

COVID-19 NEXT STEPS: A FRAMEWORK

The COVID-19 pandemic has widespread and profound implications. Many of these concern the NHS directly and with immediate effect; others have a longer term, often more complex impact. The timing, scale and impact will be uncertain for many months ahead as the understanding and modelling of the COVID-19 continues to build and refine from accumulating experience. The progress and timeline for developing an effective vaccination programme at population scale and also potential new treatment options, further complicate planning.

This document provides a basic framework to support organisations and systems in their planning efforts to secure a successful stabilisation and recalibration across the health and care system. The framework draws on the insights of executives across the Shelford Group, learning from other crises and contemporary analysis from leading think tanks.

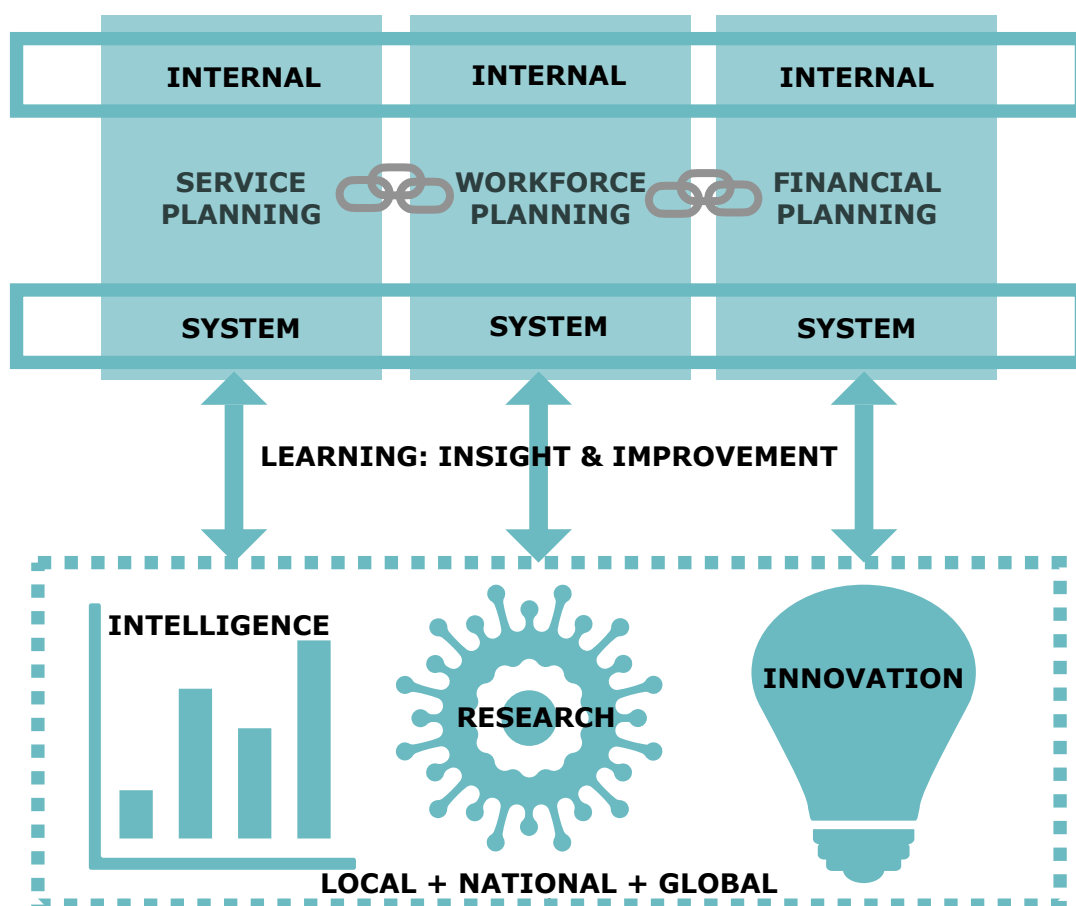
Our framework considers integration across three dimensions:

- i. **Internal:** service delivery, workforce and financial planning
- ii. **System:** externally with ICS partners across health and social care
- iii. **Learning:** planning across workforce, patient services and finance will draw on local, national and international sources of intelligence, innovation and research

There is a high degree of interdependency across these three dimensions. For example, in considering service delivery, it will be necessary to understand capacity across system partners, be informed by sound business intelligence and have clarity over what COVID-19 related innovations should be retained for the long term. These dimensions need to be considered together in shaping the operating model to bring the NHS to the best position achievable over the next 12-24 months.

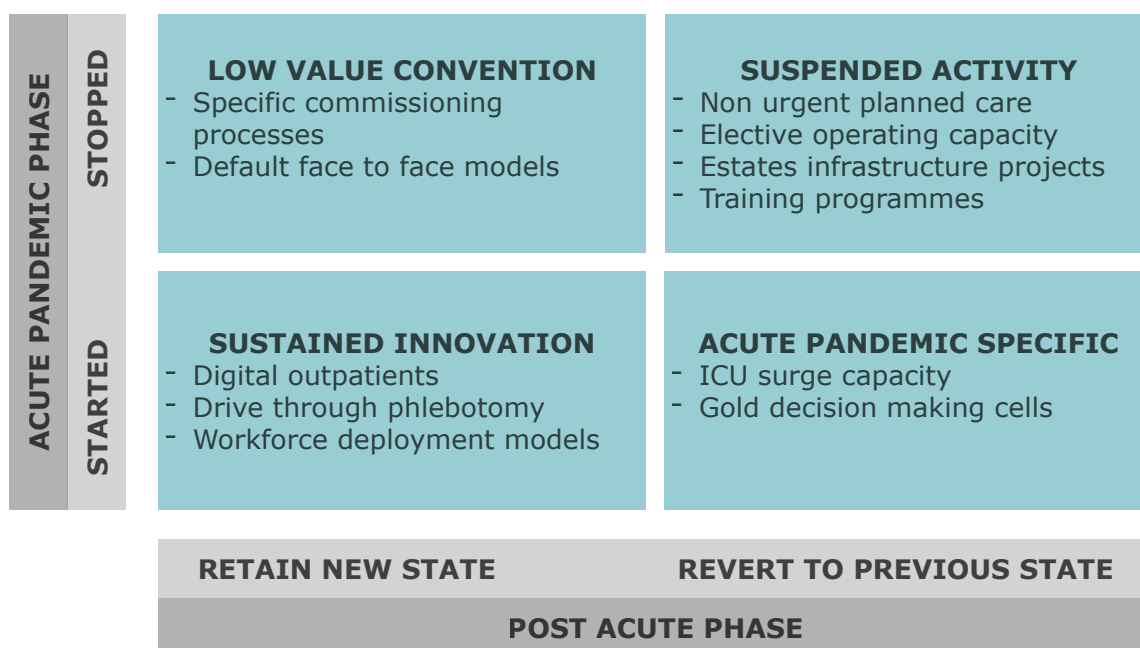
Considerations pertaining to the design of national policy are outside scope for this document and are subject to separate discussions. The experiences and learning across the Group will be used to inform national policy.

