



Health and social care innovation, research and collaboration in response to COVID-19

Summary report

December 2020

About this report

The COVID-19 pandemic was a catalyst that sparked new partnerships, accelerated research, and increased the speed at which innovations were adopted across the health and social care system. The Accelerated Access Collaborative (AAC) and the Beneficial Changes Network (BCN) commissioned Frontier Economics, Kaleidoscope Health and Care, and RAND Europe, to conduct an independent review to help learn lessons from this period and recommend how potentially beneficial changes can become day-to-day practice. It was conducted between October and December 2020, and involved a range of lived experience voices and over 80 stakeholder organisations.

This report summarises the review. It is primarily aimed at those involved with the AAC or BCN, while also being of interest to all those seeking to learn from the response to COVID-19, and embed long-term change. It is supported by an Executive Summary (5 pages), and an Evidence Report (109 pages).

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This work sought changes in response to COVID-19 that could offer sustainable benefits in the future

Detail: Evidence report p11-14

The AAC is working with the BCN to ensure that the best innovations are spread and adopted as we look to identify and understand the high impact opportunities from the COVID-19 response. The AAC brings together leaders from industry, government, regulators, patient groups and the NHS to identify and address barriers and get the best new treatments and technologies into the hands of the patients and staff who need them. The BCN has come together to build on the incredible ways in which people and systems have responded to COVID-19 through innovation (particularly innovation in service delivery), research (particularly clinical research) and collaboration, while safeguarding effective health and care delivery.

To support this work, Frontier Economics, Kaleidoscope Health and Care, and RAND Europe were commissioned to undertake an independent review, conducted between October and December 2020.

The independent review

- This work aims to identify potentially beneficial interventions, technologies and tools deployed during the pandemic that may bring further benefits to people, staff and systems.
- There is a particular focus on understanding and reducing any impact on health inequalities.
- The review builds on the considerable work already undertaken by members of the Beneficial Changes Network since April 2020.
- Frontier Economics led on the rapid evidence review, and overall, with Kaleidoscope Health and Care leading on engagement, and RAND Europe leading on international insights.

