

# The Shelford Group strategy 2021-2025

**Improving health outcomes for all**

*Working as partners for improvement  
across the health, social care and life  
sciences sectors*



# SHELFORD GROUP MEMBERS

The Shelford Group is an NHS collaboration between ten of the largest provider organisations in England. Collectively, the Group represents over £14bn annual turnover, employ over 150,000 staff and deliver care to a population of over 15 million people each year across a comprehensive spectrum of health services including primary, community, acute and highly specialised care. We have well established partnerships with major universities, through which internationally competitive training and life sciences capabilities are delivered to the benefit of the wider NHS and UK economy. As major public sector organisations in our city-regions we embrace our role as anchor institutions, working with public sector partners within and beyond the NHS to reduce inequality, improve population health outcomes and drive regional economic development.

- **Cambridge University Hospitals NHS Foundation Trust (Cambridge)**
- **Newcastle Upon Tyne Hospitals NHS Foundation Trust (Newcastle)**
- **Sheffield Teaching Hospitals NHS Foundation Trust (Sheffield)**
- **Manchester University NHS Foundation Trust (Manchester)**
- **University Hospitals Birmingham NHS Foundation Trust (Birmingham)**
- **Oxford University Hospitals NHS Foundation Trust (Oxford)**
- **Imperial College Healthcare NHS Trust (Imperial)**
- **King’s College Hospital NHS Foundation Trust (King’s)**
- **Guy’s and St Thomas’ NHS Foundation Trust (Guy’s & St Thomas’)**
- **University College London Hospitals NHS Foundation Trust (UCLH)**

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## FOREWORD

Over recent years the Shelford Group has sought to evolve its approach as an NHS collaboration. We have now made explicit our purpose to address inequalities and drive economic regeneration, furthermore to approach this in a way that not only benefits the populations we serve directly, but stands to benefit people across the NHS.

In developing our new strategy we have engaged a wide range of talents from across our organisations, with interdisciplinary workstreams leading the work which has shaped the six priorities which form the foundations for our future agenda. This work has benefited enormously from the contributions made by a diverse spectrum of external partners, including think tanks, wider NHS membership organisations, experts from other sectors, as well as colleagues in government and national bodies. For this, we are truly grateful and have a deepened sense of commitment to our position as constructive partners in policy and provision



**Dame Jackie Daniel**

Chief Executive, Newcastle upon Tyne  
Hospitals NHS Foundation Trust  
Shelford Group Co Chair

within a wider community across health, care and life sciences. Our intention is to broaden our ambition and vision in delivering a huge challenge, adopting an approach which is grounded in reality.

As we launch this ambitious new programme of work, we have emphasised areas where the Group will serve as supporting partners in priorities which are led by others. There are by comparison fewer aspirations and deliverables in which we occupy a particular niche, or possess a certain critical mass, and therefore recognise a responsibility as more of an initiating partner with others. Throughout, we will demonstrate a commitment to work in collaboration with wider civic partners to address the priorities which matter most to our staff, patients and populations.

If you are reading this, we want to hear from you, as we look to develop partnerships and evolve this strategy together with others.



**Roland Sinker**

Chief Executive, Cambridge University  
Hospitals NHS Foundation Trust  
Shelford Group Co Chair

## EXECUTIVE SUMMARY

The COVID-19 pandemic has been the biggest challenge the NHS has faced in its history. In their response, people across the NHS demonstrated remarkable courage and capability, providing care in a climate of uncertainty and fear. As we hope for the pandemic to end, we must also plan skilfully to ensure that we take steps towards a better, more inclusive, more prepared future. There needs to be a vision which is both inspiring and grounded in reality.

This vision for the future has much to learn from the pandemic response. Inequalities that cut across our communities have been exposed and amplified, with the NHS committing to address the injustices in access and outcomes which these inequalities drive. Our approach to **building back** from the pandemic must account for this as we address the national imperatives of patient waiting times. Simultaneously, university, industry and NHS organisations have demonstrated global standing as **life sciences** ecosystems, driving innovation and research which have transformed how the pandemic has been tackled.

Entering the pandemic, the NHS and care sectors were experiencing sustained and substantial **workforce** gaps. The steps we must now take as major employers and providers of education and training should break new ground, engaging our communities in new ways as part of a sustainable and fairer approach. Alongside the workforce challenge, the NHS

has faced a deteriorating infrastructure, which we are committed to address through ambitious **investments** in partnership with national bodies.

It is within this context that our collaboration of NHS providers which comprise the Shelford Group have committed to this new strategy, serving to improve population outcomes, reduce inequalities and drive economic regeneration across our city-regions and wide NHS. The six workstreams are designed to address the priorities that now face the NHS and wider society. Of these workstreams, our approach as **anchor collaboratives** is intended to feature in each of the others, recognising the relevance this agenda has to the pandemic recovery, improving patient care, leveraging our role as major employers, harnessing future infrastructure investment and directing the efforts of regional life sciences clusters.

Our new strategy is designed to stand alongside everything that partners across health, care and life sciences sectors are doing. There are a wealth of priorities which we could reasonably have sought to pursue. Our intention has been to focus on those areas where we can make the biggest difference as a collaboration. The stories and case studies we have used, serve to illuminate our aspirations and represent a selection from a much wider spectrum of excellence, both within and beyond the Group.

## OUR VISION

The Shelford Group is an NHS collaboration of large provider organisations across the NHS in England. We are rooted in the local communities we serve, as well as connected through regional and national networks of care, teaching and research to the populations across our city-regions. We also have an international profile and collaborate with partners globally. We are facing into the major opportunities of today and the future, ranging from the climate crisis, to inclusion, to new jobs and economic development. Our approach is to understand the lessons from the pandemic and apply them across this spectrum of priorities.

### Purpose

In 2021 the Shelford Group CEOs committed to a new statement of purpose, which will guide our work as a collective and has shaped our new strategy.

*"The purpose of the Shelford Group is to leverage the Group's experience, expertise and capabilities, in partnership with others, to make a nationally significant contribution to improvements across the health, social care and life sciences sectors, as well as towards economic regeneration and reduced inequalities."*

### Principles

**Purposeful partnerships:** many of the priorities we face as a collective are no different from those across the wider health, care and life sciences communities. We are therefore committed to working as a good partner in support of common priorities which stand to benefit patients and staff across the NHS.

**Unique contribution:** the regional and national reach of some of the Group's functions are atypical and not common across the majority of other organisations in health, care and life sciences. In these areas, the Group will look to shape an agenda with wider system and policy partners, with specific consideration of priorities which the Group is well placed to take a greater level of responsibility.

**Impact & pace:** the Shelford agenda is focused on achieving an impact on outcomes that matter to the patient and populations we serve directly, as well as those across the wider NHS.

A cross cutting feature of the Group's ambitions concerns leveraging our assets in collaboration with other public services, universities, community organisations, charities and industry partners, to affect inequalities and economic regeneration across our city-regions. These assets include our staff and buildings, design of services as well as approach to purchasing goods and services. How we do this is captured by the term **anchor collaborations** and is at the centre of our vision for health & life sciences regional clusters.

## OUR STRATEGY

1

### Pandemic Building Back

Addressing imperatives from the pandemic, including access to diagnostics and planned care

2

### Patient Care

Embracing the role of digital transformation to improve patient outcomes and taking responsibility as leaders in specialist care

3

### People

Recognising the duty of major employers to address equality, diversity & inclusion, innovating in training & education

4

### Investment

Leveraging expertise & experience to inform the design of the long term financial architecture for revenue & capital

5

### Life Sciences

Forming strategic partnerships with industry and universities to drive adoption of innovation and growth in clinical trials

6

### Anchor Collaborations

Collaborate with civic partners to impact on social determinants, health inequality & economic regeneration



## chapter 1

**PANDEMIC  
BUILDING BACK****Reflections**

On 31 January 2020, the UK's first two COVID-19 patients were treated by Newcastle. By March 2020, cases in the UK had begun to rise and on 16 March the Prime Minister commenced daily press briefings, urging everybody in the UK to work from home and avoid pubs and restaurants to give the NHS time to cope with the pandemic. On 23 March the UK entered its first lockdown. 18 months later the NHS continues to face a combination of acute and chronic pressures relating to COVID.