Figure 1: Concepts for planning



Planning across these different domains can help inform an organisation's approach to defining and executing different phases which follow the maximum point of escalation during the pandemic response. This document considers service planning, workforce planning and financial planning separately, highlighting internal, system and learning dimensions which are relevant to NHS provider organisations; in particular large teaching hospitals responsible for specialist services, teaching and research at a regional level. Another conceptual approach to understanding future priorities is to consider what activities started and stopped as part of the pandemic response, and which of these should start or stop as the response progresses beyond the acute phase.

Figure 2: Decision making on retaining and reverting¹



*Illustrative examples provided in figure 2; not a comprehensive appraisal

It is worth reflecting that this is not a static decision matrix; the situation is dynamic and complex. Therefore, far more disaggregation of the "post acute phase" is required to differentiate between optimal choices which will change depending on the timeframe in question. For example, the point at which some activities are restarted may not be until several months after the peak of acute pandemic pressures. In addition to the four states set out in figure 2, there is a fifth concerning decisions to develop new services required to cater for new needs (staff, patient and population) after the acute response to COVID-19.

In addition to local approaches to phases which follow the height of the acute response, it is worth highlighting what the formal national planning guidance states. Appendix 1 sets out specific details from the 2017 NHS England pandemic influenza operating framework. This specifies what responsibilities were considered to be national, regional and local in the *recovery* phase of the response. National planning documents adopt the term *recovery* as part of the formal nomenclature in describing distinct phases of the pandemic response.

On 14 May, NHS England and Improvement published an operating framework for urgent and planned services in hospital settings during COVID-19.² The framework sets out five domains containing principles and expectations to focus delivery across local healthcare systems.

- i. Careful planning, scheduling and organisation of clinical activity
- ii. Scientifically guided approach to testing staff and patients
- iii. Excellence in Infection Prevention and Control
- iv. Rigorous monitoring and surveillance
- v. Focus on continuous improvement

1. WORKFORCE

Amongst the workforce considerations governing decisions on the design of and decision making within different phases, **staff welfare** will be paramount. There has been, and will continue to be, an impact on staff resulting from the response to the height of the pandemic. This will have both acute and long term repercussions. Some of these considerations are explored below, drawing on evidence from other serious infectious disease events and evidence from the current pandemic. A further category to consider concerns the range of factors which may drive changes in workforce supply. Some of these may have a negative impact (such as potential increases in retirement or difficulties in overseas recruitment due to extended controls on international movement), but some will be positive. For example, there is an **opportunity** to harness the positive aspects from the pandemic response as a force for strengthening the NHS and wider system workforce. Some organisations are also reflecting on the cultural dividend that could result from the pandemic, with people having an amplified appreciation of each others' roles and value, both within and across organisational boundaries.

Psychological challenges

Reflecting on previous global events, the 2003 SARS outbreak provides a source of robust research into the impact on staff. Just over 8,000 people were unwell with SARS globally (CDC 2005) compared to a live count of over 4.1m COVID-19 diagnoses as of 13 May 2020 (WHO).^{3,4} Although the global scale is vastly different, the insights generated are likely to hold relevance for the current pandemic.

WORKFORCE PLANNING QUESTIONS

- i. What is the expected mental health impact on our workforce?
- ii. What other factors may drive changes in workforce supply?
- iii. How is this quantified?
- iv. How is reliable intelligence obtained?
- v. What solutions work best for our workforce?
- vi. What workforce innovations do we want to retain or introduce?
- vii. What is the impact on workforce in partners across the wider health and social care system?

One of the countries affected by SARS was Hong Kong. In 2003 the Hong Kong SARS Expert Committee published their report into their experience of the SARS epidemic. Many of the findings and recommendations are prescient to the COVID-19 pandemic. Considering workforce implications, the report comments:

"Not only were healthcare workers directly affected by SARS, many also experienced the trauma of seeing infected colleagues suffer the debilitating effects of the disease. Most worked indefatigably in stressful and difficult circumstances, and all were exposed to the fears and anxieties of dealing with a new and unexplained disease." [Chapter 12, page 135]⁵

The experience from other countries response to SARS provides valuable insights concerning the nature and magnitude of impact on staff. Health care workers had a higher rate of SARS infection than any other group, representing more than 20% of all the people who contracted SARS.

- Taiwan: 68% reported a high level of stress and 57% were found to have experienced psychological distress.
- Hong Kong: 78% reported a high level of stress and, about 57% were found to have experienced psychological distress.⁶
- Canada: a high degree of distress was experienced by 29–35% of hospital workers.^{7, 8}
- Beijing: About 10% of the respondents experienced high levels of post traumatic stress (PTS) symptoms since the SARS outbreak. Respondents who had been quarantined, or worked in high risk locations such as SARS wards, or had friends or close relatives who contracted SARS, were 2 to 3 times more likely to have high PTS symptom levels, than those without these exposures.⁹

Symptoms described by staff included intensive intrusive imagery, distressing recollections or dreams, and psychological stress reactions on exposure to stimuli linked to the trauma, feelings of detachment or derealisation, and acting and feeling as though the trauma were recurring.¹⁰

Intelligence is already available concerning the impact of the current pandemic on staff. A study from China reports findings from a survey of 1,257 healthcare workers across 34 hospitals.¹¹ A significant proportion of participants reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%) and distress (71.5%), with frontline health care workers engaged in direct diagnosis, treatment and care of patients at significantly higher risk of experiencing these symptoms. Global evidence informs the need for adopting multifaceted, evidence based approaches to burnout during the pandemic.¹²

Turning to the UK, polling data from the IPPR¹³ obtained during the pandemic response provides an early indication of the extent of staff welfare concerns. IPPR and YouGov polled 996 healthcare employees across the UK, on how COVID-19 has impacted their physical health, mental health and welfare. Fieldwork took place between 2 April and 7 April. The IPPR polling data indicates that 1 in 2 workers across the UK feel their mental health has declined with almost 1 in 2 having also experienced detriment to their family's safety. Furthermore, one in five health professionals across the UK say COVID-19 has made them more likely to leave the profession, with 16 percent more likely to want to stay. Mental health issues were far more likely amongst young professionals, with as many as 71 per cent reporting detriment. Nurses and midwives (53 per cent) and nursing assistants (54 per cent) were the professional groups most dissatisfied with steps taken by the government to support workers' mental health.

Financial security is also a concern for the NHS workforce, with over a quarter of IPPR survey respondents highlighting a deterioration in their finances and financial security as a result of the pandemic. This builds on a context of existing concerns regarding in-work poverty across the health and social care workforce.

