The majority of these recommendations are drawn from IOR 1 and 3 (just over 40% each) with only three recommendations from IOR 2. It is worth noting that a number of recommendations that discuss connecting and learning from IOR 2 were clustered under Sharing the Strategy and Guidance and will be discussed in that section. This recommendation cluster also reaches across the broadest reach of the integrated findings of this report touching on six

of the findings most prominently Network of Structures which accounts for almost 50% of the mapped IOR recommendations.

### ***Sharing the Strategy and Guidance***

Through the reviews twenty recommendations focus on the need to develop and share strategy and guidance documents, policies and approaches that delegates felt needed upgrading or creating. On the whole these recommendations focused on asks to the UK Government, but a small number also discuss requirements of LRFs and MAICs on strategy and guidance. This recommendation can be further broken down into four subfindings which can be viewed in the main table of recommendations shared in this report. Three quarters of these recommendations are classified as priority recommendations for immediate attention of the IOR stakeholders. They seek to encourage stakeholders to produce, share and deliver on strategy and guidance relating to the pandemic. There is a call to produce guidance and documentation from central decision makers as a priority. In IOR 3 the report calls for a succinct communications strategy that can be shared with those responding to Covid-19:

Recommendation 1.4 (PRIORITY): The UK Government should urgently produce a succinct UK Government Covid-19 Communications Strategy/Plan to accompany the national strategies for Covid-19 Response and Recovery that clearly articulates the approach, roles and responsibilities for communicating and explaining key decisions and actions taken at both the local and national levels to support delivery of the national strategy.

In slow time the five recommendations explore the need to develop support for partners to manage emergencies together. In IOR 2 Recommendation 5 seeks clarification on responsibilities between different partners to minimise duplication.

Recommendation 5.1: In order to maximise consistency in approach, minimise duplication of effort and enable the effective sharing of learning and good practice between all stakeholders, UK Government should clarify where responsibility lies in supporting LRFs and Government Departments in coordinating their ongoing training, exercising and debriefing needs in the context of the CCA.

This cluster of recommendation is split across all three IORs with IOR 3 making up 40% of the recommendations and the other two split 30% each. This recommendation cluster draws on three of this report's overarching findings namely Intelligence Flow, Network of Structures and Strategy and Leadership which highlight the focus on the way information is shared across and within structures and by whom.

### ***Largescale Emergency and Disaster Review***

Whether relating directly to the Civil Contingencies Act or more broadly about reviewing the UKs response and recovery from Covid-19 we see a significant clustering of recommendations that highlight the need to learn the lessons (positive and negative) from this extended and widespread emergency. This recommendation can be further broken down into three subfindings which can be viewed in the main table of recommendations shared in this report.

The Covid-19 pandemic has been a broad systemic crisis affecting the whole of the UK simultaneously, and as such has been both a unique stress test for the existing crisis response architecture and a driver of innovation in the UKs emergency response structures. Recommendations in this cluster therefore centre around evaluating the pre-existing legislation, policy, guidance and structures underpinning the UKs disaster management response architecture, to determine their effectiveness and establish whether they are fit for purpose given their performance during this broad and enduring crisis. In addition, the

recommendations in this finding call for mechanisms to be developed that allow for the identification of effective innovation, and for the sharing, formalisation and implementation of these new structures, approaches and partnerships, to enable the UK's response to future broad, complex or simultaneous emergencies to be informed and strengthened by our experiences during this unprecedented crisis. Together, these two aspects call for a review to explore if:

- 1) our current architecture is able to handle large scale disasters,
- 2) it is flexible enough to adapt and innovate (as has been demonstrated by the LRF responses throughout the IORs) and,
- 3) we can learn from this innovation to ensure the architecture is updated to handle future emergencies.

This finding also includes recommendations centring around the wellbeing and resources of Emergency Responders and communities, in terms of how this affects disaster management. In terms of the wellbeing of responders, the recommendations call for more clarity, guidance and well-resourced training to support responders at the strategic, operational, and tactical levels, as well as an integrated national Mental Health Plan to reduce staff burnout and give access to support networks such as those available to blue light staff. In terms of community, the national and the local should work together to establish effective ways to identify and map community cohesion, solidarity and vulnerability, in order to target support for struggling groups and individuals, and also to inform community resilience and response to future emergencies. Although this finding includes a mix of Priority and Slow Time recommendations, these wellbeing clusters are likely to be ongoing and develop over time with thought, effort and coordination required for their positive impacts to be felt.

As might be expected with this cluster there is a slight predilection to longer term recommendations with close to 55% of recommendations being framed as longer term but all these recommendations have a focus on improving and developing better systems for tackling national complex emergencies. In IOR 3 the report calls for a process to explore the principles of subsidiarity as a matter of urgency:

**Recommendation 3.2 (PRIORITY):** In the context of the CCA, the UK Government should commission a transparent, independently commissioned, multi-sector membership (with peers and multi-disciplinary expert panel) review as to how to maintain, sustain and protect the principles of subsidiarity of local decision-making and coordination during the Covid-19 pandemic.

Whilst in IOR 1 alongside a series of priority recommendations the report seeks a review of training and competencies to support multi-agency responses:

**Recommendation 1.4:** A review of the national training and competency framework for the strategic management of multi-agency major incidents should be undertaken to improve the consistency and capability of the multi-agency response across the country. To include the training and accreditation required to undertake the critical role of SCG Chair.

Across all three IORs we see the same requests for reviews of policy and practice with slightly more recommendations in IOR 2 and 3 than in IOR 1 (36% compared to 27%). The desire of delegates to improve and enhance the systems and practices shines through here, it is clear that there is a need to ensure we have a system that is suitable for current and emerging widespread and complex emergencies. As would be expected the recommendations mapped to this cluster focus on three of the findings of this report. Learning for the Future, Midterm Resilience and Impacts of Covid-19. The first of these makes up just under a half of the recommendations with the final two just over a quarter each which confirms

and connects these recommendations with a wider need to review and enhance the way the UK manages emergencies such as the Covid-19 pandemic.

### ***Resource the Future Needs***

To ensure the longer-term impacts of Covid-19 and related incidents are managed the recommendations stress the need to effectively resource the delivery of support across the UK. The central finding requires a step change in the support capability to ensure we support our key and frontline workers into the future to manage the long tail of Covid-19 effects and any emergencies thereafter such as a flu-pandemic or other National Risk Register threat. The IORs highlighted the extreme pressure our workforce is under and these recommendations suggest ways to support them in the midterm. This could be achieved by training the next cohort of workers and supporting the current workforce. This recommendation can be further broken down into two subfindings which can be viewed in the main table of recommendations shared in this report.

Two thirds of these recommendations were marked as priority recommendations highlighting the need to support into the future and ensure we do not burn out our highly trained and experienced workers. This is highlighted within IOR 2 which expanded the standard classification of frontline workers to showcase the broader workforce who have played an essential role through 2020:

Recommendation 6.2 (PRIORITY): LRFs and associated multi-agency partnerships should urgently consider the merits of establishing a broader duty of care framework and encouraging mutual aid between organisations more experienced in supporting the health and wellbeing of not just first responders but all those involved in the enduring response to Covid-19.

Within a longer term framing the recommendations discuss the need for more formal links to mental health support and a need to publicly recognise the efforts of all workers who have played a role to ensure they are seen and supported.

Recommendation 6.4: LRFs and associated multi-agency partnerships should consider ways in which they can recognise the efforts of their staff and community achievements during the Covid-19 pandemic.

Whilst the needs of workers were recognised across all three IORs this recommendation cluster predominantly focused on recommendations from IOR 2 when delegates were considering the longer-term implications of Covid-19. They had begun to see national restrictions relax but had an eye on the impact of this and the potential for second waves in the autumn. Only one of the recommendations is drawn from IOR 3 which called for a central Mental Health Lead across Government to develop and deliver a unified and connected mental health support offer that tackled the impacts of Covid-19. All but one of the recommendations clustered here related to the Impacts of Covid-19 report finding.

### ***Future Models and Approaches***

A small number of recommendations (5) highlighted the need to explore and implement new approaches to emergencies, such as the Covid-19 pandemic, which ensure we lead the way to be in the best possible place to tackle similar emergencies in the future. This recommendation can be further broken down into two subfindings which can be viewed in the main table of recommendations shared in this report. These recommendations call on us to consider and create systems that can cope with disasters and emergencies that threaten the UK. Large scale and widespread events such as this Covid-19 pandemic have created knock on impacts across society and we need to ensure that our ways of managing both in terms of models and approaches are reflective of this.

As you would expect these recommendations are dominated by slow time changes (60% of the recommendations) but the recommendations that were

marked as priorities focus on the need to act now to tackle emergent need or system challenges. Both recommendations marked as priority are from IOR 1, they call for a new approach and system.

