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DATA SHARING DURING CORONAVIRUS

Data sharing between national, devolved and local government

Summary of a private roundtable

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Introduction

This short paper summarises a roundtable discussion held in summer 2022 looking at national, devolved and local data sharing during the first two years of the Covid pandemic. The roundtable brought together public servants from national, devolved and local government. This paper draws mainly on conversations that took place at the roundtable, and is supplemented with a small number of interviews with other officials who were unable to attend the event. The roundtable was held under the Chatham House Rule – nothing anyone said is attributed to them or their organisation, unless they have asked for it to be. The discussion does not represent the views of the Institute for Government.

The roundtable forms part of a wider piece of Institute for Government research looking at government data sharing during the pandemic. The project takes six case study areas and uses a roundtable on each to explore what worked well, what could have worked better and what lessons government should learn for the future. Reports on each of the roundtables will be followed by a short synthesis report bringing together common themes.

Summary

Data was integral to enabling local and devolved government to respond to the pandemic. The available data informed local public health interventions, from being able to locate and respond to local outbreaks of Covid to targeting public health messaging campaigns to encourage vaccination take-up. Local government was also at the forefront of continuing to operate public services, such as schools for the children of key workers and bin collections. These activities relied on local officials receiving data from national organisations, such as Public Health England (now the UK Health Security Agency), and in turn relied on local government providing data to national government to inform the overall pandemic response.

There were concerns about the data capability of local government during the pandemic, and the recruitment and retention of people with digital skills within local government continue to be a challenge.[1] This could have contributed to some hesitancy and risk aversion from data providers in central government and recipients in local government,[2] which slowed the creation of data sharing agreements. At the same time, the UK government was supportive of local authorities' innovative data use, providing funding through the Department for Levelling Up, Housing and Communities (DLUHC) administered Covid-19 Challenge Fund to 11 local government projects to support their recovery from the pandemic and help share best practice across local government.[3]

Data sharing was sometimes slow due to technical challenges. It took until mid-February 2020 for epidemiological modellers to sign data sharing agreements for their work, and it proved difficult to make NHS England data accessible to all of the modelling subgroups of the Scientific Advisory Group for Emergencies (SAGE), leading to lags in their analysis.[4] Data flows between public health and emergency response systems were further complicated as response systems, such as Test and Trace, were set up outside of the health service, which created technical issues for sharing data across systems.[5] These took time to resolve, and local authorities were initially unable to access the Test and Trace data required to respond to the pandemic.[6] These issues of system compatibility and poorly managed data slowed the sharing of the granular data essential for local interventions, and "hampered" early analysis of the pandemic.[7]

In the health secretary's response to the joint report on 'Coronavirus: Lessons learned to date' of the Health and Social Care and Science and Technology select committee, the UK government accepted a recommendation about establishing arrangements for allowing immediate data flows between bodies responsible for responding to emergency situations, and creating a mechanism that could quickly resolve any disputes in data availability.[8] As a result, the UK government stated that the National Situation Centre would consider how to improve the use of data in government and how this affects the government's modernisation agenda, while the Civil Contingencies Secretariat's regular review of the Civil Contingencies Act 2004 would consider whether data sharing among emergency responders remains fit for purpose.[9]

Key themes from the roundtable discussion

The roundtable discussion focused on how health data, specifically data on case rates and vaccination uptake, was shared with local government at an individual or small-area aggregated level. We repeatedly heard how data sharing between central and local government could be complex and slow, although in some cases data was shared faster than before the pandemic.

Participants told us that to obtain the data that local government wanted, they had to follow similar processes and make multiple requests for data at various meetings with national government. Local actors, including directors of public health, felt that at times this limited the ability of local authority data teams to manipulate data, or respond to the pandemic (making it harder, for example, to identify and target infection hotspots or low vaccination rates). Given the key role of local authorities in delivering public services, especially for public health, providing sustainable access to national datasets to aid local decision makers, especially during an emergency, should be a priority for national government. We therefore welcome the recent commitments of the National Situation Centre to consider how to ensure data flows quickly and securely in times of national emergency.