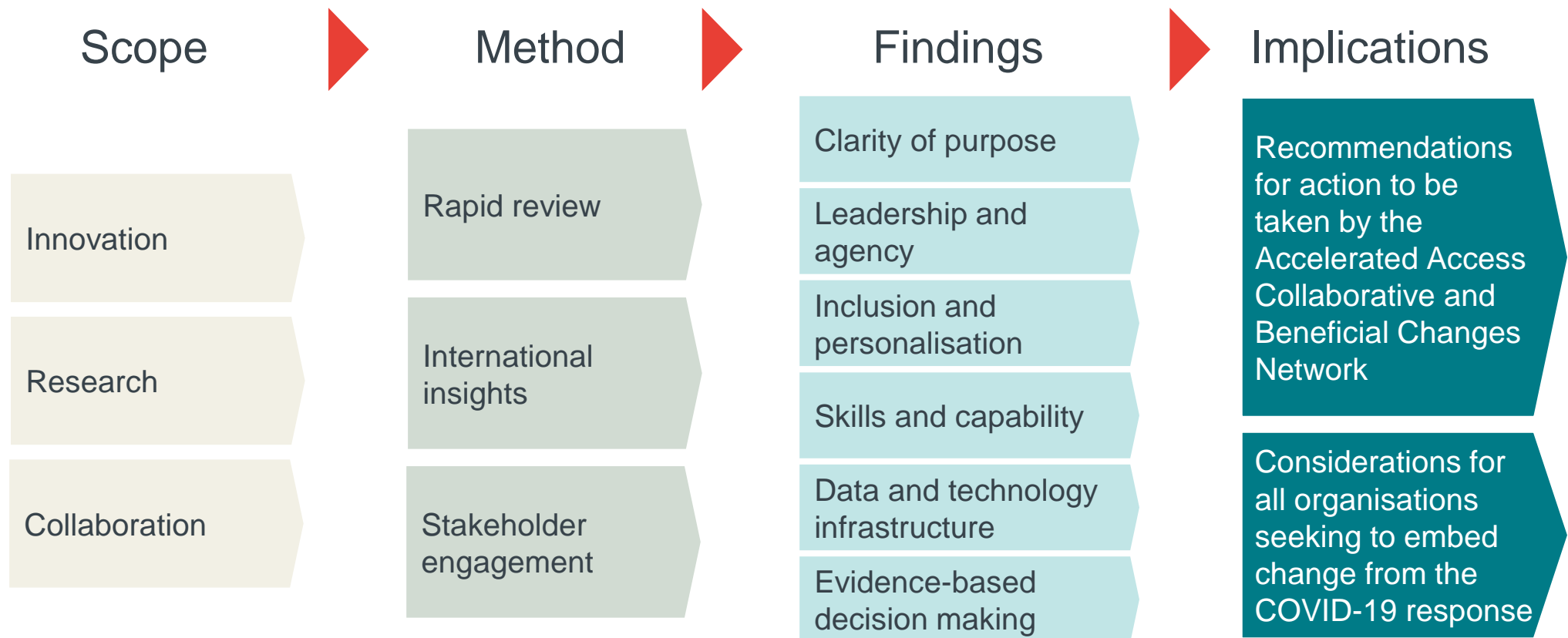
Three core aims

1. Understand the impact of the response to the COVID-19 pandemic in relation to innovation, research and collaboration across health and care
2. Identify any methods/practices that would support the development and adoption of high impact changes identified across stakeholders/workstreams of the BCN, while considering the impact on health inequalities.
3. Propose recommendations to support current activities and inform future priorities of the AAC, NHS England and NHS Improvement and the wider health and care system

The primary focus of the review was producing recommendations for the AAC and BCN