Recommendation 4.2: (PRIORITY) National thought leadership on the forward look and insights of how Covid-19 primary and secondary impacts are likely to interact and their associated, projected emergent need in the community/society.

Recommendation 3.2: (PRIORITY) Establish a multi-disciplinary Knowledge Management Centre at the national level to work alongside the National MAIC to analyse data and intelligence and provide advice to key stakeholders at both local and national level, avoiding duplication of effort and maintaining a commonly recognised intelligence picture.

The remainder of the recommendations all reference the Civil Contingencies framework and approach and call for it to adapt to the impacts of Covid-19 on our communities and the way we deal with them in crisis.

These recommendations are evenly split across each IOR highlighting the call from the reports to put in place mechanisms to update and enhance the UKs approach to emergencies. These recommendations mapped across the Strategy and leadership and Network of Structures findings of this report and reflect the need to review and develop our approach and policy and operational levels.

Recommendation Clusters	Priority Split
Enhance Connectivity and Learning	
Slow Time	47.8%
Priority	52.2%
Future Models and Approaches	
Slow Time	60.0%
Priority	40.0%
Large-scale Emergency and Disaster Review	
Slow Time	54.5%
Priority	45.5%
Resource the Future Needs	
Slow Time	33.3%
Priority	66.7%
Sharing the Strategy and Guidance	
Slow Time	25.0%
Priority	75.0%

Recommendation Cluster and IOR link	IOR Split	
Enhance Connectivity and Learning	IOR 1	43.48%
	IOR 2	13.04%
	IOR 3	43.48%
Future Models and Approaches	IOR 1	40.00%
	IOR 2	40.00%
	IOR 3	20.00%
Large-scale Emergency and Disaster Review	IOR 1	27.27%
	IOR 2	36.36%
	IOR 3	36.36%
Resource the Future Needs	IOR 2	83.33%
	IOR 3	16.67%
Sharing the Strategy and Guidance	IOR 1	30.00%
	IOR 2	30.00%
	IOR 3	40.00%

## Recommendations and Clusters Table

Recommendation Clusters	Finding	IOR	Recommendation
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 2.1 (PRIORITY): To provide clarity for all stakeholders and maintain flexibility in the response to Covid-19, the UK Government should commission an independent body to work with local decision-makers to produce visual 'wiring' diagrams of the local, regional and national structures clearly showing the information and decision-making flows between key stakeholders. These wiring diagrams should be supported by clear Terms of Reference and lines of accountability for all stakeholders.
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 3.3 (PRIORITY): The UK Government should clarify how new Covid-19 specific structures (or other structures that emerge during concurrent events or longer-term emergencies) align with the key principles of emergency management within the CCA.
Enhance Connectivity and Learning	Network of Structures	IOR 1	Recommendation 3.6: (PRIORITY) Each LRF should continue to have access to a named and consistent GLO, who ideally is familiar with the locality, for the duration of the response.
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 4.4 (PRIORITY): UK Government should work with local and national stakeholders to identify how best to reduce bureaucracy and promote agility in the planning and response to the potential integrated, four-way D20 winter crisis, supported by sufficient physical and financial resources and a clear public engagement plan to mitigate probable impacts should it occur.
Enhance Connectivity and Learning	Strategy and Leadership	IOR 3	Recommendation 4.3 (PRIORITY): UK Government should reconstitute the flu/pandemic preparedness committee/group to capture learning from the leading collaborative and cross silo processes and systems that delegates have praised and prepare for future emergencies including committing to resourcing national exercising for 2nd and 3rd waves of Covid-19 and place a duty on all partners to participate and to share data and information.
Enhance Connectivity and Learning	Integrity	IOR 3	Recommendation 2.4 (PRIORITY): To empower current representatives that connect the local to national government (GLOs, MHCLG reps) to enhance their reach into government beyond MHCLG so that they are able to provide a bi-directional flow of information and enhance communication between local and national levels recognising they can be key advocates of the local context.
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 2.6 (PRIORITY): For government departments with portfolio responsibility, to work with local elected members to develop a central position/framework to improve the communication and engagement between LRFs and local partnerships and structures outside of the Local Outbreak Engagement Boards to ensure a single line of support.
Enhance Connectivity and Learning	Network of Structures	IOR 1	Recommendation 3.1: (PRIORITY) To ensure consistent, timely and current information exchange a clearly defined National Multi Agency Information Cell based on the LRF MAIC model should be formally adopted to collate, synthesise and disseminate the national and sub-national picture in a timely way. The information should be readily accessible via Resilience Direct to enable local strategic decision makers and Government to be able to read up and down as well as across both structures and information content.
Enhance Connectivity and Learning	Intelligence Flow	IOR 1	Recommendation 2.3: (PRIORITY) Resilience Direct should be re-structured to improve horizontal visibility across LRFs, to improve situational awareness and share good practice. Greater use of standard naming conventions and templates for reporting is encouraged.
Enhance Connectivity and Learning	Intelligence Flow	IOR 1	Recommendation 3.4: (PRIORITY) At local/sub national level, an policy of an inclusion protocol (where this does not already exist) should be signed by partners of the LRF and sub national partners to indicate and commit to a willingness to share (data, intelligence, strategy, decision-making, forward look) with other partners in order to facilitate local level decision-making. Similar considerations should be made when considering how to share vertically. Please note, this is not a data sharing agreement, but goes beyond the sharing of data to wider intelligence.

Recommendation Clusters	GT Finding	IOR	Recommendation
Enhance Connectivity and Learning	Intelligence Flow	IOR 1	Recommendation 3.7: (PRIORITY) The communication forums between local LRFs and the national level need to be further improved to ensure they are effective, timely and bi-directional and discussions, requests, actions and decisions are logged and shared with participants.
Enhance Connectivity and Learning	Learning for the Future	IOR 1	Recommendation 1.1: (PRIORITY) A national level debrief process, with a rapid turnaround, should be sustained throughout the response and recovery phases of the current pandemic to ensure learning and good practice is captured, shared and acted upon in real time, to mitigate harm and influence future activity. Future reviews should seek to include greater community engagement and participation.
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 3.1: The UK Government should review the LRF Secretariat functions, including funding arrangements, at the local/ regional level to improve consistency and coordination in approach.
Enhance Connectivity and Learning	Network of Structures	IOR 3	Recommendation 4.1: The national CCA guidance and JESIP doctrine should be updated to clarify the preparedness strategy for the medium to long term and to standardise the intelligence ecology and MAIC practices that support major emergencies in order to provide a coherent direction of development across the UK.
Enhance Connectivity and Learning	Strategy and Leadership	IOR 2	Recommendation 1.3: The UK Government should establish a LRF Advisory Group, drawn from and representative of the existing LRFs across the country, to promote more effective consultation and engagement between the local and national levels in areas such as the development and implementation of policy and guidance, data/ intelligence sharing, training, debriefing and learning, improving vertical and horizontal communication between partner agencies and Government departments and with our local communities.
Enhance Connectivity and Learning	Network of Structures	IOR 2	Recommendation 1.2: LRFs should be engaged by the UK Government to identify the data and intelligence sharing needs of LRFs and develop a commonly understood protocol that ensures timely, ethical, accurate, transparent and actionable sharing, both horizontally and vertically, of data and intelligence on Covid-19.
Enhance Connectivity and Learning	Integrity	IOR 3	Recommendation 2.5: To provide consistency in approach, Government to ensure all GLOs undergo appropriate induction and training in the local and national ways of working, supported by a shared communication platform beyond GLOs and the LRF Chairs calls to promote more robust two-way dialogue with local decision-makers.
Enhance Connectivity and Learning	Network of Structures	IOR 1	Recommendation 2.6: LRFs should review how partner agencies develop and maintain a mutual understanding of their respective roles, capabilities and capacity to support multi-agency major incidents.
Enhance Connectivity and Learning	Structural Agility	IOR 1	Recommendation 1.3: All Cat 1 & 2 responders and government departments performing a key role in the SCG environment must ensure their staff are trained and accredited in the effective strategic management of multi-agency major incidents. LRFs must ensure their training and exercising plans include a competency register for all partners.
Enhance Connectivity and Learning	Learning for the Future	IOR 1	Recommendation 2.4: LRFs should adopt a formal induction process for all participant members to ensure knowledge of roles, responsibilities and structures are fully understood.