The main areas discussed were as follows:

- Technical difficulties slowed the movement of data across different health systems, which in some cases contributed to delayed public health interventions. Local participants reported that the UK government had data (including projected infection rates from epidemiological modelling and individual-level infection test results) and once this was shared, local authorities were able to make timely health interventions.
- Local authorities have uneven levels of skills for handling data. Some large local or combined authorities have the data science staff and expertise to conduct data-driven assessments of their populations. But other areas struggle. However, initiatives such as Local Data Spaces, which provided detailed analysis for individual authorities using automated processes, and the Covid-19 Challenge Fund, which funded new projects to support local authorities in making data-driven assessments of local situations, were valuable to inform local authorities.
- Having procedures in place in advance, such as the Welsh Accord on the Sharing of Personal Information (WASPI) – a pre-agreed framework for data sharing between Welsh local authorities, NHS Wales and some public service providers, voluntary organisations and others – improved the speed of forming data sharing agreements between multiple organisations. The WASPI framework was established before the pandemic, outlining what data could be shared, in what format and with whom. This then avoided having to reach consensus between multiple parties at speed, as was required during the pandemic in other cases.

Lack of initial data sharing restricted activities

During the early stage of the pandemic, from January to early spring 2020, directors of public health were "effectively blind" to infection data and Covid impacts, according to some roundtable participants. Initially this was due to a lack of testing and knowledge about the disease. As testing levels increased, national data existed but was not being widely shared with local authorities. This was, in part, due to the Test and Trace service being set up as a new organisation outside the public health system, creating technical challenges for passing test data to the public health system. As a result, local authorities found it difficult to access individual or local-area aggregated test results that had been collected at a national level. With better access to data within their areas, local public health teams might have been able to take on additional helpful activities, such as door knocking to raise awareness and distributing additional targeted testing kits.

Roundtable participants thought open sharing of data should be possible. Directors of public health stated that their data teams – which are separate to data teams in local authorities – have the data expertise, information governance and data security architecture in place to handle sensitive, personally identifiable data for their normal duties, such as for genitourinary medicine or tracking substance use. They suggested there was sometimes a lack of understanding from Public Health England (now the UK Health Security Agency) about their role in protecting public health and expressed frustration about how slowly data was shared at times. One participant speculated that different interpretations of the risks associated with data sharing may have constrained data sharing. Another participant suggested there was a "lack of trust" in local-level systems. These difficulties would be helped or avoided by the creation of a data sharing plan as part of future emergency planning arrangements as has been committed to by the National Situation Centre.

One example of challenges in data sharing mentioned at the roundtable was the provision of epidemiological modelling results. Modelling data was seen as important for local public health directors and their teams to plan their pandemic response and resourcing, as well as inform any required public engagement, such as targeted messaging for specific communities. Sharing the modelling tools that national government used with local government would have allowed interventions, such as targeted business/school closures, to be trialled and improved. But Public Health England did not share the modelling tools. In lieu of the national model, selected authorities (for example, Liverpool City Region) teamed up with local universities to conduct their own modelling, separate from the national efforts. This was not an option for other local authorities, leading to a patchwork of several epidemiological models being created for some authorities, leaving others without a model.

As more data became available, the provision of data access was inconsistent and at times difficult. Initial data access was provided via a public dashboard, giving local authorities a snapshot of the infection rate in their area, but with no historical information. To cover this gap, the Local Government Association captured daily

information, which was then published on its own LG Inform tool, so that councils could see data trends over time for their areas.[10] As time went on, local directors of public health were granted access to data that Public Health England and other parts of the health system held. For some government departments or agencies, this meant providing local teams with NHS accounts to access key datasets (which have since been rescinded, preventing access to data). In other cases, data access was provided through an account that the local director of public health administered, who then had to request additional accounts for their data teams. For vaccination data, directors of public health had to access data from six different sources, each with their own set of access requirements.[11] Participants agreed that having a permanent public health data platform would be useful to sustain data access between the health system via the UK Health Security Agency and local authorities, providing consistent data security and control standards that could be broadened as needed during times of emergency.

Benefits of good public health information

Public Health Liverpool offers a good example of the benefits of strong local public health information. Its pandemic response was built on a pre-pandemic system (that most council teams do not have) that could conduct modelling and join datasets under established data sharing agreements, providing experience of joint datasets and the necessary data architecture. The system is often used for tracking a "bad batch" of drugs through its communities, enabling health awareness campaigns to be quickly stepped up in response to escalating concerns.

In 2021, Liverpool was the location of the mass community testing trial. Using the Combined Intelligence for Population Health Action (CIPHA) system,[12] local government, the NHS and Liverpool University researchers could see who was using tests for what purpose as well as their results, giving a strong indication of how the testing offer could be improved or adapted to increase uptake and utility. Learning from the mass community testing pilot was then used during the vaccination campaign. The initiative relied on local intelligence and insight, to add contextual information to the data coming into the system, and co-ordinating actions, such as closing down outbreaks more quickly via very local testing deployment.[13]

Elsewhere, the Public Health Intelligence Team in Lincolnshire created an internal data dashboard in summer 2020 based on the individual-level testing data. Covid test results from the Test and Trace service were marked only with a home address, but this was enough to allow the team to identify patterns in infectious cases and link them to outbreaks in individual workplaces or schools. This knowledge allowed the local health protection team to target their activity and make public health interventions or conduct early testing to bring local outbreaks under control.