Before the Covid-19, the evidence showed:

- 38 per cent of NHS staff in England were reporting feeling unwell, due to work related stress. The cost, per health employee, of mental ill-health was between £1,794 and £2,174 each (Health Education England, 2019).¹⁴
- 40.3 per cent of NHS workers had felt ill due to work related stress (NHS Staff Survey, 2019).¹⁵
- Work related stress accounts for 30 per cent of NHS work absences, at a cost of £300 to £400 million (NHS Employers, 2019).¹⁶

In addition to the baseline concerning staff wellbeing, both the NHS and social care systems were experiencing significant workforce shortages, which combined total over 200,000 staff.

As the pandemic has progressed an increasing amount of workforce data and intelligence has become available. The insights generated by knowing the details of absence rates, risk profiles, the impact on staff from BAME backgrounds and nosocomial transmission, are critical to the unfolding response. The implications carry both immediate and long term significance and it is important that effective mechanisms exist for generating evidence in these areas, synthesising intelligence, updating workforce modelling (nationally, regionally, in systems and within providers) and shaping decisions in a transparent way. As the health and care sector, as part of wider society, approach subsequent phases of the pandemic response it will be essential to have reliable and rapid sources of intelligence concerning transmission of COVID-19 within the workforce. In this regard it is worth reflecting that key areas of best practice (such as testing of symptomatic, then of asymptomatic staff) emerged from leading provider organisations, with a perhaps inevitable lag time from national policy.

Developing solutions

The significant workforce needs that will result from the pandemic will place commensurate demands on occupational health services across the NHS. It will be important to engage occupational health experts, alongside staff, unions and employers, to develop a comprehensive package to ensure needs are met. The scope need to recognise front-line hospital, community and care sector staff, and also across a wide range of support teams (for example teams delivering on procurement materials, management staff, wellbeing support,

operational HR, to name but a few) and equally to the leaders and operational managers who have organised and delivered the COVID-19 response in a rapidly evolving, dynamic and uncertain operating context over such a prolonged period of time and unlike anything else experienced.

HEE recommendations to improve staff wellbeing before the pandemic will now have amplified relevance for the NHS. These included provision of post-incident support for NHS frontline staff; a dedicated support service, open 24 hours a day; fast tracked referrals; improved rest spaces and NHS 'wellbeing guardians' in every NHS organisation (Department of Health and Social Care, 2019).¹⁷ In addition to these, the NHS should seek to learn from international practice, particularly drawing on the lessons from those countries responding to SARS.

Staff safety

Social distancing in the workplace is critical to maintaining a safe working environment in areas where staff have limited access to PPE. As non-COVID services are ramped up there will be a significant challenge in ensuring social distancing practices are observed. This will be particularly challenging in areas where the physical design of a space acts as a hard constraint, for example in diagnostic laboratories.

Realising workforce opportunities

Securing changes in working models that have been tested throughout the pandemic provides a further seam of solutions to factor into workforce planning. For example, the Shelford Group Lead Healthcare Scientists have identified an opportunity to update training curricula and embrace further role innovation drawing on insights from the pandemic response. One specific area of interest concerns the opportunity to "upskill" certain roles, not least to build service resilience in services which are dependent on single practitioner expertise. This would need to connect closely with service and financial planning given the implications for service delivery models and the need for investment to support the transformation. Others across the Group have commented on the opportunity to reconsider staffing ratios and divisions of labour, reflecting on learning from the pandemic response.

Some organisations have also reported innovations in their communication with staff. The use of **technology**, such as MS Teams, Facebook live and Zoom (see online [case study](#) from Imperial College Healthcare), have been deployed to deliver large scale engagements with staff and engagement across clinical communities such as virtual grand rounds. In a similar vein is the use of technology for meetings, ranging from informal team discussions to formally constituted board meetings. Technology has the potential to transform the delivery of education and training, with some universities now offering entire undergraduate programmes through online platforms.¹⁸

There exists a further category of workforce opportunities relating to the potential for large teaching hospitals to function as **anchor** organisations for their city-regions. In the context of the pandemic, this may include providing access to PPE and diagnostic testing for the workforce across a broader spectrum of health and social care partners; in the longer term this could extend much more widely across the local economy and form a key pillar of controlling the potential re-emergence of the pandemic up to the point where a vaccine is developed. The implications for mass, repeated, testing across the workforce are profound and requires robust planning in the context of ensuring both supply and welfare of the workforce. Occupational Health departments and Infection Prevention and Control teams can similarly provide a trusted source of expert knowledge and advice to employers across a region. These types of activities carry a further benefit of reinforcing the connection the local population has with its NHS providers and present channels through which wider population health objectives could be advanced.

Regional NHS anchor organisations can also undertake a more significant role in attracting talent into health and care services. The immediate needs - addressing long term vacancy rates to support fatigue across the incumbent workforce, expanding rehabilitation services, making diagnostic testing and tracing for COVID a success - would benefit from the leadership of large centres with a critical mass of expertise in recruitment and training, working on behalf

of their regional partners. Recruitment needs across health and care can also consider the impact of the pandemic on employment across other sectors; combined with a dynamic approach to the orientation of education and training capabilities in partnership with universities, NHS anchors can ameliorate rising unemployment locally and develop a more sustainable, locally rooted, model for addressing workforce shortages.

2. PATIENT SERVICES

There is an advanced understanding across providers that planning patient services will need to accommodate high levels of **acute** COVID-19 patient needs for a sustained period. Early modelling may make this quantifiable to relatively high levels of accuracy at system and provider level. Perhaps more challenging will be understanding the emergence of new **long term** and in some cases **chronic** COVID-19 patient needs. In addition to this there may be a shift in the profile and complexity of **non COVID-19** patient needs in areas where patient presentation has been delayed or delivering care deferred.

Planning intelligence

Understanding the latest intelligence on the pandemic and how it differs across regions will be a critical component of local planning and recovery. Recent evidence demonstrates a significant variation across regions in the phase and nature of the pandemic:

- **Deaths:** recent reports highlight no new deaths in London hospitals over a 48 hour period. The Financial Times are maintaining updates to demonstrate the differences in the pandemic curve between regions.
- **Regional variation of R:** research from the Cambridge MRC Biostatistics Unit shows significant regional variations in R, from 0.4 in London to 0.8 in the North East and Yorkshire.
- **PHE analysis of care homes:** data up to 17 May shows that the cumulative percentage of care homes reporting suspected or confirmed outbreaks ranges from 27 percent in the South West to four in the North East. Add information on Local Authority level detail on care home infections.

Workforce planning assumptions will require regular updating as the pandemic and government policy evolve. Variables which are likely to feature in local workforce planning models include:

- **Sickness absence:** both COVID and mental health illness related to the COVID response.
- **Shielding:** accounting for staff subject to shielding requirements.
- **Quarantine:** for staff returning from overseas required to quarantine for 14 days.
- **International recruitment:** subject to significant constraints over the short term.
- **Isolation:** with the likely increase in number of staff having to isolate as the national test, trace and tracking model is rolled out in June.