Recommendation Clusters	GT Finding	IOR	Recommendation
Enhance Connectivity and Learning	Learning for the Future	IOR 1	Recommendation 2.5: LRFs must ensure they fully adopt and embed the use of an agreed online platform for sharing and acting upon learning and good practice that may impact on multi-agency working (such as the JESIP/CCS Joint Organisational Learning).
Enhance Connectivity and Learning	Learning for the Future	IOR 2	Recommendation 5.3: To ensure delivery of Rec 5.2 and consistency of approach across all LRFs, Government should develop and implement an appropriate assurance mechanism through which all LRFs can be independently assessed against these pandemic principles and other relevant national resilience standards.
Enhance Connectivity and Learning	Learning for the Future	IOR 3	Recommendation 5.4: UK Government to consider funding and prioritising fast track training and professional development opportunities in Disaster and Emergency management skills to alleviate pressure on local responders in the short term and reinforce the UK's capacity and capability to deal with the ongoing and future pressures in the medium and long term.
Future Models and Approaches	Strategy and Leadership	IOR 1	Recommendation 4.2: (PRIORITY) National thought leadership on the forward look and insights of how Covid-19 primary and secondary impacts are likely to interact and their associated, projected emergent need in the community/society.
Future Models and Approaches	Network of Structures	IOR 1	Recommendation 3.2: (PRIORITY) Establish a multi-disciplinary Knowledge Management Centre at the national level to work alongside the National MAIC to analyse data and intelligence and provide advice to key stakeholders at both local and national level, avoiding duplication of effort and maintaining a commonly recognised intelligence picture.
Future Models and Approaches	Strategy and Leadership	IOR 2	Recommendation 5.4: At an appropriate time, the UK Government should review the effectiveness of the wider civil contingencies' legislative framework and associated guidance in the context of learning from Covid-19. The scope of the review should seek to address accountability, responsibility, resourcing and funding at both local and national levels.
Future Models and Approaches	Strategy and Leadership	IOR 2	Recommendation 5.6: In the longer term, the UK ConOps document should be updated given the context of Covid-19 to ensure all stakeholders are clear on the roles, responsibilities and structures at local and national levels to manage the response and recovery to a wider range of foreseeable major incidents and national emergencies.
Future Models and Approaches	Network of Structures	IOR 3	Recommendation 1.6: The powers and remit of the CCS should be expanded to ensure the UK has appropriately tested strategies, plans, procedures, structures and resources to mitigate and respond to the range of foreseeable risks captured on the National Risk Register. This includes an inspectorate/regulatory function to provide assurance of the UK preparedness to deal with such emergencies concurrently at both the local and national level.
Large-scale Emergency and Disaster Review	Midterm Resilience	IOR 2	Recommendation 2.1 (PRIORITY): The UK Government should rapidly establish a common debrief methodology and shared learning mechanism to ensure learning and good practice is captured, shared and acted upon in real time, to both mitigate harm now, and influence the future response, to Covid-19. Reviews and local debriefs should aim to identify the enabling factors of the successful longer-term response and recovery partnerships in this unique situation.

Recommendation Clusters	GT Finding	IOR	Recommendation
Large-scale Emergency and Disaster Review	Midterm Resilience	IOR 3	Recommendation 5.3 (PRIORITY): To help mitigate the adverse impacts of extended working for responders and support staff and their families, UK Government to undertake a public sector skills audit to identify both capability needs and available capacity gaps. From this develop a well-resourced training programme covering both induction and CPD for the strategic, tactical and operational levels.
Large-scale Emergency and Disaster Review	Learning for the Future	IOR 1	Recommendation 1.5: (PRIORITY) Undertake a specific review of the policy, procedure, guidance and legislation underpinning the response to the pandemic outbreak to identify how it can be adapted and improved to aid future response and recovery phases.
Large-scale Emergency and Disaster Review	Learning for the Future	IOR 3	Recommendation 3.2 (PRIORITY): In the context of the CCA, the UK Government should commission a transparent, independently commissioned, multi-sector membership (with peers and multi-disciplinary expert panel) review as to how to maintain, sustain and protect the principles of subsidiarity of local decision-making and coordination during the Covid-19 pandemic.
Large-scale Emergency and Disaster Review	Impacts of Covid-19	IOR 3	Recommendation 5.2 (PRIORITY): The UK Mental Health Lead/Czar to publish an integrated UK Mental Health plan to limit staff burnout and fatigue amongst responders and support staff and share the established support networks and systems available to blue light staff.
Large-scale Emergency and Disaster Review	Midterm Resilience	IOR 2	Recommendation 2.2: A review of the range and sometimes adhoc regional/sub-national Government, LRF and Health structures and networks established for the Covid-19 emergency should be undertaken to identify where they are adding real value and those areas where enhancing cross-border working could improve the effectiveness of response and recovery activity.
Large-scale Emergency and Disaster Review	Learning for the Future	IOR 1	Recommendation 1.2: To specifically review and contrast the structures adopted by LRFs when implementing local and national plans and guidance for responding to a pandemic influenza, with a focus on identifying innovation and enablers of good practice.
Large-scale Emergency and Disaster Review	Learning for the Future	IOR 1	Recommendation 1.4: A review of the national training and competency framework for the strategic management of multi-agency major incidents should be undertaken to improve the consistency and capability of the multi-agency response across the country. To include the training and accreditation required to undertake the critical role of SCG Chair.
Large-scale Emergency and Disaster Review	Learning for the Future	IOR 3	Recommendation 2.2: The current roles and responsibilities of key stakeholders, structures and ways of working should be systematically reviewed by a transparent, independently commissioned, multi-sector membership review through the lens of the CCA to ensure the Act and it's underpinning EPRR doctrine and guidance remains fit for purpose and adaptable to the concurrent and emerging risks and threats to the safety and security of the UK. This should include an evaluation of the differing LRF/SCG response and recovery models deployed across the country and the way in which their components and subcomponents are networked to produce a series of recommendations for implementing learning from the current activation.

Recommendation Clusters	GT Finding	IOR	Recommendation
Large-scale Emergency and Disaster Review	Impacts of Covid-19	IOR 2	Recommendation 7.1: Government should work with LRFs and LAs to collate and share the range of methods being used to identify and map community cohesion, community vulnerability and community solidarity. This would inform priorities of the immediate recovery work, and also the approach of future community relationships in the context of Local Outbreak Management and support aggregation to the sub-national and national levels whilst allowing local innovation to be maintained.
Large-scale Emergency and Disaster Review	Impacts of Covid-19	IOR 2	Recommendation 7.2: A review of the contribution made to the Covid-19 response by the voluntary and community sector should be undertaken to identify best practice and opportunities for strengthening the coordination, consistency and understanding of support provided and ensure the voices of the voluntary and community sectors are fully heard.
Resource the Future Needs	Impacts of Covid-19	IOR 3	Recommendation 5.1 (PRIORITY): UK Government to commission and fund a UK Mental Health Lead/Czar with public profile and support to ensure the needs of responders and support staff are identified and they receive the support they need. Consideration should include the impacts on communities and how best to coordinate effectively across sectors.
Resource the Future Needs	Impacts of Covid-19	IOR 2	Recommendation 6.1 (PRIORITY): In the immediate term, national support structures such as Our Frontline, Mind, Mind for Emergency Responders NHS crisis lines should be publicised by all partnership organisations to their staff.
Resource the Future Needs	Impacts of Covid-19	IOR 2	Recommendation 6.2 (PRIORITY): LRFs and associated multi-agency partnerships should urgently consider the merits of establishing a broader duty of care framework and encouraging mutual aid between organisations more experienced in supporting the health and wellbeing of not just first responders but all those involved in the enduring response to Covid-19.
Resource the Future Needs	Midterm Resilience	IOR 2	Recommendation 3.1 (PRIORITY): The UK Government needs to urgently engage with LRFs to identify and resolve the immediate capacity and resourcing needs and financial assistance required for local multi-agency response/recovery structures to sustain an effective Covid-19 response, manage concurrent threats and also maintain core business as usual services over the next 12 months and beyond.
Resource the Future Needs	Impacts of Covid-19	IOR 2	Recommendation 6.3: LRFs and associated multi-agency partnerships should formally engage appropriate mental health professionals to ensure their approach to supporting the health and wellbeing of all those involved in the enduring response to Covid-19 is effective.
Resource the Future Needs	Impacts of Covid-19	IOR 2	Recommendation 6.4: LRFs and associated multi-agency partnerships should consider ways in which they can recognise the efforts of their staff and community achievements during the Covid-19 pandemic.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 1.1 (PRIORITY): The UK Government should urgently refresh the Coronavirus (Covid19) Action Plan (published 3 March 2020), ensuring it clearly and succinctly articulates the overall goal, strategic objectives and priorities of the national response to Covid-19 in the short, medium and long term. This must be accompanied by visual and easily understood information on the organisational structure, roles and responsibilities of the various agencies involved at both the national and local levels and the current Covid alert levels.