Relationship between national, devolved and local government

Relationships between national, devolved and local government covered a number of overlapping organisations in the public health space, with Public Health England/ the UK Health Security Agency, the NHS, local resilience forums and local authorities all involved in responding to community needs. One participant reported that the Ministry for Housing, Communities and Local Government (MHCLG, now DLUHC) did not fully grasp the data sharing requirements of local authorities. This includes processing individual-identifiable data and also onward data sharing to contracted public service providers, which often requires more extensive and considered data sharing agreements. The difficulty of sharing data was exacerbated due to not having a conclusive map of how services work across borders in the UK, between both nations and different local administrations.

Local leaders reported attending multiple meetings with a changing cast from national government and repeating their requests for access to better local data, succeeding in receiving case-rate data and delegated responsibility to analyse and share the data onward where necessary. Participants noted that sharing processes improved with the vaccination data, although there was still a one-month delay in local authorities receiving data in the format they requested. The improvement was attributed in part to the trust and relationships built over the early phase of the pandemic. While data was more available to local leaders, there was a missed opportunity to use the data to better inform the vaccination programme, including where to send local vaccination buses and which communities needed more engagement to improve vaccine take-up, as was achieved in Liverpool.

In addition to sharing data from central systems to local government, we heard during the roundtable that national government requested data and information from local authorities throughout the pandemic. The single data list[14] (a collection of datasets that local government must submit to central government) was temporarily suspended. Instead, other new datasets were requested from local authorities to show how certain services were being used and/or supported – for example, school attendance, especially when schools were only open for priority workers, support provided through the Clinically Extremely Vulnerable People Service (CEVPS) and early years provision. Some roundtable participants suggested that where health data was being sent to national government, local authorities were not always given national data back in return.

Local government data processing

Local authorities were known to have different levels of data processing capabilities at the time of the pandemic. Whilst some were capable and had their own dedicated data teams, others lacked particular kinds of data expertise and were less developed with their practices. These differences were in part down to local authority leaders

prioritising data differently due to budget constraints, patchy data skills, or inadequate data practices.[15] Local authorities are can also be uncertain about legal aspects of data sharing and how data can be used.[16]

The uneven range of data capabilities in local authorities challenged MHCLG to rapidly provide data in formats that all local authorities could handle. The urgency of the pandemic drove decisions to provide data such as the clinically extremely vulnerable people list underpinning the CEVPS initially via a secure spreadsheet-based system so that all local authorities could access the data as quickly as possible. This data provision was enabled by MHCLG, CDDO and others quickly creating a set of data sharing agreements and guidance for local authorities on how to use the clinically extremely vulnerable people list to provide essential pandemic support.[17] One participant noted that given the time pressures of the pandemic, it was necessary to prioritise a common data format such as the chosen spreadsheet-based system due to this being usable by all local authorities. Another suggested using spreadsheet-based approaches were especially beneficial when developing new datasets that would frequently adapt (in terms of data formats and definitions), before switching to more automated and efficient data sharing processes once the data format became stable.

It may be helpful for the UK government to build as much awareness as possible of the varying data capabilities of different local authorities so that it can provide data in the most suitable formats for local usage. This should improve through the implementation of the National Data Strategy,[18] which commits to upskilling staff in data skills and improve local authority access to trusted data resources.

Joint learning

Initial challenges in data sharing practices were at least partly overcome over time. The Joint Biosecurity Centre (JBC) ran open national learning workshops on data needs and issues that were open to all. The workshops were helpful for the JBC to understand what data users wanted and in what format, which led to local government being able to access and manipulate datasets to increase their local understanding, rather than only accessing limited numbers and trends from the UK Covid dashboard on GOV.UK.

In addition, four London boroughs (Barnet, Camden, Hackney and Newham) set up a good practice network in London, allowing them to discuss and share their data analytics. The network also improved general understanding of what data could be shared, how it might be used and what would become available in the future, so that local authorities could prepare for the next release/scheme, such as when unique property reference numbers (UPRNs) were added to the individual positive case results reporting. Participants praised the opportunity to provide feedback on what data was useful and the shared learning opportunity that the network provided for improving their pandemic response.