Since the pandemic emerged in 2020, Shelford Group providers have worked together as part of the national response effort, as well as to share learning across the Group and with the wider NHS. Executive leaders held regular teleconferences to share insights, procurement directors worked in close collaboration to secure a pipeline of essential supplies, specialty experts fed into the NICE COVID-19 rapid guidelines

as they were published, and Shelford providers were called upon, both individually and collectively, to feed into new and emerging national policy relating to the pandemic.

Shelford Group organisations, working closely with university and industry partners, played an active role in research and innovation throughout the pandemic. This included the COVID-19 vaccine in Oxford, rapid diagnostic tests in Cambridge, participation in research trials across all Shelford providers, and service innovations, such as a new drive-through phlebotomy service in Sheffield.

Now, with patients experiencing unprecedented waits for access to diagnostics and elective care, we are committed to developing solutions which will have a scalable impact. This is especially important for those patients who are experiencing the longest waits. The bedrock for this will be a supported and sufficiently resourced workforce.

From March 2020 to March 2021

**Over 2,300  
patient  
transfers**from other hospitals  
into Group ICUs**50,000+  
COVID-19  
patients**cared for by the  
Group**4.5 million****COVID-19 vaccines** delivered  
by the end of April 2021**8.5 million  
items of mutual aid**provided to other NHS and  
public sector partners by  
the Shelford GroupDuring the pandemic, **over 90,000  
patients were recruited** into  
**COVID-19 studies across  
Shelford trusts****59,500 were  
COVID NIHR  
UPH studies****Over 32,500  
were non UPH  
COVID studies****52% of the 48 NIHR**approved COVID-19 priority  
studies were sponsored by  
Shelford Group trusts or  
academic partners**June 2020**

Case studies

- Two Shelford Group academic partners - Oxford University and Imperial College London - led COVID-19 vaccine trials, backed by £84m of government investment and partnership with industry. In January 2021 the NHS launched the roll-out of the Oxford AstraZeneca COVID-19 vaccine. The NIHR Oxford BRC provided crucial funding to get the trials up and running and helped to fund the evaluation of its safety.
- All Shelford Group trusts participated in the RECOVERY trial to test new or existing drugs on hospitalised COVID patients. COVID-19 patients at Guy’s & St Thomas’, Imperial and Birmingham were the first to receive convalescent plasma transfusions as part of the REMAP-CAP trial. A patient at Manchester was the first to receive a convalescent plasma transfusion through the RECOVERY research study.
- The laboratory medicine team at Sheffield implemented a drive-through Phlebotomy Service in March 2020, as part of the organisation’s response to the COVID-19 pandemic. The Trust was concerned that there would be a reduced number of patients not receiving routine blood tests either due to shielding or anxiety about visiting hospital or GP settings for risk of contracting COVID-19. Physical distancing guidance also meant the phlebotomy departments in both hospitals had to reduce the numbers of patients they could see at any one time. Following its success this model of working was rolled out across other trusts in the NHS, and was developed further as model for drive through COVID-19 testing.
- In 2020 Shelford Group trusts, including King’s, Sheffield, Manchester, Oxford, Guy’s and St Thomas’ and Birmingham, were amongst the top recruiting sites to the GenOMICC study which works to identify the specific genes that cause some people to be more susceptible to viruses including COVID-19.
- Shelford organisations are amongst collaborating partners in the national COVID-19 UK Genomics Consortium (COG), which has sequenced over 1.1 million COVID-19 viruses by October 2021.

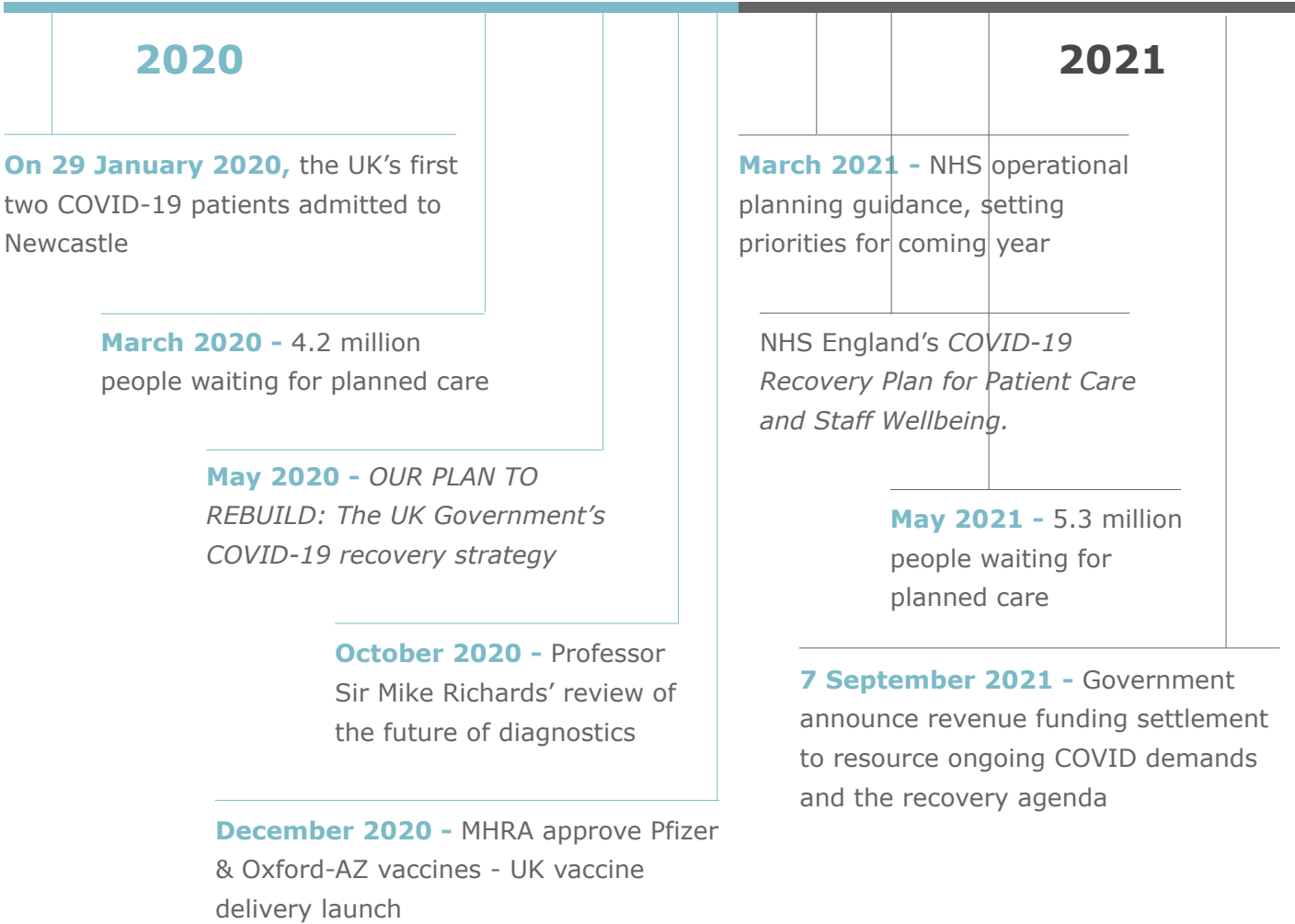
Recovery

Since the peak of the first pandemic wave in spring 2020, a series of national policies have been published, framing the national recovery effort.

Before the pandemic, the number of patients on elective waiting lists had already risen from the lowest level of 2.9 million people in January 2009 to 4.2 million people in March 2020; by May 2021, this figure had increased to 5.3 million people, with estimates that the number of people waiting could rise to over 10 million. Amplifying the severity of this challenge is the fact that access to elective treatment fell furthest in the most deprived areas of England during 2020.

From summer 2021, the NHS faced the combination of ongoing COVID demand, record waits for planned care and record levels of demand for urgent care.

It is within this context that the Group is positioning itself as a vehicle to accelerate innovative and sustainable models of provision which serve to address these national priorities.