Recommendation Clusters	GT Finding	IOR	Recommendation
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 1.4 (PRIORITY): The UK Government should urgently produce a succinct UK Government Covid-19 Communications Strategy/Plan to accompany the national strategies for Covid-19 Response and Recovery that clearly articulates the approach, roles and responsibilities for communicating and explaining key decisions and actions taken at both the local and national levels to support delivery of the national strategy.
Sharing the Strategy and Guidance	Network of Structures	IOR 3	Recommendation 1.3 (PRIORITY): To deliver both a shared strategic vision and effective decision-making processes, the UK Government Covid-19 national strategies should be informed by a cross-sector Covid-19 Strategy Stakeholder Forum comprising of local and national representatives from key government departments, LRFs, Category 1 and 2 Responders and community representatives.
Sharing the Strategy and Guidance	Network of Structures	IOR 3	Recommendation 1.5 (PRIORITY): The Communications Strategy/ Plan should incorporate the processes and platforms (such as LRF Chairs Calls/ Resilience Direct) to ensure local decision makers are made aware of key strategic decisions and changes to policy ahead of them being announced. These need to be accompanied by the evidence underpinning them; how they support the national strategic objectives and also appropriate guidance to enable the necessary planning for implementation at the local level and to enable clear communication with the public.
Sharing the Strategy and Guidance	Network of Structures	IOR 1	Recommendation 2.1: (PRIORITY) A short briefing note/resource summarising the roles and responsibilities of LRFs and partner agencies involved in a multi-agency response to a major incident is needed to improve awareness amongst key stakeholders locally and nationally.
Sharing the Strategy and Guidance	Network of Structures	IOR 1	Recommendation 2.2: (PRIORITY) A reference document should be shared across all LRFs and partner agencies that maps the current command, control and communication structures implemented in response to the current pandemic outbreak at both local, sub-national and national levels to provide greater clarity of what national support is available to LRFs and SCGs.
Sharing the Strategy and Guidance	Network of Structures	IOR 1	Recommendation 2.7: (PRIORITY) Clear guidance is needed to assist LRFs and partner agencies better understand and navigate the complex national, sub-national and local health structures, roles and responsibilities and levels of decision making in the context of the CCA.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 1.2 (PRIORITY): A UK Government National Response Strategy for Covid-19 must clearly complement 'The next chapter in our plan to rebuild: The UK Government's Covid-19 recovery strategy'.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 1	Recommendation 3.3: (PRIORITY) The Multi Agency Information Cell (MAIC) guidance with the JESIP Doctrine should be expanded to ensure a common approach is adopted by all LRFs. Common protocols and templates should be provided to facilitate the ready aggregation and disaggregation of data and information upwards, downwards and across.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 1	Recommendation 3.5: (PRIORITY) For Central Government to seek to share their assumptions, strategy, decisions, data and modelling with local level decision makers to support effective decision-making to improve the efficacy of the response, recovery and other phases going forward.

Recommendation Clusters	GT Finding	IOR	Recommendation
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 4.2 (PRIORITY): UK Government should make a commitment to share all RWCS that underpin the national risk register with local partners along with publication and review timelines to ensure local response can better align to Central Government Strategy.
Sharing the Strategy and Guidance	Strategy and Leadership	IOR 2	Recommendation 1.1 (PRIORITY): The UK Government should provide LRFs with a single set of updated Reasonable Worst-Case Scenario planning assumptions for Covid-19 to help improve consistency in response and recovery planning across the UK and build trust and confidence between the local and national levels. These planning assumptions should be updated regularly and cover, as a minimum, the 12 months from September 2020.
Sharing the Strategy and Guidance	Strategy and Leadership	IOR 1	Recommendation 4.1: (PRIORITY) Transparency of national thinking, assumptions, strategy, decisions, data and modelling with local level decision makers is required to support effective decision-making and improve the efficacy of the response, recovery and other phases.
Sharing the Strategy and Guidance	Strategy and Leadership	IOR 2	Recommendation 5.2 (PRIORITY): To ensure consistency of response in each local area, Government should produce pandemic principles to enable local areas to develop Covid-19 (infectious disease) specific plans.
Sharing the Strategy and Guidance	Strategy and Leadership	IOR 2	Recommendation 5.5 (PRIORITY): In the immediate term, UK Government should produce supplementary guidance, underpinning the UK Concept of Operations for the management of a national emergency, specific to Covid-19, that provides clarity to all stakeholders on the roles, responsibilities and structures at local and national levels and how the enduring response and recovery to the Covid-19 crisis is being managed.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 1.1.1: A succinct, easy to read and regularly updated UK Government Covid-19 National Response Strategy, given prominence on the Gov.uk website and with clear signposting out to other guidance such as the Covid-19 Contain Framework, will give greater clarity to and build trust with not just with the public but all the agencies involved in the sustained response to the pandemic, allowing individual departments, LRFs and multi-agency partners the opportunity to align their own (gold) response and recovery strategies and plans at the local, regional and national levels and supporting more effective deployment of resources.
Sharing the Strategy and Guidance	Network of Structures	IOR 2	Recommendation 3.2: The UK Government should continue to develop more detailed guidance on the purpose, functions and scope of an LRF MAIC to ensure a consistent approach across all LRFs and facilitate effective information and intelligence sharing across LRFs and nationally.
Sharing the Strategy and Guidance	Network of Structures	IOR 2	Recommendation 5.1: In order to maximise consistency in approach, minimise duplication of effort and enable the effective sharing of learning and good practice between all stakeholders, UK Government should clarify where responsibility lies in supporting LRFs and Government Departments in coordinating their ongoing training, exercising and debriefing needs in the context of the CCA.
Sharing the Strategy and Guidance	Intelligence Flow	IOR 3	Recommendation 2.3: Central Government should actively share the learning and best practice identified from this review because LRFs/ Local cannot and do not have capacity to see all the models, systems etc across the UK that could work for them within their local systems.

Recommendation Clusters	GT Finding	IOR	Recommendation
Sharing the Strategy and Guidance	Strategy and Leadership	IOR 2	Recommendation 4.1: Government should regularly issue authoritative guidance that clearly delineates the powers, responsibilities and role of local and national responding agencies and structures in the management of local outbreak infections. This guidance needs to reflect that different parts of the country and indeed the system, will be at different stages of response and recovery and need to retain the agility to act without impacting the progress on recovery.

## Appendix Three: Discussion and Review of Academic Literature

### Impacts of Covid-19 on Society and Individuals

The impacts of Covid-19 on societies across the globe have been extensive and pervasive. The academic literature has started to capture the breadth of these impacts, as well as started to scope the length of the likely number of years the impacts are likely to be felt for. This academic literature review outlines the nature of these impacts and the groups and communities within society that are likely to experience the impacts.

The literature has identified groups who are at risk of multiple impacts to include children, young people, women, people with existing mental health problems, pregnant women, migrant workers, people with underlying health problems, people with mobility issues or disability, older people, people who are homeless, people with a lower income. The psychological, economic and societal impacts have begun to be documented in the academic literature, which will now be reviewed.

The psychological impacts of Covid-19 across society have been explored. The academic literature shows that social distancing, social isolation and loneliness can lead to anxiety and depression, as well as problem internet, alcohol and drug use, and gambling (Cakir and Cetinkaya, 2020; Kar et al, 2020; Lippi et al, 2020). Reports from China show an increased prevalence of depression, anxiety and serious impacts to perceived quality of life and well-being as a result of isolation measures (Gao et al, 2020).

The short term and long-term psychological impacts on these groups may include PTSD, depression, recurrent alcohol use problems, increased moral injury and suicidal ideation (DePirro, Lowe and Katz, 2020). At risk groups often have multiple characteristics which could make them higher risk than others. Women are reported as being more at risk of burnout and their wellbeing, stability and economic stability more likely to be affected by the downstream of economic and social consequences of the pandemic (Hall et al., 2020). Clinically extremely vulnerable (CEV) people were expected to/asked to shield during the first lockdown, which affected their ability to go to work, their confidence, their ability to access healthcare, and their mental health (ONS, 2020; Unison, 2020).

A second group at higher risk from Covid-19 is black and minority ethnic groups. PHE (2020) reported clear disparities in risk and outcomes of C19 for people in black and minority ethnic groups;

“The highest age standardised diagnosis rates of Covid-19 per 100,000 population were in people of Black ethnic groups (486 in females and 649 in males) and the lowest were in people of White ethnic groups (220 in females and 224 in males).

An analysis of survival among confirmed Covid-19 cases shows that, after accounting for the effect of sex, age, deprivation and region, people of Bangladeshi ethnicity had around twice the risk of death when compared to people of White British ethnicity. People of Chinese, Indian, Pakistani, Other Asian, Caribbean and Other Black ethnicity had between 10 and 50% higher risk of death when compared to White British.” P39.