It will be important for these workforce constraints to inform both service and financial planning in an interactive and integrated way at local, regional and national levels.

Planning for COVID-19 patient needs

The NHS needs to maintain resilience to ongoing levels of COVID-19 patient infection. Considering the acute demand from COVID-19, there are a number of scenarios worth outlining, which are not mutually exclusive:

- **Long tail:** there is a prolonged demand of inpatient and intensive care facilities for patients with COVID-19; these will be significantly lower than the levels experienced during the peak of the pandemic but significantly higher than the aggregate level of demand experienced before the pandemic.
- **Multiple peaks:** there is a second peak, or further multiple peaks, in COVID-19 patient numbers, which may exceed the levels of demand experienced during the height of the

SERVICE PLANNING QUESTIONS

- i. What is the expected profile of our workforce capacity?
- ii. What is the expected profile of service capacity across health and social care system partners?
- iii. What is the expected profile of COVID and non-COVID population needs that we need to cater for?
- iv. How is reliable intelligence obtained?
- v. What service innovations should be retained?

initial peak. Understanding the potential seasonality¹⁹ of coronaviruses will be worth exploring further and factoring into models of potential demand across seasons.

- **Mutation:** the virus evolves, resulting in a new pandemic, potentially featuring annually.

Beyond the acute phase of COVID-19 patient needs there is a considerable demand for rehabilitation. For some patients there will be new chronic, long term needs that the NHS will need to cater for. The British Thoracic Society²⁰ has a range of resources to support clinical service design and delivery, with rehabilitation receiving specific focus. There has also been a particular emphasis from some parts of the country in achieving a significant long term expansion in critical care capacity. Where these planning conversations are being undertaken, there has been a recognition over the premium which will come with the ability of that new capacity to flex up and down to respond to spikes in need and avoid extended periods of low utilisation.

Testing and PPE are two areas which will present a direct tension between COVID and non COVID services. For PPE, supplies will prove essential to the safe expansion of non COVID services. For testing, the reintroduction of non COVID services will place an additional burden on laboratory capacity, including PCR which is critical to achieving high levels of COVID diagnostic testing.

HIGH LEVEL ASSUMPTIONS

An example of the high level assumptions being considered in some systems is set out below:

- i. The impacts of initial wave Covid-19 demands on bed capacity will have peaked through spring 2020 and will abate gradually to reach pre-April levels through July 2020.
- ii. The levels and timings of continuing Covid-19 impacts upon critical care bed capacity and resilience in hospitals after this initial wave has abated, will be a material uncertainty around which future operational planning must continue to navigate and remain adaptable for a further period likely to extend for at least 21 months.
- iii. The same capacity and resilience considerations apply equally fundamentally across community based services and in particular adult social care, including in relation to care home and nursing home capacity.
- iv. Development of population-scale testing, contact tracing and ultimately pre-screening programmes will have a critical bearing on how volume-based interactions with patients and users across public services can be re-established without generating significant risks of further Covid-19 surge events.
- v. These considerations will therefore each be significant factors in developing and adapting operational plans and delivery across the NHS at least throughout 2020/21 and 2021/22.

The development and refinement of planning can be considered at various levels:

At **locality** level - the locus for planning out of hospital care.

At **system** (STP/ICS) level - coordinating the roles of different hospitals across geographies.

At **regional** level - where greater economies of scale are relevant (eg. procurement & Nightingale models) and where hospital services cut across multiple systems (eg. specialised cancer services).

It will be important for the **national** NHS financial framework to be clear about where planning and decision making responsibilities lie.

Planning for non COVID-19 patient needs

i. Elective waiting lists

By the end of February 2020 the number of patients on elective waiting lists was 4.4m. This compares to 2.3m, in January 2009 when the number of patients waiting was at its lowest.²¹ In May 2020 the Health Foundation published a paper²² on the scale of the challenge the NHS now faces. Their analysis explains that in order to recover the 18 week standard with the number of patients before the pandemic, the NHS would have needed to treat an additional 500,000 patients a year for the next 4 years. NHS providers will all have recognised tools for prioritising the reactivation of elective care, reflecting the risk to patients from deferring planned treatment. Some of this reflects **national** guidance specified by NICE and NHS England, such as in the prioritisation of systemic anti-cancer treatments²³ and surgical prioritisation.²⁴ It is also worth considering that for some services, reinstating previous levels of service (quality and capacity) will be significantly more difficult and take appreciably more

time, than what was required to scale back services at the start of the pandemic response. Communication from the NHS CEO and COO on 29 April sets out further detail for developing the national operating model for the rest of 2020/21, along with service level information concerning which urgent planned services should be prioritised by providers in their efforts to expand capacity during May.²⁵

In the short term, an exhausted hospital system will need to focus primarily on catching up with backlogs of cancer, clinically urgent and risk-stratified semi-urgent cases, whilst beginning to assess the accumulated impact of long waiting patients and overall waiting list size.

ii. Cancer pathways

Cancer services have been a particular area of concern, due both to the potential for patient outcomes to be impacted by late detection during the pandemic as well as the complexity associated with safely expanding outpatient, diagnostic and treatment capacity. There have been some clear messages from the National Cancer Director, Dame Cally Palmer, regarding the strategy for cancer services. Contributing to the Health and Social Care Select Committee on 01 May, Dame Cally highlighted the restoration of cancer services being dependent on ensuring the segregation of workforce and treatment space to ensure cancer patients can be treated in a COVID-19 free environment. Furthermore, central triaging makes the NHS better able to flex capacity and distribute demand across organisational boundaries in new ways compared to before the pandemic, emphasising the role that cancer hubs had undertaken since the start of the pandemic. Restarting cancer diagnostics raises particular complexities and will require protected capacity across diagnostic modalities. Retaining access to independent sector facilities is also considered essential from the national perspective.

iii. Social determinants

Wider burdens of adverse health impacts across the population at large increasingly feature in the strategic plans for NHS providers in their role as anchor organisations for their local areas. Economic and social impacts of unemployment, deprivation, social isolation, child poverty and other systemic drivers of ill health are demonstrably exacerbated by the lockdown measures taken in the short-term crisis response period.

iv. Mental health

Specific and significant post-traumatic burdens of adverse health impacts across the NHS and care sector workforce have been detailed earlier in this paper and need to be accounted for in the planning of clinical services. Added to these are the medium and longer term impacts of lockdown and related isolation periods on the mental health of the wider population.