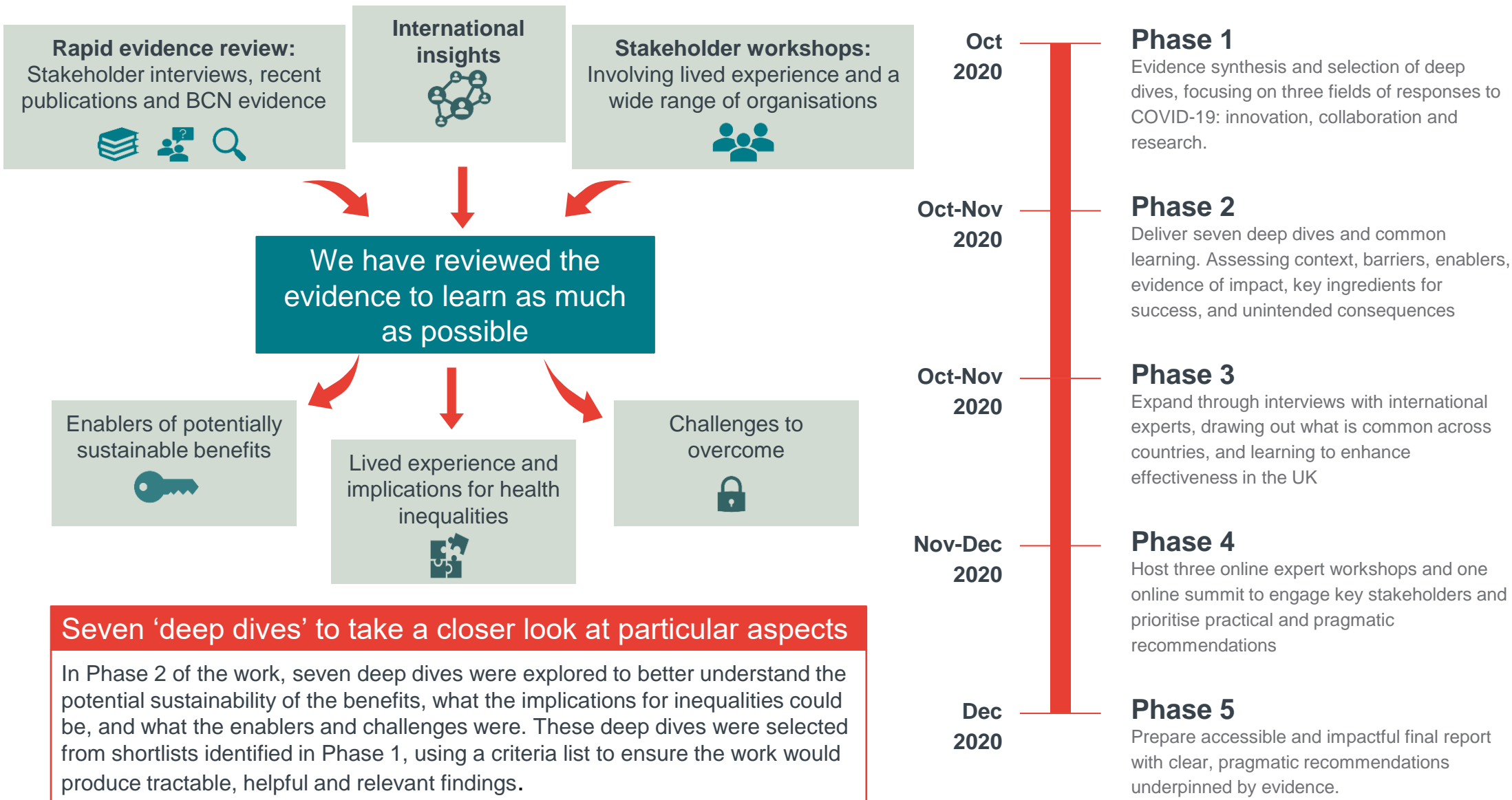
Detail: Evidence report p17-18

The review focused on the impact of the response to the COVID-19 pandemic in relation to innovation, research and collaboration. The approach comprised of a rapid evidence review with stakeholder interviews, an exploration of international comparisons, and stakeholder engagement events. There were six core findings, with recommendations for the AAC and BCN, as well as wider implications for others seeking to embed change.



Rapid methods were used to collate, synthesise, and test findings and recommendations

Detail: Evidence report p17-18



Seven 'deep dives' to take a closer look at particular aspects

In Phase 2 of the work, seven deep dives were explored to better understand the potential sustainability of the benefits, what the implications for inequalities could be, and what the enablers and challenges were. These deep dives were selected from shortlists identified in Phase 1, using a criteria list to ensure the work would produce tractable, helpful and relevant findings.

The research identified six core findings spanning across innovation, research and collaboration

Detail: Evidence report
p105-108



Clarity of purpose

A system-wide shared understanding of the need for action mobilises partners quickly and breaks down barriers to collaboration



Leadership and agency

Beneficial change is accelerated by leadership that supports appropriate agency across organisational levels, and supports innovation and collaboration



Inclusion and personalisation

Addressing health inequalities requires greater inclusion and involvement of diverse perspectives, and the better personalisation of services to different populations



Skills and capability

Change was enabled by those who had appropriate skills to solve problems, then adapt to new ways of working



Data and technology infrastructure

Critical enablers of rapid change include the safe and timely sharing of data, and appropriate and resilient technology infrastructure



Evidence-based decision making

For the impacts over time to be fully understood, there is a continuing need for robust evaluation evidence to understand what works, for whom and under what circumstances

Our recommendations require actions from a range of organisations; there is a priority to map ongoing work and ensure clarity of ownership

Critical ingredients for change

- 1. Co-production as default:** Work with system partners to place co-production - including people with lived experience - at the centre of how the health and care system learns and embeds change from the response to COVID-19
- 2. Prioritise reducing inequalities:** Work to gain a deeper understanding of how care needs to adapt to reduce inequalities, including (i) explicit consideration of blended service delivery so that new models of care can expand while ensuring choice and that needs can be met with complementary options; and (ii) addressing under-representation of some populations in research, particularly in the next phase of evaluating the response to COVID-19
- 3. Leadership for innovation:** Build on work already in place (such as the NHS People Plan and the NHS Leadership Academy) to incorporate leadership that enables innovation, inclusive change management and agile service delivery. This could include ensuring appropriate governance to enable leadership based on trust, with appropriate accountability for quality of care
- 4. Innovation-friendly environment:** Create an environment that supports innovation and rapid change delivery, including by (i) modernising frontline governance and oversight requirements to enable appropriate agency while maintaining accountability and the paramount importance of safety, and (ii) considering how the capacity of local authorities and the voluntary sector can be supported to play the essential role they play in meeting local needs