“The way we approach the backlog in care must take full account of health inequalities”

Professor Clive Kay  
Chief Executive,  
King’s College Hospital NHS  
Foundation Trust

Aspirations & deliverables to learn from the pandemic and safely recover services for patients

Aspirations

Deliverables

Supporting Partner

- Develop new approaches to tackle the imperative of **patient waiting times**
- Address the **diagnostic challenge**
- Develop new **urgent and emergency care models** which can be replicated at scale
- Inform **policy and regulatory** frameworks that support recovery

Initiating Partner

- Learn from the **pandemic and prepare** for the future

- Share learning on models for clinical prioritisation of electives
- Collaborate with national bodies on prehabilitation & prevention
- Work with partners to develop new approaches to self care
- Share insights on the role of Provider Collaboratives in recovery
- Host diagnostic imaging workshop to drive innovation and industrialisation of diagnostics
- Ensure policy offer adds value to national bodies & regulators

- Publish thought piece on the pandemic, celebrating cross sector contributions
- Engage national bodies to build on success for pandemic research
- Develop models for expanding capacity for future pandemics

“The welfare and wellbeing of our staff is critical in and of itself, but is central to all we have achieved so far and will be instrumental to what we need to deliver in coming months and years. This is not an either or.”

Kirsten Major  
Chief Executive,  
Sheffield Teaching Hospitals  
NHS Foundation Trust

chapter 2  
PATIENT  
CARE

Patient Outcomes

For too long patients across the NHS have experienced significant variations in outcomes dependent on where they receive their care. Much more is needed to systematically understand the outcomes that matter most for patients, to generate intelligence about how well the NHS is performing and to deliver improvements which are sustainable and at scale. Success necessitates the empowerment of patients over their care and of populations over their health. Ensuring that decisions about health, care and life sciences are orientated toward this priority, from beginning to end, is a profound and deeply held principle which guides the efforts of the Shelford Group.

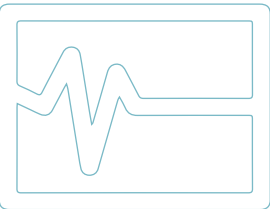
Improving patient and population outcomes is the fundamental goal of every part of our strategy. This chapter has a specific focus on two dimensions of this agenda where the Group has a contribution to make which is different to many other parts of the NHS - specialised services and digital transformation.



In 2020/21 the Group accounted for **£5bn** of expenditure on specialised services

Representing a quarter of the total spend by NHS England

0.88  
AVERAGE  
SHMI



across the Shelford Group in 2020/21, with **centres achieving the best outcomes in the NHS**



THE SAFER NURSING  
CARE TOOL + MENTAL  
HEALTH OPTIMAL  
STAFFING TOOL

Developed by Shelford Group Chief Nurses in partnership with NHS England and Improvement

Used by **162 NHS providers**  
**27 licenses purchased**  
by private and overseas providers



Specialised Services

As the NHS makes progress to integrate patient care, building organically on collaborations at system and place level as well as enabling deeper partnership working through legislation, it is essential that the needs of patients served by specialised services are understood and catered for. There are currently 147 formally designated specialised services, which in 2020, accounted for approximately £20bn of NHS expenditure. The evolution of Integrated Care Systems (ICSs) frames emerging policy concerning the future model for specialised services. We are committed to avoiding a disconnect between policy intentions for locally integrated services and those for specialised services which span NHS system boundaries. Successfully integrating patient care also requires realising the value of networks in the planning and provision of secondary care.

The Shelford Group is committed to working with national partners to secure a future model for specialised services which can achieve the best possible patient outcomes. The new model must:

- Reduce variation in **access & outcomes**
- Reduce health **inequalities**
- Build resilience where services are **fragile**
- Understand **demand** to intervene earlier
- Underpin services with a transparent & sustainable financial model encompassing **capital & revenue**
- **Integrate** specialist care with local services
- Be driven by **patients & evidence**

Digital transformation

Within Shelford there are some of the most digitally mature providers in the country, including the only HIMMS level 7 provider in the NHS.

Investment in digital infrastructure, and the transformation this can enable, is critical to delivering personalised and sustainable care. There has been an active policy agenda in recent years which frames the digital agenda across the health, care and life sciences ecosystem.

Investment in digital infrastructure and the workforce are essential companions for successful digital transformation. This transformation agenda needs to propel ambitions to empower patients, reduce inequality and integrate care.



2019	2020	2021
Digital Innovation Hubs [DIHs]	25.9% - 8.4 million people - were working from home, compared with 12.4% in 2019 about remote working	
Innovate UK investment in AI centres for pathology and imaging	10% of outpatient appointments classed as telemedicine in March 2020, compared to 3.5% in March 2019	
Local Health & Care Record Exemplars [LIHCRES]		NHSX draft strategy 'Data Saves Lives' and new guidelines for digitised healthcare 'What Good Looks Like'

Birmingham case study - digital technologies

University Hospitals Birmingham has partnered with a number of technology companies to deliver improvements in 3 key areas: smart access, smart diagnostics and smart support. This has led to the adoption of cutting edge digital technologies which have transformed models of care for the population of Birmingham and Solihull, as well as supporting the restoration and recovery of services impacted by the COVID-19 pandemic.

Projects include:

- an artificial intelligence powered skin cancer pathway, which has helped 40% of patients avoid the need for a hospital appointment
- an ophthalmology pathway where scans and diagnostics are carried out in the community without the need for a hospital appointment, with all information being reviewed by UHB consultant ophthalmologists remotely. This care model technology is now being applied to a broad range of specialties across the trust

- a 5G connection between community intermediate care and acute hospital teams, including digital stethoscopes, ECG and high resolution video, to allow comprehensive assessments to be carried out without the need to convey patients to hospital
- ask A&E symptom checker, where 64% of 19,000 users were appropriately sign-posted to non-hospital settings to receive care
- Birmingham has established contractual relationships that recognise the expertise and intellectual property that UHB brings through their clinical staff and pathway mapping as well as through their data.

\* Case study adapted from Data saves lives: reshaping health and social care with data, NHSX



Aspirations & deliverables focussed on excellence in specialised services and digital transformation to improve patient and population outcomes

	Aspirations	Deliverables
Supporting Partner	<p>Be effective partners in testing &amp; scaling digital innovations</p> <p>Nurture a digitally equipped workforce</p>	<ul style="list-style-type: none"><li>• Share learning on integrating patient and population outcomes in existing scorecards</li><li>• Collaborate to develop innovative digital training programmes</li><li>• Work with national bodies to inform digital best practice and workforce planning</li><li>• Support existing national digital workforce programmes</li><li>• Drive improvement on specialised care pathways with greatest inequalities</li><li>• Support NHSE reduce demand, integrate care &amp; build resilience in specialist care</li></ul>
Initiating Partner	<p>Take responsibility for improving specialised care</p>	<ul style="list-style-type: none"><li>• Form interdisciplinary working group to deliver specialised care policy advisory role</li><li>• Work with national partners to drive down unwarranted variation in specialist care</li><li>• Support NHSE to develop a transparent and sustainable model to finance specialist care</li></ul>

“Patients and clinicians have a key role in shaping the planning and provision of specialised services to improve outcomes”

Professor Meghana Pandit  
CMO, Oxford University Hospitals  
NHS Foundation Trust and Chair  
Shelford CMOs subgroup

chapter 3  
PEOPLE

Workforce priorities

Planning, organisation and provision of health care depends on people. Funding will yield a poor return if the NHS workforce lacks sufficient numbers, the right skillset or the physical and mental wellbeing to provide the right care for patients. There is rightly an ambitious agenda for the NHS workforce - but it would be a gross disservice if the approach to this agenda overlooked some challenging truths which frame our starting point as we emerge from the pandemic.

- Real terms average NHS pay in 2020 remained below what it was in 2010 and contrasts poorly with changes in private sector pay (Nuffield Trust, 2021)
- 15 percent of black and minority ethnic staff reported experiencing discrimination in the past 12 months; 28 percent did not believe that their organisation provided equal opportunities for career progression (WRES, 2018).