v. Coordination of planning

In addition to the national guidance, providers have emphasised the value of a coordinated **system** level response to the pandemic. Areas reporting the most positive experience of their system approach highlight the regularity of engagement and clarity which the emergency response governance has created. This is seen as an important feature of the planned reintroduction of elective services, to both coordinate an optimal configuration of services locally as well as to avoid a disequilibrium emerging where patients within a system end up experiencing differential levels of service.

vi. Challenges in delivering a safe environment for care

Leads from the Shelford Group have relayed challenges in addressing the concerns of non-COVID patients concerning the safety of attending hospital for planned diagnostics and treatments. This brings forward a number of considerations regarding the delivery model:

- **Communication:** with patients to address any misconceptions regarding the level or nature of risk they face, as well as providing clear instruction over measures they will be expected to take. Engaging with patient groups to co-design new care models to address these concerns and mitigate real risks of transmission will be a high priority.
- **Hospital actions to mitigate risk:** considering the evidence available to design service models that reduce the risk to patients and staff. Relevant topics that have been raised in this context include the optimal use of remote monitoring (for example, with impacted cardiac devices), self administration of treatment previously delivered in hospital (requiring

validated training of patients and new clinical governance arrangements), digital technologies for consultations (such as Babylon), utilisation of non-acute facilities (drive through phlebotomy in Sheffield) and designation of COVID hot/cold sites within a hospital group (including possible utilisation of private sector facilities). These are areas where national evidence is likely to depend on proactive innovation and harnessing of expertise within the provider sector, as has been observed with the early approach to staff testing undertaken in Newcastle²⁶ and Sheffield²⁷, and asymptomatic testing in Cambridge²⁸, generating valuable insights for decision making across the wider NHS. Similar opportunities for provider organisations to lead national thinking will be apparent in other areas, with the development of technology and practical approaches to immunological testing being one early area to consider.

- **Patient actions to mitigate risk:** many of the actions undertaken by hospitals to mitigate COVID-19 related risk will require engagement from patients and carers to design the fine detail and implement successfully; remote consultations is one example of this. Some actions will be far more at the discretion of patients to fully determine their successful application. Examples of actions that depend more heavily on patient action include: self monitoring, reporting of symptoms and compliance with state mandated controls (such as social distancing and isolation). The introduction of guidance on the use of face masks in public places from 13 May and the uptake of outbreak tracking apps on mobile phones, will be additional examples that have extended relevance for hospitals.
- **Integrated care:** minimising patient and staff risk will require integrated models of care, spanning boundaries across the NHS and with social care.

CASE STUDY: Community model in SE London

GSTT's COVID-19 command and control structure included a Community command structure, the remit of which included the implementation of the Hospital Discharge Standards, published on 19 March 2020. A partnership response was crucial and the membership of the Community tactical group included both Lambeth and Southwark social care and CCG partners, as well as King's College Hospital, with the group linking into the Lambeth and Southwark multi partner response groups. One of the workstream priorities identified was 'Supporting our care homes in Lambeth and Southwark'. The activities and achievements of this workstream included:

Clinical network development: A clinical network for Lambeth and Southwark was operationalised comprising representatives from care homes, GPs, secondary care professionals and community professionals. This enabled a productive professional relationship between multiple professionals across different organisations and a rapid sharing of new guidance and educational tools. A wide range of problem-solving took place, e.g. sourcing PPE urgently for care homes, urgent medication access, finding a specialist to speak to immediately. The network was also used to advertise local and national webinars and community of practice meetings. A Google Drive of national guidelines/documents was created for easy access to relevant guidance. Multi-organisational Community of practice Zoom meetings have also been trialled in Southwark to aid further discussions and joint problem-solving and planning by e.g. GPs, care homes, palliative care, geriatricians and psychiatry.

COVID tracking: A tracking system was developed to identify care homes with potential COVID outbreaks in order to co-ordinate/advocate additional clinical support. The system used a combination of the Local authority ADASS tracker, feedback from the care home network and a weekly review of hospital admissions. The tracking enabled us to adjust our clinical response to deliver added support where it was needed most.

Geriatrician provision: GSTT and KCH have worked together to cover care home needs, flexibly assisting virtual and face-to-face reviews, regardless of traditional boundaries of responsibilities. There has been much greater clinical input than previously in Lambeth, both virtually and face-to-face.

Flexible acute care: Where current community services were unable to aid an acute need, GPs flexed to delivering interventions temporarily in patients' best interests.

@Home service: An improved pathway for acutely unwell residents in care homes has been co-developed.

Access to palliative medication: The workstream advocated strongly for the provision of rapid access to medications in End of Life (EOL) patients in care homes, the need for which can be rapid in frail older people. An in-hours access pathway was put in place, with out of hours access planned to be signed off via a hospice/hospital EOL pre-pack system.

Carer mental health: There have been a number of psychologist initiatives locally for care workers and we have worked together to collate information on how these can be accessed.

COVID testing: securing laboratory and CCG agreement in Southwark for testing symptomatic residents in care homes.

Conclusions and the future

A key future initiative would be to scope and plan an education strategy together with care homes. This could include **training for care workers** (e.g. using RESTORE2 amongst other things and using coaching and other models rather than "training") and **undergraduate education** (examining how to embed the training of undergraduate nursing and allied health professionals into care homes with appropriate mentorship).

CASE STUDY: Manchester care home support

The context in Manchester before the pandemic was a fragile care homes market, with 150 beds being lost in 2018/19. Providers across the city were already working to create better pathways between Local Care Organisations (LCOs) and care homes. Governance arrangements support this collaborative effort, with Directors of Adult Social Care a core part of the Manchester LCO and Trafford LCO Executive Teams; entering the pandemic response these Directors also became part of the COVID Operational Group across Manchester and Trafford. Highlights from the joint pandemic response across health and care include:

Testing: MFT test all discharges to care homes (99 people by end April). Manchester LCO run a care homes COVID testing service with public health which has tested over 50 homes.

PPE: Care homes PPE is included in the Manchester mutual aid hub and Director of Adult Social Care is on the daily Manchester call to escalate PPE.

Infection control: LCOs in Manchester City and Trafford wrapped additional infection and prevention control (ICP) support into homes managing COVID.

Training: LCO provides ICP training to care homes and social care staff. LCO retrained 600 community staff to be able to deploy into care homes if required.

Expertise: Care homes have access via silver to Manchester LCO ICP team, which will also mobilise nurses into homes to undertake FIT testing, assess patients and provide additional advice. Each care home is now covered by a GP and has a number to ring this service includes:

- An assessment within one hour
- Telephone or video consultation
- Access to previous clinical information via EMIS
- Advanced care planning support/respect/anticipatory drugs
- Clear and agreed pathways between care home links service, primary care and community services and mobilised through Manchester LCO

Embedding innovation

Data published by NHS Digital²⁹ highlights that during the COVID-19 outbreak:

- The number of visits to the NHS website has increased dramatically. On 17 March 2020 visits peaked at 3.4 million, the highest daily total ever;
- Demand for the NHS App has grown rapidly and in March 2020 registrations to use the NHS App increased by 111%, the number of repeat prescription requests made via the app increased by 97%, and the number of patient record views rose by 62%;
- During March 2020, NHS 111 online's average number of users increased by more than 50 times, compared to average usage before the coronavirus (COVID-19) outbreak;
- Pharmacies have seen a large increase in the number of nominations, where a patient chooses which pharmacy they would like their prescription to be sent to electronically. Between February 28 and March 27 2020, more than 1.25 million nominations were received compared to 304,000 the previous four weeks.