Innovation

- 5. Digital inclusion:** Work with partners to manage the risk of digital exclusion by ensuring choice and blended services are offered by appropriately skilled professionals
- 6. Inclusive communication and support:** Co-produce information with people with lived experience, innovators and staff to enable inclusive uptake of new care models
- 7. Data and evidence sharing:** Work with system partners to understand how (i) data sharing agreements can support shared pathways while maintaining data security, (ii) robust evidence can be generated and synthesised to inform ongoing decision making







Research

- 8. Inclusive and embedded research:** Build on work to address under-representation of some groups in research, including by co-producing research design, delivery and implementation, inclusive communications, and embedding research with public and staff as part of delivering better care
- 9. International collaboration:** Further explore actions that would strengthen international collaboration in clinical research involving the UK
- 10. Digital impact:** Further explore and monitor the impacts of the appropriate adoption of digital technologies to facilitate collaborative working and research design and delivery

Collaboration

- 11. System multi-sector priorities:** In keeping with the 'system by default' policy approach, ensure new and emerging Integrated Care Systems have the ability to (i) focus on the multi-sector priorities that matter most to their area, (ii) communicate their locally chosen priorities to regional and national oversight bodies
- 12. Addressing health inequalities:** Bring together representative national, regional and local voices to consider the appropriate policies and strategies to enable resilient, inclusive change to address local health inequalities, learning from how COVID-19 enabled rapid, multi-sector action

There are additional implications from the findings for all organisations seeking to embed change from the COVID-19 response

		Core findings	Implications for all organisations
	Clarity of purpose	A system-wide shared understanding of the need for action mobilises partners quickly and breaks down barriers to collaboration	Responding to COVID-19 gave unity and focus in a highly atypical way: resources were diverted, and regulations modified. Yet all relevant organisations could now consider how priorities can be set in a way that is clear and unites partners
	Leadership and agency	Beneficial change is accelerated by leadership willing to support appropriate agency across organisational levels, and engender innovation and collaboration	Providing staff and organisations with greater freedom to innovate can support rapid, highly impactful change. Organisations need to judge the balance between legitimate accountability and genuine agency that maintains innovation
	Inclusion and personalisation	Addressing health inequalities requires greater inclusion and involvement of diverse perspectives, and the better personalisation of services to different populations	COVID-19 highlighted both the effect of health inequalities, and how innovative responses can help address it. National and local organisations should consider how both the design and delivery of what they do can be more open and personalised
	Skills and capability	Change was enabled by those who had appropriate skills to solve problems, then adapt to new ways of working	To be sustainable, the capacity and capability of staff, community groups and service users to innovate quickly will need greater focus at the national, regional and local levels
	Data and technology infrastructure	Critical enablers of rapid change includes the safe and timely sharing of data, and appropriate and resilient technology infrastructure	Much of the response to COVID-19 was made possible by effective data and technology infrastructure. All organisations could gain from considering the resilience of their infrastructure, and further service change that could be made possible
	Evidence-based decision making	For the impacts over time to be fully understood, there is a continuing need for robust evaluation evidence to understand what works, for whom and under what circumstances	All organisations could benefit from considering how they will evaluate and learn from the response to COVID-19 so far, as well as its ongoing effects. Such processes need to be open to diverse views

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The clarity of purpose given by responding to COVID-19 accelerated collaboration and enabled faster change than previously possible



Clarity of purpose



A system-wide shared understanding of the need for action mobilises partners quickly and breaks down barriers to collaboration.

Responding to COVID-19 gave unity and focus in a highly atypical way: resources were diverted, and regulations modified. Yet all relevant organisations could now consider how priorities can be set in a way that is clear and unites partners.

The common national priority of COVID-19 provided a focus for action that meant that focused trials could be identified, approved, set up and implemented much more rapidly than standard processes. Accelerated deployment of research findings was also supported with rapidly generated evidence, guidelines and system-wide communication.