To support initiatives within different local authorities, DLUHC's Local Digital Collaboration Unit funded 11 projects through its Covid-19 Challenge Fund. Beyond the funded projects, which covered topics such as improving work-from-home practices and supporting vulnerable communities, the fund acted as a mechanism to build an informal support network between council digital leaders so that they could share ideas and best practice. It also gave DLUHC an opportunity to test local authority capabilities, such as confirming its expectation that an API for the CEVPS would not have worked for all local authorities. DLUHC also learned that some local authorities had stronger capabilities in merging data, such as the clinically extremely vulnerable people list with their existing lists of vulnerable people, showing how digital skills have developed in local government.

Local Data Spaces

The Local Data Spaces initiative was an Administrative Data Research UK (ADR UK) funded collaboration between the JBC, the Office for National Statistics (ONS) and MHCLG to support local authorities' response to the Covid pandemic. The collaboration looked to build local government capacity for data science and provide local authorities with analysis using the ONS trusted research environment (TRE). This allowed local authorities to have analysis using mortality and Test and Trace data from central government datasets combined with results from the ONS Covid-19 Infection Survey and other demographic surveys they did not have access to (for example, on people's economic, health and wellbeing situation).

The academic team worked with 25 local authority stakeholders to identify analysis that could be useful when designing local interventions. Their engagement with local authorities highlighted the range of data skills within local authorities. Those that did engage needed to have senior-level buy-in to the project, who occasionally needed persuading of the importance of using data to guide their interventions.

Those who participated with Local Data Spaces got access to data that would not normally have been available, and built relationships with academic and other local government actors. Where analytical reports were made for a local authority that had a specific question, they were reproduced for all local authorities, allowing those that were not participating in the initiative an opportunity to access the resources. There were 1,060 downloads of the local authority reports (up to 22 March 2022 – a year after the project ended), showing the value of increased data science to support local authority decision making, provided through academic partners and TREs.[19]

Improvements arising from the pandemic

Roundtable participants agreed that the pandemic experience has made people acutely aware of the importance of data to inform decisions, and they therefore value better data and data sharing more than before, which in turn has spurred local innovation to improve inconsistent data quality and increase systematic data sharing. Contact-tracing

services created local models for sharing data to support bespoke interventions, targeted towards different communities or situations, without requiring a complete dataset. In addition, local resilience forums found new ways of sharing data about personal protective equipment (PPE) availability and needs, and local authorities strengthened their relationships with local NHS trusts to improve data access.

Some data sharing barriers could be reduced through further preparation. Wales has WASPI, mentioned earlier, a pre-established code of conduct for data sharing across local authorities, public service providers (including NHS Wales) and charities. NHS Wales developed this in collaboration with the Information Commissioner's Office (ICO) before the pandemic, before being rolled out more widely to organisations willing to agree to its terms and common data control standards. WASPI was set up in response to simple data sharing being historically difficult to arrange, as all involved parties needed to agree what was legally permissible between fragmented data protection impact assessments (DPIAs). The framework provided a strong starting point for creating new data sharing portals in the pandemic, and had mutually agreed answers to data protection, regulation and assurance even before the COPI notices were issued. NHS Wales still needed 33 partners to agree what data sharing was legally permissible during the pandemic, but at least the framework provided a structure to work from. The Scottish government is currently looking to create a similar framework, which could even extend to a national framework.

Recommendations

Participants drew out several key lessons and recommendations for government, based on their experience of sharing data between government(s) and levels of organisations during the pandemic:

- The National Situation Centre review into the UK government's use of data should create, via the Central Digital and Data Office, a set of national frameworks to enable consistent and clear rules for data sharing in all circumstances. This would provide a starting point for creating new data sharing agreements for specific purposes, enabling faster sharing between organisations. The frameworks could include information on how information governance standards have been interpreted as well as what data, metadata and data format standards should be met. A framework should protect flexibility for local areas to use data in different ways according to their needs.
- The National Situation Centre review should draw on best practices and shared learning during the pandemic. Some participants feared data practices would revert to pre-pandemic norms, in part due to the deletion or return of sensitive data shared under the Control of Patient Information (COPI) notices.

- As part of the review of the Civil Contingencies Act, the civil contingencies secretariat should consider the ability to invoke emergency data sharing agreements UK-wide that organisations can prepare to use in case it is needed.
- Local government should invest in, develop and expand its workforce in terms of data skills, so it can maximise the value of local data. Local skills can be augmented by providing replicable data analysis across multiple local authorities, such as the Local Data Spaces initiative, or by creating support networks between digital leaders in local authorities who can share best practice.
- UK government should be as inclusive as possible of local government in its decision making processes on data and digital services. For example, participants agreed that the co-creation of data systems such as the locally-aggregated case rate and vaccination datasets to include unique property reference numbers to enable easier data matching, involving both those collecting and using the data, would better inform decisions about what data to collect and how to store and share it. For example, the Government Digital Service should consider the impact of GOV.UK One Login* and its potential to be rolled out to local authorities.