As the NHS scales up the use of virtual consultations in response to the government's social distancing measures, digital technology has taken the many stage in many other ways including a contact tracing app³⁰ being developed by NHSX, the COVID-19 Care Assistant³¹ service by Babylon to provide people with updated information about coronavirus, check symptoms and help them get appropriate assistance, as well as the announcement of £500,000 of funding by NHSX³² for innovators who can offer digital solutions to support those self-isolating because of coronavirus.

There have been a number of articles and features published in the US about whether digital will become the 'new normal' in healthcare.³³ There is clearly an opportunity for digital healthcare to become more prominent in healthcare provision in the UK following the COVID-19 outbreak, and this should be a key area of consideration in recovery planning across trusts for improving systems as well as responding to the inevitable increased elective care patient demand.

Beyond digital innovation, there may also be opportunities concerning the effect the pandemic may have had on augmenting the UK populations propensity for higher levels of patient activation. The King's Fund³⁴ have previously highlighted that **activated patients** are significantly more likely to attend screenings, check-ups and immunisations, to adopt positive behaviours (eg, diet and exercise), and have clinical indicators in the normal range (body mass

CASE STUDY: responding to the next phase

Imperial College Healthcare NHS Trust have set out a three stranded approach to planning the next phases of their pandemic response. These focus on **restoration**, **reset** and **reconfiguration** across the wider sector. The restoration phase addresses the period immediately following the height of the acute pandemic response, in particular:

- Maintaining existing gold command arrangements
- Focusing on stepping back escalated capacity, planning red and green pathways for medium term use, maintaining adequate social distancing
- Remaining alert and ready to step up again if demand escalates
- Coordinating redeployment whilst continuing training to support ITU expansion

The reset and reconfiguration phases of Imperial approach emphasise the opportunity for the NHS to move to a new state following the pandemic; services have been transformed in a short period of time and the NHS has worked across boundaries in ways and at a speed many thought impossible. They will also incorporate reflection on how the NHS achieved the best elements of its response and consider what changes should be kept.

index, blood sugar levels (A1c), blood pressure and cholesterol). For example, the experience of COVID-19 may provide a strategic platform to address misconceptions concerning vaccination; should a mass vaccination programme emerge in coming months, the NHS should consider using this as an opportunity to engage people in other important vaccination programmes as well as other initiatives to promote health outcomes.

The establishment of regional Nightingale hospitals presents a further opportunity for transformational thinking. The first calling on these facilities remains the prioritisation of patients with COVID-19. There may however be an opportunity for health systems and regional teams to repurpose this new infrastructure to address other priorities in the medium to long term. Potential options include step down capabilities from acute care, rehabilitation, day care, diagnostic hubs and training centres.

CASE STUDY: Sheffield Teaching Hospitals drive through service model

The laboratory Medicine team at Sheffield Teaching Hospitals 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.

In response to the problem the Laboratory Medicine team worked with FlyDSA Arena Sheffield to establish a drive through service. An open-sided marquee was erected on one of the Arena car parks. The structure was wide enough to accommodate multiple lanes of cars and several phlebotomy stations to allow for scalability dependent upon the popularity of the service. An estimated capacity of approximately 50 to 60 cars or patients is able to pass through the service per hour. Each phlebotomy station was equipped with IT connectivity, allowing requests to be sent via order communications as a preferred ordering system. Written forms are also accepted and label printers allow on demand printing. Following a request from the patient's GP or hospital clinician, the patient drives or is driven to the Arena anytime Monday to Friday 9am – 5pm. No appointment is necessary. After a check for symptoms from stewards outside the marquee, patients drive through the marquee to have their blood samples taken through their car window. After being bled and checked to ensure they are fit to continue on, patients simply drive away and return home.

The service went live on Wednesday 8th April with a soft opening. By the Monday of the second week, the service had exceeded 200 patients per day, running with four phlebotomists. By the third week, after further communications to extend the facility to all patient groups, it was receiving in excess of 300 patients per day. In addition to phlebotomy, other services are contemplating whether the facility may be of use to them. Collection of MRSA swabs for pre-operative patients are being considered, as well as clinical services such as hand and wrist cast removal for fracture patients, or injections for certain patient groups. The site also acts as a receipt point for other samples including urine and sputum, preventing unnecessary visits to Trust and Primary Care sites and limiting risk.

3. FINANCIAL PLANNING

Financial framework

A further iteration of the financial framework for the NHS for this two-year period will need to accommodate the priorities which have emerged from the pandemic. There is an immediate need to understand and quantify the costs associated with service and workforce planning, as well as setting clear financial constraints on the provider sector and local health systems. This may require particular emphasis given the approach to financial management adopted nationally, which places new expectation and responsibility on systems and regions in achieving financial sustainability. The country remains in response mode and is far from overcoming the challenges of the pandemic; reintroducing financial controls therefore needs to be done carefully in order to avoid destabilising the health and social care system. It may prove necessary for there to be a regional differentiation, depending on the extent to which the effects of COVID-19 vary across different geographies. In reintroducing core financial and business processes, the NHS also has an opportunity to consider what learning should be retained from the pandemic response. The potential for a major policy shift away from the purchaser-provider split would have major implications in this regard.

FINANCIAL PLANNING QUESTIONS

- i. What capital investments are planned in the recovery, including digital transformations, equipment and site redevelopment?
- ii. What revenue costs are associated with the recovery?
- iii. What are the costs of workforce transformation?
- iv. How will national processes (eg. Health Infrastructure Plan) change?
- v. What system opportunities and challenges exist?
- vi. What operational model will be adopted for procurement?

A range of indirect variables impacting on health needs and demand for the NHS should be recognised in the national approach. The financial framework will need to take full account of the profound knock-on effects of the economic consequences of lockdown, on key partner organisations connected to the wider health and social care system. The impact on Local Authorities' financial resilience will be profound and in many cases fairly immediate. This risks the stability and sustainability of the social care system and wider public infrastructure, both critical dependencies for an NHS recovery to be sustainable in turn. Some systems are exploring the case for reviewing how care homes are funded if we in order to unlock transformational changes in interface between health and social care. This may demonstrate some parallels with changes to provider funding in the NHS, which increasingly predicate capitated models for allocating resource and are moving away from existing cost per case contracts. Understanding the extent to which the care sector finds these costly to administer and lacking in strategic resilience may generate new insights and opportunities for collaborative working on issues like emergency admission avoidance, infection control, retention, recruitment and career pathways.