Baseline

The pandemic has placed an enormous and sustained pressure on our workforce. In 2021 these pressures are growing as the demands of the pandemic combine with record levels of demand for urgent and planned care. Before the COVID-19 pandemic, the evidence showed:

- 40.3 percent of NHS workers had felt ill due to work related stress (NHS Staff Survey, 2019), accounting for 30 per cent of NHS work absences, at a cost of £300 to £400 million (NHS Employers, 2019)
- Both the NHS and social care systems were experiencing significant workforce shortages, with a combined shortfall of over 200,000 staff

Ambition

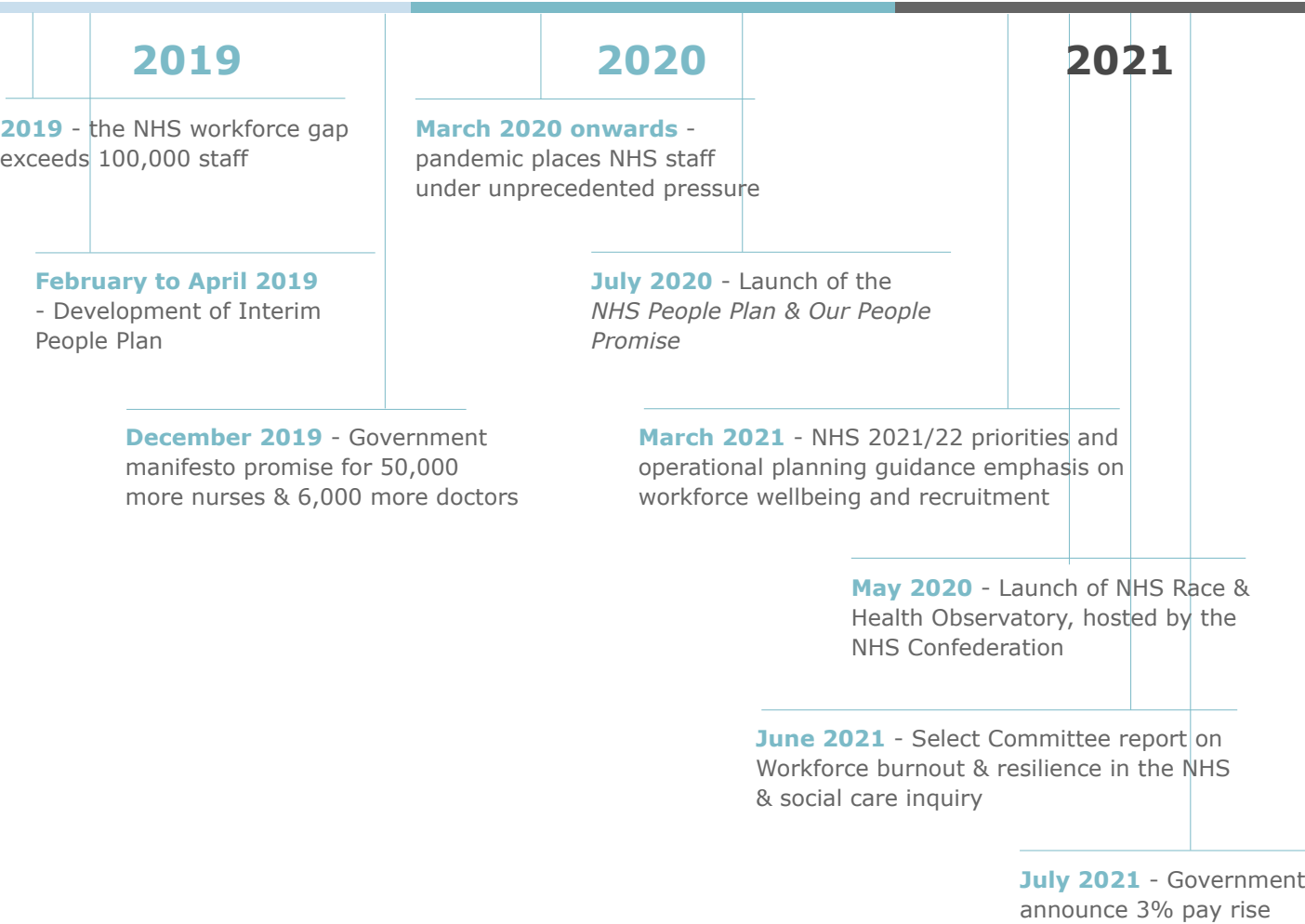
From this starting position people across the NHS have shown great skill and bravery to ensure that patients received the best possible levels of care throughout the pandemic. These attributes have been ever present - the pandemic propelled them into the public consciousness.

A remarkable feature of what people across the NHS have achieved was the acceleration of discovery and innovation. The NHS workforce represents a deep pool of talent which forms a key part of the UK life sciences and technology sectors. The Shelford Group will work with partner organisations to cultivate the future pipeline of NHS talent, investing in people and ensuring they have the chance to realise their ambitions.

### Building health with skills & employment

As NHS organisations spanning our city regions, we have a duty as major employers and providers of education and training. Our strategy seeks to deliver the aspiration of the NHS People Plan to bring those furthest from employment into meaningful employment and to target recruitment, volunteering and apprenticeship opportunities in areas of greater deprivation. Functioning as effective anchor collaborations with wider civic partners will enable:

- Widening workforce participation: connecting with communities to design opportunities that harness the full potential of our local populations
- Building the future workforce: driving innovations in training and education to equip people in health and care with the skills they need
- Being a good employer: ensuring a living wage, ending discrimination and promoting wellbeing



### Apprenticeships case study

In response to challenges in recruiting nursing staff and high levels of staff turnover, Cambridge became one of the first trusts in England to provide a nurse degree apprenticeship pathway at scale and pace. This was achieved through significant trust investment and use of the apprenticeship levy, with the aim to create a pipeline of well trained and competent staff.

Working with Anglia Ruskin University, Cambridge implemented a '2+2 model' that allows a higher apprenticeship (part one) and a 'top up' BSc nursing degree (part two). This provides more flexibility, possible step off points and a less expensive model. All those appointed onto the programme are offered permanent health care support worker (HCA) posts with a guaranteed registered nurse post upon NMC registration. As

well as developing a sustainable nursing workforce supply, the strategy provides significant career progression opportunities for all age groups and skill levels. The programme resulted in a reduced vacancy rate for adult nurses, an agency spend for adult nurses of £0 in 2019/20 and an 80% reduction in pay enhancements.

### RefuAid case study

The Shelford Group have been working with the charity RefuAid to place refugees with clinical skills into the NHS. Guy's & St Thomas' were first to recruit a number of doctors to their organisation along with a commitment to provide a range of clinical and non-clinical training. Manchester have also recruited doctors and are exploring nursing and midwifery supply. Other trusts within the Group are also exploring opportunities to place both doctors and nurses.

### Workforce across the Shelford Group



8.7%  
overall  
nursing  
vacancy rate  
in March 2021

Investing in  
the future NHS  
workforce  
26% of Shelford  
employees are  
over the age of 50

Employing in some of  
the UK's most deprived  
communities  
in regions with  
unemployment rates  
as high as 6.5%

Aspirations & deliverables to improve wellbeing, diversity and inclusivity of our workforce, developing innovative models for skills & employment with partners

Aspirations

Deliverables

Supporting Partner

- Improve health & wellbeing of the workforce
- Drive a step change in equality, diversity & inclusion
- Support workforce policy & strategy
- Innovation in skills & employment

- Contribute to research on measurement of wellbeing & evidence based interventions
- Produce benchmarking & reflective piece on lessons & failures of EDI initiatives
- Collaborate with others to develop programmes to support EDI priorities
- Work with the NHS Chief People Officer to support national initiatives
- Support national policy makers with Government priorities
- Partner to access Government schemes providing new routes to employment

Initiating Partner

- Innovation in skills & employment
- Innovate with university partners to provide more inclusive training & education
- Develop Shelford fellowship & training programmes in digital and life sciences
- Share learning, innovate and shape national apprenticeship policy

“As major employers we have a responsibility to engage local communities in our approach to training and recruitment”

Julie Screatton  
Chief People Officer,  
Guy’s & St Thomas’ NHS Foundation  
Trust and Chair of the Shelford Workforce  
Directors subgroup