Rapid review finding. Detail: p68-79 of Evidence Report



Internationally and in the UK, non COVID-19 research has suffered, as resources and staff capacity have been diverted to the pandemic response. This comes at a risk to scientific progress and to patient benefit in other disease areas.

International insights finding. Detail: p94-103 of Evidence Report

Stakeholder insights



There was a unifying effect during the pandemic of people having a single priority. The reality for the future is that we won't be able to only have one priority. How do we retain the sense of unifying purpose with this in mind?



Responding to COVID-19 brought NHS and local authorities working more closely together on wider determinants of health such as poverty. Is the NHS clear on its future role in these areas, or will it fall back to a more medical model?



While many partnerships were highly positive, some collaborations were not created with equal interest, power, or contribution - but were instigated by one party, with others falling in line and following, driven by force.

Innovation was driven by facilitative leadership and agency for staff and organisations to test and change quickly



Leadership and agency



Beneficial change is accelerated by leadership willing to support appropriate agency across different organisational levels, and engender innovation and collaboration

Providing staff and organisations with greater freedom to innovate can support rapid, highly impactful change. Organisations need to judge the balance between legitimate accountability and genuine agency that maintains innovation.

Innovating in service delivery has highlighted the importance of trust as an enabler of service innovation. From an international perspective, organisations that had pre-existing high levels of trust (internally, with workforce, with local communities, with other organisations) could respond more flexibly.



International insights finding. Detail: p94-103 of Evidence Report



The pandemic saw several changes in service delivery made directly by frontline staff who had the operational knowledge about what could be done safely and effectively. This required an appropriate balance between affording healthcare teams the freedom to innovate, while maintaining responsibility and upwards accountability.

Rapid review finding. Detail: p61-66 of Evidence Report

Stakeholder insights



'Freedom to act' has been a theme from the frontline that underpinned local collaboration. It is helpful to understand the 'levers' that have enabled collaborative working across boundaries that also need to be sustained.



There are signs that the system is already reverting to its old command and control and needing to seek permission. Legal changes may help, yet are many partnerships mature enough to have the tricky discussions needed?



Huge impact of things like 'unlimited' funding being immediately available, stopping other priorities, and having decision makers all in one place, made a huge difference to 'normal' ways of change management.

COVID-19 showed the need for **inclusion and personalisation** across health and care, exposing old inequalities as well as new opportunities



Inclusion and personalisation



Addressing health inequalities requires greater inclusion and involvement of diverse perspectives, and the better personalisation of services to different populations

COVID-19 highlighted both the effect of health inequalities, and how innovative responses can help address it. National and local organisations should consider how both the design and delivery of what they do can be more open and personalised.

Since the start of the pandemic the National Institute for Health Research has been collecting everyday data on participants' individual characteristics (age, sex, ethnicity, etc.) to control for diversity in recruitment and ensure that ethnic minorities disproportionately impacted by the virus are involved in clinical research.



Rapid review finding. Detail: p72 of Evidence Report

Communication with patients has not appropriately accounted for different languages in all cases. A virtual ward in Slough recognised that 1 in 6 households does not have a single English-speaking member. The virtual ward published instructional and informative videos in different languages to inform people about COVID-19.



Rapid review finding. Detail: p63 of Evidence Report

Stakeholder insights



There is a real need to have deep and meaningful conversations with people as to their preferred care pathways. Just because digital is the current 'best' way won't mean it will work for everyone, and we need to offer alternatives.



Involvement has been variable. Often, engagement of patients was deferred as staff were placed on front line care responsibilities, so patients didn't feel fully engaged by the collaboratives that were popping up online for staff teams.



The NHS is grappling with how it genuinely turns the models of care on their head, starting with what matters to patients, citizens and local communities. We have to be much more bold and curious. We need to listen more.

Change did not happen by accident. The right **skills and capability** enabled innovations to be designed and delivered quickly



Skills and capability



Change was enabled by those who had appropriate skills to solve problems, then adapt to new ways of working

To be sustainable, the capacity and capability of staff, community groups and service users to innovate quickly will need greater focus at the national, regional and local levels.

Non conventional leaders have stepped forward to allow innovation to take place. We now have a cadre of health and care leaders who have participated in, and learned from, rapid innovation in how care is delivered. New styles of leadership (including patient leadership) and patient engagement have arisen and have facilitated innovation.