Securing capital investments will be critical for all NHS providers and will need to be addressed in the updated financial framework. There is a particular imperative for providers planning large scale redevelopment programmes as part of the government Health Infrastructure Plan (HIP); especially those in phases 1 and 2. Long term infrastructure investments of this nature are unlikely to have a bearing on the stabilisation and recovery planning for patient services over the coming year, but may place significant demands on finance, estates and strategic planning teams who may be required to alter or accelerate redevelopment plans.

More pressing will be the investments required in digital infrastructure and clinical equipment to deliver service plans. The revenue costs associated with recovering constitutional standards is furthermore substantial: the Health Foundation estimate the total direct cost of treating 92% of patients within 18 weeks to be £5.2bn–6.8bn, including elimination of the backlog by the end of March 2024. This does not include additional costs associated with the complexity of delivering planned care as a result of the pandemic, nor any changes in levels or nature of patient demand. A significant proportion of this cost is accounted for in the NHS funding settlement.

Supply chain

The predictability and reliability of the supply chain has been a recurring source of acute concerns throughout the pandemic response so far. The ingenuity and determination of procurement professionals within the provider sector has proven critical in securing essential supplies. This has included working to support national efforts and arranging new supply chain routes into the NHS at speed. In some cases this has been sufficient to enable large providers to offer mutual aid to system partners in health and social care. The subsequent phases of the pandemic response will place ongoing demands on the supply of equipment and materials, with PPE an ongoing priority.

Plans to reintroduce services are proceeding when supplies and the supply chain may not be sufficiently robust. A good example would be exam gloves being on push drop; it is unclear how many services can reasonably restate in a large hospital with products like this still on push drop. It is important that plans to re-establish the supplies and the supply chain are an integral part of the wider recovery planning for clinical services. Locally, there will be a case for some systems to consider the role of procurement functions as a core part of their offer as an anchor organisation, working more closely with local suppliers as well as providing expertise to Local Resilience Forums and social care providers where desired.

There is now an opportunity to draw on the expert insights of procurement directors to shape the optimal operational model for procurement across the system. Resetting arrangements with the national NHS Supply Chain will be an important part of financial and operational planning over the next 12-18 months. Understanding what this means for cost based category management will be a key part of this. Shaping the future model should recognise that regional geographic relationships have been paramount and Shelford Group organisations have functioned as anchors for their systems.

Charitable funding

Charities are reporting significant reduction in fundraising since the onset of the pandemic. The extreme nature of the economic impact and its expected long term duration will present ongoing challenges for the charitable sector, which are likely to be substantial. The NHS is a major recipient of charitable funding, with research income being a particular consideration for Shelford Group providers. This may also manifest indirectly through the impact a contraction in the charitable sector will have on university partners. Intelligence from the university sector is already highlighting ongoing research funded by cancer charities as a widespread concern.

Research & education funding

A number of risks to research funding are escalating as a result of the pandemic. In addition to the contraction of charitable investments are similar risks posed by the impact of economic contraction and uncertainty on industry and governmental research funding, particularly in relation to priorities that do not directly concern the pandemic response. A further mechanism through which research funding will be impacted is the deferral of research projects and their associated milestones, upon which the release of external funding is often contingent. Understanding the medium term impact of pandemic control measures on the delivery and progress of different types of research will be important in understanding the likely impact on financial flows which fund these programmes. The impacts upon Universities will have far-reaching consequences across many interconnected aspects of healthcare delivery – from education and teaching programmes through to sustaining and further developing health and life sciences research and the international competitiveness of the UK in these fields.

4. CONCLUSION

Reflecting on the different components which may shape the approach to planning following the height of the pandemic, it is useful to distil five guiding principles:

- i. **Complexity:** health and social care systems are inherently complex; establishing new processes and governance to drive and deliver the next phases of the pandemic response risks adding to this complexity. There will be opportunities to leverage existing mechanisms within trusts and ICSs to inform planning, make decisions and drive delivery. The experience of the pandemic response may yield new insights as to how these existing mechanisms could be better designed for the long term. Alignment with regional decision making is strategically important, particularly from the perspective of NHS anchors which serve a large city-region population.
- ii. **Intelligence:** the nature of the pandemic is highly dynamic; new information, evidence, analysis and opinion is being produced at a rate which contrasts with business as usual. Navigating and synthesising this vast quantity of data to ensure that decisions are well informed will demand advanced business intelligence capabilities. One way in which these may need to evolve is through an NHS provider's connection to expertise in other sectors, such as social care, industry, local authorities (including public health) and universities.
- iii. **Decisions:** embracing transparency around the planned approach to next phases, key decisions faced and governance for taking those decisions will facilitate both a timely execution of plans and support engaging with stakeholders. This may be more of a challenge for ICSs where governance arrangements may be nascent.
- iv. **Communication:** with, and engagement of staff, patients and local populations, through the next phases of the pandemic response will be critical in understanding organisational priorities. Understanding the issues faced by staff will be critical to galvanising a collective strength in the months that follow.
- v. **Learning:** engage the organisation and wider system in understanding what worked and what didn't during the pandemic and find ways to reflect these honestly. Some of these insights may be for internal action; others may relate to system partners; national and regional NHS bodies may also have lessons to draw on.

APPENDIX 1: NHS England pandemic influenza operating framework³⁵

The operating framework document was published in December 2017. Section 6.3, *After the pandemic: recovery*, sets out the NHS response with responsibilities at national, regional and local levels. The section states (p14):

Alongside planning for and delivering a pandemic response, it is essential that the recovery phase is also planned and managed. This will help ensure services are restored in the most appropriate way to normalise the system. Additionally, it is essential that plans are maintained after it appears the pandemic has abated in the event that there is a further wave of disease.

Responsibilities are then set out as follows:

	National	Regional	Local
assess the impact through comprehensive debriefing internally, of NHS organisations, and with partners	✓	✓	✓
in collaboration with NHSI, review staffing arrangements in conjunction with the local NHS organisations	✓	✓	✓
acknowledge staff contributions and review welfare arrangements, providing support as necessary	✓	✓	✓
in collaboration with NHSI, ensure a staged recovery of NHS England and the NHS as soon as appropriate	✓	✓	✓
review national, regional and local resources and capabilities	✓	✓	✓
review effectiveness of antiviral and personal protective equipment distribution, and of vaccination campaign	✓	✓	✓
in collaboration with NHSI, ensure readiness is maintained internally and across the NHS to manage subsequent waves of pandemic influenza or of increased seasonal influenza activity	✓	✓	✓
review and report on pandemic response arrangements and update to reflect lessons identified	✓	✓	✓
oversee any return of unused countermeasures as required to national stockpiles			✓

Section 7.3 expands on the governance to manage recovery across the NHS, stating (p17):

Pandemic Influenza Recovery Working Group (PIRWG) *should be established at all levels in NHS England (with command and control processes mirroring the response teams) early in a response. This group would work closely with NHS Improvement, which would have a longer term role in ensuring recovery of NHS services with providers once the pandemic has been stood down.*

Section 7.4.4 further expands on the role of PIRWGs, including guidance that (p19-20):

The PIRWGs should be established and be chaired by staff empowered to make decisions and potentially allocate funds. A key role of these groups will include management of the return to business as usual of the NHS and NHS England. This could be a 'new normal' if the pandemic is particularly severe.