chapter 4  
INVESTMENT

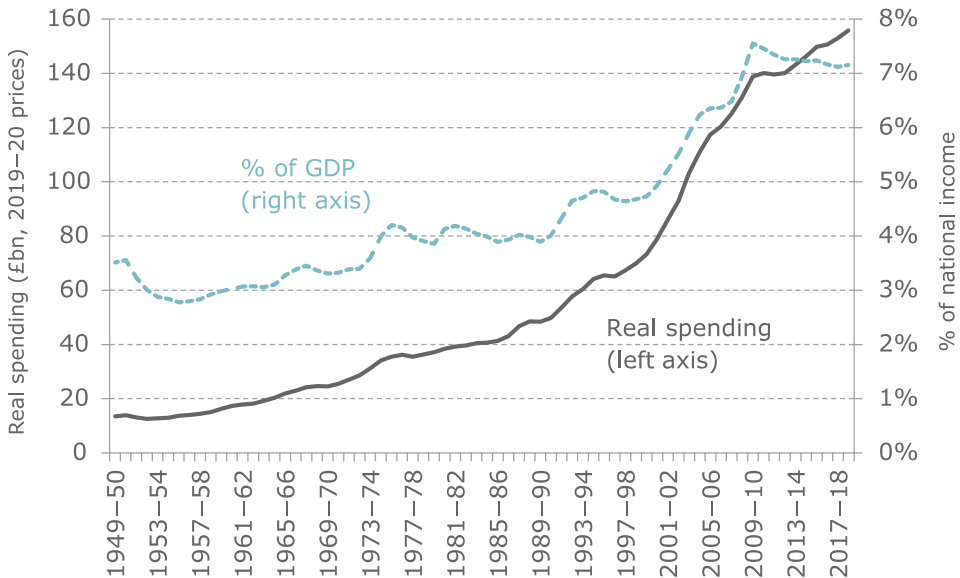
The inclusion of a dedicated section on investment in the Group’s strategy reflects the critical role of finance to securing safe and sustainable services which drive improving patient and population outcomes across the Shelford Group and beyond. Three components need to combine, forming a coherent NHS financial model, to drive these outcomes: (i) the quantum of investment; (ii) expertise and capabilities; and (iii) the financial architecture. These provide a framework for understanding the policy landscape, how it has evolved and how it frames the opportunities and challenges which lie ahead. A critical feature for the NHS to realise its potential will be the establishment of a longer term, more strategic approach to financial planning for the provider sector - especially for capital investment.

Baseline

Taking 2009/10 as a baseline, there has been a prolonged period of significant fiscal restraint. Overall public expenditure over the seven year period to 2015/16 fell by 6 percent of GDP to 39.6 percent, equating to a real terms reduction of over £25bn. For the NHS, this equated to the most sustained period of near zero real terms expenditure growth in its history: the four years from 2009/10 to 2012/13 represented zero real term growth on a baseline expenditure of £128.6bn, a reduction in expenditure as a share of GDP from 7.8 to 7.4 percent. Recent comparisons with the OECD indicate that whilst the levels of funding for the NHS are comparable with the OECD mean, there are significant deficits concerning investment in diagnostic infrastructure, inpatient beds and the number of doctors and nurses per head of population.

UK public spending on health in real terms (2019–20 prices) & % of national income

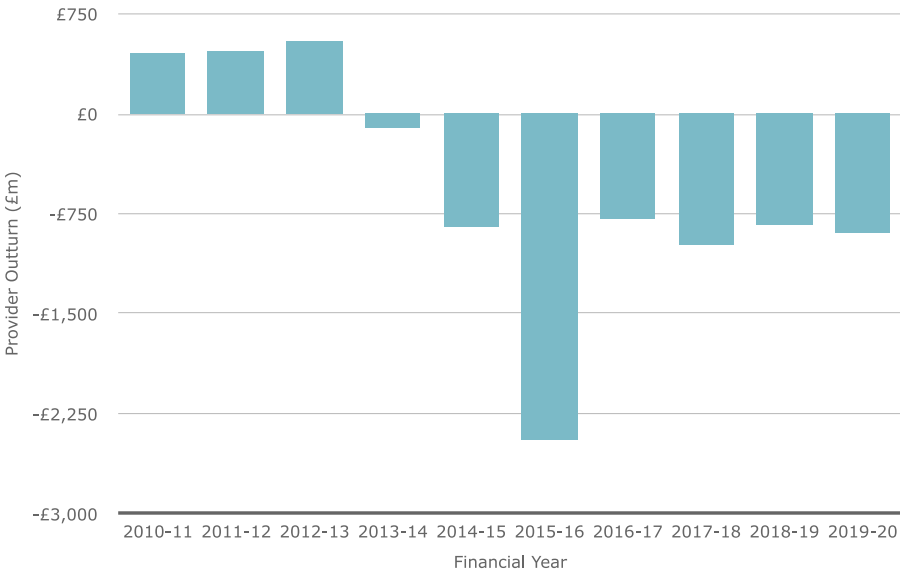
Source: Institute for Fiscal Studies (2019)





The financing system in place before the pandemic, in particular the use of control totals and Provider Sustainability Funding in previous years, lacked transparency and led to a provider system which is **structurally operating in deficit**. It is widely acknowledged that the current system is not fit for the future. Similar challenges are evident for **capital** investment, with the NHS accumulated backlog maintenance rising to £9bn in 2019-20, from £4.0bn in 2012-13. A new approach is required for the NHS to meet Government priorities.

NHS Provider Sector Outturn, 2010-11 to 2019-20



Sources: DHSC, Annual Report 2017/18 (July 2018; 199); DHSC Annual Report 2019/20 (2021)

2019		2020		2021	
April 2019 - Health Foundation publish <i>Failing to Capitalise</i> , detailing ten years of underinvestment		February 2020 - NAO report raises concerns over resource levels to deliver the LTP			
October 2019 - DHSC publish Health Infrastructure Plan		April 2020 - £13.4 billion of historic provider sector debt written off		June 2021 - NHS System Oversight Framework sets new model for financial recovery	
December 2019 - Government manifesto commitment to build 40 new hospitals		October 2020 - Professor Sir Mike Richards' review of the future of diagnostics makes case for investment			
		November 2020 - Government Spending Review sets allocations for a further year			
				September 2021 - the Prime Minister announces a new funding settlement for the NHS and social care	

Shelford infrastructure and economic impact

Over  
**£400m**  
total capital  
expenditure  
2019/2020



**53**  
hospital and  
community  
sites

Accountable for  
**over £14bn**  
expenditure each year

Aspirations & deliverables to demonstrate the economic value of the NHS and promote the need to match NHS priorities with available resources

Aspirations		Deliverables
Supporting Partner	Promote the need to match NHS priorities and available resource	<ul style="list-style-type: none"><li>Function as a trusted partner in policy development &amp; offer road testing capability</li><li>Develop paper quantifying the spectrum of funding from different bodies</li><li>Co-design recommendations on SOF &amp; financial accountability across NHS tiers</li><li>Develop model for providing policy experience to finance professionals</li><li>Inform national work to redesign system capital investment process</li></ul>
	Shape financial architecture to enable delivery	
Initiating Partner	Inform capital reform and long term resourcing	<ul style="list-style-type: none"><li>With partners, evidence the economic multipliers from investment in health</li><li>With partners, make the case for a 10 year investment plan</li><li>Maintain relationships across government &amp; national bodies to inform capital policy</li><li>Publish thought piece on capital reform, including multi-ICS infrastructure</li><li>Engage government to develop new pathways for capital investment</li></ul>
	Demonstrate the economic value of the NHS	
Initiating Partner	Inform capital reform and long term resourcing	
	Demonstrate the economic value of the NHS	



chapter 5

# LIFE SCIENCES & INNOVATION

Life sciences is one of the few major sectors where the UK has an international competitive advantage, accounting for around \$37billion in 2020. The sector is a complex ecosystem comprising universities, charities, industry, national bodies and Government departments.

In the May 2021 Queen’s Speech, the Government signalled plans to deliver on its 2019 manifesto reaffirming the commitment to increase Government R&D spending by £7.1bn so that total UK R&D investment rises to 2.4 percent of GDP by 2027.

The pandemic demonstrated the role of the NHS in discovery, translation and adoption, providing an insight into what is possible and the place the NHS has to occupy in the UK’s vision for global success in life sciences. In particular, the NHS pandemic response demonstrated the value that major city-region NHS anchors can generate in research and innovation by amplifying impact across all parts of the NHS and delivering outputs with global reach.

## The Shelford Group impact in life sciences

OVER **£750m**  
of NIHR research infrastructure investments

and over £120m of national infrastructure awards

**BIOMEDICAL RESEARCH CENTRES**

leveraged **£3.4bn** of external investment from 2016 to 2020

**44 spin out companies**  
in 5 years

OVER **150,000 PATIENTS** participated in clinical research in 2020/2021

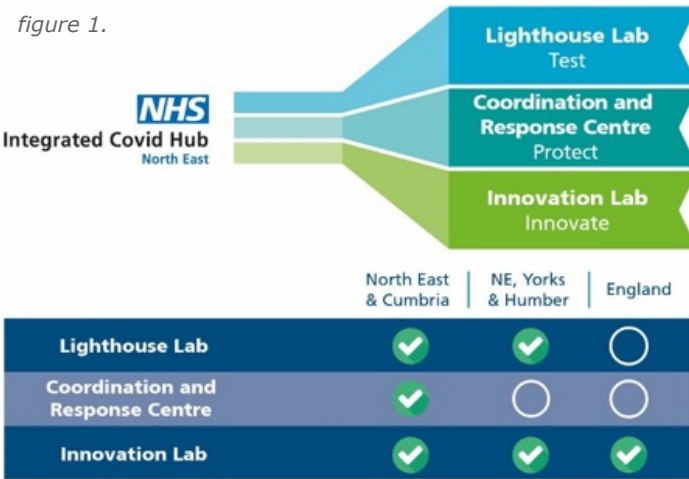
### Integrated COVID HUB North East case study

The integrated COVID HUB North East (ICHNE) is a tripartite initiative that was approved by ministers in August 2020 and commissioned in January 2021 as part of a regional and national response to the COVID-19 pandemic. Hosted by Newcastle Upon Tyne Hospitals NHS Foundation Trust it embodies the concept of a quadruple helix; hosted by the NHS, supporting the local community, and delivered in partnership with local authorities and public health teams, industry and academia.