International insights finding. Detail: p94-103 of Evidence Report

Partnerships brought together the skills and capacity needed to quickly meet particular clinical or social needs. Industry, the military (such as in the building of the Nightingale hospitals) and communities were able to provide skills and resources that may not otherwise have been available, or only at a much slower pace.



Rapid review finding. Detail: p37-42, 87-91 of Evidence Report

Stakeholder insights



Voluntary and community groups valued the opportunities for new collaboration but also had concerns that there was too much reliance on the voluntary sector without sustainable funding and resource.



Focusing on areas where there were already significant amounts of work being done made the process of implementation much 'easier'. How much evidence was there of starting a new innovation from 'scratch'?



Barriers to implementation of digital innovation were reduced and organisations and clinical teams were more willing to try new solutions. Driven by concerns of COVID-19 transmission rather than clinical benefits alone?

The use of existing data and technology infrastructure underpinned much of the innovative change made in response to COVID-19



Data and technology infrastructure



Critical enablers of rapid change include the safe and timely sharing of data, and appropriate and resilient technology infrastructure

Much of the response to COVID-19 was made possible by effective data and technology infrastructure. All organisations could gain from considering the resilience of their infrastructure, and further service change that could be made possible.

The delivery of investigational medicinal products to a participant's home to allow them to self-report symptoms and side-effects did not require substantial regulatory amendment. There is potential to adopt remote monitoring technologies for patients' data collection to a greater extent where this could be appropriate.



Rapid review finding. Detail: p55-59 of Evidence Report



A key enabler was the unprecedented degree of data and knowledge sharing across practices and sectors. For instance, in the Hull and East Riding area during the pandemic, an agreement was reached with all practices in the area that superseded the usual need for a data sharing agreement when accessing patient data.

Rapid review finding. Detail: p49-53 of Evidence Report

Stakeholder insights



It would be worth considering what features of the current system need maintaining and building on. For example, the key role of NIHR infrastructure that binds NHS and university partners, as well as others.



There are concerns that collaborations that happened really quickly or happened with commercial organisations didn't have the measures in place to ensure adequate accessibility for all users.



As we move back we may need flexibility of services but also some structure. Home delivery of medicines, remote consultations, and consent and monitoring adaptations to allow people to engage in clinical trials have been key.

There will be an increased need for **evidence based decision making** as the pandemic progresses and we learn of the impact of responses



Evidence-based decision making



While the impact of the pandemic is still being felt, there is a need for robust evaluation evidence to understand what works, for whom and under what circumstances

All organisations could benefit from considering how they will evaluate and learn from the response to COVID-19 so far, as well as its ongoing effects. Such processes need to be open to diverse views.

Evidence syntheses are key to bringing information to decision-makers. At present, there appears to be more focus on evidence syntheses that consider the clinical consequences of COVID-19 and public health research, than on evidence syntheses looking at social and economic consequences.



International insights finding. Detail: p95-103 of Evidence Report



While there is significant anecdotal evidence of strengthened collaboration, there has been limited thorough evaluation of changes so far. For pilot programmes / new place-based networks to continue and receive support, they may need to demonstrate that they are providing both valued services and value for money.

Rapid review finding. Detail: p85, 91 of Evidence Report

Stakeholder insights



Need robust evaluation including with people of lived experience. Always question what is the impact of the change. This shouldn't just be about COVID-19 but emergent innovation and continuous evaluation cycles.



We have had to deliver at pace but we cannot and must consider the unwarranted variation we have introduced. Some of this may well be warranted variation, but until we know more we will never know.



Formal revisiting of the success stories regularly, within a place, or a system to remind partners that for a while it was possible (and enjoyable) to work differently.