Such disparities have been attributed to job types, travel types and location of residence, rate and type of co-morbidities, household composition and racism (IFS, 2020; Independent SAGE report 2020; ONS 2020). Additionally, the impact of Covid-19 on black and minority ethnic groups include; job loss and income decrease (often associated with employment in public facing jobs that cannot be completed by working from home, and there is often only one wage earner within the home), and disrupted grieving processes (IFS, 2020; Moore et al. 2020).

As well as occupation, there is also the loss of opportunities such as training and education and social development. Children and young people have been referred to as having the most amount of opportunity loss from Covid-19. This includes loss of employment, loss of access to early years facilities, academic denial and disruptions to their social development. Longitudinal research shows that children who attend structured learning at an early age (such as early years pre-school) are more likely to get better GCSE results (Department for Education, 2014), the disruption to these types of activities means that the impacts are likely to be felt across the years for this age group as they progress through life. Further research showed that overall absence from education had a statistically significant negative link to attainment; the higher the percentage of sessions missed the lower the likely level of attainment (Department for Education, 2016). This means the ability to try and ‘recover’ that loss of sessions and the accumulative impact it is likely to have is a priority. Additionally, academics have demonstrated that the summer break can affect children and young people’s learning, widen gaps in literacy and maths skills, lead to isolation, malnutrition, can impede socialisation, further risk taking behaviours (Alexander et al, 2007; Cooper et al, 1996; Ellison and Hutchison, 2018; Morgan et al, 2019; Ryder, Edwards and Rix, 2017; Van Lacker and Parolin, 2020). Some solutions that have been used to navigate these impacts to date also come with considerable compromise such as the use of predicted grades impact young people from disadvantaged backgrounds proportionately more as predictions are often biased and based on historic data (Parliament, 2020).

Research from Best Beginnings (2020) into the experiences of expectant and new parents during the initial lockdown showed that many parents feel they did not receive any or enough support which affects their mental health, that babies and children have not had the opportunity to socialise and develop, and that services (including ante natal, breast feeding and health visiting) were not running as required. The impacts on young children have also started to be documented. The Children’s Society (2020) researched children’s experiences during the initial wave and found that children are coping less well with not being able to see friends and family and most were worried to some extent about the virus. The NSPCC (2020) reports ChildLine data collected and analysed during the first wave that demonstrates an increase in concerns for exposure to domestic abuse.

The delegates discuss throughout all three IORs the latent and emergent demand from the impacts of Covid-19 on families as well as children of varying ages. One of the aspects raised in both categories and in regard to barriers to help seeking and safeguarding is the possible increase in domestic abuse. Calls to the National Domestic Abuse Helpline increased on average 25% during the first lockdown, and traffic to the national domestic abuse website increased by 150% (Refuge, 2020). Those individuals are also considered to be within an at-risk group.

As the literature has started to document the impacts on adults, older adults have been identified as being more at risk from the impact of the virus, but there are

other social and emotional impacts specific to this group which are reflected in the IORs. Although specific numbers are unknown, many older adults live within care homes or supported living accommodation and attend respite centres or hospices. Each of these services have faced changes to the way they run in order to abide by coronavirus restrictions but also keep staff and service users safe. Changes include the use of PPE, visiting restrictions, isolation requirements, access to services, access to healthcare, and reductions in liberty (Department for Health and Social Care, 2020; Hospice UK, 2020; Inside Housing, 2020).

Those of working age have also experienced significant disruption. The opportunity to work from home and new ways of working more generally was discussed as an opportunity from Covid-19 within the societal impacts. Creating work life balance when working from home has been a challenge for many parents (Rustubog, Ocampo and Wang, 2020) and the academic literature shows there are often work-life conflicts due to each role intruding on the other (Eddleston and Mulki, 2017). Women tended to fit work in around the needs of the children, whilst men saw themselves first and foremost as workers (Laegran, 2008).

Closely aligned to health and social inequalities which disproportionately spread the impacts on at risk groups, and the disruption to working lives, are the economic consequences on families. There is evidence to suggest that family financial stress can lead to mental health effects for all family members, decline in quality and breakdowns of relationships and with conflicts which can spill over and have negative interactions with children (Masarik & Conger, 2017) and a multitude of literature examines the negative impact of financial stress upon families and their members (Brown et al, 2005; Fonseca et al., 2016; Conger and Conger, 2002).

The literature focussing on housing poverty suggests that many families are depleting savings in order to get by and that many planned to or had taken out credit to cover household costs (Citizens Advice, 2020). A study from Citizens Advice in May 2020 “Near the cliff-edge” reports that a third of renters have fallen behind or expect to fall behind on their rent. A further survey from the Resolution Foundation ‘Doing what it takes’ in March 2020 suggests that most respondents (45%) intended to use savings to get by and that a similar proportion would need to access benefits (44%). Only 27% of those in rented accommodation reported having savings to be able to access to buffer the effects of the crisis.

The consequences of economic insecurity on the ability of families to buy food has also been considered within the literature. Key groups more likely to experience food insecurity, and at the highest risk of the most severe form of food insecurity, include those with incomes that are in the very bottom of the income distribution, people who are unemployed or not working for other reasons, and people with disabilities (The Food Foundation, 2020). During the initial wave, income losses had an immediate impact on food insecurity including adults with low socio-economic backgrounds and adults which were typically not found to be at risk. Other groups also at higher risk of less severe food insecurity in particular, including adults with children and adults from Black, Asian and Minority Ethnic groups (The Food Foundation, 2020). Loopstra (2020) also claims that not all households were equally affected, adults with disabilities and adults with children are particularly vulnerable in the present climate. Consistent with national monitoring data on food insecurity, groups at risk of poverty are at risk of food insecurity; these include adults who are unemployed, adults with disabilities, adults with children, adults with children who are usually eligible for free school meals and Black and Ethnic Minority groups (Loopstra, 2020).

As well as food poverty, fuel poverty has been included in the academic research. Research found that many people rationed their fuel use to cope and in some studies as many as 30% of adults report fears overpaying utility bills (Larpmann, Zuckerman, Gonzalez & Kenny, 2020). Despite rationing, recent data from the Citizens Advice Report (2020) ‘Near the Cliff Edge’ suggests that over 300,000

people in Wales alone fell behind on utility bills in the first few weeks of the crisis. With more people thought to have fallen behind since across the UK on utility bills and with people prioritizing other bills like housing, increasing debt to pay for essentials and continued increase in job losses, fuel poverty is likely to continue to rise and lead to the need for emergency intervention (Baker, Ambrose & Brierley, 2020; Holmes et al., 2020).

The impacts are also evident across the wider social public service provision. Regarding the latent and emergent demand, the literature has started to detail the impacts on non-Covid health across society. The first wave led to the suspension of elective hospital work across the NHS on 17 March 2020 in order to increase acute and intensive care capacity; this has increased the backlog of patients waiting for elective and routine outpatient appointments and the resultant waiting lists (The Academy of Medical Sciences, 2020).

### ***Midterm Resilience of Keyworkers Wellbeing and Capacity***

Delegates stated clearly that there are specific and unique impacts on keyworkers including those who have responded and managed the emergency across a range of local level partnerships. They report that the LRF staff are exhausted, and express concerns about burnout and staff shortage issues. Although much of the research into the wellbeing of emergency responders focuses on 'frontline' staff such as police (Stogner, Miller & Mclean, 2020) and healthcare workers (e.g. Pappa et al, 2020), the findings may shed light on the potential challenges and support needs of LRF staff. The results from the IORs indicate that, although not necessarily 'on the front line', LRF staff are bearing a large burden during the Covid-19 response and may suffer from similar difficulties and benefit from some of the same support measures as frontline workers.

In the context of healthcare workers, Heath, Sommerfield and von Ungern-Sternberg (2020) state that leadership and work culture are important for protecting against burnout, including good communication and supportive professional relationships. These authors also suggest that direct management support, including resources to promote resilience, self-care and staff engagement all decrease the risk of burnout.

The IOR reports also recommend that more direct support structures such as Our Frontline, Mind, Mind for Emergency Responders NHS crisis lines should be publicised by all partnership organisations to their staff, as well as formally engaging appropriate mental health professionals. In practice, this could form a tiered system similar to the one described by Miotto et al (2020) where there are layers of different types of support which overall provide a varied ecology of mental health services to individuals and their immediate family members.

Looking ahead, the priority would be to try and rest this staff as much as possible, by securing the resources and expertise to build a wider cadre of trained people who can take up these roles and start gaining the appropriate experience. This requires the development and transmission of organisational memory and organisational learning to this next team, without making their experience just restricted to Covid learning.