ICHNE is commissioned by Department of Health and Social Care until March 2022 to provide three elements; high throughput Polymerase Chain Reaction testing at a purpose-built Lighthouse lab in Baltic Park, Gateshead, independent evaluation of new COVID diagnostic products at an Innovation

Lab in The Biosphere, Newcastle Helix and effective management of potential or actual virus outbreaks at a regional co-ordination and response centre, also at Newcastle Helix - see figure 1. The Lighthouse lab has also created around 650 new public sector jobs with a focus on improving population health by providing better access to jobs for those living in deprived areas, highlighting the role of NHS trusts as anchor institutions.

figure 1.





UCL Ventura case study

UCL engineers, UCL clinicians and industry partners MercedesAMG High Performance Powertrains developed a breathing aid to help keep COVID-19 patients out of intensive care. The UCL-Ventura breathing aid is a Continuous Positive Airway Pressure (CPAP) device that supports patients with breathing difficulties. It gained regulatory approval in 2020, with up to 10,000 devices order by the Department of Health and Social Care. To help meet international need, they released the designs and manufacturing instructions for free to governments, industry manufacturers, academics and health experts across the globe. By May 2020, 1,100 devices had been delivered to hospitals across the NHS and details on how to make the devices had been downloaded by more than 1,800 teams across 105 countries.

Manchester global genomics campus case study

In 2018, QIAGEN announced a partnership with multiple organisations to underpin the creation of a global genomics campus in Manchester for innovation, life sciences, translational science and molecular diagnostics. The partnership will support up to 1,500 jobs, while also adding an estimated £150 million to Manchester’s economy over the next decade. QIAGEN are based in the Citylabs 2.0 development (£25 million, 92,000 sq. ft. build located within the hospital campus).

A joint venture between Manchester University NHS Foundation Trust and Manchester Science Partnerships, Citylabs has been designed as a campus targeting companies within fields such as precision medicine and medtech. It forms part of a £95 million expansion creating a further 1,200 jobs. Businesses, such as QIAGEN, based at Citylabs have access to clinical and academic collaborators located on the campus, as well as business support.

Too often the approach to economic development is characterised by a zero-sum inter-regional competition. The UK - and its regions - need to work to a strategy which realises that for the UK to become a global hub the competition is international: imaging in Amsterdam, immunotherapies in China and San Francisco, diagnostics in Germany. The Shelford Group will support the government to strategically cultivate **regional life sciences clusters** which build on areas of natural competitive advantage and amplify the contribution the NHS makes as an innovation partner. Part of this requires investing in centres of excellence, often around existing geographic clusters where the NHS, universities and industry have a footing. It also means extending out from these centres to provide a platform for other parts of the supply chain - both in services and manufacturing - to locate in towns, rural areas and remote communities.

2019	2020	2021
<b>April 2019</b> - “Boosted” Accelerated Access Collaborative launched to oversee the innovation landscape	<b>January 2020</b> - Professor Sir John Bell publishes update on the <i>Life Sciences Industrial Strategy</i>  <b>April 2020</b> - 8 AHSCs announced to support translation of science into treatment for patients  <b>July 2020</b> - BEIS publish <i>R&amp;D Roadmap</i> , largely silent on the role of the NHS	<b>January 2021</b> - DHSC launch Research Resilience, Recovery & Growth Programme  <b>March 2021</b> - DHSC publish <i>The Future of UK Clinical Research Delivery</i>  <b>April 2021</b> - NICE publish new strategy recognising the role of the NHS as an innovation partner  <b>July 2021</b> - OLS publish a new <i>UK Life Sciences Vision</i>





### Manchester University Hospitals

- NIHR Biomedical Research Centre (BRC) + NIHR Clinical Research Facility (CRF)
- Manchester Academic Health Science Centre (AHSC)
- Host NIHR Clinical Research Network (CRN) for Greater Manchester
- Lead North West Genomic Laboratory Hub (GLH) and host Genomic Medicine Service Alliance (GMSA)
- Host to the Citylabs campus - a cluster of diagnostics, medtech, digital health and genomics businesses driving the future of healthcare
- HDRUK Digital Innovation Hub

### University Hospitals Birmingham

- NIHR BRC + NIHR CRF
- Host Central and South NHS GMSA
- Cancer Research UK (CRUK) research centre & institute
- HDRUK Digital Innovation Hub
- Innovate UK Midlands & Wales Advanced Therapies Treatment Centre

### Oxford University Hospitals

- NIHR BRC + NIHR CRF
- Host of the NIHR CRN Thames Valley and South Midlands
- Oxford Academic Health Partners AHSC
- Central & South NHS GMSA partner
- UKRI funded National Consortium of Intelligent Medical Imaging
- CRUK research centre
- British Heart Foundation (BHF) Centre of Research Excellence
- HDRUK Digital Innovation Hub

### King's College Hospital

- NIHR BRC + NIHR CRF
- King's Health Partners AHSC
- South East NHS GMSA partner
- CRUK research centre & Francis Crick Institute
- BHF Centre of Research Excellence

### Newcastle upon Tyne Hospitals

- NIHR BRC + NIHR CRF + NIHR PRN + NIHR Medtech and Invitro Diagnostics Co-operatives (MICs)
- Host of the NIHR CRN North East and North Cumbria
- Newcastle Health Innovation Partners AHSC
- Lead North East & Yorkshire NHS GLH
- CRUK research centre
- HDRUK Digital Innovation Hub

### Sheffield Teaching Hospitals

- NIHR BRC + NIHR CRF
- Host NIHR CRN for Yorkshire and Humber
- North East & Yorkshire NHS GMSA partner

### Cambridge University Hospitals

- BRC + NIHR + CRF + NIHR BioResource
- Cambridge University Health Partners AHSC
- Lead East NHS GLH and host GMSA
- CRUK research centre & institute
- BHF Centre of Research Excellence

### Imperial College Healthcare

- NIHR BRC + NIHR CRF
- Host NIHR CRN North West London
- Imperial College AHSC
- North Thames NHS GMSA partner
- CRUK research centre & Francis Crick Institute
- BHF Centre of Research Excellence
- HDRUK Digital Innovation Hub

### University College London Hospitals

- NIHR BRC + NIHR CRF
- North Thames NHS GMSA partner
- CRUK research centre & Francis Crick Institute
- HDRUK Digital Innovation Hub
- UCLPartners AHSC

### Guy's and St Thomas'

- NIHR BRC + NIHR CRF
- Host South Thames NIHR CRN
- King's Health Partners AHSC
- Lead South East NHS GLH and host GMSA
- UKRI funded Medical Imaging and Artificial Intelligence Centre for Value-Based Healthcare
- CRUK research centre & Francis Crick Institute
- BHF Centre of Research Excellence
- HDRUK Digital Innovation Hub



- Shelford trusts led **8 of the 13 Genomic Medicine Centres (GMCs)** established to drive delivery of the 100,000 Genomes Projects and are now integral partners within the new Genomic Medicine Service Alliances (GMSAs)
- Shelford trusts are partners in **7 of the 8 Academic Health Science Centres (AHSCs)** in England.
- All **10 Shelford trusts are partners in NIHRs 20 Biomedical Research Centres** - collaborations between world-leading universities and NHS organisations that bring together academics and clinicians to translate lab-based scientific breakthroughs into potential new treatments, diagnostics and medical technologies.
- All **10 Shelford trusts are active partners in the NIHRs 22 Clinical Research Facilities (CRFs)** - purpose built facilities in NHS hospitals where researchers can deliver early-phase and complex studies.
- All **10 Shelford trusts are part of the 14 Experimental Cancer Medicine Centres (ECMCs)** across England, funded by the NIHR in partnership with Cancer Research UK.
- The life sciences clusters which Shelford organisations are part of, feature individually and collectively, in every stage of the **UK Life Sciences Vision**. These ecosystems have delivered over 20 Nobel Prizes in life sciences over the last 20 years, generated thousands of new companies and been a major driver of UK economic growth.