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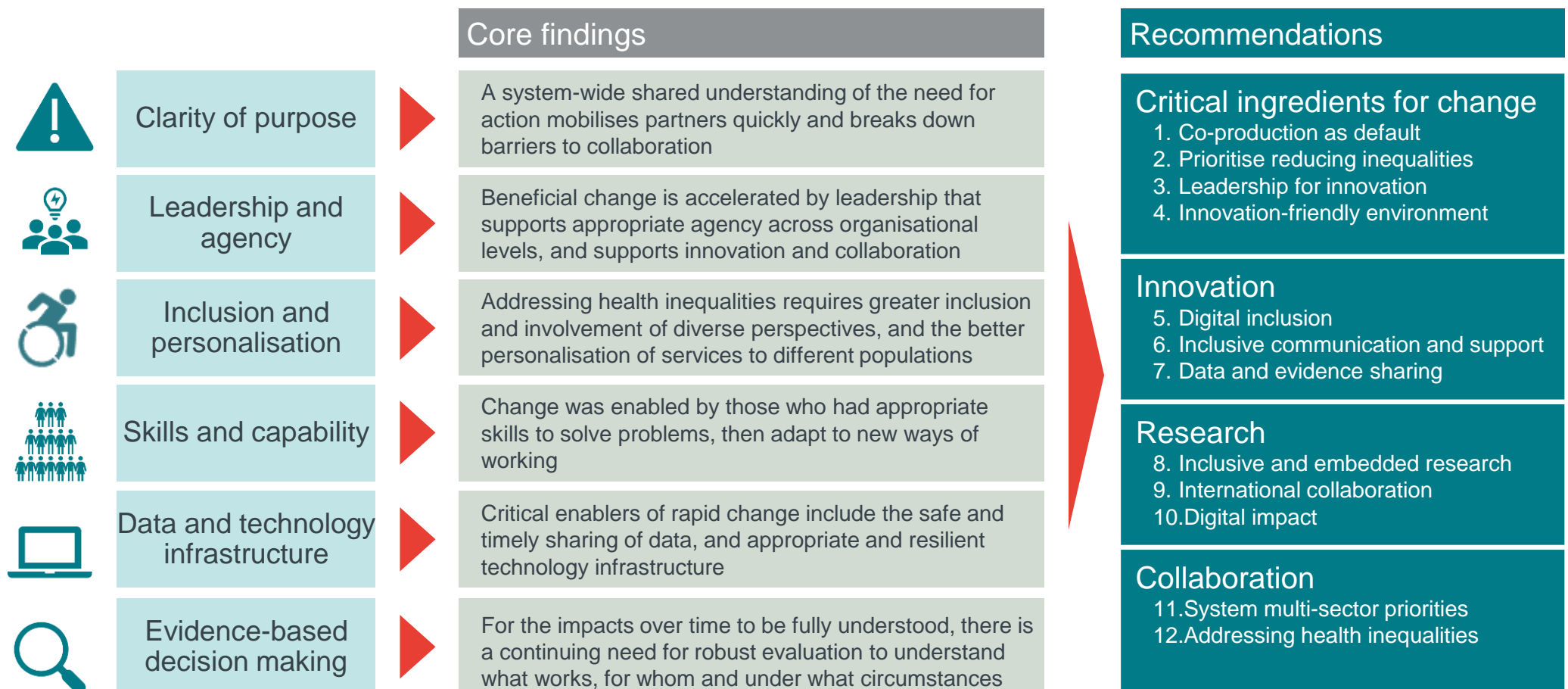
- The independent review was commissioned to propose recommendations to support current activities and inform future priorities of the AAC and BCN, and the wider health and care system.
- Recommendations were formed using four criteria, and shaped through a three part process:
 - Findings and potential areas for recommendations related to innovation, research, and collaboration were presented at three stakeholder workshops for discussion and reaction.
 - Responses were synthesised, and a draft set of recommendations were presented to the summit workshop of 80 stakeholders. Recommendations were discussed and prioritised.
 - Summit responses were further synthesised and iterated between the research team and AAC and BCN colleagues.

Recommendation criteria

Within review scope?	Within organisation remit?	Practical for action within 12 months?	High impact?
Relates to research, innovation and/or collaboration in response to COVID-19.	<p>AAC: “Delivering the best health innovations to patients faster than ever”.</p> <p>BCN: “Endeavours to facilitate the cultural change required to ensure these benefits are felt by all”.</p>	Able to be translated into clearly identified actions with progress possible within 12 months.	Once implemented capable of high impact on health and wellbeing outcomes across England (BCN) and/or UK (AAC).