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* GOV.UK One Login is a single sign-on service for public services that the Government Digital Service is currently developing for use across all government departments.

References

1 Centre for Data Ethics and Innovation, *CDEI AI Forums: Local government use of data during the pandemic*, GOV.UK, 2021, assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968515/Local_government_use_of_data_during_the_pandemic.pdf

2 *Ibid.*

3 Department for Levelling Up, Housing and Communities, 'C-19 Challenge: funded projects', Department for Levelling Up, Housing and Communities, (no date) retrieved 18 January 2023, www.localdigital.gov.uk/c-19-challenge-funded-projects

4 Vallance P, Written evidence to the Science and Technology Committee (C190111), 24 July 2020, retrieved 18 January 2023, https://committees.parliament.uk/writtenevidence/10928/html

5 House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons learned to date: Sixth report of the Health and Social Care Committee and third report of the Science and Technology Committee of session 2021-22* (HC 92), The Stationery Office, 2021, retrieved 18 January 2023, https://committees.parliament.uk/publications/7496/documents/78687/default

6 Comptroller and Auditor General, *Initial Learning from the Government's Response to the COVID-19 Pandemic*, Session 2021-22, HC 66, National Audit Office, 2021, www.nao.org.uk/wp-content/uploads/2021/05/Initial-learning-from-the-governments-response-to-the-COVID-19-pandemic.pdf

7 House of Commons Health and Social Care and Science and Technology Committees, *Coronavirus: Lessons learned to date: Sixth report of the Health and Social Care Committee and third report of the Science and Technology Committee of session 2021-22* (HC 92), The Stationery Office, 2021, retrieved 18 January 2023, https://committees.parliament.uk/publications/7496/documents/78687/default

8 Secretary of State for Health and Social Care, *The Government's Response to the Health and Social Care Committee and Science and Technology Committee Joint Report: Coronavirus: Lessons learned to date* (CP 690), The Stationery Office, 2022, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1083411/government-response-to-the-hscc-and-science-and-technology-committee-joint-report-coronavirus-lessons-learned-to-date-web-accessible.pdf

9 *Ibid.*

10 Local Government Association, 'LG Inform: Covid-19 cases tracker – quick view for your local authority', Local Government Association, (no date) retrieved 18 January 2023, https://lginform.local.gov.uk/reports/view/lga-research/covid-19-case-tracker-area-quick-view-1

11 Local Government Association, 'Guide to local authority COVID-19 vaccination data sources', Local Government Association, (no date) retrieved 18 January 2023, www.local.gov.uk/guide-local-authority-covid-19-vaccination-data-sources

12 Combined Intelligence for Population Health Action, 'CIPHA', Combined Intelligence for Population Health Action, (no date) retrieved 18 January 2023, www.cipha.nhs.uk

13 University of Liverpool, 'Covid-SMART rapid antigen community testing evaluations', University of Liverpool, (no date) retrieved 18 January 2023, www.liverpool.ac.uk/research/research-themes/infectious-diseases/coronavirus-research/covid-smart-pilot

14 Department for Levelling Up, Housing and Communities, 'Guidance: single data list', Department for Levelling Up, Housing and Communities, 6 May 2022, retrieved 18 January 2023, www.gov.uk/government/publications/single-data-list

15 Centre for Data Ethics and Innovation, *CDEI AI Forums: Local government use of data during the pandemic*, GOV.UK, 2021, assets.publishing.service.gov.uk/government/uploads/

system/uploads/attachment_data/file/968515/Local_government_use_of_data_during_the_pandemic.pdf

16 Centre for Data Ethics and Innovation, *Addressing trust in public sector data use*, GOV.UK, 2020, retrieved 26 January 2023, www.gov.uk/government/publications/cdei-publishes-its-first-report-on-public-sector-data-sharing/addressing-trust-in-public-sector-data-use

17 Freeguard G and Shepley P, *The Clinically Extremely Vulnerable People Service*, Institute for Government, 2022.

18 Department for Digital, Culture, Media and Sport, *National Data Strategy*, GOV.UK, 9 December 2020, www.gov.uk/government/publications/uk-national-data-strategy/national-data-strategy

19 ADR UK, *Local Data Spaces: Pilot study evaluation*, ADR UK, 2021, www.adruk.org/fileadmin/uploads/adruk/Documents/Local_Data_Spaces_Pilot_Evaluation_Report_Aug_2021.pdf

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