Aspirations & deliverables to promote the place the NHS has to occupy in the UK’s vision for global success in life sciences

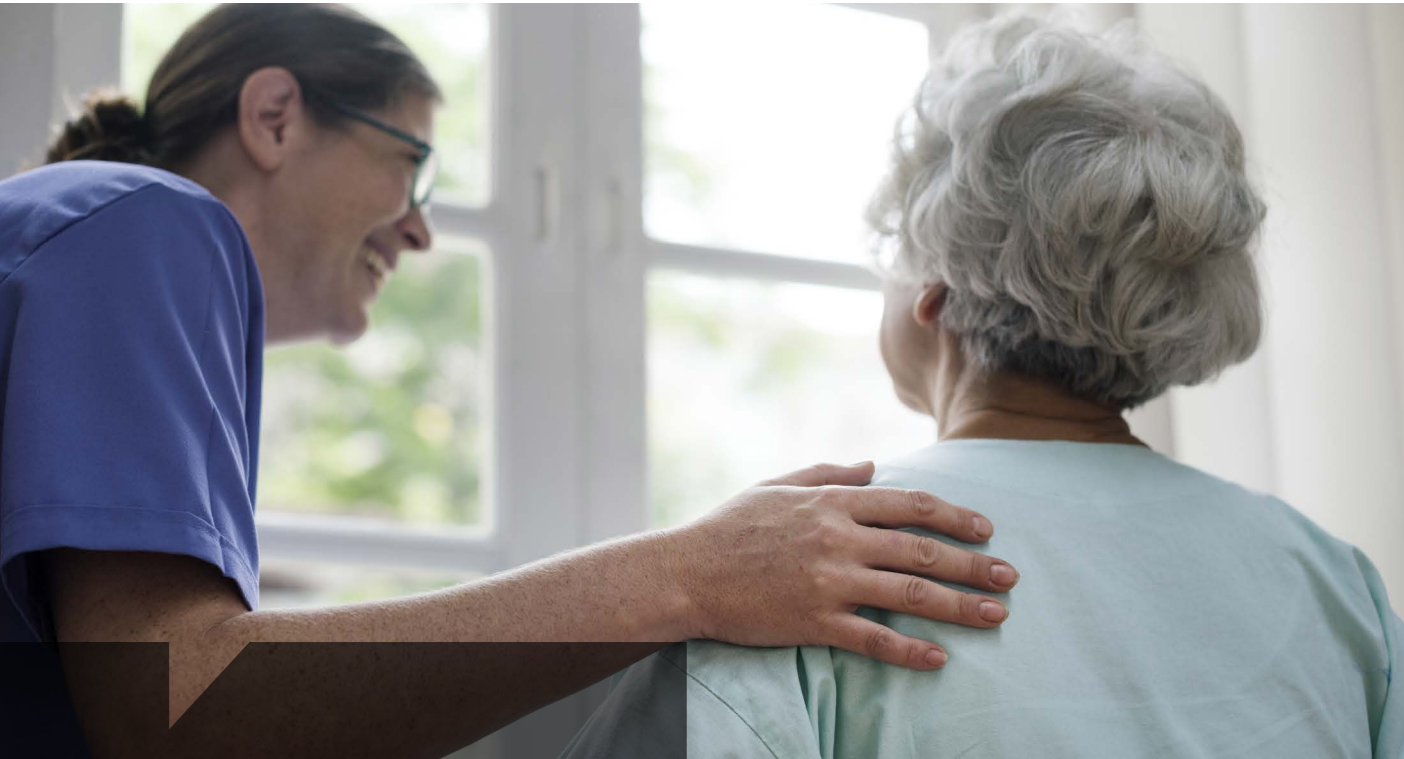
	Aspirations	Deliverables
Supporting Partner	<ul style="list-style-type: none"><li>Inform policy of NHS life sciences contribution</li><li>Leverage research anchors for population benefit</li><li>Promote NHS globally for commercial research</li></ul>	<ul style="list-style-type: none"><li>Develop advanced policy advisory function with partners</li><li>Develop strategic vision for regional life sciences clusters</li><li>Strengthen adoption of innovation, working with national bodies</li><li>Develop strategic vision for how the UK can amplify commercial research</li></ul>
Initiating Partner	<ul style="list-style-type: none"><li>Leverage research anchors for population benefit</li><li>Promote NHS globally for commercial research</li><li>Build capability through employment &amp; skills [see Chapter 3]</li><li>Accelerate deployment at scale for the benefit of patients and competitiveness of UK life sciences sector</li></ul>	<ul style="list-style-type: none"><li>Develop new models to improve access &amp; outcomes in deprived &amp; remote areas</li><li>Establish networked capability as a digital &amp; health tech test bed for real world evidence</li><li>Develop a business model for growth in commercial trials, scalable across the NHS</li></ul>

“Successful life sciences ecosystems will serve to address population health needs and drive economic regeneration within our local communities”

**Dr Bob Klaber**  
Director of Strategy, Research and Innovation, Imperial College Healthcare NHS Trust and Chair of the Shelford Directors of Strategy subgroup

chapter 6

# ANCHOR COLLABORATIONS



The Marmot Review 10 Years On report states that since 2010 successive governments in England have not prioritised action on health inequalities and some policies have had a detrimental impact. The data in the report shows that Government spending has declined in key social determinants of health - between 2009/10 and 2018/19, Government spending as a percent of GDP declined from 42 per cent to 35 per cent - and it is also now allocated in a less equitable and more regressive way.

In 2021, the IFS Deaton Review of Inequalities published a New Year’s message, which presented evidence on how the COVID-19 pandemic has both illuminated existing inequalities and accentuated them.

- Key findings highlighted the effect the pandemic has had on:
- Labour market inequality: exacerbating inequalities between high & low paid jobs.
  - Educational inequality: with pupils at private schools twice as likely as those in state schools to get daily online lessons during lockdown.
  - Mortality: between March and July 2020, mortality rates from COVID-19 were twice as high in the most deprived areas as in the least.
  - Racial inequality: mortality rates from COVID-19 among some black groups have been twice those among white British.
  - Generational inequality: through 2020, pensioners on average reported becoming financially better off, whilst the young have borne the brunt of job and income loss.

The concept of **anchor organisations** has evolved in response to the challenge of improving population health outcomes and reducing deeply rooted inequalities. The role of NHS providers as anchors extends significantly beyond the diagnosis and treatment of ill health to address population health & inequality by influencing the wider determinants of health. Anchor organisations are defined in part by their purposeful undertaking of strategic and operational decisions which seek to effect these wider determinants. Their scale and the fact that they are tied to the place in which they are based are defining characteristics of an anchor.

Opportunities to effect wider determinants span the public policy spectrum and extend beyond the four walls of a hospital; partnerships is therefore an essential capability for an effective anchor organisation. **Anchor collaborations** describe

the communities of organisations which can work together to amplify their anchor mission through collective action.

There is also a broader policy context of levelling up, which the anchor agenda needs to position itself within. The Government have given levelling up a prominent place in their policy agenda, including through programmes of investment targeting towns and cities considered in greatest need of economic regeneration.

The Shelford Group recognises the potential for anchor collaborations to bind NHS, local government, charitable, university and commercial partners together in addressing common and synergistic priorities. These synergies are evident throughout our new strategy. Realising the potential of the NHS as an anchor is critical to long term delivery across all of our ambitions.