AND

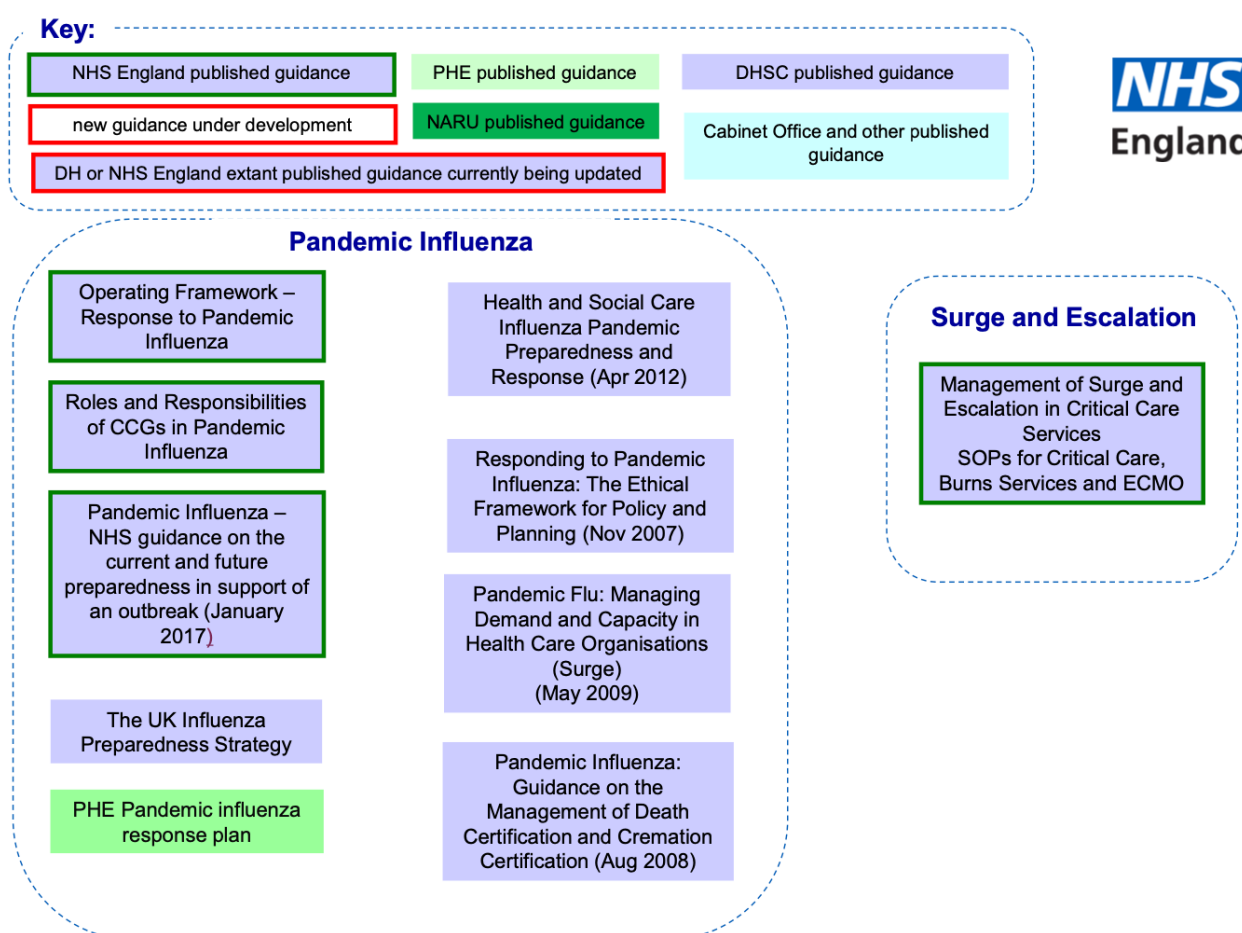
The PIRWG will need to consider ways to rebuild a healthcare infrastructure which can allow prioritisation of care to meet demand in the post pandemic period (eg mental health) with a planned approach to returning to business as usual or a new way of working.

The group should also consider how NHS England and the NHS would respond should there be further waves of pandemic influenza, or a severe subsequent seasonal influenza epidemic.

A separate section addresses the deployment of pandemic stockpiles, although states that (p21):

The delivery model is being finalised which will be activated during a pandemic; this includes distribution principles to ensure equitable access to the stockpile. Items will be delivered direct to healthcare providers; local solutions are being developed for social care by local government. More information will be provided in due course and when needed through specific briefing and guidance, however short summaries are provided below.

NHS England also published a separate document,³⁶ updated in 2019 to provide a visual guide to the various national publications concerning emergency preparedness, resilience and response. The illustration mapping pandemic influenza guidance is set out below.



The 2012 Department of Health document, *Health and Social Care Influenza Pandemic Preparedness and Response*,³⁷ includes a section dedicated to the recovery phase. This states that (p50):

Recovery is the process of rebuilding, restoring and rehabilitating the community following an emergency and may be coordinated across a local area via a multi-agency Recovery Coordination Group. The retention of knowledge and incorporation of lessons identified into the pandemic plans of individual and partner organisations will be an important part of this phase. Planning for recovery should be integrated into normal planning before, during and after any pandemic as part of business continuity planning.

It goes on to specify the recovery phase as comprising a number of overlapping activities (p50-51):

- consequence management (eg restoring essential services);
- restoration of the well-being of individuals, communities, the infrastructure which supports them and the organisation itself;
- exploiting opportunities afforded by emergencies, and
- structured debrief, identifying potential improvements and applying lessons learned in order to improve any future response.

There is furthermore a detailed checklist setting out a structured approach to recovery encompassing several domains: people, programme, processes, premises, profile and performance.

Reading across the NHS and earlier Department of Health guidance on pandemic influenza, it is clear that there are differences between the official planned approach to recovery and the reality in recovering from COVID-19. For example, planning documents emphasise the local level of the NHS being responsible for supply and provision of PPE, which recent communications from NHSE/I have stipulated largely for national determination.

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