## **The Impact of Covid-19 on the Emergency Management Systems and Infrastructure**

### ***Structural Agility and Command and Control***

In the context of Covid-19, the sheer volume of information being fed into central government across the local picture to establish a national Common Operating Picture, was unmediated by any structures between the LRFs and governmental level and largely unprecedented. The volume may have been approaching the Covid-19 quantity through Operation Yellow Hammer, but not across the broad range of societal structures and activities seen in Covid-19. This could be

resolved in future large, systemic events (such as EU Transition) by the introduction of an intermediary layer. In other countries, this is mediated by structures with a subnational or national portfolio. There is learning to be taken for implementing such a structure from the US where disaster management is decentralised, handled by state and local authorities initially and supported by the Federal Emergency Management Agency (FEMA). During Hurricane Katrina, a lack of communication between FEMA and other agencies (both federal and local level) led to a lack of situational awareness and a delayed response (Chua, Kaynak & Foo, 2007; Kahn & Barondess, 2008). Rigid command and control processes also delayed significant help and assistance (Chua, Kaynak & Foo, 2007). From this learning, the perceived lack of situational awareness nationally could have been created by a lack of two-way communication between LRFs and central government. The centralised nature of the UK's response to Covid-19 may have acted as a bottleneck to the provision of support or intelligence to LRFs and the communities they serve.

The literature is in clear agreement that communication between the central government and the local levels is a priority area for the effectiveness of the response and recovery to disasters and emergencies. Communication between different organisations is vital for the delivery of a co-ordinated response. Curtis (2015) completed an analysis of Hurricane Katrina establishing communication and co-ordination are positively correlated. When information flows through large bureaucratic organisations, miscommunication can also become widespread as well as the lack of information. Having a single central government organisation processing a large amount of information can cause miscommunication.

- **There needs to be structures in place which allow for the timely and accurate collection, synthesis and communication of information in order for coordination to be effective.**
- **The challenge for a central government layer is to collect, synthesise and communicate correct information which requires a high degree of situational awareness whilst being geographically remote.**

Alongside the communication flows, the command and control systems are also highly influential in the effectiveness of the response and recovery. Rigid and hierarchical command and control systems are highly effective for carrying out tasks that are repetitive or uniform in process or function. However they lack the flexibility required to deal with uncertain and rapidly changing disaster situations (Boersma, Ferguson, Groenewegen & Wolbers, 2014; Waugh & Streib, 2006). As the findings from the IORs have detailed, the innovation, agility and flexibility needed to respond to Covid-19 meant that there was misalignment with central government. The literature suggests that the agility and evolutionary pace achieved by LRFs, would not be achieved if they had been facilitated by central government. This is because these centralised, hierarchical command and control structures significantly delayed decision-making and provision of support during other systemic and geographically large incidents, such as Hurricane Katrina (Waugh & Streib, 2006) and the Fukushima nuclear incident (Funabashi & Kitizawa, 2012). In this sense, the CCA principle of subsidiarity is entirely appropriate and the requests from delegates for guidance and thought leadership in certain areas (for example recovery), may be too detailed and at too quick a pace for government reach, agility or ability.

- **On the basis of the learning from literature it can be assumed that a centralised, hierarchical structure, where central government make the decisions, would not be flexible or fast-acting enough to adequately respond to the Covid-19 crisis.**
- **Decentralisation of decision-making to LRFs who have more timely situational awareness of rapidly evolving situations, in addition to the facilitation of effective horizontal and vertical communication, is likely to improve the speed and effectiveness of the Covid-19 response.**

- A central government layer facilitating this communication and coordination may be more useful than a central command and control structure. This concept of operations also includes data flow as well as communication flow, could act as a key facilitating stakeholder in enabling vertical and horizontal data sharing.

Literature suggests that strong central governments working with weak local governments (such as in China) increases effectiveness of coordination from the centre (Zhong et al, 2014), but a fragmented horizontal structure made coordination across local regions very difficult (Guo & Kapucu, 2015). This lead to the establishment of the Ministry of Emergency Management to facilitate both vertical and horizontal coordination. The learning from this is to ensure additional coordination layers when the emergency is across regions or when it is systemic or elongated. This highlights the importance of coordinating information, communication and situational awareness both vertically and horizontally, supporting these needs as identified by the delegates in the IOR datasets.

An alternative view in the literature to command and control systems, is the network approach. This is because in most research, it is networks, rather than command and control hierarchies, that are found to be more effective, flexible and timely, especially in the context of responding to fast changing disasters (Kapucu & Garayev, 2016; Palttala et al, 2011). This is because horizontal communication facilitates organisational flexibility in response to situational uncertainty and variability (Kozuch & Sienkiewicz-Matyjurek, 2016). Using a command and control system to communicate between international, national, local and organisational levels has been found to be slow and inadequate (Krumkampe et al, 2009).

- **A more rapid network approach is likely to enhance disaster management through increasing the effectiveness of communication. The only issue being that standard operational procedures that define communication are required as there is often a lack of clarity around roles in terms of who sends and receives information in these networks.**

The command and control linear approach to communication is restrictive and limits agility. With all the points of communication across lots of organisations being like grains of sand passing through an hourglass.

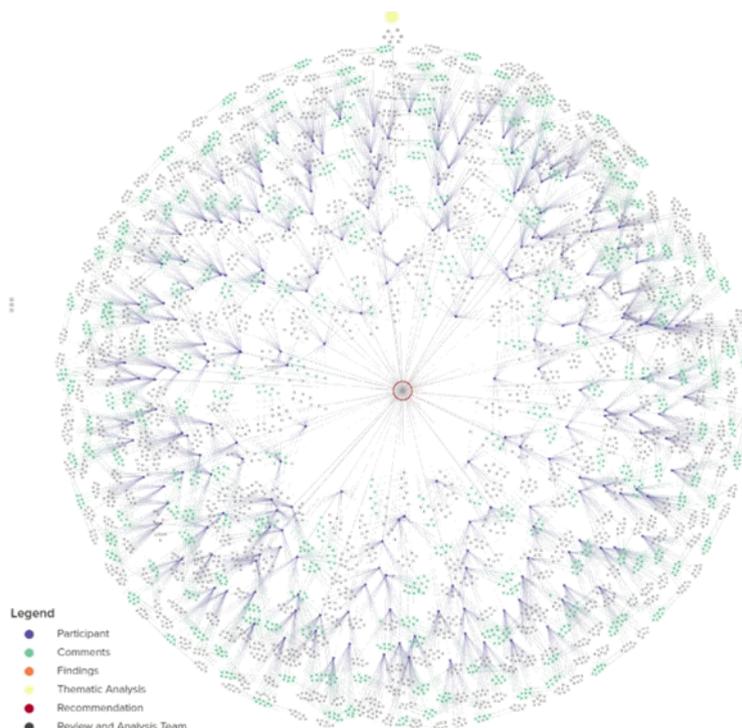


Figure 22. Visual representation of the IOR discussion used here to represent a spiders web of communication flow

- **The role of central government should be to facilitate the development of networks and communication between local bodies (such as LRFs). Whether this is a linear or network communication pattern, the communication between the central government and local bodies should be two way.**
- **This could be enhanced in a multi-region or national emergency through an additional layer which could coordinate the communication and information flow and build a situational awareness, the concept of operations.**

There is debate in the literature as to whether a centralised or decentralised system is more effective. Waugh and Streib (2006) argue that FEMA is more effective when it is decentralised and allows for the development of networks through multiple methods (such as national level training). Waugh (1994) argued that federal emergency management should have regional centres to be closer to the situation on the ground and provide a forum for local-local cooperation.

The literature is unresolved on whether these additional layers of coordination and decision-making should be independent (or arm's length) of government. Being one of a large number of organisations within government has been suggested to be a possible reason for disputes over authority which hamper decision-making and delay response, as could be seen in the context of Hurricane Katrina (Chua et al, 2007; Waugh & Streib, 2006).

The permissiveness of implementing something like this structure is also to be debated as UK currently employs an anticipatory response. The Prime Minister currently makes the decision to call COBR and any central government layer of disaster management may only become operational once COBR meets, potentially delaying the deployment/coordination of national resource, the communication of information and establishment of the shared common operating picture.

- **Having an independent central body that does not use a hierarchical command and control system may speed up disaster response by preventing disputes over authority. This may complement a decentralised system whereby LRFs do not have to wait for the results of command and control decisions at the national level.**

### ***Flow of Decision-Making***

This topic clearly shows that command and control from a variety of structures above the local level has made decision making, allocation of resources and coordination of response difficult for LRFs. This is both because the decision-making flows down vertically from above, rather than horizontally at the local level, and because there is a large amount of confusion around the complex network of systems that has formed.

As discussed in the literature review for Finding One, a network approach can in fact be effective and fast-responding, but only when 1) it develops more organically and horizontally at a local level, rather than being enforced or imposed from above and 2) there is clarity of roles and structure.