Action needs to come not only from the AAC and the BCN, but from a range of organisations working together in a clear, aligned way

We have focused on how learning from the response to COVID-19 can translate into long-term, sustainable change. While they require action from the AAC and BCN, our recommendations require collaboration across a range of organisations nationally, regionally and locally. The first urgent actions are a mapping of work ongoing and planned, and an allocation of roles that gives clarity of ownership, and supports collaboration without duplication.



Our recommendations include critical actions to support change, and specific action for innovation, research and collaboration

Critical ingredients for change

- 1. Co-production as default:** Work with system partners to place co-production - including people with lived experience - at the centre of how the health and care system learns and embeds change from the response to COVID-19
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This was a short, focused review. There will be an ongoing need for in-depth analysis and evaluation

This analysis was rapid and focused. Some important context and limitations therefore need to be noted to interpret findings appropriately.

Rapid review timeframe

- This project is a rapid review of evidence undertaken over 10 weeks (between October and December 2020). It seeks to collate available evidence and draw out the insights within the time available.
- Wider work programmes are underway in parallel across different partners in the health and social care system.

Evidence is continually emerging

- At the time of writing, the COVID-19 pandemic is on-going. Evidence is continually emerging and the health and social care system is continually adapting. Therefore, the evidence base will continue to rapidly evolve. However, every effort has been made to focus on insights that will add value over time.

Focus on where the report can add value

Due to the time constraints this report has focused on where value can be added:

- It does not focus on areas that have been subject to much research and discussion so far, such as remote consultations
- This has been considered when defining *innovation*, *research* and *collaboration* for the purposes of this work.

The aim of this work is therefore to identify areas of ***potential and high impact*** benefits

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We would like to warmly thank all those who participated in this review, through interviews, workshops and the summit, including members of the AAC and BCN. Across the different elements, the review involved a range of lived experience voices and over 80 stakeholder organisations.

Abbott Diabetes Care, Association of British Healthtech Industries, Association of Medical Research Charities, BioIndustry Association, Bradford Institute for Health Research, Bridges, Bristol Health Partners Academic Health Science Centre, Cambridge University Health Partners, Care Quality Commission, Department for Business, Energy and Industry Strategy, Department of Health and Social Care, Disability Rights UK, East Midland Academic Health Science Network, Eastern Academic Health Science Network, Health Education England, Health Foundation, Health Innovation Manchester, Health Innovation Network, Health Research Authority, Imperial College, Imperial College Healthcare NHS Trust, Innovate UK, Innovation Agency, International Hospital Federation, Kent Surrey Sussex Academic Health Science Network, Learning Disability England, Local authorities, Local Government Association, London South Bank University, Urgent Public Health Group, McMaster Health Forum COVID-END initiative, Medical Research Council, Medicines and Healthcare products Regulatory Agency, Men's Health Forum, Multiple Sclerosis Society, National Autistic Society, National Institute for Health Research, National Institute of Health and Care Excellence, National Services Scotland, NHS Scotland, National Voices, NHS Confederation, NHS England and NHS Improvement, NHS Horizons, NHS Innovation Accelerator, NHS National Services Scotland, NHS Providers, NHS Scotland, NHSX, NIHR Applied Research Collaboration: North East and North Cumbria, North East and North Cumbria Academic Health Science Network, Nuffield Department of Primary Care Health Sciences, Nuffield Trust, Nutshell Communications Ltd, Office for Life Sciences, Oxford Academic Health Science Network, UK biobank, Nuffield Department of Population Health, Public Health England, Salford City Council, Scottish Government, Sheffield Teaching Hospitals, Shelford Group, South Asian Health Action, South West Academic Health Science Network, The Adaptation and Resilience in the Context of Change network, The Association of British Pharmaceutical Industry, The Q Community, UK Research and Innovation, University College London Partners, University of Manchester, University of Oxford, Wessex Academic Health Science Network, West Midlands Academic Health Science Network, West of England Academic Health Science Network, World Health Organization, Yorkshire and Humber Academic Health Science Network, Yorkshire and Humber Improvement Academy.



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