2019	2020	2021
Shelford Group CEOs initiate nascent programme of work on population health and NHS anchors	<b>February 2020</b> - Health Foundation publish <i>The Marmot Review 10 Years On</i>	<b>2021</b> - NHS England & Health Foundation launch Health Anchors Learning Network
<b>August 2019</b> - Health Foundation publish <i>Building healthier communities: the role of the NHS as an anchor institution</i>		<b>January 2021</b> : IFS publish <i>Deaton Review of Inequalities: a New Year’s message</i>
<b>December 2019</b> - Conservative election manifesto promises on levelling up, including a £3bn National Skills Fund		<b>2021</b> - Government White Paper on Levelling Up expected



In 2011 health and care accounted for

**up to 9.8% of gross value added**

across their local economies in Shelford city-regions

**6.5%**

**unemployment rate**

in our most deprived city regions, compared to the **national average of 4.9%**

Action on **climate emergency** is a priority across the **NHS**. Shelford trusts reductions in carbon admissions have reduced by as much as **41% in 2020/21**

**£200 million**

per annum: investments in local economy supply chains by individual trusts



**6 out of 10**

Shelford Group organisations procured **100% of their electricity from renewable sources**

Aspirations & deliverables that realise the potential of the NHS as an anchor to effect health inequalities and population outcomes

	Aspirations	Deliverables
Supporting Partner	<p>Form the Shelford anchor mission</p> <p>Span boundaries to form new delivery coalitions</p> <p>Provide a constructive bridge for policy makers</p> <p>Support translation of NHS reform agenda</p> <p>Create investible propositions for levelling up</p>	<ul style="list-style-type: none"><li>• Programme spanning multiple sectors to deliver levelling up</li><li>• Thought piece describing vision for NHS in levelling up</li><li>• Produce social impact reports in collaboration with NHS Quest</li><li>• Join up learning from unique Shelford regional roles</li><li>• Share insights to inform local anchor strategies driven by interdisciplinary group</li><li>• Support reforms to integrate care &amp; share insights on Provider Collaboratives</li><li>• Develop investible propositions across multiple funding sources</li></ul>
Initiating Partner	<p>Form the Shelford anchor mission</p> <p>Support translation of NHS reform agenda</p>	<ul style="list-style-type: none"><li>• Launch Shelford strategy describing ambitious anchor agenda</li><li>• Provide connections across government for integrated policy</li></ul>

“Collaboration between the NHS and wider civic partners is critical in how we address the social determinants of health”

Sir Mike Deegan  
Chief Executive,  
Manchester University NHS  
Foundation Trust

# DELIVERY & IMPACT

Our new strategy emphasises the value of partnership working to driving delivery of our aspirations. As an intimate community a primary vehicle through which the Group generates value are the spectrum of sub groups. These span all executive functions and extend to a wider breadth of professional groups and specialist portfolios. We will harness the expertise and experience across these communities to provide leadership and provide bandwidth required across our agenda. This creates a strategic platform for our **policy advisory, shared learning** and **joint programmes** of work.

Realising the depth and breadth of expertise across the Group is enabled by the central Shelford team, which bring a combination of **policy, project** and **events** expertise to amplify the Group’s collective impact. This team will support the detailed delivery plans which underpin a number of the key deliverables which have emerged from this strategy, establishing effective relationships with partners organisations and securing additional investment where collective action is warranted.

## Policy

A continuing priority for the Group will be sustaining trusted relationships with national decision makers, ensuring that our contributions provide valuable insights which support the initiation, design and implementation of national policy.

## Shared Learning

Building on the frequent and substantial amount of tacit and internal shared learning to develop more structured and external facing outputs. This includes working in partnership with others to accelerate solutions which address the UK’s health priorities.

## Shared Programmes

Learning from the business models and operationalisation of existing programmes - particularly the Safer Nursing Care Tool - to establish new shared capabilities & collective outputs where the Group occupies a specific niche or has a critical mass of expertise.

# DELIVERY THROUGH PARTNERSHIP

Understanding where the group has a unique role and where it is a supporting partner

## APPROACH TO DELIVERY

### SUPPORTING PARTNER

Priorities characterised by their **broad relevance** across a large number of health, care and life sciences organisations. These are areas where Shelford has a contribution, but it is not unique and will function as a supporting partner.

Examples of what we will do as a **supportive partner** include:

- Tackling elective backlogs & urgent care
- Improving equality, diversity & inclusion
- Delivering integration of care
- Informing local anchor strategies
- Shaping reforms to the capital system

### INITIATING PARTNER

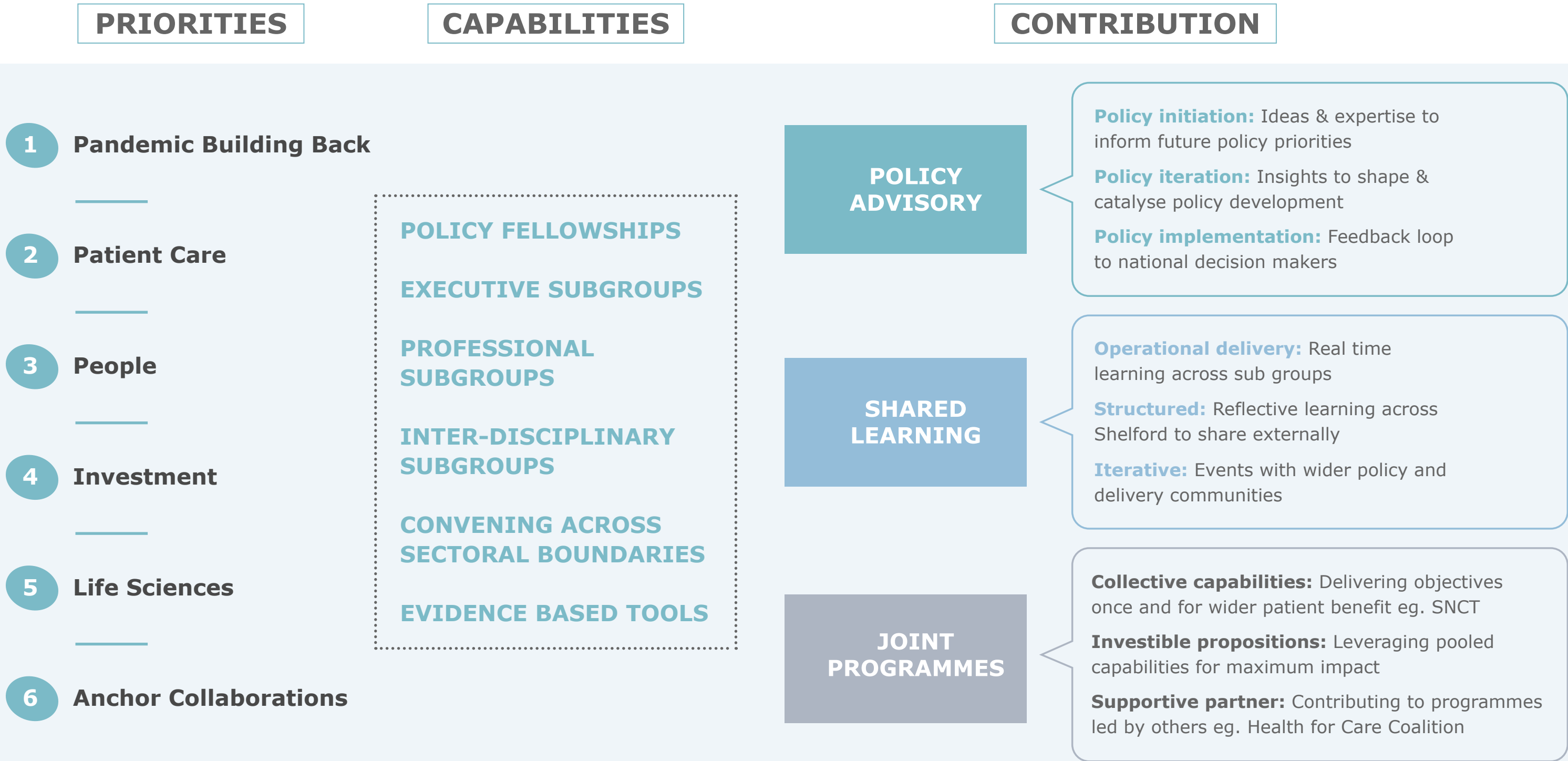
Priorities where the Shelford Group accounts for a significant proportion of NHS capability - such as specialist care and life sciences. These are areas where Shelford may have a **unique contribution or access to scarce expertise**.

Examples of what we will do as a **initiating partner** include:

- Learning from our pandemic experience
- Leveraging training capabilities in new ways
- Improving outcomes in specialist services
- Providing large scale testbeds for innovation
- Developing models to expand access to trials

# CAPABILITIES & CONTRIBUTION

Harnessing our capabilities to form a meaningful contribution





We look forward to working with partners across health, care and life sciences sectors to address the shared priorities which we now face.