The literature highlights that networks pose a risk to the clarity of roles, a risk from the lack of guidelines for communication and response, and a risk from the fallibility of informal relationships between key individuals (McGuire & Silvia, 2010; European Centre for Disease Prevention and Control, 2017; Krumkampe et al, 2009). Therefore, it may be the case that a central government layer should exist to incentivise and facilitate effective networks between LRFs and other local level bodies by creating (flexible) communication guidelines, clarifying roles, identifying potential key bodies to include in the network, and encouraging formalisation of networks. This central body should not dictate a single 'harmonious' response (Chen et al, 2008), but rather create the communication structure that facilitates the emergence of this harmony through coordination across the network. Literature has found that networks allow for leadership to

emerge across boundaries such as organisations and regional divisions which is echoed in the findings of this report. Such cross-cutting networks should include consultation with private and civil society, especially when dealing with 'wicked problems' which are difficult or impossible to solve alone (Head, 2008).

A network approach is a good alternative to a centralised hierarchical command and control structure, as it allows for faster communication and coordination, and flexibility in response to an uncertain and variable situation.

It may be the case that a central government layer should exist to incentivise and facilitate effective networks between LRFs and other local level bodies by creating (flexible) communication guidelines, clarifying roles, identifying potential key bodies to include in the network, and encouraging formalisation of networks. This central body should not dictate a single 'harmonious' response, but rather create the communication structure that facilitates the emergence of this harmony through coordination across the network.

### ***Strategy of Unified Communication***

The LRFs reported that there was a lack of a common approach between the local and national communications strategy, which hindered clarity and process. The reports recommended updates to the Government's Covid-19 Action plan and the development of a clear communications strategy and strategic stakeholder forum that strengthens the links and flows between local, sub-national and national.

The literature supports this call for a more unified communications strategy, suggesting that inconsistent and misleading messages from governmental authorities during Covid-19 have led to confusion, frustration, and contributed to public protests against Covid-19 restrictions (Kim and Kreps, 2020). The literature suggests that communication in such a context as the pandemic should be highly coordinated within and between different government agencies, with the media, and with representatives of other countries who share similar health risks. Clear and frequent communication and coordination between health authorities and the media have been slow to increase preventative and public-spirited behaviour (Lunn et al, 2020; Rosseau et al, 2015).

Furthermore, trust in government is vital in determining whether the public engage with a communications strategy, and whether they comply with recommended health behaviours (Prati, Pietrantonio & Zani, 2011; Siegrist & Zingg, 2014; van der Weerd et al, 2011; Setbon et al, 2011). Consistent, clear and reliable communications are likely to foster this trust in government (Agüero et al, 2011; Bults et al, 2011; Siegrist & Zingg, 2014), and reduce informational overload (Kim & Kreps, 2020).

- **Communication should be highly coordinated within and between different government agencies, with the media, and with health authorities. It should be clear, frequent and coordinated. This increases trust, compliance with recommended health behaviours and reduces informational overload.**

### ***Intelligence Flow and Learning for the Future***

Evidence from the IORs and the literature suggest that effective intelligence sharing facilitates both an effective, flexible crisis response and also the sharing of and learning from good practice and innovation in real time. The literature reviewed below explores both effective intelligence flow (finding five) and how this facilitates learning for the future (finding six)

The IOR report also highlighted that strong leadership was essential in facilitating information sharing and innovation, something that is supported by research (Bigdeli, Kamal & De Cesare, 2013; Gil-Garcia & Sayogo, 2016; Yang & Maxwell, 2011). Increased trust can enhance the accuracy and efficiency of inter-organisational information sharing (Mohammed et al., 2015) and having a formally assigned project manager is vital for successful sharing between

organisations information sharing initiatives, increasing the efficiency of information sharing (Gil-Garcia & Sayogo, 2016). Such a role requires significant resources and time, often not available for public managers who need to spend 80–85% of their total work time in their routine organisational tasks (Agranoff, 2006). However, it is also important to avoid a control-oriented style of leadership, and to ensure there are clear shared goals for information sharing (Gil-Garcia, Smith & Duchessi, 2007; Yang & Maxwell, 2011)

Delegates clearly stated that horizontal information sharing was vital in the response to Covid-19, through coordinating the response, facilitating innovation, and the sharing in real time of good practice. They identified that establishing trust and commitment, as well as strong leadership within the LRFs, allowed them to effectively collaborate in this way. However, they also asked for more support and direction from central government, in terms of resources and a legal framework in which to work. The literature reviewed confirmed the importance of horizontal information sharing, corroborated and elaborated the importance of establishing trusted relationships and strong leadership, and echoed the importance of central government facilitation and the need for a clear legal framework within which to share (see Strategy and Leadership, Finding Three). This is supported by the literature as the management of public services increasingly relies on multiple networks of interdependent organisations (Bigdeli, Kamal & De Cesare, 2013), and this is particularly important during disasters, such as pandemics, in order that agencies stay up to date and obtain necessary information to react to the emergency (Yang & Wu, 2014).

Dawes (1996) identified the most important benefits of information integration and sharing between local government agencies as:

- more integrated plans,
- improvement in policy development and programme implementation across agencies,
- more accurate data and information for decision-making and problem solving,
- improvement in use of resources, and
- improvement in the networked collaboration among agencies.

Delegates reported the vital importance of cross-partnership working, to coordinate the response, innovate new ways of working, and share good practice in real time. A key theme throughout the IORs was the need for central government to drive, coordinate and fund horizontal information sharing. Research has found that central governments need to facilitate information sharing between local government agencies by providing them with suitable funding, improving their IT infrastructure and enhancing the level of IT skills and knowledge among the employees (Bigdeli, Kamal & De Cesare, 2013).

- **Literature suggest that effective intelligence sharing facilitates both an effective, flexible crisis response and also the sharing of and learning from good practice and innovation in real time.**
- **Building trusted relationships between organisations based on a mutual understanding of needs and concerns and shared responsibility, increasing trust, accuracy and efficiency of inter-organisational information sharing.**

# Appendix Four: Interim Operational Review Finding Summaries

## First Operational Review Summary

The first Interim Operational Review took place on Wednesday 22 April 2020. This was the first mid-crisis review of its kind. It brought together delegates to review their experiences of Covid-19 and to collate their responses at the beginning of the UK's response to the pandemic and in the midst of the first lockdown. The analysis of this review yielded six main findings and 21 recommendations:

- Effective Working and Enabled Innovation;
- Structures: Knowledge, Complexity, Context;
- Inclusion into the Intelligence Picture and;
- Requests for Support.

There were a further three themes:

- Recovery;
- Managing Concurrent Events and;
- PPE and Testing.

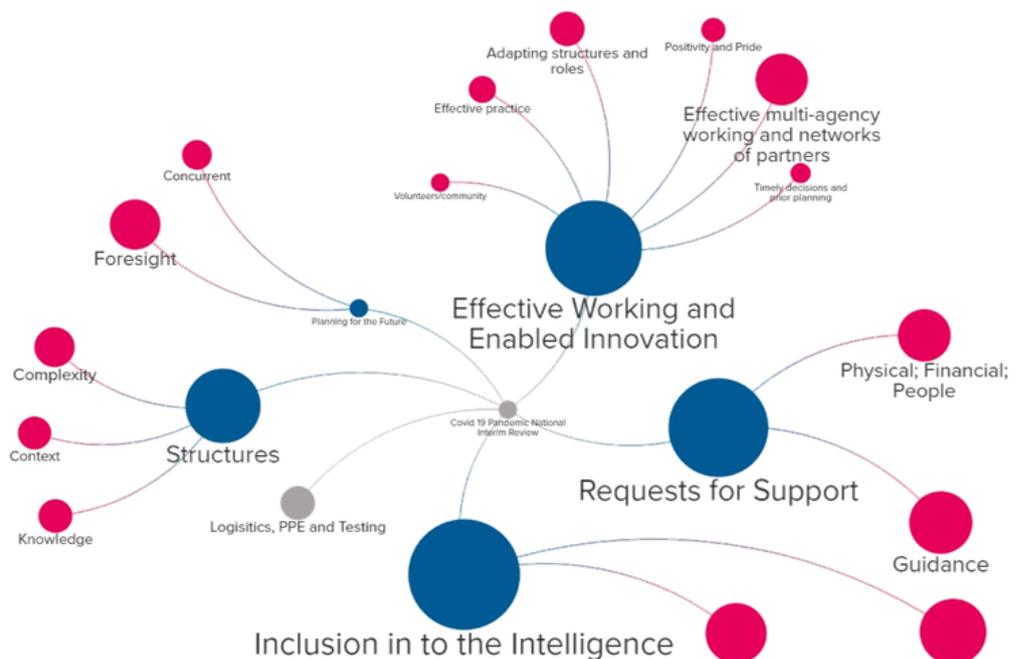


Figure 23. Interim Operations Review One Finding and Sub finding Summary scaled by code volume.

## Second Operational Review Summary

The second interim operational review took place on Wednesday 17 June 2020, the second mid-crisis review of its kind during a time when the country was beginning to relax the lockdown and consider how to live with Covid-19. The analysis yielded seven main findings and 20 recommendations:

- Disconnect Between Local and National
- Cross-Partnership Working is Key
- Managing the Health of Key Structures into the Future
- Managing Local Outbreaks
- Learning and Adapting

- Consequences to the Individual
- Community and Public Need

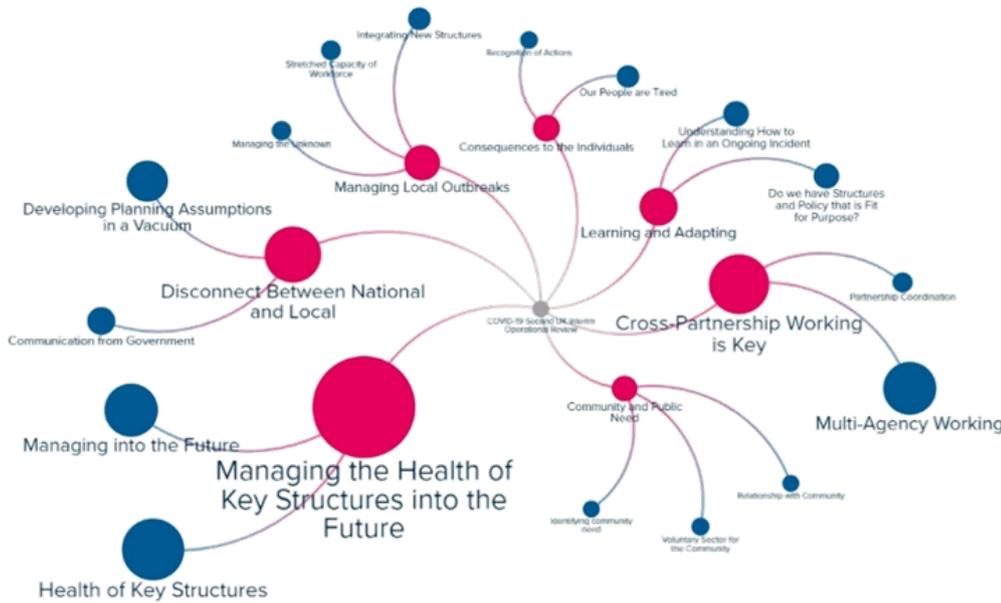


Figure 24. Interim Operations Review Two Finding and Sub finding Summary scaled by code volume.

### Third Operational Review Summary

The third interim operational review took place on Wednesday 16 September 2020, the third mid-crisis review of its kind. It took place between a summer of further relaxation of regulation and rules (unless you lived in Leicester) and the beginning of a rise in case numbers across Europe and the UK as we began to plan for the winter and return of learners to schools and universities. The analysis yielded five main findings and 23 recommendations:

- Content of the Communication Strategy
- Decision-Making, Boundaries, Blockers and Tensions
- Subsidiarity
- Planning for Longevity
- Strategy for Psychological Impacts

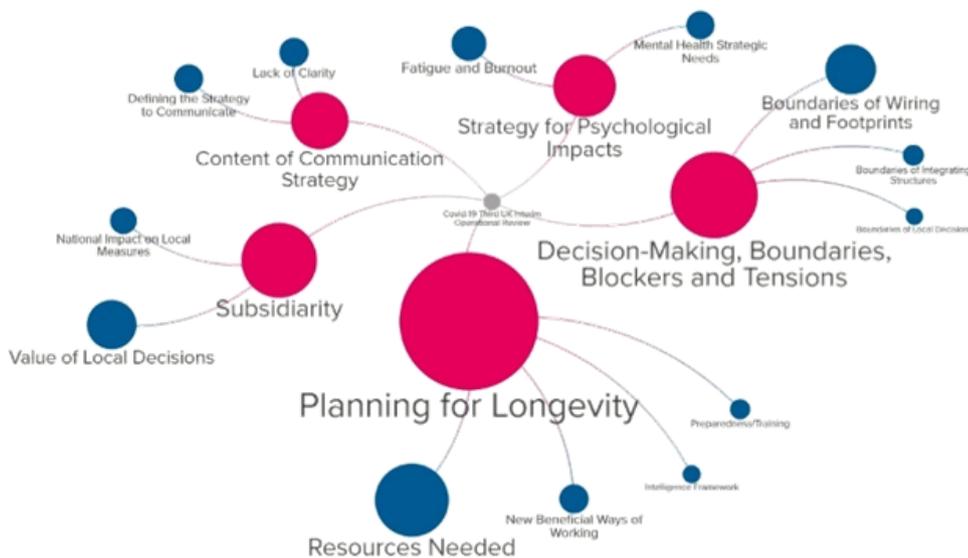


Figure 25. Interim Operations Review Three Finding and Sub finding Summary scaled by code volume.

## Appendix Five: IOR Question Set Tables

Each IOR followed a similar question set with minor alterations to suit the situation and requirements of partners. Below are the full question sets for reference.

IOR 1	
Question	Subquestion
<b>1. Activity within your Local Resilience Forum</b>	What achievements are you most proud of?
	What didn't go so well?
	What would you change and do differently moving forward?
<b>2. Regional Support</b>	What achievements are you most proud of?
	What are the key challenges in your region?
	What would you change and do differently moving forward?
<b>3. National Support</b>	What achievements are you most proud of?
	What support might you require?
	What isn't going so well?
<b>4. Concurrent Emergency</b>	What's your preparedness for a concurrent emergency?
	What are the pressure points?
	What support might you require?
<b>5. Forward Look</b>	How much space and time are you affording to foresee consequences of Covid-19 and identify legacy issues?
	How well geared are your C3 arrangements to contribute to this?
	What foreseeable mid to long term consequences might you anticipate as move from response into recovery?
<b>6. Personal Reflections &amp; Insights</b>	This open section provides a space for you to record your personal insights, thoughts etc., which may not have been covered by the questions above.

## IOR 2

Question	Subquestion
<b>1. Since the first national peak (April), in the context of your LRF...</b>	What is working?
	What isn't working?
	How will you manage the next phase of response/recovery?
<b>2. Since the first national peak (April), in the context of your Sub-Regional structures...</b>	What is working?
	What isn't working?
	How will you manage the next phase of response/recovery?
<b>3. Since the first national peak (April), in the context of the National structures...</b>	What is working?
	What isn't working?
	What is required from national response in next phase of the response/recovery?
<b>4. Concurrent Emergency</b>	What is your preparedness for a major local outbreak alongside the duality of response and recovery?
	How do you plan to manage concurrent events alongside the management of local outbreaks?
	What are the gaps in capability due to the ongoing response to local outbreaks, recovery and planning for potential concurrent events?
<b>5. Forward Look</b>	What community engagement methods or approaches do you plan to undertake to inform your ongoing response and recovery?
	What learning can we take from how you are currently managing community challenges?
	In your existing plans, is there anything you think you should change? Have you discovered you are better prepared in some areas than others?
<b>6. Personal Reflections &amp; Insights</b>	This open section provides a space for you to record your personal insights, thoughts etc., which may not have been covered by the questions above.

IOR 3	
Question	Subquestion
1. In the scope of the pandemic so far, in the context of your LRF...	What is working?
	What isn't working?
	How well do you feel the local structures will aid the management of the remaining phases of the pandemic?
2. In the scope of the pandemic so far, in the context of existing or new sub-national structures such as Joint Biosecurity Centre (JBC) and Incident Management Teams (IMTs) ...	What is working?
	What isn't working?
	How well do you feel the sub-national structures such as the JBC and Test, Track and Trace will aid the management of the remaining phases of the pandemic?
3. In the scope of the pandemic so far, in the context of the national structures...	What is working?
	What isn't working?
	How well do you feel the national structures will aid the management of the remaining phases of the pandemic?
4. Preparing for a challenging winter	In respect of managing a local outbreak, how robust do you feel your current local outbreak plans will be when faced with viral transmission and its mitigation?
	In your local context, how effectively do you feel the local to national structures will coordinate to aid the management of a local outbreak?
	In the context of preparing for a challenging winter (combination of seasonal flu, EU transition and adverse weather), describe how you feel your plans will cope with these cumulative demands
5. Your legacy contribution to Covid-19	What support and interventions are your partnerships (in the widest sense) putting in place to identify and address psychological impacts in your community in relation to the pandemic?
6. Personal Reflections & Messages to inform Strategy	This open section provides a space for you to record your personal insights, thoughts etc., which may not have been covered by the questions above.
Integrated Review (additional question asked for separate analysis, see appendix three of IOR 3)	What are the key steps the UK should take to maximise its resilience to natural hazards and malicious threats? How can we build a whole of society approach to tackle these challenges?

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